

Adoption of Advanced Management Accounting Practices in Gulf Cooperation Council Countries: Insights from Institutional Theory Analysis

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Contents Page

Title Page	I
Content.....	II
List of tables.....	IX
List of figures.....	XI
List of abbreviation.....	XIII
Acknowledgment	XV
Declaration.....	XVI
Abstract.....	XVII
Chapter 1: Introduction	2
1.1. Importance of study	3
1.2. The problem of study	3
1.3. The aim and objectives.....	3
1.4. Research questions and hypotheses	4
1.5. Methodology	5
1.6. Structure of study	7
Chapter 2: Introduction to GCC countries and advanced MAPs.....	10
2.1. GCC business environment:.....	10
2.1.1. Geography of the Middle East:.....	11
2.1.2. Current status of the GCC	12
2.1.3. GCC language, law, and religion:.....	12
2.1.4. Modern history of political change:.....	12
2.1.5. GCC and its economic status:.....	13
2.1.6. GCC and the impact of oil.....	15
2.2. The advanced MAPs and their recent adoption	17

2.2.1. ABC	17
2.2.2. ABM	19
2.2.3. BSC	21
2.2.4. TC	29
2.2.5. LCC	31
2.2.6. TQM	31
2.2.7. Benchmarking	33
2.2.8. JIT	34
2.3. Shortcomings of TMAPs	34
2.4. Development and adoption of MAPs	36
2.5. Factors influencing the adoption of advanced MAPs	39
2.6. MAPs in GCC countries	46
2.7. Summary:	51
Chapter 3: Changes in MAPs and theoretical underpinning of the study	52
3.1. The study's theoretical underpinning	52
3.1.1. Institutional Theory	53
3.1.2. NIS	53
3.1.3. OIE and NIE	55
3.1.4. Power, politics and institutional theory	56
3.1.5. NIS approach to MA change	57
3.1.6. Theoretical framework and hypotheses	59
3.1.6.1. Hypotheses in relation to coercive pressure:	61
3.1.6.2. Hypotheses in relation to normative pressure	62
3.1.6.3. Hypotheses in relation to mimetic pressure	64
3.2. Summary	64
Chapter 4: Research Methodology	66
4.1. Introduction	66

4.2. Positivism and Phenomenological approach.....	66
4.2.1. Disadvantages of Phenomenology	68
4.2.2. Disadvantages of Positivism	68
4.3. Research approach.....	68
4.3.1. Inductive approach	69
4.3.2. Deduction approach	69
4.4. Research strategy and design	69
4.4.1. Overview of questionnaire based research	71
4.5. Questionnaires types	72
4.6. Questionnaire design.....	72
4.7. Research sampling.....	74
4.8. Data analysis	76
4.9. Validity and reliability	79
4.9.1. Validity	79
4.9.2. Reliability	80
4.10. Ethical considerations and data protection.....	81
4.11. Summary	81
Chapter 5: Data analysis and results.....	83
5.1. Section A: Demographics questions.....	83
5.1.1. Gender	84
5.1.2. Age	84
5.1.3. Years of work experience	85
5.1.4. Academic qualifications.....	87
5.1.5. Field of study	89
5.1.6. Professional qualifications.....	90
5.1.7. Job title	91
5.2. Section B: Company characteristics	92

5.2.1. Geographic distribution of companies	92
5.2.2. State-owned organisation	93
5.2.3. Type of business: an independent company or a subsidiary company.....	94
5.2.4. Type of industry: manufacturing or services.....	95
5.2.5. Number of products/services.....	96
5.2.6. Number of years the organisation has operated	96
5.2.7. Number of employees.....	97
5.2.8. The market in which the company operates	98
5.2.9. The main strategic focus of the company	99
5.2.10. The level of marketing competition the company faces	100
5.3. Section C: Advanced MAPs in use.....	101
5.3.1. ABC	101
5.3.2. ABM	102
5.3.3. BSC.....	103
5.3.4. TC	104
5.3.5. LCC	105
5.3.6. TQM	106
5.3.7. Benchmarking	107
5.3.8. JIT.....	108
5.4. Section D: Factors influencing the decision of adopting advanced MAPs	109
5.4.1. Statement 1: “Government legitimacy”	111
5.4.2. Statement 2: “Company headquarter”	111
5.4.3. Statement 3: “Joint venture with foreign companies”	112
5.4.4. Statement 4: “Professional bodies”.....	112
5.4.5. Statement 5: “Educated manager”	112
5.4.6. Statement 6: “Conferences, seminars and workshops”	113
5.4.7. Statement 7: “Consultants”	113

5.4.8. Statement 8: “The successful experience of other organisation”	113
5.4.9. Statement 9: “The existence of a widely recognised champion of the implementation”	114
5.4.10. Statement 10: “The competitiveness of the market”	114
5.4.11. Statement 11: “Employee/Organisation recognised need for change”	114
5.4.12. Statement 12: “Employee/organisation dissatisfaction with the previous system”	115
5.4.13. Statement 13: “The loss of market share”	115
5.4.14. Statement 14: “Deterioration in profitability”	115
5.5. Statistical relationships	116
5.5.1. Type of business.....	116
5.5.2. Ownership.....	117
5.5.3. Number of products/services types the company currently produces.....	118
5.5.4. Type of industry	119
5.5.5. Number of years the organisation has operated:.....	120
5.5.6. Number of employees.....	121
5.5.7. Market in which the company operates	122
5.5.8. Level of marketing competition the company faces	123
5.5.9. Main strategic focus of the company	124
5.6. Section E- Factors facilitating the adoption of advanced MAPs.....	125
5.6.1. Statement 1: “The availability of adequate accounting staff”.....	127
5.6.2. Statement 2: “Using computer systems for MA purposes”	127
5.6.3. Statement 3: “The authority”.....	128
5.6.4. Statement 4: “The arrival of a new accountant”	128
5.6.5. Statement 5: “Top management support”	128
5.6.6. Statement 6: “Co-operation”.....	129
5.6.7. Statement 7: “Accounting research”	129
5.6.8. Statement 8: “Management accounting training programmes”	129
5.6.9. Statement 9: “Adequate financial resources”	130

5.6.10. Statement 10: “Employee/organisation ability to afford time”	130
5.6.11. Statement 11: “Employee/organisation ability to afford the amount of time”	130
5.6.12. Statement 12: “Management consultants”	131
5.7. Summary:.....	131
Chapter 6: The outline and the discussion of the findings	133
6.1. General findings	133
6.1.1. Geographic location of the respondents	133
6.1.2. Geographic location of the companies:	134
6.2. Findings relating to the first question of the study.....	135
6.3. Findings relating to the second question of the study	136
6.3.1. Findings relating to the study hypotheses	136
6.3.2. Other factors that may influence the decision of adopting advanced MAPs	139
6.3.3. Organisational characteristics and the adoption level of advanced MAPs	139
6.3.3.1. Type of business: independent or subsidiary	139
6.3.3.2. Ownership (state or private)	140
6.3.3.3. Number of products/services type the company currently produces:	140
6.3.3.4. Type of industry: manufacturing and services	140
6.3.3.5. Number of years an organisation has operated	141
6.3.3.6. Number of employees.....	141
6.3.3.7. Market in which the company operates: international or national	142
6.3.3.8. Level of marketing competition the company faces	142
6.3.3.9. Main strategic focus of the company	144
6.3.4. Findings relating to the facilitating factor.....	144
6.4. Summary	146
Chapter 7: Conclusion, Contribution and Recommendations	147
7.1. An overview of the study	148
7.2. The main findings.....	150

7.2.1. The extent to which the advanced MAPs have been adopted	150
7.2.2. Findings relating to the study hypotheses	150
7.2.3. Findings relating to other factors.....	152
7.2.4. Organisational characteristics and the adoption of advanced MAPs.....	153
7.2.5. Factors facilitating the adoption of advanced MAPs	154
7.2.6. Concluding remarks in relation to second question of the study	155
7.3. Contributions.....	156
7.4. Limitations and recommendation.....	157
8. References:.....	159
Appendix A	183
Appendix B: the ethical approval form filled in and submitted:	189

List of tables

Table	Title	Page
4.1	Characteristics of the two main paradigms	66
4.2	Research Approach	68
4.3	Features of qualitative & quantitative research	70
4.4	Study population and response rate	76
4.5	Likert Scale Interpretation	79
4.5.1	Reliability statistics of MAPs	81
5.1	Frequency distribution of gender	84
5.2	Frequency distribution of age group	85
5.3	Frequency distribution of work experience in both position and in the company	86
5.4	Frequency distribution of academic qualifications and years holding those qualifications	87
5.5	Frequency distribution of field study	89
5.6	Frequency distribution of the professional qualifications, types of qualifications and numbers of years holding them	90
5.7	Frequency distribution of job title	91
5.8	Frequency of geographic distribution of the companies	92
5.9	Frequency distribution of state-owned organisation and the percentage of state ownership in your organisation	93
5.10	Frequency distribution of type of business; an independent company or a subsidiary company	94
5.11	Frequency distribution of type of industry: manufacturing or services	95
5.12	Frequency distribution of number of products/services types the company currently produces	96
5.13	Frequency distribution of number of years the organisation has operated	97

5.14	Frequency distribution of number of employees	98
5.15	Frequency distribution of the type market in which the company operates	98
5.16	Frequency distribution of the main strategic focus of the company	99
5.17	Frequency distribution of the level of marketing competition the company faces	100
5.18	The adoption level of advanced MAPs in GCC companies	102
5.19	Percentages of responses to the 12 statements concerning relevance of the “Factors influencing the decision on adopting Advanced MAPs” with average and standard deviation	110
5.20	Result of paired samples of the adoption of advanced MAPs and type of business with two-tail t-Test where the T critical is 1.971	117
5.21	Result of paired samples of the adoption of advanced MAPs and ownership with two-tail t-Test where the T critical is 1.971	118
5.22	Result of paired samples of the adoption of advanced MAPs and products/serves types the company currently produce with two-tail t-Test where the T critical is 1.971	119
5.23	Result of paired samples of the adoption of advanced MAPs and type of industry (manufacturing or services) with two-tail t-Test where the T critical is 1.971	120
5.24	Result of paired samples of the adoption of advanced MAPs and number of years the organisation has operated with two-tail t-Test where the T critical is 1.971	121
5.25	Result of paired samples of the adoption of advanced MAPs and number of employees with two-tail t-Test where the T critical is 1.971	122
5.26	Result of paired samples of the adoption of advanced MAPs and the market in which the company operates with two-tail t-Test where the T critical is 1.971	123
5.27	Result of paired samples of the adoption of advanced MAPs and the level of marketing competition the company faces with two-tail t-Test where the T critical is 1.971	124
5.28	Result of paired samples of the adoption of advanced MAPs and the level of marketing competition the company faces with two-tail t-Test where the T critical is 1.971	125
5.29	The percentages of responses to the 12 statements relevant to the “main factors that may impact and facilitate the adoption of Advanced MAPs in the Gulf countries” with average and standard deviation	126

List of figures

Figure	Title	Page
2.1	Arab Gulf countries	11
3.1	The study theoretical framework	60
5.1	Frequency distribution of gender	84
5.2	Frequency distribution of age group	85
5.3.1	Frequency distribution of work experience in this position	86
5.3.2	Frequency distribution of work experience in this company	87
5.4.1	Frequency distribution of academic qualifications and years holding those qualifications	88
5.4.2	Frequency distribution of academic qualifications and years holding those qualifications	88
5.5	Frequency distribution of field study	90
5.6	Frequency distribution of the professional qualifications and kind of those qualifications as well as the years holding that qualifications	91
5.7	Frequency distribution of job title	92
5.8	Frequency distribution of geographic of companies	93
5.9	Frequency distribution of state-owned organisation and the percentage of state ownership in your organisation	94
5.10	Frequency distribution of type of business; an independent company or a subsidiary company	95
5.11	Frequency distribution of type of industry: manufacturing or services	95
5.12	Frequency distribution of number of products/services types the company currently produces	96
5.13	Frequency distribution of number of years the organisation has operated	97
5.14	Frequency distribution of number of employees	98
5.15	Frequency distribution of type of market in which the company operates	99

5.16	Frequency distribution of number the main strategic focus of the company	100
5.17	Frequency distribution of the level of marketing competition the company faces	101
5.18.1	Distribution of ABC against the five internal factors	102
5.18.2	Distribution of ABM against the five internal factors	103
5.18.3	Distribution of BSC against the five internal factors	104
5.18.4	Distribution of TC against the five internal factors	105
5.18.5	Distribution of LCC against the five internal factors	106
5.18.6	Distribution of TQM against the five internal factors	107
5.18.7	Distribution of Benchmarking against the five internal factors	108
5.18.8	Distribution of JIT against the five internal factors	108
5.19	The average and standard deviation of respondents to the 12 statements concerning relevance of the” Factors influencing the decision on adopting Advanced MAPs”	111
5.20	The average and standard deviation of respondents to the statements indicating that to what extent the factors below facilitate the adoption of advanced MAPs	127

List of abbreviations

ABC: Activity Based Costing

ABM: Activity Based Management

LCC: Life Cycle Costing

BSC: Balanced Scorecard

CMAPs: Contemporary management Accounting Practices

CS: Control Systems

GCC: Gulf Cooperation Council

JIT: Just-in-time Manufacturing

JVs: Joint Ventures

MA: Management Accounting

MAIs: Management Accounting Innovations

MAP: Management Accounting Practices

MAS: Management Accounting Systems

NIE: New Institutional Economics

NIS: New Institutional Sociology

OIE: Old Institutional Economics

SMEs: Small and Medium- sized Enterprises

SOE: State Owned Enterprises

SMA: Strategic Management Accounting

TC: Target Costing

TQM: Total Quality Management

TMA: Traditional Management Accounting

TMAPs: Traditional Management Accounting Practices

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Declarations

No portion of the work referred to in the thesis has been submitted in support of an application for another degree or qualification of this or any other university or other institute of learning.

ABSTRACT

Adoption of Advanced Management Accounting Practices in Gulf Cooperation Council countries: Insights from institutional theory analysis

This study investigates the adoption of advanced Management Accounting Practices (MAPs) in GCC countries and helps fill the gap in understanding of developments in management accounting in that region. Drawing on (NIS), the study considers the impact of various factors on the decision to adopt advanced MAPs, the relationship between organisational characteristics and that decision, and the factors facilitating adoption. It used a questionnaire survey to collect data from 153 GCC listed companies. The data was analysed through the descriptive and explanatory methods of statistical analysis.

The findings indicate that the adoption level of advanced MAPs in GCC countries is relatively low, with almost 38% of the organizations surveyed implementing or trialing these practices. Of all the factors considered, the consultancy industry was found to have the most and a high level of influence on adoption decisions whilst other factors were moderately influential. Top management support was the highest facilitating role in advanced MAPs adoption, followed by the levels of employment of management consultants to facilitate implementation. Several organisational characteristics were found to have a significant relationship with advanced MAPs adoption, including being private sector and manufacturing companies, of large size, operating in international markets, facing high levels of marketing competition and having a strategic focus on innovation and production diversity.

This study provides further empirical evidence of the robustness and generalisability of NIS in explaining the reasons behind the adoption of change in MAPs. Specifically, it complements recent arguments for the primacy of the mimetic consultancy factor amongst all the institutional factors influencing advanced MAPs adoption. It contributes to the literature by studying the adoption of advanced MAPs in a GCC countries context and by comprehensively examining the factors influencing decisions and those facilitating adoption and implementation.

Chapter 1: Introduction

The main purpose of this chapter is to introduce the key themes within this thesis, contextualise the research and present the objectives and questions as well as structure of the thesis

TMAPs (such as budgeting system) have been widely criticised by the literature. (Johnson and Kaplan (1987); Cooper and Kaplan 1988; Kaplan and Norton ,1996) claimed that accounting information was of little help in reducing costs and improving productivity, that it failed to provide accurate product costs, and that its time horizons were too short term. What is becoming clear is that not only do traditional accounting systems lack relevance, but by providing managers with misleading signals and inviting the wrong decisions to be taken, they also help to destroy jobs, innovations, and long-term growth. However, despite the strong advantages of advanced MAPs, empirical evidence suggests that their adoption in practice is low. Current organisations need to manufacture high-quality products with less cost to be able to compete and this is only possible with rational decisions based on accurate information about the costs. The traditional costing system cannot provide accurate information about costs. Three decades ago, Johnson and Kaplan (1987) indicated that MAPs had not changed since the 1920s despite all the changes in this environment. Johnson and Kaplan (1987) further stated that, due to a lack of innovation in MAP, it was not adequately meeting the needs of businesses.

Regarding the traditional costing system; Johnson and Kaplan (1987) argued that the traditional costing system, primarily developed to measure true costs, is not able to provide the data required by the more recent strategic planning frameworks of the 1970's and 1980's. Several researches were conducted worldwide to investigate the diffusion and the adoption of advanced MAPs, which came with mixed results. Despite this, little work has been done to investigate the adoption of advanced MAPs in developing countries in general and in GCC countries. Thus, to contribute to filling this gap in the literature, this study will be concerned with investigating and providing evidence on the adoption of advanced MAPs in GCC countries. Moreover, the NIS framework will be used to provide unique insights into the context of the selected countries in relation to the factors driving MAPs change; this involves more examination of NIS which is believed to provide further empirical evidence on its robustness and generalisability. The study starts with an introductory chapter which provides an overall outline of the study and links to the subsequent chapters. In this chapter, the background to the study is introduced as well as a discussion about the adoption of Management Accounting Innovations (MAI) and the criticisms which have emerged alongside these practices. It goes on to provide a brief discussion

as to why GCC countries have been selected for this study. The research objectives, methodology, and an explanation as to why this methodology has been adopted for this study are then outlined. Finally, the remaining contents of the study are presented.

1.1. Importance of study

The importance of this study lies in the importance of MAPs. It is the researcher's desire to contribute towards the companies of the GCC countries adopting the finest of advanced scientific systems to keep up with the developed world. In addition, the study can enrich the scientific libraries, particularly in the areas of higher education in these countries.

This study is expected to make a significant contribution to academia and practitioners in several ways. The study contributes to the literature by examining advanced MAPs in GCC countries which has rarely been studied in the literature. The use of the NIS framework will provide unique insights in the context of the selected countries in relation to the factors driving MAPs change in GCC countries; and this involves more examination of NIS which is believed to provide further empirical evidence on the robustness and generalisability of NIS.

1.2. The problem of study

Cohen et al., (2005) concluded that over the past decade there has been a growing awareness of advanced MAPs (e.g., ABC, ABM), but the overall rate of implementation has been low. Joshi et al., (2011) confirmed that there exists a need for more studies on MAPs in the United States, Europe, and Asia, as well as in other emerging economies (Joshi et al 2011). (McLellan and Moustafa, 2011; 2013) further indicated that there is not much research about MAPs in the Arab countries, despite the increased contribution of these countries to the world economy, and their increasingly open policies towards international trade and markets. Concerning the adoption of MAPs in GCC countries, the extant evidence in relation to the adoption of MAPs in Arab countries in general and GCC countries in particular suggests that companies in these countries still rely more on TMAPs such as budgeting rather than the more recently developed strategically focused tools such as ABM and the BSC (e.g., McLellan & Moustafa, (2011) McLellan and Moustafa, (2013); Joshi et al. 2011). However, these findings came upon very rare empirical investigations. That is, in contrast to the many studies conducted in western countries and in Asia, there is a lack of studies conducted in Middle Eastern countries in general and the GCC states in particular regarding the adoption of MAPs.

1.3. The aim and objectives

This study is mainly based on the topic of the adoption of advanced MAPs in the Gulf States where the main aim of the study is to investigate the adoption of advanced MAPs in the GCC

states: Kuwait, Saudi Arabia, Oman, Qatar, UAE and Bahrain, focusing on ABC, ABM, BSC, QTM, Benchmarking, LCC, JIT and TC.

To achieve the aim of the study, major objectives must be achieved, these include:

1. To present the results of the previous regional and international studies that are relevant to advanced management accounting practices throughout the world.
2. Examining the factors affecting the adoption of advanced MAPs in the concerned companies based on the institutional theory: specifically, NIS.
3. To show the advanced MAPs that have been adopted by GCC countries.
4. To present the results of a questionnaire survey of listed manufacturing and service companies based in GCC countries.

1.4. Research questions and hypotheses

Based on the previous discussion, and the lack of knowledge of the adoption of advanced MAPs in GCC countries, the study identified its main questions as follows:

1. To what extent have advanced MAPs been adopted by GCC countries?
2. What are the factors influencing the adoption of advanced MAP in GCC countries from the perspective of NIS?

Moreover, drawing on NIS, which is the main theoretical basis of this study, the study develops hypotheses on the factors that may influence the adoption of advanced MAPs in GCC companies. This is towards answering the second question of the study. The study hypotheses are as follows.

Hypothesis 1: *HO: Government legislation has an influence on the decision of adopting advanced MAPs in GCC companies.*

Hypothesis 2: *HO: Companies' headquarters have an influence on the decision of adopting advanced MAPs in GCC companies.*

Hypothesis 3: *HO: International companies have an influence on the decision of adopting advanced MAPs in GCC companies, in cases where a GCC company and an international company are in a joint venture.*

Hypothesis 4: *HO: Professional bodies have an influence on the decision of adopting advanced MAPs in GCC companies.*

Hypothesis 5: *HO: Educated managers have an influence on the decision of adopting advanced MAPs in GCC companies.*

Hypothesis 6: *HO: Conferences, seminars and workshops have an influence on the decision of adopting advanced MAPs in GCC companies.*

Hypothesis 7: *HO: The consulting industry has an influence on the decision of adopting advanced MAPs in GCC companies.*

Hypothesis 8: *HO: The experience of other organisations with their adoption of advanced MAP has an influence on the decision of adopting advanced MAPs in GCC companies.*

1.5. Methodology

The methodological orientation of this study will mainly depend on the quantitative method, using the questionnaire survey as the only research method. In this study questionnaire surveys have been applied to provide the quantitative data required for achieving the study objectives and answering its questions. Moreover, several organisations provide online questionnaire sites such as www.surveymonkey.com, which is used by the current study to distribute its electronic questionnaires to the targeted companies. The electronic online survey has been chosen for this study as a standout amongst the most worldwide types of research strategies, considering several reasons. This technique spares time and it is viewed as one of the more affordable strategies, when contrasted with the others. It spares time by instantly covering a wide geographical area, and thereby also invites a wide range of perspectives. In addition, this strategy is advantageous for members from two angles: they will have the ability to answer the questions and express their perspectives uninhibitedly, with no limitations, and furthermore they can choose the best time and place for them to answer the survey (Creswell, 2003).

The questionnaire has been designed to avoid complex and compound questions, which would probably generate lower response rates without control over the questionnaire respondent. That is, the questionnaire has been designed to be convenient and suitable to the employees of companies and organisations in the GCC countries. It has been created on the www.surveymonkey.com website with the title: Adoption of Advanced Management Accounting Practices in GCC Countries: New Institutional Theory Analysis Survey.

This questionnaire survey is presented in five parts. The first part is concerned with collecting data on the respondent; the second part is concerned with collecting data on the surveyed companies; the third part aims to collect data on the adoption level of advanced MAPs in GCC companies; the fourth part is concerned with collecting data on the factors that may influence the decision of adopting advanced MAPs; finally, the fifth part is designed to collect data on the factors that may have a facilitating role in the adoption of advanced MAPs in the surveyed companies. Regarding the population and the sampling; because the population of this research

was relatively small – 469 listed companies in the GCC countries, both manufacturing and service companies - the initial plan was to target all the companies of the population. The main reason for choosing the entire population is to ensure that the sample is representative and not biased.

Concerning the respondents; senior financial staff, including finance directors and senior management accountants, have been targeted as respondents for this study. The reason for choosing these high-ranking staff is that they are in a good position with their advanced knowledge to complete the questionnaire in respect of the most popular MAPs in their companies.

However, despite the distribution of the questionnaire to the total of 469 companies that represent the total population of the study, the number of the returned questionnaires was 126. Of these, 14 questionnaires have been ignored due to the multiple mistakes and contradictory answers. The final number of 153 completed questionnaires has provided a satisfactory response rate of 32.62%. According to Krumwiede (1998), the normal response rates for this kind of surveys is approximately 20% though there are many published surveys with lower response rates such as 12.5% or 19.6% (Al-Omiri & Drury, 2007a; Al-Omiri & Drury, 2007b). Table 4.1 shows the number of listed companies in each GCC country (the study population) and the completed questionnaires collected from each country.

Furthermore, the data analysis in this study contains several different statistical tests that are listed below:

- The study relied on the descriptive statistic including percentages and means to describe the characteristics of the responding firms and the individual respondents. In addition, the percentages and the means are used to identify the level of advanced MAPs in the surveyed companies. The percentages and the means are also used to identify the influence level of the surveyed factors on the decision of adopting advanced MAPs and to identify the facilitating role of other surveyed factors in the adoption of advanced MAPs in those companies.
- Besides, the study uses the exploratory analysis tests (t two-tail) in order to determine the relationships between organisational characteristics and the adoption of advanced MAPs in GCC companies.

1.6. Structure of study

This study is presented in six chapters, addressing the aims and objectives previously identified.

Chapter One: introduction; the purpose of this chapter is to introduce the key themes within this thesis and provide a brief background to the subject as well as presenting the research questions and objective. In addition, this chapter will present an outline on the research method and structure of the study.

Chapter Two: this chapter provides a brief overview of the domain of this study. This includes the geography of the Middle East, the current status of the GCC, law, and religion in the GCC states, the modern history of political change within the GCC; the relationship between the Middle East and the western world, and finally the Middle East and oil discovery. Moreover, the chapter provides a brief overview of the advanced MAPs that will be the focus of the investigation of this study. These comprise ABC, ABM, BSC, TC, LCC, TQM, Benchmarking and JIT.

Chapter Three: this chapter mainly provides a review of the literature in relation to the adoption of advanced MAPs and the factors that may affect it. Moreover, the chapter presents the findings of previous studies on the adoption of advanced MAPs and the factors affecting it in GCC countries. The chapter then proceeds to discuss the theoretical underpinning of the study. With prime focus on institutional theory, the chapter discusses the concept of institutional theory, NIS, OIE, the comparison between OIE and NIS, power, politics and institutional theory, and then it discusses new institutional theory for MA change. Furthermore, the chapter goes on to build a theoretical framework of the study and develop its hypotheses.

Chapter Four: this chapter is concerned with the methodology of the study. It gives an overview of the questionnaire research method and its advantages. Moreover, the chapter discusses the different types of questionnaires, their different types of use, and those that were adopted by the current study. In addition, the chapter shows how the questionnaire of the study was designed and structured. It also provides a discussion of the sampling issues in questionnaire-based research, and how the population and sample of this study were defined. Furthermore, it shows the number of questionnaires that were distributed, the number of returned questionnaires and the response rate. The chapter proceeds to discuss the analysis methods used in this study. Besides, it discusses the reliability and validity issues and how the current study met them. Finally, the chapter provides an overview of the ethical approval and how it was obtained.

Chapter Five: this chapter represents the data analysis and results. Several statistical tests were applied in this chapter to analyse the data and obtain the results. This chapter contains six main headlines: demographics questions, company characteristics, advanced MAPs in use, factors prompting the decision of adopting advanced MAPs, the statistical relationship between organisational characteristics and the adoption of advanced MAPs, and factors facilitating the adoption of advanced MAPs. In this chapter, descriptive tests producing percentages, mean averages and standard deviations and statistical association tests such as the t-test have been implemented. Therefore, the chapter ends with conclusions about the study findings.

Chapter Six: this chapter provides, explains and discusses the key findings of the study in relation to the results and findings of previous studies and researches. This chapter includes several main and sub headlines that connect the main findings with the objectives of this study. The findings linked to the geographic location of the organisations (companies) and to the advanced MAPs in use have been discussed. Moreover, the chapter presented and discussed the findings on the study hypotheses concerning the influence of different factors relating to the NIS pressures. That is, the chapter presents and discusses the findings relating to the influence of coercive, normative and mimetic factors on the decision of adopting MAPs in GCC countries; these include government legislation, company headquarters, international companies, professional bodies, educated managers, consultants, conferences, seminars and workshops, and the successful experience of other organisations. The chapter further explains and discusses the influence that can be applied by some other factors on the decision of adopting the advanced MAPs in GCC countries; these include the existence of a widely recognised champion of the implementation, competitiveness of the market, employee/organisation recognised need for change, employee/organisation dissatisfaction with the previous system, the loss of market share and the deterioration in profitability.

Moreover, the chapter presents and explains the relationship between the adoption of advanced MAPs in GCC countries and certain organisational characteristics; these include type of business, ownership, products/services types the company currently produces, type of business, number of years the organisation has operated, number of employees, market in which the company operates, level of marketing competition the company faces and main strategic focus of the company. Finally, the chapter presents and discusses the study findings relating to the role of several factors in facilitating the adoption of advanced MAPs in GCC companies; these include the availability of adequate accounting staff, using computer systems for MA purposes, the authority attributed to the accounting function within the organisation, the arrival of a new accountant, co-operation between universities (academics) and companies (professionals),

accounting research, management accounting training programmes, adequate financial resources, employee/organisation ability to afford the amount of investment required to adopt the innovation, employee/organisation ability to afford the amount of time required to implement the innovation, levels of employment of management consultants to facilitate implementation, top management support.

Chapter Seven: This chapter aims to provide a summary of the study procedures, findings, contributions and implications, limitations and potential directions for further studies. It begins with an overview of the study. This is followed by presenting the study main findings related to the adoption of advanced MAPs in GCC companies, the factors that influence the decision of adopting MAPs in GCC companies, the relationships between organisational characteristics and the adoption of advanced MAPs in GCC companies, and finally, the findings related to the factors that may facilitate the adoption of advanced MAPs in GCC companies. The chapter explains the main contributions and implications of the study, and then defines the study limitations, and suggests potential avenues for further studies.

Chapter 2: Introduction to GCC countries and advanced MAPs

This chapter will provide a brief introduction to the characteristics of GCC countries as well as a brief introduction to the types of advanced MAPs.

The objective of this chapter is to discuss the natural, geographical and political characteristics of the Arabian Gulf, including the geographical location, language, law, and religion of Gulf countries and it will study the modern history of political change and the Middle Eastern business environment. This chapter also presents the previous researches and studies relating to advanced MAPs throughout the world.

The British withdrawal from the Gulf States in 1971 triggered changes in regional power balances leading to the rise of Iranian dominance in the region. The Gulf Arab nations of Bahrain, Qatar and United Arab Emirates sought Saudi guidance and leadership to counterbalance Iraqi and Iranian hostility. The Persian Gulf became an increasingly topical focal point in terms of the international system because the Persian Gulf's hydrocarbon reserve is imperative to the stability of the global economy. Following Iran's Islamic revolution in 1979, the USA was no longer an ally to Iran and there were dramatic changes in regional dynamics. The GCC, consisting of the Arab nations of the Persian Gulf, was founded in February 1981 with the aim of defying any direct military threat through collective security mechanisms. The USA and the western world supported the economic agreement signed by the six of GCC states.

2.1. GCC business environment:

The main purpose of this section is to provide a brief background on the GCC business environment. It covers the geography, history, modern politics, and economics of the countries included in the study namely Kuwait, Saudi Arabia, UAE, Qatar, Oman, and Bahrain. It consists of several sub-sections; the first subsection (2.1.1) will start with the geography of the Middle East, the second subsection (2.1.2) will be concerned with the current status of GCC, while the third subsection (2.1.3) will present the language, law, and religion in GCC states. In addition, the fourth subsection (2.1.4) will discuss the modern history of political change within the GCC; the fifth subsection (2.1.5) will explain the relationship between the Middle East and the western world. Finally, the sixth subsection (2.1.6) will focus on Middle East and the economic impact of oil discovery.

2.1.1. Geography of the Middle East:

The Middle East which is also referred to as the south-western region of the Asian continent covering a geographical area about 3 million square kilometres. The south-eastern area of the Middle East (peninsula) is called by the Rub'al-Khali which covers a large expanse of continuous sand. This, the Gulf region, includes seven Arabic countries which are Saudi Arabia, United Arab Emirates, Kuwait, Bahrain, Qatar, the Sultanate of Oman, and finally the Republic of Yemen which is not included in the sample of this study (Figure 3.1). GCC comprises the first six of these countries. The Persian Gulf region is a critical part of global security arrangements due to its vast energy resources which are vital to world economic stability and attract constant foreign involvement. (Sturm et al, 2008). The period since the GCC was formed in 1981 has been one of turbulence for the region while it has assumed a more vital global role due its energy reserves. As world-leading producers and exporters of oil and gas, the security and stability of the GCC states has a global economic importance.



Figure 2.1: Arab Gulf countries

2.1.2. Current status of the GCC

The GCC is a trading bloc involving the six Arabian Gulf states of Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, and the UAE. The Gulf area has some of the fastest growing economies, due mostly to a boom in oil and natural gas revenues. In 2007, the nominal GDP was \$1,023 billion (IMF, 2008). The IMF predicted that the GDP would reach \$1,112 billion at end of 2008 and in fact this was exceeded with the GDP amounting to \$1,210 billion at the end of 2009. In 2011 Qatar overtook the world top-ranked state of Luxembourg in terms of its GDP per capita. The GCC has a rapidly growing economy like China and other Asian countries and a close connection with many western countries, especially the UK and the USA.

The GCC business community is comprised of “national” family owned businesses, branches of large multinational businesses that have been invited to locate in the GCC and many joint ventures between local GCC businesses and international companies. MA practitioners in the Gulf are predominately American CMA holders from countries in Asia or Egypt. Corporate ownership in the GCC is still largely non-diffused family/government holder-ship, compared to the Western (Anglo-Saxon) economic environment, where ownership is in the hands of many shareholders. Against this background, examination of the existing literature is presented next.

2.1.3. GCC language, law, and religion:

The six GCC states each have unique institutions and legal systems, their main language is Arabic, and in all of them the legal system is subject to Sharia influence and interpretation (Chazi et al., 2010) and Sharia law is considered hierarchically superior to commercial law. Gulf states abide by a combination of Islamic, civil, and common law (Anglo Saxon, French civil law or Romano Germanic tradition law) (Chazi et al., 2010). In all GCC countries the civil code is rooted in the Sharia law but in the commercial sector a more secular law is followed. Omani law is influenced by common, codified, and Islamic laws instead of the more common Sunni and Shiite forms.

2.1.4. Modern history of political change:

Bahrain was a monarchy which gained independence from the British Empire in 1971. Their legal system is like other countries with a combination of English common, codified French and Islamic laws (Chazi et al., 2010). It is more secular, but the Islamic law is always prominent. 60% of Bahrainis are Muslim Sunnis and because of the Persian incursion, some of the Shia minority became unsettled. There is a Bahraini Chamber of Commerce and the

industry works as an arbitrator. Bahrain is the fastest growing economy in the GCC with real GDP growth of 3.9% and the non-oil economy expanding by 5pc (Avinash, 2018).

Kuwait has a mixed legal system, which initially saw the British common law as predominant. Until 1961, Kuwait was under the jurisdiction of Great Britain. After it gained independence, the commercial code was influenced by the French through the work of the Egyptian jurisdiction.

Oman has a monarchy which has formed its government. Oman has a lower income per capita than other GCC states and a large land area. It was the first country in the Middle East to gain independence in 1651 but due to repeated invasions by the British, Oman remained under British mandate until 1971.

Saudi Arabia is the oldest among the sovereign modern states in this study's sample. It was founded in 1932 by Abd Al-Aziz bin Abd Al Rahman Al Saud after a long struggle to unify the kingdom. Saudi Arabia is the birthplace of the Prophet Mohammed and their legal system is based on Sharia, with several secular laws also having been introduced.

Qatar is strategically located in the small peninsula on the Arab Gulf. It has a constitutional monarchy and around 90% of the population are Sunni Muslims. The legal system is based on both Islamic and civil law codes, controlled by the laws of the ruling family.

The UAE achieved its independence from Great Britain in 1971. The legal system is very much influenced by the British although Islamic law is also present, mainly in civil law. The UAE consists of important emirates such as Dubai and Abu Dhabi; each of these emirates has its own Amir.

2.1.5. GCC and its economic status:

In recent years the sustained rise in oil prices has yielded considerable additional revenues for the GCC economies. An estimated half of this petrodollar inflow is spent on trade, with an ensuing shift in the imports-to-exports ratio compared to the 1970s (Sturm et al, 2008). The remainder has bolstered GCC countries' foreign exchange reserves, and increasingly also their Sovereign Wealth Funds, through investments in financial assets, including stabilisation and savings funds. However, there is limited transparency of these investment activities, with international statistics accounting for around half of them (Sturm et al, 2008).

There is growth in foreign participation and competition, with evidence of market entry and licence applications by banks from other GCC countries and from outside the region. Banking

systems in the GCC are among the most sophisticated in the Arab world and the banks are generally profitable and well-capitalised. However, financial markets tend to be underdeveloped and while stock markets have grown, bond markets, insurance and mortgage lending remain nascent. Compared, for example, to the Euro Zone, there is still a low ratio of total bank assets to GDP (Sturm et al, 2008). In late 2006 the GCC's largest banking sectors, with assets exceeding 100% of GDP, were in the UAE and Bahrain (including the offshore sector). The smallest banking sector was in Oman, with assets totalling approximately 50% of GDP, while Saudi Arabia's was also relatively small. (Sturm et al, 2008)

The GCC is expanding its role as a regional trading hub. In recent years, GCC countries have invested substantially in physical infrastructure, including roads, ports and airports. These investments are now increasingly bearing fruit. Improvements in physical infrastructure have been accompanied by remarkable efforts at trade facilitation. GCC countries have formed a customs union, which came into effect at the beginning of 2003. Furthermore, at the beginning of 2008, the GCC common market was launched, which allows for the free movement of labour (for GCC countries' citizens) and the free movement of capital.

The GCC region's role in regional and international trade could be further strengthened by improving trade facilitation. The GCC countries' future role as a regional trading hub will depend not only on the quality of physical trade infrastructure, but also on a competitive legal and institutional framework.

Bahrain has had a free trade agreement with the USA since 2006 which involves the reduction of legal restrictions on free trade and labour law regulations (Chazi et al., 2010). Bahrain has a mixed economy, with the government controlling or owning some of the country's basic industries, including the important oil and aluminium industry. Between the years 2000 and 2006, the Bahrain Government's expenditure increased by 170%. During that same period, government revenues continued to depend on oil and increased by about 200%. The government has used its modest oil revenues to build and advance infrastructure in transportation, communications and other projects to improve the standard of living, health, education, housing, electricity, water and roads (Chazi et al, 2010).

Oman was only truly opened to the world economy after 1970, in conjunction with the reign of the Sultan Qaboos.

Qatar's economic policy is predominantly based on trying to diversify from oil to other sectors, although it depends largely on its income from oil and gas exploration. In 2000, there were

encouraging signs for the Kuwaiti economy including real GDP growth, improved public finances and financial services diversification. The ongoing programme of reform is expected to further strengthen the economy. (Al Kandary, 2009)

2.1.6. GCC and the impact of oil

The GCC states have abundant oil reserves and their economies depend on exporting oil at competitive prices. At the opening of this century, the GCC countries all benefitted financially from a sustained period of rising world oil prices. Since 2008, falling prices have variously impacted their budgets and economic growth. (Vohra, 2017) studies the effect of oil price changes during 2000-2015 and finds evidence that falling and volatile prices have slowed economic growth which has been the primary factor in fuelling budget deficits and reducing current accounts.

Saudi Arabia does not rely heavily on oil income, and for that reason they joined the World Trade Organisation (WTO) in 2005 (Chazi et al., 2010). Sturm et al. (2008) state that since 2003, when oil prices started to raise rapidly, the member states of the GCC have experienced economic development at a heightened rate which in turn has also heightened their position as both trading partners and investors in the world economy. GDP growth has particularly been significant amongst non-oil activities, which have increased at a quicker rate than oil GDP. The increased oil revenues have resulted in macroeconomic developments, with current and large fiscal account excesses characteristic of this as well as export growth. These macroeconomic developments also bring with them challenges, with a major one for the GCC countries being the rising inflation, a pressure which is further subject to exchange rate policies. However, the GCC countries have benefited overall over recent years by addressing structural-challenges of a long-term nature, diversifying their oil economies into other sources of income and reforming labour markets (Sturm et al. 2008).

These countries have subsequently become a highly significant net supplier in the global market, with only East Asia surpassing them, and consequently they have become a focal point in debates on global imbalance policies. Sturm et al., (2008) further state that these countries also hold some of the world's biggest sovereign wealth funds; itself highlighting issues around financial stability. Additionally, the GCC countries have also strengthened their position as trade partners, with only the European Union maintaining a large surplus in bilateral trade with these countries. A final significant point relates to the fact that these countries will continue

playing a key role in their control of large oil and gas reserves which they will benefit from exploiting (Sturm et al., 2008).

Meanwhile the imbalance between rising current expenditure and limited capital expenditure has continued to hamper the Kuwaiti economy, Kuwait holds 9% of the worldwide oil reserves and, considering its population of about 1.2 million citizens, Kuwait finds itself in the most privileged position economically with a highest GDP per capita is \$49588 and high balance of payment surpluses (ERTL, 2014). Overall non-oil sector growth has slowed over the last five years, but in FY16/17 it accelerated to 2.0% and, due to a sharpened state focus on infrastructure development, the forecast is now more favourable (Al Jazeera, 2017). Sales volumes of shares and real estate and rising property prices are testament to the success of the Kuwaiti privatisation programme. Despite the negative impacts on Kuwait of the Iraqi invasion and the 1997-8 Asian financial crisis, the ensuing privatisation agenda brought quick results and the value of directly-related investment exceeds KD800 million. (Al Kandary, 2009)

The Economic Development Board's (EDB) latest assessment shows that Bahrain was the fastest-growing economy in the GCC, with expansion of 3.9 percent in real GDP and 5 percent in the non-oil sector. Growth "accelerated markedly" in 2017, compared to 3.2 percent in 2016, reports the EDB's latest Bahrain Economic Quarterly (BEQ) (ERTL, 2014). With the combination of a strong non-oil private sector, led by tourism, plentiful infrastructure projects and record levels of foreign direct investment, Bahrain has bucked the trend of sluggish regional growth. (Avinash, 2018). The IMF's World Economic Outlook has forecast that Bahrain' economy would continue to be the fastest growing economy in the GCC this year, suggesting momentum is expecting to be maintained into the current year (Avinash, 2018).

The United Arab Emirate' economy based on a strong structure supported by high Oil prices, according to United Nation E-Government Index 2012, the Emirate's position , has shifted to rank first amongst Arab countries ,second amongst western Asia, and fifth in Asia (AlKaraan,2018)

The protracted world economic downturn seems unending, rooted in fundamental problems such as over-reliance on artificial stimulus and an accompanying unusual volatility. This volatility is particularly challenging for economies like Bahrain's, historically reliant on commodity exports and vulnerable to price fluctuations, and yet the Bahraini economy has performed remarkably well in these difficult times (Avinash, 2017).

2.2. The advanced MAPs and their recent adoption

Several advanced MAPs have been developed during the previous few decades. Among these advanced MAPs, this study will concentrate on the following: ABC, ABM, and BSC), TC, LCC, TQM, Benchmarking, and JIT. The study briefly discusses each of these advanced MAPs as follows.

2.2.1. ABC

There is no clear or universal definition of an ABC system. The official terminology of the Chartered Institute of Management Accountants (CIMA) defines ABC as: “an approach to the costing and monitoring of activities which involves tracing resources consumption and costing final outputs. Resources are assigned to activities and from activities to cost objects based on consumption estimates. The estimation of consumption is done using cost drivers, which are used to attach the cost of activities to the output” (CIMA, 1996, p.20).

ABC gained notoriety in the 1980s and 1990s with the promise of management consultants that it would improve the allocation of indirect costs and accuracy of information analysis and increase profitability (Aillon et al, 2018). When these systems were designed, most companies manufactured small product ranges, with labour and materials as their primary costs, Overhead costs were relatively low and there were few problems of distortions caused by arbitrary overhead allocations, Costs of information processing were very high, discouraging more sophisticated methods of allocating overheads (Armstrong, 2002).

By the mid-1980s, however, the situation for companies was entirely different with wider product ranges, a fall in the proportion of budgets allocated to labour costs and a hike in overhead costs. Decision errors due to poor cost information had become both more likely and costlier due to intensified global competition (Holzer & Norreklit, 1991).

The innovation that has possibly generated the biggest interest has been ABC. ABC emerged in the 1980s as a mechanism for providing more accurate products/services information to support strategic decisions. During the 1990s ABC has been referred to as a tool to control and manage costs more effectively (Aillon et al, 2018). The principles of internal processing models remain core to current performance measurement systems. For instance, in the measurement system known as activity-based costing ABC, there is a focus on detailed documentation and record keeping that is expected to lead the improved allocation of resources (Gimzauskiene, 2004).

“ABC is ranked as one of the two or three most important management accounting innovations of the twentieth century” (Johnson, 1990, p.15). Scapens (2006) indicates that during the 1970s researchers began to incorporate information economics into the models. He describes this as the “costly truth” approach, whereby truth is assumed to vary from one situation to another, according to the costs and benefits of the information. Thus, under certain circumstances simplistic costing systems may be appropriate when the costs and benefits of information are considered (Scapens, 2006). A review of management accounting journals indicated that the research into ABC is the most popular topic and there are approximately 358 papers on this topic across 404 published papers, (89%) between 1987-2000 (Bjornenak & Mitchell, 2000). Over the last two decades there has been an increasing interest in ABC, but the rate of implementation has been slow (Askarany & Yazdifar, 2007). Some researchers have reported that adopters have abandoned it after implementation (Chenhall & Langfield Smith, 1998. Aillon et al ,2018). ABC has subsequently been applied in a different setting, such as financial sectors, education departments, health care and hospitals and to a variety of cost objects (Armstrong, 2002)

All the above definitions relate to the two-stage allocation process with costs being assigned to activities in the first stage and then activity costs to cost objects (typically products, services or customers) in the second stage (Jusoh & Miryazdi, 2015). In contrast, traditional costing systems assign costs to cost pools in the first stage that are departmental based and, in the second stage, uses volume-based cost drivers that are often not based on a cause and effect relationship to assign costs to cost objects (Aillon et al ,2018). In practice it can be difficult to classify some costing systems as activity based or traditional. In the first stage of the two-stage allocation process many departments are often established based on the activities undertaken for tasks such as machining and assembly. In a different way most of the departments within an organisation may have identical activities. Cost system designers may also claim that there may be a cause and effect relationship between volume-based drivers and the incidence of overhead costs (Gimzauskiene & Kloviene, 2008). Although such a costing system is a traditional costing system, it could be argued that it broadly fits the requirements of the previously given definitions of ABC. It can be concluded that classifying costing systems as either ‘traditional’, or as ‘ABC’ can sometimes be problematic. (Aillon et al, 2018) Since its emergence over a decade ago, ABC has been adopted by numerous, mostly large, organisations and has established itself successfully not so much as a replacement for traditional accounting

systems, which are still required for financial reporting purposes, but as a parallel and sedentary system facilitating managerial decision-making (Gimzauskiene, 2004).

There are difficulties to differentiate between ABC and Non-ABC systems that may account for some of the differences in the reported usage of ABC systems. However, despite the claimed benefits of ABC, the level of implementation of ABC is still lower than those of traditional management accounting techniques. The study by Jusoh and Miryazdi (2015) sheds light on this debate. First it examines the level of association between technological changes in manufacturing practices and the level of implementation of ABC to see whether (or not) implementation of technological changes may lead to the implementation of ABC. Then it tests the level of association between the implementation of ABC and the level of satisfaction of ABC users to see whether or not the adopters of ABC are more satisfied than non-adopters. The findings indicate that the diffusion of ABC is associated with the implementation of technological changes in manufacturing practices. As a tool for planning and control, costing systems play a considerable role in providing information needs for managers. Given the diversity of costing systems and simultaneous advancement of new costing systems, choosing a costing system may challenge managers (Gimzauskiene and Klovienė, 2008).

Baird et al., (2007) discovered considerable variations in the adoption of ABC in the public sector, reporting a low rate of adoption in Australia. According to Baird et al (2007) accounting practices played a big role, especially activity management practices that can facilitate cost management through increased focus on internal business processing. Baird et al., (2007) note that business units may adopt activity management at any of three levels depending on their situation. They stated that business units might continue adopting the lower levels of activity management, that is Activity Analysis (AA) and Activity Cost Analysis ACA without proceeding to ABC because: first, their primary objectives from activity management are process improvement and cost reduction; second, concern over the utility of the cost allocations to products and services at the ABC level; and third, because the adoption of ABC is not seen as cost beneficial (Baird et al, 2007).

2.2.2. ABM

(Armstrong, 2002) analysed that ABC and Activity Based Management (ABM) have become a stock-in-trade of successful consultancy corporations, with one in six devoted wholly to their promotion. These techniques involve careful accounting and assignment of costs previously

defined as fixed overheads and treat the workforce as a mass producer of repeated activities for the delivery of products.

The limitations of ABM in managing staff activity can be illustrated concretely by contrasting its approach to the purchasing function (one of its favoured targets) with the supply chain management approach advocated by practitioners and academics who take this function seriously (Armstrong, 2002).

As Armstrong (2002) stated, a typical definition of ABM comes from the leaders of Ernst and Young's specialist ABM consultancy:

“ABM is a way in which an organisation can direct, measure and control its aim for enhanced performance. This is achieved by the creation and use of an activity-based performance measurement framework as the primary means of resource management, continuous improvement and decision making”

It is further analysed by Armstrong (2002) according to realist ontology, therefore, that ABC evolved into ABM. As stated by Ryan et al (2002, p13) “Ontology is the study of existence and in this context is concerned with what we discern to be ‘real’. Reality is a difficult concept but is concerned with the construction of existence in objects.” In the process, the cost drivers originally devised as a means of allocating indirect costs were pressed into service as non-financial performance indicators for staff departments. Although the intellectual and political origins of ABC were very different from those of accounting management in public sector service, its basic technology of control is a series of non-financial indicators of performance similar in principle to those currently being promoted in the public sector (Armstrong, 2002). Both progresses, moreover, were propelled by a kind of organisational moderation, preoccupied with the cancellation of activities which failed to add customer value and with minimising the unit costs of those which did (Armstrong, 2002).

ABC has been developed as a mechanism for producing more accurate product costs to enable better decisions to be made. In the middle of the 1990s the users of ABC recognised that the ABC could be extended beyond purely a product costing, to a range of cost management applications (Armstrong, 2002). (Kaplan & Cooper, 1998) provide a broad definition of ABM and describe it as referring to the entire set of actions that can be taken with activity-based cost information. Furthermore, they stated that ABM can accomplish its objectives through two complementary approaches which Kaplan and Cooper (1998) describe as operational and strategic ABM. Operational ABM takes the demand for organisational activities as a given and

attempts to meet this demand with fewer organisational resources. Strategic ABM attempts to alter the demand for activities to increase profitability by shifting the mix of demands for activities away from unprofitable applications to profitable applications; in other words, seeking to find the most profitable product mix (Armstrong, 2002).

Despite their formal similarities as monitoring systems, there are important differences between the terms on which ABM proposes to open the labour process as compared with scientific management involving a concrete implication and standardisation of production development; ABM offer no guide to the revision of working practices. Its standard costs are not those of activities which have been redesigned in standardised form. Rather, they are the expression of a belief that staff activities already are or should be of this form (Armstrong, 2002). The most striking fact is that the diffusion of ABC /ABM appears to be hurdled by exactly the mentality which it seeks to operationalise in the form of accounting controls (Armstrong, 2002).

Cooper and Kaplan (1998) view strategic ABM as the use of ABC product cost information for strategic product related decisions. The ABM strategy could be equivalent to the activity-based product costing application. They also state that strategic ABM could include decision making about product design and product development which would reduce demand for organisational resources. The most distinguishing feature between activity-based product costing and ABM is that cost management is usually fascinated by having activity cost information at a disaggregated level. Therefore, several hundred activity cost pools may be required to generate information for ABM (Baird, 2007). Baird (2007) analyses the comparison of adoption in the public and private sectors, resulting in confirmation that adoption in the public sector was less prevalent.

2.2.3. BSC

In the past, the measuring of success depended on financial measures which were inherently traditional. In terms of reliability in implementing the BSC strategy, the greater depth of information we have of a company's financial situation, the better equipped we are to discern the true state of its operations (Drucker & Diekmeyer 1999). As Drucker & Diekmeyer (1999) considered, managing knowledge in relation to worker productivity is one of the great management challenges of the twenty-first century. According to Kaplan and Norton (1996) the organisation's value today is mainly provided by employee knowledge, customer

relationships, and a culture of innovation; all of which can accordingly be measured by the BSC.

By the late 1980s it became clear that existing financial measures were not enough to assess performance and it became obvious that there was a demand for an alternative road map (Sundin et al., 2010). BSC comprises a strategy map of metrics, visions, and initiatives which are typically constructed over four perspectives: financial; customer; internal process; and learning and growth (Makhijani& Creelman, 2011). The four perspectives are non-financial measures and are more about strategy, vision, and control involving employees, managers and leaders. In terms of the actual meaning of the word ‘balance’ in relation to the BSC, it is useful to consider firstly, the lexical origins of the word, and secondly how Kaplan and Norton have applied this term (Sundin et al., 2010)

The word ‘balance’ is a noun which has several related meanings such as; a balance wheel to keep something in equilibrium; an even distribution, equal in design and/or promotion. ‘Balance’ also has an adjective form, ‘balanced’, and this attribute means that a phenomenon is in equilibrium and has an even distribution (Sundin et al, 2010). Kaplan and Norton’s (1992) early ideas included the identification of an even distribution of measures across a range of perspectives (Sundin et al., 2010). The main ideas contributed by Kaplan and Norton (1992) include the application of the BSC, the four checks of the BSC and its history. Robert Kaplan, an accounting professor at Harvard University, and David Norton, a consultant from the Boston area, developed the idea of the BSC in 1990. They both lead a research study on a dozen companies with the aim of discovering a new method of performance measurement and major management planning.

Kaplan and Norton (1992) contended that the BSC is a template which can be used by any organisation or industry. Papers concluded by (Sundin et al, 2010) stated that the BSC played an important part in the process of balancing objectives in an organisation and that a balance between the four objectives were to a large extent achievable. Further they indicated that there was consistent and contrary evidence to the normative prescriptions of Kaplan and Norton, and, importantly, also find that while the BSC had a positive influence on organisations, it did not operate alone. They indicated that several other factors were critical to the implementation of BSC, including the explicit desire for balance, the ability of stakeholders to participate in putting on pressure, other formal management control systems and indirect controls, such as organisational culture and the leadership role of management.

Kaplan and Norton (1992) knew that financial measures were not enough for companies to survive. The BSC measures a firm's activities in four areas. The first area is to do with measurement but the other three are more involved with vision and strategy. Since its inception, the BSC has grown tremendously both in stature and adoption (Niven, 2005). Kaplan and Norton (1992) recognised that in this new era of the economy it is paramount to value intangible assets. Furthermore, Kaplan and Norton (1992) compared their approach to managing a company to that of a pilot who views assorted instrument panels in an airplane's cockpit.

1. Financial perspective view of BSC

Traditionally, companies measure their performance through financial performance and the improvements seen by their shareholders (Kaplan, 1991). Traditional performance assessment involves a comparison made between the present and the past which can provide an indication to managers as to whether their current practice is better or worse compared to the previous year (Andersen et al., 2001). Basically, it will tell you if the other objectives are completed. It uses accounting measures to evaluate a short-term financial result. The financial perspective refers specifically to, or has the same meaning as, traditional financial measures (Kaplan & Norton, 1992).

Financial measures are mainly concentrated on income growth and how that growth can be sustained, described by Kaplan and Norton as sales' growth rates and market share for targeted regions, markets, and customers (Kaplan & Norton 1996). The traditional financial measurements on all accounting ratios can be misleading as towards the health and improvement of the company (Kaplan, 1991).

2. Customer perspectives of BSC

With regards to how the customer views the presentation of a company's services in respect of time, quality, performance, and service, the company chooses the customer and market segment to compete (Kaplan & Norton, 1992; 1996). For the company to forward their products and services, they must understand their customers and find out what they need to build on that relationship (Kaplan & Norton, 1992). These give customers a reason to choose you over your competitors. Customer satisfaction is not the only way to help a customer to stay loyal with you, as recent research shows (Kaplan & Norton, 2006). To generate customers through image and reputation is one of the most important 'intangible' elements to attract new customers and generate business, and subsequently to create a comparative advantage.

3. Internal business processes perspective of BSC

Companies need to meet customers' expectations and the only way to achieve this is to bring about more measures which can lead to innovating and enhancing the internal processing (Kaplan & Norton, 1996). In the case of the customer, they need the company to have a forward plan for new internal processes; it means to innovate a new process, in a way that the customer is valued by deepening the relationship with them (Kaplan & Norton, 2000). This process is historically known as the performance measurement system. The successful internal process can be achieved by implementing the right chain model which finally results in gaining competitive advantage. (Kaplan & Norton, 2000)

The innovation process is one of the factors in the creation of value by companies and will bring about a new market (Kaplan & Norton, 1996). All innovation is strongly associated with growth, and all economic growth since the eighteenth century has been finally attributed to growth (Bessant & Tidd, 2007). In order to be able to reach most of the customers, companies need to bring new procedures to show their customers that they value those (Kaplan & Norton, 2008). Internal processing is one of the critical factors of the BSC and it is different from performance measurement (Kaplan & Norton, 2008). The internal process perspective should include measures that track the progress of processes that are essential to achieving strategic objectives (Kaplan & Norton, 1996). This is a result of focusing on internal measures based on strategy instead of minor improvements in existing activities. The main performance drivers of this perspective are: product development, manufacturing efficiencies and product delivery measurements (Bible et al., 2006).

4. Learning and growth perspective of BSC

Achieving objectives in the first three perspectives will teach you the importance of the learning and the growth perspective (Kaplan & Norton, 1992). The principles of learning and growth will give infrastructure for the other three perspectives to be achieved with excellent outcomes; the learning and growth foundation of employees' skills and information systems drives improvements and successes in their perspectives (Kaplan & Norton, 1996). The perspective includes employee training and corporate cultural attitudes related to individual and organisational self-improvement (Andersen et al., 2001). In a knowledge worker organisation, their main resource should be continued learning (Kaplan & Norton, 1996). Certain measures in this strategy help managers to focus training funds on where they can help the most. According to Kaplan and Norton (2000) this perspective concentrates on the

employee's capabilities. Kaplan and Norton (1996) suggest that the learning and growth perspective is just one, or perhaps more than one, important factor for strategic success in comparison to other perspectives. We should emphasise that learning includes not only training, but also mentoring, communication amongst workers and technological tools.

Additionally, Kaplan and Norton (2000) have identified three categories of intangible assets associated with the learning and growth perspectives: human capital, information capital, and organisation capital. Human capital refers to the skills, talents and knowledge possessed by the employee (Chen & Jones, 2009). Information capital refers to the company's information systems, databases, networks and other technological infrastructures. Organisation capital refers to the company's leadership culture as well as the alignment of staff with strategic goals (Kaplan & Norton, 2004). According to (Debusk & Crabtree, 2006) Sixty percent of regular users of the BSC offer financial motivation to employees to meet or exceed production targets, which is compatible with BSC measures. According to their survey at the top level, CEOs are given stock options to provide a financial motivation to increase share prices. Business unit managers, middle managers, and front-line supervisors can have their bonuses and salary increases linked to achieving their targets.

5. Strategy and success in BSC

Strategy is implemented in all four perspectives. It is the positioning of BSC into strategy rather than measurement that is important, particularly following the detailed consideration of Kaplan and Norton's points in creating a step-by-step strategy-focused organisation (Kaplan & Norton, 2000). Kaplan and Norton (2000) have created strategies which are assembled in effect into an army in which one should possess and study the map before invading the area. They have called this a strategy map; a strategy to make the organisation work towards desired goals (Kaplan & Norton, 2000). A strategy map will tell you the investment needs in all aspects and tools of your strategy and the neglect any of them that will cause the strategy to fail (Kaplan & Norton, 2000).

Kaplan and Norton (2000) concentrated on the influence of those in positions of top management; they indicated that the people at the top must be energetic as this will be the key condition for change (Kaplan & Norton, 2000). The key aspect of the BSC is to enhance and improve business performance as opposed to traditional systems. If a manager perceives the measure as a positive then it will be positively affected, if they see it as negative that will have a negative effect (Biggart et al., 2010). A survey conducted by a national merchandising

company, concluded that the BSC does have an impact on managers' attitudes, organisational functioning and concluded that a positive attitude of managers was linked to high BSC scores (Biggart et al, 2010).

Studies have also shown that the effect of the BSC on other multi-perspective strategic goal-setting and organisational performance was a positive one (Iselin et al, 2008). A further survey by the Institute of Management Accountants (IMA) has shown that many organisations have implemented the BSC and that it has improved their performance. According to Debusk and Crabtree (2006) some large organisations regularly use the BSC's reported improvements in operating performance, and 66% of them also reported an increase in profits.

The importance of strategy has been advocated in Porter's essay, *Towards a Dynamic Theory of Strategy*. This gives strategy as a reason for the success and failure of a business (Porter, 1991). Porter (1991) suggests that the real meaning of the formulation of a competitive strategy depends on five competitive factors in every industry and assesses them to determine the industry's weaknesses and strengths. Porter's five forces of competition are as follows: 'competition in the industry', 'potential of new entrants into industry', 'power of suppliers', 'power of customers' and 'the threat of substitute products'.

Furthermore, the powerful analysis of Porter's model can be seen in every business today. As he says, "national prosperity is created, not inherited" but he advocates building these prosperities on domestic demands; "the benefit from having strong domestic rivals, aggressive home-based suppliers, and demanding local customers" (Porter, 1991, p97) He further elaborated that what is meant by success is 'competitive position'.

The first principle of strategy is Executive Leadership; the successful BSC programme will recognise that it is not a metrics project; it is a process of change (Makhijani & Creelman 2011). Furthermore, Kaplan and Norton (2000) analysed that the dynamics of executive leadership determine whether a BSC can be sustained, in order that the strategy can be executed as planned (Kaplan & Norton, 2001). A successful leadership can bring about these changes which comprise creating climates for change: a leadership team, team accountability, a change in culture and vision, and strategy (Kaplan & Norton, 2001). The second principle of strategy is to translate the strategy into operational terms, and thirdly to align the organisation to the strategy. Principle 4: make strategy everyone's daily job (Kaplan & Norton, 2000). Principle 5: make a strategy a continual process with the strategy of the BSC at the heart of the organisation. Taking the example of Dr Gilpin Faust, scholar and historian president at Harvard

University, Faust's leadership approach was first to listen and learn and then to lead. Faust believed that listening and learning are paramount to building a leader's knowledge and creating unity around common goals and purpose (Burnison, 2011).

Kaplan and Norton's fourth book 'Alignment' took the BSC into unprecedented territory and presented the idea of a corporate strategy (Kaplan & Norton, 2005). As Kaplan and Norton indicated, the core of the BSC lies with the scorecard's construction, involving a group of 6 to 12 executives, and these groups can then reach a consensus in respect of their goals and strategies (Kaplan & Norton, 2008). Sometimes the group may be increased because it might contribute more and help it in terms of implementation (Hughes et al., 2005). Further analysis by Kaplan and Norton comes up in their fifth book, 'The Execution Premium: Linking Strategy to Operations for Competitive Advantage', which expresses additional ideas on the strategy revealed in the ideas of the Office of Strategy Management (OSM) (Kaplan & Norton, 2008).

Kaplan and Norton analysed that the OSM integrates and coordinates activities across functions and business units to align strategy with operations and the OSM can be a designer of all planning, execution and control processes (Kaplan & Norton 2008). The task of the designer is to introduce the missing strategy execution predecessor and bring order to what is otherwise a fragmented collection of management processes (Makhijani & Creelman 2011). Kaplan and Norton additionally assign core roles and responsibilities to the OSM. These comprise: defining the strategy management; designing the strategy management process; developing strategy; planning the strategy; aligning the organisation; reviewing and adapting the strategy; linking strategy to financial resource planning and budgeting; aligning plans and resources; communication of the strategy; managing strategic initiatives; linking strategy to key operating processes; and sharing best practices (Kaplan & Norton , 2008).

In the study by Frigo, (2002), some of the IMA surveys on performance management reflect the cause and effect linkages. The survey found that foremost, users and performance measurement systems better supported corporate strategies, and additionally that stronger linkages existed between performance measures in their performance measurement systems. Secondly, the BSC has facilitated the identification of new performance measures. Thirdly, the BSC has improved the effectiveness of performance measurement systems in their communication strategy to employees (Frigo, 2002). A further study by Campbell (2002) examines how the BSC cause-and-effect analysis could be used to evaluate effectiveness of strategy. The managers have a responsibility to develop a business unit strategy and the best

plan for the firm is to have a long-term relationship with a strategy consultancy (Koch, 1993). As Richard Koch further insists, a strategy should be planned due to an unforeseeable future in the market and should be simple so that everybody can understand it. As Kaplan confirmed, the BSC puts strategy and vision at its centre (Kaplan & Norton, 1992).

Further analysis and contribution are provided by Kaplan and Norton in their essay on using the BSC as a strategic managing system; their analysis links long-term strategic objectives with short-term strategic action (Kaplan & Norton, 1996). Furthermore, they identify four processes on managing strategy: translating the vision; communication and linking; business planning; and feedback and learning (Kaplan & Norton, 1996). As advocated by Bremser & Barsky (2004) the implementation of management strategies requires an integrated performance measurement system which supervises the changes in financial and non-financial measures. Furthermore, he confirmed that performance measurement strives to align the organisation's processes with corporate strategy (Bremser & Barsky, 2004). Jessica Keyes, as a President of New Art Technologies in New York since 1989, and founding partner of Manhattan Technology Group, in her book 'Aligning IT with Corporate Strategy' emphasises the strategic use of information technology in implementing the BSC on all organisational operations and that it serves as a support or strategic role in the organisation (Keyes, 2005).

The time for implementing the BSC depends on the efficiency and capability of teamwork. Parmenter analysed in his contribution to the BSC that, according to Kaplan and Norton, the implementation of the BSC should not take more than 16 weeks and therefore questioned why it was taking companies 16 months or more to implement. Further analyses conclude that the successful implementation of the BSC relates to the core of implementation which is the commitment of the senior management team in their work and dedication to implement the four perspectives and 20 measures (Parmenter, 2002).

6. Criticism of the Balanced Scorecard

The BSC is not without critics, Norreklit (2000) claims that the foundation of the BSC approach is mainly based on a persuasive rhetoric rather than a convincing theory based on empirical understanding. Norreklit (2000) has analysed that the financial measures of the accounting system are more about past actions than future alertness. The other area of criticism is the focus on strategy implementations, which is not easy for many firms (Norreklit, 2000). There is a gap between the actual strategy planned and the action taken. The measures of the accounting

system are not enough to guarantee goal agreement between staff decisions and action. Furthermore Norrleklit's (2000) concluding criticisms are as follows:

1. The BSC is based on the strategy developed by Porter (1991) which is a competitive strategy focussed on competitive forces. Therefore, the competitive strategy of the firm should be driven by its environment and not only by competences. That is quite contrary to the way the BSC has been adapted.
2. The BSC is the strategy and vision for business to be translated into objectives and measures in four perspectives. These include financial; customer; internal processing; and learning and growth. These four measures are linked together in a causal chain.
3. The relationship between measures on the BSC is not clear enough and has not been described properly. The model suffers a lack of clarity. Kaplan and Norton (2008) believe that excellent customer services can lead to customer loyalty and then profit.

2.2.4. TC

In the accounting literature, target costing has been introduced as a strategic management accounting system for the management of product costs (Ewert & Ernst, 1999). It is a costing technique to manage a firm's future profits by explicitly including target costs in the product development process (Cooper & Slagmulder, 1999). This management of target costs is generally referred to as TCM and in Japanese firms is concerned with completing a target cost at the same time as the planning, development and design of new products. In relation to this TCM system specific tools were developed such as cost tables, value engineering, total quality management and inter-organisational cost management (Cooper, 1995; Tani et al., 1994; Kato, 1993). Central to the target costing concept is "reverse costing", in which an estimation of the attainable selling price and the required profit margin are used to determine the allowable cost for a new product. In the accounting literature this reverse costing mechanism is referred to as "market driven costing" (Cooper & Slagmulder, 1997). This market orientation is an essential characteristic of target costing systems (Ewert and Ernst, 1999).

Cooper and Slagmulder (1997, 1999) describe that in the target costing systems of Japanese firms' market-driven costing is followed by two other costing sections. In the "product level target costing" section cost pressures are transmitted to the product designers to discipline and focus their creativity to the cost side of the product. Once target costs for designers are set, "component-level target costing" is used to discipline and focus suppliers' creativity to find

ways to design and manufacture components that meet the target costs and required quality and functionality, while realising an adequate profit margin. For this study, it was chosen to adopt a broad definition of target costing, based on its general characteristics. Target costing is defined as a costing technique that uses the following formula to calculate an allowable cost price to be achieved during the product development process: maximum allowable cost price one quarter of the attainable selling price of the required profit margin. Since Dutch companies may have developed and use techniques like Japanese Target cost Management (TCM) without knowing its theoretical counterpart, they may have chosen different ways of organising the cost management process. Therefore, the study focuses mainly on the generic phase, i.e. market-driven costing (Kato, 1993).

In the literature, target costing is positioned as a cost management system, suggesting that cost reduction is an important objective. However, the product development process is characterized by multiple, and possibly conflicting goals, such as realizing low cost, high quality, customer satisfaction, and timely product introduction (Cooper, 1996,1995; McMann & Nanni, 1995; Tani et al., 1994). Target costing as a disciplining mechanism contributes to realising these different goals by having product designers make explicit trade-offs between them. Its market orientation forces designers to consider explicitly the value of product characteristics in the ‘eyes of the market’, and the price that customers are willing to pay for it (McMann & Nanni, 1995). Cooper (1995) suggests that the main purposes of target costing are to ensure that no unprofitable products are introduced and to realize an optimal trade-off between cost, functionality, and quality. After setting the target costs several coordination techniques can be used to manage these trade-offs between goals in the design of products, such as value engineering (VE), quality function deployment (QFD) and design for manufacture and assembly (DFMA) (Cooper & Slagmulder, 1999). This trade-off between multiple objectives to be managed during product design leads to the question for which goals firms perceive target costing to be beneficial to adopt such a practice. And, after adoption, to what extent are these goals realized? Tani et al., (1994) found in their Japanese sample of manufacturing firms that cost reduction was the most important goal when TCM was implemented, followed by realising quality, satisfying customer needs and timely introduction of new products. Horvath and Tani (1997) similarly found in a multiple case study among 10 German adopters of target costing practices that they perceived cost reduction strategy as the most important element. This goal was followed by market-oriented product development, lead-time reduction for product development (time-to-market), and high quality.

2.2.5. LCC

LCC is a type of investment calculus used to rank different investment alternatives (Gluch & Baumann, 2004). It is the estimation of the cost of acquiring, commissioning, operating, maintaining, and disposing of equipment. It is a “cradle to grave” cost analysis. The aim of Life Cycle Costing is to ensure that all relevant costs are identified, and that through life costs are considered at the planning, acquisition, and budgeting stages (Hastings, 2015). LCC was originally designed for procurement purposes in the US Department of Defence (White & Ostwald, 1976) and is still used most commonly in the military sector as well as in the construction industry (Woodward, 1997).

The LCC of an item is the sum of all funds expended in support of the item from its conception and fabrication through its operation to the end of its useful life (White & Ostwald, 1976). Such life cycle costs of a product can be many times the initial purchase or investment costs (Woodward, 1997), and according to several sources 70-90 percent of these total life cycle costs become defined already in the design phase (e.g., Bescherer, 2005; Dowlatshahi, 1992). Yet initial investment costs are most often used as the primary and sometimes the only condition in purchase decision (Lindholm & Suomala, 2004; Woodward, 1997). Despite the obvious long-term advantage of Life Cycle Costing (LCC), its adoption has been relatively slow (Lindholm & Suomala, 2004; Woodward, 1997). Possible reasons for the slow adoption include the lack of standard or formal guidelines and the lack of reliable past data (Ardit & Messiha, 1999).

Papers by (Higham et al, 2014) concluded that (LCC) is often described as a best-value method of evaluating proposed built environment projects an early stage. However, it is more likely to be used on projects procured by the public sector, including education and the health service, and is rarely used across the UK construction industry. This is due to factors including a lack of understanding of the benefits of LCC and a short-term approach to budgets which inhibits spending on this evaluative tool (Higham et al, 2014).

2.2.6. TQM

Jamshid Khan (2003) analysed the use of TQM in export based Pakistani industries to compete with other countries such as Bangladesh, India and China. Khan (2003) emphasised that export needs to use TQM to compete with others. Research by Khan (2003) indicated that the main principle behind TQM is absolute customer focus; and employee empowerment, involvement and ownership; continuous enhancement; and use of systematic approaches to management

organisation, and customer satisfaction. TQM is basically a management concept, and it has become the common approach for enhancing quality and productivity in organisations. Various terminologies have been assigned to the general concept of TQM. These include “total quality control”, “total quality leadership”, “total quality improvement program”, “continuous quality improvement”, and “total quality service” (Lemieux, 1996). However, whatever terminology is used, the three basic ingredients of TQM are constant: Luthans et al (1995) summarised TQM as being a participative system that empowers all employees to take responsibility for enhancing quality management within the organisation.

There were many analysts that write about the cultural impact on implementation and adoption of TQM. Juran (1993) for example, said that we don’t have to change the country’s culture to enable us to discipline the quality of improvements. He believes the main principle of this practice to make TQM work, is to advocate its practices and techniques. Kano (1993), advocates the ideas, that one needs to take cultural background into account when adopting TQM. Even though he was adamant that culture is not going to be a barrier to the adoption of TQM. A Study by Zairi (1994) on a Bradford-based benchmarking study, based on 22 critical factors of TQM across several countries with cultures differences; he found that not all the critical factors are connected in a generic sense. The Key critical factors such as top managers commitment, the need for a clear mission statement and concentrating on the customer were most important as being critical to the success of TQM across borders (Zairi, 1994). Given that the adoption of the TQM system being one of the most challenging tasks which an organisation might ever face (Glover, 1993; Kanji & Asher, 1993). It is not surprising to note that there are as many TQM failures as there are success stories (Gilbert, 1992). For some clear reason, reports of failures in the open literature are a lot and Several writers, however, have analysed main features of TQM failures (Glover, 1993).

A paper by Karia and Assaari (2006) analysed the impact of TQM on employees work related attitudes in a Malaysian setting. Results showed that the organisation was focused on employees’ job satisfaction and career satisfaction; thus, focusing not only on the quality of product, but also on the quality of employees. Indeed, the most successful TQM implementations depend heavily on changes in employees’ attitudes and activities. The employees who are affected most directly are those who are the agents of change in implementing TQM or other programmes for continuous quality improvement. In theory, TQM processes produce positive effects on employees by improving their satisfaction and commitment and by enhancing their organisational effectiveness. Indeed, many organisations

that have adopted quality-management practices have experienced an improvement in attitude, commitment, and effectiveness among employees. Butler (1996) found that companies that used TQM practices achieved improvements in employee satisfaction, attendance, turnover, safety, and health. The adoption of TQM brings benefits to organisations in terms of quality, productivity, and employee development, through improved teamwork, creativity, innovation, training, communication, trust, and decision making. (Lawler et al., 1995)

2.2.7. Benchmarking

World-class organisations use benchmarking as an effective permanent improvement tool to enhance aspects of organisational competitive priorities such as cost, quality, delivery, flexibility, and customer service (Dawkins et al ,2007). Benchmarking may be defined as a process in which an organisation tries to learn a lot from the best-in-class organisations in the world, determine how the best-in-class achieve top performance levels, and materialise those practices as benchmarks for their own organisation (Watson, 1992,). Dawkins et al (2007) and several other quality advocates have strongly recommended the use of benchmarking as an essential component of continuous improvement (Dawkins et al., 2007; Venetucci, 1992). Improving organisational performance by setting a high level of standards, an outward looking approach, flexibility, creating a culture of organisational learning, and effective performance measurement are the main factors behind the use of benchmarking as a valuable quality improvement tool (Dawkins et al, 2007) Since the mid-1980s, benchmarking has been a major element of the Malcolm Baldrige National Quality Award criteria. More recently, the practice of benchmarking is being widely used for Six Sigma processes and for organisations seeking ISO 9000 series certification (Kafetzopoulos & Gotzamani ,2014).

Meybodi (2013) elaborated that in the early 1980s many articles have been written on the development and application of benchmarking in diverse areas such as manufacturing, health care, marketing, supply chain, energy, investment decisions, hotel business, and customer service. The basis for these articles and their primary focus, however, has been on short-term financial metrics to evaluate the performance of the organisation. These studies generally produced limited results. Meybodi (2013) further elaborated that, managers in a broad range of industries recognised that new global competitive realities require that financial metrics to be treated as one among a broader set of performance measures. Singh and Smith (2006) utilised customer service as benchmarking metrics to provide insights into how organisations can develop more a customer-focussed culture. Singh and Smith (2006) used multiple benchmarking performance measures to evaluate the performance of several specialty coffee

stores. Singh and Smith (2006) also materialised benchmarking to investigate supply chain management practices at number Indian manufacturing organisations.

2.2.8. Just in Time (JIT)

If these characteristics of a fault-free, flexible, customer-satisfying (i.e. TQ) system are listed, they can be recognised as those which are also essential for JIT manufacturing: quality design; defect-free incoming supplies; 100 percent reliable equipment; best-practice production processes; flexibility; responsive, rapid manufacturing; technological superiority; supplier participation (Meybodi, 2013). Without an inventory from which to choose, the company has to anticipate what customers expect and want, and this breeds TQ. JIT is the technique developed by Koichi Ohno and his fellow workers at Toyota (Ohno & Imaoka, 1987). The idea was to change production's direction from the estimation of demand to actual demand – a purpose originally rooted in the absence of a mass market and the need to produce small lots of many per. There is a certain amount of confusion over what exactly constitutes a Just-in-Time system. Just-in-Time can be defined as the ideal of having exactly the necessary amount of material available where it is needed and when it is needed (Groenevelt, 1993). In some sense this is precisely what Material requirement planning MRP systems try to accomplish (with varying degrees of success), and what assembly lines closely approximate (Groenevelt, 1993). However, the term Just-in-Time is most frequently used to describe the pursuit of this ideal in repetitive parts manufacturing. To more completely characterize Just-in-Time in this environment, the basic elements of Just-in-Time will be described here. The various elements of a Just-in-Time programme that are often cited include the following: a pull method of coordination of the production stages, setup time reduction, lot size reduction, production smoothing, standardised operations, flexible workers and facilities, a group technology or cellular layout, an emphasis on quality control activities, and continual improvement efforts (Groenevelt, 1993) .

2.3. Shortcomings of TMAPs

TMAPs, such as budgeting system, have been widely criticised by the literature. Johnson and Kaplan (1987) exposed a significant gap between the information needed by contemporary managers and the information provided by their traditional accounting systems. They claimed that accounting information was of little help in reducing costs and improving productivity, that it failed to provide accurate product costs, and that its time horizons were too short term. What is becoming clear is that not only do traditional accounting systems lack relevance, but

by providing managers with misleading signals and inviting the wrong decisions to be taken, they also help to destroy jobs, innovations, and long-term growth.

Concerning the traditional costing system, Hergert and Morris (1989) in their papers on Accounting data for value chain analysis, argued that the traditional costing system, primarily developed to measure true costs, is not able to provide the data required by the more recent strategic planning frameworks of the 1970s and 1980s. They further elaborate that the traditional system cannot address some of the difficulties in using these accounting data. They believe that current organisations need to manufacture high-quality products with less cost to be able to compete and this is only possible with rational decisions based on accurate information about the costs; the traditional costing system cannot provide accurate information about costs.

Furthermore, information obtained from traditional costing systems is usually unhelpful for strategic cost analysis because it does not help an organisation understand the behaviour of costs from a strategic perspective. Managers are under pressure to bring about new techniques and practices to meet these challenges (Burns & Baldvinsdottir, 2005; Johnson & Kaplan, 1987, Cooper & Kaplan, 1988). However, Johnson and Kaplan (1987) indicated three decades ago that MAPs had not changed since the 1920s despite all the changes in this environment. They further stated that, due to a lack of innovation in MAPs it was not adequately meeting the needs of businesses.

As further elaborated by (Johnson & Kaplan, 1987) in their essay on relevant loss 'The Rise and Fall of Management Accounting', they say that the aim towards shareholder value maximisation could be derailed by accountants and finance people in their work to conclude a positive financial statement (Johnson & Kaplan, 1987).

Furthermore, Johnson and Kaplan (1987) p22 stated:

"Today's management accounting systems provide a misleading target for managerial attention. They fail to provide the relevant set of measures that appropriately reflect the technology, products, processes, and competitive environment in which the organisation operates. Originally designed earlier in this century to help coordinate the diverse activities of emerging vertically integrated enterprises, financial measures such as return on investment (ROI) have become for many organizations the only measure of success. Financial managers, relying exclusively on periodic financial statements for their view of the firm, get isolated from the real value-creating operations of the organization and fail to recognize when the accounting

numbers are no longer providing relevant or appropriate measures of the organization's operations."

2.4. Development and adoption of MAPs

Consequently, traditional management accounting models have evolved with innovations such as ABC, ABM, BSC, TQM, TC, LCC, Benchmarking and JIT. Researchers have pointed out that these innovations have altered the processes of management accounting concerning planning, controlling, and decision-making in business organisations. In the 1970s, management accounting research focused on economics-based mathematical models. Researchers (Askarany et al., 2007; Askarany & Yazdifar, 2007; Jarvenpaa, 2007) consider that advanced MAPs, including ABC and ABM, largely linked to the notion that the information provided is more accurate and detailed than that provided by traditional costing systems. Moreover, these advanced practices have been aimed at helping business decisions and taking control in an increasingly sophisticated way and with this they enhanced the business orientation of managerial accounting and changed the role of the management accountant from number crunching to a business-directed role.

Many surveys have been conducted in different countries around the world on the adoption of MAPs (Libby et al., 2004; Malmi, 2001; Francis & Minchington, 2003; Nielsen & Sorensen, 2003; Jusoh & Miryazdi, 2015; Bescos and Charaf, 2010); Bjornenak, 1997; Cohen et al, 2005). However, despite the strong advantages of advanced MAPs, empirical evidence suggests that their adoption in practice is low. For example, the survey conducted by Askarany & Yazdifar, (2007) shows that the take-up of ABC and ABM has been low in practice. Abdel-Kader & Luther (2006b) in their article on MAPs in the UK food industry have concluded that these accounting practices are vulnerable to economies of scale. They confirmed that traditional management accounting and setting budgets continue to be the principal pillars and the implementation of ABC and BSC has happened very rarely in practice.

Conducting a survey of 200 manufacturing Canadian companies, Gosselin (2011) examined the association between structure, strategy and environmental uncertainty, the use of non-financial measures as well as the adoption of innovative performance measures such as the BSC. Based on responses from 111 companies, the findings showed that 11.9% of responding companies had adopted the BSC, 49.5% had adopted other innovative and integrated Performance Measurement Systems (PMS), and 69.3% of companies had not adopted any innovative or integrated PMS. Furthermore, the result show organisation with having strategy

in place, have implemented more MAPs such as BSC or integrated performance measurement systems, also environmental uncertainty and decentralised structure are other factors influencing the design of innovative MAPs (Gosselin, 2011). Concerning this low level of MAPs adoption, for example in the case of ABC and ABM, the papers by Lee (2002) show in the international managerial context that, in the early 1990s the implementation rates of ABC and ABM were low in both the USA and Europe. Review by Lee (2002) found out that survey in finish 30% of the investigated companies had implemented ABC, while survey in 1994 US 39% of the companies implementing ABC, at the same time the Dutch companies like US using ABC. According to Lee (2002) 22.5% of Swedish companies were implementing the method. In the UK around 46% of the surveyed companies had implemented the ABC. According to the above surveys, it is correct to establish that UK, Australian and Scandinavian firms were following the adoption path of the US.

Papers by (Bescos and Charaf, 2010) observed the adoption of ABC in the banking system in the Morocco Almaghrib Bank during a field study from January 2007 to March 2009. The aim of the papers was to show the association between the implementation of ABC and performance. The papers concluded the four level of activity have been implemented: Activity Analysis (AA), Activity Cost Analysis (ACA), Activity Based Costing (ABC) and Activity Based Budgeting (ABB). The study resulted in managers confirming that the implementation of ABC had improved communication between the different departments as explained by the head of the Financial Department and improved performance and delivered all the benefits relevant to performance. Giannopoulos et al., (2013) conducted a study to evaluate the BSC approach in small companies regarding managers' perceptions of the BSC concept, the adoption of the BSC, and the reasons that may prevent small companies from adopting this approach. Relying on surveying 500 companies in the UK and Cyprus, and with a response rate of 8%, the study firstly found that most of the companies' managers in both countries were unaware of the BSC concept, and only a single UK company and two Cypriot companies claimed to have adopted the BSC. The main reasons for the non-adoption of the BSC were identified by the study as the use of other performance measurement systems, the non-appropriateness of BSC for small companies, and its being too time consuming to use (Giannopoulos et al., 2013).

Hendricks et al., (2004) surveyed 579 Canadian companies in order to examine the adoption of BSC. Their survey findings are based on the responses of 179 companies; the study reported a low level of BSC adoption with just 23.5% of the surveyed companies having adopted the

BSC. In France and Belgium, the adoption rates were around 20%, in the Netherlands around 12%, while in other countries they were less than 10% (Lee, 2002; Clark et al., 2002). Researchers (Innes et al., 2000) undertook a comparison study between 1994 and 1999 and reported low adoption rates of ABC (of around 10%) in the UK at the start of the study; but a few years later the same survey showed more companies implementing ABC, with adoption rates reaching 20%. As for the public sector, 54% of local authorities, 17% of government agencies and 55% of healthcare organisations were using ABC/ABM techniques. The paper concluded ABC implementation has remained significantly higher among non-SME companies and among those from the finance companies. However, the percentages of ABC users and of those currently assessing it have fallen, the percentage refusing it has risen a bit, At the same time statistically, there is considerable increase has been apparent in those currently giving no consideration to it. These results are concluded that there is no growth in the popularity of ABC and are consistent with both a levelling off in interest in it and the adoption of it over this 5-year period study. (Innes et al, 2000)

Bedford et al., (2008) investigated the adoption of the BSC in Australian organisations; having conducted a survey questionnaire and based on the responses of 426 organisations, the findings firstly show that just 92 companies (21.6%) had adopted the BSC. This adoption is found to be associated significantly to organisation size. Hence, it is obvious that the findings of previous studies show in general that the adoption of advanced MAPs varies between countries, while there is still a low level of advanced MAPs adoption compared to the traditional ones. Al-Dhubaibi et al., (2015) indicated that there are clear differences in the (MAPs) of companies and organisations. Many examinations have recorded different levels of MAPs adoption and fulfilment, particularly in developing countries. They found that customary MAPs were more prevalent than advanced MAPs despite the benefits of the latter. Furthermore, they showed that these investigations researched a small number of factors and that may explain the diversity in the MAPs of firms in country of Yemen.

(Soin et al, 2002) used institutional theory to clarify the role of management accounting in organisational change, analysing a longitudinal empirical study of the implementation of an Activity Based Costing system in the clearing department of a UK-based multinational bank. To analyse their case study, they used a theoretical framework based on Burns and Scapens (2000), chosen because that theory provided both a general model of organisational change and a method of interpreting the data.

2.5. Factors influencing the adoption of advanced MAPs

The spread of advanced MAPs cannot take place automatically through the organisation's existing practices. Carnegie and Napier (2002) explained that MAPs and MA concepts in any country are not the outcome of invention within a single country but are rather the outcome of innovations in many places and on an international scale. Carnegie and Napier (2002, p.690) stated:

“Our aim in this paper is to bring together the insights of comparative international accounting and those of historical accounting research, in order to propose the CIAH approach. However, we are conscious that it is desirable not just to “preach” but also to “practice”.

This paper explained the notion of CIAH Comparative International Accounting history and was concerned with the diffusion of accounting and this study inspired more papers for cross national studies of accountancy development and investigating accounting development. (Carnegie and Napier, 2002) Concerning the factors that may affect the adoption of MAPs. Shield (1995) found that there are five factors that can have effect on the change in MAPs: top management support, integration with competitive strategies, non-accounting ownership, performance evaluation, and technical influence such as software. The study indicated that success in the adoption of ABC very much depends on how you deal with specific “behavioural and organisational variables” used in the correct way, especially top management support (Shield, 1995). Davila et al., (2009) reviewed 69 early-stage technological companies in relation to their adoption of MAPs and how these practices evolve over time. Davila et al., (2009) found a connection between the growth of the company and the reason for the adoption of MAPs. Their study identified several factors influencing the adoption of advanced MAPs by early stage technological companies including external factors such as accounting reports, legitimacy and environmental uncertainty, internal factors such as reacting to chaos and learning and the Managers' backgrounds (Davila et al, 2009) .

Yazdifar and Askarany (2012) were concerned with investigating the effect of industry type on the adoption of the advanced MAPs, TC. Based on their investigation in the UK, Australia, and New Zealand, the study shows that TC was prevalent in both manufacturing and service companies although there were different implementations. Their study shows that there is a big focus on the strategy of all cost reduction at the early planning stage and not at the production stage. Abdel-Kader and Luther (2006b) attempted to understand the effectivity of explanatory and conversion factors on the level of MAPs adoption. Abdel-Kader and Luther (2006b)

indicated that organisations implementing a product differentiation technique require a cost strategy which is more experienced and correctly evaluates the price of production and quantity distinction. The aim of their paper was to report on the current state of MAPs in the food industry in UK; it concluded that while more than three quarters of companies considered financial measures of performance to be most important, non-financial performance measures were also perceived to be highly important.

Powell and DiMaggio (1991, p.65) stated that “early adopters of organisational innovations are commonly driven by a desire to improve performance.” They further stated that there are four fundamental elements of adoption of new practices: the social system, the innovation, time, the diffusion process, and communication and channels of communication. Social system is described as an interrelated unit to solve problems to achieve a common goal. Time is the main factor in the process of diffusion. Rogers (1995) indicated that the adoption of a new idea or technique is contingent on several factors, including the benefits it will bring to the organisation, its congruence with the organisation’s existing values, its complexity, and the potential for adoption on an initial trial basis.

Hall (2004, p.12) in his book states that, “one can derive a list of factors that might be expected to influence the adoption of innovations. These can be classified into four main groups, first those that affect the benefits received, second those that affect the costs of adoption, third those related to the industry or social environment, fourth those due to uncertainty and information problems”. Alternatively, using the classification system of Rogers, one can identify the first and second as combining to yield relative advantage and complexity, the third as compatibility, and the fourth as being determined by trainability and observability (Rogers, 1995).

Bjørnenak (1997) in his explorative study uses the example of the ABC and focuses on understanding the diffusion of MAPs. He identifies two types of participants in this diffusion process with one being the leader who invented the idea and the other being the adopter who plays an important role in diffusion. He also identifies three factors influencing the speed and range of a diffusion process. The first factor is, ‘initial resistance’ to the innovation for practical or theoretical reasons; secondly, ‘barriers’, such as lack of resources or cultural/linguistic obstacles; and thirdly, the ‘information field’ of potential adopters, that is, their exposure to information and relevant contacts. Bjørnenak (1997) considers the issue of supply and demand for innovation. While most studies tend to focus on demand for an innovation from potential adopters, there is also the factor of suppliers seeking to create that demand through promoting

new accounting ideas. Bjørnenak (1997) considers three types of diffusion of ABC in the Norwegian manufacturing industry. One is driven by skilled workers moving about and causing change; the second is 'contagious', through the random and smooth spread of information; the third is 'hierarchical', with a 'trickle down' spread of information. Bjørnenak (1997) reports that the initial demand for innovations was a less critical factor to successful diffusion than the role played by suppliers in promoting the benefits of the innovations and considered that the origins of the innovation and the structure of the company will influence the process of diffusion. Bjørnenak (1997) indicates that difference in size is significant for diffusion, implying that large companies have large networks which will help the adoption of the ABC.

Askarany and Yazdifar (2007) based on their survey of varied Australian companies found that factors relating to the characteristics of innovations seemed to be among the most important influencing factors. They cited examples of those factors including lack of suitable software, cost of set up and implementation, lack of information on available costing techniques, management policies and priorities and lack of appropriate cost accounting skills (Askarany & Yazdifar, 2007). Further papers by Askarany and Yazdifar (2015) studied the organisations' approach to adopt benchmarking in Australia where it is not widely used. The aim of the papers was to shed light on the diffusion of benchmarking. In their papers they laid down a series of steps for the benchmarking process to be adopted comprising: understanding the full process, using the process of others, comparing your own performance with others and completing these steps. The study concluded that there is a level of association between organizational factors and the adoption of Benchmarking, other contextual factors affecting the adoption of this innovation such as the commitment of senior managers.

Furthermore, the results of a postal questionnaire survey by Al Omiri and Drury (2007) targeting 1000 UK manufacturing/service firms with a turnover of above £50 million, suggested that companies facing intensely competitive market environments tend to employ relatively more advanced MAPs. Al Omiri and Drury (2007) study indicated there is the potential contextual factors influence the product costing systems, the study not advocating the strong link between ABC adopting and those contextual factors, the study further indicated that high level cost system are positively related cost information. Also, the study concluded that intensity of the competitive environment, size, type of business sector. The study indicated further that higher levels of cost system sophistication are positively associated with the importance of cost information, and the extent of use of other innovative MAPs. Different studies have investigated different factors that may affect the adoption of advanced MAPs; for

this reason, this study seeks to help in this aspect of research by investigating the role of NIS factors in the adoption of advanced MAPs.

Ahmadzadeh et al., (2011) in turn investigated the role of organizational size, organisational type, and cost structure and service diversity in the adoption of advanced MAPs in Iran. They found that the adoption of advanced MAPs ABC among intermediate and small companies is more common than in big ones. They explained that the reasons why big Iranian companies have not attempted to implement this system can be traced to economic crisis, lack of external competition. Hoque and James (2000) are among the early researchers concerning the factors influencing the adoption of the BSC. They examine the contingent relationship between BSC usage, organisation size, product life cycle stage and marketing position. The results of this study based on the 66 received questionnaires show that organisation size is positively and significantly associated with the adoption of BSC, whereas large organisations are more likely to adopt the BSC than smaller organisations. Moreover, there is a positive and significant relationship between BSC adoption and the early product life-cycle; regarding the market position, the study found that there is a negative but not significant relationship between organisational market position and the adoption of the BSC. Askarany and Smith (2008) have produced findings that suggest the existence of a significant positive correlation between business size and the adoption of both manufacturing innovations and ABC in organisations. However, the findings also suggest that the diffusion of ABC fails to keep pace with technological change in manufacturing practice. Bedford et al., (2008) found that the adoption of the BSC in Australian companies is associated significantly with organization size.

Gosselin (2011) examined the contingent relationship between the use of non-financial measures as well as the adoption of innovative performance measures such as BSC and several factors including strategy, decentralisation and environmental uncertainty. The study shows that there is a positive and significant relationship between the prospector strategy and the use of non-financial measures and outcome measures and the adoption of the BSC. In contrast, the cut-cost based strategy has a significant but negative effect on the use of non-financial measures and the use of outcome measures, while it has a positive but not significant relationship with BSC adoption comparing with prospector strategy. Moreover, decentralisation correlated significantly with the use of non-financial measures and process measures, yet it does not have a significant relationship with BSC adoption. Finally, addressing the relationship between the independent variables and environmental uncertainty shows that

a high level of environmental uncertainty has a positive and significant relationship with the use of non-financial measures, outcomes measures, and BSC adoption.

Other studies by (Claes et al, 2006) argue that that is not always the case and show the existence of a relationship between a high-level of customer satisfaction and return whereby a high-level of customer satisfaction yields a high return. In addition to this point the latest study by Dixon et al., (2010) shows that delighting the customer does not build loyalty. The study was conducted with more than 75,000 people and analysed their interactions over phone, Internet and email contacts, plus hundreds of structured interviews in which they asked the customers three questions: beginning firstly, with the question of how important they regard customer service in terms of loyalty. Secondly, questions were raised as to which customer service activities increase loyalty, and which do not. Thirdly, they asked whether companies can increase their loyalty without the accumulation of extra costs. Surprisingly two results have emerged which should affect a company's customer service strategy: firstly, that delighting the customer does not build loyalty, the work to solve their problem does. Secondly, acting deliberately on this insight can help improve customer services as well as reducing customer service costs (Dixon et al., 2010). Doran et al., (2002) alleges that the BSC approach can be very time-consuming and complex as well as requiring a considerable commitment of time and resources. Furthermore, the BSC approach will also require the mapping and alignment of strategy with performance measuring; for that reason, it cannot be viewed as an 'off-the-shelf' solution (Doran et al., 2002).

A study by Anand et al. (2005) on the BSC in Indian Companies highlighted in their results that the BSC cannot be viewed as a one-off event but rather needs to be viewed as a continuous process. Anand et al. (2005) concluded from their survey on Indian companies, that the adoption of the BSC rate was 45.28 per cent in corporate India in comparison with the US which was 43.90%. The corporate experiences with the implementation of the Balanced Scorecard in Indian companies concluded mixed results. In their article, the authors' conclusions were summarised as follows:

- 1) Identify the extent of the usage of the BSC by corporate companies in India;
- 2) They want to find out whether Indian firms use all the four perspectives, namely, customer, financial, internal business, and learning and growth in their performance scorecard;
- 3) Identified by management motivations for implementation of the Balanced Scorecard;

4) They analysed the key performance indicators in different perspectives of the performance scorecard;

5) Assessing the performance of the Balanced Scorecard as a management tool.

Prajogo and McDermott's (2005) random survey was drawn from 194 Australian companies and explores the relationship between TQM practices and organisational culture with the purpose of identifying the cultures that determine the successful implementation of TQM practices. The results show that different types of TQM practices are affected by different types of cultures, with hierarchical culture having a significant relationship with some practices. They also show that organisations can implement a range of TQM practices, even if they are underpinned by different and even opposing cultural factors.

The study of Lee et al., (2014) found that there is a significant and positive relationship between BSC adoption and contingent variables such as organizational size, market position, and market competition. The study further indicates no significant association between BSC adoption and contingent variables such as product life-cycle, market uncertainty and market growth. The study based on a sample of 259 South Korean firms and further results concluded that the BSC will be more effective if linked to corporate strategy.

Malmi (1999) looked at ABC diffusion among Finnish firms, identifying three additional explanations for adoptions: 'forced' selection can be driven by a dominant supplier; the 'fashion perspective' is where many potential adopters have a choice over implementation; and the 'fad perspective' is where organisations are motivated by wanting to appear legitimate and have competitive advantage. Ax and Bjørnenak (2005) studied the relatively rapid adoption of the BSC in Sweden and concluded that suppliers have 'bundled' the BSC with other MAPs and adapted the original BSC, developed in the USA, to make it more attractive to Swedish business culture. The study stressed the importance of focussing on the supply side to understand the diffusion of MAPs. Ax and Bjørnenak (2005, p.20) stated: 'To a great extent the transformation and adaptation of innovations are processes driven by supply side actors'

The study by Shukri and Ramli (2015), conducted in the Malaysian private hospital, found that there is a significant positive relationship between the centralisation, formalisation and the adopting of BSC. The survey covered 97 significant and positive hospital's and had been selected for a structured questionnaire; in result, the response was 40.2%. The study concluded that the adopting of the BSC had improved this sector in the internal processing and patient

quality service and the organisational learning and growth together within the financial prospect.

Modell (2012) explained the politics behind the diffusion and dissemination of MAPs, giving BSC as an example, stating: “another strand of research with significant potential to make the politics behind the diffusion of BSC explicit has concentrated on its distinct ideological dimensions and how this contributes to legitimize particular management style.” The author considered the impact of the political aspect, connected to power, conflict, and resistance in the diffusion process. It further analysed a chain of studies that focussed on economic and competitive imperatives and believed these were outweighed by political factors, such as coercive pressures as a reason for adoption. (Model, 2012)

Lebedev (2014) in his report analysed the factors that have contributed in shaping and currently influence understanding of management accounting within Russia. Since the fall of the communist system in Russia, a market economy evolved dominated by heavy competition. Market forces forced Russian companies to innovate and design effective strategy. Russian companies adopted western capitalist methods with their legal and accounting system. The fundamental discoveries show that, at a beginning stage of improvement in management accounting within Russia, it was principally consultants, who informed and impacted the ideas with an expanding role of scholastics and education and in addition a cross-border data exchange. Seven different factors identified by Bhimani (1996), comprising full and variable costing, education of students and employees, government intervention, profession association, transfer of management accountancy ideas, technology computerisation and consultants, have been analysed by Lebedev (2014) in his paper as having shaped and currently influencing understanding of management accounting in country of Russia. The conclusion of this study is that the consultant has in the early stages significantly influenced and informed the management accounting practices in Russia. (Lebedev, 2014)

Hendricks et al., (2004) examined the relationship between the adoption of the BSC and some contextual factors including business strategy, organisational size, environment uncertainty, investments in intangible assets, and the prior organisational performance. The study reports that business strategy is significantly associated with BSC adoption, whereas the adoption of the BSC was higher in organisations following innovative-based strategies than those following a cut-cost-based strategy. Moreover, the study reported a significant association between organisational size, environmental uncertainty and the adoption of BSC, with no

support to the existing relationship between the investment in intangible assets, prior poor performance and BSC adoption.

Tuanmat et al., (2010) investigated the potential relationships between the environmental factors, practices of management accounting and organisational factors in Malaysian industrial organisations in the Klang Valley. They found that most of the responding businesses had reacted positively to changes in the competitive business environment and industrial technology. They indicated that there was an increased change in the relationship between MAPs and organisational factors as well as changes within organisational factors and MAPs .

A study by Anand et al. (2005) on the BSC in Indian Companies highlighted in their results that the BSC cannot be viewed as a one-off event but rather needs to be viewed as a continuous process. Anand et al. (2005) concluded from their survey on Indian companies, that the adoption of the BSC rate was 45.28 per cent in corporate India in comparison with the US which was 43.90%. The corporate experiences with the implementation of the Balanced Scorecard in Indian companies concluded mixed results between 2003 and 2007.

2.6. MAPs in GCC countries

Concerning the adoption of MAPs in Gulf Cooperation Council GCC countries, the extant evidence in relation to the adoption of MAPs in Arab countries in general and GCC in particular suggests that companies in these countries still rely on the more TMAPs such as budgeting rather than the more recently-developed strategically-focused tools such as ABC and the use of the BSC (e.g., Joshi et al., 2011; McLellan & Moustafa, 2011;2013) However, these findings came upon very rare empirical investigations. That is, against the many studies conducted in Western countries and in Asia, there is a lack of studies conducted in Middle Eastern countries in general and the GCC regarding the adoption of management accounting practices. McLellan & Moustafa (2011) indicated that there is not much research about MAPs in the Arab countries, despite the increased contribution of these countries to the world economy, and their increasingly open policies toward international trade and markets. Joshi et al., (2011) further confirmed that there exists a need for more studies on MAPs in the United States, Europe, and Asia, as well as in other emerging economies. There is a trend towards a global confluence of management ideas and systems. (Joshi et al 2011).

A study by Ramadhan (2009) in the Kingdom of Bahrain indicated that budgetary accounting is the most important component of the accounting system of the government and he further indicated that the major duties and responsibilities of the Budget Directorate consist of: budget development; budget formulation; budget implementation; oversight; budget monitoring and reporting; revenue enhancement; expenditure management; public expenditure; management strategy; accountability and transparency in financial administration; and training and development. Each department in the Budget Directorate is responsible for a sector (Ramadhan, 2009). In his efforts to investigate the adoption of the BSC in private Egyptian companies and identify the main difficulties that may inhibit these companies from implementing BSC, Ismail (2007) used a questionnaire sent to 150 private companies listed on the Egyptian stock exchange. Based on the responses from 43 companies, the findings indicate that although 65% of responding companies claimed to have adopted BSC, they were not using all the generic four perspectives. In addition, the study points out that the most significant obstacles preventing the Egyptian companies from implementing the BSC is the inadequacy of their information systems, followed by the lack of sufficient knowledge of how the BSC can be implemented, the belief that non-financial measures are less important than financial measures in evaluating organisational performance, the high cost of implementing the BSC, the ambiguities within companies' strategies, and the lack of software package to enhance the implementation of the BSC.

The study of Fakhri et al., (2009) surveyed 93 commercials and specialised Libyan banks in order to examine the adoption of the BSC and the use of non-financial measures as well as the relationship between this use and several contingent variables. With a response rate 68% and through asking a direct question to top and middle managers related to their implementation of the BSC, the study found that there 16% of responding banks had already adopted the BSC, while 40% were considering this. The study also confirmed that BSC adoption does not appear to be associated with organisational size. Concerning the use of non-financial measures, the findings indicate that Libyan banks still rely essentially on financial measures rather than the non-financial measures in evaluating their performance. In addition, the use of non-financial measures is found to have a significant relationship with decentralization, organizational size, intensity of competition and organisational strategy (Fakhri et al, 2009).

Chazi et al., (2010) survey of six Middle Eastern countries showed that the traditional accounting system, including capital budgeting, cost of capital, and capital structure, is still a major issue for the Gulf States (Bahrain, Kuwait, Oman, Saudi Arabia, Qatar and UAE). The survey is based on 38 questionnaires out of 479. Most of the study focused on capital structure. The survey shows that these Middle Eastern countries on average finance 20% of their assets with long term debt (Chazi et al., 2010). The study shows that, despite the unique institutional features of the different countries, the practice of corporate finance is largely similar among Chief Financial Officer's CFOs in North America, Europe and the Middle East. Chazi et al. In their article, the authors' conclusions were summarised as follows Chazi et al. (2010, p.217), stated "our results fail to identify meaningful differences in executive's practices mix of Islamic law and secular law". Furthermore, Chazi et al., (2010) continue and state that 'institutions do rule but, from the perspective of a Middle Eastern financial manager, not that much. Our study of the interrelationships between institutions and finance and the theory and practice of corporate finance raises additional important questions inviting further research in this area.'

Sawalqa et al. (2011) investigated the adoption of the BSC among Jordanian industrial organisations. Based on gathering information from 168 companies through using a questionnaire survey, the study found that about 35.1% of Jordanian companies have adopted the BSC approach while the others do not do so. On the other hand, the study indicated that the BSC provides several benefits for companies such as improving the performance measurement process, fostering better management of the operational process and overall business processes, and enhancing the communicating strategy and decision-making process. Furthermore, the study concluded that the BSC was used for different purposes such as "evaluation of organisational performance", "compliance with legal requirements", "evaluation of managerial performance" together with "encouraging improvement of business processes" (Sawalqa, 2011).

In general, there is lack of studies concerned with investigating the adoption of MAPs in the Middle East and in GCC countries. Concerning GCC countries, McLellan & Moustafa, (2013) found that companies in the GCC rely on the more TMAPs such as budgeting rather than the more recently-developed strategically focused tools such as activity-based management and the use of the balanced scorecard. Besides, the study investigated the effect on the adoption of advanced MAS in GCC countries of different organisational factors including companies' ownership (branch of international company versus locally owned companies), legal structure (incorporated, partnership/joint ventures, family owned), size (small, medium, and large), and

industry sector (manufacturing versus service). The study, in this respect, found that company characteristics play a significant role in the use of management accounting tools by businesses. Overall, international ownership and incorporation tend to increase the use of many MAPs.

Joshi et al. (2011) conducted a study that analysed how MAPs had been adopted and diffused by publicly-listed firms in Middle Eastern countries including the GCC countries. The survey shows that the adoption rates for MAPs in the area of cost management and strategy are low while those in the area of performance measurement are moderate. Furthermore, the study investigated the effect of certain factors on the adoption of MAPs in the concerned countries, including the differences between the companies in relation to their characteristics and the prospective economic-benefits from adopting the MAPs. The study-related findings show that power and politics, not economic, or cost–benefit, reasons, were the most influential reasons for the non-adoption of MAPs.

That is, while small number of studies are concerned with investigating the adoption of MAPs in GCC countries, much further empirical investigations are required to understand this adoption. Besides this lack of relative studies, the time horizontal between the previous studies and the current study gives the current study the chance of capturing changes in the tendency of GCC countries towards adopting advanced MAPs, in a way that strengthens the importance of conducting the current study.

On the other hand, here it is important to point out the difference between the current study and the studies of McLellan and Moustafa, (2011;2013) and Joshi et al., (2011) owing to the apparent resemblance.

First, in relation to McLellan and Moustafa, (2013):

- The study of McLellan and Moustafa, (2013) has investigated the effect of the organisational characteristics on the adoption of MAPs, but it did not investigate or employ explicitly the institutional theory or other theories for analysing the adoption of the systems. That is, in addition to investigating a varied set of advanced MAPs in GCC countries, the current study will investigate the factors that may have effect on the adoption of such MAPs, and that will be mainly through the study employment of (NIS).
- The study of McLellan and Moustafa, (2013) concentrated on the companies that have been certified by the institute of management accounting (IMA). However, our study focuses on the listed companies within the stock exchange markets within the GCC countries. The

researcher believes that this focus provides the chance to investigate a wider range of companies.

- The study of McLellan and Moustafa, (2013) was based on surveying the opinion of respondents instead of investigating explicitly the real situation of companies in relation to their real adoption of MAPs and the factors that affect this adoption. However, the current study is going to survey companies' key members on the real current situation of the company in terms of the adoption of advanced MAPs, and the factors that they experienced to have effect on that adoption.

Second in relation to McLellan and Moustafa (2011):

- The findings of the study of McLellan and Moustafa, (2011) were based on small number of respondents in the way that can affect their generalisability and therefore their ability to provide adequate understanding of the adoption of advanced MAPs in Gulf countries.
- The study of McLellan and Moustafa, (2011) concentrated on investigating the adoption of traditional and contemporary MAPs, in the way that affected negatively its ability to include a broad set of contemporary advanced MAPs; whereas, among the investigated MAPs, the study investigated just five out of many contemporary MAPs; and this can have a negative effect on the results of the study. That is, to conclude, that the adoption level of advanced MAPs in Gulf countries is very low, and this was based only on investigating the adoption of just 5 MAPs, this, at least in our opinion, is misleading findings, because there are many other advanced MAPs that may be the practical focus of Gulf companies rather than just the identified five MAPs.
- The study of McLellan and Mustafa, (2011) only invited the 453 CMAs in the Gulf region to participate and this did not show any connection to the listed companies in the GCC.

Third in relation to Joshi et al:

The main difference with the current study is that Joshi et al., (2011) considered the implicit way in which some institutions affected the adoption of advanced MAPs in GCC countries. However, these institutions are intra-organizational factors (power and internal policies), while the current study is going to investigate the effect of external pressures on the adoption of advanced MAPs through using the NIS; such external pressures include coercive, normative, and mimetic pressures, which will be discussed later in this chapter.

2.7. Summary:

This chapter provided a brief overview of the domain of this study. This included the geography of the Middle East, the current status of the GCC, the law, and religion in GCC, the modern history of political change with the GCC; the relationship between Middle East and western world, and finally the impact of oil discovery. Moreover, the chapter provides an overview of the advanced MAPs that will provide the focus of the investigation of this study. These are ABC, ABM, BSC, TC, LCC, TQM, Benchmarking and JIT.

Chapter 3: Changes in MAPs and theoretical underpinning of the study

This chapter will focus on the adoption of advanced MAPs and the factors that may influence this adoption, besides discussing the study's theoretical underpinning and the development of its hypotheses

The review papers by Scapens (2006) analysed the author's personal journey as an MA researcher and the concept and meaning of MAPs. The study considers the period from 1970 and the changes that have evolved over the last four decades. He indicates that MAP in the 1970s was more focused around economic models (Scapens, 2006). Two years after qualifying as a chartered accountant he joined Manchester Business School with two years' practical experience with accountant firms. By the early 1980s, as he discusses, academics found a big gap between theory and practice and academics and researchers came to an agreement on the need to learn more about MAPs through questionnaire surveys, fieldwork, and the interviewing of managers. This chapter mainly provides a review of the literature in relation to the adoption of advanced MAPs and the factors that may affect it. Moreover, the chapter presents the findings of previous studies on the adoption of advanced MAPs and the factors affecting it in GCC countries. The chapter then proceeds to discuss the theoretical underpinning of the study. With prime focus on the institutional theory, the chapter discusses the concept of the institutional theory, NIS, the OIE, the comparison between OIE and NIS sociology; power, politics and institutional theory, and then it discusses the role of new institutional theory for management accounting change. Furthermore, the chapter goes on to build the theoretical framework of the study and develop its hypotheses.

3.1. The study's theoretical underpinning

A variety of theories to study (MAPs) were developed in the 1980s and 1990s by extending the theoretical domain from economics to organisational and social theory. The current research streams exhibit a wide range of theoretical diversity (Joshi et al 2011). Institutional theory is one of the most common theoretical frameworks for MA research in trying to explain why and how accounting change occurs. Powell and DiMaggio (1991, p.243) stated that: "The evidence suggested that pattern of individual and organizational behaviour varies institutionally". It is intended in this study to use NIS as a theoretical framework to explain changes in MAPs and to inform the analysis of the case (Burns & Scapens, 2000; Scapens, 1994). This study of the diffusion of innovation is in the context of the diffusion of MAPs and seeks to understand what drive the adoption of advanced MAPs in institutionalised organisations. The analysis of this

study draws on NIS), one of the main branches of institutional theory. These theories are used by academics to interpret how MAPs are adopted and the significance of institutions and institutional relations for the survival of organisations (Ahmed & Scapens, 2000; Yazdifar & Tsamenyi, 2005).

3.1.1. Institutional Theory

Moll et al., (2006) indicated that Institutional theory became one of the most important theories in analysing management accounting research and accounting change. Ahmed and Scapens (2003) explain that institutional perspective can assist us in explaining the development of cost-based pricing rules in UK. Burns and Scapens (2000, p.25), state that: “The starting point for our institutional framework is the recognition that MAPs can both shape and be shaped by the institutions which govern organizational activity”. However, the focus here is the issues related to the researchers that apply institutional theory using both branches of OIE and NIE. Burn (2000) discovered the accounting changes in the product development department of a small UK chemicals manufacturer and using an institutional framework of accounting and a framework of power mobilisation to help explain the dynamics of process of change. Collier (2001) describes the introduction of management accounting change in the structure of local financial managements in a police force, West Mercia Constabulary, using an ethnographic study. The work of researchers has pointed to the diffusion of innovation in connection with NIS (e.g., James, 2009; Haunschild & Miner, 1997; Tsamenyi et al, 2006; Brandua et al, 2013). These researchers indicated that the institutional factors such as government role are influence the organisational network diffusion of innovation. There are various types of institutional theory that have been used in understanding organisation and management accounting change.

3.1.2. NIS

The foundations of NIS were laid by Meyer and Rowan’s (1977) seminal paper, which came after a series of puzzling observations made in the 1970s by a group of researchers studying the educational sector in the USA; specifically, they identified inconsistencies and observed the loose coupling of formal structures/procedures and actual work practices, which existing organisational theory could not explain (Meyer and Scott, 1992).

NIS emphasises the impact of environment on organisations’ practices in the sense that environment is not merely conceptualized as a source of task constraints or a relational network (of customers, suppliers and other near constituencies) that poses demands for operational coordination and control on an organisation. (Powell and Di Maggio, 1991)

Powell and DiMaggio, (1991, p9) describe the sociological flavour of institutions as follows:

“In this sense, then the sociological approach to institutions is more restrictive than that of economics and public choice: only certain kinds of conventions qualify. On the other hand, with respect to the sorts of things that may be institutionalised, sociology is much more encompassing. Whereas most economists and political scientists focus exclusively on economic or political rules of the game, sociologists find institutions everywhere, from handshakes to marriages to strategic -planning departments. The new institutionalism in organization theory tends to focus on a broad but finite slice of sociology’s institutional cornucopia: organizational structures and processes that are industrywide, national or international scope”

NIS includes the cultural rules and social norms that are reflected in specific formal structures and procedures of the organization. That is, institutionalised organizations tend to adopt structures and procedures that are valued in their social and cultural environments. They do this in order to achieve legitimacy and to secure the resources that are essential for their survival. (Powell and Di Maggio 1991) As stated by Moll et al. (2006, p.186) “A starting point for most NIS informed studies is an assumption that intra-organisational structures and procedures, including accounting, are largely shaped by external factors rather than cost-minimising objectives”.

NIS focuses on the elaboration of rules, symbols and beliefs, as well as the wider environment of an organization (Yazdifar, 2004; Selznick, 1996; Scott & Meyer, 1994; Scott, 1987), raising the awareness that organisations need to conform to institutional rules and norms to legitimise their existence (DiMaggio & Powell 1991; Meyer & Rowan, 1977). NIS thus provides explanations for changes in organisational practices (such as accounting practices), referred to as institutional isomorphism (Powell& DiMaggio 1991). DiMaggio and Powell (1991) identify three mechanisms, pressures, through which institutional isomorphic change occurs. Coercive isomorphism occurs when an organization adopts certain practices due to pressures exerted by those that the company depends on externally, such as the state and the credit markets, and the pressure on the organization to conform to the cultural expectations of the larger society. Mimetic isomorphic change occurs under conditions of uncertainty when organisations imitate other organisations in their field that they perceive to be more legitimate or successful. Finally, normative isomorphism stems primarily from pressures from professional groups.

James, (2009) aimed to advance a framework grounded in NIS theory which inspects the effect of national competition policy on the plan and execution of the BSC in a legislature claimed electricity partnership in Australia. It inspects the significance of the rational analytical deliberation of legitimacy as a major accompaniment to isomorphism in the proceeding with improvement to the new execution management framework. This thesis proposed, utilising NIS

to, that not only will an organisation go up against isomorphic conduct by mirroring practices that will legitimise itself to specific constituencies in its evolving environment, yet it will also embrace specialized technical rational strategies, for example, contemporary performance measurement agendas, to enable them to be placed strategically (James, 2009).

It is paramount to set out the differences between the new and old. The main differences are in respect of the approach to the environment, with views on conflict and change and images of individual action (Powell & DiMaggio, 1991). In NIS the basis of these profound changes are historical changes that have transferred authority from the central to the macro level, for example, institutionalised environment. It is also significant to bring in social science to the matter of human motivation and behaviour (Powell & DiMaggio, 1991). DiMaggio and Powell (1991, p.8) portray NIS as following “a rejection of rational actor models, an interest in institutions as independent variables, a turn toward cognitive and cultural explanations”. NIS is primarily concerned with the diffusion and spread of organisational models and is a mainly macro-theoretical approach (Kasperskaya, 2008).

3.1.3. OIE and NIE

OIE is grounded in the American institutional tradition which developed in opposition to neoclassical economics, arguing that individual behaviour and market mechanisms are shaped by organisational routines and institutions, and rejecting the ideas that the individual is taken for granted (Burns & Scapens, 2000a; b). Burns and Scapens (2000, p.7) define rules and routines thus: “In the context of managerial accounting rules comprise the formal management accounting systems, as they are set out. In the context of MA, rules comprise the formal (MAS), as they are set out in the procedure manuals; whereas routines are the accounting practices in use. Clearly, there will be a relationship between rules and routines, but it is important not to confuse the two in the procedure manuals; whereas routines are the accounting practices in use”

There is an important overlap between the two theories of OIE and NIE and their emphasis on contextual factors such as political, social, institutional, and economic factors. OIE focuses on macro-economic levels within organisations (Scapens, 1994). From the perspective of OIE, accounting change can be understood as changes in the routine procedure of accounting (Yazdifar et al., 2008; Robalo, 2014; Guerreiro et al, 2006). It is significant to compare the OIE and NIE. The OIE and NIE emerged as a result of a lack of consideration given to institutions in predictable neoclassical economics (Rutherford, 1995).

As stated by Rutherford (1995, p.443): “for old institutionalists, the neoclassical approach with its emphasis on the rational economic actor is to be abandoned in favour of one that places economic behaviour in its cultural context. For new institutionalists, or at least a good number of them, the standard neoclassical approach based on the rational choice model is to be extended, perhaps modified, but not abandoned.” They both have a central focus on economic behaviour and performance, and both respond to changes that occur within economic factors. Although there is this shared concern within institutional economics there are some differences between the two. Unlike NIE and neo-classical theory, OIE is not underpinned by individualism methodological or rational individual assumptions (Yazdifar, 2004). NIE has outgrown this and advocates the belief of economists that institutions should be considered within the framework of new classical economics (Moll et al, 2006).

3.1.4. Power, politics and institutional theory

The main principle of institutional theory is power (Powell & DiMaggio, 1991). In terms of institutional reproduction there are four methods; firstly, the exercise of power; secondly, complex interdependences; thirdly, taken-for-granted assumptions; fourthly, path-dependent development processes (Powell & DiMaggio, 1991). Powell and DiMaggio (1991, p.191) state that “power has the great deal with historical preservation of pattern of value” and continue to say that “for good theoretical reasons, institutionalists have been reluctant to label something maintained solely through the exercise of power an institution.”

The OIE focuses on power through organisation (Powell & DiMaggio, 1991). NIS concentrates on power deriving from external pressures rather than power at the micro-level (Yazdifar et al., 2008). Operating at the macro level, new institutionalists tend to focus on the role of an institutionalised environment, the state, law and constitutional rules. Most institutional research at the macro level examines indicators of the effects of the institutional environment on some aspect of organisational structure or activity (Powell & DiMaggio, 2011). By contrast, the micro level approach focuses on institutionalisation as a process; on the cognitive processes involved in the creation and transition of institutions; on their maintenance and resistance to change; and on the role of language and symbols in those processes (Powell & Di Maggio, 1991).

Most modern institutions are interdependent and contradictory in politics (Powell & DiMaggio, 1991). For example, bureaucratic states may rely on democratic legitimate forces in their decision-making and capitalist markets may depend upon families to minimise the costs; in that way all institutional contradictions are the basis for most important political conflicts (Powell & DiMaggio, 1991).

3.1.5. NIS approach to MA change

Given that organisational change occurs in response to regulatory pressures and changes in external environment; NIS provides a useful theoretical framework to discern how new accounting and financial information systems were adopted in order to cope with these external pressures (Tsamenyia et al., 2006). In order to understand the changes that occur within an organisation it is necessary to gain an understanding of the external social, economic and political environment within which the organisation operates (Tsamenyia et al.,2006). Many accounting researchers have used NIS theory to explain how external institutions influence accounting systems and their associated behaviour (James,2008; Hassan et al 2014; Hassan,2005; Tsamenyi et al ,2006; Brandau et al ,2013; Ma and Tayles ,2009; Phuong,2016; Yazdifar and Tsamenyi,2005; Jarvenpaa ,2009).

It is a key premise of NIS that external environmental factors have primacy over internal organisational factors (Moll et al., 2006a) and that they shape management accounting and other internal practices. On this basis NIS explains similarities between organisations working in the same environments (Scapens, 2006).

Scott (1995, p.34) stated that ‘institutions consist of cognitive, normative and regulative structures and activities that provide stability and meaning to social behaviour.’ Taking into consideration the key premises of OIE and NIS, OIE cannot adequately address the research questions in this study of the adoption of MAPs in manufacturing and service firms in different environments in GCC countries. NIS is more appropriate for gaining a fuller, holistic picture of the pressures facing these firms and will help to explain why particular organisational firms adapt and move in certain directions (Powell & DiMaggio, 1991). Powell and DiMaggio (1991, p.11) state that: “New institutionalism in organisation analysis has a distinctly sociological flavour that means action is structured and made by shared systems. This prospect emphasizes the ways in which action is structured and order made possible by shredding systems of rules that both constrain the inclination and capacity of actors to optimise as well as privilege some groups whose interests are secured by prevailing rewards and sanctions”.

Changes in MA systems would not be easy and could be quite revolutionary, involving radical changes to existing routines and fundamentally challenging the prevailing institutions; such revolutionary changes are possible only as a result of major external changes, takeovers, economic recession, and market collapses (Burns et al., 1999).

Dambrin et al., (2007) asked researchers over the last 20 years of their understanding of the history of Management Control Systems and these researchers responded that organisations not

only strive for resources and customers but also for institutional legitimacy and for social and economic fitness to be embedded in political power. For this reason, so many companies want to be legitimised and are adopting organisational structures and practices for the sake of ceremonial purposes and not for the reasons of improving efficiency and responding to institutional demand (Meyer & Rowan, 1977). Ribeiro and Scapens (2006, p.95) stated : “Although an OIE-based conceptual framework should be capable of shedding light on the processes of management accounting change, following the introduction of an innovation into an organization, it is rather vague about the reasons and processes that led to the introduction of such innovations”; this factor gives advantages to NIS over OIE. In consistence, different studies emphasised that NIS, which is concerned with institutions at the more “macro” level of organisational fields or sectors, is a powerful theory when it comes to explaining the adoption of innovations by “institutionalised” organisations (Meyer & Rowan, 1977; Powell & DiMaggio 1991). Ma and Tayles (2009) in turn argue in favour of NIS; they concluded that external factors have a strong connection with demands the new managing accounting practice.

Powell and DiMaggio (1991) ask about the source of variation in organisational responses to institutionalised pressures. Why do some institutionalised practices vary in the rate and extent of diffusion? Why are some externally-legitimated processes quickly adopted, while others are shunned or receive only token support? Institutionalisation is a history-dependent process and so everything is a matter of degree. Organisational fields are created in different times and circumstances and evolve at varying speeds and with divergent trajectories. Organisations have different ways of accommodating conflicting institutional demands, including to compromise with or resist external pressures, to play one source of legitimacy and support off against another, and to comply with some expectations while challenging others.

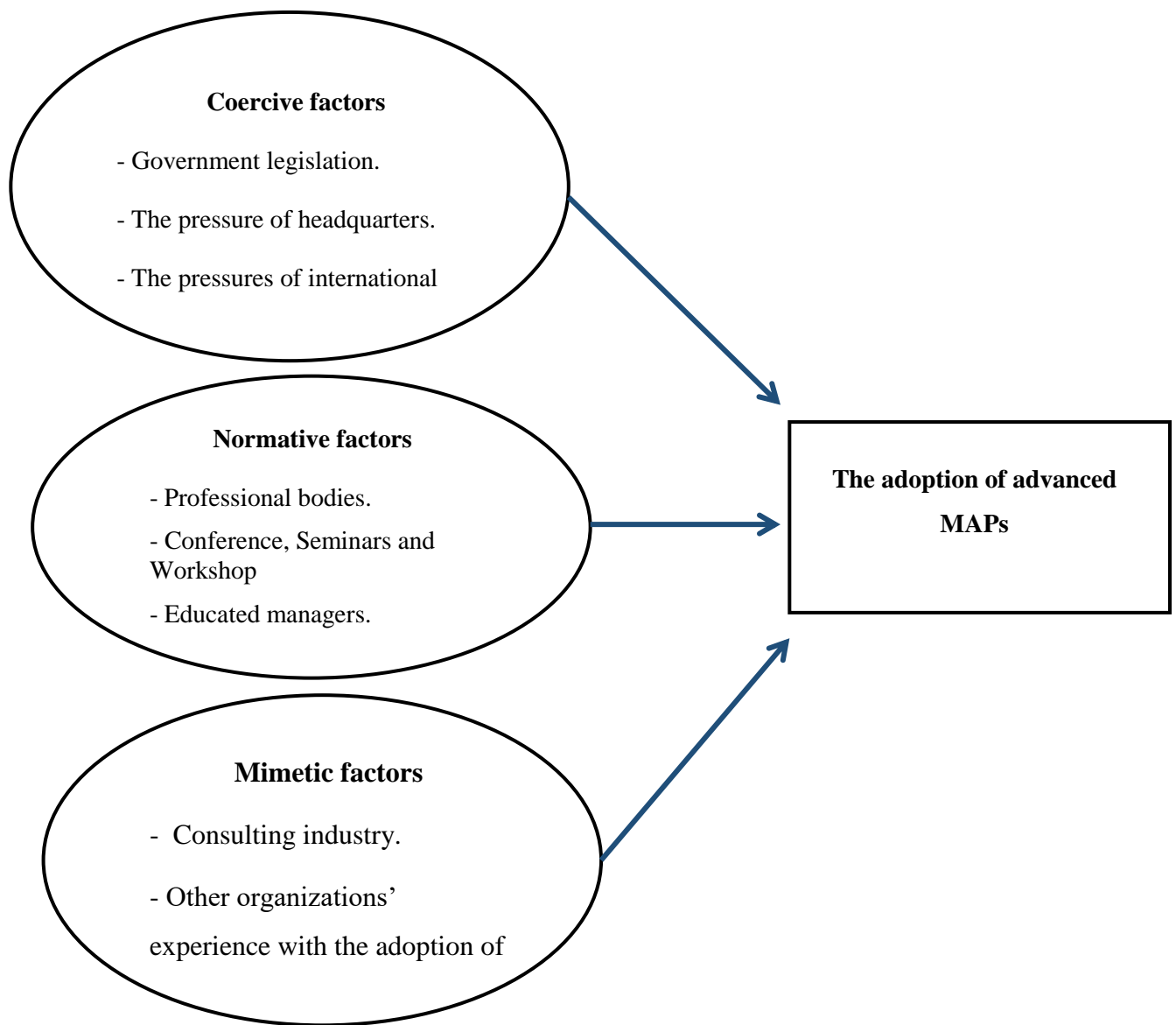
The impact of external pressures, including from government agencies and corporate sponsors, may be limited, for example, to one of encouragement rather than the ability to enforce a new practice. An organisation will tend to adopt such policies on a strategic basis, where they are perceived to be in its interests, but these will tend to have limited institutional support and may be introduced but not reproduced or have only short-term effectiveness linked to their source of normative support (Powell and DiMaggio, 1991).

Given the above discussion of the wide use and usefulness of NIS for explaining the organisational change in general, and the change in MAPs, the current study will rely mainly on NIS for investigating the factors that may affect/drive the adoption of advanced MAPs in GCC countries.

3.1.6. Theoretical framework and hypotheses

As mentioned previously, the institutional theory has become one of the most common theoretical frameworks for MA research in trying to explain why and how accounting change occurs. It is intended in this study to use NIS as a theoretical framework to explain changes in MAP and to inform the analysis of the case (Burns & Scapens, 2000; Scapens, 1994). This study of the diffusion of innovation is in the context of the diffusion of MAPs and it seeks to understand what drives the adoption of advanced MAPs in institutionalised organisations. The analysis of this study draws on NIS, one of the main branches of institutional theory. These theories are used by academics to interpret how MAPs are adopted and the significance of institutions and institutional relations for the survival of organisations (Ahmed & Scapens, 2000).

As illustrated previously, the main premise of NIS is that the adoption or change in MAPs is a result of pressures applied by the external environment of an organisation. Those pressures are coercive, mimetic and normative pressures. Several studies have investigated the influence on the change in MAPs of different factors relating to NIS's three types of pressures. Based on the investigation of previous studies, the study developed its theoretical framework as shown in figure 3.1, and develops its hypotheses as follows:



Source (Powell and Di Maggio,1991)

Figure 3.1: The study theoretical framework

The author has identified three mechanisms through which institutional isomorphic change occurs, each with its own antecedents:

Coercive isomorphism: Coercive isomorphism results from the pressures placed on organisations by other organisations which depend upon cultural expectations. These pressures can be formal or informal, along a range including compulsion, persuasion and invitation. Manufacturing companies, for example, can adopt anti-pollution technologies to comply with environmental regulations; non-profits will keep financial records and hire accountants to abide by tax laws; and organisations may hire affirmative action officers to protect themselves from discrimination allegations. As the reach of rationalised states extends to wide spheres of social

life, the rules they legitimate and institutionalise are increasingly reflected in organisational structures. (Powell and Di Maggio, 1991)

Mimetic pressures: uncertainty often fuels imitation and organisations may model themselves on other organisations where methods and technologies are poorly understood, goals are ambiguous or the environment breeds uncertainty. In such circumstances mimetic behaviour can provide effective, low-cost solutions to apparently intractable problems. (Powell and DiMaggio, 1991)

As Powell and DiMaggio (1991: p.69) stated “Modelling as we use the term, is a response to uncertainty. The modelled organization may be unaware of the modelling or may have no desire to be copied, it merely services as a convenient source of practices that the borrowing organizations may use”

Normative pressures: stemming from professionalisation, this is the third source of isomorphic organisational change. Recently there has been a big expansion of professional staff in organisations, especially managers and specialists. They need to collaborate with non-professional staff, bosses and regulators and are subject to the same coercive and mimetic pressures as organisations. While there are differences among professionals within organisations, each professional category displays similarities across organisations. (Powell and DiMaggio, 1991)

Two key aspects of professionalisation, and sources of isomorphism, are the learning materials and training produced by university specialists and the exponential development of professional networks which enables rapid diffusion of new models. Universities and professional training institutions provide bedrocks for new organisational norms to develop among professional managers and their staff. (Powell and DiMaggio, 1991)

3.1.6.1. Hypotheses in relation to coercive pressure:

Factors including government legislations/intervention; and the headquarters’ influence; constitute the major focus of NIS-based studies that investigated the coercive type of NIS pressure. Lebedeva (2014) investigated the role that government intervention can play in prompting the change in MAS by Russian companies. The study, however, found no statistical relationship between the change in MAPs and government intervention. Kasperskaya (2008) in their investigation of the factors that motivated the adoption of one advanced MAPs (BSC) in Spain, Kasperskaya (2008) found that the primary motive for initiating the change in MAPs comes from changes in the governing legal framework. Consistent with this later finding, Jalaludin et al., (2011) found that government legislation had a positive and significant role for

prompting organisations to adopt advanced MAPs, particularly, the environmental Management Accounting. On the other hand, concerning the role of headquarters, Yazdifar & Tsamenyi (2005) find that in the UK, headquarters can play an important role in prompting subsidiaries to make changes in their MAPs, or to adopt new MAPs that are adopted or advised by the headquarters. Along the same lines; Tsameny et al., (2006) found that in Spain, headquarters plays a noticeable role in promoting the change in MAPs applied by subsidiary companies.

The paper published by Brandau et al., (2013) contributed to the discussion of international convergence in management accounting, which has consisted of only limited empirical data. They analysed cross-sectional field study data from a unique set of manufacturing companies in both Brazil and Germany. They found that German management accounting concepts had a strong influence in Brazil. The current study shows pressures created by the adoption of the International Financial Reporting Standards and the pursuit of legitimacy via adherence to social expectations. Therefore, in addition to the two factors of government legislation and headquarters power; the fact that GCC business involves many joint ventures between local GCC business and international companies, gives a basis for the following argument, the change in MAPs in GCC companies can be motivated further by international companies joining internal companies. That is, the international company applies pressure on the local company to update or adopt new MAPs. This is to handle the difference in the local company's MAPs that is considered by the international company to be an obstacle to the joint venture. Based on the discussion, the following hypotheses are posed:

Hypothesis 1: government legislation has an influence on the decision of adopting advanced MAPs in GCC companies.

Hypothesis 2: Companies' headquarters has an influence on the decision of adopting advanced MAPs in GCC companies.

Hypothesis 3: International companies have an influence on the decision of adopting advanced MAPs in GCC companies, in cases where a GCC company and an international company are in a joint venture.

3.1.6.2. Hypotheses in relation to normative pressure

Factors including both management accounting professionalization, as well as those related to education constitute the major focus of NIS-based studies that have investigated the normative type of NIS pressure. Tsameny et al., (2006) investigated the normative role of professional bodies in Spain, they found that professional bodies, such as SAP have a vital role in motivating

the change in MAPs .The paper examined how changes in accounting and financial system information in large Spanish electricity company were influenced by the interplay between institutional forces and market forces (Tsameny et al,2006) Consistent with this, Lebedeva (2014) find professional bodies to have a significant role in prompting the change in MAPs in Russia. Phuong (2016), in turn, provides supportive evidence from Vietnam; they showed that management accounting professionalisation has an obvious influence on MAPs change. Brandua (2013) find that professional bodies have the most obvious and significant role in formulating the change and the development of MAPs in both Brazil and Germany. This finding was further confirmed in the context of Iraq, the most significant force in the decision to adopt IFRS is coercive pressure, (Hassan et al., 2014). On the other hand, concerning the educational factors, Bradua et al., (2013) found that the adoption of advanced MAPs (such as TQM) in Brazil and Germany is associated with managers possessing graduate degrees. In the same vein, Kasperkaya (2008) found that education through attending relevant seminars has a key role in encouraging managers to adopt new MAPs.

Furthermore, Al-Dhubaibi et al. (2015) found that the teaching and qualification of CFOs play an essential part in the MAPs development level of their individual firms in Yemen. They explicitly indicate that CFOs of high education efficiently enhance the accounting practices in their firms which adopt more advanced MAPs. Consequently, these CFOs encourage the initiation of more practices in their specific firms. Additionally, the application and the effective implementation of new management accounting strategies are improved in the cases that the CFO is highly familiar with such techniques. A CFO of high educational level is also predicted to have high ambitions, bring in new concepts, and implement enhanced financial and managerial systems.

Based on these findings of previous studies, and the obvious feature of the selected GCC countries that CMA practitioners are predominantly American CMA holders, it is possible to assume that the professional bodies such as CMA and educational factors, including managers having academic degrees in accounting and attending relevant additional education e.g. seminars, workshops, would have a key role in the adoption of advanced MAPs. Thus, the following hypotheses are posed:

Hypothesis 4: Professional bodies have an influence on the decision of adopting advanced MAPs in GCC companies.

Hypothesis 5: Educated managers have an influence on the decision of adopting advanced MAPs in GCC companies.

Hypothesis 6: Conferences, seminars and workshops have an influence on the decision of adopting advanced MAPs in GCC companies.

3.1.6.3. Hypotheses in relation to mimetic pressure

Factors including: consultants and imitating other organisations represent the major focus of NIS-based studies that investigated the mimetic type of NIS pressure (Ma & Tayles, 2009). Lebedeva (2014) investigated the mimetic pressure relating to consultants; they found that consultants represent the primary driver of change in MAPs in Russia. Consistent with this, Yazdifar & Tsamenyi (2005) found that, from the perceptions of respondents from different UK companies, consultants have a noticeable role in driving change in MAPs. Ma and Tayles (2009) assure further that the consulting industry has a significant role in prompting MAPs development. On the other hand, concerning the imitation of other organizations, Ma and Tayles (2009) also found that organizations tend to imitate other organizations in respect of MAP change and development. Similarly, Jalaludin et al., (2011) found that in the USA there is similarity in the adoption of MAPs (such as TQM) among US-owned companies and foreign-owned companies operating in the USA; in the way that illustrates the significant role of imitation between companies in shaping their practices of MA. Based on their findings concerned with the Spanish context, Kasperskay (2008) conclude that the adoption of new MAPs can be a result of imitating the successful experiences of others.

Given the aforementioned discussion, and considering that, first: the countries selected for the survey have a close connection with western countries, particularly the UK and USA; second: the GCC is a bloc involving companies from six different countries operating within the same context; Third: the international companies in general, and in particular in respect of the oil industry, constitute a wide part of the business of all the selected countries; one can assume that the normative pressure factors would have a significant role in motivating companies to adopt advanced MAPs. Thus, the following hypotheses are posed:

Hypothesis 7: The consulting industry has an influence on the decision of adopting advanced MAPs in GCC companies.

Hypothesis 8: The experiences of other organisations with their adoption of advanced MAP have an influence on the decision of adopting advanced MAPs in GCC companies.

3.2. Summary

This chapter aimed to discuss the previous researches and studies related to advance MAPs throughout the world. As well as the previous studies it considered the factors affecting the adoption of advanced MAPs in the concerned companies based on the institutional theory. This

chapter consisted of topics which are: studies on the adoption of MAPs and the factors influencing this adoption; shortcomings of TMAPs, the studies presented in this chapter varied in time and place. In addition, these studies included several countries throughout the world in different continents, while the dates were between 1990 and 2017. Moreover, this chapter discussed the OIE and NIE as well as presenting an explanation about theoretical frameworks and hypotheses. This chapter reached the conclusion that NIS should be embedded in the theoretical framework to explain the processes of change in MAPs. The discussion of the management accounting literature shows that organisational change interacts with many external and internal factors; these factors are contributing mainly to the change in the MAS. The chapter argued that NIS theory is more useful than OIE in order to explain the processes of change in MAPs in terms of the adoption of new MAPs. Hence, this theory NIS has been adopted in this study to structure its theoretical framework and to develop its hypotheses on the factors that can affect the adoption of advanced MAPs in GCC countries.

Chapter 4: Research Methodology

This chapter will discuss the methodology applied in assessing, collecting and analysing the data.

4.1. Introduction

Research philosophy is an explanation of how a researcher observes the real world. The methods utilised to carry out any research and the prototype of research questions can be best illustrated through Research Paradigms (Fossey et al, 2002). Research paradigms can be categorised into two approaches of thinking; positivistic and phenomenological. According to Fossey et al (2002), this view aims to “focus primarily on understanding and accounting for the meaning of human experiences and actions” (2002, p. 720). Bryman and Bell (2011) suggests that when conducting a piece of research, the research paradigm can be utilised at three levels: the philosophical level, the social level, and the technical level. The philosophical level reveals fundamental beliefs, both locally and globally. The social level allows the researcher to carry out the research but within a given framework and guidelines. The technical level details the methods and techniques to be used in order to achieve one’s goals during the research.

After considering all the options for this research, it became apparent that the two most likely paradigms were ‘positivist’ and ‘phenomenological’. Below is a table which defines the main features of both these paradigms.

Table 4.1. Characteristics of the two main paradigms

Positivistic Paradigm	Phenomenological Paradigm
<ul style="list-style-type: none">• Tends to produce quantitative data• Uses large samples• Concerned with hypothesis testing• Data is highly specific and precise• The location is artificial• Reliability is high• Validity is low• Generalises from sample to population	<ul style="list-style-type: none">• Tends to produce qualitative data• Uses small samples• Concerned with generating theories• Data is rich and subjective• The location is natural• Reliability is low• Validity is high• Generalises from one setting to another

Source: Collis and Hussey (2003)

4.2. Differences between Positivism and Phenomenological approach

The positivist approach claims to study the sociological or psychological reality without considering the individual experience, while the phenomenological approach tries to study such a reality with so-called objectivity. In the phenomenological approach, the researcher talks to

individuals and tries to find out their social construction (Welman, 2005). One concept that makes positivism different from the phenomenological approach is that it interprets the researcher's role differently.

Ryan et al (2002) argues that researchers are unable to separate themselves from their belief and their culture. Therefore, the phenomenologist believes that whatever the researcher observes is not the reality but an interpretation of the reality. This concept can be explained more by the following examples. Natural scientists have no similarity with their research objects, i.e. gases, plants, etc. However human behavioural scientists could have lots of common similarity with their objects i.e. humans. This similarity facilitates more direct understanding and allows the researcher to recognise the circumstances of the objects of his study. On the other hand, positivist researchers try as much as they can to be detached from the situation to avoid getting involved (Collis and Hussey ,2003). Positivists aim at discovering general laws of relationship and origin that are always appropriate to all people, while phenomenologists are more concerned with discovering social and psychological bases of people's perceptions that could be for specific times and places. The positivist approach requires that the research design be chosen before data is collected, while the phenomenological approach usually accounts for 'emergent design'. That is because researchers may decide to adopt data collection procedures during the research in order to use new data which they have only realized during the research itself (Collis and Hussey 2003).

Valle et al (1989 p.167) describes the unity between humans and their world as follows: "In the truest sense, the person is viewed as having no existence apart from the world and the world as having no existence apart from persons. Each individual and his or her world are said to co-constitute one another".

It is usually hard to describe every step in a phenomenological study in the same way as it can be described in a positivist study. The traditional idea that only positivism can provide valued research that can add value to the body of knowledge is being refuted. The phenomenological approach is gradually becoming more conventional among business and management researchers as a superior method for various types of research as more people worry about humans and their behaviour. (Ryan, et al 2002)

However, since for this research the researcher is seeking to find out to what extent advanced MAPs have been adopted in the GCC countries and what are the factors driving the adoption of advanced MAPs, the researcher will utilise the positivism approach instead of the phenomenological approach which uses semi interviews.

4.2.1. Disadvantages of Phenomenology

Some academics argue that the phenomenological approach is not universally accepted as it cannot be generalised. However, in the area of social science and business management it is a popular research paradigm (Ryan et al ,2002). Conventionally it has been accepted that business and management researches can only be generalised through the very accurate positivism. Those in favour of the positivist approach argue that without generalisation the outcome of any research cannot be valued.

4.2.2. Disadvantages of Positivism

When it comes to answering questions such as why customer service is poor, why some people are disgusted with their jobs and why some staff achievement more than other staff, positivism fails to provide a useful explanation.

4.3. Research approach

There are two main research approaches, Inductive and Deductive, and they are mainly selected according to the philosophy that is used. Inductive research relies on primary data and data collection as the first step to conduct the research. It starts from collecting data concerning a specific social phenomenon, aiming to discover a theoretical framework which might explain it (Saunders et al, 2003). On the other hand, deductive research follows a different approach by testing the relevant theories to the research questions. According to Maylor & Blackmon (2005) deductive research starts with a theory and then collects data with the aim of testing the theory and concluding by either approving or disproving it.

Table 4.2. Research approach

Research Paradigms	Research Approaches	Research Strategy	Data Collection	Data Analysis
Positivistic	Deductive	Experiment	Secondary Data	Quantitative Data
		Survey		
		Case Study		
Phenomenological	Inductive	Action Research	Primary Data	Qualitative Data
		Grounded	Observation	
		Theory	Interview	
		Ethnography	Questionnaire	

4.3.1. Inductive approach:

According to Bryman and Bell (2012) the inductive approach consists of four main stages:

- Observation: Observe and record all facts without being selective or having any preconceptions about their significance.
- Analysis: Analyse, compare, and classify these facts to identify regularities, without reference to any hypothesis.
- Inference: From this analysis of regularity, infer generalisations about the relations between the facts, i.e. the 'laws of nature'.
- Confirmation: Test these 'laws of nature' through further observation of facts.
- Through the inductive approach, knowledge is added by collecting objective data, and that will result in creating regularities and general laws. The acceptance of the produced general laws increases as more and more are observed. Additionally, induction drives theory from the observations made.

4.3.2. Deduction approach:

Deduction is theory driven, and is sometimes called the hypothetic-deductive method because the researcher summarises a hypothesis based on the theory. Subsequently, empirical methods are used to see whether it is true or false (Creswell and Clark 2011).

Collis and Hussey (2009) argued that repeated observation might confirm a general law but cannot prove that it is true. He also argued that hypotheses can be generated by induction. However, it cannot be tested. To test this, a hypothesis deductive approach must be used. Ryan et al (2002) arguments as follows:

- The world operates in a lawful manner, and the aim is to discover these laws.
- This is done by generating theories and testing hypotheses about cause and effect, in order to explain the how and why of the world.
- However, it is not possible to unequivocally establish these laws. All that can be done is to eliminate false theories, thereby moving gradually closer to the truth.
- Even so, we have no way of knowing for certain when we have arrived at a true theory, so even those theories that have survived testing must be regarded as provisional.

4.4. Research strategy and design

One of the main aspects of the research strategy is the research design. The research design can be in two different forms, either *Qualitative* or *Quantitative* research (Bryman & Bell, 2003). Qualitative research involves the analysis of words such as interviews. However, quantitative

research involves the analysis of numeric data. The following table explains the main distinction between the two types of research.

Table 4.3. Features of qualitative & quantitative research

<u>Qualitative</u>	<u>Quantitative</u>
"All research ultimately has a qualitative grounding." - Donald Campbell	"There's no such thing as qualitative data. Everything is either 1 or 0." - Fred Kerlinger
The aim is a complete, detailed description.	The aim is to classify features, count them, and construct statistical models to explain what is observed.
Researcher may only know roughly in advance what he/she is looking for.	Researcher knows clearly in advance what he/she is looking for.
The design emerges as the study unfolds.	All aspects of the study are carefully designed before data is collected.
Subjective – individuals' interpretation of events is important, e.g. uses participant observation, in-depth interviews etc.	Objective - seeks precise measurement & analysis of target concepts, e.g. uses surveys, questionnaires etc.
Researcher tends to become subjectively immersed in the subject matter.	Researcher tends to remain objectively separated from the subject matter.

Resource: Miles & Huberman 1994, p. 40. Qualitative Data Analysis.

There are many factors that influenced the choice of specific research methodology according to the research objectives and paradigms. In this study the survey method was adopted as the main methodology. Fellows and Liu (2008) stated that information gathering is critical to satisfy the objectives and aims when completing the examination. It aims to exchange data professionally from respondents to analyst, it is an unpredictable and troublesome process, and it is often restricted by cost, confidentiality and time. Information accumulation techniques can be characterised into secondary and primary information gathering. Secondary information accumulation techniques are on the whole sources which are accessible to a researcher with a specific end goal to get the fundamental data for a research issue. Secondary information can be categorised as survey versus documentary. Data which is documentary includes written (e.g. reports, books and journals) and non-written (e.g. webinars and television programmes). In survey-based research, data is collected predominantly by questionnaire to gather quantitative

data in relation to one or more than one variable. To achieve the main aim and the objectives of the study, a potentially large sample (469) of a targeted population in GCC countries was chosen. This approach has been used intensively in previous research in similar areas concerning the adoption of MAPs (Askarany, 2012; Askarany et al., 2007; Al Omiri & Drury, 2007; Askarany & Smith, 2008; Yazdifar et al., 2005; Beonenak, 1997).

4.4.1. Overview of questionnaire-based research

The questionnaire survey is a pre-formulated written list of questions appropriate to individuals planning to accumulate data (Saunders et al., 2007). It is one of the most widely recognised data accumulation procedures in the worlds of business and education. Clifford et al., (2010) explains that a questionnaire survey research is an examination strategy for collecting data about activities or attributes of a community from a sample of individuals. It is useful to comprehend the general population's perceptions and attitudes towards specific issues. Bryman & Bell (2011) emphasised that a questionnaire is the greatest research tool utilised for gathering both quantitative and qualitative data and it comprises short questions expressed to suit the information needs of the researcher. In addition, there is little chance to bring bias into the outcomes if the questionnaire is composed well; it likewise enables the respondents to fill it in at a suitable time if required.

Consequently, a variety of people have previous experience in terms of utilising the questionnaire as a strategy of data accumulation. Despite questionnaires being utilised as the main strategy for data accumulation, it is advised to combine them with other techniques in a varied strategy research design (Saunders et al., 2007). As indicated by Gray (2013), the utilisation of questionnaires has numerous benefits. First, the use of questionnaires spares both time and money due to them being able to be sent to countless respondents at a low cost with little to no effort. Second, respondents' inputs and replies are often returned within a short period of time. Third, coding the questions is frequently an exceptionally basic and speedy process. That is, the respondents can complete the questionnaires at places and times they find most convenient (Saunders et al., 2007). Respondents can also answer a questionnaire online through the internet in a way that makes it more convenient and easier. In consistence, studies such as Shepherd (2003) and Prince et al., (2008) confirm that the use of questionnaires is usually an outcome of the low cost of the accumulation of data from many individuals which, along with convenience and lack of intrusiveness, makes questionnaires a commonly used research method for obtaining data. To conclude, in this study structured questionnaire surveys have been applied to provide the quantitative data required for achieving the study objectives and answering its questions. Moreover, several organisations provide online questionnaire sites

such as www.surveymonkey.com, which is used by the current study to distribute its electronic questionnaire to the targeted companies.

4.5. Questionnaires types

There are distinctive kinds of questionnaires which can be utilised as part of the gathering of the quantitative information. These consist of verbal, closed, structured and open questionnaires. According to several researches the structured questionnaire is an exceptionally compelling and effective method for data gathering as it makes the work of analysis and processing simple in contrast to the crude data accumulated from the unstructured or open questionnaires (Babbie, 2010; Sapsford & Jupp, 2006). On the other hand, questionnaire methodology takes diverse forms: questioning individuals face-to-face, telephonic surveys, mail surveys, or electronic surveys (Adams et al., 2007). Gratton & Jones (2004) explains that questionnaires for the most part can be categorised into four classes, with the most recognisable form being the self-completion questionnaire. These four classifications are: postal questionnaire, which is given or presented to the respondent; telephone questionnaire, where the analyst questions the survey respondent via the phone; face-to-face questionnaire, where the analysts and respondent are at the same location; and online questionnaire, which is related to this study as the respondents can complete the questionnaire electronically.

The electronic online survey has been chosen for this study as a standout amongst most types of research strategies, considering several reasons. This technique saves time and is viewed as one of the more affordable strategies, when contrasted with the others. It spares time by covering a wide geographical area, thereby accepting a wide range of perspectives. In addition, this strategy is more advantageous for members from two angles: they can answer the questions and express their perspectives uninhibitedly, with no limitations, and furthermore they can choose the most suitable time and place to complete the survey (Creswell, 2003).

4.6. Questionnaire design

In this study, the questionnaire was designed to avoid complex and compound questions which, without control over the questionnaire respondent, would probably generate lower response rates. The questionnaire was designed to be convenient and suitable to the employees at companies and organisations in the Gulf countries. It has been created on the www.surveymonkey.com website with the title: Adoption of Advanced Management Accounting Practices in GCC Countries: New Institutional Theory Analysis Survey.

This questionnaire survey is presented in five parts. The first section consists of the demographic questions, including gender, age, job title, work experience, academic

qualification, number of years of holding the latest academic degree, study field, professional qualification, kind of professional qualifications (CIMA, CPA, ACCA, CIPA), and number of years holding professional qualifications, The second section includes several questions that are relevant to the companies, including a company's name, a company's geographic location, a company's ownership, the percentage of state ownership, the type of company (independent company or subsidiary company), the type of business (manufacturing or service), the years of operation, the number of employees, the market in which the company operates, the main strategic focus of the company, the level of marketing competition the company faces, and finally, the number of products/service types the company currently produces. The third section is concerned with measuring the adoption level of several advanced MAPs in GCC companies. These include ABC, ABM, BSC, TC, LCC, Benchmarking and JIT. Regarding this section, the respondents are asked to indicate his/her company's adoption of advanced MAPs on a 5-point scale obtained from the study of Askarany and Yazdifar (2007). The responses are: discussions have not taken place regarding the introduction of this practice; decision has been taken to not introduce this practice; some consideration is being given to the introduction of this practice; this practice has been introduced on a trial basis; this practice has been implemented and accepted. The fourth section is concerned with gathering data on factors that may influence the decision of adopting advanced MAPs in GCC companies. These comprise: government legitimacy; company headquarter; joint venture with foreign companies; professional bodies; educated manager; conferences, seminars and workshops; consultants; successful experience of other organisations with adopting advanced MAPs; existence of a widely recognised 'champion' of the implementation; competitiveness of the market; employee/organisation recognised need for change; employee/organisation dissatisfaction with the current system; loss of market share; arrival of a new accountant; deterioration in profitability. Regarding this section, the study asked the respondent to indicate his/her company's adoption of advanced MAPs on a 5-point Likert scale. These comprise: do not influence; slightly influence; moderately influence; significantly influence; extremely influence.

Finally, the fifth section is concerned with collecting data on the factors that may facilitate the adoption of advanced MAPs in GCC countries. These comprise: availability of adequate accounting staff; using computer systems for MA purposes; authority attributed to the accounting function within the organisation; arrival of a new accountant; top management support; co-operation between universities, academics, and companies' professionals; accounting research; management accounting training programs; adequate financial resources; employee/organisation ability to afford the amount of investment required to adopt the

innovation; employee/organisation ability to afford the amount of time required to implement the innovation; level of employment of management consultants to facilitate implementation. The study asked the respondent to indicate his/her company's adoption of advanced MAPs on a 5-point Likert scale comprising: do not facilitate; slightly facilitate; moderately facilitate; significantly facilitate; and extremely facilitate.

Some questions in this questionnaire survey of study were easily answered with a simple single answer, such as demographic questions and questions related to the technology use, for example: Do you have professional qualifications (y/n)? What kind of professional qualification do you have (CIMA, CPA, ACCA, CIPA)? But others require multiple choices, a scale or a grid, for example: to what extent do the factors below facilitate the process of adoption of advanced MAPs (does not influence, slightly influence, moderately influence, significantly influence and extremely influence)?

4.7. Research sampling

As indicated by Saunders et al., (2007), sampling strategies can be utilised for data gathering and can be split into two crucial categories: probability sampling and non-probability sampling. Probability sampling strategies are utilised within quantitative studies once the probability of individual participants being included has become known (Teddlie & Yu, 2007). Probability sampling consists of random sampling, stratified random sampling, systematic random sampling and lastly, cluster random sampling (Saunders et al., 2007). However, non-probability sampling strategies are utilised when the probability of inclusion of each member in the population is unknown; this usually occurs in qualitative studies (Gray, 2017). Non-probability sampling consists of purposive sampling, convenience sampling, quota sampling, self-selection sampling and snowball sampling (Saunders et al., 2007). With probability sampling, the possibility of each element being chosen from the population is usually equal, whilst non-probability sampling does not give an equal opportunity to each element chosen.

Saunders et al., (2007) demonstrated that if a researcher needs to meet members concerning their research, non-probability sampling might be the best decision since non-probability sampling centres around a minimum group of case study participants for a selected purpose. Although quantitative research relies on substantial samples of members, qualitative research depends on low numbers or even a solitary case. Purposive sampling is, along these lines, utilised when the members being examined are picked because they can give essential knowledge that couldn't be got from other sampling methods (Gray, 2017).

Regarding the sample size, Yin (2014) stated that there are no settled numbers of interviews within qualitative research; rather, this number depends on whatever is required to discover what you need to know. In like manner, Saunders et al., (2007) clarified that, while sampling in quantitative research depends on the size of the research population, in qualitative research, the quantity of interviews depends on 'replication logic', as opposed to 'sampling logic'. This means that a qualitative analyst must continue interviewing until the point where he accomplishes 'replication' or the saturation point of hearing similar stories repeated again and again, at which no new data arises from the interview procedure.

Choosing the appropriate sample of members is a huge part of the procedure of information gathering. It should be remembered that the selected sample speaks to this present reality and could therefore prompt the objective conclusions. There are two strategies of primary sampling: probability and non-probability sampling.

Barreiro and Albandoz, (2001) stated that probability sampling is when each individual sample has the same probability of being chosen, and purposive sampling is where the individual choosing the sample is also the one who tries to make the sample representative, based on his purpose or opinion, and the no-rule sampling draws a sample without any rule. Barreiro and Albandoz, (2001) clarified that there are various types of probability sampling including random sampling without and with replacement, cluster sampling, systematic sampling, stratified sampling and more forms of sampling methods.

On the other hand, according to Barreiro and Albandoz (2001) when the population is small, less than 500, it is customary to use a 100 percent sample, which is called a census sample, in which the questionnaire is sent to all the members of the research population. Hence, because the population of this study was relatively small - 469-listed companies in the GCC countries - the initial plan was to target all the companies of the population. The main reason for choosing the entire population is to ensure that the sample is representative and not biased.

Concerning the respondents; senior financial staff, including finance directors and senior management accountants have been targeted as respondents for this study. The reason for choosing these high-ranking staff is that they are in a good position with their advanced knowledge to complete the questionnaire in respect of the most popular MAPs in their companies.

However, despite the distribution of the questionnaire to the total 469 companies that represent the total population of the study, the number of returned questionnaires was 167. Among these, 14 questionnaires have been ignored due to the multiple mistakes and contradictory answers to

different questions and so a total of 153 completed questionnaires have been included within this study. This final number of completed questionnaires has provided a satisfactory response rate of 32.62%. According to Krumwiede (1998), the normal response rates for this kind of surveys is approximately 20% although there are many published surveys with lower response rates such as 12.5% or 19.6% (Al-Omiri & Drury, 2007a; Al-Omiri & Drury, 2007b). Table 4.4 shows the number of listed companies in each GCC country, the study population, and the completed questionnaires collected from each country.

Table 4.4: Study population and response rate

Countries	The aimed number	The accepted number	Response rate
Bahrain	49	15	30.60%
Oman	54	18	33.33%
Qatar	36	11	30.56%
Kuwait	186	51	27.42%
Saudi Arabia	80	31	38.75%
United Arab Emirates	64	27	42.19%
Totals	469	153	32.62%

4.8. Data analysis

The data analysis is a fundamental stage after the gathering of primary and secondary information. This stage for the most part centres on exchanging the questionnaire outcomes into valuable and dependable data whilst ensuring that the gathered information accomplishes the objectives of the research. According to Yin (2014), information analysis strategies can be characterised as a procedure that comprises classifying, testing, examining, tabulating or recombining both qualitative and quantitative evidence to address the preliminary discoveries or propositions of a study. According to Yin (2014), to limit potential analytical complications, a general technique for information analysis ought to be established. Thusly, the nature of the information and the connection between the strategy and the objectives of the research are considered as the reason for choosing the correct information investigation techniques.

Usually, quantitative information analysis manages statistical information analysis methods. Some of the most usually utilised methods are for example chi-square analysis, factor analysis, correlation analysis and regression analysis. Amaratunga et al., (2002) stated that whatever the type of information that has been gathered, it is reasonable to start the analysis through examining the raw data to scan it for patterns. Much analysis of quantitative information is

related to scanning the information for different kinds of patterns so that hypothetical connections can be established.

Saunders et al., (2007) expressed three different ways of estimating, namely mode, mean, and median. Additionally, measures of variability like variance and standard deviation will be used by the researcher for analysis of the data. The main purpose for descriptive statistics is to make information gathered more effortlessly intelligible by utilising graphs, tables and computation of a variety of descriptive measures. Descriptive statistics are used along with exploratory statistics, including the transformation of raw information into a shape that will be given to data to describe an arrangement of factors in a scenario. This is achieved through manipulating the raw information gathered (Saunders et al.2007).

Thompson (2009) insists that descriptive statistics is an analysis of numbers that describes the information a study is managing with the objective of explaining what took place in the sample. Thompson (2009) additionally states that descriptive analysis of this form can be utilised to contrast samples with each other, and it can likewise assist analysts with detecting sample qualities that may influence their decisions. Thus, prior to undertaking a more in-depth foundation analysis of the information researched, descriptive analyses were done on all the member transcripts.

The statistical analysis mainly depends on the main aim and objectives of this study, where the objectives have been established as to obtain data and information about the situation of the sample of employees working in different companies in GCC countries. The first statistical task therefore is to work on the descriptive test of variables. In this analysis it was important to present results acquired for all variables, where the association between variables and predictive analysis will be analysed.

A quantitative statistical analysis will be applied in the next chapter of this study on data that will be obtained from 153 respondents on the questionnaire, starting with Cronbach's alpha test for reliability of data, descriptive states, and measures of variation. Throughout this study, to ensure the questionnaire's internal dependability, Cronbach's Alpha tests were fulfilled using the Excel software programme in order to check for internal reliability.

In this study several statistical tests have been applied such as . mean average, percentages, standard deviation, measures of association, graphical trend analysis methods and statistical trend detection methods. The data analysis in this study contains several different statistical tests which are listed below:

- The study relied on the descriptive statistic including percentages and means to describe the characteristics of the responding firms and the individual respondents. In addition, the percentages and the means are used to identify the level of advanced MAPs in the surveyed companies. The percentages and the means are used also to identify the influence level of the surveyed factors on the decision of adopting advanced MAPs and to identify the facilitating role of other surveyed factors in the adoption of advanced MAPs in those companies.
- Besides, the study has used the exploratory analysis tests (t two-tail) in order to determine the relationships between organisational characteristics and the adoption of advanced MAPs in GCC companies.

$$t = \frac{\bar{x}_1 - \bar{x}_2}{\sqrt{\frac{s_1^2}{N_1} + \frac{s_2^2}{N_2}}}$$

where \bar{x}_1 = mean of sample 1

\bar{x}_2 = mean of sample 2

n_1 = number of subjects in sample 1

n_2 = number of subjects in sample 2

s_1^2 = variance of sample 1 = $\frac{\sum(x_1 - \bar{x}_1)^2}{n_1}$

s_2^2 = variance of sample 2 = $\frac{\sum(x_2 - \bar{x}_2)^2}{n_2}$

Source: Bryman and Bell (2011)

The participants were asked to answer at which point they would choose to agree with or disagree with the given statements on the 5-point Likert scale. The average of the Likert scale can be calculated by (1+2+3+4+5)/5). Therefore, the results of the mean average have been interpreted based on Likert Scale Interpretations as shown in Table 4.5. On the other hand, one of the important points that must be considered is measuring the standard deviation which is consider as a much more accurate and detailed estimate of dispersion or variation. Standard deviation usually shows the relation of a set of scores to the mean of the sample. Moreover, a small value of standard deviation indicates the tendency of data to similarity and homogeneity.

Table 4.5: Likert Scale interpretations

Scale	Range	Interpretation	Interpretation
1	From 1.0 to 1.79	Very low	Do not influence
2	From 1.8 to 2.59	Low	Slightly influence

3	From 2.6 to 3.39	Moderate	Moderately influence
4	From 3.4 to 4.19	High	Significant influence
5	From 4.20 to 5.0	Very high	Extremely influence

Source: Bryman and Bell (2011)

4.9. Validity and reliability

To decrease the possibility of achieving incorrect results as well as to enhance the credibility of the result findings, it is, therefore, necessary to pay more attention to validity and reliability of the research instrument (Saunders et al., 2007). Thus, prior to data analysis, the research instrument was assessed for its reliability as well as its validity.

Reliability and validity are the most important criteria for any business and management research (Bryman & Bell, 2011). Bryman and Bell (2011) state that “reliability is concerned with the question of whether the results of the study are repeatable” and that “validity is concerned with the integrity of the conclusions that are generated from a piece of research.” Scapens (1990, p.274) states: “when using quantitative research methods, researchers are concerned with the reliability and validity of evidence. In such research, reliability is the extent to which evidence is independent of the person using it and validity is the extent to which the data is in some sense true”.

4.9.1. Validity

Research literature identifies and discusses several types of validity testing. Firstly, criterion validity is used to ensure measurement validity (Hair et al., 2003; Bryman and Bell, 2011). It evaluates the extent to which a construct behaves as expected relative to other variables identified as meaningful criteria (Hair et al., 2003). Bryman and Bell (2011) identified concurrent validity and predictive validity as two types of criterion validity. The former considers how the measurement scale relates to other validated measures of the same subject. The latter considers how the instrument scale aids prediction of future performance. Secondly, content validity is the most important type of validity, concerned with the extent to which the measurement scale reflects what is supposed to be measured (Bryman and Bell, 2011). According to Emory and Cooper (1991), careful definition of the research topic and the items included in the measurement scale can ensure content validity. Using a group of individuals or experts can help in judging how well the instrument meets the standard. Litwin (1995) recommends a review of the questionnaire content to ensure it includes everything it should and does not include anything it should not in order to ensure content validity. It has been argued that there is a disagreement among social science researchers regarding the content of many concepts, and it is apparently difficult to develop measures that have agreed validity (De Vaus,

2001). Thirdly, construct validity shows how well the findings derive from employing the measure that fits the theories and theoretical assumptions around which the test is designed (Bryman and Bell, 2011)

It is usually evaluated by tracking the performance of the instrument scale over years in different settings and populations (Litwin, 1995). It has been recommended to use established constructs or measurement scales and consider the opinion of experts (De Vaus, 2001), behaviour and attitude (Litwin, 1995). Regarding this study, many procedures have been followed to achieve questionnaire validity:

- An extensive literature review was carried out and understood to define the topic and purpose of the study and research methodology (chapter 3)
- The study questionnaire was assessed and refereed by many people who have adequate knowledgeable experience in the study area and a pilot study was conducted, involving four academics and three CIMA members.

4.9.2. Reliability

Reliability indicates to the stability and consistency with which the instrument is measuring the concept. Bryman and Bell (2011) stated that reliability will help to estimate and evaluate the ‘goodness’ of a measure as well as to minimize the inaccuracy and biases in a study. Furthermore, Amaratunga et al., (2002) state that the most important object of reliability is to ensure that, if a later investigator followed the same procedures, the same results, findings and conclusions would result.

There is a significant relationship between reliability and validity. Neuman (2003, p. 186) explains the relationship as follows:

“Reliability is necessary for validity and is easier to achieve than validity. Although reliability is necessary to have a valid measure of concept, it does not guarantee that a measure will be valid. It is not a sufficient condition for validity. Validity and reliability are usually complementary concepts, but in some special situations they conflict with each other. Sometimes, as validity increases, reliability is more difficult to attain, and vice versa. This occurs when the construct has a highly abstract and not easily observable definition. Reliability is easiest to achieve when the measure is precise and measurable”.

Bryman and Bell (2011) indicated that Cronbach's alpha test coefficient can be used for questionnaires using scales such as rating and that it should fall within a range from 0.70 to 1.00. According to Bryman and Bell (2011) it is the most convenient and reasonable index that can be used for questionnaires to apply scales such as rating. In addition, if the values of

Cronbach's alpha are above the accepted lower limit of 0.7, this indicates that the scales used in the instrument are reliable. Moreover, the Cronbach's alpha coefficient applies in order to calculate the estimated internal consistency of reliability of the questionnaire. To ensure the internal reliability of the questionnaires, Cronbach's Alpha tests were carried out using the Excel software program in order to check for internal reliability.

Regarding factors that may facilitate the adoption of MAPs decision, the study comprises 8 variables. The Cronbach's Alpha values for the reliability of the questionnaire were high standard level. The Cronbach's Alpha values for the internal consistency of the scale and the items were all above standard agreed measures (0.72) for good internal consistency i.e., greater than 0.70; (Bryman and Bell, 2011).

Table 4.5:1 Reliability statistics of MAPs

<u>Cronbach's Alpha</u>	<u>Number of Items</u>
0.72	8

4.10. Ethical considerations and data protection

Since nearly all questionnaire-based studies are about human affairs, a researcher, before going to the field, must obtain a formal approval for his/her plan to protect human subjects involved in the study (Yin, 2014). Thus, following the ethical approval guidance prepared by Salford University (the institution of the researcher), the study's ethical approval was prepared to clarify: (1) the study title, questions, objectives, the rationale for undertaking the study and the outline of the study methodology; (2) the procedures for gaining informed consent, including the preparation of the company information sheet, the company consent form, the participant information sheet, and the participant consent form; (3) the procedures undertaken for data protection. Having prepared the initial form of the ethical approval, it was submitted to the Research Ethics Panel of Salford University in 19/12/2017 and was approved on 30/8/2018 (see Appendix B).

4.11. Summary

This chapter provided a detailed explanation of the general questionnaire, the importance of the questionnaire as well as the objectives that have been achieved by using a questionnaire. This chapter explained the type and design and form of the questionnaire that has been used in this study. Furthermore, this chapter provides an explanation of purpose of the questions included in the questionnaire and the type of questionnaire that has been used in this study. This chapter

explained the method of data collection, sample selection and shape as well as the sample size of study. Moreover, this chapter provided a detailed explanation of the procedures used by the researcher in order to select the sample and its geographical distribution, whereby a total of 153 completed questionnaires have been analysed within this study. This chapter has provided a detailed explanation of the quantitative statistical analysis that has been applied in this study on a total sample 153 participants. This chapter also displayed the statistical tests that have been applied to analyse the data, starting with Cronbach's alpha test for reliability and descriptive states, and tests into analysis of variance. At the end of this chapter, a detailed explanation of the concepts of validity and reliability were presented as well as some important information regarding ethical considerations and data protection measures.

Chapter 5: Data analysis and results

This chapter focuses on analysis of the data collected from the 153 companies in GCC countries

As mentioned in the previous Chapter, several descriptive statistical tests, a graphical method, and measures of statistical trend detection methods have been used in this study to analyse quantitative data collected using the questionnaire method. This chapter in turn presents the statistical analysis – descriptive and exploratory – applied on the data collected from 153 GCC companies and therefore presents the obtained results. The results were grouped into different sections, where the sections also have sub sections representing data that comprises the answers to the proposed research questions. In addition, it has a summary developed from the analysis that concludes and highlights the main findings of research study. This chapter is structured to include several subsections. The first section is concerned with analysing the data collected in relation to the demographic information about the respondents therefore presenting the obtained findings. The second section analyses the data collected in relation to the adoption of advanced MAPs in GCC companies and, hence presenting the obtained findings. The third section aims to analyse the data collected on the factors influencing the decision of adopting MAPs in GCC companies and presenting the resulting findings. The fourth section is concerned with analysing the relationship between organisational characteristics and the adoption of advanced MAPs in GCC companies. The fifth section aims at analysing the data collected on the factors that facilitate the adoption of advanced MAPs in GCC companies and, hence presenting gained findings. Finally, the sixth section summarises the chapter and the main findings obtained.

5.1. Section A: Demographics questions

This section aims to summarise the following: gender, age, years of work experience in that position and in the company, academic qualifications, years holding those qualifications, field of study, professional qualifications and type of qualifications as well as the years of holding those qualifications for all the respondents from the 153 GCC companies.

5.1.1. Gender

Table 5.1 indicates that most of the respondents to this questionnaire are male, which is 132 respondents comprising 86.3% of the respondents, whereas there were 21 female respondents comprising 13.7% of the total (Table 5.1 and Figure 5.1).

Table 5.1: Frequency distribution of gender

Gender	Male	Female
Number	132	21
Percentage	86.3%	13.7%

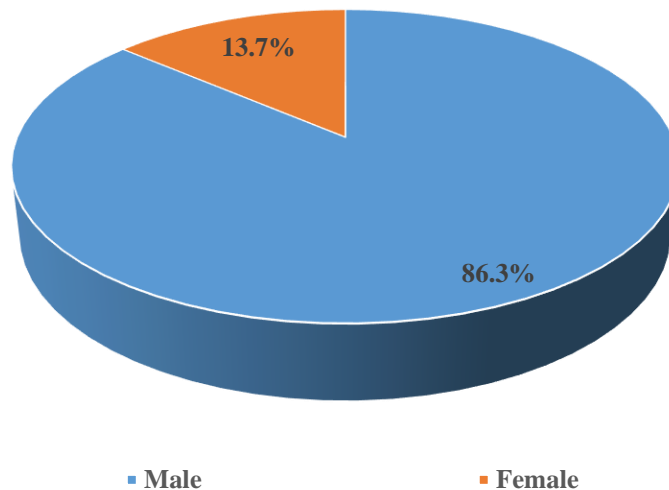


Figure 5.1: Frequency distribution of gender

5.1.2. Age

Age group has been divided into four groups as shown in Table 5.2. The largest portion corresponded to the fourth group of “older than 45 years old” which accounted for slightly more than 32% of the whole sample. This is followed by the second group which is from 25 to 35 years old with 29.5%. The third largest group was from 36 to 45 years old, which was 26.5% of the total respondents. The lowest number of respondents belonged to the group of less than 25 years old, comprising less than 12% of the total (Figure 5.2).

Table 5.2: Frequency distribution of age group

Age	Less than 25 years	25 to 35 years	36 to 45 years	Older than 45 years
Percentage	11.8%	29.5%	26.5%	32.4%

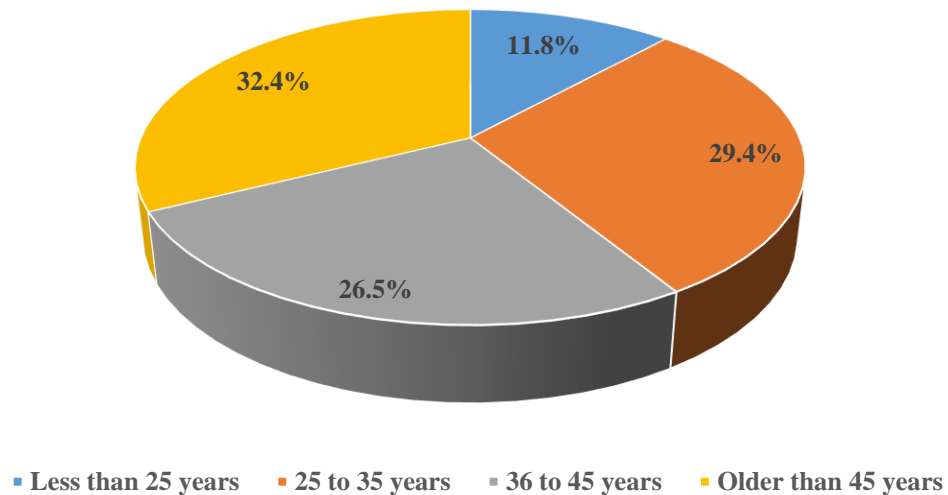


Figure 5.2: Frequency distribution of age group

5.1.3. Years of work experience in that position and in the company

In this question, respondents were asked about the number of years of work experience in their position and in the company. The largest number of respondents for both options of “years of work experience in this position” and “years of work experience in this Company” responded with 6 to 10 years: this accounted for slightly more than 46% of total respondents. The second largest number of respondents responded with 11 to 15 years, with 23.5% for the years in the position and 18.6% for the years in the company. The third largest number of respondents for both options responded with less than 3 years, with slightly less than 17% for years in the position and 17.6 for years in the company. 6.9% of respondents gave 3 to 5 years and more than 15 years for their years in the position. For years of work experience in this company for 12.7% stated more than 15 years and 5.9% stated from 3 to 5 years.

Table 5.3: Frequency distribution of work experience in both position and in the company

Years of work experience in this Position	> 3	3 to 5	6 to10	11 to 15	> 15
Percentage	16.7%	6.9%	46.1%	23.5%	6.9%
Years of work experience in this Company	Less than 3 years	From 3 to 5 years	From 6 to 10 years	From 11 to 15 years	More than 15 years
Percentage	17.6%	5.9%	46.1%	18.6%	12.7%

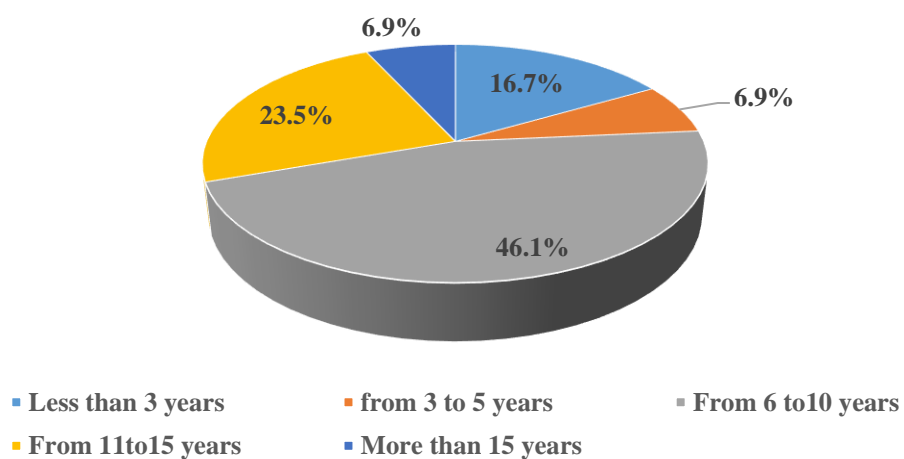


Figure 5.3.1: Frequency distribution of work experience in this position

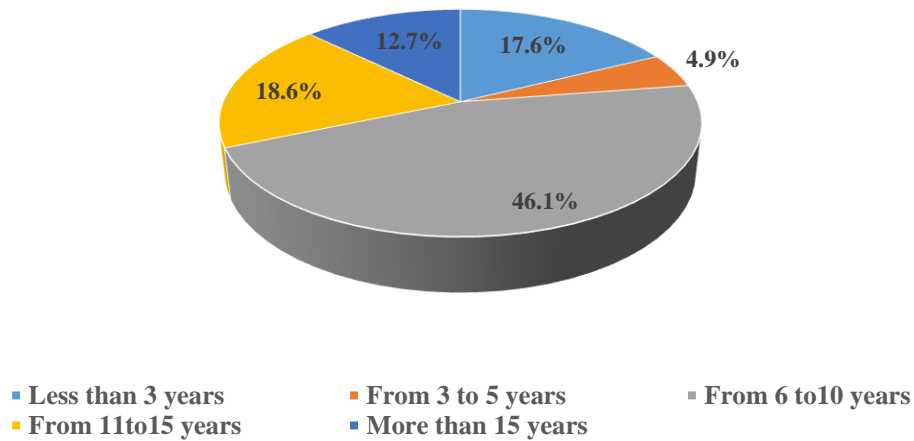


Figure 5.3.2: Frequency distribution of work experience in this company

5.1.4. Academic qualifications and years holding those qualifications

This question was about the educational qualification that respondents hold. As can be seen, the largest group hold a master's degree, comprising 50% of the total of 153 respondents. The result also shows that similar numbers of respondents have PhDs and BSc's, totalling 25.5% and 22.5% of respondents respectively. The remaining groups (1.0%) and (2.0%) of those employees responding to the survey respectively hold High School and Medium Diplomas (Table 5.4).

Table 5.4: Frequency distribution of academic qualifications and years holding those qualifications

Academic qualification	High School	Medium Diploma	BSC	Master's	PhD
Percentage	2.0%	1.0%	22.5%	50.0%	25.5%
Number of years of holding the latest academic degree	<3	3 to 5	6 to 10	11 to 15	>15
Percentage	21.6%	51.2%	15.7%	11.8%	9.8%

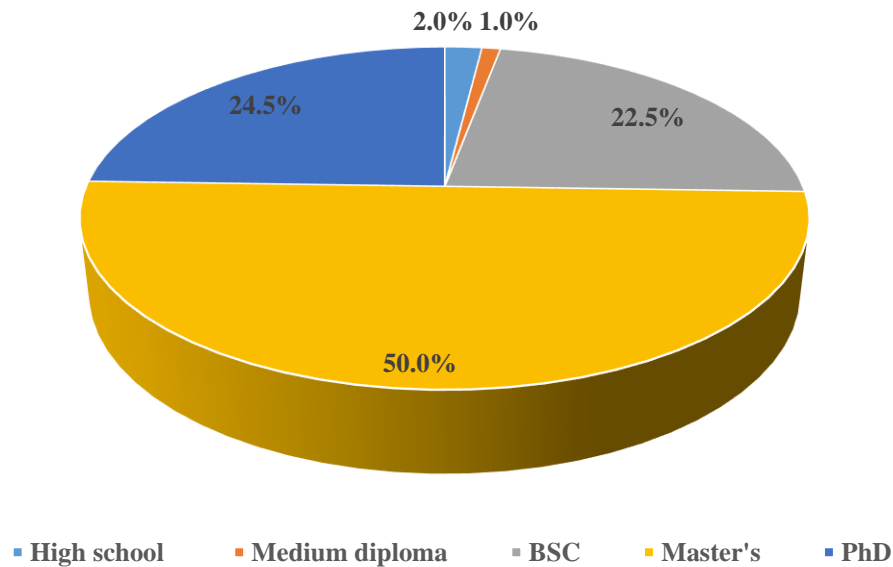


Figure 5.4.1: Frequency distribution of academic qualifications and years holding those qualifications

The second section of this question asked about the duration of years the respondents had held their latest academic degree. The largest percentage was slightly higher than 51% of the respondents who stated 3 to 5 years, followed by the second and third largest percentages who stated less than 3 years 21.6%, and 6 to 10 years 15.7%. The fourth largest number of respondents was for 11 to 15 years, 11.8% of the total, and the smallest percentage 9.8% said more than 15 years.

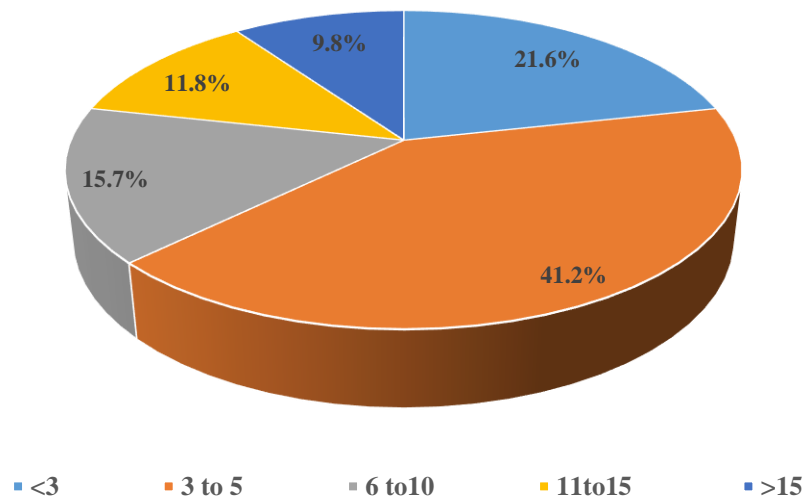


Figure 5.4.2: Frequency distribution of academic qualifications and years holding those qualifications

5.1.5. Field of study

The respondents to this questionnaire were asked about their field of study, and it is clear to see that the bulk of the participants in this questionnaire have come from the following 11 industries: Accounting, Business Administration, Economics, Finance, Management, Literature, Engineering, Clinical Psychology, Computer Science, Regulation and Legal (Table 5.5). The biggest group 25.5% was Management, followed by Business Administration and Engineering with 17.6% and 13.7% respectively. The lowest percentages of participants (2.9%) stated Computer Science, Regulation and Legal (Figure 4.5).

Table 5.5: Frequency distribution of field study

Your field of study	Percentage
Accounting	9.8%
Business Administration	17.6%
Economics	10.8%
Finance	5.9%
Management	25.5%
Literature	3.9%
Engineering	13.7%
Clinical psychology	5.9%
Computer Science	2.9%
Regulation	2.9%
Legal	2.9%

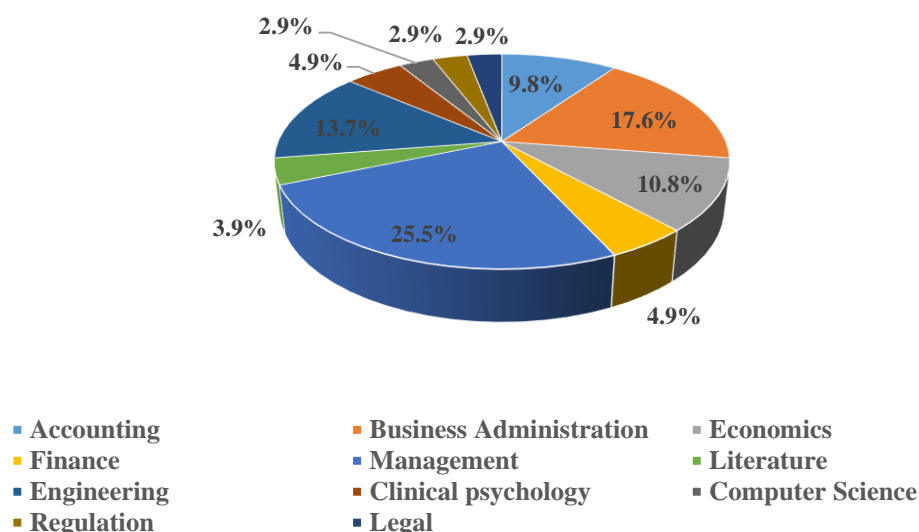


Figure 5.5: Frequency distribution of field study

5.1.6. Professional qualifications, type of qualifications and the number of years held

In this question the respondents were asked about their professional qualifications, including the kind of qualifications as well as the number of years they have held them. More than 89% of the respondents do not hold a professional qualification. 10.6% of the whole total respondents responded “yes” they do hold a professional qualification. The highest percentage said they have a CIMA, 10.8%. The second highest percentage, 6.9%, said they have a CAP. The third and least respondents, 3.9% and 2.9% respectively, said they have ACCA or CIPA.

Table 5.6: Frequency distribution of the professional qualifications and types of qualifications

Professional qualifications	NO		Yes	
Number	137		16	
Percentage	89.5%		10.6%	
Kind of Professional qualifications	CIMA	CAP	ACCA	CIPA
Percentage	10.8%	6.9%	3.9%	2.9%

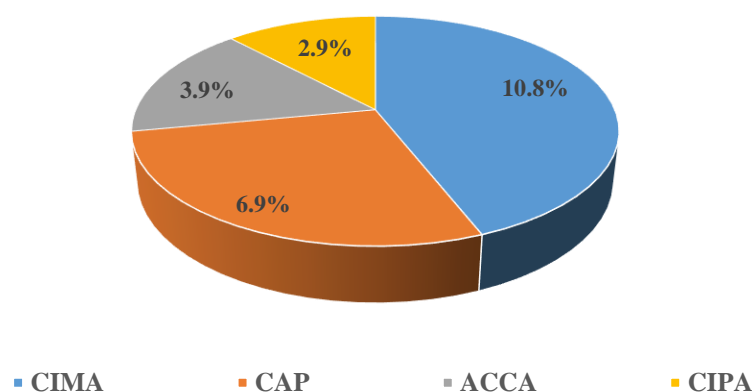


Figure 5.6: Frequency distribution of the professional qualifications and types of qualifications

5.1.7. Job title

In this question the respondents were asked about their job title. As shown in Table 5.7 the CEO was the most common job, held by 52.9% of respondents, followed by financial accountant and financial manager, with 8.8% and 7.8%. The fourth most common job title amongst the respondents was staff 5.9%, followed by psychologist also 5.9%. The least common job title was project manager, accounting for 1% of respondents.

Table 5.7: Frequency distribution of job title

Job Title	Percentage
CEO	52.9%
Financial accountant	8.8%
Cost account	2.0%
Financial manager	7.8%
Investment relations	3.9%
Staff	5.9%
Psychologist	5.9%
Legal Counsel	2.9%
Project Manager	1.0%
Commerce manager	3.9%
Department manager	2.9%
Supply Technical	2.9%

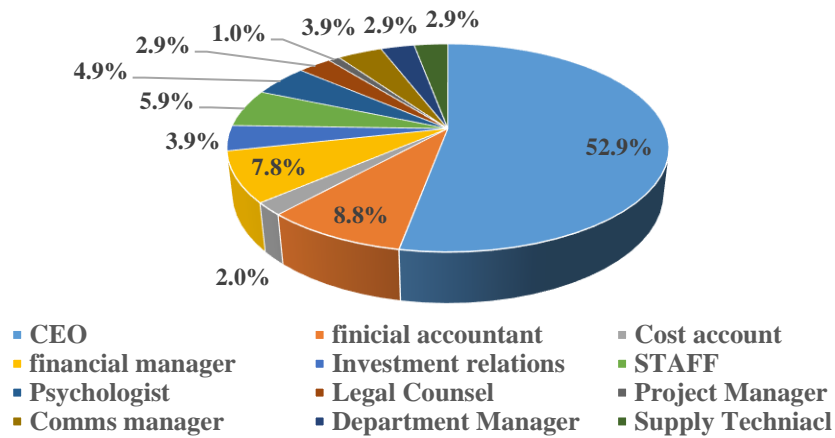


Figure 5.7: Frequency distribution of job title

5.2. Section B: Company characteristics

This section of the questionnaire contained a variety of information regarding the companies and it includes 13 questions which addressed the name of organisation ,company; the owning status of the organisation, the percentage of state's ownership in the organisation; the type of joint venture establishment; the ownership percentage of the organisation; whether the business is an independent company or a subsidiary company; the type of business, the number of products/services types the company currently produces; the number of years the organisation has operated, the number of employees; the market in which the company operates, the main strategic focus of the company and the level of marketing competition the company faces.

5.2.1. Geographic distribution of companies

The geographic distribution of the companies involved in this questionnaire was between six countries: Bahrain, Kuwait, Qatar, Oman, Saudi Arabia and United Arab Emirates. As shown in Table 4.8, Kuwait had the most companies 51 with 33.3%. The second and third highest percentages of companies were Saudi Arabia and United Arab Emirates with 20.3% and 17.6% respectively. The fourth most companies were found in Oman where there were 18 companies comprising 11.8% of the total. The smallest percentages of companies were in Bahrain, with 9.8%, 15 participants, and Qatar with 7.2%, 11 participants

Table 5.8: Frequency of geographic distribution of the companies

Nationality	Bahrain	Kuwait	Qatar	Oman	S Arabia	UAE
Number	15	51	11	18	31	27
Percentage	9.8%	33.3%	7.2%	11.8%	20.3%	17.6%

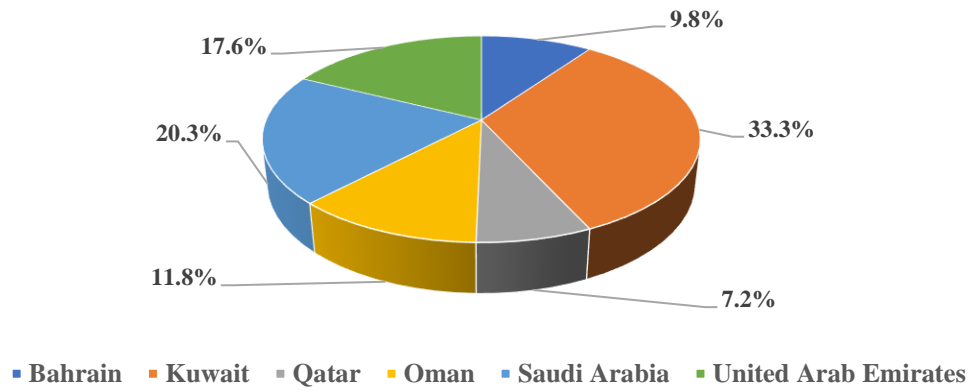


Figure 5.8: Frequency of geographic distribution of the companies

5.2.2. State-owned organisation and the percentage of state ownership in your organisation

It is clear to see from the answers to this question, that private sector is the most common type of organisation, comprising 94 organisations which is 61.4% of the total. The second most common sector is “state-owned organisation” with 24.2% (N: 37). This is followed by “state and private” businesses (22) with 14.4% which is the smallest percentage.

Table 5.9: Frequency distribution of state-owned organisation and the percentage of state ownership in your organisation

The ownership	state owned organisation	Private sector	state & private
Number	37	94	22
Percentage	24.2%	61.4%	14.4%

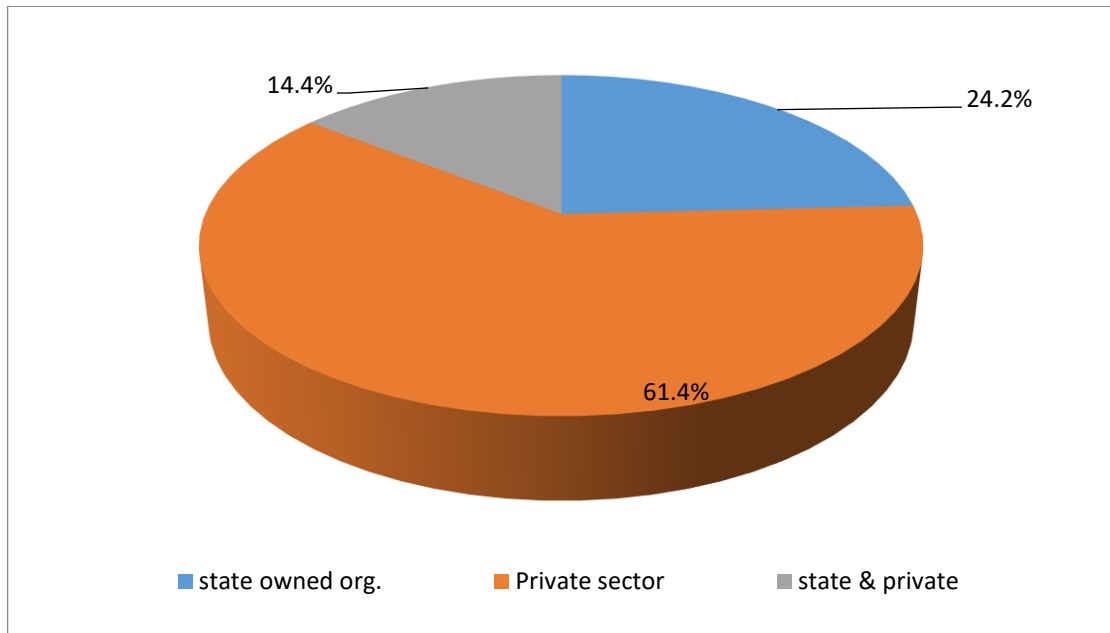


Figure 5.9: Frequency distribution of state-owned organisation and the percentage of state ownership in your organisation

5.2.3. Type of business; an independent company or a subsidiary company

The respondents to the questionnaire were asked what best describes the company's type of business based on these two characteristics: an independent company or a subsidiary company. The detailed results are represented graphically by (Figure 5.10). As can be seen, the majority 81% of those who responded to the survey described their companies as independent companies. The remaining 19% described their companies as subsidiary companies.

Table 5.10: Frequency distribution of type of business; an independent company or a subsidiary company

Is the business an independent company or a subsidiary company?	Independent	Subsidiary company
Number	124	29
Percentage	81%	19%

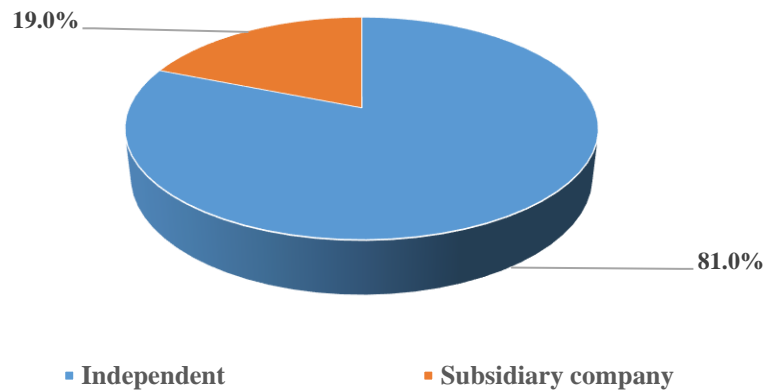


Figure 5.10: Frequency distribution of type of business; an independent company or a subsidiary company

5.2.4. Type of industry: manufacturing or services

The results of the survey in Table 4.11 show that the larger proportion 56.9% of respondents was from the “services” type of business. The smaller proportion 43.1 was from the “manufacturing” type of business.

Table 5.11: Frequency distribution of type of industry: manufacturing or services

Type of business	Manufacturing	Services
Percentage	43.1%	56.9%

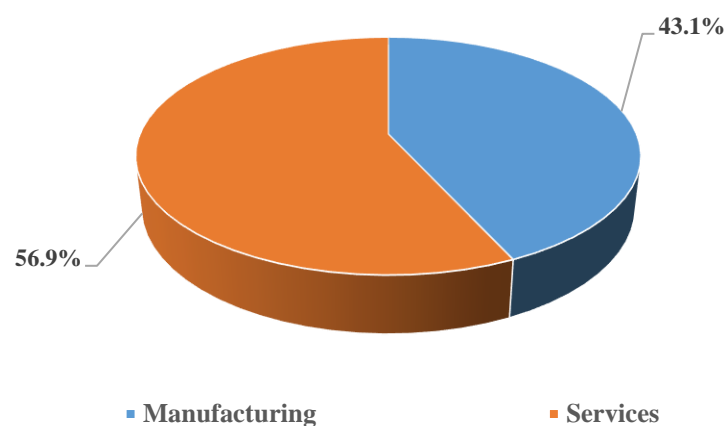


Figure 5.11: Frequency distribution of type of industry: manufacturing or services

5.2.5. Number of products/services types the company currently produce

The survey respondents were asked to describe the number of products/services types the company currently produces. The results are presented graphically in Figure 5.12. It was found that 54, slightly higher than 35%, of total respondents said they have more than 50 products/services types that their company currently produces. 24.2% of respondents have 5 to 10 products/services types. 17.6% have 21-50 types, 15% have 11-20 types and 7.8% have fewer than 5 types.

Table 5.12: Frequency distribution of number of products/services types the company currently produces

The number of products/services types the company currently produces	Less than 5	5 to 10	11 to 20	21-50	More than 50
Number	12	37	23	27	54
Percentage	7.8%	24.2%	15%	17.6%	35.3%

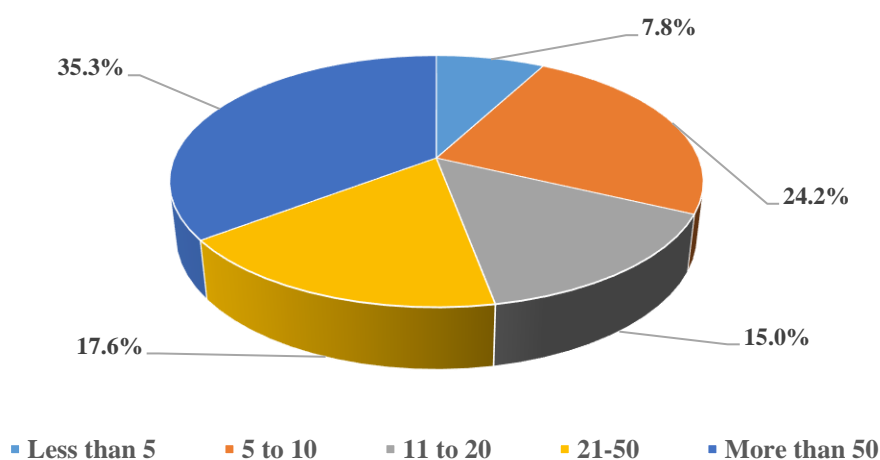


Figure 5.12: Frequency distribution of number of products/services types the company currently produces

5.2.6. Number of years the organisation has operated

The survey respondents were asked about the number of years the organisation had operated and they were given two options: from 1 to 20 years and more than 20 years. The results are presented graphically in Figure 4.13. More than half of the companies have operated for more than 20 years. 65.4% of the respondents 100 answered that their companies have operated for

more than 20 years. The remaining organisations, 34.6% of the total, responded that they had operated from 1 to 20 years.

Table 5.13: Frequency distribution of number of years the organisation has operated

Number of years the organisation has operated	From 1 to 20 years	More than 20 years
Number	53	100
Percentage	34.6%	65.4%

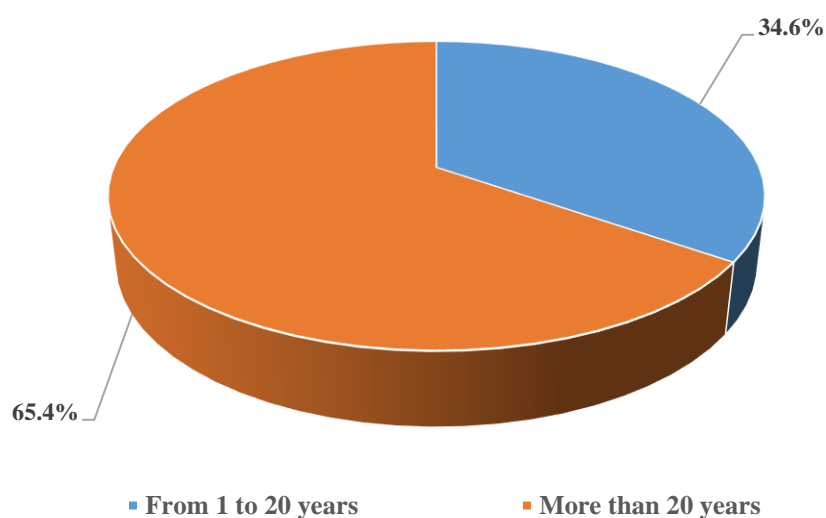


Figure 5.13: Frequency distribution of number of years the organisation has operated

5.2.7. Number of employees

The respondents to the questionnaire were asked to categorise their organisations in terms of the number of employees. The detailed results are represented graphically by (Table 5.14). The respondents' answers ranged from "less than 100" to "more than 1000". However, most organizations were situated in the 100-300 brackets, comprising 54 companies and 35.3% of the total (Figure 5.14).

Table 5.14: Frequency distribution of number of employees

Number of Employees at the company	Less than 100	100-300	301-700	701-1000	More than 1000
Number	27	54	22	13	37
Percentage	17.6%	35.3%	14.4%	8.5%	24.2%

The second highest number of respondents, 24.2%, selected the “more than 1000” employees’ category, followed by “less than 100” and “301-700” with 17.6% and 14.4% respectively. The smallest category shown in Table 4.15 was for 701-1000 employees, which comprised 8.5% or 13 respondents.

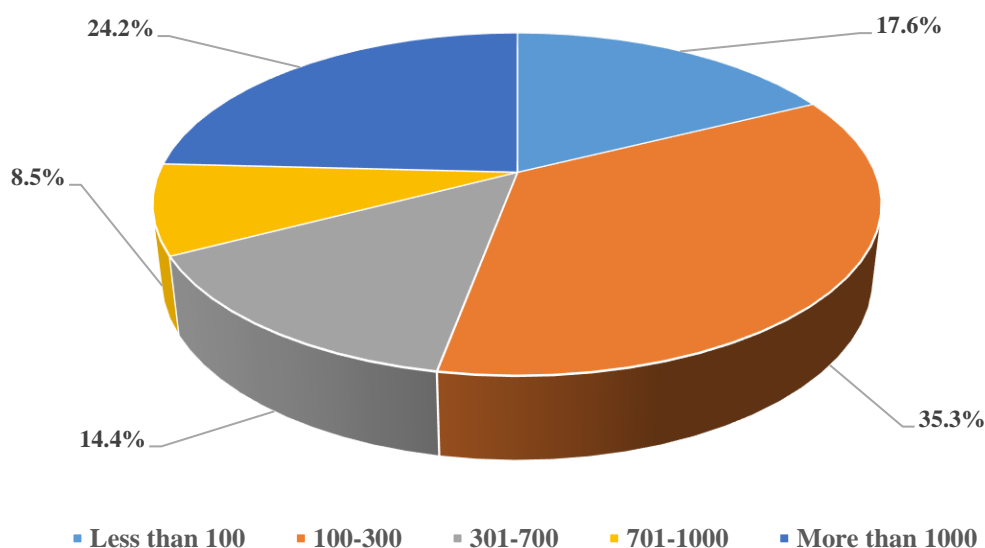


Figure 5.14: Frequency distribution of number of employees

5.2.8. The market in which the company operates

This question asked was whether the market in which the organisation operates is a national market, international market or both. It is clear from the Table 4.15 that most companies are operating in national markets; these account for slightly more than 56.1% of total respondents, followed by “both” markets with 33.3% and international markets with 20.6% of total respondents (Figure 5.15).

Table 5.15: Frequency distribution of the type market in which the company operates

The market in which the company operates	National markets	International markets	Both
Percentage	56.1%	20.6%	33.3%

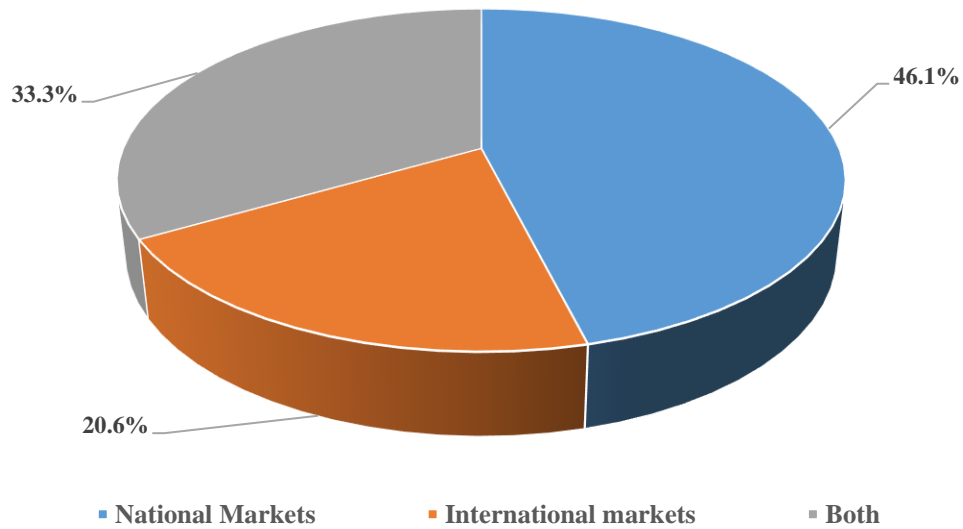


Figure 5.15: Frequency distribution of type of market in which the company operates

5.2.9. The main strategic focus of the company

This question is intended to figure out the main strategic focus of the company based on two factors which are to either “Cut costs” or “Innovation and production diversity”. The higher percentage of companies 70; 68.3% responded with “innovation and production diversity”. The remaining companies 32; 31.5% responded with “cut costs” (Table and Figure 5.16).

Table 5.16: Frequency distribution of the main strategic focus of the company

The main strategic focus of the company	Cut costs	Innovation and production diversity
Number	48	105
Percentage	31.4%	68.6%

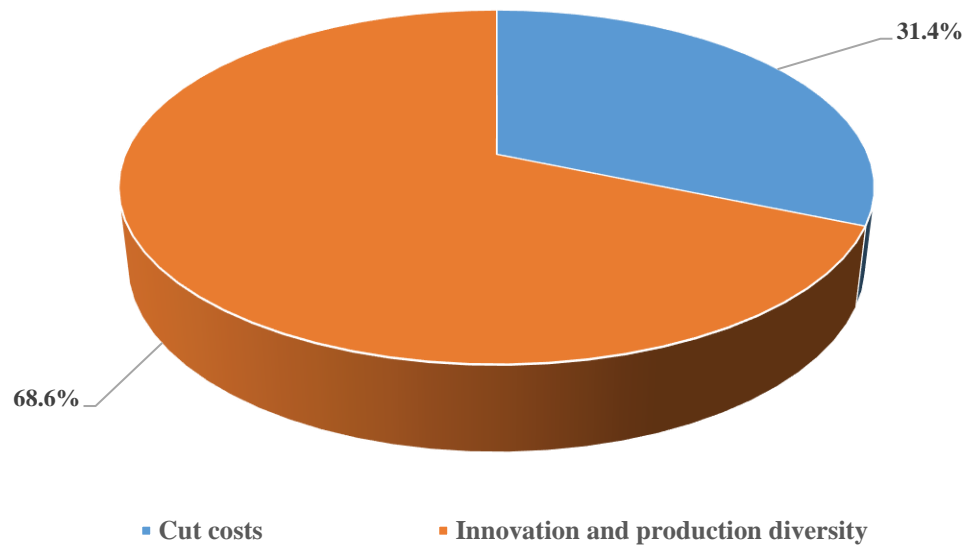


Figure 5.16: Frequency distribution of the main strategic focus of the company

5.2.10. The level of marketing competition the company faces

The level of marketing competition the company faces was shown clearly in Table 5.16 where it ranges from “no or very low” to “very high”. The most common response, by 87 companies, slightly less than 57%, was for “medium” level of marketing competition, followed by 25.5% of respondents saying, “very high” and 17.6%, the least number of respondents, saying “no or very low”.

Table 5.17: Frequency distribution of the level of marketing competition the company faces

The level of marketing competition the company faces	No or very low	Medium	Very high
Number	27	87	39
Percentage	17.6%	56.9%	25.5%

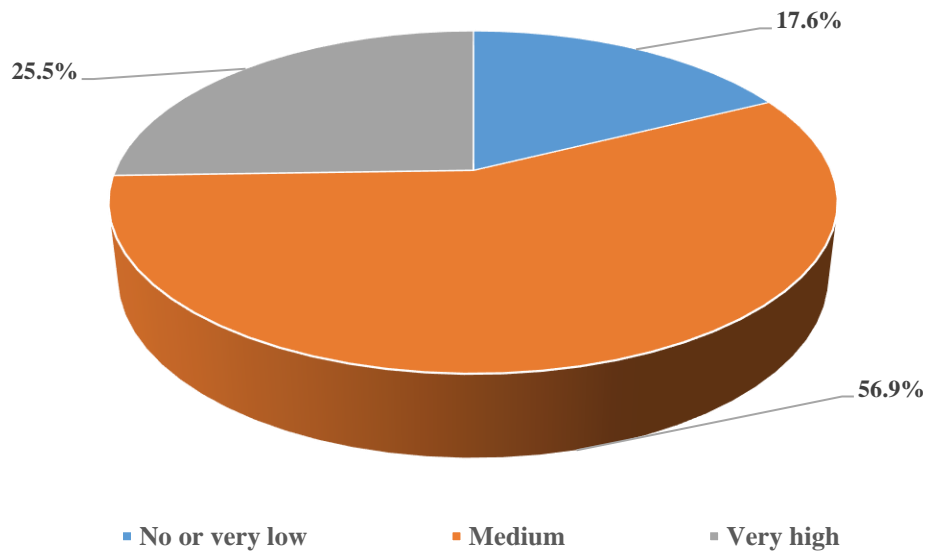


Figure 5.17: Frequency distribution of the level of marketing competition the company faces

5.3. Section C: Advanced MAPs in use

This section aims to investigate the adoption of advanced MAPs by GCC companies, focusing on advanced MAPs which are: ABC, ABM, BSC, TC, LCC, TQM, Benchmarking and JIT. To investigate this issue, the researcher depended on five internal factors (Table 5.18) which are: “discussions have not taken place regarding the introduction of this practice”, “decision has been taken not to introduce this practice”, “some consideration is being given to the introduction of this practice”, “this practice has been introduced on a trial basis” and “this practice has been implemented and accepted”.

5.3.1. ABC

The results (Table 5.18) of the survey show that, the largest proportion 38.2% of respondents stated that no discussions have taken place regarding the introduction of the practice of Activity-Based Costing ABC, followed by slightly more than 30% who confirmed that decisions have been taken to introduce this practice.

The identical smallest proportions 8.8%: Figure 5.18.1, were for both these internal factors: “this practice has been introduced on a trial basis” and “this practice has been implemented and accepted”. Slightly less than 14% of respondents said, “Some consideration is being given to the introduction of this practice”. The adoption rate of ABC is generally low with only 30 organisations implementing and accepting this practice or introducing it on a trial basis. Respondents from 105 organisations stated that they have not discussed the introduction of this practice or have decided to not introduce it.

Table 5.18: The adoption level of advanced MAPs in GCC companies

Advanced Management Accounting Practices	Discussions have not taken place regarding the introduction of this practice	Decision has been taken to not introduce this practice	Some consideration is being given to the introduction of this practice	This practice has been introduced on a trial basis	This practice has been implemented and accepted
Activity-Based Costing (ABC)	38.2%	30.4%	13.7%	8.8%	8.8%
Activity-Based Management (ABM)	25.5%	7.8%	7.8%	41.2%	17.6%
Balanced Scorecard (BSC)	20.6%	25.5%	8.8%	2.9%	42.2%
Target Costing (TC)	20.6%	7.8%	36.3%	9.8%	25.5%
Life-cycle costing LCC	42.2%	7.8%	11.8%	24.5%	13.7%
Total Quality Management (TQM)	22.5%	11.8%	41.2%	12.7%	11.8%
Benchmarking	16.7%	7.8%	18.6%	23.5%	33.3%
Just in time JIT	24.5%	6.9%	41.2%	4.9%	22.5%
Total	26.35%	13.23%	22.43%	16.04%	21.93%

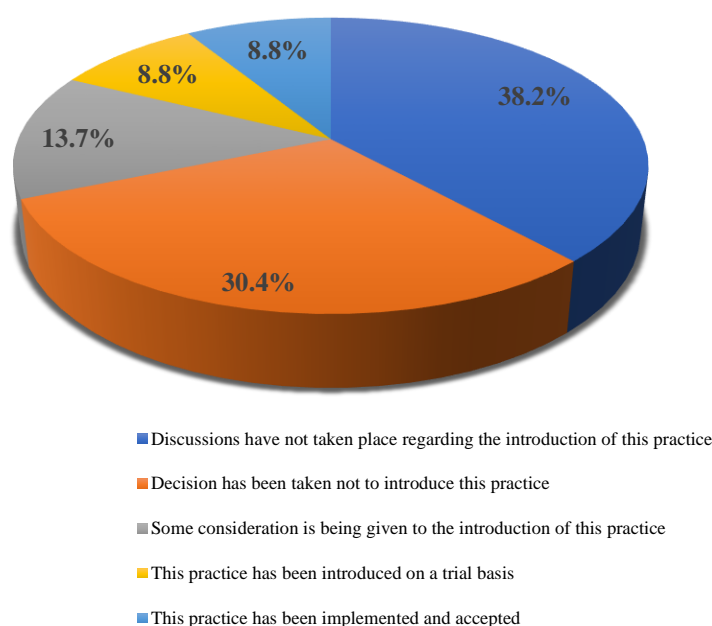


Figure 5.18.1: Distribution of ABC against the five internal factors

5.3.2. ABM

Table 5.18 shows that the largest percentage of slightly more than 41% of respondents stated that “this practice has been introduced on a trial basis”, followed by slightly more than one-quarter of respondents who confirmed that “this practice has been implemented and accepted”.

The smallest percentage of respondents 7.8% was reported twice for both these internal factors: “Decision has been taken to not introduce this practice” and “Some consideration is being given to the introduction of this practice”. Slightly higher than 25% of respondents confirmed that the “Discussions have not taken place regarding the introduction of this practice”.

That is, the rate of implementation and acceptance of the ABM and the rate of its introduction on a trial basis is higher than for the previous practice ABC, with 27 organisations having acted to implement this practice and accept it whilst 63 organisations have introduced it on a trial basis. However, 51 organisations have not held any discussions regarding the practice, N: 39 or have decided to not introduce it N: 12.

- Discussions have not taken place regarding the introduction of this practice
- Decision has been taken not to introduce this practice
- Some consideration is being given to the introduction of this practice
- This practice has been introduced on a trial basis
- This practice has been implemented and accepted

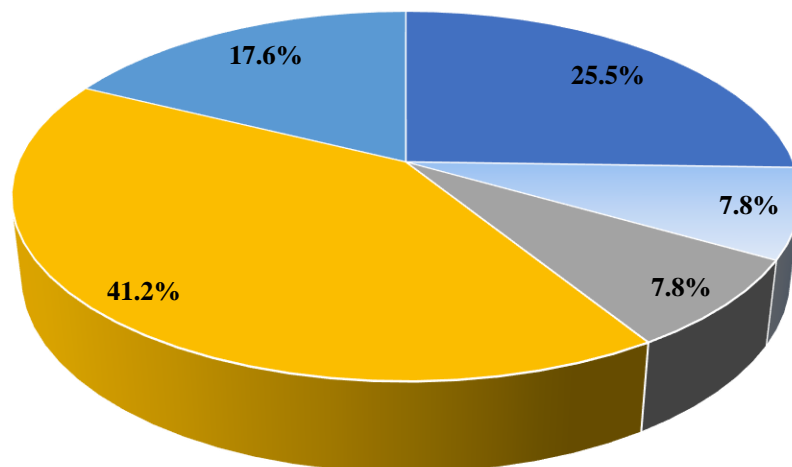


Figure 5.18.2: Distribution of ABM against the five internal factors

5.3.3. BSC

The outcomes, Table 5.18, of the questionnaire show that the proposition with the largest rates of respondents, 42.2%, said that this practice of Balanced Scorecard has been implemented and accepted. It is followed by 25.5% of respondents which confirmed that decisions have been taken not to introduce this practice. The smallest percentage, 2.9%; Figure 5.18.3, claimed that

this practice has been introduced on a trial basis. The response of participants to “some consideration is being given to the introduction of this practice” is 8.8%, leaving 20.6% of respondents opting for “discussions have not taken place regarding the introduction of this practice”.

The adoption of the BSC practice has the highest acceptance and implementation rate with 64 companies have decided to do so, whilst 14 companies have decided to take this into consideration. However, a total of 71 companies have either not discussed the introduction of this practice N: 32 or decided to not introduce it N: 39.

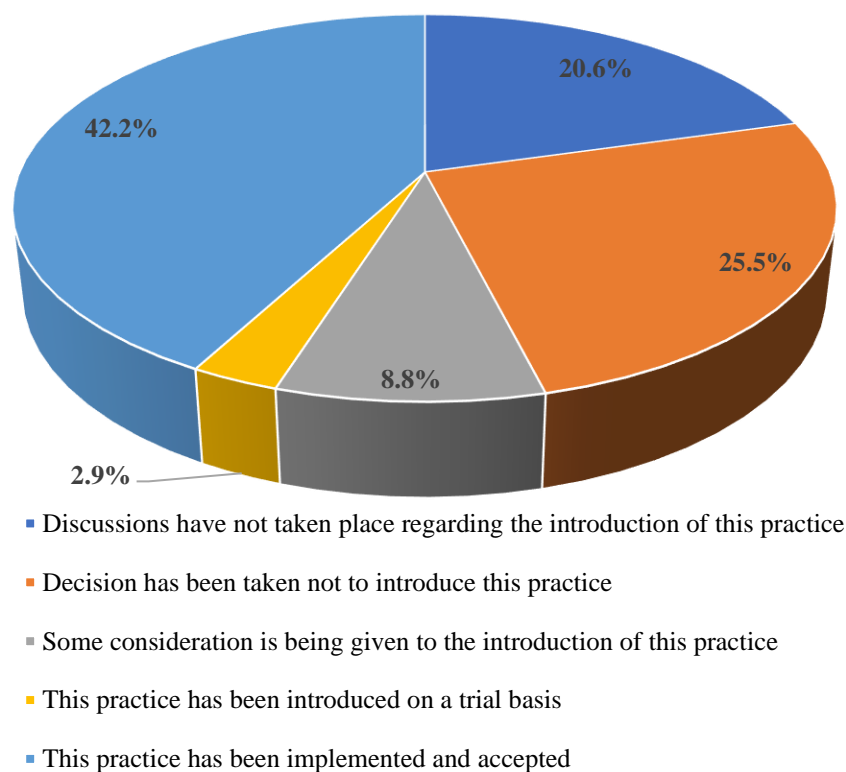


Figure 5.18.3: Distribution of BSC against the five internal factors

5.3.4. TC

Table 4.18 shows that the highest rated proposition selected by respondents was that “some consideration is being given to the introduction of this practice” 36.3%. The smallest rated proposition was “decision has been taken to not introduce this practice” which received 7.8%,

while “this practice has been introduced on a trial basis” got 9.8% (Figure 4.18.4). 25.5% of respondents stated that “this practice has been implemented and accepted”. The remaining 20.6% stated that “discussions have not taken place regarding the introduction of this practice”.

That is, 56 of the companies have decided to take the introduction of the Target Costing practice into consideration, while 43 stated that they have either decided to not introduce the practice N:12 or that discussions have not been taking place regarding this practice’s introduction N:31.

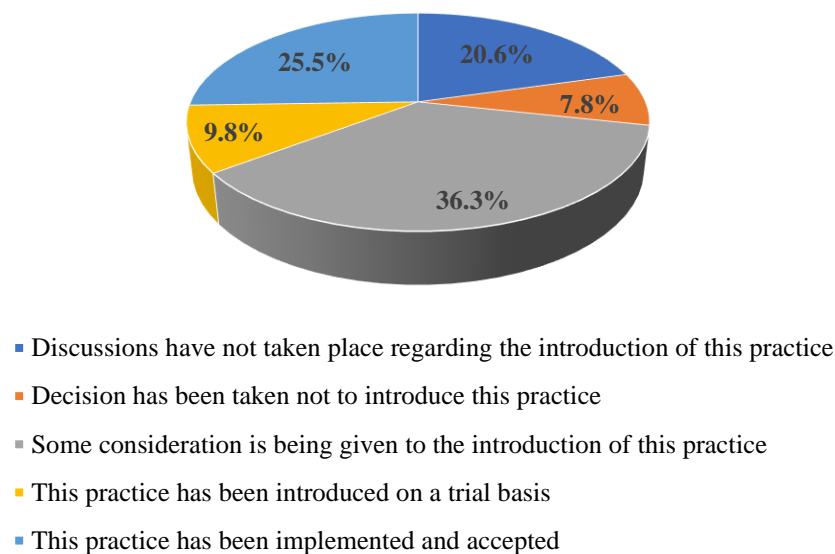
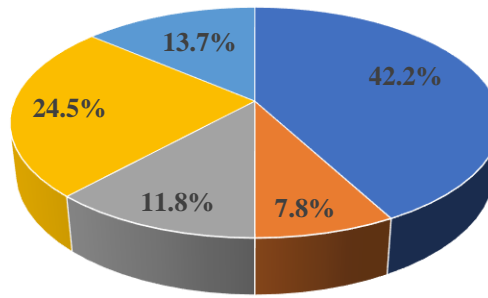


Figure 5.18.4: Distribution of TC against the five internal factors

5.3.5. LCC

Most respondents claimed that “discussions have not taken place regarding the introduction of this practice” 42.2%, followed by 24.5% of respondents who stated that “this practice has been introduced on a trial basis”. The proposition with the least votes, receiving 7.8%, was that “the decision has been taken to not introduce this practice”. The statement that “some consideration is being given to the introduction of this practice got a percentage of 11.8%. Lastly, 13.7% of participants stated that “this practice has been implemented and accepted” (Figure 4.18.5).

That is, there were the highest number of companies who have not discussed the introduction of LCC N: 65, whilst 18 of the companies are considering the introduction of this practice. There is a total of 58 companies who have either introduced this practice on a trial basis N: 37 or have implemented and accepted it N: 21.



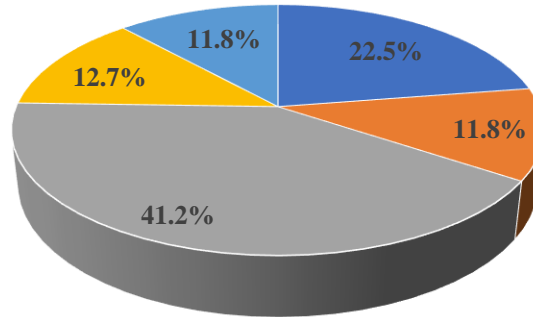
- Discussions have not taken place regarding the introduction of this practice
- Decision has been taken not to introduce this practice
- Some consideration is being given to the introduction of this practice
- This practice has been introduced on a trial basis
- This practice has been implemented and accepted

Figure 5.18.5: Distribution of LCC against the five internal factors

5.3.6. TQM

The biggest group of respondents 41.2% stated that some consideration is being given to the introduction of this practice, followed by 22.5% of respondents who stated that the discussions have not taken place regarding the introduction of this practice. Table 5.18 shows that the smallest percentage 11.8% was for these two options: “the decision has been taken to not introduce this practice” and “this practice has been implemented and accepted”. The 12.7% of respondents claimed that this practice has been introduced on a trial basis.

The adoption rate of the TQM is lower than those previously mentioned with 19 companies having decided to introduce the practice on a trial basis and 18 companies having implemented and accepted the practice. 63 companies are taking the introduction of the practice into consideration, whilst 52 companies have either not discussed this practices’ introduction N: 34 or have decided to not introduce this practice N: 18.



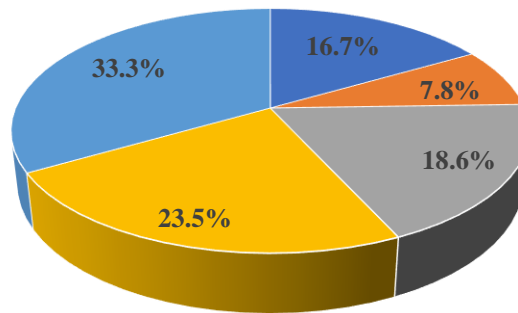
- Discussions have not taken place regarding the introduction of this practice
- Decision has been taken not to introduce this practice
- Some consideration is being given to the introduction of this practice
- This practice has been introduced on a trial basis
- This practice has been implemented and accepted

Figure 5.18.6: Distribution of TQM against the five internal factors

5.3.7. Benchmarking

This data presents that the highest-rated proposition is that “this practice has been implemented and accepted” 33.3% Table 4.18, followed by the 23% of respondents who agreed that that “this practice has been introduced on a trial basis”. “Decision has been taken not to introduce this practice” was the least-rated with 7.8%, while 16.7% stated that “discussions have not taken place regarding the introduction of this practice”. This leaves 18.6% of participants in the survey that claimed that “some consideration is being given to the introduction of this practice” (Figure 4.18.7).

Concerning the Benchmarking practice, the adoption rate is relatively higher as 51 of the companies have accepted and implemented the practice and 36 have introduced it on a trial basis. However, 26 companies have not held discussions regarding the introduction of this practice whilst 28 companies are currently considering introducing this practice.

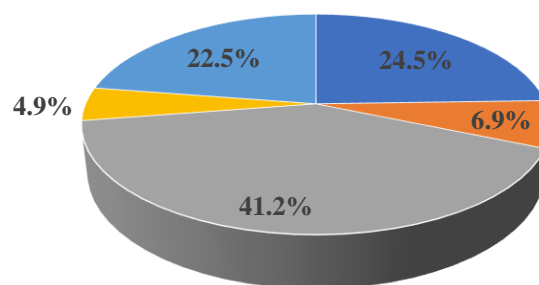


- Discussions have not taken place regarding the introduction of this practice
- Decision has been taken not to introduce this practice
- Some consideration is being given to the introduction of this practice
- This practice has been introduced on a trial basis
- This practice has been implemented and accepted

Figure 5.18.7: Distribution of Benchmarking against the five internal factors

5.3.8. JIT

The chart 5.18.8, shows that the biggest group of respondents (41.2%) stated that some consideration is being given to the introduction of this practice, whilst 22.5% stated that this practice has been implemented and accepted and 24.5% stated that discussions have not taken place regarding the introduction of this practice. The lowest ranking is 4.9% who agreed that this practice has been introduced on a trial basis. This leaves 6.9% of respondents who stated that the decision has been taken to not introduce this practice.



- Discussions have not taken place regarding the introduction of this practice
- Decision has been taken not to introduce this practice
- Some consideration is being given to the introduction of this practice
- This practice has been introduced on a trial basis
- This practice has been implemented and accepted

Figure 5.18.8: Distribution of just in time JIT against the five internal factors

5.4. Section D: Factors influencing the decision of adopting advanced MAPs

In this section the researcher analyses the data collected relating to the factors that may promote/affect the decision of the adoption of advance MAPs in GCC companies. Respondents were asked to rate the effect of certain factors on decision of the adoption of advanced MAPs in their companies. Thus, based on the data collected, the study tests its hypotheses and the effect of other factors on the adoption of advanced MAPs in GCC companies. To do so, the Likert scale has been used as it is the most appropriate test to apply for analysing the relevant collected data as planned in chapter 4. Top of Form

Table 4.9 shows that an overall average of 41% of respondents indicated that the factors would “significantly influence” their decision, whilst an average of 20% were “moderately influenced” by them. The statements “Do not influence” and “Extremely influence” had average percentages of 14% and 13% respectively and “slightly influence” had the lowest average percentage of 12%.

Table 5.19: The percentages of responses to the 12 statements concerning relevance of the “Factors influencing the decision on adopting Advanced MAPs” with average and standard deviation

Statements	Do not influence	Slightly influence	Moderately influence	Significantly influence	Extremely influence	Mean/average	SD
Government legitimacy	20.6%	15.7%	18.6%	31.5%	15.7%	2.7	1.355
Company headquarter	28.5%	5.9%	29.5%	27.5%	9.8%	2.4	1.353
Joint venture with foreign companies	5.7%	1.8%	31.5%	55.1%	5.9%	3.00	1.096
Professional bodies (i.e., CAM)	15.7%	10.8%	18.6%	51.0%	5.9%	2.9	1.155
Educated manager	8.6%	15.7%	16.7%	50.2%	9.8%	2.9	1.563
Conferences, seminars and workshops	20.6%	35.3%	15.7%	19.6%	9.8%	2.3	1.286
Consultants	1.20%	1.80%	11.90%	35.30%	50.20%	3.8	1.289
The successful experience of another organisation with adopting the advanced MAP	7.6%	5.9%	21.6%	55.1%	10.8%	3.1	1.550
The existence of a widely recognised 'champion' of the implementation	15.7%	15.7%	28.5%	31.5%	10.8%	2.7	0.997
The competitiveness of the market	18.6%	15.7%	15.7%	35.3%	16.7%	2.7	1.550
Employee/Organisation recognized need for change	5.7%	9.8%	20.6%	52.2%	11.8%	3.0	1.255
Employee/organisation dissatisfaction with the previous system	5.6%	9.7%	21%	53%	11.8%	3.1	1.126
<i>Table 5.19 (Continued)</i>							
The loss of market share	5.7%	10.8%	25.5%	50.2%	9.8%	3.0	1.322
Deterioration in profitability	15.7%	9.8%	20.6%	39.2%	15.7%	2.8	1.336
Totals	14%	12%	21%	41%	13%	-	-

5.4.1. Statement 1: “Government legitimacy”

Table 5.19 shows that the percentage of all participants who responded to this statement with “significantly influence” and “extremely influence” was 47.2% The percentage of participants who rated this statement as both “not influence” and “slightly influence” was 36.3% whilst 18.6% selected “moderate influence”. In total, the table shows that the mean/average influence of the factor of Government legitimacy is 2.7 with a standard deviation of 1.355. According to the Likert Scale Interpretation, this makes the influence of this factor on the decision of the adoption of advanced MAPs to be moderate as it falls within the value ranges between (2.6 and less than 3.39). Hence, the findings provide support to the first hypothesis of the study. They indicate that: Government legislation has a moderate influence on the decision of adopting advanced MAPs in GCC companies.

5.4.2. Statement 2: “Company headquarter”

Table 5.19 shows that the percentage of all participants who responded to this statement with “significantly influence” and “extremely influence” was 37.30%. The percentage of participants who rated this statement as both “not influence” and “slightly influence” was 34.40% and the percentage who rated this statement as having “moderate influence” was 29.50%. In total, the table shows that the mean/average influence of the factor of company headquarters is 2.4 with a standard deviation of 1.353. According to the Likert Scale Interpretation, this makes the influence of this factor on the decision of the adoption of advanced MAPs to be low as it is less than 2.6. Hence, these findings contradict the second hypothesis of the study. They indicate that: Company headquarter has a low influence on the decision of adopting advanced MAPs in GCC companies.

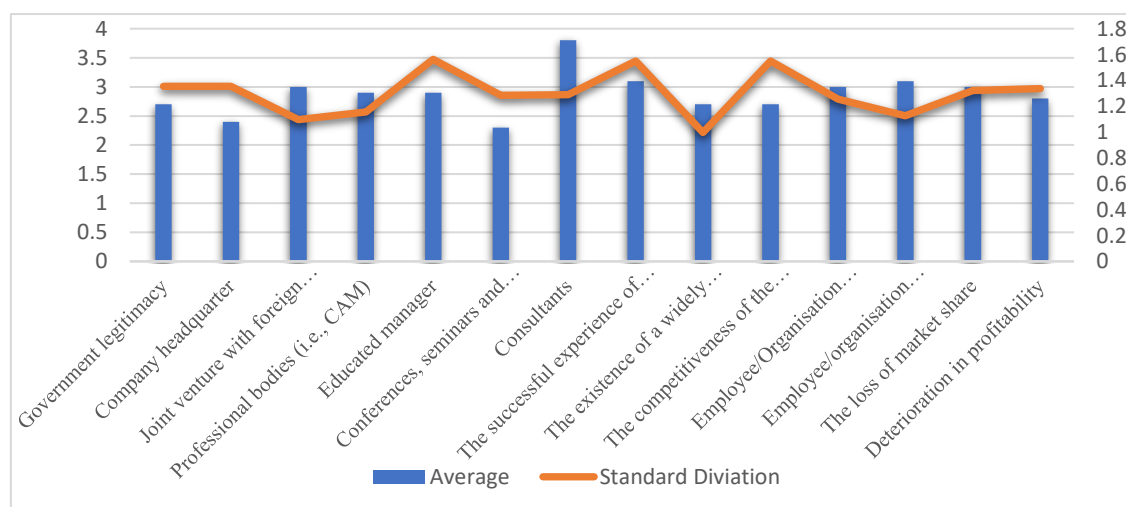


Figure 5.19: The average and standard deviation of respondents to the 12 statements concerning relevance of the” Factors influencing the decision on adopting Advanced MAPs”

5.4.3. Statement 3: “Joint venture with foreign companies”

Table 5.19 shows that the percentage of all participants who responded to this statement with “significantly influence” and “extremely influence” was 61%. The percentage of all participants who responded with “not influence” and “slightly influence” was only 7.50% whilst 31.50% of participants responded with “moderately influence”. In total, the table shows that the mean/average influence of this factor is 3.0 with a standard deviation of 1.096. According to the Likert Scale Interpretation, this makes the influence of this factor on the decision of the adoption of advanced MAPs to be moderate as it falls within the value ranges between 2.6 and less than 3.39. Hence, these findings provide support to the third hypothesis of the study. They indicate that: The joint venture with foreign companies has a moderate influence on the decision of adopting advanced MAPs in GCC companies.

5.4.4. Statement 4: “Professional bodies”

Table 5.19 shows that the percentage of all participants who responded to this statement with “significantly influence” and “extremely influence” was 56.90%. The percentage of participants who rated this statement with both “not influence” and “slightly influence” was 26.50% whilst 18.60% selected “moderate influence”. In total, the table shows that the mean/average influence of the factor of Professional bodies is 2.8 with a standard deviation of 1.155. According to the Likert Scale Interpretation, this makes the influence of this factor on the decision of the adoption of advanced MAPs to be moderate as it falls within the value ranges between 2.6 and less than 3.39. Hence, these findings provide support to the fourth hypothesis of the study. They indicate that: Professional bodies have a moderate influence on the decision of adopting advanced MAPs in GCC companies.

5.4.5. Statement 5: “Educated manager”

Table 5.19 shows that the percentage of all participants who responded to this statement with “significantly influence” and “extremely influence” was 60.00% The percentage who rated this statement as both “not influence” and “slightly influence” was 24.30% whilst 16.70% selected “moderately influence”. In total, the table shows that the mean/average influence of the factor of educated manager is 2.9 with a standard deviation of 1.563. According to the Likert Scale Interpretation, this makes the influence of this factor on the decision of the adoption of advanced MAPs to be moderate as it falls within the value ranges between 2.6 and less than 3.39. Hence, these findings provide support to the fifth hypothesis of the study. They indicate that: Educated manager has a moderate influence on the decision of adopting advanced MAPs in GCC companies.

5.4.6. Statement 6: “Conferences, seminars and workshops”

Table 5.19 shows that the average percentage of all participants who responded to this statement with “significantly influence” and “extremely influence” was 29.40%. The percentage of participants who rated this statement as both “not influence” and “slightly influence” was 55.90% whilst 15.70% selected “moderately influence”. In total, the table shows that the mean/average influence of the factor of Government legitimacy is 2.3 with a standard deviation of 1.286. According to the Likert Scale Interpretation, this makes the influence of this factor on the decision of the adoption of advanced MAPs to be low as it is less than 2.6. Hence, these findings contradict the sixth hypothesis of the study. They indicate that: Conferences, seminars and workshops have a low influence on the decision of adopting advanced MAPs in GCC companies.

5.4.7. Statement 7: “Consultants”

Table 5.19 shows that the percentage of all participants who responded to this statement with “significantly influence” and “extremely influence” was 85.50%. The percentage who rated this statement as both “not influence” and “slightly influence” was only 3.00% whilst 11.90% selected “moderately influence”. In total, the table shows that the mean/average influence of the factor of Consultants is 3.8 with a standard deviation of 1.289. According to the Likert Scale Interpretation, this makes the influence of this factor on the decision of the adoption of advanced MAPs to be high as it falls within the value ranges between, 3.4 and 4.19. Hence, these findings provide support to the seventh hypothesis of the study. They indicate that: Consultants have a high influence on the decision of adopting advanced MAPs in GCC companies.

5.4.8. Statement 8: “The successful experience of other organisation”

Table 5.19 shows that the percentage of all participants who responded to this statement with “significantly influence” and “extremely influence” was 65.90%. The percentage who rated this statement as both “not influence” and “slightly influence” was 13.50% whilst 21.60% selected “moderately influence”. In total, the table shows that the mean/average influence of this factor is 3.1 with a standard deviation of 1.550. According to the Likert Scale Interpretation, this makes the influence of this factor on the decision of the adoption of advanced MAPs to be moderate as it falls within the value ranges between, 2.6 and less than 3.39. Hence, these findings provide support to the eighth hypothesis of the study. They indicate that: The successful experience of other organisation has a moderate influence on the decision of adopting advanced MAPs in GCC companies.

In addition to the above factors, embedded in the study's hypotheses, the study investigates the effect of other factors on the adoption of advanced MAPs in GCC. These factors are also shown in Section D of the survey and analysed as follows:

5.4.9. Statement 9: “The existence of a widely recognised champion of the implementation”

Table 5.19 shows that the percentage of all participants who responded to this statement with “significantly influence” and “extremely influence” was 42.30%. The percentage who rated this statement as both “not influence” and “slightly influence” was 31.40% whilst 28.50% selected “moderately influence”. In total, the table shows that the mean/average influence of this factor is 2.7 with a standard deviation of 0.997. According to the Likert Scale Interpretation, this makes the influence of this factor on the decision of the adoption of advanced MAPs to be moderate as it falls within the value ranges between, 2.6 and less than 3.39. Hence, these findings indicate that “the existence of a widely recognised champion of the implementation” has a moderate influence on the decision of adopting advanced MAPs in GCC companies.

5.4.10. Statement 10: “The competitiveness of the market”

Table 5.19 shows that the percentage of all participants who responded to this statement as “significantly influence” and “extremely influence” was 52.00%. The percentage who rated this statement as both “not influence” and “slightly influence” was 34.30% whilst 15.70% selected “moderately influence”. In total, the table shows that the mean/average influence of this factor is 2.7 with a standard deviation of 1.550. According to the Likert Scale Interpretation, this makes the influence of this factor on the decision of the adoption of advanced MAPs to be moderate as it falls within the value ranges between, 2.6 and less than 3.39. Hence, these findings indicate that “The competitiveness of the market” has a moderate influence on the decision of adopting advanced MAPs in GCC companies.

5.4.11. Statement 11: “Employee/Organisation recognised need for change”

Table 5.19 shows that the percentage of all participants who responded to this statement with “significantly influence” and “extremely influence” was 64.00%. The percentage who rated this statement as both “not influence” and “slightly influence” was 15.50% whilst 20.60% selected “moderately influence”. In total, the table shows that the mean/average influence of this factor is 3.00 with a standard deviation of 1.255. According to the Likert Scale Interpretation, this makes the influence of this factor on the decision of the adoption of advanced MAPs to be moderate as it falls within the value ranges between, 2.6 and less than 3.39. Hence, these

findings indicate that “Employee/Organisation recognized need for change” has a moderate influence on the decision of adopting advanced MAPs in GCC companies.

5.4.12. Statement 12: “Employee/organisation dissatisfaction with the previous system”

Table 5.19 shows that the percentage of all participants who responded to this statement with “significantly influence” and “extremely influence” was 65%. The percentage who rated this statement as both “not influence” and “slightly influence” was 15.30% whilst 21% selected “moderately influence”. In total, the table shows that the mean/average influence of this factor is 2.3 with a standard deviation of 1.126. According to the Likert Scale Interpretation, this makes the influence of this factor on the decision of the adoption of advanced MAPs to be a moderate as it falls within the value ranges between 2.6 and less than 3.39. Hence, these findings indicate that “Employee/organisation dissatisfaction with the previous system” has a moderate influence on the decision of adopting advanced MAPs in GCC companies.

5.4.13. Statement 13: “The loss of market share”

Table 5.19 shows that the percentage of all participants who responded to this statement with “significantly influence” and “extremely influence” was 60.00%. The percentage who rated this statement as both “not influence” and “slightly influence” was 16.50% whilst 25.50% selected “moderately influence”. In total, the table shows that the mean/average influence of this factor is 3.00 with a standard deviation of 1.322. According to the Likert scale interpretation, this makes the influence of this factor on the decision of the adoption of advanced MAPs to be moderate as it falls within the value ranges between 2.6 and less than 3.39. Hence, these findings indicate that “The loss of market share” has a moderate influence on the decision of adopting advanced MAPs in GCC companies.

5.4.14. Statement 14: “Deterioration in profitability”

Table 5.19 shows that the percentage of all participants who responded to this statement with “significantly influence” and “extremely influence” was 54.90%. The percentage who rated this statement as both “not influence” and “slightly influence” was 25.50% whilst 20.60% selected “moderately influence”. In total, the table shows that the mean/average influence of this factor is 2.8 with a standard deviation of 1.336. According to the Likert scale interpretation, this makes the influence of this factor on the decision of the adoption of advanced MAPs to be moderate as it falls within the value ranges between ,2.6 and less than 3.39. Hence, these findings indicate that “Deterioration in profitability” has a moderate influence on the decision of adopting advanced MAPs in GCC companies.

5.5. Statistical relationships between companies' characteristics and adoption of advanced MAPs

In this sub-section the research conducts further examination of the factors that may impact and facilitate the adoption of advanced MAPs. This will be by examining the association between each organisational characteristic, namely type of business :an independent or a subsidiary , ownership: state, private , number of products/services, types the company currently produces: ,ranging from less than 5 to over 50 products, type of business: manufacturing or services, number of years the organisation has operated :from less than 20 years and more than 20 years, number of employees :from less than 100 to over 1000 employees, the market in which the company operates: national markets, international markets, both national and international markets, level of marketing competition the company faces: no or very low, medium, very high, main strategic focus of the company: cut costs and innovation and production diversity, and the adoption of eight types of advanced MAPs, namely ABC, ABM, BSC, TC, LCC, TQM, Benchmarking, and (JIT). The two-tail t-test has been applied to find out the statistical association.

5.5.1. Type of business

Table 5.20 below is about the paired samples t-test between the two variables of the type of business (an independent company or a subsidiary company) and the adoption of the eight advanced MAPs. The table shows that, there is a significant relationship between the type of business and adoption of the eight advanced MAPs with p-value less than 0.05 (Table 5.20). Hence, it can be said that the factor of type of business may influence significantly the adoption of advanced MAPs in GCC companies.

Moreover, according to the data that has been analysed by the Likert scale (Table 5.20) the subsidiary companies have a higher importance and association than the independent companies with the adoption of ABC, ABM, BSC, TC, JIT, LCC and TQM. Otherwise, there is no statistical difference between the subsidiary companies and the independent companies in relation to the adoption of Benchmarking. On the other hand, the independent companies have a higher importance and association than the subsidiary companies with the adoption of JIT.

Hence, it can be said that, in general, subsidiary companies have a higher importance and association with the adoption of MAPs than independent companies, with an average of 2.95.

Table 5.20: Result of paired samples of the adoption of advanced MAPs and type of business with two-tail t-Test where the T critical is 1.971.

Adoption of advanced MAP	P(T<=t) two-tail	Mean average Independent	Mean average Subsidiary
Activity-Based Costing (ABC)	0.001*	2.2	2.5
Activity-Based	0.020*	3.3	3.5
Balanced Scorecard (BSC)	0.000*	2.8	2.9
Target Costing (TC)	0.004*	2.6	2.9
Life Cycle Costing (LCC)	0.001*	2.2	2.5
Total Quality Management	0.000*	2.7	2.9
Benchmarking	0.020*	3.3	3.3
Just in time (JIT)	0.000*	3.4	3.1
Totals		2.81	2.95

5.5.2. Ownership

Table 5.21 below is about the paired samples t-test between the three variables of the ownership; state, private and state & private and the adoption of the eight advanced MAPs. The table shows that there is a significant relationship between the factor of ownership and the adoption of the eight advanced MAPs with p-value less than 0.05. Thus, the result indicates that, the factor of the type of ownership may influence significantly the adoption of advanced MAPs in GCC companies.

Moreover, according to the data that has been analysed by the Likert scale Table 5.21 the private sector has a higher importance and association than the other types of ownership with the adoption of ABM, BSC, TQM, LCC, Benchmarking and JIT. Otherwise, the state-owned companies have a higher importance and association than the other types of ownership with the adoption of just two types of advanced MAPs, namely, ABC and TC. At the time that the mixed state & private companies had the lowest level of importance and association with the adoption of all eight advanced MAPs. Hence, it can be said that, in general, private sector has a higher importance and association with the adoption of MAPs than the other types of ownerships, with an approximate average of 3.00.

Table 5.21: Result of paired samples of the adoption of advanced MAPs and ownership with two-tail t-Test where the T critical is 1.971

Adoption of advanced MAP	P(T<=t) two-tail	Mean average of state owned	Mean average of private sector	Mean average of state & private
Activity-Based Costing (ABC)	0.010*	2.52	2.17	2.31
Activity-Based Management	0.010*	3.29	3.37	2.92
Balanced Scorecard (BSC)	0.000*	2.83	2.94	2.08
Target Costing (TC)	0.000*	2.70	2.63	2.69
Life Cycle Costing (LCC)	0.000*	2.83	2.94	2.08
Total Quality Management	0.000*	2.87	2.89	2.15
Benchmarking	0.000*	3.26	3.48	2.69
Just in time (JIT)	0.000*	2.96	3.49	3.00
Totals		2.91	2.99	2.49

5.5.3. Number of products/services types the company currently produces

Table 5.22 below is about the paired samples t-test between the two variables of the Products/services type the company currently produces that ranges from less than 5 to over 50 products, and the adoption of the eight advanced MAPs. The table shows that there is a significant relationship between the number of products/services types and the adoption of five advanced MAPs with p-value less than 0.05, namely, ABC, ABM, BSC, TC, JIT, LCC and TQM). Otherwise, the table shows that there is no statistical relationship between the concerned variable and the adoption of the remaining three advanced MAPs with p-value less than 0.05. Since this factor has a significant relationship with five of the advanced MAPs but not with three of them, this indicates that this factor may have a medium influence on the adoption of advanced MAPs in GCC companies.

Moreover, according to the data that has been analysed by the Likert scale Table 5.22 the companies that produce more than 50 types of products/services have a higher importance and association than the other types of companies with the adoption of advanced MAPs in relation to ABM, BSC, LCC, TQM and Benchmarking. Otherwise, the companies that produce less than 5 types of products/services have a higher importance and association than the other types of companies in relation to the adoption of TC and JIT. On the other hand, the companies that produce 11 to 20 types of products/services have a higher importance and association than the other types with the adoption of just one advanced MAP, namely, ABC. Finally, the companies

that produce 5 to 10 types of products/services came with the lowest level of importance and association with the adoption of all the eight concerned advanced MAPs. Hence, in general, the findings indicate that the companies that produce more than 50 types of products/service have a higher importance and association with the adoption of MAPs than the other types of companies, with an average of 3.19.

Table 5.22: Result of paired samples of the adoption of advanced MAPs and products/serves types the company currently produce with two-tail t-Test where the T critical is 1.971

Adoption of advanced MAP	P(T<=t) two-tail	Less than 5	5 to 10	11 to 20	21-50	More than 50
Activity-Based Costing (ABC)	0.000*	1.56	2.50	3.00	1.83	2.22
Activity-Based Management ABM	0.498	3.33	2.94	2.85	3.44	3.64
Balanced Scorecard (BSC)	0.000*	2.89	2.62	2.38	2.56	3.17
Target Costing (TC)	0.000*	3.56	2.04	2.46	2.94	2.81
Life Cycle Costing (LCC)	0.000*	2.89	2.62	2.38	2.56	3.17
Total Quality Management (TQM)	0.000*	2.78	2.54	2.31	3.00	3.03
Benchmarking	0.580	3.60	2.96	2.85	3.44	3.89
Just in time (JIT)	0.543	3.78	2.88	2.77	3.50	3.61
Totals	-	3.05	2.64	2.63	2.91	3.19

5.5.4. Type of industry

Table 5.23 below is about the paired samples t-test between the two variables of the type of industry: manufacturing or services, and the adoption of the eight Advanced MAPs. The table shows that there is a significant relationship between the type of industry and the adoption of all the eight advanced MAPs with p-value less than 0.05. Thus, the result shows that, the factor of type of business may influence significantly the adoption of advanced MAPs in GCC companies.

Table 5.23: Result of paired samples of the adoption of advanced MAPs and type of industry: manufacturing or services, with two-tail t-Test where the T critical is 1.971

Adoption of advanced MAP	P(T<=t) two-tail	Manufacturing	Service
Activity-Based Costing (ABC)	0.000*	2.16	2.34
Activity-Based Management ABM	0.000*	3.39	3.24
Balanced Scorecard (BSC)	0.000*	2.95	2.67
Target Costing (TC)	0.000*	2.64	2.67
Life Cycle Costing (LCC)	0.000*	2.95	2.67
Total Quality Management (TQM)	0.000*	2.89	2.71
Benchmarking	0.000*	3.36	3.33
Just in time (JIT)	0.000*	3.23	3.38
Totals		2.95	2.88

Moreover, according to the data that has been analysed by the Likert scale (Table 5.23) the manufacturing companies have a higher importance and association than the service companies with the adoption of (ABM), (BSC), (LCC), (TQM) and Benchmarking. On the other hand, the service companies have a higher importance and association than the manufacturing companies with the adoption of (ABC), (TC) (JIT). Hence, in general, the findings indicate that manufacturing companies have a higher importance and association with the adoption of MAPs than the service companies, with an average of 2.95.

5.5.5. Number of years the organisation has operated:

Table 5.24 below is about the paired samples t-test between the two variables of the number of operation years and the adoption of the eight Advanced MAPs. The table shows that there is a significant relationship between the years of operation and adoption of the eight advanced MAPs with p-value less than 0.05. Hence, it can be said that the company's years of operation factor may influence significantly the adoption of advanced MAPs in GCC companies

Table 5.24: Result of paired samples of the adoption of advanced MAPs and number of years the organisation has operated with two-tail t-Test where the T critical is 1.971

Adoption of advanced MAP	P(T<=t) two- tail	More than 20 years	From 1 to 20 years
Activity-Based Costing (ABC)	0.000*	2.18	2.29
Activity-Based Management ABM	0.000*	3.52	3.21
Balanced Scorecard (BSC)	0.000*	2.64	2.90
Target Costing (TC)	0.000*	2.97	2.53
Life Cycle Costing (LCC)	0.000*	2.97	2.53
Total Quality Management (TQM)	0.000*	2.97	2.71
Benchmarking	0.000*	3.42	3.31
Just in time (JIT)	0.000*	3.48	3.26
Totals	-	3.02	2.84

Moreover, according to the data that has been analysed by the Likert scale (Table 5.24), the companies with more than 20 years of operation have a higher importance and association than those with up to 20 years of operation with the adoption of MAPs: ABM, TC, LCC, TQM, Benchmarking, and JIT. On the other hand, the companies with up to 20 years of operation have a higher importance and association than those with more than 20 years with the adoption of just two advanced systems, namely, ABC and BSC. Hence, in general, the findings indicate that companies with higher years of operation have a higher importance and association with the adoption of MAPs in GCC companies.

5.5.6. Number of employees

Table 5.25 below is about the paired samples t-test between the two variables of the number of employees and the adoption of the eight advanced MAPs. The table shows that, there is a significant relationship between the number of employees and the adoption of five advanced MAPs with p-value less than 0.05, namely, ABC, ABM, LCC, Benchmarking and JIT. Otherwise, the table shows that there is no statistical relationship between the concerned variable and the adoption of the remaining three advanced MAPs with p-value less than 0.05. Considering that the factor of the number of employees has a significant relationship with five of the concerned advanced MAPs but not with three of them, it can be indicated that this factor may have a medium influence on the adoption of advanced MAPs in GCC companies.

Table 5.25: Result of paired samples of the adoption of advanced MAPs and number of employees with two-tail t-Test where the T critical is 1.971

Adoption of advanced MAP	P(T<=t) two-tail	Less than 100	100- 300	301- 700	701- 1000	More than 1000
Activity-Based Costing (ABC)	0.029*	2.43	1.94	2.20	2.67	2.53
Activity-Based	0.030*	3.09	3.53	3.07	3.44	3.41
Balanced Scorecard (BSC)	0.797	2.74	2.86	2.53	2.89	2.88
Target Costing (TC)	0.388	2.48	2.39	2.87	3.00	3.12
Life Cycle Costing (LCC)	0.038*	3.39	3.28	2.67	3.56	3.71
Total Quality Management	0.756	2.70	2.67	2.53	3.11	3.29
Benchmarking	0.010*	3.26	3.23	3.20	3.52	3.47
Just in time (JIT)	0.038*	3.39	3.28	2.67	3.56	3.71
Totals	-	2.94	2.90	2.72	3.22	3.27

Moreover, according to the data that has been analysed by the Likert scale Table 5.25 the companies with more than 1000 employees have a higher importance and association than the other companies with the adoption of advanced MAPs in relation to ABC, TC, TQM, LCC and (JIT). Otherwise, the companies with 701-1000 employees have a higher importance and association than the other companies in relation to the adoption of BSC and Benchmarking. On the other hand, the companies that with 100-300 employees have a higher importance and association than the other companies with the adoption of just one advanced MAP, namely, ABC. Finally, the companies with 301-700 employees and those with less than 100 employees have a lower level of importance and association with the adoption of all the eight concerned advanced MAPs. Hence, in general, the findings indicate that the companies with more than 1000 employees have a higher importance and association with the adoption of MAPs than the other types of companies, with an average of 3.27

5.5.7. Market in which the company operates

Table 5.26 below is about the paired samples t-test between the two variables of the type of market (national, international and mix) and the adoption of the eight Advanced MAPs. The table shows that there is a significant relationship between the type of market and adoption of the eight advanced MAPs with p-value less than 0.05 (Table 5.24). Hence, it can be said that, the market type factor may influence significantly the adoption of advanced MAPs in GCC companies.

Table 5.26: Result of paired samples of the adoption of advanced MAPs and the market in which the company operates with two-tail t-Test where the T critical is 1.971

Adoption of advanced MAP	P(T<=t) two-tail	National markets	International markets	National and international markets
Activity-Based Costing (ABC)	0.013*	2.30	2.38	2.09
Activity-Based Management ABM	0.000*	3.09	3.76	3.18
Balanced Scorecard (BSC)	0.000*	2.68	2.86	2.91
Target Costing (TC)	0.000*	2.04	2.19	2.56
Life Cycle Costing (LCC)	0.000*	2.68	2.86	2.91
Total Quality Management (TQM)	0.000*	2.34	3.00	2.71
Benchmarking	0.000*	3.34	3.48	3.26
Just in time (JIT)	0.000*	3.10	3.29	3.21
Totals	-	2.70	2.98	2.85

Moreover, according to the data that has been analysed by the Likert scale Table 5.26 companies that operate in international markets have a higher importance and association than the other types of companies with the adoption of ABC, ABM, TQM, Benchmarking and JIT. Otherwise, the companies that operate in both national and international markets have a higher importance and association than the other companies with the adoption of three types of advanced MAPs, namely, BSC, TC and LCC. At the time that companies that operate just in the national market have the lowest level of importance and association with the adoption of all the eight advanced MAPs. Hence, it can be said that, in general, the companies operating in the international markets have a higher importance and association with the adoption of MAPs than the other companies, with an approximate average of 3.00.

5.5.8. Level of marketing competition the company faces

Table 5.27 below is about the paired samples t-test between the two variables of the marketing completion level and the adoption of the eight advanced MAPs. The table shows that there is a significant relationship between the level of marketing competition and the adoption of six advanced MAPs with p-value less than 0.05, namely, ABM, BSC, TQM, Benchmarking and Just in Time. Otherwise, the table shows that there is no statistical relationship between the concerned variable and the adoption of both ABC and LCC with p-value less than 0.05. Considering that the factor of marketing competition has a significant relationship with the

almost all the concerned advanced MAPs, except ABC and LCC, it can be indicated that this factor may influence significantly the adoption of advanced MAPs in GCC companies.

Moreover, according to the data that has been analysed by the Likert scale, Table 5.27 companies with a very high level of marketing competition have a higher importance and association than the other companies with the adoption of all eight advanced MAPs except TC. That is, a very high level of marketing competition has a higher association with the adoption of ABC, ABM, BSC, TQM, LCC, Benchmarking and JIT. On the other hand, the companies with a moderate level of marketing competition have a higher importance and association than the other companies with the adoption of TC only. Otherwise, the companies with a low level of marketing completion came with the lowest level of importance and association with the adoption of all eight advanced MAPs. Hence, it can be said that, in general, the companies with a very high level of marketing competition have a higher importance and association with the adoption of MAPs than the other companies with an average of 3.10.

Table 5.27: Result of paired samples of the adoption of advanced MAPs and the level of marketing competition the company faces with two-tail t-Test where the T critical is 1.971

Adoption of advanced MAP	P(T<=t) two-tail	No or very low	Medium	Very high
Activity-Based Costing (ABC)	0.203	2.33	2.07	2.65
Activity-Based	0.000*	3.06	3.24	3.62
Balanced Scorecard (BSC)	0.000*	2.44	2.83	2.96
Target Costing (TC)	0.012*	2.67	2.76	2.65
Life Cycle Costing (LCC)	0.203	2.33	2.07	2.65
Total Quality Management	0.000*	2.72	2.79	2.81
Benchmarking	0.000*	3.17	3.26	3.65
Just in time (JIT)	0.000*	3.00	3.21	3.77
Totals	-	2.72	2.78	3.10

5.5.9. Main strategic focus of the company

Table 5.28 below is about the paired samples t-test between the two variables of the strategic focus: cost cut; innovation and production diversity, and the adoption of the eight Advanced MAPs. The table shows that there is a significant relationship between the strategic focus and adoption of the eight advanced MAPs with p-value less than 0.05 Table 5.28. Hence, it can be

said that the strategic focus factor may influence significantly the adoption of advanced MAPs in GCC companies.

Moreover, according to the data that has been analysed by the Likert scale (Table 5.28) it can be seen that the companies with the strategic focus of innovation and production diversity have a higher importance and association than the companies with the strategic focus of cut costs with the adoption of BSC, TQM, LCC, Benchmarking and JIT. On the other hand, the companies with the strategic focus of cut costs have a higher importance and association than the companies with the strategic focus of innovation and production diversity with the adoption of ABC, ABM and TC. Hence, in general the findings indicate that companies with the strategic focus of innovation and production diversity have a higher importance and association with the adoption of MAPs than the cut costs-based companies, with an approximate average of 3.18.

Table 5.28: Result of paired samples of the adoption of advanced MAPs and the level of marketing competition the company faces with two-tail t-Test where the T critical is 1.971

Adoption of advanced MAPs	P(T<=t) two-tail	Cut costs	Innovation and production diversity
Activity-Based Costing (ABC)	0.003*	2.44	2.19
Activity-Based Management ABM	0.001*	2.91	3.49
Balanced Scorecard (BSC)	0.000*	2.66	2.86
Target Costing (TC)	0.002*	2.72	2.63
Life Cycle Costing (LCC)	0.001*	2.91	3.49
Total Quality Management (TQM)	0.000*	2.56	3.84
Benchmarking	0.005*	3.03	3.49
Just in time (JIT)	0.004*	3.01	3.41
Totals	-	2.78	3.18

5.6. Section E- Factors facilitating the adoption of advanced MAPs

In this section the researcher analyses the data collected relating to the factors that may facilitate the adoption of advanced MAPs in GCC companies. Respondents were asked to rate the facilitating role of certain factors in the adoption of advanced MAPs in their companies. Likert scale will be used as it is the most appropriate test to apply for analysing the relevant collected data. Top of Form

Table 5.29 shows that an overall average of 42% of participants indicated that the factors would “significantly facilitate” the adoption of advanced MAPs in their companies. This was followed by an average 18% selecting “moderately facilitate”. On the other hand, the statements of “slightly facilitate” and “extremely facilitate” came with average percentages of 16% and 17% respectively. Finally, the statements of “do not facilitate” came with the lowest average percentage of 0.8%

Table 5.29: The percentages of responses to the 12 statements relevant to the “main factors that may impact and facilitate the adoption of advanced MAPs in the Gulf countries” with average and standard deviation.

Statements	Do not facilitate	Slightly facilitate	Moderately facilitate	Significantly facilitate	Extremely facilitate	Average	Standard Deviation
The availability of adequate accounting staff	13.7%	22.5%	10.8%	50.2%	10.8%	2.9	1.222
Using computer systems for MA purposes	7.80%	20.50%	15.60%	50.20%	7.80%	2.9	0.979
The authority attributed to the accounting function within the organization	1.90%	10.70%	20.60%	58.00%	8.80%	3.1	1.007
The arrival of a new accountant	5.9%	19.6%	15.7%	50.0%	8.8%	2.9	1.053
Top management support	2.90%	3.80%	7.60%	19.80%	65.90%	3.8	0.975
Co-operation between universities (academics) and companies (professionals)	5.7%	15.7%	22.5%	50.2%	5.9%	2.8	1.166
Accounting research	9.8%	18.6%	26.5%	37.3%	7.9%	2.7	1.059
Management accounting training programmes	9.8%	18.6%	20.6%	35.3%	15.7%	2.8	1.179
Adequate financial resources	10.60%	16.70%	18.60%	35.30%	18.90%	2.9	1.211
Employee/organisation ability to afford the amount of investment required to adopt the innovation	9.8%	18.6%	25.5%	35.3%	10.8%	2.7	1.152
Employee/organisation ability to afford the amount of time required to implement the innovation	15.7%	20.6%	18.6%	30.5%	14.7%	2.6	1.195
The level of employment of management consultants to facilitate implementation	1.80%	5.70%	17.50%	51.20%	25.90%	3.4	1.065
Totals	08%	16%	18%	42%	17%	-	-

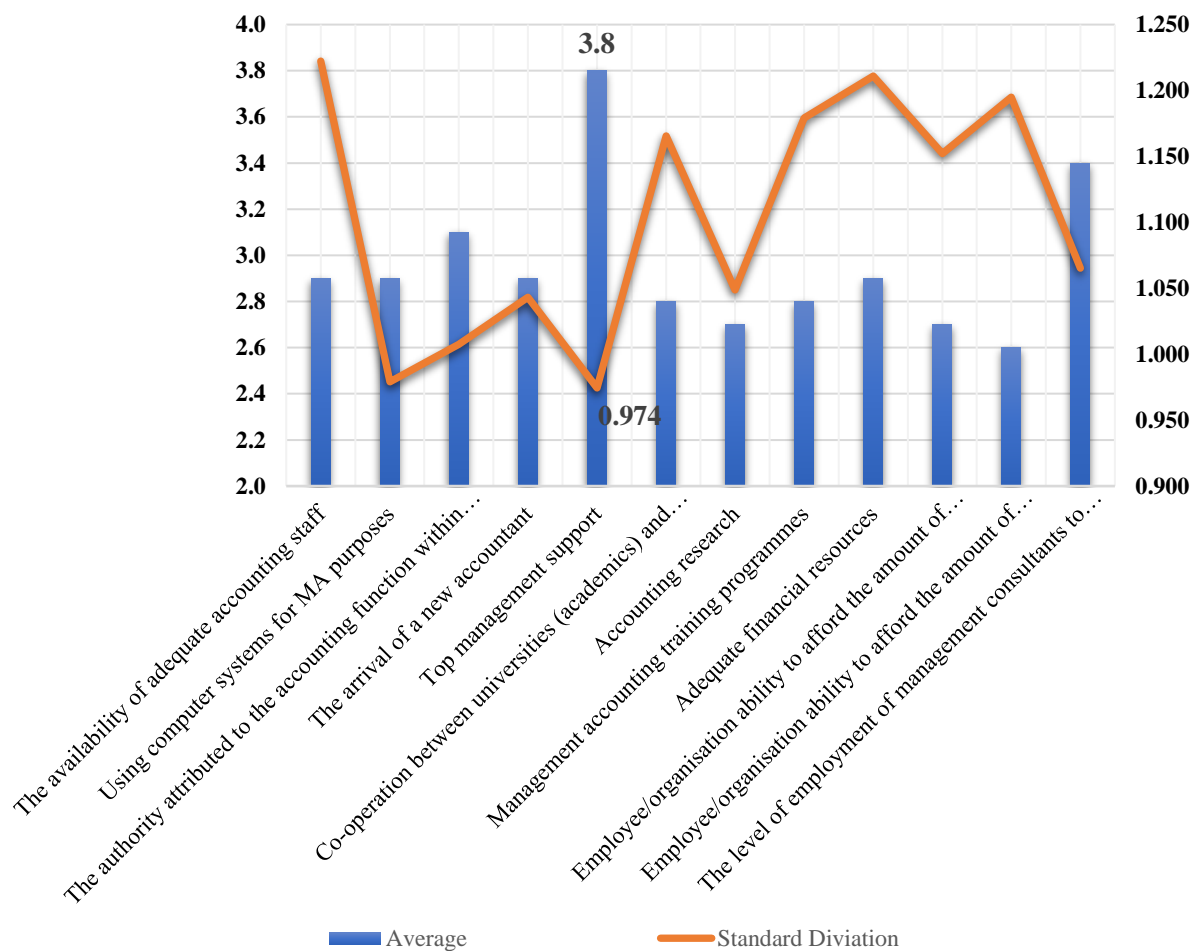


Figure 5.20: The average and standard deviation of respondents to the statements indicating that to what extent the factors below facilitate the adoption of advanced MAPs

5.6.1. Statement 1: “The availability of adequate accounting staff”

Table 5.29 shows that the percentage of all participants who responded to this statement with “significantly facilitate” and “extremely influence” was 61.00%. The percentage who rated this statement as both of “do not facilitate” and “slightly facilitate” was 36.20% whilst 10.80% selected “moderately facilitate”. In total, the table shows that the mean/average facilitating role of this factor is 2.9 with a standard deviation of 1.222. According to the Likert Scale Interpretation, this makes the facilitating role of this factor in the adoption of advanced MAPs to be moderate as it falls within the value ranges between (2.6 and less than 3.39). Hence, these findings indicate that: “The availability of adequate accounting staff” has a moderate facilitating role in the adoption of advanced MAPs in GCC companies.

5.6.2. Statement 2: “Using computer systems for MA purposes”

Table 5.29 shows that the average percentage of all participants who responded to this statement with “significantly facilitate” and “extremely influence” was 58.00% The percentage of

participants who rated this statement as both “do not facilitate” and “slightly facilitate” was 28.30% whilst 15.60% selected “moderately facilitate”. In total, the table shows that the mean/average facilitating role of this factor is 2.9 with a standard deviation of 0.979. According to the Likert Scale Interpretation, this makes the facilitating role of this factor in the adoption of advanced MAPs to be moderate as it falls within the value ranges between, 2.6 and less than 3.39. Hence, these findings indicate that: “Using computer systems for MA purposes” has a moderate facilitating role in the adoption of advanced MAPs in GCC companies.

5.6.3. Statement 3: “The authority attributed to the accounting function within the organisation”

Table 5.29 shows that the percentage of all participants who responded to this statement with “significantly facilitate” and “extremely influence” was 66.80% The percentage who rated this statement as both “do not facilitate” and “slightly facilitate” was 12.60% whilst 20.60% selected “moderately facilitate”. In total, the table shows that the mean/average facilitating role of this factor is 3.1 with a standard deviation of 1.007. According to the Likert Scale Interpretation, this makes the facilitating role of this factor in the adoption of advanced MAPs to be moderate as it falls between the value ranges between (2.6 and less than 3.39). Hence, these findings indicate that: “The authority attributed to the accounting function within the organisation” has a moderate facilitating role in the adoption of advanced MAPs in GCC companies.

5.6.4. Statement 4: “The arrival of a new accountant”

Table 5.29 shows that the average percentage of the participants who responded to this statement with “significantly facilitate” and “extremely influence” was 58.80%. The percentage who rated this statement as both “do not facilitate” and “slightly facilitate” was 25.50% whilst 15.70% selected “moderately facilitate”. In total, the table shows that the mean/average facilitating role of this factor is 2.9 with a standard deviation of 1.053. According to the Likert Scale Interpretation, this makes the facilitating role of this factor in the adoption of advanced MAPs to be moderate as it falls within the value ranges between 2.6 and less than 3.39. Hence, these findings indicate that: “The arrival of a new accountant” has a moderate facilitating role in the adoption of advanced MAPs in GCC companies.

5.6.5. Statement 5: “Top management support”

Table 5.29 shows that the percentage of all participants who responded to this statement with “significantly facilitate” and “extremely influence” was 87.70%. The percentage who rated this statement as both “do not facilitate” and “slightly facilitate” was only 6.70% whilst 7.70% selected “moderately facilitate”. In total, the table shows that the mean/average facilitating role

of this factor is 3.8 with a standard deviation of 0.975. According to the Likert Scale Interpretation, this makes the facilitating role of this factor in the adoption of advanced MAPs to be high as it falls between value ranging between 3.4 and 4.19. Hence, these findings indicate that: “Top management support” has a high facilitating role in the adoption of advanced MAPs in GCC companies.

5.6.6. Statement 6: “Co-operation between universities (academics) and companies (professionals)”

Table 5.29 shows that the percentage of all participants who responded to this statement with “significantly facilitate” and “extremely influence” was 56.10%. The percentage who rated this statement as both “do not facilitate” and “slightly facilitate” was 21.40% whilst 22.50% selected “moderately facilitate”. In total, the table shows that the mean/average facilitating role of this factor is 2.8 with a standard deviation of 1.166. According to the Likert Scale Interpretation, this makes the facilitating role of this factor in the adoption of advanced MAPs to be moderate as it falls within the value ranges between 2.6 and less than 3.39. Hence, the findings indicate that: “Co-operation between universities academics and companies professionals” has a moderate facilitating role in the adopting advanced MAPs in GCC companies.

5.6.7. Statement 7: “Accounting research”

Table 5.29 shows that the percentage of all participants who responded to this statement with “significantly facilitate” and “extremely influence” was 45.20%. The percentage who rated this statement as both “do not facilitate” and “slightly facilitate” was 28.40% whilst 26.50% selected “moderately facilitate”. In total, the table shows that the mean/average facilitating role of this factor is 2.7 with a standard deviation of 1.056. According to the Likert Scale Interpretation, this makes the facilitating role of this factor in the adoption of advanced MAPs to be moderate as it falls within the value ranges between 2.6 and less than 3.39. Hence, these findings indicate that “Accounting research” has a moderate facilitating role in the adoption advanced MAPs in GCC companies.

5.6.8. Statement 8: “Management accounting training programmes”

Table 5.29 shows that the percentage of all participants who responded to this statement with “significantly facilitate” and “extremely influence” was 51%. The percentage who rated this statement as both “do not facilitate” and “slightly facilitate” was 28.40% whilst 20.60% selected “moderately facilitate”. In total, the table shows that the mean/average facilitating role of this factor is 2.8 with a standard deviation of 1.179. According to the Likert Scale Interpretation, this makes the facilitating role of this factor in the adoption of advanced MAPs to be moderate

as it falls within the value ranges between 2.6 and less than 3.39. Hence, these findings indicate that: “Management accounting training programmes” has a moderate facilitating role in the adoption of advanced MAPs in GCC companies.

5.6.9. Statement 9: “Adequate financial resources”

Table 5.29 shows that the percentage of all participants who responded to this statement with “significantly facilitate” and “extremely influence” was 54.20%. The percentage who rated this statement as both “do not facilitate” and “slightly facilitate” was 27.30% whilst 18.60% selected “moderately facilitate”. In total, the table shows that the mean/average facilitating role of this factor is 2.9 with a standard deviation of 1.211. According to the Likert Scale Interpretation, this makes the facilitating role of this factor in the adoption of advanced MAPs to be moderate as it falls within the value ranges between 2.6 and less than 3.39. Hence, the findings indicate that: “Adequate financial resources” has a moderate facilitating role in the adoption of advanced MAPs in GCC companies.

5.6.10. Statement 10: “Employee/organisation ability to afford the amount of investment required to adopt the innovation”

Table 5.29 shows that the percentage of all participants who responded to this statement with “significantly facilitate” and “extremely influence” was 46.10%. The percentage who rated this statement as both “do not facilitate” and “slightly facilitate” was 28.40% whilst 25.50% selected “moderately facilitate”. In total, the table shows that the mean/average facilitating role of this factor is 2.7 with a standard deviation of 1.152. According to the Likert Scale Interpretation, this makes the facilitating role of this factor in the adoption of advanced MAPs to be moderate as it falls within the value ranges between 2.6 and less than 3.39. Hence, these findings indicate that: “Employee/organisation ability to afford the amount of investment required to adopt the innovation” has a moderate facilitating role in the adoption of advanced MAPs in GCC companies.

5.6.11. Statement 11: “Employee/organisation ability to afford the amount of time required to implement the innovation”

Table 5.29 shows that the percentage of all participants who responded to this statement with “significantly facilitate” and “extremely influence” was 45.20%. The percentage who rated this statement as both “do not facilitate” and “slightly facilitate” was 36.30% whilst 18.60% selected “moderately facilitate”. In total, the table shows that the mean/average facilitating role of this factor is 2.6 with a standard deviation of 1.195. According to the Likert scale interpretation, this makes the facilitating role of this factor in the adoption of advanced MAPs to be moderate

as it falls within the value ranges between 2.6 and less than 3.39. Hence, these findings indicate that: “Employee/organisation ability to afford the amount of time required to implement the innovation” has a moderate facilitating role in the adoption of advanced MAPs in GCC companies.

5.6.12. Statement 12: “The level of employment of management consultants to facilitate implementation”

Table 5.29 shows that the percentage of all participants who responded to this statement with “significantly facilitate” and “extremely influence” was 77.10%. The percentage who rated this statement as both “Do not facilitate” and “slightly facilitate” was only 7.50% whilst 17.50% selected “moderately facilitate”. In total, the table shows that the mean/average facilitating role of this factor is 3.4 with a standard deviation of 1.065. According to the Likert Scale Interpretation, this makes the facilitating role of this factor in the adoption of advanced MAPs to be high as it falls within the value ranges between, 3.4 and 4.19. Hence, these findings indicate that: “The level of employment of management consultants to facilitate implementation” has a high facilitating role in the adoption of advanced MAPs in GCC companies.

5.7. Summary:

In this chapter of the study, data obtained from the compilation of the questionnaires completed by 153 participants was analysed. Several statistical tests were applied to analyse the data and obtain the results. This chapter contains six main headlines: demographics questions, company characteristics, the adoption of advanced management accounting practices MAPs, factors prompting/influencing the decision of adopting advanced MAPs, the statistical relationship between organisational characteristics and the adoption of advance MAPs, and factors facilitating the adoption of advanced MAPs. In this chapter, descriptive tests: percentages, mean average and standard deviation; and statistical association tests (t- test) have been implemented. In total, the findings of the study show the following. First: the adoption rate of advanced MAPs in GCC countries is generally low with only 37.96% of the organisations implementing and accepting these practices or introducing them on a trial basis. Second: the decision of the adoption of advanced MAPs in GCC companies is influenced by different factors. The main findings in this respect show that the consultant factor has the most and the highest level of influence on the decision of adopting advanced MAPs in GCC companies. The findings otherwise show that the factors including company headquarter and conferences, seminars and workshops have a low influence on the decision of adopting advanced MAPs in GCC companies. Third: the adoption level of advanced MAPs in GCC companies has relationships

with different organisational characteristics. The main findings in this respect show that there is a significant relationship between the adoption of advanced MAPs in GCC companies and the organisational characteristics of type of business, ownership, the industry type manufacturing or service, and the company's years of operation, the type of market national/international, the level of marketing competition, and the strategic focus of the company. The findings, otherwise, show that there is a medium relationship between the adoption of advanced MAPs and the organisational characteristics of the number of employees and the number of products/services provided. Fourth: the adoption of advanced MAPs in GCC countries is facilitated by different factors.

The main findings in this respect show that the factors of "top management support" and "the employment of management consultants to facilitate implementation" have a high facilitating role in the adoption of advanced MAPs in GCC companies. This was followed by several factors that have a moderate facilitating role including the level of employment of management consultants to facilitate implementation, the authority attributed to the accounting function within an organisation, adequate financial resources, the arrival of a new accountant, the availability of adequate accounting staff, using computer systems, co-operation between universities academics and companies professionals, management accounting training programs, accounting research, employee/organisation ability to afford the amount of investment required to adopt the innovation, and finally, employee/organisation ability to afford the amount of time required to implement the innovation.

Chapter 6: The outline and the discussion of the findings

This chapter will discuss the main findings that have been obtained in the previous chapter, providing an explanation of the key results and discussing them with reference to the results and findings of previous studies and researches.

This chapter analyses the findings of the study and discuss them in the light of previous research. The chapter will present the findings and discuss them under several headings. Firstly, it discusses the study's general findings on demographics characteristics of the individual respondents and companies. Secondly, the chapter presents and discusses the findings relating to the first question of the study on the adoption of advanced MAPs in GCC companies towards providing conclusion remarks for this question. Thirdly, the chapter presents and discusses the findings relating to the second question. To do so, the chapter started with presenting and discussing the findings relating to the study hypotheses; then it proceeds to present and discuss the findings relating to the other factors that influence the decision of adopting advanced MAPs in GCC companies; the chapter further presents and discusses the findings relating to the relationship between organisational characteristics and the adoption of advanced MAPs in GCC companies; and finally the chapter presents and discusses the findings relating to the factors facilitating the adoption of advanced MAPs in GCC companies. Hence, the chapter ends by summarising the study findings in relation to the two questions of this study.

6.1. General findings

6.1.1. Geographic location of the respondents

Most participants responding to this questionnaire were male; this mirrors the fact that most of the workforce in the selected companies, and in Arab countries generally, are male.

The largest age group was “older than 45 years” and the largest group chose 6 to 10 years as the number of years of work experience in their position in the company. This reflects the nature of leadership in the Gulf countries where most leaders are older people.

More than 75% of the respondents hold high degrees including MSc and Ph.D's. This also provides evidence that the questionnaire of the study has been completed by qualified people. In addition, this reflects the recruitment requirements of companies in the Gulf States and it also reflects their high levels of scientific, economic and technical development. This, in general, can be attributed to the economic growth and massive changes that have happened in the way of life of the general population of the Arabian Gulf accompanying the discovery of oil and the achievement of independence by these countries from the West.

A majority of approximately 70% of respondents have their qualifications in business-related fields. These included study fields of Accounting, Business Administration, Economics, Finance and Management. Since these study fields present the most relevant fields to the subject of the current study, this indicates that the data of the study being collected from the most appropriate people for answering the questions of the study's questionnaire.

The findings also show that approximately 11% of the respondents have professional qualifications, including CIMA, CAP, ACCA and CIPA. While this to some extent provides an enhancement of the quality of data collected and the findings obtained by this study, it also reflects a low tendency to gain professional qualifications in GCC countries.

Regarding the job titles of the respondents, the findings show that most of the respondents approximately 70% occupy high management positions in their companies. This therefore also provides an enhancement of the quality of the data collected and the findings obtained by this study as most of the respondents are in a good position to complete the questionnaire in respect of the most adopted MAPs in their companies.

6.1.2. Geographic location of the companies:

This section discuss the key discoveries which are relevant to the 10 questions that have been analysed in the previous chapter which included the geographic location of the organisations, ownership status of the organisation, type of business :an independent or a subsidiary , type of industry: manufacturing or services, the number of products/services types the company currently produces, the number of years the organisation has operated, the number of employees, the market in which the company operates, the main strategic focus of the company and the level of marketing competition the company faces.

As shown in the previous chapter, more than one-third 34% of respondents are from Kuwait. The most common type of organisation is private sector which accounted for 61.8% of the total. 81.5% of respondents described their organisations as independent companies rather than subsidiaries and more than half of them described their type of business as a services type of business. Concerning to the number of products/services types the company currently produces, more than one-third (35.3%) of all respondents stated that their company produces more than 50 products/services types.

Two-thirds (66.7%) of respondents confirmed that their organisations have been operating for more than 20 years, and more than one-third (35.3%) of the companies or organisations have 100-300 employees. The majority of all the companies are operating in national markets and 68.6% of respondents gave “innovation and production diversity” as the main strategic focus

of the company. More than half of all respondents 56.9% stated that their companies face a medium level of marketing competition.

The economic development accompanying the emergence of oil in the Gulf countries has created a great economic base with the foundation of many companies and commercial establishments in all the countries. Since 2003, when oil prices started rapidly increasing, the member states of the GCC have experienced economic development at a heightened rate which in turn has also heightened their position as both trading partners and investors in the world economy (Sturm et al, 2008). They further state that these countries also hold some of the world's biggest sovereign wealth funds; itself highlighting issues around financial stability. The GCC is a trading bloc involving the six Arabian Gulf states of Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, and the UAE and has some of the fastest growing economies, (International Monetary Fund IMF, 2008). The GCC has a rapidly growing economy like China and other Asian countries and a close connection with many western countries, particularly the UK and the USA.

6.2. Findings relating to the first question of the study

The first question of the study is related to the adoption level of advanced MAPs in GCC. It is concerned with these eight advanced MAPs: ABC, ABM, BSC, TC, TQM, LCC, Benchmarking and JIT; and it considers the five different factors of “discussions have not taken place regarding the introduction of this practice”, “decision has been taken to not introduce this practice”, “some consideration is being given to the introduction of this practice”, “this practice has been introduced on a trial basis” and “this practice has been implemented and accepted”.

The result, shown in chapter 5, reveal that 26.35% of the responding companies have not taken any steps towards the introduction of any of the eight advanced MAPs. 13.23% of the responding company have taken their decision to not introduce advanced MAPs, while 22.43% have given some consideration to the introduction of advanced MAPs. Otherwise, 16.04% of the companies have already introduced advanced MAPs on a trial basis, and 21.93% have implemented and accepted advanced MAPs. Hence, it can be concluded that the adoption rate of advance MAPs in GCC countries is generally low with only 37.96% of the organisations implementing and accepting this practice or introducing it on a trial basis.

The above findings provide an answer to the first question, indicating that: the adoption level of advanced MAPs in GCC companies is low. This finding provides an important support to the previous research findings that, despite the great economic growth in the Gulf countries due to the emergence of oil, companies in the GCC countries still rely on the more traditional MAPs

such as budgeting rather than the more recently-developed strategically-focused tools such as ABC and the use of the BSC (e.g. Joshi et al., 2013; McLellan & Moustafa, 2011). In addition, the findings also provided support to the view that, despite the strong advantages of advanced MAPs, their adoption rate in practice is low. For example, in the survey conducted by Askarany & Yazdifar, (2007) just 14% of their targeted Australian companies use advanced MAPs (e.g., ABC). Askarany and Yazdifar (2015) on the other hand found that the adoption of innovative accounting practice (e.g., Benchmarking) in Australia is low with a level of adoption of less than 47% of the targeted companies. Moreover, Askarany (2014) found that less than 33% of his targeted companies in the Sultanate of Oman have adopted innovative accounting practices e.g., Benchmarking. Consistently, the findings also provide support to the study of Cohen et al., (2005), which concluded that over the past decade there has been a growing awareness of advanced MAPs: e.g., ABC, ABM, but the overall rate of implementation has been low.

6.3. Findings relating to the second question of the study

The second question of the study is concerned with the factors that may prompt the adoption of advanced MAPs in GCC companies. To answer this question, the study first, and drawing on the institutional theory, examined the influence of eight factors on the decision of adopting advanced MAPs in GCC companies. These factors were included in the study's eight hypotheses. Second, extending the examination of the study hypotheses, the study further examined other factors on the adoption rate of advanced MAPs. Third, the study also examines the association between the organisational characteristics and the adoption level of advanced MAPs in GCC companies. This is in order to provide more supportive and holistic findings on the factors that may influence the GCC companies to adopt advanced MAPs. Fourth, the study further examined the facilitating role of several factors in the adoption of advanced MAPs in GCC companies.

6.3.1. Findings relating to the study hypotheses

The first three hypotheses H1, H2 and H3 focus on the examination of influence of the coercive pressure on the adoption of advanced MAPs in GCC companies. The coercive pressure was represented in three main factors including government legislation, company headquarter and partnerships with international companies. The findings relating to these three hypotheses, as shown in chapter 5, indicate that the two factors of government legislation and partnerships with international companies have a moderate influence on the decision of adopting advanced MAPs in GCC companies. Otherwise, the factor of company headquarters came with a low level of influence on the decision of adopting advanced MAPs in GCC companies.

In their investigation of the factors that motivated the adoption of one advanced MAPs: BSC in Spain, Kasperskaya (2008) find that the primary motive for initiating the change in MAPs comes from changes in the governing legal framework. Consistent with this later finding, Jalaludin et al., (2011) find that the government legislation has a positive and significant role for prompting organisations to adopt advanced MAPs, On the other hand, the study, by Pavel Lebedeva (2014) found no significant relationship between the change in MAPs and government intervention in his study investigating the role that government intervention can play in prompting the change in MAS by Russian companies. Hence, our findings provide support from GCC companies to the previous findings of Jalaludin et al (2011) and Kasperskaya (2008). On the other hand, they provide contrary evidence to the finding of Lebedeva (2014), who found no relationships between the change in MAS and the government legislation in Russian companies.

Concerning the role of headquarters, Yazdifar & Tsamenyi (2005) find that in the UK, headquarters can play a primary role in prompting subsidiaries to make changes in their MAPs, or to adopt new MAPs that are adopted or advised by the headquarters. In the same way, Tsamenyi et al., (2006) found that in Spain, headquarters plays an effective role in promoting the change in MAPs applied by subsidiary companies.

Otherwise, these findings do not provide support to the findings of Tsamenyi et al (2006) and Yazdifar & Tsamenyi (2005) on the primary role of the company headquarter on the adoption of advanced MAPs. Instead, this study shows a low influence by this factor on the adoption of advanced MAPs in GCC companies. This contrary finding indicates that the subsidiary companies in GCC companies have autonomy in terms of deciding on which MAPs are required to be adopted.

Hypotheses 4, 5 and 6 focus on the examination of the influence of normative pressure on the adoption of advanced MAPs in GCC companies. The normative pressure was represented in three main factors including professional bodies, educated manager, and educational programs: Conferences, seminars and workshops. The findings relating to these three hypotheses, as shown in chapter 5, indicate that the two factors of professional bodies and educated manager have a moderate influence on the decision of adopting advanced MAPs in GCC companies. Otherwise, the factor of educational programs: Conference, seminars and workshops; has a low influence on the decision of adopting advanced MAPs in GCC companies.

The above findings provide support from GCC companies to the previous findings of Al-Dhubaibi et al., (2015), Lebedeva (2014), Brandua (2013) and Tsamenyi, et al (2006) relating to positive role of normative-based factors of professional bodies and educated managers in

prompting the change in MAPs. However, the findings provide evidence to the contrary to the findings of Kasperkaya (2008) who found a high influence of attending relevant educational programs on the adoption of new MAPs.

Hypotheses 7 and 8 focus on the examination of the influence of mimetic pressure on the adoption of advanced MAPs in GCC companies. The mimetic pressure was represented in two main factors including the consulting industry and the experiences of other organisations with their adoption of advance MAPs. The findings relating to the hypothesis 7, as shown in chapter 5, indicate that the factor of consulting industry has a high influence on the adoption of advanced MAPs in GCC companies. Lebedeva (2014) investigated the mimetic pressure relating to consultants; they found that consultants represent the primary driver of change in MAPs in Russia. Consistent with this, Yazdifar & Tsamenyi (2005) found that, from the perceptions of respondents from different UK companies, consultants have a noticeable role in driving change in MAPs. Ma and Tayles (2009) assure further that the consulting industry has a significant role in prompting MAP development.

Relating to Hypothesis 8, the findings, as shown in chapter 5, indicate that the factor of the successful experience of another organisation with the adoption of advanced MAPs has a moderate influence on the adoption of advanced MAPs in GCC companies. Ma and Tayles (2009) found that organisations tend to imitate other organizations in respect of MAPs change and development. Similarly, Jalaludin et al., (2011) found that in the USA there is similarity in the adoption of MAPs, such as TQM, among US-owned companies and foreign-owned companies operating in the USA; this illustrates the role of imitation between companies in shaping their practices of MA. Kasperskay (2008) concluded that the adoption of new MAPs can be a result of imitating the successful experiences of others. Hence, the findings of hypothesis 8 provides additional support from the GCC companies to the previous relative findings, therefore supporting their robustness and generalisability.

It is notable that, among all the factors included in the study hypotheses, just the mimetic-relating factor of consultancy industry has a high level of influence on the adoption of advanced MAPs in GCC companies. Otherwise, the other factors, whether the factor of successful adoption of other organisations or the factors relating to the coercive pressure and normative pressure all came with moderate influence or a low influence as is the case with the factor of company headquarter. This indicates that GCC companies are influenced more essentially by the consulting companies concerning the adoption of advanced MAPs. In other words, the mimetic-relating factor of consultant industry can be very effective in explaining the reason for the adoption of advanced MAP in the GCC companies.

6.3.2. Other factors that may influence the decision of adopting advanced MAPs

Additionally, the study examined the influence of other factors on the decision of adopting advanced MAPs in GCC companies. These factors are: the existence of a widely recognised 'champion' of the implementation; the competitiveness of the market; employee/organisation recognised need for change; employee/organisation dissatisfaction with the previous system; the loss of market share; and deterioration in profitability.

The study findings, as shown in Chapter 5, indicate that all the above factors have a moderate influence on the decision of adopting advanced MAPs in GCC companies.

These findings provide support to the findings of Askarany and Yazdifar (2015) in relation to the positive role of the factor of the existence of a widely recognised 'champion' of the implementation in the adoption of advanced and innovative accounting practices. The findings also support the Askarany and Yazdifar (2015) study in relation to the positive influence of the factor of "employee/organisation dissatisfaction with the previous system" on the adoption of innovative accounting practices. Furthermore, the findings of the study provide supporting evidence to the findings of Askarany and Yazdifar (2007) in relation to the positive role of the factor of "employee/organisation recognized need for the change" on the adoption of advanced MAPs (e.g., ABC). In addition, these findings support the findings of Hall (2004) and Powell and DiMaggio (1991) in relation to the relationship between the adoption of advanced MAPs and the potential benefit that is supposed to be gained by that adoption.

6.3.3. Relationships between organisational characteristics and the adoption level of advanced MAPs

The subsection 5.7 was concerned with the statistical analysis of the relationship between the adoption of advanced MAPs: ABC, ABM, BSC, TC, TQM, Benchmarking and JIT; and organisational characteristics including: type of business, ownership of companies, number of products/services types the company currently produces, type of business, number of years the organisation has operated, number of employees, the market in which the company operates, the level of marketing competition the company faces :no or very low, medium, very high, and the main strategic focus of the company.

6.3.3.1. Type of business: independent or subsidiary

The data analysis in chapter 5 shows that there is a significant relationship between the type of business and the adoption of advanced MAPs in GCC companies. Whereas, the findings showed that the subsidiary companies generally have a higher importance and association with the adoption of MAPs than the independent companies. This finding therefore indicates the low

role of the company headquarter in the adoption of advanced MAP in the subsidiary company. Hence, the finding provides further support to study findings relating to H2.

6.3.3.2. Ownership (state or private)

The data analysis in Chapter 5 shows that there is a significant relationship between the type of ownership and the adoption of advanced MAPs in GCC companies. The findings show that the private sector in general has a higher importance and association with the adoption of advanced MAPs than the other types of ownership state-owned, and state & private companies.

The previous result has been supported by Al-Dhubaibi et al., (2015): they confirmed that the ownership of companies or organizations, industry type, and educational level of Chief Financial Officers: educated managers significantly explain the variations in the MAPs of companies and organisations in Yemen.

6.3.3.3. Number of products/services type the company currently produces:

The data analysis in Chapter 5 shows that there is a medium relationship between the number of products/services types produced by a company and the adoption of advanced MAPs in GCC companies. The findings show that the companies that have more than 50 products, generally have a higher importance and association with the adoption of advanced MAPs than the other companies, especially in relation to the adoption of ABM, BSC, LCC, TQM and Benchmarking. This finding contrasts the findings of some related previous studies such as Allahyari and Ramazani (2011) and Abdel-Kader and Luther (2006b), who found no relationships between the production diversity and the adoption of advanced MAPs. However, the researcher's interpretation of this finding is that where a company is engaged with producing different types of products or providing different types of services, the company will require more advanced and sophisticated MAPs to produce the information required to effectively plan and control the operational and marketing processes of those diverse products and/or services.

6.3.3.4. Type of industry: manufacturing and services

The data analysis in chapter 5 shows that there is a significant association between the type of industry and the adoption of advanced MAPs in GCC companies. The findings show that manufacturing companies have a higher importance and association with the adoption of advanced MAPs than services companies in relation to the adoption of most of the surveyed advanced MAPs. This finding contrasts the findings of Allahyari and Ramazani (2011), who found no relationship between the industry type and the adoption of advanced MAPs, ABC.

On the other hand, the finding supports the finding of Al-Dhubaibi et al., (2015), indicating that the industry type has a significant role in explaining the variations in the MAPs of companies.

6.3.3.5. Number of years an organisation has operated

The data analysis in chapter 5 shows that there is a significant association between the years of operation and the adoption of advanced MAPs in GCC companies. The findings show that the companies with more than 20 years of operation have a higher importance and association than those with up to 20 years of operation with the adoption of most of the surveyed MAPs, specifically with the adoption of ABM, TC, LCC, TQM, Benchmarking, and JIT. To the researcher's best knowledge, there is no previous study concerned with such findings. Hence, the researcher's interpretation of this finding is that companies with higher years of operation have more experience that allows them to effectively identify the shortcomings of the traditional MAPs, therefore prompting the company to search and adopt advanced MAPs that can overcome these shortcomings of the traditional systems.

6.3.3.6. Number of employees

The data analysis in chapter 5 shows that there is a medium relationship between the number of employees and the adoption of advanced MAPs in GCC companies. The finding shows that companies with more than 1000 employees have a higher importance and association than the other companies (<1000) with the adoption of most of the surveyed advanced MAPs, specifically in relation to ABC, TC, LCC, TQM and JIT. Considering the number of employees as an indication of the size of company (Tuanmat & Smith, 2011), this finding indicates that there is a positive relationship between company size and the adoption of advanced MAPs in GCC companies.

Mbawuni and Anertey (2014), in looking at MAPs in telecommunication organisations in Ghana, discovered that the degree of the use and the explanation behind the adoption of MAPs in Ghana relied upon the nature and size of the association. Ahmad (2012) inspected 110 Malaysian organizations in the production area. The discoveries of the examination uncovered that association size significantly affects MAPs in business tasks on the grounds that bigger firms have more resources to encourage MAPs. The investigation additionally found that bigger firms required more comprehensive MAPs compared with SMEs. Abdel-Kader and Luther, (2006b) and Nair & Nian, (2017), also found such positive relationship between the company's size and the adoption of advanced MAPs.

An investigation by Ismail and Mahmoud (2012) that inspected association with MAPs in Egyptian manufacturing firms established that only a couple of manufacturing firms that have

adopted current MAPs since present day MAPs are sophisticated to Egyptian manufacturing firms. Likewise, many the manufacturing firms in Egypt want to embrace conventional MAPs on the grounds that traditional MAPs are straightforward and are suitable to utilise. Allahyari and Ramazani (2011) found no relationship between company's size and the adoption of advanced MAPs. However, Bjornenak (1997) indicates that difference in size is significant for diffusion, implying that large companies have large networks which will help the adoption of the ABC.

The findings of the study provide supporting evidence from GCC companies to the findings indicating a positive relationship between a company's size and the change in MAPs (e.g. Nair & Nian, 2017; Mbawuni & Anertey, 2014; Ahmad, 2012; Abdel-Kader & Luther, 2006b). Otherwise, the findings contrast with the findings of studies such as Ismail and Mahmoud (2012) and Allahyari and Ramazani (2011) who indicated that there are no relationships between these variables. The related study findings can be interpreted in line with the Bjornenak (1997) interpretation that, as a company grows it becomes more able to obtain the resources required to adopt and implement advanced MAPs.

6.3.3.7. Market in which the company operates: international or national

The data analysis in Chapter 5 shows that there is a significant relationship between the market in which a company operates and the adoption of advanced MAPs in GCC companies. The finding shows that companies that operate in international markets have a higher importance and association than the other types of companies with the adoption of most advanced MAPs, specifically in relation to the adoption of ABC, ABM, TQM, LCC, Benchmarking and JIT). To the researcher's best knowledge, no previous study has been concerned with such findings before. Hence, the researcher's interpretation of this finding is that operating in international markets will prompt the company to evaluate its performance and management methods in comparison with internationally leading companies where advanced MAPs have been adopted and implemented. Hence, this will influence a company to adopt similar systems to improve its performance and therefore compete in its international market.

6.3.3.8. Level of marketing competition the company faces

The data analysis in Chapter 5 shows that there is a significant relationship between the level of marketing competition and the adoption of advanced MAPs in GCC companies. The finding shows that companies with a very high level of marketing competition have a higher importance and association than the other companies with the adoption of almost all the eight advanced MAPs except TC and LCC. That is, the very high level of marketing competition has a higher

importance and association with the adoption of ABC, ABM, BSC, TQM, Benchmarking and JIT.

This finding provides additional support from GCC companies to the findings of previous studies such as Tuanmat et al., (2010) and But Nair and Nian, (2017), who found an important role of marketing competition in the adoption of advanced MAPs in Malaysian manufacturing companies. In addition, the findings correspond to Copeland and Shapiro (2010) who have studied the influence of market structure on a firm's decision to adopt a new technology in the personal computer industry. They found that, relative to Apple, producers of PCs have more frequent technology adoption, low product cycles, and very high price declines over the product cycle. They developed a parsimonious vintage-capital model which matches prices and sales of PC and Apple products. The model predicts that competition is the key driver of the rate at which technology is adopted. Moreover, the findings came in line with the findings of the study of Al Omiri and Drury (2007), which targeted 1000 UK manufacturing/service firms with a turnover of above £50 million. This indicated that companies facing intensely competitive market environments tend to employ relatively more advanced MAPs.

The Luther and Longden (2001) study on MAPs in South Africa found that MAPs change due to the volatility of the market competition faced by companies. This paper reports on research into management accounting techniques in South Africa and changes in those techniques. The methodology comprises interpretation of 139 responses to a postal questionnaire, using 77 equivalent UK responses as a benchmark for comparison. Analysis of the data shows significant changes in the perceived benefits derived from management accounting techniques in South Africa over the period 1996–2002 and that these benefits differ from the UK equivalents. Haldma and Laats (2002) examined the impact of the intensity of market competition on MAPs of manufacturing companies in Estonia. The findings of the study revealed that there is a positive relationship between intensity of market competition on MAPs as the external environment aspect affected the nature of the accounting system.

The researcher's interpretation of this finding is that the high level of marketing competition enforces a company to seek a competitive advantage over its competitors and adopt techniques that can allow it to respond more quickly and competitively to the market's emerging opportunities. Hence, it adopts the advanced MAPs in order to help it accomplish those requirements.

6.3.3.9. Main strategic focus of the company

The data analysis in chapter 5 shows that there is a significant relationship between the strategic focus and the adoption of advanced MAPs in GCC companies. The finding shows that companies with the strategic focus of innovation and production diversity have a higher importance and association than the companies with the strategic focus of cutting costs with the adoption of most of the surveyed MAPs, specifically in relation to the adoption of the BSC, TQM, LCC, Benchmarking and JIT. This finding supports the findings of some previous studies, such as (e.g., Hendricks et al., 2012; Gosselin, 2011). Therefore, it indicates that companies with the strategic focus of innovation and diversity will pay more attention to the non-financial aspects of the business including R&D, customer perspective, employees' skills and competencies to innovate. Hence, to effectively provide the information required to plan and manage such elements, those companies are prompted to adopt more sophisticated and advanced MAPS.

The above findings show that all the factors relating to organisational characteristics, discussed above, have a significant relationship with the adoption of advanced MAPs in GCC companies. The exceptions from this are the factors of number of products/services types and number of employees, which came with a medium relationship with the adoption of advanced MAPs in GCC companies.

6.3.4. Findings relating to the factors facilitating the adoption of advanced MAPs

This part of the study concerning the facilitating role of 12 factors in the adoption of advanced MAPs. These factors are the availability of adequate accounting staff, using computer systems for MA purposes, the authority attributed to the accounting function within the organization, the arrival of a new accountant, co-operation between universities academics and companies professionals, accounting research, management accounting training programmes, adequate financial resources, employee/organisation ability to afford the amount of investment required to adopt the innovation, employee/organisation ability to afford the amount of time required to implement the innovation, levels of employment of management consultants to facilitate implementation, and top management support.

The study findings presented in chapter five showed that all the above factors have a facilitating role in the adoption of advanced MAPs in GCC companies. However, while most of the factors have a moderate facilitating role, the factor of top management support has the highest facilitating role in the adoption of advanced MAPs. This was followed by the factor of the level of employment of management consultants to facilitate implementation, which also came with a high facilitating role.

These findings support the findings of Askarany and Yazdifar (2015) in relation to the strong role of the top management support in the adoption of innovative accounting systems. The findings also are in line with the findings of Askarany and Yazdifar (2015) relating to the positive role in the adoption of innovative accounting systems of factors such as employee/organisation ability to afford the amount of investment required to adopt the innovation, and employee/organisation ability to afford the amount of time required to implement the innovation. However, the findings provide evidence to the contrary to the findings of Askarany and Yazdifar (2015) regarding the influence of the level of employment of management consultants to facilitate the implementation of the innovative accounting systems. That is, while the findings of Askarany and Yazdifar (2015) shows no significant influence of this factor on the adoption of advanced MAPs, the findings of this study show this factor to have a higher influence role in facilitating the adoption of advanced MAPs. Furthermore, the findings of the study provide supporting evidence to the findings of Askarany and Yazdifar (2007) in relation to the positive influence on the adoption of advanced MAP by factors including the use computer systems for MA, the availability of adequate financial resources, and the availability of adequate accounting staff,

Haldma and Laats (2002) in their research on accounting staff on MAPs in Estonian assembling organizations discovered that there is a significant connection between the level of capability of accounting staff and MAPs. Likewise, the authors found that a considerable number of accounting staff lack adequate training on the most proficient method to utilise the bookkeeping data.

Ahmad (2012) inspected the connection between the level of capability of bookkeeping staff and MAPs in Malaysian SMEs. The creator found that the level of capability of bookkeeping staff significantly affected MAPs in Malaysian SMEs. The study's findings provide support to the findings of the studies mentioned above and other studies such as Nair and Nian, (2017) and Abdel-Kader and Luther (2008) in relation to the positive facilitating role of the adequate accounting staff in adopting the change in MAPs (advanced MAPs).

In general, the aforementioned findings support the findings of (Askarany and Yazdifar, 2007) who found that amongst the most important factors influencing an avoidance of innovation were a lack of suitable software, cost of set up and implementation, lack of information on available costing techniques, management policies and priorities and a lack of appropriate cost accounting skills (Askarany and Yazdifar, 2007).

6.4. Summary

This chapter discusses the main findings obtained in the chapter of results and analyses them. It provides, explains and discusses the key findings of the study in respect of the findings of previous studies. This chapter includes several main and sub headlines that connected the main findings with the questions of this study. The findings relating to the geographic location of respondents and organisations companies have been discussed. The chapter then proceeds to discuss the findings relating to the study's first question on the adoption of advanced MAPs in GCC companies. Moreover, the chapter presented and discussed the findings relating to study's hypotheses on the influence of NIS-based factors on the decision of adopting advanced MAPs in GCC companies. That is, the chapter presents and discusses the findings relating to influence of coercive, normative and mimetic factors on the decision of adopting advanced MAPs in GCC companies, and these included government legislation, company's headquarters, international companies, professional bodies, educated managers, consultants, the successful experience of other organisations, and conferences, seminars and workshops.

The chapter further explains and discusses the influence that can be applied by some other factors on the decision of adopting advanced MAPs in GCC companies; these include the existence of a widely recognised 'champion' of the implementation, competitiveness of the market, employee/organisation recognised need for change, employee/organisation dissatisfaction with the previous system, the loss of market share and the deterioration in profitability. Moreover, the chapter presents and explains the relationship between the adoption of advanced MAPs in GCC and certain organisational characteristics; these include type of business, ownership, products/services type the company currently produces, type of business, number of years the organisation has operated, number of employees, market in which the company operates, level of marketing competition the company faces and the main strategic focus of the company. Finally, the chapter presents and discusses the study findings relating to the role of some factors in facilitating the adoption of advanced MAPs in GCC companies; these include the availability of adequate accounting staff, using computer systems for MA purposes, the authority attributed to the accounting function within the organisation, the arrival of a new accountant, co-operation between universities academics and companies professionals, accounting research, management accounting training programmes, adequate financial resources, employee/organisation ability to afford the amount of investment required to adopt the innovation, employee/organisation ability to afford the amount of time required to implement the innovation, levels of employment of management consultants to facilitate implementation, and top management support.

Chapter 7: Conclusion, Contribution and Recommendations of the study

This chapter focuses on the conclusion and recommendations as well as the most important contribution of the study.

This study has mainly been on the topic of the adoption of advanced MAPs in the GCC. It gives insights into the adoption of advanced MAPs in GCC companies which can represent general indications about the adoption of advanced MAPs in general. The study has employed the NIS framework, and this provides unique insights into the context of the selected countries in relation to the factors driving MAPs change whilst it also conducts some more examination of NIS which is believed to provide further empirical evidence on the robustness and generalizability of this theory. In this study different relationships between different coercive, normative and mimetic relating factors and the adoption of advanced MAPs in GCC companies has been defined. This is in addition to the investigation of the role of other factors in prompting the adoption of advanced MAPs in GCC companies. Additionally, the study investigates the role of some factors in facilitating the adoption of advanced MAPs in the concerned companies. Therefore, this study is expected to make a significant contribution to academia and practitioners in several ways that are discussed in this chapter. That is, this chapter aims to provide a summary of the study procedures, findings, contributions and implications, limitations and potential directions for further studies. It begins with an overview of the study. This is followed by presenting the study main findings related to the adoption of advanced MAPs in GCC companies, the factors that influence the decision of adopting MAPs in GCC companies, the relationships between organisational characteristics and the adoption of advanced MAPs in GCC companies, and finally, the findings related to the factors that may facilitate the adoption of advanced MAPs in GCC companies. Having done this, the chapter explains the main contributions and implications of the study, and then defines the study limitations, and suggests potential avenues for further studies.

7.1. An overview of the study

The main aim of the study was to investigate the adoption of advanced management accounting practices MAPs in the GCC counties: Kuwait, Saudi Arabia, Oman, Qatar, UAE and Bahrain, focusing on the most important activities such as ABC, ABM, LCC, BSC, QTM, JIT Benchmarking and TC.

As previously noted, the study is mainly based on the theme of the adoption of advanced MAPs in the Gulf States and, therefore, the study was focused on achieving the main goals and the four objectives which are:

1. To present the results of the regional and international previous studies that are relevant to the advanced MAPs throughout the world.
2. To examine the factors affecting the adoption of advanced MAPs in the concerned companies based on the institutional theory, specifically, New Institutional Sociology (NIS).
3. To identify the advanced MAPs that have been adopted by GCC countries.
4. To present the results of a questionnaire survey of manufacturing and services companies based in GCC countries.

This study was built on two main fundamental questions:

- 1- To which extent have the advanced MAPs been adopted by GCC countries?
- 2- What are the factors influencing the adoption of advanced MAPs in GCC countries from the perspective of NIS?

Moreover, the study identified several hypotheses that would achieve the main aim and the objectives of the study as follows:

Hypothesis 1: *HO: Government legislation has an influence on the decision of adopting the advanced MAPs in GCC companies.*

Hypothesis 2: *HO: Companies' headquarters have an influence on the decision of adopting the advanced MAPs in GCC companies.*

Hypothesis 3: *HO: The international companies have an influence on the decision of adopting the advanced MAPs in GCC companies, in cases where a GCC company and an international company are in a joint venture.*

Hypothesis 4: *HO: Professional bodies have an influence on the decision of adopting the advanced MAPs in GCC companies.*

Hypothesis 5: *HO: Educated managers have an influence on the decision of adopting the advanced MAPs in GCC companies.*

Hypothesis 6: *HO: Conferences, seminars and workshops have an influence on the decision of adopting the advanced MAPs in GCC companies.*

Hypothesis 7: *HO: The consulting industry has an influence on the decision of adopting the advanced MAPs in GCC companies.*

Hypothesis 8: *HO: The experience of other organisations with their adoption of advanced MAP has an influence on the decision of adopting the advanced MAPs in GCC companies.*

This study used a questionnaire survey as the main method of data collection. The questionnaire in this study was designed to involve five parts, where the first section consists of the demographic questions, including: gender, age, job title, work experience, highest academic qualification, number of years of holding the latest academic degree, study field, professional qualification, kind of professional qualifications, CIMA, CPA, ACCA, CIPA, and number of years holding professional qualifications, technology use, materials of the repository and services and functionality of the repository. The second section is relevant to the companies and organisations and includes many different questions including name and nationality of the company as well as the ownership, percentage of state ownership, type of company: independent or subsidiary, type of business, number of products/services types the company currently produces, number of years the organisation has operated, number of employees, the market in which the company operates, the main strategic focus of the company and the level of marketing competition the company faces. The third section consisted of three questions concerning the advanced MAPs in use, the factors influencing the decision of adopting advanced MAPs and the factors facilitating the adoption of advanced MAPs.

Some questions in this questionnaire survey were easily answered with a simple single answer such as the demographic questions and questions related to the technology use, for example: Do you have Professional qualifications (y/n)? And what kind of professional qualification do you have (CIMA, CPA, ACCA, CIPA)? But others require multiple choice selections, scales and grids. For example, to what extent do the factors below facilitate the adoption of advanced MAPs process, does not influence, slightly influences, moderately influences, significantly influences and extremely influences?

The population of this study was defined as all listed manufacturing and services companies in the selected GCC countries. To obtain information on these companies, the researcher visited the website of stock exchanges in the six GCC countries and identified 469 companies that

constitute the entire population of the study. The researcher aimed to produce 469 questionnaires; therefore, he sent an email with a link of the study questionnaire (on Monkey survey website) to each individual company. About 167 of these have been completed online. 14 questionnaires have been ignored due to the multiple mistakes and contradictory answers to different questions. This left a total of 153 questionnaires which provides a satisfactory response rate of 32.62% (Krumwiede, 1998).

The study relied on the descriptive statistic including percentages and means to describe the characteristics of the responding firms and the individual respondents. In addition, the percentages and the means are used to identify the level of advanced MAPs in the surveyed companies. The percentages and the means are used also to identify the influence level of the surveyed factors on the decision of adopting advanced MAPs and to identify the facilitating role of other surveyed factors in the adoption of advanced MAPs in those companies. Besides, the study uses the exploratory analysis tests (t two-tail) in order to determine the relationships between organisational characteristics and the adoption of advanced MAPs in GCC companies.

7.2. The main findings

7.2.1. The extent to which the advanced MAPs have been adopted

The statistical analysis of the data collected shows that 26.35% of the responding companies have not taken any steps toward introducing any of the surveyed advanced MAPs. 13.23% of the responding company has taken their decision to not introduce advanced MAPs, while 22.43% have given some consideration to the introduction of MAPs. Otherwise, 16.04% of the companies have already introduced advanced MAPs on a trial basis, and 21.93% have implemented and accepted advanced MAPs.

Hence, based on the above findings, the study answers its first question as follows: “The adoption rate of advance MAP in GCC countries is generally low with only 37.96% of the organisations implementing and accepting this practice or introducing it on a trial basis”.

7.2.2. Findings relating to the study hypotheses

In relation to H1: the study found that there is a moderate influence of the government legislation on the decision of adopting advanced MAPs in GCC companies. Therefore, this finding provides support to H1.

In relation to H2: the study found that there is a low influence of company headquarters on the decision of adopting advanced MAPs in GCC companies.

In relation to H3: the study found that there is a moderate influence of the partnership with international companies on the decision of adopting advanced MAPs in GCC companies. Therefore, this finding provides support to H3.

Considering the above findings, the study concludes that coercive pressure-based factors (e.g. the government legislation and the international partnership), have a moderate influence on the decision of adopting advanced MAPs in GCC companies. This is therefore enhancing the role of NIS in relation to this type of institutional pressure in providing helpful explanation of the adoption of advanced MAPs.

In relation to H4: the study found that there is a moderate influence of professional bodies on the decision of adopting advanced MAPs in GCC companies. Therefore, this finding provides support to H4.

In relation to H5: the study found that there is a moderate influence of the educated manager on the decision of adopting advanced MAPs in GCC companies. Therefore, this finding provides support to H5.

In relation to H6: the study found that there is a low influence of educational programs (conferences, seminars and workshops) on the adoption of advanced MAPs in GCC companies. Therefore, this finding provides minimal support to H6.

Considering the above findings relating to H4, H5 and H6; the study concludes that normative pressure-based factors have on average a moderate influence on the decision of adopting advanced MAPs in GCC companies. This is therefore enhancing the role of NIS in relation to this type of institutional pressure in providing helpful explanation of the adoption of advanced MAPs.

In relation to H7: the study found that there is a high influence of the consulting industry on the decision of adopting advanced MAPs in GCC companies. Therefore, this finding provides support to H7.

In relation to H8: the study found that there is a moderate influence of successful experience of another organisation with the adoption of advanced MAPs on the decision of adopting advanced MAPs in GCC companies. Therefore, this finding provides support to H8.

Considering the above findings relating to H7 and H8; the study concludes that mimetic pressure-based factors have a positive, diverse influence (high and moderate) on the decision of adopting advanced MAPs in GCC companies. This is therefore enhancing the role of NIS in

relation to this type of institutional pressure in providing helpful explanation of the adoption of advanced MAPs.

From the above findings it is noticeable that, among all the factors included in the study hypotheses, only the mimetic-relating factor of consultancy industry has a high level of influence on the decision of adopting advanced MAPs in GCC companies. Otherwise, the other mimetic factor of the successful adoption of advanced MAPs by another organisation or the factors relating to coercive pressure and normative pressure all came with a moderate influence or with a low influence as is the case with the factor of company headquarter. This indicates that GCC companies are influenced more essentially by the consulting companies to adopt advanced MAPs. In other words, the mimetic-relating factor of consultant industry can be highly effective in explaining the reason behind the decision of adopting advanced MAPs in the GCC companies.

7.2.3. Findings relating to other factors

Additionally, the study examined the influence of other factors on the decision of adopting advanced MAPs in GCC companies. These factors are the existence of a widely recognised 'champion' of the implementation; the competitiveness of the market; employee/organisation recognised need for change; employee/organisation dissatisfaction with the previous system; the loss of market share; and deterioration in profitability.

The study-related findings are as follows:

1. The existence of a widely recognised 'champion' of the implementation has a moderate influence on the decision of adopting advanced MAPs in GCC companies.
2. The competitiveness of the market has a moderate influence on the decision of adopting advanced MAPs in GCC companies.
3. The employee/organisation recognised need for change has a moderate influence on the decision of adopting advanced MAPs in GCC companies.
4. The loss of market share has a moderate influence on the decision of adopting advanced MAPs in GCC companies.
5. The deterioration in profitability has a moderate influence on the decision of adopting advanced MAPs in GCC companies.

Based on the above findings, it is noticeable that all the concerned factors have a moderate influence on the decision of adopting advanced MAPs in GCC companies. This on the other hand enhances the robustness of the study findings that the mimetic-relating factor of the

consultant industry can be more effective in explaining the reason behind the decision of adopting advanced MAPs in the GCC companies.

7.2.4. Organisational characteristics and the adoption of advanced MAPs

The study conducted further examination of the relationships between organisational characteristics and the adoption of advanced MAPs in GCC companies. These organisational characteristics include: type of business, ownership state, number of products/services types the company currently produces, type of business: manufacturing or services, number of years the organisation has operated, number of employees, the market in which the company operates, the level of marketing competition the company faces, and finally the main strategic focus of the company. Applying the Two-tail T-test the study found that:

1. There is a significant relationship between the type of business and the adoption of advanced MAPs in GCC companies. The findings in general show that the subsidiary companies generally have a higher importance and association with the adoption of advanced MAPs than the independent companies.
2. There is a significant relationship between the type of ownership and the adoption of advanced MAPs in GCC companies. The findings in general show that the private sector in general has a higher importance and association with the adoption of advanced MAPs than both state-owned and state & private companies.
3. There is a medium relationship between the number of products/services types produced by a company and the adoption of advanced MAPs in GCC companies. The findings in general show that the companies that have a high diversity of products/services in general have a higher importance and association with adoption of MAPs than the other companies.
4. There is a significant relationship between the type of industry and the adoption of advanced MAPs in GCC companies. The findings in general show that manufacturing companies in general have a higher importance and association with the adoption of advanced MAPs than services companies.
5. There is a significant relationship between the years of operation and the adoption of advanced MAPs in GCC companies. The findings in general show that companies that have more than 20 years of operation have a higher importance and association with the adoption of advanced MAPs than the companies with fewer years of operation.
6. There is a medium relationship between the number of employees and the adoption of advanced MAPs in GCC companies. The findings in general show that companies that are

bigger in size have more importance and association with the adoption of advanced MAPs than smaller companies.

7. There is a significant relationship between the market in which a company operates and the adoption of advanced MAPs in GCC companies. The findings in general show that companies operating in an international market have a higher importance and association with the adoption of advanced MAPs than other companies.
8. There is a significant relationship between the level of marketing competition and the adoption of advanced MAPs in GCC companies. The findings in general show that companies with a higher level of marketing competition have a higher importance and association with the adoption of advanced MAPs than companies operating with a lower level of marketing competition.
9. There is a significant relationship between strategic focus and the adoption of advanced MAPs in GCC companies. The findings in general show that companies with the strategic focus of innovation and production diversity have a higher importance and association with the adoption of advanced MAPs than companies with the strategic focus of cutting costs.

Based on the above findings, it is noticeable that there is a significant relationship between the factors of companies' characteristics and the adoption of advanced MAPs in GCC companies. The exceptions to this are the organisational characteristics of the number of products/services types and the number of employees, which have a medium relationship with the adoption of advanced MAPs in GCC companies.

7.2.5. Factors facilitating the adoption of advanced MAPs

Extensionally, the study investigated the facilitating role of 12 factors in the adoption of advanced MAPs. These factors are the availability of adequate accounting staff, using computer systems for MA purposes, the authority attributed to the accounting function within the organisation, the arrival of a new accountant, co-operation between universities academics, and companies professionals, accounting research, management accounting training programmes, adequate financial resources, employee/organisation ability to afford the amount of investment required to adopt the innovation, employee/organisation ability to afford the amount of time required to implement the innovation, levels of employment of management consultants to facilitate implementation, and top management support.

The study-related findings are as follows:

1. The factor of the availability of adequate accounting staff has a moderate facilitating role in the adoption of advanced MAPs in GCC companies.

2. The factor of using computer systems for MA purposes has a moderate facilitating role in the adoption of advanced MAPs in GCC companies.
3. The factor of the authority attributed to the accounting function within the organisation has a moderate facilitating role in the adoption of advanced MAPs in GCC companies.
4. The factor of the arrival of a new accountant has a moderate facilitating role in the adoption of advanced MAPs in GCC companies.
5. The factor of the cooperation between universities and companies has a moderate facilitating role in the adoption of advanced MAPs in GCC companies.
6. The factor of accounting research has a moderate facilitating role in the adoption of advanced MAPs in GCC companies.
7. The factor of management accounting training programmes has a moderate facilitating role in the adoption of advanced MAPs in GCC companies.
8. The factor of adequate financial resources has a moderate facilitating role in the adoption of advanced MAPs in GCC companies.
9. The factor of employee/organisation ability to afford the amount of investment required to adopt the advanced MAPs has a moderate facilitating role in the adoption of advanced MAPs in GCC companies.
10. The factor of employee/organisation ability to afford the amount of time required to implement the advanced MAPs has a moderate facilitating role in the adoption of advanced MAPs in GCC companies.
11. The factor of the levels of employment of management consultants to facilitate the implementation of advanced MAPs has a high facilitating role in the adoption of advanced MAPs in GCC companies.
12. The factor of top management support has a high facilitating role in the adoption of advanced MAPs in GCC companies.

To overview, the above findings indicate that that all the above factors have a facilitating role in the adoption of advanced MAPs in GCC companies. However, while a majority of the factors have a moderate facilitating role, the factor of top management support has a higher facilitating role in the adoption of advanced MAPs. This was followed by the factor of the levels of employment of management consultants to facilitate the implementation, which came as well with a high facilitating role in the adoption of advanced MAPs in GCC companies.

7.2.6. Concluding remarks in relation to second question of the study

Based on the findings presented in Subsections 7.2.2, 7.2.3, 7.2.3.1, 7.2.3.2, the study provides its answer to its second question as follows:

- There are several factors influencing the decision of adopting advanced MAPs in GCC companies with different levels of influence. However, the mimetic related factor of consultancy industry appears to have the most and higher influence on the decision of adopting advanced MAPs in GCC companies.
- The adoption of advanced MAPs in GCC companies appears to be also affected by different organisational characteristics. Among these characteristics, the adoption of advanced MAPs in GCC companies appears to have a significant relationship with the type of business, the type of ownership, the industry type: manufacturing or services, and company's years of operation, the type of market (national/international), the level of marketing competition, and the strategic focus of the company.
- There are several factors facilitating the adoption of advanced MAPs in GCC companies with different level of facilitation. However, the factors of top management support and the level of employment of management consultants to facilitate the implementation appear to have the most and higher facilitation role in the adoption of advanced MAPs in GCC companies.

7.3. Contributions

The contribution of this study can be presented as follows:

1. This study contributes to the literature by examining advanced MAPs in GCC countries which has rarely been studied in the literature. In other words, the study contributes to fill the gap in the understanding of the development of management accounting in this part of the world, the GCC countries. (McLellan & Mustafa, 2011; 2013; Joshi et al., 2011).
2. This study contributes to the robustness and generalisability of the NIS in explaining the reasons for adopting the change in MAPs. This is specifically in relation to the memetic - related factor of consultant industry which has been found by the current study to have an effective role in explaining the reason behind the decision of adopting advanced MAPs in the GCC companies.
3. Where there is a confliction in the findings of previous studies about the relationship between organisational characteristics and the change in MAPs, this study contributes to the literature by providing additional empirical evidence from GCC companies on how different organisations with different organisational characteristics interact with the adoption of advanced MAPs.
4. The study provides a comprehensive examination of the factors that can affect the adoption of advanced MAPs. That is, in addition to investigating the factors that can influence the decision of adopting advanced MAPs, the study investigated how certain factors can

facilitate the adoption of advanced MAPs following that decision. Since this type of investigation has been rarely considered by previous studies, this study contributes to the literature by showing that there are several factors that can affect the adoption of advanced MAPs at the stage following making the decision to adopt. Consequently, these factors can prompt the adoption and can also frustrate it. Hence, considering these factors is an important element for proceeding from the stage of the decision-making to the stage of the real adoption and implementation of advanced MAPs.

5. The study provides policy makers and decision-makers in GCC companies with the knowledge about what factors can influence the adoption of advanced MAPs. Therefore, it shows them how to enhance the adoption of advanced MAPs by influencing the factors that affect this adoption in their countries.

7.4. Limitations and recommendation

This study represents an effort to contribute to the limited knowledge about the adoption of advanced MAPs in GCC companies and the factors that can influence this adoption. However, like the other management accounting research, this study is subject to several limitations which represent opportunities for further studies to add to our knowledge regarding this field of research. This can be through consideration of the following:

- The findings of this study were derived from data collected from 153 companies: while this can be enough to provide insights into the study questions, other studies can strengthen their investigation and findings by seeking data from a larger sample.
- The study findings show that the level of adoption of advanced MAPs in GCC companies is low. Hence, further studies are invited to investigate the reasons behind this low level of adoption.
- This study draws mainly on NIS theory to provide explanatory insights into the adoption of advanced MAPs in GCC companies. Therefore, further studies can employ other theories such as OIE and contingency theory. This in turn would increase the understanding of the factors that may affect the adoption of advanced MAPs in GCC companies.
- Although the study investigates many factors that can affect the adoption of advanced MAP in general and in GCC companies, other factors have not been covered. For example, there is the factor of environment uncertainty. Thus, further studies are invited to investigate the relationship between such factors and the adoption of advanced MAPs in GCC companies.
- The study findings show that different factors have different levels of influence on the adoption of advanced MAPs in GCC companies. Therefore, further studies are invited to

replicate the investigation of the study and therefore test the robustness and generalizability of its findings.

- The study is concerned with “WHAT” type of questions – What are the factors influencing the adoption of advanced MAPs in GCC countries? The study identifies certain factors to have that influencing role. Hence, further studies are invited to deeply investigate HOW these certain factors influence the adoption of advanced MAPs in GCC countries. This can be obtained by applying more qualitative types of research such as a case study approach.

8. References:

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Participant Invitation

I am Arian Mufid who is currently conducting a PhD at the University of Salford business school (UK) under the supervision of Professor Hassan Yazdifar. This study seeks to investigate the adoption of advanced Management accounting practices in GCC countries. I am writing to invite you to participate in this research through the completion of the questionnaire which is being conducted as a part of my PhD. The estimated time to complete this questionnaire is about 15 minutes. Please be assured that all data collected will be treated as strictly confidential and it will not be passed to any third party. No individual identities will be revealed, and only aggregate results will be presented.

If you would like to review the results of the study when completed, please write your address and I will send you a copy of the summary of my research.

If you have any questions, please feel free to contact me or my supervisor at address below.

The success of this study depends upon your response; accordingly, your participation is much appreciated.

Yours sincerely,

Arian Mufid:

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Appendix A

Section A: General information

A- Information about the participant

A1) Gender & Age:	Gender	<input type="checkbox"/> Male	<input type="checkbox"/> Female	
Age:	<input type="checkbox"/> < 25	<input type="checkbox"/> 25- 35	<input type="checkbox"/> 36- 45	<input type="checkbox"/> > 45

A2) Your job title:	<input type="checkbox"/> Financial accountant	<input type="checkbox"/> Cost accountant	<input type="checkbox"/> Management accountant
	<input type="checkbox"/> Financial Manager	<input type="checkbox"/> Internal auditor	Other, please specify.....

A3) Work Experience:	<u>< 3 years</u>	<u>3-5 years</u>	<u>6-10 years</u>	<u>11-15 years</u>	<u>> 15 years</u>
In this position	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
In this organisation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Overall experience	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

A4) Participant's Academic qualification:	<input type="checkbox"/> High school level/ Medium diploma	<input type="checkbox"/> Bachelor / High institution	<input type="checkbox"/> Master's	<input type="checkbox"/> PHD	
Number of years of holding the latest academic degree:	<u>< 3 years</u>	<u>3-5 years</u>	<u>6-10 years</u>	<u>11-15 years</u>	<u>> 15 years</u>
A5) Participant's field of study:	<input type="checkbox"/> Accounting	<input type="checkbox"/> Business administration	<input type="checkbox"/> Economics	<input type="checkbox"/> Finance	Other, please specify.....
A6) Professional qualification (e.g. CIMA, CPA, ACCA, CIPA) please indicate.....					
Number of years of holding the professional qualifications:	<u>< 3 years</u>	<u>3-5 years</u>	<u>6-10 years</u>	<u>11-15 years</u>	<u>> 15 years</u>

B- Information about the organisation

B1) Your organisation's name (optional):

B2) Geographic location of the company:

☐ Saudi Arabia ☐ United Arab Emirates ☐ Bahrain ☐ Oman ☐ Kuwait ☐ Qatar

B3) The ownership

☐ State owned Organisation (100% owned by the state).

☐ Private organisation (100% owned by the private sector).

☐ Mixed ownership between state and private sector. State ownership%

☐ Joint venture (ownership divided between the state and a foreign partner). State ownership.....%

If yes; When was the joint venture established? years ago.

☐ Joint venture (ownership between private sector and a foreign partner). Private ownership.....%

If yes; When was the joint venture established? years ago.

B4) Is the business an independent company or a subsidiary company?

☐ Independent company

☐ Subsidiary company, Name of parent company (Optional) and % of their ownership.....

A10) Type of business

☐ Manufacturing ☐ Service

B5) Number of years the organisation has operated:

☐ 1 – 20 years ☐ More than 20 years

B6) Number of employees

☐ Less than 100 ☐ 100-300 ☐ 101-200 ☐ 301-700 ☐ 701-100 ☐ More than 1000

B8) The market in which the company operates:

National Markets ☐ International Markets ☐ Both ☐

B9) The main strategic focus of the company:

Innovation and production diversity: ☐ Cut Costs: ☐ Others ☐

B10) The level of marketing competition the company faces:

No or very low ☐ Medium ☐ Very high ☐

B11) The number of product's types the company currently produce:

Less than 5 ☐ 5-10 ☐ 11-20 ☐ 21-50 ☐ More than 50 ☐

C: Advanced Management accounting practises (MAPs) in use:

Please indicate with a TICK in the appropriate column in each row the relevance of each of the following Advanced management accounting practices in your organization					
M12Technique	Discussions have <i>not</i> taken place regarding the introduction of this practice	Decision has been taken <i>to not</i> introduce this practice	Some consideration is being given to the introduction of this practice	This practice has been introduced on a trial basis	This practice has been implemented and accepted
Activity-Based Costing (ABC)					
Activity-Based Management (ABM)					
Balanced Scorecard (BSC)					
Target Costing (TC)					
Life-cycle costing					
Benchmarking					
Total quality management (TQM)					
Just in Time (JIT).					
Other, please specify					
A).....					
B).....					
C).....					

Section D: Factors influencing the decision of adopting Advanced MAPs

C1) Please indicate with a Tick in row the extent which the decision to adopt advanced management accounting practices in your organizations was influenced by the following factors:					
Factor	Do not influence 1	Slightly influence 2	Moderately influence 3	Significantly influence 4	Extremely influence 5
External factors:					
Government legitimacy					
Company headquarter					
Joint venture with foreign companies					
Professional bodies (i.e., CAM)					
Educated manager					
Conferences, seminars and workshops					
Consultants					
The successful experience of other organization with adopting the advanced MAP					
Internal factors:					
The existence of a widely recognized 'champion' of the implementation					
The competitiveness of the market					
Employee/organisation recognised need for change					
Employee/organisation dissatisfaction with the current system					
The loss of market share					
The arrival of a new accountant					
Deterioration in profitability					
Other, please specify					
A).....					
B).....					
C).....					

Section E: Factors facilitating the adoption of Advanced MAPs

C1) Please indicate to what extent do the factors below facilitate the adoption of MAIs process					
Factor	Do not facilitate 1	Slightly facilitate 2	Moderately facilitate 3	Significantly facilitate 4	Extremely facilitate 5
The availability of adequate accounting staff					
Using computer systems for MA purposes					
The authority attributed to the accounting function within the organization					
The arrival of a new accountant					
Top management support					
Co-operation between universities (academics) and companies (professionals)					
Accounting research					
Management accounting training programs					
Adequate financial resources					
Employee/organisation ability to afford the amount of investment required to adopt the innovation					
Employee/organisation ability to afford the amount of time required to implement the innovation					
The level of employment of management consultants to facilitate implementation					
Other, please specify					
A).....					
B).....					
C).....					

[illegible]

Appendix B: the ethical approval form filled in and submitted:

Document	Enclosed? (Indicate appropriate response)		Date	Version No.
Application form	<u>Mandatory</u>	If not required, please give a reason		
Risk Assessment Form	Not Required	The study just involves collecting and using management accounting information in save way without holding any risks		
Participant Invitation Letter	No	The invitation is involved in participation information sheet		
Participant Information Sheet	Yes			
Participant Consent Form	Yes			
Participant Recruitment Material – e.g. copies of posters, newspaper adverts, website	No	The researcher will connect the participants face to face for inviting them to take part in the study.		
Organisation Management Consent / Agreement Letter	Yes			
Research Instrument – e.g. questionnaire	No			
Draft Interview Guide	Yes			
National Research Ethics Committee consent	Not Required			

The form must be completed electronically; the sections can be expanded to the size required.

School	Business School
Course of Study	PHD in accounting
Is this application a resubmission from a rejected application? Please state the reference number	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Reference number:
Is this an amended version of a previous approved application? Please state the reference number	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Reference number:
Is this a revision of an ongoing application? Please state the reference number	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Reference number:
Has this project received external funding?	NO If YES , please provide name of Research Council or other funding organisation: Click here to enter text.
Do you use non-human genetic materials from outside UK for your research?	NO If YES , has this been collected since the 12 th October 2014? Select

1a. Title of proposed research project
Adoption of Advanced Management Accounting Practices in Gulf Countries: new institutional theory analysis
1b. Is this project purely literature based?
Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>

2. Project Focus
The adoption of advanced Management accounting practices in Gulf Countries and the institutional factors that underline this adoption

3. Project Objectives

1- Investigating the adoption of GCC companies of advanced MAPs, with focusing on Activity Based Costing (ABC), Activity Based Management (ABM), Strategic Management Accounting (SMA), Balance Scorecard (BSC), Total Quality Management (QTM), Just in Time (JIT) and target costing (TC). 2- Relying on NIS theoretical framework to investigate the factors that prompted GCC companies to adopt advanced MAPs.

4. Research Methodology

- The study adopted a questionnaire survey as the main data collection method. It allows collecting data from a wide sample of the study's targeted population. Thus, it enhances reaching representative findings relating to that population respecting the study focuses. In particular; the study uses the online type of questionnaire. This is because its effectiveness to research a high level of responses. The study further uses interview method. This method is used in this study to provide insights and explanations of the findings obtained by the survey method.

- Participants in this study are both the manufacturing and service companies listed in the stock exchanges in the six GCC countries (Bahrain; Oman; Qatar; Kuwait; Saudi Arabia; United Arab Emirates). Based on this, the population of the study will include a total of 469 companies. Therefore, Because the relatively small size of the population, the target sample will represent the entire population. Concerning the respondents; senior financial staff, including finance directors and senior management accountants, has been targeted as respondents for this study. The reason for choosing these high-ranking staff from these companies is that they are in a good position with their advanced knowledge to finalise and complete the questionnaire in respect of the most popular MAPs in their companies.
- Data analysis: The study will rely on the descriptive statistic including frequencies and means to describe the characteristics of the responding firms and the individual respondents. In addition, frequencies, means and mean differences are used to identify the level of advanced MAPs in the survived companies. Besides, the study uses the exploratory analysis tests (simple T texts) in order determining on the extent to which each concerned factor by the study affects the adoption of advanced MAPs. Respecting the analysis of data obtained by interviews; the process will start at coding all the data following normal research methodology. The data will be gathered to look across all respondents and their answers in order to identify consistencies and differences, the data from subsequent questions will be compiled together to aide in analysis. This same approach will be applied to particular topics (Bryman and Bell, 2011).

5. What is the rationale which led to this project?

There are three main rationales for conducting the current study, which are:

- The general lack of empirical evidence on the adoption of advanced management system in practice, despite the wide emphasis on their importance in the literature (e.g., Askarany & Yazdifar, 2007; Cohen et al., 2005).
- The very limited number of study that have investigated the adoption of whether the traditional or the advanced management system in Middle East, despite the increased contribution of these countries to the world economy, and their increasingly open policies toward international trade and markets (e.g., McLellan & Moustafa, 2011; Joshi et al., 2013).
- The use of the NIS framework will provide unique insights in the context of the selected countries in relation to the factors driving MAP change in GCC countries; and this on the other hand provides more examination of NIS which is believed to provide further empirical evidence on the robustness and generalizability of NIS.

6. If you are going to work within a particular organisation, do they have their own procedures for gaining ethical approval?

(E.g. within a hospital or health centre?).

Yes ☒ No ☐

If **YES** – what are these and how will you ensure you meet their requirements?

The participated organizations may require a guarantee that any information collected from them will be kept confidential and just used for scientific purposes. Therefore, may the real names of these companies will not be mentioned in this study; thus, codes will be used as references to these companies instead.

7. Are you going to approach individuals to be involved in your research?

(E.g. within a hospital or health centre?).

Yes ☒ No ☐

If **YES** – think about key issues – for example, how you will recruit people? How you will deal with issues of confidentiality/anonymity? Then make notes that cover the key issues linked to your study.

All participants will be informed briefed about the project verbally and will be provided with that information in written form. Participants will also be given enough time to consider whether they want to participant or no. They also will be informed that they are free to withdraw from the study at any time and without giving reasons. In addition, they will be informed that their names will not be announced and will not be known from their position as the names of their companies will be referenced to by codes in the way that keeps their organizations' name confidential.

8. More specifically, how will you ensure you gain informed consent from anyone involved in the study?

All participants who agree to participate will then sign a consent form, and will be free to withdraw from the study at any time without any justification. I will guarantee that the recorded material will not be shared with anyone. Oct 2014 v3 <http://www.pg.salford.ac.uk/page/forms> Data will be stored securely on my computer, and on a separate hard drive. Data will be destroyed at the end of the project. Anonymity will be assured by identifying speakers through code names or numbers. The identity of the participants will be protected, unless the participant wishes to be named and thanked in the acknowledgements of the dissertation.

9. How are you going to address any Data Protection issues?

The data will be anonymised once it has been collected. The access to data during the study will be just for the researcher, his supervisors and persons related to assessing the quality of data and the quality of the study in general. The collected data will be used just for scientific purpose related to the research object. Thus, the provided information will be quoted in publications, reports, web pages, and other research outcomes in the way that keeps the confidentiality of the information save. The primary provided data will be stored in a locked cabinet and a password protected computer known only by the researcher, and the access to this data will be only when necessary-for example when discussion data or/and re-using data

10. Are there any other ethical issues that need to be considered? E.g. Research on animals or research involving people under the age of 18.

N/A

11 (a) Does the project involve the use of ionising or other type of “radiation”
Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
11 (b) Is the use of radiation in this project over and above what would normally be expected? E.g. in diagnostic imaging?
Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
11 (c) Does the project require the use of hazardous substances?
Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
11 (d) Does the project carry any risk of injury to the participants?
Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
11 (e) Does the project require participants to answer questions that may cause disquiet/or upset to them?
Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>

If the answer to any of the questions 11(a)-(e) is **YES**, a risk assessment of the project is required and must be submitted with your application.

12. How many subjects will be recruited / involved in the study / research? What is the rationale behind this number?

The study population consists of 469 companies, while the sample size targeted covers all the companies in the population.

13. Please state which code of ethics has guided your approach (e.g. From Research Council, Professional Body etc.).

from Research Council

Remember that informed consent from research participants is crucial; therefore all documentation must use language that is readily understood by the target audience. Projects that involve NHS patients, patients' records or NHS staff, will require ethics approval by the appropriate NHS Research Ethics Committee. The University Ethics Panel will require written confirmation that such approval has been granted. Where a project forms part of a larger, already approved, project, the approving REC should be informed about, and approve, the use of an additional co-researcher.

Signed by Student: *Arian Mufid*

Print Name: Mufid Arian

Date: 24/05/2018

Signed by Supervisor

Print Name Hassan Yazdifar