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**THE EFFECTS OF BALANCED SCORECARD IMPLEMENTATION
ON ORGANIZATIONAL PERFORMANCE: THE CASE OF THE
HEALTHCARE SECTOR IN THE UAE**

Alaa Salah Mushtaha

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THE EFFECTS OF BALANCED SCORECARD IMPLEMENTATION
ON ORGANIZATIONAL PERFORMANCE: THE CASE OF THE
HEALTHCARE SECTOR IN THE UAE

Alaa Salah Mushtaha

This dissertation is submitted in partial fulfilment of the requirements for the degree
of Doctorate of Business Administration

Under the Supervision of Professor Khaled Aljifri

April 2020

Declaration of Original Work

I, Alaa Salah Mushtaha, the undersigned, a graduate student at the United Arab Emirates University (UAEU) and the author of this dissertation entitled “*The Effects of Balanced Scorecard Implementation on Organizational Performance: The Case of the Healthcare Sector in the UAE*”, hereby, solemnly declare that this dissertation is my own original research work that has been completed and prepared by me under the supervision of Professor Khaled Aljifri, in the College of Business and Economics at the UAEU. This work has not previously been presented or published or formed the basis for the award of any academic degree, diploma or a similar title at this or any other university. Any materials borrowed from other sources (whether published or unpublished) and relied upon or included in my dissertation have been properly cited and acknowledged in accordance with appropriate academic conventions. I further declare that there is no potential conflict of interest with respect to the research, data collection, authorship, presentation and/or publication of this dissertation.

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Advisory Committee

1) Advisor: Khaled Aljifri

Title: Professor

Department of Accounting and Finance

College of Business and Economics

2) Co-advisor: Taoufik Zoubeidi

Title: Professor

Department of Analytics in the Digital Era

College of Business and Economics

Approval of the Doctorate Dissertation

This Doctorate Dissertation is approved by the following Examining Committee Members:

1) Advisor (Committee Chair): Khaled Aljifri

Title: Professor

Department of Accounting and Finance

College of Business and Economics

Signature  _____

Date 23/4/2020

2) Member: Riyad Eid

Title: Professor

Department of Innovation Technology and Entrepreneurship

College of Business and Economics

Signature  _____

Date 23/4/2020

3) Member: Fathalla Rihan

Title: Professor

Department of Mathematical Sciences

College of Science

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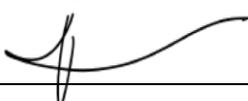
Date 23/4/2020

4) Member (External Examiner): Hisham Farag

Title: Professor

Department of Finance

University of Birmingham, UK

Signature  _____

Date 23/4/2020

This Doctorate Dissertation is accepted by:

Dean of the College of Business and Economics: Professor Frank Bostyn

Signature  Date 9/6/2020

Dean of the College of Graduate Studies: Professor Ali Al-Marzouqi

Signature  Date June 10, 2020

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Abstract

The aim of this study is to identify the critical success factors (CSFs) that positively affect balanced scorecard (BSC) implementation in the healthcare sector in the United Arab Emirates (UAE) and to examine the impact of BSC implementation on organizational performance. The BSC theory has been applied in various industries, including manufacturing, the public sector, banking and insurance, hospitality and healthcare. However, little knowledge has been revealed about its design and implementation in healthcare organizations. In addition, no published articles exist on BSC implementation in the context of the healthcare industry in the UAE, which shows a clear gap when it comes to use of the integrative theories framework of the BSC in healthcare. The healthcare sector is very important for leaders and key decision makers in the UAE, so it seems pertinent to identify the CSFs for BSC implementation in this sector.

A conceptual framework is proposed to explain the impact of 13 CSFs on BSC implementation to strive for high-performance organizational practice. The proposed conceptual model is tested using a quantitative approach through a survey questionnaire distributed to 73 private hospitals in the UAE. The hospitals' top management involved in BSC implementation were approached to complete the study and the final sample size comprises 140 people. This gives a response rate of 81.5%, which is very high due to the researcher's strong connections in the healthcare industry. A partial least squares method is used to fit the conceptual model and test the research's goodness of fit by assessing the validity and reliability of the scales used. Bootstrap tests are applied to determine the significance of the relationships between the latent variables that represent CSFs, successful implementation of the BSC and organizational performance. The results show strong statistical evidence that CSFs influence the effectiveness of BSC implementation, which also significantly impacts organizational performance. The research findings recommend BSC as an effective tool for managers in the hospitality sector to achieve high organizational performance.

Keywords: Critical Success Factors, Balanced Scorecard, Organizational Performance, Healthcare, Organizational Age, Organizational Size.

Title and Abstract (in Arabic)

تأثير استخدام بطاقة الأداء المتوازن على الأداء المؤسسي: حالة قطاع الرعاية الصحية في دولة الإمارات العربية المتحدة

المخلص

الهدف من هذه الدراسة هو تحديد عوامل النجاح الحاسمة (CSFs) التي تؤثر بشكل إيجابي على تنفيذ بطاقة الأداء المتوازن (BSC) في قطاع الرعاية الصحية في دولة الإمارات العربية المتحدة وكذلك دراسة تأثير تطبيق بطاقة الأداء المتوازن (BSC) على الأداء المؤسسي. تم تطبيق نظرية (BSC) في العديد من الصناعات المختلفة، منها علي سبيل المثال قطاع التصنيع والقطاع العام والمصارف والتأمين والضيافة والرعاية الصحية. ومع ذلك، تم الكشف عن القليل من المعرفة حول تصميم وتنفيذ بطاقة الأداء المتوازن (BSC) في مؤسسات الرعاية الصحية. بالإضافة إلى ذلك، لا توجد مقالات أكاديمية منشورة حول تنفيذ بطاقة الأداء المتوازن (BSC) في مجال الرعاية الصحية في دولة الإمارات العربية المتحدة، مما يدل على وجود فجوة واضحة عندما يتعلق الأمر باستخدام إطار النظريات التكاملية من بطاقة الأداء المتوازن (BSC) في مجال الرعاية الصحية. قطاع الرعاية الصحية مهم جداً للقادة والمدراء، لذلك فمن المنطقي العمل على تحديد عوامل النجاح الحاسمة (CSFs) لتنفيذ نظريه بطاقة الأداء المتوازن (BSC) في قطاع الرعاية الصحية في دولة الإمارات العربية المتحدة.

تم اقتراح إطار عمل مفاهيمي لشرح تأثير 13 عامل من عوامل النجاح الحاسمة (CSFs) على تطبيق نظريه (BSC) للوصول إلى ممارسة تنظيمية عالية الأداء. تم اختبار النموذج المفاهيمي المقترح من خلال استخدام نهج كمي بتوزيع استبيان استقصائي على 73 مستشفى خاص في دولة الإمارات العربية المتحدة، حيث تم التعامل مع الإدارة العليا للمستشفيات المطبقة لنظرية (BSC). بلغ حجم عينة الدراسة 140 شخصاً. وبلغت نسبة الاستجابة 81.5٪، وهي نسبة مرتفعة جداً وذلك يرجع الي علاقات الباحث القوية في قطاع الرعاية الصحية. تم استخدام طريقة المربعات الصغرى الجزئية لتناسب النموذج المفاهيمي واختبار مدى ملاءمة البحث من خلال تقييم صلاحية المقياس وموثوقيته. تم اختبار فحوصات (Bootstrap) لتحديد أهمية العلاقات بين المتغيرات الكامنة التي تمثل عوامل النجاح الحاسمة (CSFs) والتنفيذ الناجح لنظرية (BSC) والأداء المؤسسي. تظهر النتائج بأدلة إحصائية قوية على أن عوامل النجاح الحاسمة (CSFs) تؤثر على فعالية تنفيذ نظرية (BSC) والتي تؤثر أيضاً بشكل كبير على الأداء المؤسسي كما

توصي نتائج البحث بأن تكون نظرية (BSC) أداة جيدة للمدراء في قطاع الرعاية الصحية للوصول إلى الأداء المؤسسي الجيد.

مفاهيم البحث الرئيسية: عوامل النجاح الحاسمة، بطاقة الأداء المتوازنة، الأداء التنظيمي، الرعاية الصحية، عمر المؤسسة، وحجم المؤسسة.

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Dedication

My father

Who did his utmost to support me and was patient with me while I increased my level of knowledge.

My mother

Who takes care of me and continuously remembers me in her prayers, memories and Douaa.

My wife

I'm where I am today thanks to her support, sacrifices in taking care of our family and continued encouragement.

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List of Abbreviations

ABC	Activity-Based Costing
AUD	Abu Dhabi Emirate
AVE	Average Variance Extracted
BSC	Balanced Scorecard
CEO	Chief Executive Officer
CFO	Chief Financial Officer
CMO	Chief Medical Officer
COO	Chief Operating Officer
CSF	Critical Success Factor
CSR	Corporate Social Responsibility
DHCC	Dubai Healthcare City
DHA	Dubai Health Authority
DOHMS	Department of Health and Medical Services
DXB	Dubai Emirate
EFQM	European Foundation for Quality Management
FGSME	Fast-Growth Small to Medium Enterprise
FUJ	Fujairah Emirate
GAHS	General Authority of Health Services
GCC	Gulf Cooperation Council
HAAD	Health Authority for Abu Dhabi
KFSH-RC	King Faisal Specialist Hospital and Research Centre

MANOVA	Multivariate Analysis of Variance
MOH	Ministry of Health
MOHAP	Ministry of Health and Prevention
NGOs	Non-Governmental Organizations
NHS	National Health Service
PLS	Partial Least Squares
RAK	Ras Al-Khaimah Emirate
SEHA	A Phonetic Rendering of the Arabic Word for Health
SEM	Structural Equation Modeling
SHJ	Sharjah Emirate
SPC	Statistical Process Control
SPSS	Statistical Package for Social Sciences
TQM	Total Quality Management
VIF	Variance Inflation Factor
UAE	United Arab Emirates
UAQ	Umm Al Quwain Emirate

Chapter 1: Introduction

1.1 Overview

This chapter provides an overview of the research topic, which examines the effectiveness of the balanced scorecard (BSC) on organizational performance in the healthcare sector in the United Arab Emirates (UAE). Based on the literature review and supported by the researcher's long experience in the healthcare sector in the UAE, research problems related to the BSC's effectiveness are identified. The research topic is justified and gaps in both literature and practice in relation to BSC implementation are analyzed to confirm the need for a research study to fill these gaps. The research objectives, as well as the research questions, are identified, as are the research problems. The research hypothesis is outlined to build the conceptual research model and construct the questionnaire required for data collection. The questionnaire was addressed to private hospitals' key opinion leaders, such as the Chief Executive Officer (CEO), Chief Financial Officer (CFO) and Chief Medical Officer (CMO), hospital directors, as well as hospital managers involved in BSC implementation.

The remainder of this chapter is structured in six sections. Section 1.2 presents the research background, followed by Section 1.3 that outlines the research aims, objectives and questions. Section 1.4 explains the research justification and significance and Section 1.5 describes the research methodology. The structure of the dissertation is provided in Section 1.6.

1.2 Research Background

The balanced scorecard was invented in early 1992 by two scholars from Harvard Business School (Kaplan & Norton, 1992) as a tool to help organizations manage their

performance toward successful growth. Kaplan and Norton (1992) devised the BSC during a research project with 12 companies at the leading edge of performance measurement.

The BSC is a measurement system that serves to manage the firm's strategy over a long period of time (Michalska, 2005) and enables organizations to translate their vision and strategy into action (Isoraite, 2008; Kaplan & Norton, 1992, 1993, 1996; Poon & Wagner, 2001; Robert, 1994). It is based on four balanced perspectives (i.e., financial perspective, customer perspective, internal business perspective and learning and growth perspective) that are linked together with the concept of cause and effect (Inamdar et al., 2002; Isoraite, 2008; Kaplan, 2001; Kaplan & Norton, 1992, 1996).

In 1992 Kaplan and Norton provided significant insight into the application potential of the BSC in both private and public sectors and gave numerous design and implementation examples from a range of industries (Papalexandris et al., 2005). Therefore, the BSC has been implemented and adopted in different industries, such as manufacturing firms (Hoque, 2005; Hoque & James, 2000), local governments and municipalities (Bianchi & Montemaggiore, 2008; Hoque & Adams, 2011; Lilian Chan, 2004), banks and insurance companies (Kaplan & Norton, 1996), software firms (Papalexandris et al., 2004), hospitality companies (Doran et al., 2002; Elbanna et al., 2015) and hospitals and healthcare centers (Chang et al., 2008; Chow et al., 1998; Heberer, 1998; Inamdar et al., 2002; Stewart & Bestor, 2000; Zelman et al., 1999a, 1999b; Zelman et al., 2003).

As explained by Zelman et al. (1999a, 2003); Heberer (1998), the BSC has been labeled one of the most influential management instruments of the twentieth century, given that it is well into its growth phase for the healthcare sector. Heberer (1998, p.1)

explained that the BSC “is a method of enabling development and implementation of a business strategy that equally respects the financial requirements, the needs of the customers, process development and organizational learning”.

The BSC has been emphasized in various studies as a potential tool to help healthcare organizations to create future value (Chow et al., 1998) and to align business activities to the organization’s vision and strategy (Narayanamma & Lalitha, 2016). In addition, executives surveyed have reported that the BSC tool could be used in the healthcare sector to improve organizational performance (Heberer, 1998; Inamdar et al., 2002).

The BSC has been applied successfully as a strategic management system; however, there is also evidence of many failures (Gurd & Gao, 2007), with the claimed failure rate reported to be 70% (Neely & Bourne, 2000). Identifying the critical success factors (CSFs) for BSC implementation is therefore important. Much of the literature relates to how the BSC can be successfully utilized and published surveys about applying the BSC in the healthcare sector are less common.

As mentioned above, the BSC has been applied successfully and unsuccessfully in different industries and has therefore gained wide acceptance in various sectors. In terms of country contexts, Chan and Ho (2000) conducted a survey of the BSC in Canadian hospitals and Inamdar et al. (2002) surveyed executives in nine provider organizations in the USA. However, little knowledge has been revealed about its design, implementation and success in healthcare organizations, particularly those in the UAE.

This lack of published articles on BSC implementation in the context of the healthcare industry in the UAE shows a clear gap when it comes to the use of the integrative

theories framework of the BSC in healthcare. As raised by (Behery et al., 2014), Middle Eastern organizations lack BSC utilization and this is even more pronounced when considering the UAE. According to (Behery et al., 2014), the BSC is being used in the Middle East, but its application lacks cohesion: initiatives are handled by different departments, but are not integrated into the company system. If a company's initiatives are integrated and aligned with its objectives and strategies, this will help to facilitate BSC implementation and maximize organizational performance.

To the best of the researcher's knowledge, few studies have been conducted on BSC implementation in the UAE. One extant study is that by Viswanathan et al. (2014), which was conducted on BSC implementation at DUBAL, the world's largest aluminum producer. The purpose of this study was to identify the users' perceptions of BSC implementation, as well as to understand to what extent BSC implementation has affected organizational performance. Secondary data were used in addition to a questionnaire that was developed to measure the users' perceptions of BSC implementation. The BSC was implemented well in DUBAL for monitoring and achieving the company's goals. The main findings of the study were that BSC users should identify opportunities to reduce cost, increase productivity and improve efficiency, but the initiatives remained as suggestions only and did not convert to practices. In addition, there was no involvement by operational staff and little or no communication across the board.

Another study was conducted by Behery et al. (2014) for fast-growth, small to medium enterprises (FGSMEs) in the UAE. The research comprised a qualitative case study with a sample of more than 16,000 farmers. The BSC was found to be already

implemented in the company but, again, not cohesively. The research confirmed that the initiatives were not properly integrated as one whole-company system.

It is quite challenging to implement the BSC in the healthcare sector without obstacles (Chow et al., 1998; Dechow, 2012); a group effort is required from all levels of the organization and commitment is needed from different people (Narayanamma & Lalitha, 2016). The organization's mission must be defined based on the agreed goals and strategies to develop its own unique scorecard and achieve its goals (Chow et al., 1998). It is well known that moving from concept to practice is challenging for an organization's top management. Each organization should engage in the full range of activities, from defining the organization's mission to selecting goals and strategies and therefore develop its own scorecard to help it reach its selected goals.

This study seeks to provide a better understanding of BSC implementation in healthcare organizations; in doing so, it will help to improve their competitive market positioning and financial results to achieve long-term profitability and customer satisfaction (Chow et al., 1998; Doran et al., 2002; Inamdar et al., 2002). Traditional financial measures are “lagging” indicators of performance, which need to be balanced with non-financial measures as lead indicators and, therefore, serve to drive future performance.

As mentioned by (Kaplan & Norton, 1992), “what you measure is what you get”. It is quite challenging to measure organizational performance, especially when assessing movable measures that keep changing (Hubbard, 2009). Therefore, the main goal for business managers is to achieve superior performance (Tavitiyaman et al., 2012) and to choose a suitable performance measurement tool that can provide solid feedback on the organization's success, including its execution capability (Chow et al., 1998).

Organizational performance is indeed an important construct in the relevant management research; it has been used widely as a dependent variable by researchers in the area of performance measurement research (Richard et al., 2009). Organizational performance is an essential part of measuring organizational success for executives and senior managers and for implementing effective strategies to reach their targets related to market share, lead time, or profitability (Lebas, 1995), as performance relates to the future.

Organizational performance definition is an open topic that has been discussed by different researchers using inconsistent definitions and measures (Kirby, 2005). There is debate and discussion on organizational performance versus organizational effectiveness. Organizational performance is described by Richard et al. (2009) as consisting of three specific areas of firm outcomes: (1) financial performance (e.g., profits, return on assets, return on investment, etc.); (2) product-market performance (e.g., sales, market share, etc.); and (3) shareholder return (e.g., total shareholder return, economic value added, etc.). Conversely, organizational effectiveness is described as “broader and captures organizational performance plus the plethora of internal performance outcomes normally associated with more efficient or effective operations and other external measures that relate to considerations that are broader than those simply associated with economic valuation (either by shareholders, managers, or customers), such as corporate social responsibility”.

1.3 Research Aims, Objectives and Questions

The aim of this research is to improve BSC implementation in the UAE by identifying CSFs that could affect positively BSC implementation in the healthcare sector and

assess the impact of such implementation on organizational performance. To accomplish this aim, the following objectives are established:

1. □ To explore the concept of the BSC in the healthcare sector in the UAE.
2. □ To identify the CSFs that contribute to the successful implementation of the BSC in the healthcare sector in the UAE.
3. □ To examine the effect of using the BSC on organizational performance in the healthcare sector in the UAE.
4. □ To determine the relationship between CSFs, BSC practices and organizational performance in the healthcare sector in the UAE.

A conceptual framework was proposed, as described in Chapter 3, to explain the impact of 13 CSFs on BSC implementation to obtain high-performance organizational practice. The proposed conceptual model for effective implementation of the BSC based on high-performance organizational practice is adapted from a study by Assiri et al. (2006). This conceptual framework will contribute to existing theories about BSC implementation and will provide a better understanding of BSC implementation in the healthcare sector in the UAE. Therefore, the study will help to improve healthcare organizations' competitive market positioning and financial results to achieve long-term profitability and better customer satisfaction. The purpose of this study is to answer the following research questions:

1. □ What are the main determinants of BSC implementation in the healthcare sector in the UAE?
2. □ What are the factors that affect organizational performance in the healthcare sector in the UAE?

3. Is there any relationship between CSFs, implementation of the BSC and organizational performance?

1.4 Research Justification and Significance

The BSC has been implemented successfully and produced promising outcomes in many different industries globally, such as manufacturing firms, local governments and municipalities, banks and insurance companies, the hospitality sector and hospitals and the healthcare industry. Even though the available published literature ascertains the importance of BSC implementation in healthcare organizations, few articles have been published on BSC implementation in the Gulf Cooperation Council (GCC); meanwhile, no published articles exist on BSC implementation in the context of the healthcare sector in the UAE. The literature review has revealed a lack of research with regard to some of the CSFs of BSC implementation (Assiri et al., 2006; Doran et al., 2002), such as executive and manager sponsorship. The expected outcomes from this research are that it will help the leaders, as well as the stakeholders, of healthcare organizations to successfully implement the BSC through applying the related CSFs that will lead to a positive outcome for organizational performance. This research is motivated mainly by two considerations. The first consideration is that healthcare improvement and sustainability are crucial issues for the UAE government and are included in the country's vision 2020 to be a world-class site for healthcare. To achieve that, the UAE government needs to work in collaboration with all health authorities in the country to have all public and private hospitals accredited according to clear national and international quality standards for medical services and staff. Therefore, the healthcare sector is very important for the leaders and key opinion leaders in the

UAE, so it makes sense to work on identifying the CSFs for BSC implementation in the healthcare sector in the UAE.

The second consideration is that the healthcare sector is continuously changing globally and faces many forces demanding unprecedented levels of change (Chow et al., 1998), such as demographic change, high customer expectations, increased competition and governmental regulatory constraints (Chow et al., 1998; Inamdar et al., 2002; Moullin, 2002). It is quite challenging to implement BSC in the healthcare sector without obstacles (Chow et al., 1998; Dechow, 2012). Group effort is required from all levels of the organization and commitment is needed from different people (Narayanamma & Lalitha, 2016). In addition, the organization's mission must be defined regarding the agreed goals and strategies and as such its own unique scorecard should be designed to achieve the organization's goals (Chow et al., 1998).

As confirmed by Kaplan and Norton (1992), the BSC consists of four main categories (i.e., financial perspective, internal business perspective, customer perspective and learning and growth perspective). The economic significance of the BSC implementation should reflect these four perspectives (e.g. employees, cost and productivity, customers and market share and profitability). As mentioned above, the findings of this study are expected to be significant to the healthcare sector, as well as to non-healthcare industries in the UAE and the GCC.

Financial-perspective measures are very important for executives and are usually measured by profitability though a number of tools, such as return on assets. As part of the economic significance of this study, the BSC can help executives and directors to manage their organizations in such a way as that will lead to positive economic impacts and high profitability and patient excellence (customer satisfaction).

Therefore, an expected outcome of this study is that it will help executives to make appropriate decisions to successfully implementing the BSC in order to maximize the benefits to the organization (Behery et al., 2014; Rhodes et al., 2008; Rodgers, 2011).

Regarding the part of the BSC that serves as a management tool, the performance of employees is key to the success of all organizations across industries. Any organization will fail if the operational goals of employees are not aligned with the organization's vision and mission (Yu et al., 2009). On the opposite side, if the operational goals of employees are aligned with the organization's vision and mission, this will lead to high performance and will positively impact the organization's revenue.

Another economically significant aspect of the BSC is that it increases organizational performance with respect to the product life cycle and the organization's size (Hoque & James, 2000) and market share. As per research by Hoque and James (2000), who conducted a questionnaire among 66 Australian manufacturing companies, larger firms make greater use of the BSC than do smaller firms. Effective use of the BSC will positively impact organizational performance and Hoque and James (2000) suggest that more extensive BSC usage is associated with improved performance for organizations.

1.5 Research Methodology

The methodology of this study is adopted from various methodologies of previous studies (Abdallah & Alnamri, 2015; Al-Kaabi et al., 2019; Assiri et al., 2006; Elbanna et al., 2015). The study uses a quantitative approach with a positivist paradigm to understand the extent to which the BSC is implemented in the healthcare sector in the UAE. The researcher will use the questionnaire's outcomes to measure organizational

performance through implementing the BSC, taking into consideration the related CSFs that could positively affect BSC implementation.

As per research conducted by Assiri et al. (2006), the study was built based on a comprehensive review of the relevant literature and case studies. Assiri et al. (2006) used an exploratory global questionnaire sent to 103 organizations in 25 countries that have already implemented or are in the process of implementing the BSC. The research proposed 27 CSFs divided into three groups, namely dominant, main and supporting; these factors are expected to positively influence BSC implementation.

In other research in the medical industry conducted by Al-Kaabi et al. (2019) at the Ministry of Public Health in Qatar, a descriptive cross-sectional questionnaire in Arabic and English was sent to 199 respondents. The main outcome of this research was that building a BSC performance system was found to help employees to think in a strategic way about their organization's vision, as well as developing a new way of thinking. In research conducted in Saudi Arabia by Abdallah and Alnamri (2015), data on BSC implementation were collected using a survey mailed to 180 randomly selected manufacturing subsidiaries in different industrial cities in the country. The study aimed to examine the financial and non-financial measures of performance implemented by multinational organizations in Saudi Arabia. The research found that the majority of multinational companies used non-financial measurements at a very low rate compared with the use of financial measurements; this is due to the fact that financial measurements are well known and familiar in business practice in Saudi Arabia, so that they are easy to understand and implement.

A study in the hospitality industry conducted by Elbanna et al. (2015) in the UAE and Qatar measured hotels' performance by using the BSC. Questionnaires were sent to

190 hotels (four and five stars) and the research findings recommend the BSC as a good tool for managers in the hospitality sector to achieve high organizational performance.

In this study, a questionnaire instrument using a 5-point Likert scale was sent to 140 senior managers working at 73 private hospitals in the UAE to measure the effect of CSFs on BSC implementation and, therefore, measure organizational performance. The partial least squares (PLS) statistical technique was used to generate the conceptual model and assess the significance of possible relationships among the CSFs, while SPSS software was used for data entry and then the file was transferred to the PLS application.

The questionnaire was composed of three parts. The first part consisted of 10 questions seeking categorical-type data, reflecting the respondents' profile such as gender, age, nationality, educational level, role in the organization, where the organization was based in the UAE, number of employees, organization's age, whether the respondent was familiar with the BSC concept and the stage of BSC use at which the respondent's organization was currently at. The second part of the questionnaire consisted of 38 items representing 4 variables (12 items for total quality management [TQM], 8 items for innovation, 6 items for competitiveness and 12 items for corporate social responsibility [CSR]) that captured the respondents' perspective on organizational performance. Meanwhile, the third part consisted of 40 items representing 13 CSFs (3 items for top management, 3 items for the BSC team, 3 items for BSC perspectives, 3 items for communication, 4 items for training, 3 items for key performance indicators [KPIs], 3 items for cause and effect, 3 items for regular reporting, 3 items for measurement assessment, 3 items for problem solving, 4 items for rewards to

stakeholders, 3 items for corporation alignment and 3 items for benchmarking). Chapter 4 will explain the research methodology, consisting of theoretical and practical parts.

The CSFs and organizational performance variables were derived from a number of studies. CSFs were derived from (Assiri et al., 2006; Inamdar et al., 2002; Lilian Chan, 2004; Moullin et al., 2007; Radnor & Lovell, 2003b; Rodgers, 2011); the TQM variable was derived from (Ahire et al., 1996; Oakland, 2011; Samson & Terziovski, 1999); the innovation variable was derived from (Atuahene-Gima, 1996; Danks et al., 2017; Dobni, 2008); and the CSR variable was derived from (Bowen, 2013; Lantos, 2001; McBarnet, 2009; Rahman, 2011).

1.6 Structure of the Dissertation

This dissertation consists of seven chapters (Figure 1.1). The following is a brief description of each chapter. After the introduction to the study in this chapter, Chapter 2 provides an overview of the healthcare industry in the UAE, followed by a brief introduction to the four main governmental regulators in the UAE: The Health Authority for Abu Dhabi Emirate (HAAD); Dubai Health Authority (DHA) and Dubai Healthcare City (DHCC) for Dubai Emirate; and the Ministry of Health and Prevention (MOHAP), located in Dubai and managing the Northern Emirates. The research will then describe the BSC theory as well as the role of the BSC in the healthcare industry.

Chapter 3 provides a literature review that introduces the BSC concept, its origin and its effectiveness on organizational performance in the healthcare sector. As part of the literature review, the researcher conducted a comprehensive examination of the 13 CSF variables that could positively affect BSC implementation in healthcare and then

outlined the four variables for organizational performance (i.e., TQM, innovation, competitiveness and CSR). Chapter 4 explains the conceptual framework for the research and how it is developed, as well as outlining the hypothesis development.

The research methodology employed by the study is described in Chapter 5, which explains the research strategy and research paradigm and justifies the inductive approach as a research strategy. In addition, it sheds light on the justification for considering positivism as the research paradigm of this dissertation. The quantitative research methodology is introduced to collect data required for the analysis. This chapter also addresses the critical steps related to the empirical research process, starting from the conceptualization of the theoretical/measurement model. It proceeds toward model identification, operationalization of research instruments, assessment of the validity and reliability of these instruments, ethical considerations, data collection and data processing.

Chapter 6 presents the results of the questionnaire, including detailed results of the descriptive analyses of the collected data, such as the data type, sample demographics and response rate. The researcher also presents the results of in-depth statistical analysis, such as Cronbach's alpha results, composite and indicator reliability and convergent and discriminant validity. It then evaluates the conceptual model through PLS data analysis. A further discussion carried out in this chapter examines the CSFs for effectiveness in BSC implementation, as well as the effectiveness of BSC theory on organizational performance achievements.

Chapter 7 presents the summary and conclusion of the study. It discusses the main findings, implications, limitations and recommendations of the research. It also proposes directions for future research.

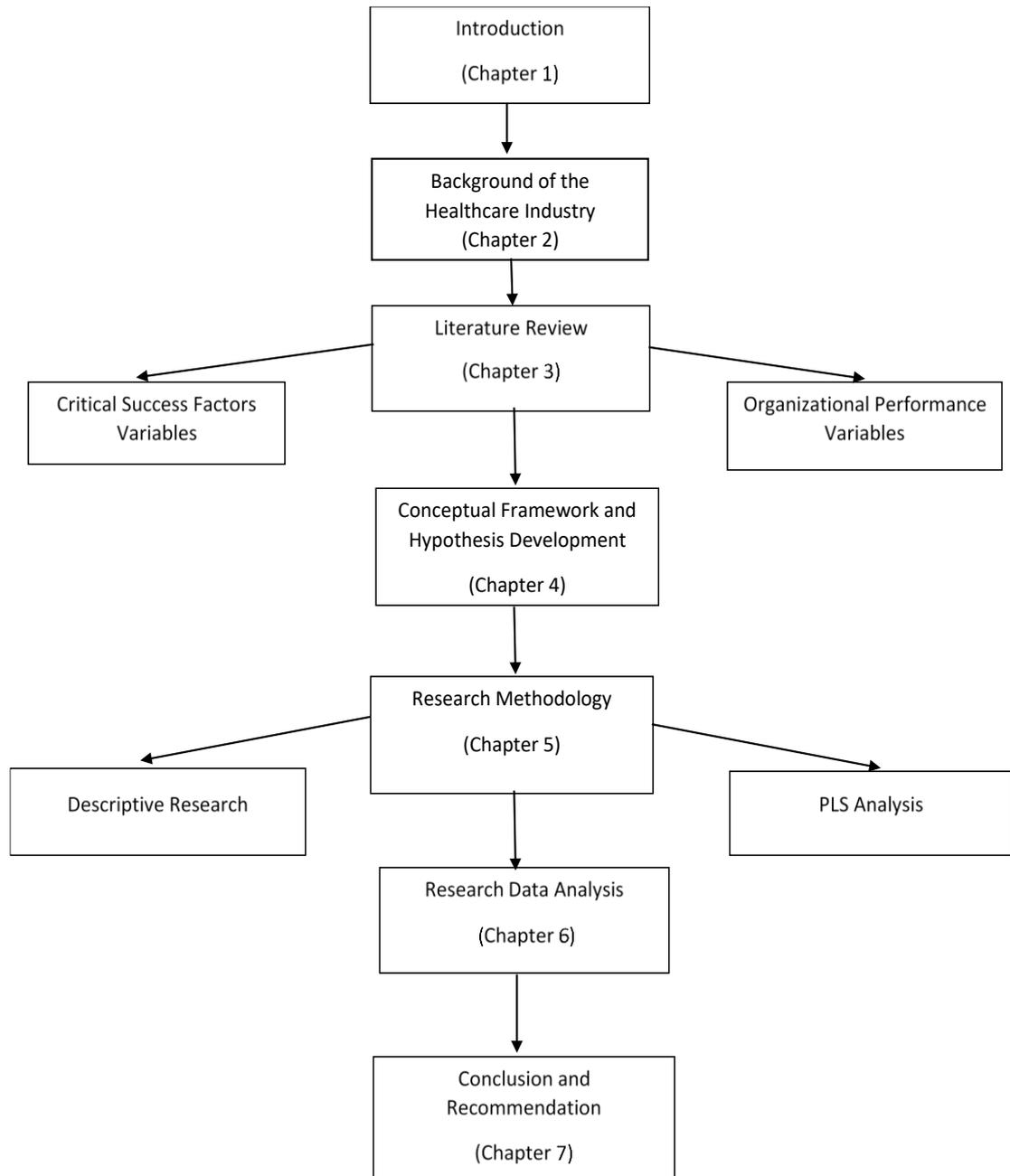


Figure 1.1: The dissertation structure

Chapter 2: Background of the Healthcare Industry and BSC

This chapter presents a historical and general background of the UAE. The chapter highlights the healthcare structure in the UAE, illustrating how private hospitals are managed. It also provides an overview of BSC implementation focusing on the healthcare sector. The remainder of this chapter comprises four sections. Section 2.1 presents the introduction to the four main regulatory authorities in the UAE, followed by Section 2.2 that describes the theoretical background to the BSC. Section 2.3 explains the BSC in the healthcare industry and Section 2.4 presents the conclusion to the chapter.

2.1 Introduction

The UAE stands for the United Arab Emirates, which is located in the southeast region of the Arabian Peninsula. The UAE is part of the GCC and in 2019 had a population of around 10 million (1.5 million locals and 8.5 million expatriates), which makes the UAE the 92nd largest country worldwide (WPR, 2019).

The UAE is a federal country consisting of seven Emirates: Abu Dhabi (the UAE capital), Dubai (the economic capital), Sharjah, Ajman, Umm Al Quwain (UAQ), Ras Al Khaimah (RAK) and Fujairah (FUJ). The UAE occupies an overall area of 83,600 square kilometers. Each Emirate is governed by a hereditary Sheikh who together form the federal supreme council, headed by the Sheikh of Abu Dhabi Emirate as a president for the UAE.

All seven Emirates provide healthcare services to their population (i.e., locals and expatriates) and therefore build their infrastructure (e.g., hospitals, clinics and medical cities) based on the Emirate's requirements. It is worth noting that each Emirate works

as a fully independent entity in managing its private healthcare sector locally. The healthcare industry in the UAE is divided into two sectors: public and private healthcare providers. Both types of healthcare providers are usually managed and regulated by federal and Emirate-level government entities.

This subsection describes the main governmental regulatory organizations that is, the Health Authority of Abu Dhabi (HAAD), Dubai Health Authority (DHA), Dubai Healthcare City (DHCC) and Ministry of Health and Prevention (MOHAP) as well as identifying their role in managing the private healthcare sector to improve organizational performance.

HAAD is the first and only local governmental entity for Abu Dhabi Emirate (Abu Dhabi city, Al Ain city and the Western region) that was established in 2007. It was previously known as GAHS (General Authority of Health Services for the Emirate of Abu Dhabi). The main task for HAAD is to control the healthcare sector in Abu Dhabi Emirate by ensuring the level of excellence for its populations (locals and expatriates). DHA is the second local entity for the Emirate of Dubai that was established in 2007. It was previously known as DOHMS (Department of Health and Medical Services), which was established in 1973. The main task for DOHMS was to manage the healthcare service in Dubai, whereas the main task for DHA is to manage and control the healthcare sector as well as to enhance the private healthcare sector's engagement in the Emirate of Dubai. There is another local regulatory authority in Dubai, DHCC (Dubai Healthcare City), whose main task is to manage the private hospitals and clinics in the Free Zone area, which have their own policies and regulations.

The fourth local regulatory authority in the UAE is MOHAP, which was founded at the time of the country's establishment in 1972. It was previously known as the

Ministry of Health (MOH) and covered the healthcare sector in the seven Emirates. The main task for MOHAP is to manage and control the healthcare sector in the Northern Emirates, except Abu Dhabi Emirate (Sharjah, Ajman, Um Al Quwain, Ras Al Khaimah, Fujairah and some facilities in Dubai). Full details on each sector will be given in the following sections.

It is quite challenging for hospital managers, directors and researchers to measure organizational success and to implement an effective strategy for future success. The healthcare industry is one of the most rapidly growing sectors in the world and health expenditure is increasing dramatically from year to year an increase driven by factors such as aging and growing populations, emerging-market dynamics, infrastructure improvements and the cost of utilizing the latest technology (INSEAD, 2019). Such factors are driving key opinion leaders to work on reducing costs and maximizing savings.

As confirmed by different authors, many forces exist that demand unprecedented levels of change and can lead the market into radical shifts, with challenges related to changing demographics (Chow et al., 1998; Doran et al., 2002), increasing customer satisfaction (Moullin, 2002), meeting customers' expectations (Chow et al., 1998), increased market competition, governmental rules and pressures and demographic changes (Chow et al., 1998; Inamdar et al., 2002; Moullin, 2002, 2009).

Thus, the healthcare industry is growing and transforming in many countries (Eiriz et al., 2010). The UAE healthcare sector has experienced significant changes in technology, financing and patient demands that have increased healthcare expenses and given rise to a need for restructuring. Therefore, different thinking is required for implementing innovative tactics in order to make healthcare services attractive for

patients and hence improve organizational performance. The situation surrounding the healthcare industry in the UAE has completely changed since the discovery of oil in 1962, which has led to a significant increase in investment in healthcare.

The UAE healthcare industry is divided into two sectors: public and private healthcare. Both sectors usually are managed and regulated by federal and Emirate-level government entities. In this study, the researcher used private hospitals and secondary and tertiary services as a case study; therefore, the researcher excluded governmental hospitals from the research due to difficulties in accessing the required data. Thus, all data preparation and data analysis for this research represent only private hospitals and the researcher excludes government hospitals' statistics.

As explained above, the UAE consists of seven Emirates, all of which provide healthcare services to their population (locals and expatriates) and therefore build their infrastructure (hospitals, clinics and medical cities) based on the Emirate's requirements. It is worth noting that each Emirate works as a fully independent entity in managing its private healthcare sector locally. There are 73 private hospitals that offer secondary and tertiary services in the UAE, the distribution of which is illustrated in Table 2.1.

Table 2.1: Private hospitals distribution in the UAE per Emirate

City Name	No. of Hospitals	Emirate Name
Abu Dhabi	23	Abu Dhabi
Al Ain	10	Abu Dhabi
Dubai	27	Dubai
Sharjah	8	Sharjah
Ajman	2	Ajman
UAQ	0	UAQ
RAK	1	RAK
FUJ	2	FUJ
Total	73	

The total number of hospitals in Abu Dhabi Emirate is 33 (23 hospitals in Abu Dhabi city and 10 hospitals in Al Ain city), which represents around 45% of the total private hospitals in the UAE. On the other hand, Dubai Emirate has 27 private hospitals, which represent around 37%, so the majority of private hospitals exist in the main two biggest Emirates, Abu Dhabi and Dubai, which is 60 hospitals out of 73. The balance of 17.8% is distributed in the other Emirates, Sharjah, Ajman, RAK and FUJ. There is no private hospital in UAQ as a secondary or tertiary service; all that are available are two government hospitals, as well as private polyclinics.

Since this research focuses on BSC implementation in the private healthcare sector in the UAE, it is worth looking at the private healthcare sector from different angles. There are large groups of healthcare providers that consist of a number of hospitals, pharmacies and polyclinics located in different places in the UAE. As an example, there are 45 private hospitals in 10 different healthcare groups distributed around the country. Table 2.2 lists the groups; they are represented alphabetically due to the researcher's ethical requirement not to mention any hospital name in the research.

Meanwhile, there are 28 private hospitals with individual structures that do not belong to any of the 10 healthcare groups mentioned. In the context of the present research, this suggested that the researcher should approach the group's management to arrange for questionnaire distribution. This point is discussed further in Section 5.5.3, "Ethical Considerations".

Table 2.2: Healthcare groups distribution in the UAE per Emirate

Groups	No. of Hospitals	Locations
Group A	8	AUD (4), DXB (3) and SHJ (1)
Group B	7	AUD (2), Al Ain (2) and DXB (3)
Group C	10	AUD (6), Al Ain (2) and Dubai (2)
Group D	3	AUD (3)
Group E	2	AUD (1) and Al Ain (1)
Group F	2	DXB (2)
Group G	2	DXB (1) and SHJ (1)
Group H	6	DXB (5) and SHJ (1)
Group I	3	DXB (1), Ajman (1) and FUJ (1)
Group J	2	DXB (1) and SHJ (1)
Individual hospitals	28	Various Emirate locations
Total	73	

2.1.1 Health Authority Abu Dhabi (HAAD)

HAAD is the main regulatory body for the healthcare sector in the Emirate of Abu Dhabi that ensures excellence in the healthcare community by monitoring the health status of the population, including locals and expatriates. According to the official website for HAAD (2019), the strategic plan for the healthcare sector in Abu Dhabi Emirate for the next five years highlights that there are a number of areas the authority should focus on, but that the main priority for HAAD is to focus on the integrated continuum of care for individuals; for example, increasing the quality of healthcare services, improving patient safety and hiring the required qualified talents.

The healthcare system in the Emirate of Abu Dhabi is comprehensive, encompassing the full spectrum of health services for protecting, promoting, sustaining and restoring world-class services across the Emirate's territories (HAAD, 2019). The system is driven toward excellence through continuous improvement and monitored for the achievement of targets. The healthcare providers are fully independent and follow an approved list by HAAD for an international quality standard. Expatriates and locals have full access to healthcare providers in the Emirate of Abu Dhabi.

SEHA is the corporate marketing name of Abu Dhabi Health Services Company and operates all public hospitals and clinics across the Emirate. It is the largest healthcare network in the UAE, providing a continuum of care to all populations in the Emirate and utilizing leading-edge technologies. "SEHA" is a phonetic rendering of the Arabic word for health (SEHA, 2019). SEHA was established in 2007 and consists of 12 hospitals, 46 primary healthcare clinics, 10 disease prevention and screening centers, 3 mobile clinics, 1 school clinic, 2 blood banks, 4 dental centers and 1 vaccination center.

2.1.2 Dubai Health Authority (DHA)

In the Emirate of Dubai, the commercial capital of the UAE, healthcare is experiencing rapid innovation through the modernization of patient service delivery and infrastructure projects. The DHA serves a dual role as regulator and operator of the healthcare sector in Dubai. The DHA's main priorities (DHA, 2019) are represented as (1) hiring and retaining healthcare talents, (2) strengthening initiatives around postgraduate healthcare education and (3) continuing on the investment plan for primary and specialized health services.

DHA was created in 2007 as a replacement for the Department of Health and Medical Services, which was established in 1973 for managing healthcare services in Dubai. DHA's mission is to transform Dubai into a leading healthcare destination by fostering innovative and integrated care models and by enhancing community engagement. DHA also focuses on providing services through DHA healthcare facilities, including hospitals and primary healthcare centers spread throughout the Emirate; meanwhile, DHA manages 4 big hospitals, 6 specialty centers and 13 health centers.

According to the DHA's official website (DHA, 2019), the four main pillars of service delivery at DHA health facilities are (1) quality, (2) efficiency, (3) patients and (4) staff. The main aim is to maintain and improve the quality and efficiency of DHA healthcare services. An important aspect of the service delivery strategy is to focus on patients, their needs and satisfaction, as well as to attract, retain and support outstanding staff.

2.1.3 Dubai Healthcare City (DHCC)

The third regulatory governmental authority in the UAE is DHCC, which is the second regulatory authority for the Emirate of Dubai. DHCC was established in 2002 to meet the demand for high-quality healthcare. It has many well-known local and international private hospitals, laboratories, polyclinics and pharmacies equipped with licensed professional staff.

DHCC Authority Regulatory (DHCR) is the independent regulatory arm of DHCC. DHCR regulates the Free Zone and reports directly to the board of Dubai Healthcare City Authority (DHCA). DHCR is responsible for ensuring compliance with and enforcement of international quality standards for healthcare providers, as well as

overseeing the licensing of all healthcare professionals, educators and operators (DHCC, 2019).

2.1.4 Ministry of Health and Prevention (MOHAP)

The fourth regulatory governmental authority in the UAE is MOHAP, whose head office is located in Dubai and whose purpose is to manage the healthcare sector in the Northern Emirates (Dubai, SHJ, Ajman, UAQ, RAK and FUJ), as well as to manage the public hospitals and other facilities for outpatient clinics distributed around the Northern Emirates.

MOHAP provides primary, secondary and tertiary services in six Emirates. In Dubai, MOHAP has 2 public hospitals and 10 health centers; in Sharjah, it has 6 public hospitals and 24 health centers; in Ajman, it has 7 public health centers; in UAQ, it has 1 public hospital only and 6 health centers; in RAK, it has 5 public hospitals and 10 health centers; and in FUJ, MOHAP has 3 public hospitals and 15 health centers.

According to MOHAP (2019), the UAE has placed a strong focus on the healthcare sector to serve all individuals residing in the country, both citizens and residents, providing them with comprehensive, world-class healthcare. The UAE has one of the highest expenditures on healthcare among GCC countries, as well as those in the Middle East region in general, including building modern hospitals, implementing new ideas, recruiting the right talents and ensuring the right setup for health insurance. The UAE has a clear vision for developing the private health sector to deliver a high standard of healthcare for both locals and expatriates in the country.

MOHAP (2019) developed its strategies according to the principles of modern scientific planning, which is applicable to the healthcare systems in the Northern

Emirates for the coming years. These strategies emphasize excellence in providing world-class health services, empowering employees to build their skills to maintain continuous health development and integrating the delivery of comprehensive nationwide health services with coordination between all levels of healthcare by unifying the health policies in the country and ensuring health service accessibility across the country.

2.2 BSC Background

Traditional financial performance measures are insufficient to gauge performance and guide organizations in today's rapidly changing (Bloomfield, 2002) and complex economic landscape. The BSC is a measurement system that can provide executives in organizations with a comprehensive framework to translate a company's strategic objectives into a coherent set of performance measures.

The BSC has been implemented and adopted globally in various industries, such as hospitality, manufacturing, local government, municipalities and hospitals and healthcare centers. As mentioned in Chapter 1, Section 1.2, the BSC is most frequently used among organizations to measure organizational performance. The literature suggests that the BSC is already implemented in the GCC, including in Saudi Arabia, UAE and Qatar. It has been implemented in non-medical organizations such as DUBAL, the world's largest aluminum producer (Viswanathan et al., 2014); the hospitality sector in the UAE and Qatar (Elbanna et al., 2015); and FGSME in the UAE (Behery et al., 2014). However, while the BSC is already being implemented, it is not being used cohesively across departments, which undermines its effectiveness.

The BSC has been through four generations since its establishment. The first generation was in 1992 (Kaplan & Norton, 1992) and included four types of perspectives (customer, internal business, innovation and learning and financial). The first generation of the BSC was focused on a mixture of financial and non-financial measures with limited numbers, such as 15–20 KPIs measured in 1993 (Kaplan & Norton, 1993) and 20–25 KPIs in 1996 (Kaplan & Norton, 1996). The BSC can provide an answer to four basic questions: (1) How do customers see us? (2) What must we excel at? (3) Can we continue to improve and create value? and (4) How do we look to shareholders? (see Figure 2.1).

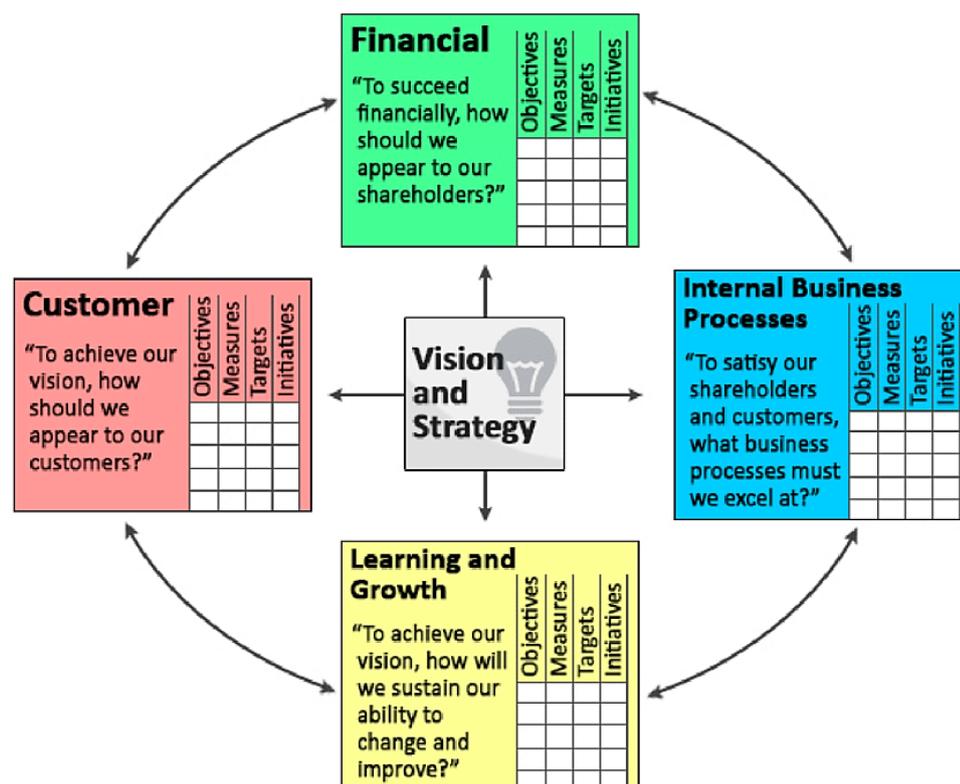


Figure 2.1: BSC's main perspectives
Source: Kaplan and Norton (1992)

The first perspective of BSC is the customer: "How do customers see us?" The majority of companies focus on the customer to distinguish their position among other

competitors, which is a typical mission for any organization looking to perform well. The BSC demands that successful managers intend to translate the organization's mission statement on customer service into specific measures that reflect the factors related to customers' requests. According to Kaplan and Norton (1992), customers' concerns usually fall into four categories: time, quality, performance and service and cost.

The second perspective of BSC is internal business: "What must we excel at?" Organizations should seek to meet customers' expectations, which will lead them to go through a number of steps derived from processes, decisions and actions occurring throughout the organization. As stated by Kaplan and Norton (1992), managers should focus on these critical internal operations that enable them to achieve customer needs.

The third perspective of BSC is learning and growth: "Can we continue to improve and create value?" When the BSC was devised in 1992, this variable was named the innovation and learning perspective (Kaplan & Norton, 1992). As the market is commonly dynamic and continues to be challenging, organizations should consider global competition, which requires them to make continuous improvements to their existing products and processes and therefore to have the ability to introduce new products with new strengths. According to Kaplan and Norton (1992), the organization's ability to innovate, improve and learn is tied directly to the organization's value. Such abilities will be achievable by launching new products, creating more value for customers and improving quality, which will help to penetrate new markets.

The fourth perspective of the BSC is financial, where financial performance measures define the long-run objectives of any business unit (Kaplan & Norton, 1996): "How

do we look to shareholders?” This is an important indication for top management to control the organization in the right way to see whether its strategy, implementation and execution are contributing to bottom-line improvement (Kaplan & Norton, 1992). Therefore, profitability indices, growth and shareholders are typical financial goals for all organizations.

The second generation of the BSC represents a substantial improvement on the first generation (Lawrie & Cobbold, 2004) and is represented by linking measurements to the organization’s strategy, which is at the heart of successful development of the BSC process (Kaplan & Norton, 1993). The BSC’s second generation is an addition to the first generation, which used cause-and-effect relationships (Kaplan & Norton, 1996; Speckbacher et al., 2003); thus, the work done between 1992 and 1996 was focused on finding ways to show the causality between measures (Lawrie & Cobbold, 2004). Kaplan and Norton published two papers: the first (Kaplan & Norton, 1996) described the linkage between measures and the second (Norton & Kaplan, 1999) described the linkage between strategic objectives. So-called “strategic linkage models” or “strategic maps” show the connections between objectives and this helped to position the BSC as a strategic management system instead of a measurement system, as it started out in 1992.

The second generation of the BSC gave rise to significant practical issues in measure selection and target setting and with attempts to rationally cascade the higher level of the BSC to lower levels of the organization (Lawrie & Cobbold, 2004). This helped the third generation of the BSC to go further, with new features intended to provide better functionality and more strategic relevance. According to Speckbacher et al. (2003), the BSC’s third generation is an addition to the second generation in that it

connects incentives with the BSC. The BSC's third generation (Lawrie & Cobbold, 2004) has four components: (1) the destination statement or vision statement, (2) a strategic linkage model with activity and outcomes perspectives, (3) a set of definitions of each objective and (4) a set of definitions of each measure.

The fourth generation of the BSC is about managing the organization's strategy, people and performance in a dynamic or changing environment. Executives should know how to manage their strategy, people, customers and performance; therefore, executives have to move on for managing the stakeholders to achieve good organizational performance. The new point added to the BSC's fourth generation is refining and adapting the organizational strategy for today's environment and market situation. The organization should use all aspects that are still appropriate, useful and effective.

The measurements selected for the BSC represent a tool for leaders to use in communicating to employees and external stakeholders the outcomes and performance drivers by which the organization will achieve its mission and strategic objectives. Hospitals, as well as non-medical organizations, need to link performance measurement to strategy and must measure performance in ways that reflect both successful and past performance (Kaplan & Norton, 2001a, 2001b). Effective measurement must be an integral part of the management process (Kaplan & Norton, 1993).

As part of research for a doctorate degree, Simbolon (2018) summarized the BSC framework from its original introduction according to the series of publications by Kaplan and Norton since 1992. Table 2.3 identifies the key aspects that the BSC introduced based on the literature written by Kaplan and Norton.

Table 2.3: Summary of BSC development

Publication Year	Publication Title	Key Areas Covered
1992 (Kaplan & Norton, 1992)	The balanced scorecard: Measures that drive performance	<ul style="list-style-type: none"> • <input type="checkbox"/> Introduction of the BSC as a foundation for development • <input type="checkbox"/> The BSC is a superior performance measurement that uses both financial and non-financial measures • <input type="checkbox"/> Identification of the four perspectives: financial; customer; internal business; innovation and learning • <input type="checkbox"/> The BSC is forward-looking (long-term performance)
1993 (Kaplan & Norton, 1993)	Putting the balanced scorecard to work	<ul style="list-style-type: none"> • <input type="checkbox"/> The BSC is not only a measurement exercise, it is also a management system to motivate breakthrough improvement • <input type="checkbox"/> The BSC has the greatest impact when used to drive a change process • <input type="checkbox"/> Identification that transparency is critical to a successful BSC • <input type="checkbox"/> Measures on the BSC must be specifically designed to fit the firm's mission, strategy, technology and culture
2001 (Kaplan & Norton, 2001a)	The strategy-focused organization: How balanced scorecard companies thrive in the new competitive environment	<ul style="list-style-type: none"> • <input type="checkbox"/> Translating the strategy into operational terms: building strategy maps • <input type="checkbox"/> Aligning the organization to create synergies: creating business unit synergy • <input type="checkbox"/> Making strategy everyone's everyday job: creating strategic awareness, defining personal and team objectives, the balanced paycheck • <input type="checkbox"/> Making strategy a continuous process • <input type="checkbox"/> Mobilizing change through executive leadership
2004 (Kaplan et al., 2004)	Strategy maps: Converting intangible assets into tangible outcomes	<ul style="list-style-type: none"> • <input type="checkbox"/> Visually map strategy • <input type="checkbox"/> A visual cause-and-effect explanation of what is working and what is not, in a way that everyone in the company can understand
2005 (Kaplan & Norton, 2005)	Creating the office of strategy management	<ul style="list-style-type: none"> • <input type="checkbox"/> Establishing a new unit to orchestrate strategy and execution within an organization

Table 2.3: Summary of BSC development (Continued)

Publication Year	Publication Title	Key Areas Covered
2006 (Kaplan & Norton, 2006)	Alignment: Using the balanced scorecard to create corporate synergies	<ul style="list-style-type: none"> • <input type="checkbox"/> Helping get the entire organization involved in the strategy scorecard to create corporate synergies • <input type="checkbox"/> Alignment: a source of economic value • <input type="checkbox"/> Corporate strategy and structure • <input type="checkbox"/> Aligning financial and customer strategies • <input type="checkbox"/> Aligning internal process and learning and growth strategies: integrated • <input type="checkbox"/> Strategic themes • <input type="checkbox"/> Cascading: the process • <input type="checkbox"/> Aligning boards and investors • <input type="checkbox"/> Aligning external partners • <input type="checkbox"/> Managing the alignment process • <input type="checkbox"/> Total strategic alignment
2008 (Kaplan & Norton, 2008)	The execution premium	<ul style="list-style-type: none"> • <input type="checkbox"/> Develop the strategy • <input type="checkbox"/> Plan the strategy • <input type="checkbox"/> Align the organization • <input type="checkbox"/> Plan operations • <input type="checkbox"/> Monitor and learn • <input type="checkbox"/> Test and adapt
2010 (Kaplan et al., 2010)	Managing alliances with the balanced scorecard	<ul style="list-style-type: none"> • <input type="checkbox"/> The BSC management system can help companies switch their alliance management focus from contributions and operations to strategy and commitment
2015 (Gibbons & Kaplan, 2015)	Formal measures in informal management: Can a balanced scorecard change a culture?	<ul style="list-style-type: none"> • <input type="checkbox"/> The collaboration to create a BSC of performance measures can help change an organization's culture

Source: Simbolon (2018)

As mentioned earlier, the BSC has been applied successfully many times as a strategic management system; therefore, identifying the CSFs for BSC implementation is an important topic. Much of the literature relates to how can the BSC be applied

successfully; however, studies on BSC application in the healthcare sector are less common. Inamdar et al. (2002) conducted a survey of the BSC in Canadian hospitals, as well as surveying executives in nine provider organizations in the USA. Nevertheless, there is insufficient information about the overall pattern and success of BSC implementation in healthcare. The researcher will discuss the CSFs in Chapter 3 as part of the literature review section.

2.3 The BSC in the Healthcare Industry

Hospital performance assessment is becoming increasingly important for different stakeholders (Groene et al., 2008; Rabbani et al., 2010) in healthcare organizations, in response to growing demands to ensure transparency and control and reduce variations in clinical practice (Groene et al., 2008). Senior healthcare executives have reported that the BSC strategy implementation and performance tool could be successfully applied in the healthcare sector (Gurd & Gao, 2007; Inamdar et al., 2002), enabling organizations to improve their performance and customer satisfaction, as well as financial outcomes.

The healthcare industry in the UAE has witnessed an extended period of high growth that is still ongoing and changes from year to year, driven by the gap between supply and demand (INSEAD, 2019). According to the official website for the UAE 2021 vision (2019), the UAE national agenda aims to achieve a world-class healthcare system. Therefore, the UAE federal government has to work in close collaboration with all health authorities in the country to have all public and private hospitals accredited according to clear national and international quality standards for medical services and staff. The UAE government plays a central role in providing world-class healthcare services for both locals and expatriates. However, the government is

focusing on the private sector's engagement in all areas of medical service to deliver a high standard of healthcare to the country's population.

From the literature review, it can be seen that the BSC has been applied successfully and produced promising outcomes in healthcare (hospitals, polyclinics, universities, women's health centers and public services) in different locations. Several articles have described the use and potential benefits of implementing the BSC in various healthcare settings: a community health partnership (Hageman et al., 1998); Duke children's hospital (Meliones, 2000); an army medical department (Holt, 2001); outpatient services (Curtright et al., 2000); and case studies of hospital systems, psychiatric centers, national healthcare organizations (Zelman et al., 2003) and hospitals (Aidemark, 2001; Pink et al., 2001).

Other articles provide advice on the general issues and specific steps that healthcare organizations should consider when building a BSC (Griffith, 2000; MacStravic, 1998; Oliveira, 2001; Weber, 2000). According to research conducted by MacStravic (1999), a true BSC can have three internal benefits: (1) providing customer insights, (2) refocusing internal operations and (3) energizing internal stakeholders; and another three external benefits: (1) strengthening customer acquisition efforts, (2) improving customer relations and (3) increasing loyalty and returns of value. However, few articles describe the CSFs from the perspective of a healthcare organization that has implemented the BSC.

2.4 Conclusion

This chapter introduced the main four regulatory authorities in the UAE: HAAD, the main authority for managing the healthcare sector in the Emirate of Abu Dhabi; DHA

and DHCC for managing the healthcare sector in the Emirate of Dubai; and MOHAP for managing the healthcare sector in the Northern Emirates. The UAE has a clear vision for developing the health sector to deliver high-quality healthcare services in the country. The vision includes both the public and private sectors. As a result, the private healthcare sector has received considerable attention and is managed and regulated by federal and Emirate-level government entities. This indicates that the healthcare sector in the UAE is under control from the government and is managed following the country's vision.

The chapter reviewed the development of the BSC through four generations, which has contributed to encouraging the healthcare sector to implement the BSC to provide high-quality healthcare services. In other words, the BSC is an essential tool for improving organizational performance and managing the organization's strategy. This is evident from the findings of different studies that found the successful implementation of BSC has produced favorable outcomes in healthcare. The next chapter presents the literature review for the BSC, CSFs and organizational performance.

Chapter 3: Literature Review

3.1 Introduction

In Chapter 2, the researcher described the structure of the healthcare sector in the UAE and outlined the main governmental regulatory authorities in the country (i.e., HAAD, DHA, DHCC and MOHAP) and then described BSC theory, as well as the BSC in the healthcare industry.

Chapter 3 conducts a comprehensive literature review to engage with previously published research papers on the effect of BSC implementation on organizational performance, explain the related CSFs for the healthcare sector and thus identify gaps that require further investigation. The chapter is structured as follows. Section 3.2 identifies CSFs that might have a significant influence on BSC implementation. Section 3.3 presents the main related literature to show the effect of BSC implementation on organizational performance in the healthcare sector. Section 3.4 concludes the chapter.

3.2 Critical Success Factors

The purpose of this section is to highlight the main CSFs that might positively influence BSC implementation in the healthcare sector. As explained in Chapter 2, the various generations of the BSC have changed its role from being a tool for performance measurement to also being a strategic management system. The BSC was improved in 2001 by Kaplan and Norton by translating strategy into operational terms through the building of strategy maps. The most important issue is to make the organization's strategy applicable to everyone by creating strategic awareness, defining personal as well as team objectives and making the strategy a continuous process.

In 2004, Kaplan and Norton created the strategy map based on the theme of converting intangible assets into intangible outcomes through visualizing the strategy map and implementing cause-and-effect relationships among the BSC perspectives. The BSC should be tailored to suit any organization in any sector by establishing a new unit to manage strategy and execution in the organization.

Kaplan and Norton (2008) released a theme called the execution premium, which follows a number of steps, such as develop the strategy, plan the strategy, align the organizations, plan operations, monitor and learn and test and adapt. Therefore, the BSC is a management system that can help organizations to control their performance and to switch their alliance management from contributions and operations to strategy and commitments.

CSFs are an essential part of BSC implementation in the healthcare sector (Houck et al., 2012; Inamdar et al., 2002; Kaplan & Norton, 1992; Poon & Wagner, 2001; Rodgers, 2011), so measuring organizational success and implementing effective strategies for future success represent continuous challenges for senior managers, researchers and consultants (Assiri et al., 2006).

Other researchers highlight the importance of CSFs (Poon & Wagner, 2001; Rodgers, 2011; Veen-Dirks & Wijn, 2002) that may influence successful implementation of the BSC in healthcare organizations. CSFs are now being utilized in a growing number of organizations worldwide (Bullen & Rockart, 1981) and are necessary for managers to reach their goals. Managers should have the appropriate information to determine whether tasks are proceeding sufficiently in each department in their organizations.

CSFs are defined by Bullen and Rockart (1981) as “the limited number of areas in which satisfactory results will ensure successful competitive performance for the individual, department or organizations. CSFs are the few key areas where ‘things must go right’ for the business to flourish and for the manager’s goals to be attained”.

CSFs comprise a number of important factors that will influence successful implementation of the BSC in organizations (Rodgers, 2011). From the organization’s point of view, CSFs include industry CSFs, corporate CSFs, sub-organizations’ CSFs and individual CSFs. Any list of CSFs for an organization should reflect industry CSFs in the individual company’s CSF list.

CSFs have been identified by various researchers in Saudi Arabia. A study by Al Thunaian (2014) was the first in the healthcare sector in Saudi Arabia to examine BSC implementation through understanding the relationship between the BSC and performance measures. Al Thunaian (2014) collected 330 completed responses with a 33% response rate and therefore used qualitative and quantitative methodologies to encompass the different aspects of BSC implementation. King Faisal Specialist Hospital and Research Centre (KFSH-RC) was used as a case study. The research is a good example of how the BSC has been implemented in the healthcare sector in the GCC and inspired the researcher to conduct this study. The main weakness of Al Thunaian (2014) study is that he applied 40 measures; however, according to Kaplan and Norton (1996), 21 to 28 measures should be used, so the number used by Al Thunaian is excessive.

Alomiri and Alroqy (2019) also considered the service context in Saudi Arabia. The purpose of their research was to examine the contextual factors that influence BSC implementation in Saudi Arabia. Around 900 questionnaires were sent out and the

researchers collected 515, with a response rate of around 57%. This response rate can be considered acceptable even though the questionnaires were sent to the research sample via mail. If the researcher had used other channels, such as SurveyMonkey or LinkedIn, a higher response rate could have been achieved. Nevertheless, Alomiri and Alroqy (2019) the researchers were very successful in presenting a good background on BSC theory. Although the authors identified many publications on BSC implementation in the banking and service sectors, they did not include any healthcare providers. Thus, their main contribution was to open the door for further research in terms of management accounting innovations and other tools such as activity-based costing (ABC) and TQM.

As mentioned in Chapter 1, this research study is adapted from Assiri et al. (2006). The purpose of their research was to identify potential factors that can influence BSC implementation. The researchers used case studies in telecommunications and the industrial sector in Saudi Arabia. They sent a global questionnaire to 103 organizations in 25 countries that have implemented or are in the process of implementing the BSC. Assiri et al. (2006) research provides useful examples of BSC implementation in the GCC and this motivated the researcher to conduct the present study, even though Assiri et al. did not include any healthcare providers in their research.

Assiri et al. (2006) identified 27 CSFs that are expected to positively influence BSC implementation. These were divided into three levels; namely, dominant, main and supporting factors. The dominant factors are those that are expected to play a significant role in BSC implementation; the main factors are less critical than the dominant factors; while the supporting factors are less critical than both dominant and main factors in BSC implementation.

Few papers have been collected from the UAE on BSC implementation. Viswanathan et al. (2014) published a paper on DUBAL's power operation department (DUBAL is the largest aluminum factory in the GCC). The BSC has already been successfully implemented there; however, a limitation was found in the research in that there was no involvement of operational staff and little or no communication across the board.

Another study on BSC adoption in the UAE was conducted by Behery et al. (2014). This qualitative research focused on small to medium-sized enterprises. The researchers focused on "how" questions and exploratory analysis of primary and secondary data supported by interviews with senior managers. They found that the BSC initiatives already implemented in the company were not linked together toward effective implementation of the BSC system. In addition, the initiatives were driven by the interests of different business units and were not properly integrated as one whole company system. If proposed initiatives are integrated and aligned together with the organization's objectives and strategies, this will facilitate the adoption of BSC implementation and, therefore, maximize organizational performance outcomes.

Another study on CSFs, by Rodgers (2011), presented a model containing 10 CSFs that are expected to influence BSC implementation positively toward organizational performance in the healthcare sector in the United Kingdom. Rodgers divided the model into four categories, named (1) strategic purpose (i.e., corporate strategy relationship and measurement versus management); (2) design and process (i.e., assigning KPI owners, quadrant balance and evolution and data quality and information flow); (3) contextual integration (i.e., healthcare contract performance and UK healthcare regulation); and (4) strategic human resource management (i.e., management competencies, organizational learning and cultural acceptance). Rodgers

(2011) found that senior management should proactively and effectively manage CSFs in the organization to maximize the opportunity to improve organizational performance in UK healthcare through a customized BSC system.

Another model was presented by Rhodes et al. (2008) for implementing the BSC in Asian countries. Their conceptual framework proposed four interdependent elements of divergence (i.e., leadership style, national culture, organizational culture and human resources practices). The study was implemented in a central bank of Indonesia to measure BSC implementation and explore the convergence and divergence of global management practices. The research outlined how the divergent factors can influence BSC implementation in Asian organizations, which deepened understanding of BSC implementation in other sectors, as well as other locations.

Gurd and Gao (2007) considered the BSC as a prominent innovation in strategic performance measurement systems. They presented a number of case studies in the healthcare sector to confirm that the BSC is a useful tool for this sector. Meanwhile, many examples of BSC implementation in healthcare have not been considered in published studies. Thus, Gurd and Gao (2007) recommend that future research investigates the characteristics of unsuccessful implementations of BSC, where additional insights could come from cross-national surveys of best practice use of the BSC in the healthcare sector.

3.2.1 Corporate Purpose

The first group of CSFs is represented by the corporate purpose group, which consists of three factors (i.e., top management, BSC team and BSC perspectives) that are crucial to and expected to play a significant role in, BSC implementation. It is difficult

to obtain positive outcomes from BSC implementation without the corporate purpose group.

3.2.1.1 Top Management

The first corporate purpose factor is top management, which consists of executive suite levels such as chief executive officers, chief administrative officers, chief financial officers and other senior management, who need to be committed to BSC implementation (Braam & Nijssen, 2011; Inamdar et al., 2002; Kaplan & Norton, 1992, 1996; Kaplan & Norton, 2005; Lilian Chan, 2004; Radnor & Lovell, 2003b; Rodgers, 2011). Executives' support is a significant element for a successful implementation of the BSC (Assiri et al., 2006).

Top management is defined by Slevin and Pinto (1987) as the willingness of top management, as key opinion leaders, to provide the necessary support, as well as the power, for project success. According to Rodgers (2011), managers need to have the required skills to facilitate effective implementation of the BSC. Top management usually makes decisions that are compatible with the organization's vision and strategies to drive future progress. Many researchers, such as Kaplan and Norton (1992); Robert (1994); Stanton (1996), believe that BSC implementation usually starts with committed and passionate leaders, whose support is crucial for organizational mission success. These are the leaders who can make real and fundamental changes.

Top management is an essential factor to ensure successful implementation of the BSC. Therefore, it is difficult to attain successful implementation of the BSC without senior management's support and commitment (Assiri et al., 2006; Inamdar et al., 2002). Senior managers usually have a complete picture of the organization's vision

and priorities (Assiri et al., 2006; Kaplan & Norton, 1992). Therefore, managers should give the necessary attention to BSC implementation and be proactive in order to effectively manage the full range of organizational CSFs to maximize the chances of improving organizational performance in healthcare by customizing the BSC system (Rodgers, 2011).

Successful leaders can motivate employees and therefore bring about positive change by spreading passion, conviction and confidence (Monczewski, 2003). It is important to see that senior management supports the key tenets of the BSC and to see them engaged in regular BSC team meetings. Organizations that fail to encourage this support and participation will encounter failure at a certain stage of BSC implementation, so human, as well as financial, perspectives are key to successful implementation of the BSC.

Managers should have certain skills to ensure successful implementation of the BSC. They should be experts in disseminating the right information to the core team at the right time. As explained by Monczewski (2003), executives should have the ability to form and develop the team through coaching and support, since executives are motivators for the entire team and can articulate the philosophy as well as the benefits of the BSC to all stakeholders.

3.2.1.2 BSC Team

The second corporate purpose factor is the BSC team, which is essential for successful implementation and building of the BSC. Executives should select the smartest people in the organization and empower them with more responsibilities for the BSC project (Assiri et al., 2006). The BSC team is required to update executives frequently;

therefore, creating a BSC team to control the BSC tool within the organization is critical for successful implementation of the BSC. The BSC team is usually chosen by the organization's top management.

The right teams normally work to solve the organization's problems and to strengthen individual capabilities to overcome management challenges (Albright et al., 2005). According to Katzenbach and Smith (1994), a team is a small number of people with integral skills who are committed to a common purpose and performance goals and an approach for which they hold themselves mutually accountable.

Managers in a BSC team should understand how to use the BSC to overcome the limitations of a traditional financial control system (Albright et al., 2005), so that each unit in an organization should focus on cascading the BSC to develop its own measures that align with the organization's strategy. Three issues should be considered once the organization begins the process of establishing the BSC (Albright et al., 2005): (1) ownership of the BSC should convey the right message to employees; (2) performance should be set at achievable levels; and (3) all employees must perceive the organization's measures and targets.

The BSC team, as well as the organization's employees, usually need guidance in how to design and implement the BSC in the right way (Albright et al., 2005; Assiri et al., 2006; Kaplan & Norton, 1993, 2001a, 2001b; Kaplan & Norton, 1993; Robert, 1994). A well-structured BSC can be accomplished by a BSC team (Assiri et al., 2006). Fortune magazine reported in 1999 that 70% of strategy execution is related not to the organization's strategy but rather to bad execution. Therefore, the BSC's suitability can be achieved from real support from top management for the BSC team's activities (Monczewski, 2003). Monczewski adds that the right team members should work

together to achieve their goals by solving problems to strengthen the capabilities of individuals as well as to overcome management challenges.

The long-term value of the BSC will be sustained by a complete teamwork effort; individual work related to the BSC will not positively impact organizational performance and will not add to the organizational strategy, internal process, business competencies, or markets, or to the organization's mission or vision. As stated by Monczewski (2003) and Michalska (2005), effective managers of the BSC should have certain skills and BSC team members should have a mix of skills.

The BSC team should have a unique approach to disseminate BSC culture throughout the organization. They should meet regularly to review the results and plan for the future. In addition, they should encourage the team members to work in a suitable environment to positively affect BSC implementation. The BSC team members usually act as "goodwill ambassadors" in engaging all stakeholders to contribute positively to the organization's strategic goal (Monczewski, 2003).

3.2.1.3 BSC Perspectives

The third corporate purpose factor is BSC perspectives. As confirmed by Kaplan and Norton (1992), four perspectives have been found to be appropriate for most companies and industries. However, these four perspectives (i.e., financial, customer, internal business process and learning and growth) have to be considered as a template to connect all the organization's parts into one measurement system (Kaplan & Norton, 1992, 1993, 1996; Kaplan, 1996). The BSC perspectives should be represented in such a way as to create a competitive advantage and breakthroughs for the organization (Kaplan & Norton, 2001a).

The BSC gives senior managers the opportunity to look at the business from important perspectives rather than using traditional financial accounting measurements. The BSC is essential for the healthcare sector, which is built on competitive advantage for hospitals. In all industries, the business models for measuring intangible assets, such as employee skills and knowledge levels, customer and supplier relationships and an innovative culture, are critical in achieving a cutting-edge level for organizations (Isoraite, 2008; Kaplan & Norton, 1993, 1996, 2000b; Robert, 1994).

The BSC consists of four perspectives. First, the financial perspective is defined by Kaplan and Norton (2001b) as the strategy for profitability and growth. A successful organization should keep its shareholders satisfied and engaged to maximize shareholder value. The financial perspective can measure revenue growth, profit and loss, cash flow, return on investment and cost reduction by gathering financial data and reviewing business performance based on financial performance (Butler et al., 2011; Hubbard, 2009; Kalender & Vayvay, 2016; Kaplan & Norton, 1992; Zavodna, 2013).

Financial strategic objectives are used by Papalexandris et al. (2004) for measuring reductions in cost, increasing earnings and increasing revenue from new technologies. Financial measures are “lagging” indicators that indicate past performance for any organization, whereas non-financial measures are lead indicators that can capture future scenarios for the organization (Kaplan & Norton, 1996; Yahanpath & Islam, 2016).

The customer perspective is the second perspective for the BSC and is a main indicator for organizations that are looking to achieve customer satisfaction. As suggested by

Chavan (2009), customer satisfaction can be attained by means of product attributes, customer relationships, image and reputation.

The customer perspective can be measured by market share and customer loyalty, value creation, service quality, customer satisfaction, profitability and acquisition (Butler et al., 2011; Kaplan & Norton, 1992; Zavodna, 2013). The customer perspective is a strategic objective, as mentioned by Papalexandris et al. (2004); it can be achieved by increasing customer satisfaction, diversifying the customer portfolio, increasing market share and adding and retaining valued customers.

The internal business process is the third perspective of the BSC for identifying a more effective and efficient process that meets the organization's objectives (Butler et al., 2011; Kaplan & Norton, 1992; Zavodna, 2013). The internal process can satisfy both internal and external shareholders and enable managers and decision-makers to identify the processes for achieving customers' and shareholders' objectives (Kaplan & Norton, 2001a).

The main concern for the internal business process is to improve order processing, delivery, manufacturing and products to satisfy customers and therefore improve financial outcomes (Farooq & Hussain, 2011). The internal business process is measured by Papalexandris et al. (2004) to manage the attributes of employee turnover and utilization, as well as productivity level and improve quality by reducing the number of errors and minimizing the response time to errors.

Learning and growth is the fourth perspective for the BSC. It is a leading indicator that enables organizations to attain long-term improvement in the environment. The learning and growth process focuses on employee training, employee turnover,

information technology functionality and administration of routine processes (Butler et al., 2011; Zavodna, 2013). Kaplan and Norton (1992) suggested that the learning and growth perspective includes three kinds of scales (i.e., human capital, information system capital and organizational capital). Learning and growth are measured by Papalexandris et al. (2004) through improving a number of factors such as employee satisfaction, training efficiency, knowledge management, training in leading-edge technology and performing job enlargement.

3.2.2 Integration Purpose

The second group of CSFs is the integration purpose. It consists of four factors (i.e., communication, training, KPIs and cause and effect). These factors are less critical than the first group, corporate purpose, although the BSC implementation project will not succeed without the influence of the integration purpose group.

3.2.2.1 Communication

The first integration purpose factor is communication (Braam & Nijssen, 2011; Inamdar et al., 2002; Kaplan & Norton, 1996; Kaplan & Norton, 2005; Lilian Chan, 2004; Moullin, 2017; Papalexandris et al., 2004). It is essential to communicate the BSC throughout the organization from top to bottom, so organizations should arrange frequent meetings with all stakeholders who are involved in BSC implementation (Niven, 2002; Phillips & Louvieris, 2005; Smith & Kim, 2005). The organization has to establish a certain comprehensive plan to communicate the BSC to its employees (Assiri et al., 2006), followed by continuous updates to sustain the outcomes, which usually depend on the organization's management levels.

As stated by Niven (2002), meetings should be organized in an environment of collaboration to positively affect BSC implementation. Therefore, staff should learn from each other to overcome the challenges. The BSC should be communicated throughout the organization from the top (Assiri et al., 2006; Niven, 2002) and involve all levels in internal communications (Albright et al., 2005). Employees should be updated frequently on BSC development through the use of various communication channels such as internal announcements, newsletters and management circulars (Assiri, 2006; Assiri et al., 2006). As stated by Assiri et al. (2006), meetings should discuss whether the targets have been achieved; meanwhile, the intended actions have to be identified.

3.2.2.2 Training

The second integration purpose factor is training (Assiri et al., 2006; Inamdar et al., 2002; Lilian Chan, 2004), which is also termed training and education (Lilian Chan, 2004). Since the BSC is a new project within the organization, it centers on adopting new perspectives, processes and innovations (Assiri et al., 2006). Therefore, training and education initiatives for employees may help to facilitate the proposed change by providing employees with the knowledge and skills required to adapt and lead the change process (Andersen et al., 2004; Assiri et al., 2006; Karathanos & Karathanos, 2005; Zelman et al., 2003).

The most interesting point for organizations that implement the BSC is how they adopt BSC theory (Zelman et al., 2003). Employees' training and education initiatives may help facilitate BSC theory (Zelman et al., 2003). Meanwhile, training is an essential factor for practicing the right technique for BSC implementation (Albright et al., 2005; Valiris et al., 2005). Training that is aligned to the organization's strategy will provide

employees with the necessary skills to transfer organizational objectives into actions. Employees should be considered a solid asset to receive the required education and training to obtain the organization's objectives.

3.2.2.3 Key Performance Indicators

The third integration purpose factor is KPIs, as mentioned by many researchers (Assiri et al., 2006; Kaplan & Norton, 2000a; Moullin, 2004). The KPI factor constitutes quantifiable measurements that reflect the CSFs of an organization (Assiri, 2006; Assiri et al., 2006). KPIs consist of a number of vital tools, such as reports, spreadsheets and charts, for any organization (Assiri, 2006; Assiri et al., 2006; Kaplan et al., 2004; Wells & Weiner, 2005).

Measuring performance in healthcare is understandably controversial. When organizations have professional KPIs, it can motivate their employees to improve performance and guide them to desired performance (Moullin, 2009). The BSC usually translates the organization's strategy into a comprehensive set of KPIs, where KPIs are closely linked to the organization's goals by tracking performance across BSC perspectives (Assiri et al., 2006). By applying the cause-and-effect relationship among KPIs, the BSC measurement system provides managers with a solid understanding of how to control their responsibilities according to the organization's strategies.

Organizations need to act positively toward the information obtained to improve services by producing a clear plan and designating the right people to achieve targets (Moullin, 2009) through building professional KPIs. Therefore, the healthcare sector requires a continuous improvement culture to serve its patients. According to Assiri et al. (2006), building a suitable setup for KPIs prior to BSC implementation will lead to

suitably balanced KPIs for the organization; therefore, action and objectives should be supported by the organization's KPIs.

3.2.2.4 Cause-and-Effect Linkage

The fourth integration purpose factor is cause and effect (Assiri et al., 2006; Kaplan & Norton, 1996; Papalexandris et al., 2004; Radnor & Lovell, 2003b). The nature of cause-and-effect linkage entails that financial and non-financial measures should be linked together in a logical way, whereas non-financial measures will lead to future financial performance. The cause-and-effect relationship has been supported by many previous studies (Assiri et al., 2006; De Geuser et al., 2009; Inamdar et al., 2002; Porporato et al., 2017; Tayler, 2010; Yang & Tung, 2006); on the other hand, some research has outlined challenges to the implementation of cause and effect causality and simplicity (Norreklit, 2000; Nørreklit, 2003; Nørreklit et al., 2012).

It is assumed by Kaplan and Norton (1996) that there is a cause-and-effect relationship between the BSC's four perspectives, so that any organization deploying the BSC measurement system should attempt to validate the cause-and-effect factor by measuring the strength of the linkages among the perspective measures. The organization has to build its measures according to cause-and-effect linkages (Assiri et al., 2006); therefore, improvements in the organization's measures will lead to financial success.

A criticism raised by Norreklit (2000) is that the BSC contains financial and non-financial measurements, as well as other measures, such as outcomes and performance drivers of outcomes, that mean the BSC is not built on valid assumptions and, therefore, is not a valid performance-measurement tool. Other criticisms were raised

by Porporato et al. (2017) in a quantitative case study conducted in a community hospital in Canada that used the BSC. The researchers challenged the cause-and-effect assumption mainly with respect to cascading the context, confirming that there is a lack of attention to how composite indices of lower measures converge into a single higher-level measure, which may be the reason for ineffective use of the BSC.

To execute the organization's strategy, employees should communicate effectively to support their strategy by using cause-and-effect connections among the BSC's four perspectives (i.e., financial, customer, learning and growth and internal process). Executives should tell employees how to turn resources from intangible to tangible through the organization's strategy (Kaplan & Norton, 2000a), whereas intangible assets usually affect financial performance directly.

In many papers, the BSC is usually refer to the cause-and-effect principle and this principle is a core feature of the BSC. In general, the cause-and-effect relationship is the main feature that distinguishes the BSC from other kinds of measurement tools (Bukh & Malmi, 2005). Many organizations globally have adopted different versions of non-financial measurement frameworks, such as the BSC and other templates. Ittner et al. (2003) found that the BSC is a measurement tool that can establish a linkage between the cause and effect between organizational measurements and the BSC's desired outcomes.

Wongrassamee et al. (2003) examine the similarities and differences between the BSC and the European Foundation for Quality Management (EFQM) excellence model. The researchers argue that the BSC should recognize the sequence of cause-and-effect relationships between the organizational measures and the performance drivers of

those outcomes. Each measure should represent a component of the cause-and-effect relationship to communicate the organization's strategy to all stakeholders.

In research by Gumbus and Wilson (2004), the researchers confirmed that the BSC has developed into a strategy map that provides a visual representation of the critical components and the cause-and-effect linkages required for an organization to achieve its strategic goals and create long-term value. The BSC makes the strategy hypotheses explicit and can be tested through the cause-and-effect relationship. The strategic hypotheses need to identify the leading indicators (non-financial measures) and the lagging indicators (financial measures) to achieve good performance outcomes. The organization must build its measures based on the cause-and-effect relationship. Therefore, the cause-and effect relationship between the four perspectives of the BSC is an essential factor to obtain a more comprehensive view of the business that will help to achieve the main goals identified by the organization.

3.2.3 Supporting Purpose

The third group of CSFs is the supporting purpose factors (i.e., regular reporting, measurement assessment, problem solving, rewards to stakeholders, corporate alignment and benchmarking). These are less critical than corporate and integration purposes and consist of six variables.

3.2.3.1 Regular Reporting

The first supporting purpose factor is regular reporting (Assiri et al., 2006). The BSC has become a commonly used and popular measurement system worldwide and has been implemented in various organizations and industries, so frequent and regular reporting will help to ensure successful BSC implementation. Regular reporting will

help managers to think about their businesses and how they invest their time and resources. Many organizations worldwide use the BSC for organizational performance reporting (Andersen et al., 2004; Assiri et al., 2006; Berler et al., 2005; Debnath et al., 2004).

The BSC has become a widely practiced and popular management reporting method in recent times (Sharif, 2002). The regular reporting function can play a vital role in BSC implementation, as explained by Lawson et al. (2003) and monitoring and reporting strategy execution is an important step in BSC implementation. Meanwhile, Amaratunga and Baldry (2002) believe that regular reporting via the BSC is necessary to provide the information needed to keep the organization on the right track, which will help the organization's stakeholders to keep their performance up to date according to the organization's plan. This is aligned with the outcomes of research by Curtright et al. (2000), who stated that "the BSC provides senior management with a quick yet comprehensive glimpse of organizational performance in meeting its strategic goals".

The main task for any measurement system is to control the organization's operations (Amaratunga & Baldry, 2002); therefore, the performance measurement system provides the appropriate means for regular reporting tasks. Regular reporting via the BSC enables the organization's stakeholders to focus on the BSC's four perspectives rather than only on a traditional financial driver, as was the main goal for top management previously.

It is clear from the literature review that key opinion leaders should be aware of how to communicate and report the BSC effectively among the team. Many scholars believe that BSC reporting is more convenient to top management when it is web-

based rather than, as traditionally, paper-based (Lawson et al., 2004; Marr & Neely, 2003; Silk, 1998). It is clear from the researcher's review of the private hospitals in the UAE that none of the hospitals that are using the BSC are implementing an automated BSC tool.

3.2.3.2 Measurement Assessment

The second supporting purpose factor is measurement assessment (Assiri et al., 2006). It is challenging for organizations to monitor their employees' progress without defining the goals and main performance measures. Studies have shown that careful performance measurements and assessments are the keys to an organization's success (Niven, 2002). As mentioned by Kaplan (2001), one of the BSC's benefits is that it enables the organization to review its measures frequently and identify the right combination of measures.

It is difficult for organizations worldwide to work without defining their goals and performance measures and not doing so will lead to difficulties in monitoring their employees' progress (Niven, 2002); therefore, performance measurement and assessment are essential to obtain organizational success. These outcomes were confirmed by Kaplan and Norton (2001a), who stated that the BSC can benefit the organization by enabling it to review its measures frequently and therefore identify the right combination of measures.

3.2.3.3 Problem Solving

The third supporting purpose factor is problem solving (Assiri et al., 2006). Practicing a problem-solving technique in general will help organizations to undertake suitable analysis, identify the main cause of problems and therefore take the required action to

improve their performance. The problem-solving process was described through the Danaher website (Danaher, 2019), for which the researcher works, as a process and culture that enables associates to close performance gaps. This process is represented by the DIVE acronym in four essential steps (i.e., define the problem, investigate root causes, verify and implement and ensure sustainability). Danaher frequently offer professional courses to their associates to improve organizational performance. On the other hand, as stated by Knippen and Green (1997), problem solving consists of seven steps (i.e., establish goals, identify the problems, identify the constraints, identify alternatives, evaluate alternatives, select the best solution and create an implementation).

A problem-solving team is defined by Knippen and Green (1997) as a group of individuals or stakeholders who work together to analyze a situation or point of conflict to determine the problems and look for alternative solutions to solve the organization's issue. Problem solving is a process for resolving a common problem and reaching a solution. It can include many ways to encourage individuals' critical thinking. Therefore, the healthcare sector usually focuses on solving its problems by removing all obstacles to attain patient satisfaction.

Hospital administrators can take advantage of the problem-solving techniques used by managers, as explained by Peters (1986). BSC measures can enhance problem solving and team communication processes, including providing a common understanding of the problem and searching for appropriate solutions. The BSC will help the organization's decision-makers to focus their efforts on those critical processes. Organizations should have the capability to identify problems that could affect their processes and therefore assign a special team to problem-solving tasks. Problems can

appear in any organization or industry (Tucker et al., 2002) and may appear continuously during the organizational process, which will lead to improving products and services.

The BSC team should have a mix of skills and approaches that will enable them to create a meaningful culture within the organization and in problem solving (Michalska, 2005). The BSC team should have regular meetings for plan review of current themes and for the future. The problem-solving team is a significant factor and toolkit for any organization's continuous improvement (Rooney & Hopen, 2004). As stated by Knippen and Green (1997), "the real success in problem-solving lies in how to do it. If the procedures are not followed correctly, the entire method will fail".

3.2.3.4 Rewards to Stakeholders

The fourth supporting purpose factor is reward to stakeholders (Kaplan & Norton, 1996), which is also termed reward and recognition (Assiri et al., 2006). It is a good idea to connect BSC implementation with employees' rewards (Kaplan & Norton, 1996). The BSC team has to be updated with any change in the BSC perspective; therefore, the performance measures have to be updated annually, according to the internal and external circumstances (Assiri et al., 2006).

Providing rewards for executives and managers will strengthen BSC implementation; therefore, this should be connected with the outcomes of BSC measures (Kaplan & Norton, 1996). According to Assiri et al. (2006), the BSC measures should occasionally be revisited and redefined, which will help to keep the BSC up to date; therefore, the organization's top management should link compensation and rewards to the BSC measures' results. Kaplan and Norton (1996) and Kaplan (2001) state that

the BSC measures linked to rewards will have a positive impact on employees by focusing on the organization's strategic priorities. These rewards can be divided into extrinsic and intrinsic factors, where extrinsic factors are represented in both monetary and non-monetary form and direct and indirect compensation (Kaplan et al., 2004).

Olve et al. (1999) stated that a potential problem with rewarding performance in terms of the scorecard is that "The balance among several different measures may be destroyed when these measures are combined into a single index of benefit". Another possible problem may occur when BSC measures are not perfectly linked to strategic objectives and when actions that improve the short-term measured results are inconsistent with achieving long-term objectives (Kaplan & Norton, 1996).

However, "the big question faced by all companies is how to link their formal compensation system to the scorecard measures" (Kaplan & Norton, 1996). Accordingly, managers would not receive incentive compensation if actual performance in a period falls short of the threshold on any of the designated measures (Kaplan & Norton, 1996).

3.2.3.5 Corporate Alignment

The fifth supporting purpose factor is corporate alignment (Assiri et al., 2006), which is a part of CSFs that can have a huge impact on BSC implementation. Both tangible and intangible assets should be aligned with the organization's strategy in order to create value (Albright et al., 2005; Gumbus & Wilson, 2004; Wells & Weiner, 2005). In addition, integration is necessary to support enhancement of all of the organization's intangible assets.

Alignment and integration, together, will supply the theoretical building blocks for establishing objectives for human capital, information capital and organization capital in the learning and growth perspective (Kaplan & Norton, 2004). Consequently, an important part of the BSC is organizational alignment with corporate strategy. Identifying key strategic initiatives to achieve objectives and allocating resources appropriately, provide the basis for effective execution.

The organization should have an adequate information system to help managers obtain access and therefore generate data, to explore the cause of any problem and that will have a considerable effect on BSC implementation.

3.2.3.6 Benchmarking

The sixth supporting purpose factor is benchmarking (Camp, 1989; Massheder & Finch, 1998; Moriarty & Smallman, 2009), which is also termed benchmarking and target stretching (Assiri, 2006; Assiri et al., 2006). Benchmarking is defined by McGaughey (2002) as “an ongoing process of measuring and improving products, services and practices against the best that can be identified worldwide”. Another definition of benchmarking by Camp (1989) is “the search for industry best practices that lead to superior performance”. Meanwhile, benchmarking is defined by Zairi (1992) as “the art of establishing superior performance by identifying gaps in performance and emulating the best practices which help close them”.

Benchmarking is a systematic comparison process of performance sources and indicators (Tomlinson, 1998). Benchmarking should be conducted at different levels of analysis, namely at the organizational and service levels, for different categories of performance indicators (efficiency and effectiveness).

Another definition by the American Productivity and Quality Center (APQC, 2019) is that benchmarking is “the process of identifying, understanding and adapting outstanding practices and processes from organizations anywhere in the world to help your organization improve its performance”. Benchmarking is a continuous process and can be altered over time to reflect internal changes. Many things, such as products, processes and activities, can and should be benchmarked (McGaughey, 2002) and can affect an organization’s success.

Benchmarking activities will positively force any organization to develop its performance and therefore grow its business among global competition (Cook et al., 2004). Benchmarking consists of four types (i.e., internal, competitive, generic and functional). Therefore, the researcher considered benchmarking as an important factor, since it is seen as one of the most important CSFs that contributes positively to BSC implementation.

As mentioned by Kaplan and Norton (1992), the BSC puts strategy and vision at the center. In any organization, employees must take appropriate steps to achieve the organization’s goals. Therefore, senior managers should know their goals; nevertheless, sometimes they do not know how to arrive at them, so the BSC will motivate them to strive for the highest achievement (Letza, 1996). Benchmarking positively motivates employees and enhances performance to allow the organization to continuously improve, grow and develop among the market competition (Cook et al., 2004).

3.3 Organizational Performance

This section begins with an introduction to organizational performance and continues with a brief discussion of the effect of BSC implementation on organizational performance. It further presents the importance of the organizational performance topic from academic and professional perspectives.

Organizational performance is an essential part of improving organizations' accountability and profitability through the improvement of productivity (Antony & Bhattacharyya, 2010). It is an essential variable of interest for many researchers and one of the most important constructs in management research (Richard et al., 2009).

Organizational performance is one of the main constructs in the management research field. Strategy and accounting researchers seek to measure organizational performance, while researchers in marketing and human resources seek to understand and improve performance (Richard et al., 2009). Therefore, measuring organizational performance is essential for researchers and managers to evaluate the specific actions of firms and managers (Dess & Robinson, 1984; Richard et al., 2009).

There is a difference between organizational performance and organizational effectiveness, as confirmed by Richard et al. (2009). Organizational performance encompasses three specific areas of firm outcomes: (1) financial performance (i.e., profits, return on assets, return on investment, etc.); (2) product market performance (i.e., sales, market share, etc.); and (3) shareholder return (i.e., total shareholder return, economic value added).

Organizational effectiveness is broader and captures organizational performance plus the plethora of internal performance outcomes normally associated with more efficient

or effective operations and other external measures related to considerations that are broader than those simply associated with economic valuation (either by shareholders, managers, or customers), such as CSR.

Innovation and efficiency measures are considered part of organizational effectiveness (Cameron & Whetten, 1983). On the other hand, BSC implementation helps to increase the attention paid to the aspects of organizational effectiveness in management research. The BSC, as explained earlier, is a management tool that can measure financial performance, customer outcomes, innovation and internal processes (Kaplan & Norton, 1996). The BSC should be tailored to each individual firm and it is challenging to compare the results across firms; therefore, organizational performance provides the potential to make meaningful comparisons across organizations and industries.

According to Richard et al. (2009), there are three main approaches to measuring organizational performance. The first approach comprises a single measure and its relationship to performance; in the second approach the researcher uses several different measures to compare analyses with different dependent but identical independent variables; in the third approach the researcher aggregates dependent variables, assuming convergent validity based on the correlation between measures.

There are two types of objective measures for organizational performance: (1) accounting measures; and (2) financial market measures. Accounting measures are commonly used by organizations to measure organizational performance; that is, cash flow from operations; earnings before interest and taxes; earnings before interest, taxes, depreciation and amortization (EBITDA); market share; net operating profits or earning profits; net operating profit less adjusted taxes (NOPLAT); profit margin;

return on assets (ROA); return on book-valued assets; return on capital employed (ROCE); return on equity (ROE); return on investment (ROI); return on invested capital (ROIC); return on net assets (RONA); return on sales (ROS); return on total assets; risk-adjusted return on capital (RAROC); sales growth; and variance in accounting profitability.

Financial market measures, the second type of objective measures for organizational performance, are the preferred instrument for characterizing organizational performance; that is, earnings per share (EPS), beta coefficient, Jensen's alpha, market value or market capitalization, price-to-earnings ratio, return on market-valued assets, stock price, total shareholder return (TSR) and tracking stocks. Using financial market data to evaluate performance entails limitations; therefore, the market value approach is the most appropriate to measure organizational performance.

As explained above, previous studies have focused on some common financial and non-financial items to measure organizational performance. Measuring organizational performance is essential in allowing researchers and professionals to evaluate the specific actions of the organization and for managers to know how they perform over time and, therefore, how to improve the organization in the future.

Many researchers have mentioned the importance and benefits of the BSC itself and the implementation process of organizational performance measurement; however, few researchers have outlined the empirical evidence on whether the BSC is associated with organizational performance. This represents the main contribution of the current research, which aims to fill that gap and therefore find relevant literature on the successful implementation of BSC in organizational performance.

Some evidence has been found regarding the effect of a measurement system such as the BSC on organizational performance (Braam & Nijssen, 2004; Ittner et al., 2003; Lipe & Salterio, 2000; Speckbacher et al., 2003). The first study of the BSC's contribution to organizational performance was by the main founder of the BSC tool, Kaplan (1996), in his case study of an oil company, which described the ability of the BSC to communicate strategy to all members of the organization. The CEO of the oil company transformed the strategy into 17 independent business units and 14 internal service companies. The CEO utilized the BSC as a measurement system due to its ability to link measurement to strategy; the study found that several key benefits were obtained from the BSC. In addition, Kaplan and Norton (2001) mentioned in their book *The Strategy-Focused Organization* the ability to link BSC measures to each employee and to the internal share price. This philosophy contributes to employees' performance to improve their productivity and therefore increase the organization's performance.

De Geuser et al. (2009) examined two questions: whether the BSC adds value to companies and how the BSC contributes to organizational performance. The previous literature did not separate these two points; therefore, the researchers used Foster and Swenson (1997) methodology to separate and quantify the BSC's contribution to organizational performance by applying the cause-and-effect scheme to the BSC. De Geuser et al. (2009) sent their questionnaire to 164 persons working for European companies that had recently implemented the BSC. The researchers received 76 questionnaires from 24 different organizations out of the 164 surveyed. The aim of De Geuser et al. (2009) research was to measure organizational performance by using the cause-and-effect scheme of the BSC. By following Foster and Swenson (1997), the researchers used multi-item proxies resulting in four organizational performance measures (i.e., the management's evaluation of the success of the BSC, the cost benefit

from the development of the BSC, the integration of key management processes through the BSC and the greater autonomy of the business unit due to the development of the BSC). The fifth source of organizational performance is called the OP_aggregate (an equally weighted aggregate of the abovementioned measures representing the global success of the implementation of the BSC). De Geuser et al. (2009) research outcomes indicated that the BSC is a relevant tool for corporate management and for the highest management levels of a business unit.

The BSC is a strategic management system that is used by many organizations worldwide to assess organizational performance. Braam and Nijssen (2004) sent a questionnaire to 100 Dutch business-to-business organizations, obtaining 41 responses and therefore giving a response rate of 41%. The authors found that the BSC will not improve an organization's performance automatically and improvement depends on the manner in which the BSC is used. They developed a model to test how the BSC's use can affect organizational performance. The model includes the relationships between strategy, environment and organizational performance. They concluded that use of the BSC aligned to the organization's strategy will positively influence performance (Braam & Nijssen, 2004).

In other research, Davis and Albright (2004) investigated the effectiveness of the BSC in improving financial performance and therefore organizational performance. The researchers used a quasi-experimental method consistent with Yin (1994) and Cook and Campbell (1979) methodology to measure the effectiveness of the BSC by comparing the performance of BSC implementers to the performance of BSC non-implementers. According to the research outcomes, the researchers provided evidence to support the proposition that the BSC can be used for improving the financial

performance of the organization and, therefore, improving organizational performance. Their study is considered a good contribution to antecedent literature on the ability of the BSC to improve financial performance.

Maiga and Jacobs (2003) attempted to measure the effect of the interaction of the BSC and ABC on organizational performance in a number of industrial firms. The questionnaire was sent out to 347 people and the final number of responses received was 83. The researchers measured organizational performance from three main dimensions (i.e., product quality, customer satisfaction and margin on sales). The results of this research showed that there is no significant positive interaction between the BSC internal process and ABC to affect margin on sales; meanwhile, they provided empirical evidence that the BSC is a management accounting system that impacts performance.

From the above discussion, many studies on the BSC have documented systematic connections between BSC implementation and organizational performance. Therefore, it can be concluded that the BSC is an effective tool to improve organizational performance. In earlier discussions of organizational performance, previous studies have used different financial and non-financial items to measure organizational performance. This is an essential part of the researcher's point of view that highlights the importance of organizational performance measurement through four items: TQM, innovation, competitiveness and CSR. The next section will review studies that have used these four items as a measurement of organizational performance.

3.3.1 Total Quality Management

This section will shed light on the TQM construct and explore the scales that represent the manifestations of this variable. Constructs are latent variables that cannot be measured directly (Ahire et al., 1996), such as top management commitment to quality; therefore, adequate resources must be allocated to quality improvement efforts.

TQM is a common variable for organizational performance measurement that not only helps healthcare organizations to improve their competitiveness, but also positively impacts organizational success (Ahire et al., 1996; Samson & Terziovski, 1999), effectiveness and flexibility through planning, organizing and understanding each activity and involving each person at every level (Hoang et al., 2010; Oakland, 2011).

TQM is commonly used worldwide for organizations that are looking to be recognized for high-quality products. It encompasses organizations' efforts to focus on customer satisfaction through continuously improving the performance of goods, services and employees (Bayraktar et al., 2008) with zero defects and at low cost compared to competitors in the market (Rolstadås, 1998).

It is well known that a mindset change is required to solve existing barriers (Oakland, 2011). From practical experience, quality is a precursor of successful organizational performance, such that executives must accept any responsibility for a commitment to quality that meets the organization's customer needs.

Quality is a crucial part of success in competitive markets and has become an important part of distinguishing the organization from its competitors. Improving healthcare quality is highly important for governments, healthcare providers, managers and directors, professionals and patients. It is well known that patients usually expect more

quality of service from healthcare providers and compare their experiences with the countries with higher quality; therefore, there are increasing pressures to improve quality in the healthcare industry.

Each organization should develop its own policy on quality, together with an arrangement for its implementation (Hoang et al., 2010). The policy for quality should be well known to all employees and organizations should keep their employees focused on the concept of customer satisfaction (Rolstadås, 1998).

Various studies have concluded that Japanese organizations were the first to implement TQM (Ebrahimpour, 1985; Garvin, 1984; Oakland, 2011) and that Japanese firms focus on quality as a competitive factor (Rolstadås, 1998). The quality concept then moved to different manufacturers and organizations in the USA, Germany, Europe and Australia to produce better-quality products at lower cost (Ahire et al., 1996) through applying the concept of TQM (Samson & Terziovski, 1999).

There is huge demand from US organizations to improve the quality of their products to align with Japanese product quality standards. Japanese firms prioritize important elements, such as top management commitment and product quality planning (Ahire et al., 1996; Bhote, 1989; Bognossian, 1988; Cole, 1981); therefore, many researchers have recommended quality-improvement initiatives such as product quality planning, customer focus and shop floor quality control (Ahire et al., 1996).

TQM scale elements are outlined in Table 3.1. Ahire et al. (1996) identified 12 constructs of integrated TQM strategies using a survey of 371 manufacturing firms. These constructs are top management commitment, customer focus, supplier quality management, design quality management, benchmarking, statistical process control

(SPC) usage, internal quality information usage, employee empowerment, employee involvement, employee training, product quality and supplier performance.

Saraph et al. (1989) derived eight factors for TQM without including the items relating to customer satisfaction (Rolstadås, 1998) and customer relationship management. Therefore, the proposed eight factors are top management, quality data and reporting, training, employee relations, process management, product and service design, supplier quality management and role of the quality department. Kanji (1998) proposed a structural model for business excellence measurement that is derived from 10 factors: leadership, delight the customer, customer focus, management by fact, process performance, people-based management, people performance, continuous improvement, improvement culture and business excellence.

On the other hand, Tang and Zairi (1998a) identified five factors for TQM: leadership, strategy and policy, resource management, people management and process management. A similar list of factors for TQM was outlined by Samson and Terziovski (1999), who validated six factors of TQM i.e., leadership, people management, customer focus, strategic planning, process management and information and analysis that determined the relationship to organizational performance and outcomes.

Many organizations in Europe, the USA, Japan and Australia have tried to improve the TQM scales (Samson & Terziovski, 1999; Tang & Zairi, 1998b) and many organizations worldwide have restored their market share and profitability based on TQM implementation. Examples are Xerox, IBM, Texas Instruments, Harley-Davidson and Ford (Witcher & Butterworth, 1999). These companies have all received the Malcolm Baldrige Quality Award, which was established by the US Department

of Commerce to give recognition to organizations showing a high level of quality in production as well as in process (Kanji, Malek, et al., 1999).

The original momentum for quality came from Japan. Japanese companies usually focus on an improvement strategy; therefore, Western companies have intensively pursued their ideas and practices (Samson & Terziovski, 1999). The quality concept is important for both healthcare and non-healthcare organizations.

As stated by Black and Porter (1996), TQM models such as the Malcolm Baldrige Quality Award have not been validated by empirical means. Therefore, Black and Porter conducted a factor analysis on a questionnaire sent to 200 quality managers. The authors identified 10 critical factors for TQM (i.e., corporate quality culture, strategic quality management, quality improvement measurement systems, people and customer management, operational quality planning, external interface management, supplier partnerships, teamwork structures, customer satisfaction orientation and communication of improvement information), which provided new insights into TQM variables.

TQM and quality-improvement programs are usually initiated by senior management (Tang & Zairi, 1998b). Leadership in general is confirmed as a primary construct in many academic studies (Kanji, Malek, et al., 1999; Kanji, Tambi, et al., 1999; Owlia & Aspinwall, 1997; Samson & Terziovski, 1999; Tang & Zairi, 1998b). Other authors, such as Bayraktar et al. (2008), Lomas (2004) and Sirvanci (2004), have also emphasized the importance of appropriate leadership for the success of TQM implementation. Top management should be aware of employees' involvement and motivation and must empower them to support TQM practices through actions (Table 3.1).

Table 3.1: Summary of articles published on TQM as a measurement of organizational performance

Saraph et al. (1989) 8 constructs	Black and Porter (1996) 10 constructs	(Ahire et al., 1996) 12 constructs	(Kanji, 1998) 10 constructs	Tang and Zairi (1998b) 5 constructs	Samson and Terziovski (1999) 6 constructs
Top management leadership	Corporate quality culture	Top management commitment	Leadership	Leadership	Leadership
Quality data and reporting	Strategic quality management	Customer focus	Delight the customer	Strategy and policy	People management
Training	Quality improvement measurement systems	Supplier quality management	Customer focus	Resource management	Customer focus
Employee relations	People and customer management	Design quality	Management by fact	People management	Strategic planning
Process management	Operational quality planning	Benchmarking	Process performance	Process management	Process management
Product/service design	External interface management	SPC usage	People-based management		Information and analysis
Supplier quality management	Supplier partnerships	Internal quality information usage	People performance		
Role of the quality department	Teamwork structures	Employee empowerment	Continuous improvement		
	Customer satisfaction orientation	Employee involvement	Improvement culture		
	Communication of improvement information	Employee training	Business excellence		
		Product quality			
		Supplier performance			

3.3.2 Innovation

There is interest in academia in the concept of creativity and innovation (Aiman-Smith et al., 2005; Atuahene-Gima, 1996; Brettel & Cleven, 2011; Dobni, 2008). Innovation is generally accepted to be one of the main drivers for organizational performance measurement; therefore, innovation is one of the four variables in this research used as organizational performance criteria. Innovation takes many forms, including technological, organizational, social and artistic (Pol & Ville, 2009).

The definitions of innovation found in the literature depend on the context and scope of the analysis (Dobni, 2008). Innovation has been defined as cultural readiness and appreciation for innovation (Hult et al., 2004), or as the implementation or adoption of useful ideas by the organization's employees (Amabile et al., 1996; Antony & Bhattacharyya, 2010; Kaplan & Norton, 1992) and depends on creativity. Another definition of innovation proposed by Rolstadås (1998) is as a key factor in sustaining and improving organizational performance. Innovativeness refers to the overall innovative performance of an organization in a specific time frame, usually with regard to the output of goods and services (Skovvang, 2006).

As defined by Malinoski and Perry (2011), "innovation is the process of new ideas formation, evaluation, selection, development and implementation of new products and services, therefore, the intended results are to increase the number of new ideas, improved quality of ideas, efficient implementation of quality ideas and improve the outcomes achieved from the implementation of new ideas".

Carter and Jennings (2002) defined innovation as a technology basis for using a method or a system, driven by the emergence of new markets or new service opportunities, whereas Narver and Slater (1990) pointed out the connection between

successful innovation and market-oriented behavior. New product innovation is correlated with market behaviors, as confirmed by Atuahene-Gima (1996). Rolstadås (1998) proposed a model consisting of seven performance criteria to measure organizational performance (i.e., effectiveness, efficiency, quality, productivity, quality of work life, innovation and profitability).

A wide range of innovation frameworks have been developed in line with the organization's strategic objectives. However, they all tend to emphasize certain key determinants. Innovation has been examined by different researchers from different perspectives, ranging from a product perspective to a market and technology organization perspective (Ko & Lu, 2010). Innovation plays a critical role in organizational performance; thus, organizations need to focus on identifying and developing their own competencies. Table 3.2 compares conceptual frameworks that have applied the determinants of innovation.

Schumpeter and Redvers (1934) suggested five types of innovation (i.e., introducing a new good, opening a new market, acquiring a new source of supply, introducing a new method of production and the organization of an industry). On the other hand, Leonard-Barton (1992) identified four dimensions of innovation competencies (i.e., technical systems applied, skills and knowledge embodied in people, managerial systems and values and norms). Tidd (2000) presented innovation in three dimensions: technological competencies, organizational competencies and market competencies as a new addition to measure innovation.

On the other hand, three innovation dimensions have been used by Souitaris (2002), who separated the human resource competencies from the organizational category to create a fourth dimension. Therefore, Souitaris presented four dimensions of

innovations for examining the linkage between technology, human resources, organization's market and a firm's innovation activities.

Table 3.2: Summary of articles published on innovation as a measurement of organizational performance

Author(s)	Determinants or dimensions
Schumpeter (1934)	<ul style="list-style-type: none"> ●□ Introduction of a new good ●□ Opening a new market ●□ Acquiring a new source of supply ●□ Introducing a new method of production ●□ The organization of an industry
Leonard-Barton (1992)	<ul style="list-style-type: none"> ●□ Technical system applied ●□ Skills and knowledge embodied in people ●□ Managerial systems ●□ Values and norms
Tidd (2000)	<ul style="list-style-type: none"> ●□ Technological competencies ●□ Organizational competencies ●□ Market competencies
Souitaris (2002)	<ul style="list-style-type: none"> ●□ Technological competencies ●□ Human resource competencies ●□ Organizational competencies ●□ Market competencies
Ritter (2006)	<ul style="list-style-type: none"> ●□ Product competencies ●□ Process competencies ●□ Market competencies ●□ Communicating competencies
Dobni (2008)	<ul style="list-style-type: none"> ●□ Innovation propensity ●□ Organizational constituency ●□ Organizational learning ●□ Market orientation ●□ Innovation propensity ●□ Value orientation ●□ Employee creativity and empowerment
Ko and Lu (2010)	<ul style="list-style-type: none"> ●□ Product-related competencies ●□ Market-related competencies ●□ Technology-related competencies ●□ Organization-related competencies ●□ Industry-related competencies
Šebestová and Rylková (2011)	<ul style="list-style-type: none"> ●□ Realized innovation ●□ Success of innovation ●□ Time of innovation ●□ Acquired patents ●□ Economic indicators

Ritter (2006) proposed innovation competencies on four different scales: product competencies, process competencies, market competencies and communicating competencies. Dobni (2008) identified innovation on seven scales for innovation measurement: innovation propensity, organizational constituency, organizational learning, market orientation, innovation propensity, value orientation and employee creativity and empowerment.

On the other hand, Ko and Lu (2010) identified innovation in five dimensions related to industries, products, markets, technologies and organizations. They proposed 17 dimensions for innovation measurement and showed that industry competencies are the most important dimension, followed by those that are product related, technology related and organization related.

Šebestová and Rylková (2011) stated that five categories are connected with innovation measurement: (1) innovation realized through the number of innovations implemented during a period; (2) success of innovation realized through the number of successful projects compared to the total number of initiated innovative projects; (3) time of innovation realized by the average time for implementation of innovative projects; (4) acquired patents realized through the number of patents acquired during a certain period; and (5) economic indicators realized by return on innovation.

According to a study by Pavitt (1991), organizations can gain innovative advantage through building up competencies that are costly and difficult for competitors to imitate. Pavitt proposed that the following four key characteristics represent large innovative firms: (1) large firms are a major source of technology and innovation that usually develop their products and production process over time, so that tactical knowledge obtained from past experience is essential; (2) large innovative firms show

“resilience and longevity” in spite of successive waves of radical innovations and firms that produce chemicals and electronics, for example, are closely related to products and markets, so that medical organizations such as hospitals are closely related to markets and end-users’ or patients’ demands; (3) in large organizations, innovative tasks and processes involve continuous and intensive collaboration among the organization’s divisions; and (4) innovation activities remain highly uncertain in relation to their commercial outcomes.

The economic situation of developed countries nowadays has shifted from production to service dominated (Ko & Lu, 2010); therefore, healthcare organizations are good examples of service orientation in different countries globally. The healthcare sector in the Middle East region has been dominated by rapid changes within the last 40 years. Hospitals are equipped with the latest technology and keep changing by implementing new ideas and innovative processes to improve the healthcare service to their patients.

Healthcare providers are increasingly relying on innovation to seek creative approaches to improve patients’ outcomes (Duarte et al., 2014). Measuring the innovation competencies in the healthcare sector is important as this may have important theoretical and practical implications; however, few researchers have examined organizational performance measurement in the healthcare sector in the Middle East region.

According to Djellal and Gallouj (2007), hospitals are usually seen in terms of their functions, technical capabilities and information system. The innovation in hospitals is relatively extensive and varied and, therefore, knowledge and innovation in the area of healthcare are complicated elements of human history.

Innovation classification is an important topic; therefore, in this study the researcher considered items for measuring innovation as an important variable for organizational performance measurement. Robbins (1998) mentioned that organizations' innovations can be applied to the improvement of products, services and processes. Likewise, Oldham and Cummings (1996) stated that the successful execution of products, processes and services can be considered to constitute organizational innovation.

3.3.3 Competitiveness

The concept of competitiveness has long been debated by economists and widely considered in research (Stefan et al., 2016) and even sometimes overused. Competitiveness is a vital construct that has been analyzed in terms of competitive advantage achieved by organizations. Competitive advantage occurs when any organization or hospital shows better performance than others in the market (Rakhimbekova, 2014). Competitiveness has been measured based on a number of scales, including cost competitiveness, price competitiveness and non-price competitiveness to measure the organization's competitiveness (Arto, 1987), as well as the quality of products provided to customers.

Several definitions of competitiveness have been collected from the various literature. The concept of competitiveness is often misunderstood and is interchangeably with performance, competitive advantage, competition, or equilibrium. Hospital competitiveness was defined by Eiriz et al. (2010) as the hospital's capacity to develop superior performance that leads to a position of competitive advantage and can be analyzed in three dimensions: organization, strategic behavior and performance. The competitiveness of healthcare organizations was defined by Rakhimbekova (2014) as

an advantage over other organizations formed from internal and external factors, creating new means of market penetration.

Another definition was presented by Buckley et al. (1988), who stated that “a firm is competitive if it can produce products and services of superior quality and lower costs than its domestic and international competitors”. Competitiveness is identified in terms of three levels: firm level, industry level and country level.

According to Buckley et al. (1988), competitiveness reveals a wide variety of notions and entails extreme difficulties regarding measurement and application. Single measures of competitiveness do not capture all elements of the term. Four elements nation, industry, firm and products should be involved in the measurements to encompass competitive performance and attempt to measure competitiveness must specify the level of measurement performance taking place. The authors clarified the distinction between competitiveness and performance, where the latter refers to the measurement of competitiveness including not only an organization’s competitive performance measured by quantitative indicators, but also its potential measured by quantitative indicators, as well as its management processes by measuring qualitative indicators.

Competitiveness is a challenging variable for measuring organizational performance in the healthcare sector worldwide, in that each hospital has to take the required action to implement necessary changes based on shareholder demand, customer values and financial strength to meet market competition (Feurer & Chaharbaghi, 1994). Competitiveness in the healthcare sector should be analyzed based on the concept itself and should consider other important scales, including economic and social life. Other literature has stated that competitiveness can be determined by a number of scales:

quality of health services, performance improvement, medical technologies, human resources management, substantiation methods of medical decisions, prevention strategies and increased quality of life.

Competitiveness for healthcare organizations is one of the key factors for measuring the healthcare system's effectiveness (Rakhimbekova, 2014). Therefore, the evaluation of competitiveness for healthcare organizations should be based on an integrated indicator of competitiveness, determined by the components of organizational resources and infrastructure, human resources, innovations, financial, economic and marketing. Competitiveness is related to the organization's profit performance and its ability to compensate its employees and therefore provide superior returns to the organization.

Competitiveness is the ability to generate and maintain competitive advantage for any product or service (Choi, 2019). An organization has a competitive advantage when it has a superior market position among competitors in the market. The term "competitive advantage" means that an organization's relative superiority in resources and skills also confers superiority in implementing actions. These skills and resources together represent the ability of a business to do more or do better than its competitors (Day & Wensley, 1988).

Many international companies focus on competitive issues such as globalization, customer orientation, process orientation and high productivity to improve their competitiveness (Rolstadås, 1998). The Sink and Tuttle model for competitiveness (Sink & Tuttle, 1989) consists of seven performance criteria (i.e., effectiveness, efficiency, quality, productivity, quality of work life, innovation and profitability).

Profitability is part of several competitiveness scales and is rarely referred to in the literature as a proxy for competitiveness (Buckley et al., 1988). This is due to the difficulty of measuring profitability across industries, as well as countries. However, profitability is commonly known as the single most important measure of competitive success.

It is obvious that profitability is essential for survival and is an important element in any assessment of competitiveness. Profitability can be achieved by increasing customer satisfaction and therefore achieving customer loyalty, which is associated with the customer perspective as part of the four perspectives of the BSC (Kaplan & Norton, 1992; Kaplan, 1996; Robert, 1994). Companies should specify improvements for their products' quality, cycle time, lead time, delivery and new-product introduction. This approach will lead to higher market share, operating margins and asset turnover, or to reduced operating expenses.

Financial performance usually measures whether the organization's strategy is executed and implemented in such a way as to obtain a good level of profitability, which can be measured by quarterly sales growth and ROI. Kaplan and Norton (1992) mentioned that executives tend to understand and use traditional financial measurements such as ROI. So that, ROI is still used as a precursor for profitability in many organizations worldwide, even though it can be considered misleading for organizational continuous improvement.

According to Antony and Bhattacharyya (2010) and Inamdar et al. (2002), profitability is the main goal for any organization, including those in the healthcare sector, in terms of generating more cash flow as part of financial results and therefore to make profits (Panayides, 2006; Rolstadås, 1998).

Focusing on financial metrics will not lead to good organizational performance, so executives and managers should utilize other metrics to improve operational performance for their organization. An excellent BSC will not guarantee a winning strategy. The BSC can only translate a company's strategy into specific measurable objectives; therefore, executives should rethink the organization's strategy and its implementation plan.

3.3.4 Corporate Social Responsibilities

CSR is an important variable for organizational performance measurement; thus, in this section the researcher will highlight the history of CSR, from the 1950s to the present day. CSR has been the subject of a long historical debate that has evolved with the development of business activities that have been meeting the emerging needs of society. It has been practiced globally in many Western countries (Rahman, 2011) and there have been many calls for CSR from outside organizations (Kuhn, 1991).

Rahman (2011) outlined 10 dimensions of CSR (i.e., obligation to society, stakeholders' involvement, improving the quality of life, economic development, ethical business practice, law abiding, voluntariness, human rights, protection of environment and transparency and accountability). Drucker (2012) mentioned that the first social responsibility for any organization is to do its job, which should be aligned with the organizational clinical function.

The history of CSR started in 1950, the beginning of the modern era of CSR, with obligation to society. Many definitions of CSR have been raised and developed in the past based on social, economic, political and environmental contexts (Rahman, 2011). Howard (1953, p. 6) was an early contributor to CSR. He raised the question: "What

responsibilities to society may businessmen reasonably be expected to assume?” He provided an initial definition of the social responsibilities of business by saying that they refer: “to the obligations of businessmen to pursue those policies, to make those decisions, or to follow those lines of action which are desirable in terms of the objectives and values of our society”.

Heald (1957) defined CSR as “it is a recognition on the part of management of an obligation to the society it serves not only for maximum economic performance but for humane and constructive social policies as well”. As stated by Howard (1953) and Heald (1957), during the 1950s, directors, as well as managers of organizations started feeling an obligation to society. Therefore, studies began to discuss the obligation to achieve desired objectives, values and policies for society.

Ten years later, in the 1960s, the relationship between corporations and society was presented (Davis, 1960; Eells & Walton, 1969; Frederick, 1960; Rahman, 2011). Davis (1960) defined CSR as “businessmen’s decisions and actions taken for reasons at least partially beyond the firm’s direct economic or technical interest”. On the other hand, another researcher in 1960 (Frederick, 1960), whose paper has been cited by around 1,000 researchers, defined social responsibilities as follows: “businessmen should oversee the operation of an economic system that fulfills the expectations of the public which mean in turn that the production should be employed in a way that production and distribution should enhance the total socio-economic welfare”.

Another definition of CSR was raised by Eells and Walton (1969, p. 18), who presented a number of different models of social responsibility. They defined CSR as “the new concept of social responsibility that recognizes the intimacy of the relationships between the corporation and society and realizes that such relationships

must be kept in mind by top managers as the corporation and the related groups pursue their respective goals”.

Ten years later, in the 1970s, according to Rahman (2011), many CSR scholars (Carroll, 1979, 1999; Cochran, 1971; Eilbert, 1973; Friedman, 1970; Johnson, 1971; Sethi, 1975) started describing the social responsibility of business and expressed the relationship between organizations and their communities. Different definitions of CSR were raised and it is notable that key opinion leaders were engaged at that time with corporate philanthropy and community relations.

Cochran (1971) stated that “the corporate creation of private foundations became an important issue after the year 1945 that each organization should stabilize by absorbing extra profit in good years and spend the money in less prosperous times when corporate income might be lacking”. Friedman (1970) expressed CSR from a different angle in the New York Times Magazine, saying that “there is one and only one social responsibility of business, to use its resources and engage in activities designed to increase its profits so long as it stays within the rules of the game, which is to say, engages in open and free competition without deception or fraud”.

Another definition of CSR was presented by Johnson (1971). He offered four views of CSR: (1) organizations’ managerial staff make balances of interests, so they should consider employees, suppliers, local communities and the nation instead of paying larger profits to stockholders; (2) social responsibility states that businesses carry out social programs to add profits to their organization; (3) employees, directors and managers should not focus on their own well-being, they should consider the interests of other members of the organization; and (4) the goals for any organization are ranked according to priorities, in which past experience as well as past performance for

handling those goals is essential to continue with a higher performance in similar circumstances.

Eilbert (1973) defined CSR in a different way that refers to its implementation and practice, where the best way to understand social responsibility is to think about the good of neighborliness. Eilbert defined CSR as: “The social responsibility of business encompasses the economic, legal, ethical and discretionary expectations that society has of organizations at a given point in time”.

According to Rahman (2011), during the 1980s the need for voluntariness, economic profitability and being law abiding, ethical, economic, legal and humanitarian was raised by many scholars (Carroll, 1983; Epstein, 1987; Freeman, 1984; Jones, 1980; Strand, 1983; Tuzzolino & Armandi, 1981). The definitions of CSR during this period also contributed to identifying the relation between CSR and profitability (Cochran & Wood, 1984). CSR activities will increase the organization’s reputation, which in turn increases consumers’ confidence in its products and services, which will increase its profitability.

Jones (1980) defined CSR, as summarized by Rahman (2011), according to the notion that corporations have an obligation to constituent groups in society other than stockholders and beyond that prescribed by law and union contracts. Two facets of this definition are critical. First, the obligation must be voluntarily adopted; behavior influenced by the coercive forces of law or union contract is not voluntary. Second, the obligation is broad, extending beyond the traditional duty to shareholders to other societal groups such as customers, employees, suppliers and neighboring communities.

Tuzzolino and Armandi (1981) strove to develop a better mechanism for CSR assessment by proposing a need-hierarchy framework after the hierarchy theory of Maslow (1954). Maslow's hierarchy or pyramid of needs is a motivational theory that consists of a five-tier model of human needs; that is, basic needs (physiological and safety), psychological needs (belonging, love and esteem needs) and self-fulfillment needs (self-actualization for achieving everyone's full potential, including creative activities). Strand (1983) presented a system paradigm of organizational adaptations to the social environment that showed how social responsibility, social responsiveness and social responses are connected to an organization–environment model.

Another definition proposed by Carroll (1983) suggests that CSR should involve the conduct of business, such as being profitable, law abiding, ethical and socially supportive. Therefore, CSR should be composed of four parts (i.e., economic, legal, ethical and voluntary or philanthropic). On the other hand, Freeman (1984) proposed stakeholder theory, arguing that organizations should create value for all stakeholders, not just shareholders. He suggested a new dimension of CSR that should include external stakeholders (customers, suppliers, society, government, creditors and shareholders) and internal stakeholders (owners, managers and employees) that need active participation for CSR's successful implementation. Another way to understand CSR scales was raised by Epstein (1987), who maintained that CSR should relate to three scales (i.e., social responsibility, responsiveness and business ethics). He defined CSR as relating “primarily to achieving outcomes from organizational decisions concerning specific issues or problems which have beneficial rather than adverse effects on pertinent corporate stakeholders”.

Ten years later, in the 1990s, many scholars proposed new definitions of CSR and emphasized treating internal and external stakeholders ethically or responsibly. As explained by Rahman (2011), this was a distinctive period for stakeholders' involvement, obligation to society, environmental stewardship, people and planet, as well as profit.

Hopkins (2008) emphasized that CSR should treat internal and external stakeholders ethically or responsibly. Therefore, he defined CSR as follows: "corporate social responsibility is concerned with treating the stakeholders of the firm ethically or in a socially responsible manner and this in turn will increase the human development of stakeholders both within and outside the corporation". Meanwhile, Woodward (1999) defined CSR as a contract between business and society, wherein a community grants a company a license to operate and in return the firm meets certain obligations and behaves in an acceptable manner.

Therefore, stakeholders' involvement is a major component of CSR, as is employees' support, which is an integral part of CSR implementation, promoting stakeholders' roles and supporting employees and the community. Stakeholder theory for any organization suggests that profits to shareholders should be maximized. Khoury et al. (1999) defined CSR as follows: "Corporate social responsibility is the overall relationship of the corporation with all of its stakeholders, this should include customers, employees, communities, owners, investors, government, suppliers and competitors".

Elkington and Rowlands (1999) introduced the concept of the triple bottom line, which focuses on three issues (i.e., social responsibility, environmental responsibility and economic responsibility). Carroll and Buchholtz (2000) defined CSR by the idea of

social responsibility, which requires individual contributions to society in terms of the social system.

A new dimension of CSR was introduced in the twenty-first century, which has been an era of emerging CSR industry, by means of the integration of social and environmental concerns, voluntariness, ethical behavior, economic development, improving the quality of life of citizens, human rights, labor rights and protection of the environment. Dahlsrud (2008) classified CSR into five main dimensions: environmental, social, economic, stakeholder and voluntariness.

Hopkins (2004) defined CSR as being concerned with treating stakeholders of the firm ethically, or in a responsible manner. This means treating stakeholders in a manner deemed acceptable in civilized societies. The social element includes economic responsibility. Stakeholders exist both within and outside the firm. The natural environment is also a stakeholder. The wider aim of social responsibility is to create increasingly higher standards of living, while preserving the profitability of the corporation, for peoples both within and outside the corporation. There are three types of CSR (i.e., ethical, altruistic and strategic), as mentioned by Lantos (2001), who stated that “strategic CSR is exhibited when an organization undertakes certain, caring corporate community service activities that accomplish strategic business goals”.

Three views of CSR were summarized by De Bakker et al. (2005): (1) development occurs from conceptual vagueness; (2) hardly any progress is to be expected because of the inherently normative character of the literature; and (3) progress in the literature on the social responsibilities of business is obscured or even hampered by the continuing introduction of new constructs.

Nowadays, large organizations worldwide are taking on more responsibility for tackling CSR activities. Therefore, many are hiring CSR managers and consultants. In addition, universities are holding CSR conferences and researchers are contributing new literature in the CSR field with great momentum (McBarnet, 2009; Rahman, 2011).

Healthcare organizations should engage in social and environmental activities and therefore implement suitable initiatives to promote CSR in the market. Brandão et al. (2013) differentiated between passive and active social responsibilities. In passive social responsibility, each hospital should reach its social goals according to national and international legal standards, whereas active social responsibility goes beyond the passive model, as illustrated in Table 3.3.

Table 3.3: Types of hospital social responsibilities

Passive Social Responsibility	Active Social Responsibility
Job security, non-discriminatory policies, protecting privacy rights	Creating wealth and employment, implementing ethical codes of conduct
Protecting the investment of all shareholders and the interests of all stakeholders	Public accountability of management decisions and performance indicators
Respecting human rights	Protecting animal interests in research and tests
Refraining from environmental damage	Contributing to environmental protection
Obedying the general law	Supporting the policies, social well-being and solidarity programs of non-governmental organizations

Source: Macuda (2016)

On the other hand, Keyvanara and Sajadi (2015) presented five different dimensions concerning CSR in hospitals, as follows:

- (1) Leadership and inner processes, which include the areas of mission and vision, policies and procedures, ethical codes and regulations.

- (2) Marketing, which refers to suppliers and contractors, supply chain, consumer rights, responsibilities and liability management services, including responsible purchasing.
- (3) The workplace environment, which contains staff safety and health issues.
- (4) The environment, which includes issues of sustainable development, pollution, waste management, energy saving and green purchasing management.
- (5) The community, which includes the local community, the academic community in partnership with social institutions, partnerships with non-governmental organizations (NGOs) and volunteer participation supporting employee and charitable activities.

According to Tehemar (2012), CSR utilization in healthcare may refer to a higher efficiency in operations; therefore, improved hospital waste management is a good outcome not only in terms of reducing the amount of waste, but also in ensuring its safe disposal. At the current stage of CSR, healthcare organizations are required to pay increasing attention to their reputation, as well as customer loyalty. A damaged reputation might take years to rebuild; thus, healthcare organizations need to realize that implementing CSR practices will be beneficial to them compared to others who do not apply the CSR concept.

There is a direct link between employees and the social performance of healthcare organizations. Employees who continually witness violations of ethical norms in hospitals will not wish to be involved with those organizations. When competitors in the healthcare sector adopt less costly but less socially responsible solutions, hospitals

can take advantage of this challenge and explore new, innovative and green solutions (Macuda, 2016).

Healthcare organizations should help their employees to work well according to ethical rules and ensure a direct link between organizational behavior and the health provider's identity (Austin, 2012). Healthcare organizations should promote an environment in which to inspire their employees to cooperate with policy makers, management, physicians and primary care to implement the CSR concept (Duerden, 2009). The organizations' executives are responsible for improving accessibility and quality (Vallance, 1996), as well as for facilitating their employees' tasks. The social responsibility scale is an essential and strategic part of a successful organization; therefore, the social aspect is part of suitability theory that can help any organization sustain its performance and therefore its profitability.

According to Journeault (2016), the strategic objectives of economic performance can be measured by two points increase donations to the local community and improve employee health and safety and several performance indicators can be used to measure the social consequences of organizational performance by measuring the number of donations to the local community and the number of lost days due to injuries. Therefore, the researcher intends to use the strategic objectives and performance indicators employed by Journeault (2016) to measure the positive influence of the social perspective on organizational performance for the healthcare sector in the UAE. In healthcare organizations, stakeholders have relationships with and various impacts on CSR; stakeholders include patients, physicians, administrative personnel, nurses, suppliers and policy makers. The specific impact of these stakeholders on healthcare organizations varies from those in other industries. Rahman (2011) summarized CSR

according to 10 dimensions (i.e., obligation to society, stakeholders' involvement, improving the quality of life, economic development, ethical business practice, law abiding, voluntariness, human rights, protection of the environment and transparency and accountability).

3.4 Conclusion

The objective of this chapter was to present a broad summary of the literature related to CSFs, the BSC and organizational performance. The chapter showed that previous studies have investigated the relationship between CSFs, the BSC and organizational performance. Many studies have been conducted to find suitable variables from a wide pool for measuring organizational performance. The major limitation of current measurements of organizational performance appears to lie in the use of common financial and non-financial elements without developing new ones that better fit the type of business or sector under study.

The outcomes of this chapter have raised some important gaps in the existing literature related to BSC implementation in the Middle East, particularly in the UAE. The current study is motivated by these gaps in the academic and professional literatures. First, the majority of studies that have been undertaken on BSC implementation are from Western countries, such as the USA, UK, Europe and other developed countries. These studies have produced promising outcomes resulting from BSC implementation, which may not be the case in other countries that have different social, cultural, economic and environmental influences. Second, to the best of the researcher's knowledge no study to date has examined BSC implementation using a customized measurement of organizational performance that fits the nature of the industry (i.e., healthcare) considered in this study. It can be said that early efforts in any area lack

many elements of robust research. As research efforts become more refined over time, the power of tests applied also improves by developing better and tighter variable measurements. Finally, no work to date has been conducted on BSC implementation in the context of the healthcare sector in the UAE. Only a few studies have been conducted in Saudi Arabia to examine BSC implementation in the healthcare sector. In addition, there is a lack of information in the literature with respect to BSC application in the healthcare sector (Inamdar et al., 2002).

These gaps must be bridged in order to broaden the perspective on the effect of BSC implementation on organizational performance in the healthcare sector. This study aims to fill these gaps by addressing several research hypotheses and generating relevant results, which will be presented in Chapter 5 along with exploration of the effect of CSFs on implementation of the BSC and organizational performance. The study aims to produce interesting results to fill the gaps in both the academic literature and professional literature, in order to provide significant practical implications for relevant stakeholders. The next chapter will explain the research's conceptual structure and how the researcher built his conceptual framework, as well as the hypothesis development.

Chapter 4: Conceptual Framework and Hypothesis Development

4.1 Introduction

In the previous chapter, the literature review, the researcher presented the relevant CSFs that may positively affect implementation of the BSC. In addition, Chapter 3 reviewed several studies related to the relationship between BSC implementation and organizational performance. It revealed that there is a clear gap in the existing literature on the relationship between CSFs, the BSC and organizational performance in the context of the healthcare sector.

The purpose of this chapter is to explain the research's conceptual framework and how the researcher built his model, as well as the development of the research hypotheses. The objective of this research is to empirically investigate the CSFs that contribute to successful implementation of the BSC, as well as to examine the effect of using the BSC on organizational performance in the healthcare sector in the UAE.

The remainder of this chapter is structured in four sections. Section 4.2 presents the conceptual framework of the research by outlining the independent variables, dependent variables and control variables, followed by Section 4.3 that explains the hypothesis development of the research. Section 4.4 provides the chapter's conclusion.

4.2 Conceptual Framework of the Research

The main objective of this section is to explain the link between CSFs, the BSC and organizational performance. This will help to develop and formulate the study hypotheses. The proposed conceptual framework, shown in Figure 4.1, demonstrates the relationship between CSFs and BSC implementation on one side and the relationship between BSC implementation and organizational performance on the

other side. The model consists of 13 CSFs as potential success factors related to the healthcare sector that could affect positively BSC implementation. The CSFs, as independent variables, are presented in three different groups, named Corporate Purpose (i.e., top management, the BSC team and BSC perspectives), Integration Purpose (i.e., communication, training, KPIs and cause and effect) and Supporting Purpose (i.e., regular reporting, measurement assessment, problem solving, rewards to stakeholders, corporate alignment and benchmarking). On the other side of the conceptual framework, the dependent variable is represented by organizational performance (i.e., TQM, innovation, competitiveness and CSR). There are two control variables in the middle of the conceptual framework: organization age and organization size.

The proposed conceptual model is adapted from the study of Assiri et al. (2006), which explained how CSFs may affect BSC implementation, which in turn impacts organizational performance. The new conceptual model will contribute to the existing conceptual frameworks for BSC implementation and provide a better understanding of BSC implementation in the healthcare sector in the UAE by outlining the main CSFs by which to achieve a high organizational performance.

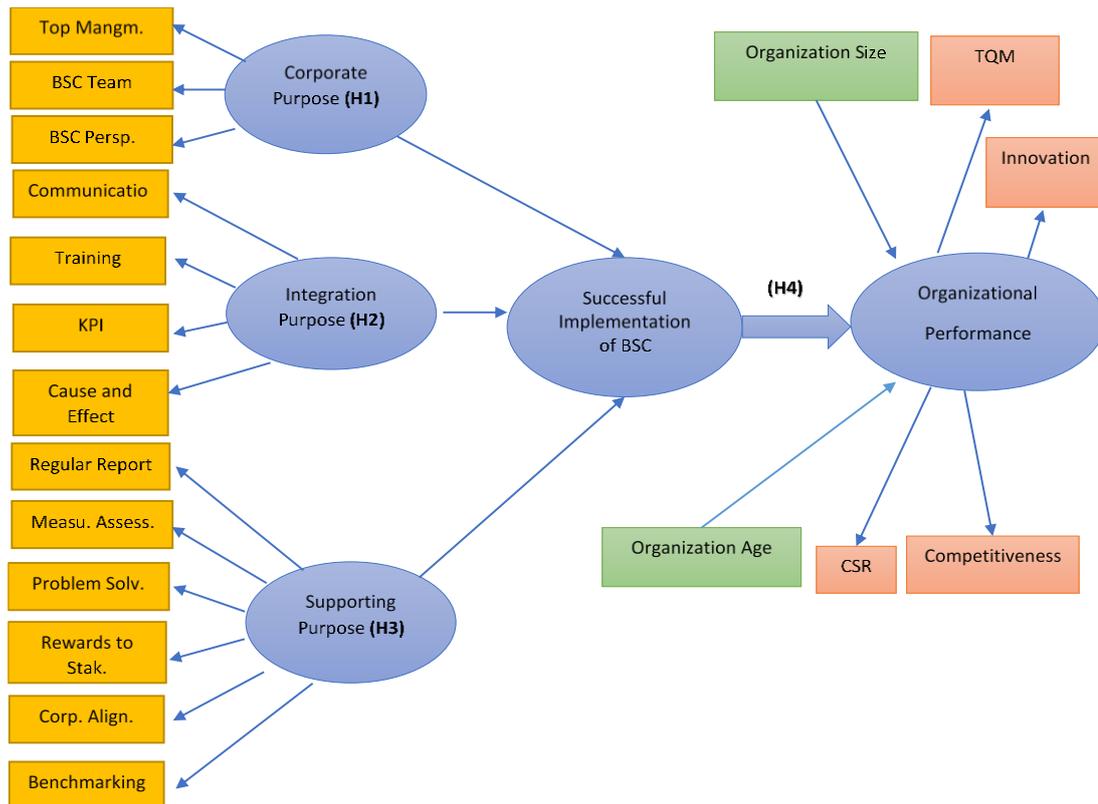


Figure 4.1: Conceptual framework of BSC implementation

4.2.1 Independent Variables

According to the conceptual framework outlined in Figure 4.1, there are 13 CSFs that can be classified into three different constructs. These constructs are independent variables that could positively affect BSC implementation in the healthcare sector in the UAE. The researcher named the three constructs Corporate Purpose, Integration Purpose and Supporting Purpose.

4.2.1.1 Corporate Purpose Construct

The first construct in the conceptual framework, Corporate Purpose, consists of three main factors (i.e., top management, the BSC team and BSC perspectives). It is difficult to obtain good outcomes for BSC implementation without having this group, or any of the three variables, in place.

Top management is the first factor in the Corporate Purpose construct in the research's conceptual framework. It is an essential variable to ensure successful implementation of the BSC. Effective executives usually motivate their employees by spreading confidence, which manifests in completing tasks in the right way. Top management support is necessary to ensure effective implementation of the BSC by following up the internal process. Top management should identify the right people, organize them in a team and empower them to carry out their tasks in the BSC project (Assiri et al., 2006). Top management should guide employees toward the organization's vision and goals, so that they have the complete picture. Top management should also engage in trust-building behaviors and transparency among the organization's team (Braam & Nijssen, 2004).

Many published papers have highlighted the importance of the top management factor for implementing the BSC (Assiri et al., 2006; Behery et al., 2014; Braam & Nijssen, 2004, 2011; Chan & Ho, 2000; Elbanna et al., 2015; Inamdar et al., 2002; Kaplan & Norton, 1996; Kaplan & Norton, 2005; Lilian Chan, 2004; Moullin, 2017; Radnor & Lovell, 2003a, 2003b; Rodgers, 2011; Slevin & Pinto, 1987; Stanton, 1996; Zairi, 2000).

The top management scale was extracted from Assiri et al. (2006), Assiri (2006) and Rodgers (2011) to propose management competencies as a main factor out of 10 CSFs in research in UK healthcare organizations. This study measures the top management factor using a scale comprising four items (see Table 4.1). A 5-item Likert scale (i.e., Strongly Disagree, Disagree, Neutral, Agree and Strongly Agree) was employed and the respondents were asked to indicate the degree to which they agreed that an item described the situation in their organization.

Table 4.1: Measurement of “top management”

Top management	<ul style="list-style-type: none"> • <input type="checkbox"/> Top management has allocated adequate resources and time for establishing the balanced scorecard project.
	<ul style="list-style-type: none"> • <input type="checkbox"/> Top management is committed to the balanced scorecard, not only in the introductory phase but on a permanent basis.
	<ul style="list-style-type: none"> • <input type="checkbox"/> Top management has played a significant role in the implementation of the balanced scorecard.
	<ul style="list-style-type: none"> • <input type="checkbox"/> Top management has reviewed and agreed on all the balanced scorecard elements.

The BSC team is the second factor in the Corporate Purpose construct in the research conceptual framework (Albright et al., 2005; Assiri et al., 2006). The BSC team is essential for BSC implementation and is named the strategy and support services team (Alsharari et al., 2019). The organization should appoint a special team for the BSC (Alsharari et al., 2019), which should meet with top management frequently to finalize the organization’s objectives.

Many published papers both within and outside healthcare have raised the importance of the BSC team factor for implementing the BSC (Albright et al., 2005; Alsharari et al., 2019; Assiri, 2006; Assiri et al., 2006; Braam & Nijssen, 2004, 2011; Katzenbach & Smith, 1994; Monczewski, 2003).

The BSC team scale was extracted from Assiri et al. (2006) and Assiri (2006). This study measures the BSC team variable using a scale that consists of three items (see Table 4.2). A 5-item Likert scale (i.e., Strongly Disagree, Disagree, Neutral, Agree and Strongly Agree) was used and the respondents were asked to indicate the degree to which they agreed that an item described the situation in their organization.

Table 4.2: Measurement of “BSC team”

BSC team	<ul style="list-style-type: none"> ● <input type="checkbox"/> The organization has a specialized team for the balanced scorecard.
	<ul style="list-style-type: none"> ● <input type="checkbox"/> The balanced scorecard team members have various relevant skills, knowledge and competencies.
	<ul style="list-style-type: none"> ● <input type="checkbox"/> The balanced scorecard team is visible and has access to top management.

BSC perspectives are the third factor in the corporate construct in the research conceptual framework. The BSC template consists of four main perspectives (i.e., financial, customer, internal business process and learning and growth). The BSC can benefit organizations by looking at the template from different perspectives rather than the traditional financial measurements and it can help organizations to control their performance.

Many published papers have raised the importance of the BSC perspectives variable for implementing the BSC (Butler et al., 2011; Chavan, 2009; Hubbard, 2009; Kaplan & Norton, 1992, 1993, 1996, 2001a, 2001b, 2001c, 2004b; Kaplan & Norton, 1993; Papalexandris et al., 2004; Yahanpath & Islam, 2016).

The BSC perspectives scale was extracted from papers such as Assiri et al. (2006), Assiri (2006) and Kaplan and Norton (1992). Therefore, this study measures the BSC perspective factor using a scale that consists of three items (see Table 4.3). A 5-item Likert scale (i.e., Strongly Disagree, Disagree, Neutral, Agree and Strongly Agree) was used and the respondents were asked to indicate the degree to which they agreed that an item described the situation in their organization.

Table 4.3: Measurement of “BSC perspectives”

BSC perspectives	<ul style="list-style-type: none"> • <input type="checkbox"/> What perspectives does the organization use to organize measures for reporting purposes? - <input type="checkbox"/> Kaplan and Norton’s four perspectives (financial, customer, internal process, learning & growth) - <input type="checkbox"/> Accenture’s value dynamics (physical, customer, financial, employee & supplier, organization) - <input type="checkbox"/> Baldrige criteria (leadership, strategic planning, customer, information & analysis, human resources, focus, process management, business results) - <input type="checkbox"/> European Foundation for Quality Management (EFQM) perspectives (leadership, people, policy & strategy, partnerships & resources, processes & results: people, customer, society, key performance)
	<ul style="list-style-type: none"> • <input type="checkbox"/> To what extent do you agree that the following are important to the organization’s balanced scorecard: <ul style="list-style-type: none"> - <input type="checkbox"/> Financial perspective - <input type="checkbox"/> Customer perspective - <input type="checkbox"/> Internal business perspective - <input type="checkbox"/> Learning and growth perspective
	<ul style="list-style-type: none"> • <input type="checkbox"/> The above four perspectives adequately capture the focus of the organization’s strategy and provide a balance between the financial and non-financial measures.

4.2.1.2 Integration Purpose Construct

The second construct in the conceptual framework, Integration Purpose, consists of four main factors (i.e., communication, training, KPIs and cause and effect). The Integration Purpose construct is less important than the Corporate Purpose construct, but it is not possible to succeed in BSC implementation without the influence of the Integration Purpose construct.

Communication is the first factor in the Integration Purpose construct. It is very important to communicate internally in an effective way, as well as using appropriate tools, such as regular meetings, internal announcements and management updates. The

right message should be conveyed to the entire team in the organization. Many published papers within and outside of healthcare have raised the importance of the communication variable for implementing the BSC (Assiri, 2006; Assiri et al., 2006; Banker et al., 2004; Braam & Nijssen, 2011; Kaplan & Norton, 1996; Lilian Chan, 2004; Moullin, 2004, 2017; Papalexandris et al., 2004). As mentioned in Chapter 3, some studies have raised the importance of the communication factor for implementing the BSC (Assiri, 2006; Assiri et al., 2006; Banker et al., 2004; Braam & Nijssen, 2011; Kaplan & Norton, 1996; Lilian Chan, 2004; Moullin, 2017; Papalexandris et al., 2004). The communication scale was extracted from Assiri et al. (2006), Assiri (2006) and other research by Moullin (2017) for a case study in the UK. Therefore, the researcher measured the communication factor using a scale that consists of three items (see Table 4.4). A 5-item Likert scale (i.e., Strongly Disagree, Disagree, Neutral, Agree and Strongly Agree) was employed and the respondents were asked to indicate the degree to which they agreed that an item described the situation in their organization.

Table 4.4: Measurement of “communication”

Communication	<ul style="list-style-type: none"> • <input type="checkbox"/> Regular team meetings are conducted to compare the performance measures and progress against corporate goals.
	<ul style="list-style-type: none"> • <input type="checkbox"/> The employees receive strategic information on a regular basis.
	<ul style="list-style-type: none"> • <input type="checkbox"/> The strategic information reaches the right people, in the right format, at the right time and in the right quantity.

Training is the second factor in the Integration Purpose construct. Ineffective communication among the team will lead to a negative impact on BSC

implementation. Therefore, the organization should arrange for specific training for the team to ensure effective implementation of the BSC. As confirmed by Assiri et al. (2006), the BSC is usually considered as a new project once implemented, so the organization should control the perspectives and its process. Therefore, the training initiative is mandatory for employees to help them to adapt and lead the implementation process of the BSC.

The training scale was extracted from Assiri et al. (2006), Assiri (2006) and other research by Papalexandris et al. (2004) is conducted on a software firm in Greece. Therefore, this study measures the training factor using a scale that consists of four items (see Table 4.5). A 5-item Likert scale (i.e., Strongly Disagree, Disagree, Neutral, Agree and Strongly Agree) was used and the respondents were asked to indicate the degree to which they agreed that an item described the situation in their organization.

Table 4.5: Measurement of “training”

Training	<ul style="list-style-type: none"> • <input type="checkbox"/> Emphasis is placed on skills development and training in the organization.
	<ul style="list-style-type: none"> • <input type="checkbox"/> Knowledge and skills are developed consistently to meet the changing needs of balanced scorecard implementation, teams and individuals.
	<ul style="list-style-type: none"> • <input type="checkbox"/> The organization links the education and training of employees to its long-term plans and strategies.
	<ul style="list-style-type: none"> • <input type="checkbox"/> Top management arranges adequate resources for employees' education and training.

KPIs are the third factor in the Integration Purpose construct. Papalexandris et al. (2004) showed the importance of effective application of KPIs and the strategy map for successfully implementing the BSC in a software development firm in Greece. Any

organization, not only those in the healthcare sector, should have professional KPIs that in turn will motivate employees to improve their performance (Moullin, 2009).

Many studies have shown the need for having the right KPIs (Assiri, 2006; Assiri et al., 2006; Kaplan & Norton, 2004a; Newton, 2015; Rodgers, 2011; Vokurka, 2004). The KPI scale was extracted from Assiri et al. (2006), Papalexandris et al. (2004) and Assiri (2006). Therefore, the researcher measured the KPI factor using a scale that consists of three items (see Table 4.6). A 5-item Likert scale (i.e. Strongly Disagree, Disagree, Neutral, Agree and Strongly Agree) was used and the respondents were asked to indicate the degree to which they agreed that an item described the situation in their organization.

Table 4.6: Measurement of “KPIs”

Key performance indicators (KPIs)	<ul style="list-style-type: none"> • <input type="checkbox"/> Actions and objectives are supported by measures or KPIs.
	<ul style="list-style-type: none"> • <input type="checkbox"/> Before implementing the balanced scorecard, the organization establishes the relative importance of KPIs.
	<ul style="list-style-type: none"> • <input type="checkbox"/> The relative weights and appropriate balance among various performance indicators are determined before implementing the balanced scorecard.

Cause and effect constitute the fourth factor in the Integration Purpose construct. It was noted by Kaplan and Norton (1996) that the cause-and-effect relationship between the BSC perspectives is essential for BSC implementation and will strengthen the linkage between the BSC perspectives. Neely and Bourne (2000) claimed that the success map is a cause-and-effect diagram that explains the organization’s strategy; therefore, when this is used managers will operate the business in the right way. Papalexandris et al. (2005) maintained that there is a correlation among strategic

objectives when applying cause-and-effect relations, which will lead to improving organizational performance; thus, the team should have higher objectives with strong correlations.

Many papers have shown the need for including the cause-and-effect linkage (Assiri, 2006; Assiri et al., 2006; Kaplan & Norton, 1996; Papalexandris et al., 2004; Radnor & Lovell, 2003b). The cause-and-effect factor scales were extracted from Kaplan and Norton (1996), Assiri et al. (2006) and Assiri (2006). Therefore, this study measures the factor using a scale that consists of three items (see Table 4.7). A 5-item Likert scale (i.e., Strongly Disagree, Disagree, Neutral, Agree and Strongly Agree) was used and the respondents were asked to indicate the degree to which they agreed that an item described the situation in their organization.

Table 4.7: Measurement of “cause and effect”

Cause and effect	<ul style="list-style-type: none"> • <input type="checkbox"/> The organization establishes relationships and linkages between key performance indicators (KPIs).
	<ul style="list-style-type: none"> • <input type="checkbox"/> The organization’s balanced scorecard reveals relationships to provide cause-and-effect modeling.
	<ul style="list-style-type: none"> • <input type="checkbox"/> The cause-and-effect relationships between data elements are investigated to ensure that resources are being correctly allocated.

4.2.1.3 Supporting Purpose Construct

The third construct in the conceptual framework, Supporting Purpose, consists of six main factors (i.e., regular reporting, measurement assessment, problem solving, rewards to stakeholders, corporate alignment and benchmarking). This construct is less critical than the Corporate Purpose and Integration Purpose constructs.

Regular reporting is the first factor in the Supporting Purpose construct in the research conceptual framework. As discussed in Chapter 3, financial reports are essential for business performance management, but the financial report alone is not enough for an innovative business to measure other factors that drive competitive advantage (Walker, 1996). Many organizations globally tend to report other non-financial measures of performance, such as customer satisfaction, quality issues, product effectiveness and market share, although they typically report these measures in such a way that they are subordinated to financial figures.

Many executives recognize the weakness of financial measures reporting and therefore understand the need for a professional measurement system such as BSC to achieve the organization's strategic objectives. Therefore, many organizations use the BSC as their organizational performance reporting system (Andersen et al., 2004; Debnath et al., 2004; Kaplan & Norton, 2005; Kaplan & Norton, 2005; Robert, 1994; Walker, 1996).

As confirmed by Sharif (2002) and Lawson et al. (2003), many researchers in the management field have used the BSC as their reporting system to help them to control and monitor the organization's strategy execution. As mentioned in Chapter 3, Kaplan and Norton (1992) developed the BSC as a tool for organizational performance measurement. Therefore, the BSC's regular reporting will provide the necessary information to keep the organization on the right track according to its plan (Amaratunga & Baldry, 2002).

Many published papers have raised the importance of regular reporting (Andersen et al., 2004; Assiri, 2006; Assiri et al., 2006; McAdam & Walker, 2003; Walker, 1996). The regular reporting scales were extracted from Assiri et al. (2006), Assiri (2006) and

Walker (1996), which explained that dynamic management reporting is used for a highly flexible performance reporting system; and Andersen et al. (2004), which highlighted the links between the strategy and operational initiatives. Therefore, the researcher measured the factor using a scale that consists of three items (see Table 4.8). A 5-item Likert scale (i.e., Strongly Disagree, Disagree, Neutral, Agree and Strongly Agree) was used and the respondents were asked to indicate the degree to which they agreed that an item described the situation in their organization.

Table 4.8: Measurement of “regular reporting”

Regular reporting	<ul style="list-style-type: none"> • <input type="checkbox"/> The organization has reporting systems besides the balanced scorecard.
	<ul style="list-style-type: none"> • <input type="checkbox"/> The results of the balanced scorecard measures are incorporated into a regular reporting system.
	<ul style="list-style-type: none"> • <input type="checkbox"/> The balanced scorecard improves feedback to responsible managers so that adjustments to the strategic plan can be made during the operating period.

Measurement assessment is the second factor in the Supporting Purpose construct. As discussed in Chapter 3, it is difficult for any organization to make real progress without defining its goals and performance measures. Organizations have to show clear attention to performance measurement and its assessment to have real success (Niven, 2002). The BSC will help executives to review their measures and identify the right combination of required measures (Kaplan & Norton, 2001b).

The researcher collected numerous papers related to the measurement assessment scales (Assiri, 2006; Assiri et al., 2006; Kaplan, 2001; Kaplan & Norton, 2001a, 2001b, 2001c; Niven, 2002; Rodgers, 2011). The measurement assessment scale was extracted from Assiri et al. (2006), Assiri (2006) and Kaplan and Norton (2001a) for

measuring tangible and intangible assets and Rodgers (2011) research on the National Health Service (NHS) in the UK for identifying 10 CSFs, of which measurement assessment is one. Therefore, the researcher measured the factor using a scale that consists of three items (see Table 4.9). A 5-item Likert scale (i.e., Strongly Disagree, Disagree, Neutral, Agree and Strongly Agree) was used and the respondents were asked to indicate the degree to which they agreed that an item described the situation in their organization.

Table 4.9: Measurement of “measurement assessment”

Measurement assessment	<ul style="list-style-type: none"> ● <input type="checkbox"/> The organization has realized the significance of its strategies and operational goals.
	<ul style="list-style-type: none"> ● <input type="checkbox"/> The results of the balanced scorecard help the organization to assess its performance.
	<ul style="list-style-type: none"> ● <input type="checkbox"/> Implementation of the balanced scorecard enables the organization to review its measures frequently and identify the right combination of measures.

Problem solving is the third factor in the Supporting Purpose construct. As discussed in Chapter 3, it is very common to face problems during production and these should be solved via day-to-day tasks. Problems encountered by employees who are responsible for products and services can impact the quality of products and customer satisfaction (Tucker et al., 2002). Utilizing measurement systems as a tool will help organizations to improve the process of internal collaboration among their teams, as well as team problem solving (Gooderham, 1997).

As mentioned in Chapter 3, the researcher works for a multinational organization in Dubai, which offers a specific course for all employees called “Problem Solving Process” through the DIVE technique (i.e., define the problem, investigate root causes,

verify and implement and ensure sustainability). This helps employees to find the root cause of problems and therefore solve them in a teamwork culture. Many tools are available commercial internet sites that help organizations to solve their problems in an effective way, including action plan templates, criteria testing and rating, internal and external surveys and Gantt charts.

The researcher collected several papers to measure the problem-solving factor (Assiri, 2006; Assiri et al., 2006; Gooderham, 1997; Tucker et al., 2002; Wiersma, 2009). The problem-solving scale was extracted from Assiri et al. (2006), Assiri (2006) and in a research conducted by Wiersma (2009) on Dutch firms using the BSC. Therefore, the researcher measured the variable using a scale that consists of three items (see Table 4.10). A 5-item Likert scale (i.e., Strongly Disagree, Disagree, Neutral, Agree and Strongly Agree) was used and the respondents were asked to indicate the degree to which they agreed that an item described the situation in their organization.

Table 4.10: Measurement of “problem solving”

Problem solving	<ul style="list-style-type: none"> ● <input type="checkbox"/> The employees in the organization are empowered to resolve problems and improve processes.
	<ul style="list-style-type: none"> ● <input type="checkbox"/> The balanced scorecard results help the organization solve its problems.
	<ul style="list-style-type: none"> ● <input type="checkbox"/> The organization encourages a culture of teamwork and problem solving.

Rewards to stakeholders are the fourth factor in the Supporting Purpose construct. As mentioned in Chapter 3, the rewards of executives have to be connected with the results of BSC measures (Kaplan & Norton, 1996). On the other hand, Banchieri et al. (2016) stated that updating BSC measures and linking them to rewards is key. The use of BSC measures linked to rewards will help organizations to monitor their employees, as well as to reach their targets (Kaplan & Norton, 1996, 2001a, 2004b). Under such a scheme, employees will not receive their incentive compensation if their performance is not meeting the organization’s measures (Norton & Kaplan, 1999).

The researcher collected several papers to measure the rewards to stakeholders factor (Assiri, 2006; Assiri et al., 2006; Kaplan & Norton, 1996, 2001a, 2004b; Kaplan et al., 2004; Olve et al., 1999). The rewards to stakeholders scale was extracted from Assiri (2006), Assiri et al. (2006), Kaplan and Norton (1996), Kaplan and Norton (2004b) and Olve et al. (1999). Therefore, the researcher measured the factor using a scale that consists of four items (see Table 4.11). A 5-item Likert scale (i.e., Strongly Disagree, Disagree, Neutral, Agree and Strongly Agree) was used and the respondents were asked to indicate the degree to which they agreed that an item described the situation in their organization.

Table 4.11: Measurement of “rewards to stakeholders”

Rewards to stakeholders	<ul style="list-style-type: none"> • <input type="checkbox"/> The focus is on individuals’ contribution in relation to specific tasks in the organization.
	<ul style="list-style-type: none"> • <input type="checkbox"/> The reward system is linked to the balanced scorecard to create a cultural change to improve performance.
	<ul style="list-style-type: none"> • <input type="checkbox"/> The linking of compensation and measuring employees’ awareness to scorecard results is significant in sustaining the balanced scorecard system.
	<ul style="list-style-type: none"> • <input type="checkbox"/> Recognition and reward activities effectively stimulate employees’ commitment to the balanced scorecard implementation.

Corporate alignment is the fifth factor in the Supporting Purpose construct. This variable is essential for successful implementation of the BSC. As mentioned in Chapter 3, the intangible and tangible assets should be aligned to the organization’s strategy to create value (Albright et al., 2005; Wells & Weiner, 2005). Organizations should have their own internal systems to help their employees generate the required data to solve problems and this in turn will positively impact BSC implementation.

The researcher collected a number of papers to measure the corporate alignment factor (Albright et al., 2005; Assiri, 2006; Assiri et al., 2006; Kaplan & Norton, 2004b; Kaplan et al., 2004; Lingle & Schiemann, 1996). The corporate alignment scale was extracted from Assiri et al. (2006), Assiri (2006) and in a research by Albright et al. (2005) for outlining 11 steps represented in three stages for implementation methodology and cited by Ittner et al. (2003) to help organizations build a good understanding of their business model and therefore translate it into a strategically driven set of BSC measures.

Therefore, the researcher measured the variable using a scale that consists of three items (see Table 4.12). A 5-item Likert scale (i.e., Strongly Disagree, Disagree, Neutral, Agree and Strongly Agree) was used and the respondents were asked to indicate the degree to which they agreed that an item described the situation in their organization.

Table 4.12: Measurement of “corporate alignment”

Corporate alignment	<ul style="list-style-type: none"> • <input type="checkbox"/> The balanced scorecard system has succeeded in aligning the organization’s strategy with performance measures.
	<ul style="list-style-type: none"> • <input type="checkbox"/> The balanced scorecard facilitates achieving sustainable alignment.
	<ul style="list-style-type: none"> • <input type="checkbox"/> The measures used in the scorecard system motivate employees to work in congruence with the organization’s objectives.

Benchmarking is the sixth factor in the Supporting Purpose construct. Benchmarking is an approach to improve organizational performance. Goldberg and Godwin (2004) stated that “Benchmarking involves determining best practice guidelines for maximizing performance and guiding a company toward improved efficiency and effectiveness while reducing waste”. The organization should use benchmarking information to set its targets; it also has the possibility to stretch its goal according to its main targets (Goldberg & Godwin, 2004; Kaplan & Norton, 1996; Massheder & Finch, 1998).

Organizations should create their targets from different sources, such as employees, executive interviews, industry averages and benchmarking (Niven, 2002). Sim and Koh (2001) explained that it is an important task for organizations to train their

employees to practice techniques in the right way for successful implementation of the BSC, such as benchmarking and cause-and-effect relationships.

The researcher collected several papers to measure the benchmarking factor (Assiri, 2006; Assiri et al., 2006; Goldberg & Godwin, 2004; Kaplan, 2001; Kaplan & Norton, 2001a; Zairi, 1992). Kumar et al. (1999) identified four dimensions for firms to compete with others (i.e., price, quality, flexibility and delivery dependability).

The benchmarking scale was extracted from Assiri et al. (2006), Assiri (2006), Goldberg and Godwin (2004) and in a research conducted by Ellibee and Mason (1997) for outlining the six steps of the benchmarking process (i.e., create a benchmarking team for curriculum review, identify what to benchmark, complete self-assessment, identify best practices for comparison and learning, create an action plan for curriculum improvement and revisit the curriculum). Therefore, the researcher measured the factor using a scale that consists of three items (see Table 4.13). A 5-item Likert scale (i.e., Strongly Disagree, Disagree, Neutral, Agree and Strongly Agree) was used and the respondents were asked to indicate the degree to which they agreed that an item described the situation in their organization.

Table 4.13: Measurement of “Benchmarking”

Benchmarking	<ul style="list-style-type: none"> ● <input type="checkbox"/> Benchmarking with other competitive organizations is used in the organization.
	<ul style="list-style-type: none"> ● <input type="checkbox"/> The balanced scorecard is used to benchmark performance against other relevant organizations.
	<ul style="list-style-type: none"> ● <input type="checkbox"/> The organization’s targets are systematically stretched as a motivational tool for employees and units.

4.2.2 Dependent Variables

According to Figure 4.1, which shows the research's conceptual framework, there are four main factors for organizational performance measurement (i.e., TQM, innovation, competitiveness and CSR). Full details of each variable will be presented in this section.

4.2.2.1 Total Quality Management

Organizations are facing competitive challenges worldwide and need to think in different ways to produce better-quality products at lower prices. Japan and Germany are good examples of countries that produce high-quality products; in these countries, quality management is the main instrument used to improve the efficiency and quality of products and processes (Ahire et al., 1996).

TQM is recognized as a management philosophy that encompasses organizational efforts toward customer satisfaction by increasing the performance of goods, services and employees (Bayraktar et al., 2008). Other main features of TQM are continuous learning and the organization's process being focused directly on customers.

As mentioned in Chapter 3, the TQM variable is very important both within and outside healthcare for improving the quality of products and this will positively impact organizational performance. Many researchers have outlined the importance of TQM and explained how they implemented measurement scales for TQM (Ahire et al., 1996; Black & Porter, 1996; Kanji, 1998; Samson & Terziovski, 1999; Saraph et al., 1989; Sila & Ebrahimpour, 2003; Tang & Zairi, 1998b).

The TQM factor has been measured in manufacturing firms (Ahire et al., 1996), in Turkish higher education (Bayraktar et al., 2008), in the manufacturing sector in

Thailand (Das et al., 2006), in case studies of successful companies regarding quality concepts and quality improvement programs (Saraph et al., 1989) and in the higher education sector (Tang & Zairi, 1998b). The researcher measured the factor using a scale that consists of 12 items (see Table 4.14). A 5-item Likert scale (i.e., Strongly Disagree, Disagree, Neutral, Agree and Strongly Agree) was used and the respondents were asked to indicate the degree to which they agreed that an item described the situation in their organization.

Table 4.14: Measurement of “total quality management”

Total quality management	• <input type="checkbox"/> The organization’s top management actively participates in TQM and supports the improvement process.
	• <input type="checkbox"/> The organization’s top management encourages employees’ involvement in TQM.
	• <input type="checkbox"/> The organization’s top management focuses on how to improve the performance of employees apart from relying on financial criteria.
	• <input type="checkbox"/> The administrative processes in the organization are well aligned with the organization’s vision.
	• <input type="checkbox"/> The organization meets the expectations of its patients.
	• <input type="checkbox"/> The organization meets the expectations of its employees.
	• <input type="checkbox"/> The organization collects statistical data to improve its processes.
	• <input type="checkbox"/> TQM in the organization is continuously improved.
	• <input type="checkbox"/> The organization has a clear quality manual, quality system documentation and working instructions.
	• <input type="checkbox"/> The organization organizes training on TQM for employees and encourages employees to participate.
	• <input type="checkbox"/> Employees are actively involved in TQM-related activities.
	• <input type="checkbox"/> Employees, as the organization’s most valuable and long-term resource, are worthy of receiving the necessary education and training in order to achieve the organization’s vision.

4.2.2.2 Innovation

Innovation is one of the most important factors for organizational performance measurement. The researcher presented different definitions for innovation in Chapter 3. Innovation can be defined as the process to implement and adopt useful ideas by the organization's employees (Amabile et al., 1996). The concept of innovation in hospitals is extensive and varied (Djellal & Gallouj, 2005) and can be divided into four different concepts: production functions, set of technical capacities, information systems and service providers.

Many researchers have recorded scales for measuring innovation (Dobni, 2008; Hagedoorn, 1996; Ko & Lu, 2010; Leonard-Barton, 1992; Ritter, 2006; Šebestová & Rylková, 2011; Souitaris, 2002; Tidd, 2000). The present study measured the factor using a scale that consists of eight items (see Table 4.15). A 5-item Likert scale (i.e., Strongly Disagree, Disagree, Neutral, Agree and Strongly Agree) was used and the respondents were asked to indicate the degree to which they agreed that an item described the situation in their organization.

Table 4.15: Measurement of “innovation”

Innovation	• <input type="checkbox"/> The organization has customer relationship management capabilities.
	• <input type="checkbox"/> The organization has a mechanism for inspirational innovation and realization.
	• <input type="checkbox"/> The organization has the ability to speed up the commercialization of new services.
	• <input type="checkbox"/> The organization has the ability to attract excellent employees.
	• <input type="checkbox"/> The organization has fundamental research expenditures.
	• <input type="checkbox"/> The organization has a progressive capability for innovative technology.
	• <input type="checkbox"/> The organization has maintained sufficient investment in innovation.
	• <input type="checkbox"/> The organization has the ability to provide patients with a high quality of services.

4.2.2.3 Competitiveness

Organizations that invest in technology and develop their employees to participate in strategy formulation will improve their competitive capabilities and will reach higher performance than those that do not invest in technology (Tracey et al., 1999). The competitiveness of healthcare institutions is defined by Rakhimbekova (2014) as “an advantage over other institutions, formed on the basis of complex internal and external factors which opens up new possibilities for the development and market penetration”.

Many researchers have outlined the importance of competitiveness and explained how they use scales to measure it (Dijkstra et al., 2011; Eiriz et al., 2010; Innis & La Londe, 1994; Meredith et al., 1994; Novack et al., 1993; Tracey et al., 1999). This study measured the factor using a scale of six items (see Table 4.16). A 5-item Likert scale (i.e., Strongly Disagree, Disagree, Neutral, Agree and Strongly Agree) was used and the respondents were asked to indicate the degree to which they agreed that an item described the situation in their organization.

Table 4.16: Measurement of “competitiveness”

Competitiveness	• <input type="checkbox"/> The organization offers competitive prices.
	• <input type="checkbox"/> The organization can sell services at prices that are above average.
	• <input type="checkbox"/> The organization can compete with others based on quality.
	• <input type="checkbox"/> The organization offers high-quality products to its patients.
	• <input type="checkbox"/> The organization offers products that function according to patients’ needs.
	• <input type="checkbox"/> The organization alters service offerings to meet patients’ needs.

4.2.2.4 Corporate Social Responsibility

CSR is an important factor in academia for organizational performance measurement. The concept was first introduced in 1950 when it was implemented in many organizations in Western countries. The researcher presented many definitions in Chapter 3 and explained the long history of CSR.

Many studies have shown the importance of CSR and how they measure the CSR variables, as outlined in Chapter 3 (Carroll, 1979, 1983; Carroll & Buchholtz, 2000; Cochran, 1971; Davis, 1960; De Bakker et al., 2005; Eells & Walton, 1969; Eilbert, 1973; Frederick, 1960; Freeman, 1984; Heald, 1957; Hopkins, 2008; Howard, 1953; Jones, 1980; Keyvanara & Sajadi, 2015; Khoury et al., 1999; Lantos, 2001; Rahman, 2011; Tuzzolino & Armandi, 1981; Woodward, 1999). This study measured the factor using a scale of 12 items (see Table 4.17). A 5-item Likert scale (i.e., Strongly Disagree, Disagree, Neutral, Agree and Strongly Agree) was employed and the respondents were asked to indicate the degree to which they agreed that an item described the situation in their organization.

Table 4.17: Measurement of “corporate social responsibility”

Corporate social responsibility	<ul style="list-style-type: none"> • <input type="checkbox"/> The organization participates in activities that aim to protect and improve the quality of the natural environment.
	<ul style="list-style-type: none"> • <input type="checkbox"/> The organization implements special programs to minimize its negative impact on the natural environment.
	<ul style="list-style-type: none"> • <input type="checkbox"/> The organization targets sustainable growth considering sustainable generations.
	<ul style="list-style-type: none"> • <input type="checkbox"/> The organization supports non-governmental organizations working in problematic areas.
	<ul style="list-style-type: none"> • <input type="checkbox"/> The organization contributes to campaigns and projects that promote the well-being of society.
	<ul style="list-style-type: none"> • <input type="checkbox"/> The organization encourages its employees to participate in voluntary activities.
	<ul style="list-style-type: none"> • <input type="checkbox"/> The organization emphasizes the importance of its social responsibilities to society.
	<ul style="list-style-type: none"> • <input type="checkbox"/> The organization’s policies encourage employees to develop their knowledge, skills and careers.
	<ul style="list-style-type: none"> • <input type="checkbox"/> The organization implements flexible policies to provide a good work–life balance for its employees.
	<ul style="list-style-type: none"> • <input type="checkbox"/> The organization provides full and accurate information about its products to patients.
	<ul style="list-style-type: none"> • <input type="checkbox"/> The organization complies with legal regulations completely and promptly.
	<ul style="list-style-type: none"> • <input type="checkbox"/> Customer satisfaction is highly important for the organization.

4.2.3 Control Variables

The researcher proposes two control variables to measure the organizational performance of the healthcare sector in the UAE: organizational age and organizational size.

4.2.3.1 Organizational Age

Many researchers have studied the relationship between organizational performance and organizational age (Coad & Rao, 2008; Durand & Coeurderoy, 2001; Nasurdin & Khuan, 2011). The relationship between organizational age and organizational performance has been documented in various studies, but with different results (Durand & Coeurderoy, 2001). The organization's age can usually be measured according to the number of years the organization has been established (Durand & Coeurderoy, 2001).

As mentioned by Hannan and Freeman (1993), in any business sector, new organizations are subject to high failure rates. Age can reduce the probability of the demise of an organization that has proven its ability to survive during the initial "liability of newness" period (Hannan & Freeman, 1993). Therefore, post-entry performance is positively related to the age of the organization once it has survived for a sufficient period of time (Audretsch & Mahmood, 1994).

On the other hand, some researchers disagree with the effect of organizational age on organizational performance and maintain that older organizations will achieve lower performance compared to younger organizations (Dunne & Hughes, 1994). Older organizations usually suffer from bureaucracy in daily routine work, which will lead to poor performance.

Dunne and Hughes (1994) conducted an empirical investigation on the links between organizational size, age, growth and death in the UK between 1975 and 1985 and found that smaller organizations grew more rapidly than larger ones, while younger organizations at a given size grew more rapidly than older organizations in the 1980s.

Durand and Coeurderoy (2001) aimed to show the moderate effect of strategic orientation, such as the age of the organization and order of entry, on organizational performance. Age was represented by the number of years from the date of starting the business. The authors used a questionnaire, which was sent to 931 organizations representing four industries (i.e., clothing and leather, pulp and paper, pharmaceuticals and home equipment); the final collected sample was 582 organizations. The results of the study confirmed that younger organizations have better performance compared to older organizations, which confirms the effect of age on the organizational performance of later movers. This interpretation provides indirect support for the idea of first-mover advantage and late-mover disadvantage. This research study measured organizational age by the number of years from the date of entering the business, in line with the measurement used by Durand and Coeurderoy (2001).

4.2.3.2 Organizational Size

The second control variable is organizational size (Gallo & Christensen, 2011; Hoque & James, 2000; Jain, 2012), defined by the total number of employees (Jain, 2012; Kimberly, 1976), organizational size with efficiency (Gupta, 1980), sales turnover and total assets (Hoque & James, 2000).

As confirmed by Jain (2012), many publications have suggested that organizational size can be best measured with reference to the number of employees. Nason et al. (2015) used organizational size in their research as a domain for corporate entrepreneurship. The researchers searched for evidence in a number of published journal papers after 1999 on the topic of the organizational size heterogeneity in corporate entrepreneurship and collected 157 articles (47 of which were conceptual and 110 empirical). Nason et al. (2015) argued that there was a tendency toward

examining corporate entrepreneurship dimensions with reference to the extent of large public organizations. Organizational size enables corporate entrepreneurs to obtain competitive advantages and disadvantages via bureaucratic structures and resource bundling.

Nasurdin and Khuan (2011) highlighted the difference between old versus newer employees in their orientations toward self and with others in the same organization. More established employees usually focus on personal feelings and interpersonal values in their strong social relationships with colleagues based on their long experience; on the other hand, new employees are usually looking for economic security and success.

Stanwick and Stanwick (1998) examined the relationship between corporate social performance as part of organizational performance with three variables (i.e., organizational size, financial performance and environmental performance). They concluded, by empirically testing data from 1987 to 1992, that organizational performance represented by CSR is impacted by organizational size.

Organizational size is very important for contextual organizational dimensions, such as the organization's structure and work process (Daft, 2004). Therefore, organizational size plays an essential role in the organization's environment, which will positively influence the internal functioning of any organization.

Jain (2012) conducted a study in a two-wheeler manufacturing organization in India, distributing a questionnaire to 250 middle-level executives to examine the significance of the difference in dimensions of organizational performance with organizational size and alliance formations. The purpose of Jain (2012) research was to show the effect of

organizational size and alliance formations on organizational performance. The multivariate analysis of variance (MANOVA) method was used to determine whether the dependent variables (i.e., perceived effectiveness, employees' morale and turnover intention) were altered by the independent variables (i.e., organizational size and organizational alliance formation). Jain (2012) showed that the impact of organizational size can be seen on the measures of organizational performance in terms of organizational effectiveness, employee morale and turnover intention. This research study measured organizational size according to the number of number of employees, as per the measurement used by Jain (2012); Stanwick and Stanwick (1998).

4.3 Hypothesis Development

The purpose of this section is to empirically investigate the relationship between CSFs, the BSC and organizational performance. The aim of this research is to improve BSC implementation practice by identifying the related CSFs and assessing the impact of these on organizational performance. To achieve this aim, the conceptual framework presented in Section 4.2 will be used to develop the research hypotheses. Therefore, the relationship between the three components of the conceptual framework (i.e., CSFs, successful implementation of the BSC and organizational performance variables) will be studied through the research hypotheses in this section.

4.3.1 Corporate Purpose and the BSC

As mentioned in the previous section, the first construct of CSFs which is expected to influence BSC implementation is named the Corporate Purpose construct. It consists of three main variables (i.e., top management, BSC team and BSC perspectives) and is expected to play a significant role in BSC implementation.

Top management is the first factor in the Corporate Purpose construct and has a significant role in BSC implementation. This was proven by (Assiri, 2006; Assiri et al., 2006) in research in which a global survey was sent to 103 organizations in 25 countries. Assiri et al. (2006) confirmed that top management is essential to BSC success and should therefore discuss BSC issues during their meetings. Executives and senior managers should allocate appropriate time and resources to BSC implementation, while the involvement of top and middle managers in BSC implementation is essential to ensure its success.

The importance of executives and senior managers was outlined in the literature review section of this dissertation; executives' and senior managers' support and commitment has a positive influence on BSC implementation and has in fact been identified as the most important factor for successful BSC implementation (Andersen et al., 2004; Doran et al., 2002; Kaplan & Norton, 2001a; Lingle & Schiemann, 1996; Wang, 2005). Martinsons et al. (1999) conducted a study on building a specific BSC for information technology. The researchers confirmed that top management is required for BSC success; therefore, top management should create awareness of the concept of BSC, collect and analyze pertinent data and clearly define the company's objectives and goals.

In another study, conducted by Braam and Nijssen (2011), the researchers sent a questionnaire to 80 firms and the research outcomes showed that top management involvement can play a positive role in BSC implementation. On the other hand, in Behery et al. (2014) qualitative research in small to medium-sized enterprises in the UAE, the research outcomes confirmed that top management should facilitate BSC implementation through a good awareness of the BSC's importance. Kaplan and

Norton (2001) confirmed that the ownership and active involvement of the executive leadership team are the most important factors for successful implementation of the BSC.

Another qualitative study took two years and was conducted by Inamdar et al. (2002). The researchers surveyed executives in nine healthcare providers that were implementing the BSC. The executives in this research spoke positively about the application of the BSC to hands-on leadership. All participants stated that support is needed from top management and therefore it is essential to involve them to achieve successful implementation of the BSC. The executives reported that the BSC is a good tool for the healthcare sector to improve its performance and reach a high level of customer satisfaction. They disclosed that the BSC was implemented by applying five principles: translate the strategy into operational terms, align the organization to the strategy, make strategy every employee's job, make strategy a continual process and mobilize change through executive leadership.

The BSC team is the second factor in the Corporate Purpose construct and has a significant role in BSC implementation. This was proven by Assiri (2006) in his doctoral dissertation. He measured the BSC through five scales by sending a questionnaire to 103 organizations in 25 countries. In research conducted by Banchieri et al. (2016) the authors aimed to identify the main factors for BSC implementation. They measured the BSC team through seven scales and confirmed that the BSC team is one of the main dominant factors that could positively affect successful implementation of the BSC.

BSC team members should have a mix of skills required to communicate internally with the other stakeholders and solve problems (Michalska, 2005). The target of

training should include the BSC team and, therefore, it has been confirmed that creating a BSC team is critical for successful implementation of the BSC. The long-term value of the BSC is sustained by a complete team effort; the power of the team effort must extend to the formation and development of the BSC. On the other hand, effort from a single person in the BSC process does not have any positive impacts (Monczewski, 2003).

The manager of the BSC team should share information with the entire team in the organization. As per Andersen et al. (2004), the manager of the BSC team should work closely with executives to develop a top-down review and convey the right message to employees. Therefore, the person in charge of the BSC team should have the capability to communicate with all different levels within the organization. Niven (2002) emphasized the importance of training for the BSC team, stating that organizations should invest heavily in training to ensure success.

As the main outcome of research conducted by Bose and Thomas (2007), major changes usually take a long time to be implemented, particularly in large organizations. The BSC team needs to understand that the BSC is not an ongoing project, but a meta-change project that requires continuous monitoring. The team should drive the process to ensure successful implementation of the BSC in any business sector.

BSC perspectives are the third factor in the Corporate Purpose construct and have a significant role in BSC implementation. The BSC was designed based on four perspectives from its invention by Kaplan and Norton (1992): financial perspective, customer perspective, internal business perspective and learning and growth perspective. Many studies have explained the importance of BSC perspectives and found that there is no way to ensure success without having a template of these four

perspectives (Gurd & Gao, 2007; Kaplan, 2001; Kaplan & Norton, 1992, 1993, 1996, 2001a, 2001b; Karathanos & Karathanos, 2005; Niven, 2002).

Gurd and Gao (2007) reviewed and analyzed many case studies to understand the types of perspectives used in the healthcare sector. Other research, by Assiri (2006); Assiri et al. (2006), confirmed that the identification of BSC perspectives is crucial for the success of BSC implementation. In the current study, the researcher measured the BSC perspectives on three main scales adapted from Assiri's (2006) study. From the above discussion, the researcher built his first hypothesis, as follows:

H1: The critical success factor Corporate Purpose is positively associated with successful implementation of the BSC.

4.3.2 Integration Purpose and the BSC

As mentioned in the previous section, the second construct of CSFs that is expected to influence BSC implementation is named the Integration Purpose construct, which consists of four main variables (i.e., communication, training, KPIs and cause and effect).

Communication is the first factor in the Integration Purpose construct and has a significant role in BSC implementation (Akkermans & Van Oorschot, 2018; Amini & Babil, 2012; Assiri, 2006; Assiri et al., 2006; Banker et al., 2004; Kaplan, 1996; Lingle & Schiemann, 1996; Niven, 2002). Assiri et al. (2006) sent a global survey to 103 organizations in 25 countries and confirmed that the communication plan should be periodic between departments within the organization. Norton and Kaplan (1999) suggested that organizations should arrange for a quarterly plan at the corporate level, a monthly plan at the director level and as needed within the group. Various

communication tools can be used, such as executive announcements, videos, meetings, brochures and newsletters.

Lingle and Schiemann (1996) outlined six factors (i.e., organizational culture, alignment, review and update, communication and reporting, involvement of employees, management support and agreement on strategy) obtained from a questionnaire sent to a number of executives. These factors could help organizations to monitor progress. The findings showed that 60% of respondents in measurement-managed organizations rated strategy communication throughout the organization favorably. Therefore, effective communication demands a clear message for other stakeholders within the organization.

Another research, conducted by Amini and Babil (2012), consisted of a case study of Sahand Khodro Company of Tabriz in Iran. The BSC was implemented and discussed in monthly meetings to further the organization's objectives, as well as expressing the ideas of the personnel. They named these meetings BSC assessment meetings; therein, employees were able to translate their strategy into the organizational strategy map in the BSC.

Niven (2002) mentioned, in her book *Balanced Scorecard Step-by-Step*, the importance of the communication factor for maximizing performance and maintaining results for successful implementation in organizations. In other research, conducted by Banker et al. (2004), the authors sent a questionnaire to 480 participants in 32 groups. The research outcomes confirmed that graphical communication of the business strategy in the form of a strategy map should emphasize the link between the organization's activities and performance measures.

Training is the second factor in the Integration Purpose construct and has a significant role in BSC implementation (Andersen et al., 2004; Assiri et al., 2006; Kaplan et al., 2004; Niven, 2002; Rodgers, 2011; Waal, 2002; Zelman et al., 2003). As mentioned by Assiri et al. (2006), which is the main study referred to in this research, a global questionnaire sent to 103 organizations in 25 countries showed that training is essential for successful implementation of the BSC; therefore, employees' training and education initiatives may facilitate BSC implementation by providing them with the required knowledge to adapt the BSC, which leads to real change.

Andersen et al. (2004), in their case study research, highlighted that the link between strategy and operational initiatives is critical for delivering long-term benefits, whereas long-term strategic goals are expected to require substantial organizational, training and cultural changes from the organization. Zelman et al. (2003) used previous case studies on types of healthcare organizations that implemented the BSC. They confirmed that adoption of the BSC in healthcare organizations increases the need for valid, comprehensive and timely information.

KPIs is the third factor in the Integration Purpose construct and has a significant role in BSC implementation. This was proven by a number of researchers (Assiri, 2006; Assiri et al., 2006; Kaplan et al., 2004; Rodgers, 2011; Vokurka, 2004). Assiri et al. (2006) confirmed, through a questionnaire sent to a number of global organizations in 25 countries, that the BSC translates the organizational strategy into a set of KPIs and that these KPI measures are linked directly to the organization's goals. Therefore, it is essential to establish the relative importance of KPIs before implementing the BSC.

Rodgers (2011) mentioned 10 CSFs in his research on the NHS in the UK, one of which is KPIs. He put KPIs under the category of design and process. KPIs are

essential in order for leaders to be accountable for delivering the required objectives in their BSC. Vokurka (2004) confirmed that the BSC is an effective tool by which to translate the organization's strategy into a comprehensive set of performance measures. KPIs consist of any combination of reports and spreadsheets and can measure organizational performance by linking goals across the BSC perspectives (Assiri, 2006).

Cause and effect constitutes the fourth factor in the Integration Purpose construct and has a significant role in BSC implementation. This was proven by a number of researchers (Assiri, 2006; Assiri et al., 2006; Inamdar et al., 2002; Radnor & Lovell, 2003b; Sim & Koh, 2001). As noted by Assiri et al. (2006), the cause-and-effect factor is essential for establishing relationships between the organization's KPIs. They confirmed that the BSC can provide managers with a good understanding of the decisions they make by applying the cause-and-effect factor toward the organization's strategy.

Inamdar et al. (2002) surveyed executives in nine provider organizations with respect to implementing the BSC. The authors confirmed that the executives applied five core principles (i.e., translate the strategy into operational terms, align the organization to the strategy, make strategy everyone's job, make strategy a continual process and mobilize change through executive leadership). Therefore, the cause-and-effect factor is needed to align and connect BSC perspectives.

In another research, by Radnor and Lovell (2003b), who conducted a series of focus groups, the authors outlined a number of factors that could help in the successful implementation of the BSC in the NHS in the UK. The cause-and-effect factor is needed for successful implementation of the BSC in the healthcare sector and to

achieve good organizational performance. From the above discussion, the researcher built his second hypothesis, as follows:

H2: The critical success factor Integration Purpose is positively associated with successful implementation of the BSC.

4.3.3 Supporting Purpose and the BSC

As mentioned in the previous section, the third construct of CSFs that is expected to influence BSC implementation is named the Supporting Purpose construct and consists of six main variables (i.e., regular reporting, measurement assessment, problem solving, rewards to stakeholders, corporate alignment and benchmarking).

Regular reporting is the first factor in the Integration Purpose construct and has a significant role in BSC implementation (Andersen et al., 2004; Assiri, 2006; Assiri et al., 2006; Walker, 1996). The BSC has become a popular management reporting method (Sharif, 2002); therefore, one of the main characteristics of the BSC is monitoring and reporting on strategy execution (Lawson et al., 2003).

The research outcomes of Assiri (2006) confirmed that the regular reporting factor is critical in BSC implementation. This finding is consistent with those of Walker (1996), who showed that the BSC is a dynamic management system as well as an approach to performance management that requires a high level of regular reporting by staff. These research outcomes are also consistent with other researchers' findings, such as those by Debnath et al. (2004), Walker (1996) and Andersen et al. (2004).

Debnath et al. (2004) confirmed that executive sponsorship is required for building and therefore implementing the BSC to achieve desired results. The organization should set the right measurements for each perspective and the team should create their

own objectives for each perspective to follow up through the regular reporting factor. This will lead to adapting and changing the organization's strategies to fit the current situation of the BSC. In research by Walker (1996), the author mentioned that regular reporting will help senior managers to build their reports and review them effectively on a regular basis. This will lead to useful decisions taken in a process to improve BSC implementation. On the other hand, in research in Western organizations Andersen et al. (2004) highlighted that the BSC is an effective tool for providing linkages between quality management and the strategic processes.

Other positive outcomes were revealed in a study conducted by Waal (2003). The researcher used four case studies, with questions distributed in the format of a questionnaire via an interview and a research question list. The results indicate that there are 18 individual behavioral factors that seem to be important to the successful implementation and use of performance management systems such as the BSC. One of these factors is the control system, or regular reporting factor, which is essential for successful implementation of the BSC.

Measurement assessment is the second factor in the Integration Purpose construct and has a significant role in BSC implementation (Assiri, 2006; Assiri et al., 2006; Kaplan & Norton, 2001a; Niven, 2002; Rodgers, 2011). As discussed in Chapter 3, it is difficult for any organization to measure its performance without defining its objectives and goals and this makes it challenging for the firm to monitor its employees' progress. Measurement assessment is the key to organizations' success (Niven, 2002). The BSC will help organizations to review their measures frequently and therefore identify the right combination of measures (Kaplan & Norton, 2001b).

Assiri et al. (2006) sent a global questionnaire to 103 organizations in 25 countries and confirmed that measurement assessment is very important for successful implementation of the BSC. These findings are consistent with those of other research, such as by Waal (2003) and Doran et al. (2002).

Waal (2003) in his case study identified 18 individual behavioral factors that are important to the successful implementation and regular use of a performance management system. He explained that all employees should be involved in the performance measurement assessment of the BSC. The causal relationship between the performance measurement system, management control use and employees' behavior will lead to better performance measurement.

On the other hand, Doran et al. (2002) found, using two case studies in the hospitality industry, that the measurement assessment for financial and non-financial indicators can help managers to track the BSC's progress toward their goals and therefore detect needs for changes in the organization's strategy and actions. According to the research outcomes, managers indicated the usefulness of the BSC in the hospitality industry.

Problem solving is the third factor in the Integration Purpose construct and has a significant role in BSC implementation (Assiri, 2006; Assiri et al., 2006; Gooderham, 1997; Tucker et al., 2002; Wiersma, 2009). Problems are very common in organizations in all sectors; therefore, organizations have to have the right BSC team with the right skills to solve problems. As highlighted by (Michalska, 2005), a teamwork culture is essential to solve problems faced by organization. Successful organizations should identify problems through identifying the root causes, as well as hiring the right team to solve problems.

Assiri et al. (2006) used a global questionnaire to measure the effect of the problem-solving factor on successful implementation of the BSC in many industrial firms.

The research results are consistent with the research outcomes found by Tucker et al. (2002); Rooney and Hopen (2004).

Tucker et al. (2002) conducted a study comprising over 197 hours of observations of hospital nurses, finding that problems occur frequently in organizations and that organizational learning can occur through the problem-solving technique by identifying and resolving problems that occur in daily work. Team problem solving is very important for any organization's continuous improvement.

Rewards to stakeholders are the fourth factor in the Integration Purpose construct. Rewards can be divided into intrinsic and extrinsic factors (Franco-Santos et al., 2004). Intrinsic factors are divided into monetary and non-monetary, which may take the form of direct, such as base pay and incentives, or indirect compensation.

Rewards to stakeholders have a significant role in BSC implementation, as proven by Assiri et al. (2006), Assiri (2006), Behery et al. (2014), Kaplan and Norton (1996) and Olve et al. (1999). Rewards and recognition or rewards to executives have to be directly linked with the results of BSC measures (Kaplan & Norton, 2004b).

The research outcomes of Assiri et al. (2006) study are consistent with those of Behery et al. (2014), which indicate that executives should link employees' performance and rewards. This is also consistent with the outcomes found by Olve et al. (1999) in their book *Performance Drivers: A Practical Guide to Using the Balanced Scorecard*. The authors confirmed that rewards offered to managers have to be tied to the results of BSC measures. They also argued that the potential problem with rewarding

performance in terms of the BSC is that “the balance among several different measures may be destroyed when these measures are combined into a single index of benefit”.

Corporate alignment is the fifth factor in the Integration Purpose construct and is essential for BSC implementation success. The integration of both intangibles and tangibles has to be aligned with the organizational strategy to improve organizational performance. The importance of the corporate alignment factor in the BSC has been proven by Assiri et al. (2006), Assiri (2006), Lingle and Schiemann (1996) and Kaplan and Norton (2004b).

The research outcomes found by Assiri et al. (2006) are consistent with those of other studies, such as that by Albright et al. (2005), on building a successful BSC program. Albright et al. (2005) conducted a study in a commercial bank and identified an 11-step business modeling approach in three interrelated phases to link the organization’s strategy to the BSC. Phase 1 requires the organization to define the main four components of the model; phase 2 requires it to create an “if-then” hypothesis statement that interrelates the components of its business model; and phase 3 requires the organization to select performance measures for each of the four BSC perspectives.

This business model will help to encourage team members to report any issues in BSC implementation to the organization’s executives. The executives should be aware of common bias and consider the best ways to minimize its effect on BSC implementation. Scorecard cascading is an effective way to link the organizational perspectives together; each unit should develop its own scorecard containing the measures for achieving the organization’s goals.

Lingle and Schiemann (1996) distributed a questionnaire to a number of US companies and rediscovered the criticality of measurement as an important tool. Measurements play an important role in translating the business strategy into results. Top-performing organizations have to distinguish themselves from their competitors via six characteristics (i.e., having agreed measurement with managers, clear balance between tangible and intangible measurement, linking strategic measures to operations, updating the scorecard frequently and clearly communicating measures and progress to all stakeholders). The study by Lingle and Schiemann (1996) confirmed that effective measurement is essential for the organization's executives and that this will lead to better organizational performance through applying the BSC tool.

Benchmarking is the sixth factor in the Integration Purpose construct. It represents a way to move away from traditional approaches. Benchmarking is the process of identifying the highest standards of excellence for products and services that can keep the improvement process up to the required level of high quality (Bhutta & Huq, 1999). The benchmarking factor has a significant role in BSC implementation, as proven by Assiri et al. (2006), Assiri (2006), Kaplan (2001), Zairi (1992), Zairi and Youssef (1995), Ahire et al. (1996) and Goldberg and Godwin (2004).

As mentioned in Chapter 3, benchmarking is a modern factor that could help in successful implementation of the BSC by assessing and improving the organization's financial performance. Benchmarking can guide the organization to improve its efficiency and effectiveness by reducing waste (Goldberg & Godwin, 2004).

As proved by Assiri et al. (2006) through a global questionnaire distributed to many industrial firms in 25 countries, benchmarking is a powerful tool for continuous improvement for organizations and therefore for examining BSC implementation in

today's successful companies. Assiri et al. (2006) research outcomes are consistent with those of other researchers, such as Zairi (1992), Kaplan and Norton (2001a) and Bhutta and Huq (1999).

Bhutta and Huq (1999) conducted case studies on Xerox and Kodak. They suggested a five-step benchmarking model (i.e., plan the study, form the benchmarking team, identify partners, collect and analyze information and adapt and improve). Improvement is a continuous process for organizations to benchmark their products against competitors, who probably continue to improve their products as well. This kind of improvement will lead to a high level of organizational performance. From the above discussion, the researcher built his third hypothesis, as follows:

H3: The critical success factor Supporting Purpose is positively associated with successful implementation of the BSC.

4.3.4 Organizational Performance and the BSC

Organizational performance is an important indicator of organizational success (Stegerean & Gavrea, 2010), which, according to De Carvalho et al. (2016), is related to a number of factors (i.e., employee skills levels, personal development, quality of strategic planning and the ability to understand the dynamics of the business environment). Performance measurement is receiving more attention nowadays as many organizations worldwide attempt to implement a new measurement system to obtain a high level of organizational performance.

There are several methods in academia for measuring organizational performance and these can be classified into two categories (i.e., financial and non-financial performance measurement). As per the conceptual framework of this research

provided in Chapter 4 (Figure 4.1), organizational performance is intended to be measured through four main variables (i.e., TQM, innovation, competitiveness and CSR). The researcher selected the abovementioned four variables from a wide pool in the literature for organizational performance measurement due to this research's aim of providing a measurement of organizational performance in the healthcare sector.

TQM is the first variable for organizational performance measurement in this research. TQM has been shown to have a positive impact on organizational performance measurement (Ahire et al., 1996; Singh et al., 2018). TQM has been adopted at many organizations worldwide in many sectors, with positive outcomes in terms of organizational performance.

TQM is used by organizations that are looking to compete with high-quality products that will encompass their effort to focus on customer satisfaction, employees' performance and the cost of production with a zero defect level.

Other research, conducted among five manufacturers and three service companies in North India by Singh et al. (2018), measured the effect of TQM on organizational performance. The researchers measured the TQM scales in five general categories (i.e., organizational leadership, customer satisfaction and relationship, human resource focus, strategic planning and development and supplier quality management). They collected 236 samples from eight small and medium-sized manufacturing and service organizations. The research showed a positive impact of TQM on organizational performance.

Other research in the higher education sector in Turkey by Bayraktar et al. (2008) identified 11 scales of TQM through a questionnaire sent to 144 respondents and

including 61 items. The researchers emphasized that the operational measures of TQM would be useful for decision makers and researchers who are involved in TQM. The TQM variable encompasses the organization's efforts toward customer satisfaction through continuously increasing the performance of its goods, services and employees. The continuous improvement of TQM will lead to continuous learning and leadership flexibility that will result in increasing organizational performance.

In research conducted by Calvo-Mora et al. (2013), the authors used factorial analysis and structural equations (PLS) on a sample of 116 private firms. The main outcomes were represented by identifying three dimensions of TQM (i.e., management and human resources, strategic management of partnerships and resources and processes management). The three dimensions will help to build the right management system that will significantly affect the organization's results and performance.

Innovation is the second variable for organizational performance measurement in this research. Innovation is a key factor for success for any organization nowadays and, therefore, helps firms differentiate themselves. Innovation is one of the most important determinants of organizational performance and has a positive influence on organizational performance (Panayides, 2006; Sethibe & Steyn, 2016; Yamin et al., 1999).

Implementation of the innovation variable is crucial for the development of organizations' competitiveness and effectiveness. Innovation will help organizations to create new customer value, as well as new value for the business (Blacha & Brzoska, 2016). Blacha and Brzoska (2016) used the BSC for measuring the value created through innovations and measuring the results of the organization's activity. The

research concluded that the BSC is an appropriate tool for measuring the effects of various types of innovation in organizations.

The relationship between innovation and organizational performance was studied by Yamin et al. (1999). The researchers collected the required data from 236 manufacturers in Australia between 1991 and 1992. Their research confirmed that organizational innovation has a positive impact on organizational performance.

Research conducted by Panayides (2006) examined the consequences of the innovativeness of logistics service providers in Hong Kong for organizational performance. The research used structural equation modeling (SEM) to investigate the hypothesized relationship. The empirical findings supported the hypothesis that innovativeness would improve the quality of a logistics service and in turn would lead to high organizational performance.

Innovation relies on the organization's culture. Many executives want their organizations to be more innovative in the hope that this will enhance organizational performance. Executives are often impressed by the ability of young companies, such as Google and Facebook, to create and market their products effectively (Rao & Weintraub, 2013).

Competitiveness is the third variable for organizational performance measurement in this research. The concept of competitiveness has long been debated by economists and researchers (Stefan et al., 2016). Competitiveness is the ability to generate and maintain a competitive advantage (Eiriz et al., 2010). Any organization will be competitive if it can produce products that are highly superior at lower costs (Buckley

et al., 1988). Competitiveness is the ability to compensate employees and provide good returns to shareholders.

Tracey et al. (1999) distinguished between organizations that invest in technology and develop mechanisms for their managers to participate in strategy formulation and other organizations that do not. The former will lead to high levels of competitive capabilities, which in turn will help organizations to improve their performance.

Stefan et al. (2016) studied the sustainable competitiveness of healthcare organizations in Romania. They designed a 51-item questionnaire and sent it to 291 respondents working for 12 Romanian healthcare organizations. Factor analysis revealed four dimensions of sustainable competitiveness in healthcare (i.e., economic, quality, social and strategic). The research outcomes confirmed the contribution of leadership and managerial processes to enhancing the influence of all other dimensions and increasing the sustainable competitiveness of healthcare organizations.

Eiriz et al. (2010) proposed a conceptual framework to evaluate the relationship between the organization, strategic behavior and the performance of hospitals. Competitiveness was analyzed along three main dimensions (i.e., organization, strategic behavior and performance). The research outcomes confirmed that hospital competitiveness can provide insights for hospitals' managers and decision makers and this will help to identify the interaction between organizational performance and strategy.

Buckley et al. (1988) identified four scales of competitiveness (i.e., national, industry, firm and products) and considered the level at which measurement of performance takes place. Their findings confirmed that a single measurement cannot capture all

elements of competitiveness. It is essential to examine organizational performance, potential and management process in order to measure changes in competitiveness.

CSR is the fourth variable for organizational performance measurement in this research. CSR has been the subject of academic research for decades and is now seen as an integral part of corporate strategy. Many researchers have written on the topic of CSR (Anderson & Frankle, 1980; Carroll, 1979; Cochran & Wood, 1984). CSR is an important focus for organizations related to corporate decision making, the relationship between an organization's social and ethical policies and its financial performance (Arlow & Gannon, 1982). The CSR variable is crucial for organizations because it influences all aspects of the organization's operations, as well as its relationships with stakeholders.

CSR has been defined in a number of different ways by researchers, related to economic, legal and voluntary activities (Carroll, 1979). It has been suggested that the following scales be included to measure CSR, such as profit making (Milton, 1962); going beyond profit making (Davis, 1960); going beyond economic and legal requirements (McGuire et al., 1988); voluntary social activities; economic (Manne & Wallich, 1972), legal and voluntary activities (Steiner, 1972); responsibilities to social problems areas (Eells & Walton, 1969); and providing ways for social responsiveness (Ackerman & Bauer, 1976).

From an academic point of view, opinions vary about the interaction between financial performance and CSR (Scholtens, 2008). Many researchers have reported positive correlations between CSR and organizational financial performance (Arsoy et al., 2012; Chang et al., 2008; Choi et al., 2010; Javeed & Lefen, 2019; Lin et al., 2009; Margolis & Walsh, 2001; McGuire et al., 1988); however, on the other hand some

researchers have mentioned a negative relationship between CSR and financial performance (Freedman & Jaggi, 1982; Ingram & Frazier, 1983) in that high cost is connected to high responsibility for results that will lead the organization into a disadvantage compared to other organizations with fewer social responsibilities.

Arsoy et al. (2012) used principal component analysis as a basic multivariate statistical analysis approach for 28 companies ranked with high CSR on the Istanbul Stock Exchange. The researchers investigated the relationship between CSR and financial performance and confirmed that there is a positive correlation between CSR and organizational performance.

Lin et al. (2009) examined the impact of CSR on organizational performance. The researchers extracted details of 1,000 Taiwanese organizations between 2002 and 2004 that were evaluated by Common Wealth Magazine. These organizations included their expenditures for research and development and identified their charitable expenditures as contributors to CSR. The researchers tested the association between the rate of return for ethical firms by the Taiwan Stock Exchange Index and then tested the association between the rate of return on assets and the number obtained as CSR to understand the relationship between the corporate financial performance and corporate social responsibilities. This helps to measure the relationship between CSR and organizational performance. The research findings suggest that if CSR activities do not increase the organization's profitability, then CSR may be instrumental in reducing the risk of damage to brand evaluations in the long run; CSR in this case is akin to an insurance policy.

Choi et al. (2010) studied the empirical relation between CSR and organizational financial performance in 1,122 organizations in Korea during 2002 and 2008, where

CSR was measured by the index of the Korea Economic Justice Institute. The research outcomes confirmed that there is a significant relationship between organizational financial performance and the stakeholder-weighted (reflecting the importance of each stakeholder group based on the industry to which the individual firm belongs) CSR measure. From the above discussion, the researcher built his fourth hypothesis, as follows:

H4: Successful implementation of the BSC impacted by CSFs is positively associated with organizational performance.

4.4 Conclusion

The chapter presented an overview of how the conceptual framework and the hypotheses were developed. The conceptual framework is divided into three main parts. The first part shows how the CSFs can be considered as three main constructs, the second part pertains to successful implementation of the BSC and the third part relates to organizational performance. The researcher proposed four hypotheses, which were discussed with valid arguments using a number of relevant studies. Therefore, the researcher has built his conceptual framework on a solid foundation and sound interpretation. The first three hypotheses relate to the notion of the effect of the three constructs of CSFs on BSC implementation. The fourth hypothesis was formulated in line with the assumption that successful implementation of the BSC will positively affect organizational performance. The next chapter will present details of the research methods used to test these hypotheses.

Chapter 5: Research Methodology

5.1 Introduction

In Chapter 4, the researcher presented the conceptual framework of the research by identifying the independent, dependent and control variables and then explained the development of the research hypotheses. The aim of this research is to improve the practice of BSC implementation by identifying the CSFs and assessing the impact of the theory on organizational performance measurement.

The aim of this chapter is to present the methodology used for the research study. The remainder of this chapter is structured in five sections. Section 5.2 presents the research strategy and paradigm. Section 5.3 discusses the research conceptualization and operationalization. Section 5.4 explains the validity and reliability assessments of the research. Section 5.5 describes the data collection method used in this study and finally Section 5.6 concludes the chapter.

5.2 Research Background

This research study aims to establish a link between BSC theory and the BSC implementation process. To do so, it will identify an appropriate research strategy, paradigm and methodology to conduct the research in the context of the healthcare sector in the UAE.

The nature of any research depends on the level of knowledge in the research area investigated (Elbanna et al., 2015); thus, in this study exploratory investigation is required prior to hypothesis testing to obtain good knowledge of the current situation regarding BSC implementation in the UAE (Elbanna et al., 2013).

Prior to conducting the research study, the researcher was not fully aware of the status of BSC implementation in the healthcare sector in the UAE, except for information taken from studies conducted in Saudi Arabia in the healthcare sector (Al Thunaian, 2014); in the Saudi Telecom corporation and other case firms (Assiri, 2006); in hospitality (El-Hindawy & Alamas, 2014); and in the service sector (Alomiri & Alroqy, 2019). The purpose of Al Thunaian (2014) research was to evaluate implementation of the BSC in King Faisal Specialist Hospital and Research Centre as a case study. Another study in Saudi Arabia conducted by Assiri et al. (2006) proposed a model for the BSC consisting of 27 CSFs derived from a global questionnaire of 103 organizations in 25 countries that have already implemented or are in the process of implementing the BSC. Therefore, an exploratory approach was adopted before formulating the conceptual framework, as presented in Chapter 4.

To obtain a good understanding of BSC implementation in the healthcare sector in the UAE, the researcher needed to interview a number of senior managers as well as professionals as part of the pilot study of the research. The interviews were conducted with professionals holding the title of chief executive officer, chief medical officer, chief financial officer (Chow et al., 1998; Inamdar et al., 2002), director of strategic planning, or chief strategy officer (Inamdar et al., 2002). Pre-testing was an essential stage for this research to ensure that the respondents would understand the measurement scales in the study. The research questionnaire was sent to 10 academic researchers experienced in questionnaire design and seven experts in BSC implementation in the UAE.

The researcher had to apply for official approval from the main regulatory authorities in the UAE (i.e., HAAD in Abu Dhabi, DHA in Dubai and MOHAP in Northern

Emirates), as explained in Chapter 2, to get access to private hospitals to collect the data required to conduct the research. The total number of private hospitals contacted was 73; the majority of hospitals (60 out of 73) are based in Abu Dhabi and Dubai Emirates due to the large healthcare sectors in these two Emirates.

The final sample size of the study comprised 140 people. Two participants were selected from each private hospital. The response rate is 81.5%, which is very high due to the researcher's strong connections in the healthcare industry. In order to maximize the response rate, the researcher adopted a push-and-collect approach for the collection of questionnaires.

A survey questionnaire was sent to the research sample to collect the primary data. The questionnaire was used to validate the conceptual framework of the research by testing the research hypotheses on the effect of CSFs on BSC implementation and its impact on organizational performance.

In the second stage, PLS was used to fit the conceptual model and test the research's goodness of fit by assessing its scale validity and reliability (Elbanna et al., 2015). Bootstrap tests were used to determine the significance of the relationships between the latent variables, which represent CSFs, successful implementation of the BSC and organizational performance.

5.2.1 Research Strategy

The research strategy is an important part of this study; however the main task in designing a piece of social research is to determine how to answer the research questions (Blaikie, 2007). Following a procedure in a logical way to generate new

knowledge is essential. Research strategies can provide a starting point and a set of questions such as “what” “how” and “why” can be answered.

Establishing a connection between theory and the intended research will improve the goal of social science. This connection can be established via two types of research strategies: “theory then research” or “research then theory”. The former usually starts with a research hypothesis regarding the purpose of the research and data analysis then confirms or disconfirms the hypothesis.

Reynolds (1979) stated that this involves five stages (i.e., constructing the theory or conceptual model, building up a number of propositions that describe the relationships between its constituents, designing the research instrument to examine the model, testing the proposition against the data collected and refining the model and its associated theories).

As confirmed by (Blaikie, 2007), following the choice of research problem and research questions, research strategy selection is the most important decision that the researcher has to make. In this study, the researcher used a “deductive” strategy and a “positivist” paradigm. The researcher built his research strategy on having a known theory the BSC and then testing the effect of BSC implementation on organizational performance in the healthcare sector in the UAE. He then constructed the theory and deduced hypotheses.

As shown in Table 5.1, there are four types of research strategies (i.e., inductive, deductive, retroductive and abductive) that are based on four styles of reasoning (Blaikie, 2007). The inductive and deductive strategies are based on linear reasoning, while the other types, retroductive and abductive, are based on cyclic or spiral

processes. In general, the most well-known strategies are inductive and deductive and are frequently presented as the only two options available. Both strategies have dominated philosophical views on the processes by which theories are generated in both the natural and the social sciences (Blaikie, 2007).

Table 5.1: The logic of the four research strategies

Strategy/ Element	Inductive	Deductive	Retroductive	Abductive
Aims	To establish universal generalizations to be used as a pattern explanation	To test theories, to eliminate false ones and corroborate the survivor	To discover underlying mechanisms to explain observed regularities	To describe and understand social life in terms of social actors' motives and understanding
Start	Accumulate observations or data Procedure generalizations	Identify a regularity to be explained Construct a theory and deduce hypotheses	Document and model a regularity Construct a hypothetical model of a mechanism	Discover everyday lay concepts, meanings and motives Produce a technical account from a lay account
Finish	Use these "laws" as patterns to explain further observations	Test the hypotheses by matching them with data	Find the real mechanism via observation and/or experiment	Develop a theory and test it iteratively

Source: Blaikie (2007)

The first type of research strategy is inductive: it starts with data collection, followed by analysis of the collected data and proceeds to derive generalizations using inductive logic (Blaikie, 2007). The researcher has to find an explanation and theoretical arguments to assess the theory by deducing one or more hypotheses from the main theory and then collecting appropriate data. This type of research strategy can be used

in the social sciences to describe the characteristics of people and their behaviors, as well as their relationships.

The second type of research strategy is deductive; it is sometimes referred to as the hypothetico-deductive method, or the method of conjectures and refutation. The deductive strategy usually begins with a question or a problem that needs to be understood or explained (Blaikie, 2007). The research has a well-known theory and the researcher has to deduce or falsify the hypotheses and then measure it. The deductive research strategy usually starts with a stage to produce a possible answer to the research questions to look for a real explanation for the problem in the existing theory or to invent a new theory.

The third type of research strategy is retroductive. It starts with an observed regularity and then seeks different types of explanations. It specifically begins from an empirical phenomenon and aims to build a hypothetical model that demonstrates the mechanism responsible for producing that phenomenon (Meyer & Lunnay, 2013). Retroduction is a process of working back from data to an explanation by using creative imagination and analogy; the retroductive strategy can provide a means of answering “why” questions.

The fourth type of research strategy is abductive; the starting point is the social world of the social actors being investigated (Blaikie, 2007). The researcher should target the social actors’ everyday concepts, understanding them to produce technical and scientific descriptions that can be used to interpret other typical actions (Aldhaheri et al., 2018). It is essential that the researcher is immersed in the social situation and relies on his or her personal experience for understanding the reasons accompanying the social activities.

5.2.2 Research Paradigm

The paradigm is a conceptual framework consisting of a set of assumptions that will act as a guide for the researcher to conduct his or her research study (Guba & Lincoln, 1994). Social researchers approach research problems from different theoretical and methodological perspectives by using research paradigms (Blaikie, 2007). The research paradigm refers to a combination of ontological and epistemological assumptions: (1) ontological assumptions refer to the social reality being investigated and (2) epistemological assumptions represent the way knowledge is obtained about that reality, as well as the relationship between the reality and the researcher, which corresponds to the researcher's stance. There are four types of research paradigm: positivism, critical rationalism, classical hermeneutics and interpretivism (Blaikie, 2007).

The first type of research paradigm is positivism. It is concerned with a single truth that can be observed by the human senses. The acceptable reality should be derived from the experience and evidence provided by the senses. As per Blaikie (2007), positivism consists of a concept that corresponds to real objects, which should not be contaminated by any theoretical notions. The researcher can use different methods, such as experimental research and survey research, to falsify the support theory.

The second type of research paradigm is critical rationalism, this philosophy was developed during the middle of twentieth century by Karl Popper. The approach was built on the naturalistic idea that society has developed through a process of solving problems using trial and error. Critical rationalism adopts the position that the natural and social sciences differ in their content. It incorporates the cautious realist ontology and the epistemology of falsificationism. It is related to the critical method of trial and

error wherein theories are tested against reality. In critical rationalism there is no difference between observational and theoretical statements; all observations are theory-dependent and occur within a horizon of expectations (Blaikie, 2007).

The third type of research paradigm is classical hermeneutics. Hermeneutic means making the obscure plain, but is generally translated as “to interpret” (Blaikie, 2007). Hermeneutics is concerned with the interpretation of texts; it is the art of understanding and of making oneself understood. Hermeneutics is a specific paradigm in interpretative sociology.

The fourth type of research paradigm is interpretivism and pertains to the view that there is relationship between the natural and social sciences. Interpretivism is about the study of phenomena required for understanding the social world that people have constructed and which they reproduce through their continuing activities. Thus, interpretivism can be used to study consumer behavior that focuses on the act of consuming rather than on the act of buying (Blaikie, 2007).

This study adopted the positivist research paradigm, upon which the quantitative research questions are based. Quantitative research aims to share a language and logic from positivism that separates it from research techniques based on other approaches (Neuman, 2007). The purpose of quantitative research is to discover a causal relationship, or explanation of a relationship, by comparing the research variables under evaluation or measurement (Churchill & Iacobucci, 2006; Creswell, 1994). The reason for adopting a positivist philosophy in this study is that the foundational belief of the study and the focus on studying BSC implementation in the healthcare sector will help in designing the required research method.

The chosen paradigm considers the research objective that the study will fulfill. Therefore, the researcher will be able to collect a variety of data that is necessary to complete the research study. Greater reliability in data collection will lead to more precise research outcomes for recommendations and suggestions to executive management in the healthcare sector in the UAE.

To empirically validate the research constructs, a deductive, quantitative approach was utilized, in which quantitative data were collected. A survey instrument (questionnaire) was used to measure the respondents' responses to ordinal items (such as ratings) using a 5-point Likert scale.

5.3 Research Process

The previous section highlighted the research strategy and paradigm. The present section describes the research process used to generate the conceptual framework of the research, which is related to the effectiveness of BSC implementation, CSFs and organizational performance.

The first step of this process, called conceptualization, focuses on development of the conceptual framework, showing possible influential critical factors based on a comprehensive literature review in the healthcare as well as non-healthcare sectors. The second step of the research process is to operationalize the conceptual framework, as presented in the following section.

5.3.1 Conceptualization

Measurement is a fundamental concept when conducting research in social sciences. It is the process of assigning values to variables based on a set of rules (Blaikie, 2007). As mentioned in Chapter 1, the main objective of this research is to examine the

effectiveness of BSC implementation on organizational performance in the healthcare sector in the UAE.

As per the conceptual framework of the research shown in Figure 4.1, variables that are not measured directly are represented in the model as circles or ovals; that is, the main three constructs of CSFs (i.e., corporate purpose, integration purpose and supporting purpose), successful implementation of the BSC and organizational performance. The other variables that can be measured directly, called indicators, are represented in a different shape, such as rectangles for the 13 CSFs and 4 organizational performance variables; meanwhile, the relationships between constructs and their indicators are shown as arrows.

The measurement theory specifies how the latent variables are measured. In general there are two types of measurement (Blaikie, 2007): reflective and formative. In the reflective model the direction of the arrows goes from the construct to the indicator variables, whereas in the formative model the direction of the arrows goes from the indicator variables to the construct. The researcher should pay close attention to whether the indicators should be specified as reflective or formative when conceptualizing a given construct (Diamantopoulos & Winklhofer, 2001).

In the conceptual framework outlined in Chapter 4, the CSF variables are modeled using a reflective measurement model, whereas the directional arrows point from the constructs (i.e., corporate purpose, integration purpose and support purpose) to the indicator variables, in accordance with the assumption that the constructs give rise to the corresponding indicator measurements. A similar concept has been applied for measuring organizational performance. The directional arrows point from the

construct (organizational performance) to the four indicator variables (i.e., TQM, innovation, competitiveness and CSR).

The conceptual research model shows the constructs and the path relationship between the CSFs, successful implementation of the BSC construct and the organizational performance construct. The direction of effects in the model goes from left to right; the items on the left of the path model are independent variables and all items on the right side are dependent variables. However, variables may also serve as both independent and dependent variables.

Covariance-based SEM is a unique tool for social science researchers to test their theoretical models (Wold, 1982). Its application expanded dramatically with the availability of computers and software (Blaikie, 2007). Tenenhaus (2008) confirmed that “two complementary schools have come to the field of Structural Equation Modelling (SEM), the first one is covariance-based SEM developed by Karl Joreskog and the second is the component-based SEM developed by Herman Wold under the name PLS (Partial Least Squares). The PLS statistical technique is used to test the goodness of fit of the conceptual model and assess the significance of possible relationships among the CSFs”.

Researchers usually rely on univariate and bivariate analysis to understand data and relationships, whereas multivariate analysis is necessary to apply a more sophisticated method to understand complex relationships associated with the research directions in the social sciences. Multivariate analysis involves the application of statistical methods that simultaneously analyze multiple variables. The variables typically represent measurements associated with individuals, events, activities and situations. These

measurements are usually obtained from surveys or observations that can be collected from primary data.

The PLS statistical technique has been used in various studies to analyze results. Research of Rafiq et al. (2020) on two case studies in Pakistan (i.e., China National Electric Engineering Company and China Power Hub Generation Company) adopted four perspectives of BSC. SmartPLS was then adopted to measure six items for perceived organizational performance and six items for sustainable development.

PLS has also been used by many researchers from different disciplines, such as strategic management (Hulland, 1999), information systems (Dibbern et al., 2004) and marketing (Reinartz et al., 2004).

The conceptual framework shown in Figure 4.1 consists of two different dimensions. The first-order dimension relates to a single layer of constructs, whereas the second-order dimension relates to a multi-dimensional measurement model, contains several layers of constructs and involves a higher level of abstraction (Jarvis et al., 2003; MacKenzie et al., 2005; Ringle et al., 2012). The aim of this research study is to improve BSC implementation in the UAE by identifying CSFs that could positively affect BSC implementation in the healthcare sector and assess the impact of such implementation on organizational performance. The three groups of purpose constructs are phenomenon-related and cannot be observed directly. Instead, they can be inferred by a set of observed indicators (i.e., CSFs).

The first-order dimension of the hierarchical structural model is represented by the three purpose constructs (i.e., corporate purpose, integration purpose and supporting purpose) and the second-order dimension is represented by successful implementation

of BSC construct. A repeated indicator approach (Becker et al., 2012; Hair Jr et al., 2016) was used to estimate the parameters of these hierarchical latent variables models. In this approach, the indicator variables are used twice: (1) as measurements of the first-order constructs (i.e., corporate purpose, integration purpose and supporting purpose) and (2) as measurements for the second-order construct (i.e., successful implementation of the BSC construct). Thus, the values of 13 CSF indicators (top management, BSC team, BSC perspectives, communication, training, KPIs, cause and effect, regular reporting, measurement assessment, problem solving, rewards to stakeholders, corporate alignment and benchmarking) were used as reflective measurements of their corresponding first-order constructs (i.e., corporate purpose, integration purpose and supporting purpose) and as reflective measurements of successful implementation of the BSC construct.

5.3.2 Operationalization

In the operationalization stage, the level of data is identified and measures are formulated into the research instrument, such as the research questions. A survey questionnaire is used as the research instrument for primary data collection on CSFs and organizational performance variables (observed data). The impact of these variables on their respective constructs is measured through a number of questions with an ordinal level of measurement on a 5-point Likert scale (Strongly Disagree, Disagree, Neutral, Agree and Strongly Agree).

Each reflective indicator was measured using a set of questionnaire items as an example for the organizational performance variables (i.e., 12 items for TQM, 8 items for innovation, 6 items for competitiveness, 12 items for CSR). Moreover, the CSFs as a reflective indicator were measured using a set of three to four items (i.e., top

management, BSC team, BSC perspectives, communication, training, KPI, cause and effect, regular reporting, measurement assessment, problem solving, rewards to stakeholders, corporate alignment and benchmarking).

These questionnaire items were used to operationalize the measurement model and were developed based on the comprehensive literature review conducted in Chapter 3. A brief description of each item in the questionnaire is mentioned under each variable in Chapter 4. The next step of operationalization is to assess the validity and reliability of this instrument.

5.4 Validity and Reliability Assessment

It is essential for the research to ensure the validity and reliability of the conceptual model indicators before proceeding with data collection (Diamantopoulos & Winklhofer, 2001). This section will examine the assessment of research quality by testing the validity of the measurement instrument (survey questionnaire) and then its reliability in generating stable measurements.

5.4.1 Validity Assessment

Validity in research surveys relates to the extent to which the survey measures the relevant dimensions. This applies to both research parts (design and method). Validity assessment refers to evaluation of the suitability of the measurement instrument to measure its associated model indicators (Leedy & Ormrod, 2005) and ensuring that a correct measurement concept is obtained to understand the meaning of indicators and their related survey instruments (Hair et al., 2006).

According to Cavana et al. (2001), the validity of measures can be assessed based on four types of validation: face validity, construct validity, content validity and criterion-

related validity. Face validity refers to assessing the simplicity and accuracy of measurement instruments through a pilot survey. It is often regarded as the most important validity assessment concept (Gallagher et al., 2008). It was applied in this research to evaluate the validity of the survey questions with regard to measuring the reflective indicators and accordingly assess whether operationalization of the measure accurately reflects its construct.

5.4.2 Reliability Assessment

The reliability of the research method refers to the stability and consistency of each construct in measuring the underlying concept (Sekaran & Bougie, 2003). In other words, reliability analysis allows the researcher to study the properties of each scale and the items that compose it. As described by Leedy and Ormrod (2005), a measurement instrument is considered reliable when it constantly yields a certain result.

Cronbach's alpha (α) is an estimate of the internal consistency of the scores that can be derived from the scale's measurement composing a construct. It is calculated for each construct as a measure of the homogeneity or the average correlation among the scales of the construct. It is the most common approach for assessing construct reliability. An alpha coefficient between 0.70 and 0.90 indicates an acceptable consistency of the construct (Ntoumanis, 2003), while an alpha value of 0.70 or higher is often considered as the criterion for internal consistency of a construct (Hair Jr et al., 2016; Ntoumanis, 2003). It is suggested by Nunnally (1978) that alpha values between 0.50 and 0.60 are acceptable in the early stages of research.

In this research study, Cronbach's alpha (α) was used, using the reliability command in SPSS, to assess the reliability of the measurement scales of 17 variables (consisting of 80 items). The findings showed excellent internal consistency of 0.984 for 80 items categorized into 17 variables for CSFs and organizational performance (Table 5.2).

Table 5.2: Results of Cronbach's alpha (reliability analysis) of the scale items

Cronbach's alpha	No. of items
0.984	80

The detailed results of the Cronbach's alpha test are illustrated in Table 5.3, which shows the alpha coefficients for each indicator, as well as the corresponding construct.

Table 5.3: Results of Cronbach's alpha (reliability analysis) of the scale items per group

No of var.	Indicator	Construct	No. of items	Cronbach's alpha	Group Cronbach's alpha
1	Top Management	Corporate Purpose	4	0.910	0.953
2	BSC Team		3	0.950	
3	BSC Perspectives		3	0.962	
4	Communication	Integration Purpose	3	0.950	0.937
5	Training		4	0.946	
6	KPI		3	0.778	
7	Cause and Effect		3	0.968	
8	Regular Reporting	Supporting Purpose	3	0.873	0.937
9	Measurement Assessment		3	0.914	
10	Problem Solving		3	0.700	
11	Rewards to Stakeholders		4	0.852	
12	Corporate Alignment		3	0.975	
13	Benchmarking	Organization Performance	3	0.690	0.951
14	TQM		12	0.895	
15	Innovation		8	0.898	
16	Competitiveness		6	0.863	
17	CSR		12	0.863	

5.5 Data Collection

Once the measurement model has been conceptualized, identified and operationalized, both the validity and the reliability of the survey instrument can be assessed (Aldhaferi et al., 2018). The data collection section describes the data collection process used to gather observations related to the BSC model indicators, which in turn provide the conceptual model with data necessary to test the model “Effectiveness of BSC implementation on organizational performance”.

5.5.1 Data Collection Process

The aim of this research is to explore the effectiveness of BSC implementation on organizational performance in the healthcare sector in the UAE. Evaluation of the survey instrument was based on a pilot study of 17 respondents from 6 hospitals (3 hospitals based in Dubai, 2 in Sharjah and 1 in Ajman). This assessment helped the researcher identify the variables relevant to the healthcare industry, which led to the development of a conceptual model for BSC implementation in healthcare with the UAE as a case study.

The researcher’s long work experience in the healthcare sector was valuable for the data collection process. Data collection had to comply with the rules of the main regulatory authorities in the UAE (i.e., HAAD, DHA, DHCC and MOHAP), which included applying for approval to collect the data from each authority. This was a time-consuming process that lasted up to five weeks. The acquired approvals are as follows:

1. □ HAAD approval to approach the private hospitals in Abu Dhabi Emirate (Abu Dhabi City and Al Ain city).
2. □ DHA and DHCC approval to approach the private hospitals in Dubai Emirate.

3. □MOHAP approval to approach the private hospitals in the Northern Emirates. The selected executives in the private hospitals showed willingness to share their thoughts on BSC implementation in their organizations and to complete the research survey.

5.5.2 Research Sample

The research sample size is a critical factor for ensuring the quality and validity of the research results. The sample has to be representative of the entire population to generalize the observed research findings to the entire population.

Some researchers believe that sample size consideration does not play a role in the application of PLS (Hair et al., 2006; Hair Jr et al., 2016). This idea is fostered by the commonly used rule of thumb that the sample size should be larger than the number of arrows in the longest structural path directed at a particular construct in the conceptual model (Hair Jr et al., 2016).

In this study, the researcher collected 114 survey responses from private hospitals in the UAE. However, 21 of the respondents were non-users of the BSC. Therefore, after removing these non-users, the final sample size consisted of 93 responses. According to Hair Jr et al. (2016), the minimum sample size for this study is 65 responses, to account for four arrows in the longest structural paths (Table 5.4).

Table 5.4: Adequate sample size guidelines

Maximum number of arrows pointing at a construct	Significance level 5% Minimum R2			
	0.10	0.25	0.50	0.75
2	110	52	33	26
3	124	59	38	30
4	137	65	42	33
5	147	70	45	36
6	157	75	48	39

Source: Hair et al. (2006)

The survey questionnaire was distributed using three different methods to achieve the best response rate: (1) via face-to-face meetings with respondents based on their time availability; (2) through official emails from the researcher's registered email address at UAE University; and (3) through the LinkedIn website, where the researcher sent a SurveyMonkey link to respondents. LinkedIn was the preferred way to reach the respondents. The questionnaire completion time was 10–12 minutes. Prior to data collection, the survey questionnaire had gone through UAE University ethical approval. The next section will explain the ethical considerations of the research.

5.5.3 Ethical Considerations

Ethical considerations are a critical issue, in that all personal information and data collected must not be known to the public and therefore a high level of confidentiality is needed. Along with a high level of confidentiality, a code of ethics must be considered during the research process, covering honesty, objectivity and professionalism, so the researcher can ensure that there is no moral impact on the process of data collection. In this study, the survey was distributed to the organizations' key opinion leaders who were involved in BSC implementation, headed

by a cover letter from UAE University mentioning the research objectives and the purpose of the study.

Prior approval is required from the DBA office at UAE University to ensure that the data collection will be managed based on a high level of confidentiality and integrity. The honesty of the research must be respected by not using any data without permission and approval. All quotes used in the current research are included in the reference and bibliography sections.

5.5.4 Survey Questionnaire

The research questionnaire used in data collection (see Appendix A) is composed of three parts. The first part consists of 10 categorical items about the respondents' profile: gender, age, nationality, educational level, the respondent's role in the organization, the organization's location, the number of employees in the organization, the organization's age, whether the respondent is familiar with the BSC concept and the stage of BSC use at which the respondent's organization was currently at.

The second part of the questionnaire consists of 38 items grouped into 4 variables (i.e., 12 items for TQM, 8 items for Innovation, 6 items for Competitiveness and 12 items for CSR) that capture the respondents' perspective on organizational performance. Finally, the third part consists of 45 items representing 13 CSFs (i.e., 3 items for top management, 3 items for the BSC team, 3 items for BSC perspectives, 3 items for communication, 4 items for training, 3 items for KPI, 3 items for cause and effect, 3 items for regular reporting, 3 items for measurement assessment, 3 items for problem solving, 4 items for rewards to stakeholders, 3 items for corporate alignment and 3 items for benchmarking).

Another question seeks to confirm the type of theory used in the respondents' organizations, in order to give them the chance to share other theories they may be using, but that are not covered in the questionnaire. The full survey questionnaire, in addition to the official attached letter from UAE University, are presented in Appendix A.

The research questionnaire was validated by 17 experts in BSC theory and then distributed to the respondents through online survey software (SurveyMonkey), face-to-face meeting, or email from the researcher's official address at UAE University. The high-tech tools available provided the possibility to distribute the questionnaire via the web and collect the data in Microsoft Excel format to then be exported to SPSS file and subsequently subject it to PLS as a CSV-format file. The total number of responses, as well as the response rate achieved in this research, are detailed in the next section.

5.6 Conclusion

The objective of this chapter was to present the research methodology used for the research study. The deductive approach was deemed appropriate for this kind of research. The rationale for using this approach was discussed in the chapter. The chapter described the statistical techniques used for analyzing the questionnaire, including descriptive analysis and multivariate analysis (PLS), which were employed to measure the significance of possible relationships among the CSFs. Cronbach's alpha was calculated to assess the reliability of the measurement scale, revealing excellent internal consistency of 0.984.

The research validity and reliability assessment were confirmed, since the conceptual research framework has four arrows; the research sample of 93 is considered high since a sample of 40 was deemed the minimum for this type of research. As per (Hair Jr et al., 2016), each arrow is represented by 10 samples. The research instrument was validated by the literature using face validity, as well as being validated by 17 experts in BSC theory. The next chapter presents and discusses the results of these statistical procedures.

Chapter 6: Research Data Analysis

6.1 Introduction

In Chapter 5, a comprehensive review was undertaken of methodological procedures and approaches to examine the research hypotheses. This chapter presents the research results of the questionnaire, the design and implementation of which were explained in Chapter 5. These results helped the researcher to address the first research objective, which is about exploring the concept of the BSC in the healthcare sector in the UAE. The chapter also presents the results of the multivariate analysis using the PLS statistical technique. These results helped the researcher to address the research hypotheses.

The chapter is structured into six sections. Section 6.2 presents the descriptive statistical analysis of the questionnaire. Section 6.3 is an assessment of the reliability and validity of the structural model of the research through a number of measurements (i.e., Cronbach's alpha, composite reliability, indicator reliability, convergent validity, discriminant validity, variance inflation factor [VIF] collinearity). Section 6.4 discusses the evaluation of the structural model of the research and assesses the research questions (i.e., VIF collinearity, coefficient of determination R², F² effect size and predictive relevance Q²). Section 6.5 discusses the effect of CSFs on implementation of the BSC, as well as the effect of implementation of the BSC on organizational performance. This is followed by Section 6.6, which summarizes and concludes the findings of the chapter.

6.2 Descriptive Statistics

Descriptive statistics are used to summarize the results of the data collected via the questionnaire which is structured in four main parts. The first part consists of five questions pertaining to personal information on the respondents; the second part consists of five questions regarding background information on the respondents' organizations; the third part consists of a question to explore the scales of organizational performance variables (four main variables: TQM, innovation, competitiveness and CSR) and the last part consists of a question to explore the scale of the 13 CSFs (see Appendix A). The next section will cover the first and second parts of the questionnaire (10 questions in total).

6.2.1 Sample Demographics

The first question in the questionnaire pertained to the respondents' gender (male or female). As mentioned in Table 6.1, the majority of respondents were male (61.30%), whereas the female percentage was 38.70%. This matches professional workers' gender in the UAE as a whole, where male workers are more dominant than female workers.

Table 6.1: Gender distribution of the survey respondents

Gender	Frequency	Percentage (%)
Male	57	61.30
Female	36	38.70
Total	93	

The second question covered the respondents' age. The researcher segmented age into five different levels, as shown in Table 6.2. The age segment of 30–39 years recorded

the highest percentage, at around 41%, followed by 40–49 years, which reached around 27% and 50–59 years, at around 25%. The age segments 30–39 years and 40–49 years together constitute around 68%. This indicates a young age level of respondents in private hospitals in the UAE, which is expected to positively impact organizational performance.

Table 6.2: Age distribution of the sample respondents

Age in years	Frequency	Percentage (%)
19–29	2	2.20
30–39	38	40.90
40–49	25	26.90
50–59	23	24.70
60 or over	5	5.40
Total	93	

The third question explored the nationalities of the respondents in healthcare organizations. The research sample was overwhelmingly composed of expatriates (93.5%) and UAE locals comprised only a very small percentage (6.50%), as shown in Table 6.3. This matches the current population structure in the UAE.

Table 6.3: Nationality distribution of the survey sample

Nationalities	Frequency	Percentage (%)
UAE locals	6	6.45
Expatriates	87	93.45
Total	93	

The fourth question related to the respondents' educational level, in terms of whether they had a university degree such as a bachelor's, a postgraduate degree such as a master's or doctorate, or, as an option labeled "other" a diploma or other certificates from short courses. As shown in Table 6.4, about 84% of the respondents held a postgraduate degree, which is necessary for such professionals to be able to manage

hospitals. The remainder, 16%, held a university degree, whereas there were zero responses to the third option.

Table 6.4: Distribution of educational level among the survey respondents

Degree or certificate	Frequency	Percentage (%)
University degree	15	16.12
Postgraduate degree	78	83.87
Other	0	0
Total	93	

Question five discussed the respondents' role in the organization. The researcher outlined nine main titles that could be involved in the concept of BSC implementation. As shown in Table 6.5, 21.50% of the respondents were directors, 19.40% senior managers, 16.10% quality managers and 12.90% CEOs. This indicates the quality of responses received for the research.

Table 6.5: Respondents' roles in private hospitals in the UAE

Managerial Position	Frequency	Percentage (%)
Chief Executive Officer	12	12.90
Chief Marketing Officer	5	5.40
Chief Operating Officer	4	4.30
Chief Financial Officer	7	7.50
Director	20	21.50
Senior Manager	18	19.40
Strategic Manager	5	5.40
HR Manager	7	7.50
Quality Manager	15	16.10
Total	93	

Question six referred to part of the background information on respondents and asked about the location in which the organization was based. As mentioned in the healthcare industry section in Chapter 2, the UAE consists of seven Emirates (Abu Dhabi, Dubai, Sharjah, Ajman, UAQ, RAK and Fujairah), each of which is managed by its own

governmental institution for healthcare licenses and approval. The private healthcare sector in Abu Dhabi Emirate is controlled by HAAD, that in the Emirate of Dubai is managed by DHA and DHCC and that in the Northern Emirates (Sharjah, Ajman, UAQ, RAK, UAQ and Fujairah) is managed by MOHAP.

Almost half of the hospitals are located in Abu Dhabi Emirate (Abu Dhabi and Al Ain cities), whereas almost 37% are located in Dubai Emirate and 11% in Sharjah. The remaining 7% of hospitals are located in Ajman, RAK, or Fujairah and none of the private hospitals is located in UAQ; see Table 6.6. The concentration of the selected private hospitals in Abu Dhabi and Dubai Emirates (almost 82%) corresponds to the geographic distribution of private hospitals in the UAE.

Table 6.6: Private hospitals' locations in the UAE

Emirate Name	Frequency	Percentage (%)
Abu Dhabi City (Abu Dhabi Emirate)	23	31.50
Al Ain City (Abu Dhabi Emirate)	10	13.60
Dubai Emirate	27	36.98
Sharjah Emirate	8	10.95
Ajman Emirate	2	2.73
Ras Al-Khaimah Emirate	1	1.36
Fujairah Emirate	2	2.73
Umm Quwain Emirate	0	0.00
Total	73	

Question seven explored the total number of employees in each organization. The researcher proposed five segments, as mentioned in Table 6.7. The majority of the sample had more than 201 employees working for the organization who participated in the research study, a percentage of around 85%. On the other hand, the private hospitals who had a total number of employees between 151 and 200 totaled around 11% and around 4% of private hospitals had a total number of employees fewer than

100. This indicates that the majority of private hospitals fall under the size category of large hospitals.

Table 6.7: Number of employees in healthcare organizations in the UAE

Number of Employees	Frequency	Percentage (%)
50 or fewer	2	2.15
51–100	2	2.15
101–150	0	0.00
151–200	10	10.75
Over 201	79	84.90
Total	93	

Question eight explored the organizations' age. The researcher proposed four different ages, as shown in Table 6.8. The majority of private hospitals in the UAE have been established for more than 10 years, which indicates that the healthcare sector is well established and has been serving patients for a long time. The newer private hospitals, established for less than one year, comprised around 6.5%, which reflects the dynamic nature of the UAE market, where investors are very keen to invest in the healthcare sector.

Table 6.8: Organizational age of healthcare organizations in the UAE

Organizational Age	Frequency	Percentage (%)
Less than one year	6	6.45
1–5 years	14	15.05
6–10 years	20	21.50
More than 10 years	53	56.98
Total	93	

Question nine explored the number of respondents in the research sample who were familiar with the concept of the BSC. The researcher collected data from 114 respondents from 73 private hospitals in the UAE. The results show that 93 were BSC

users and 21 were non-BSC users; refer to Table 6.9. The latter group of non-BSC users were excluded from the analysis. The results show that 93 out of 114 respondents were familiar with BSC theory, while the remaining 21 respondents were not users of the BSC. This indicates the good implementation of BSC theory in private hospitals in the UAE, since around 81.5% of the research sample used the BSC.

Table 6.9: Respondents' familiarity with BSC theory

Question No. 9	Yes	No
Are you familiar with the concept of the BSC?	93	21

Furthermore, question 10 asked about the stage of BSC usage for each respondent's organization. The results show that 37% of respondents were in the development stage of using the BSC, 33% used the BSC, 18% were starting to use the BSC and 12% were in the research stage for considering the BSC; see Table 6.10. These results suggest that BSC theory is at a good level of implementation in private hospitals in the UAE.

Table 6.10: BSC implementation stage in the sampled healthcare organizations

BSC Stage	Frequency	Percentage (%)
Researching	11	12
Starting to use	17	18
Development	34	37
In use for some time	31	33
Total	93	

From the abovementioned 10 questions that covered the first two parts of the questionnaire (i.e., personal information and background information), the survey respondents can be characterized by three main points: (1) they are highly educated, as shown in Table 6.4; (2) they hold upper-management positions, as shown in Table

6.5; and (3) they have adequate experience in BSC implementation, as shown in Table 6.10.

6.2.2 Constructs of Organizational Performance

In the third part of the research questionnaire measured the four organizational performance outcomes (i.e., TQM, innovation, competitiveness and CSR) using a 5-point Likert scale: Strongly Disagree (SD), Disagree (D), Neutral (N), Agree (A) and Strongly Agree (SA). The frequency distributions of the responses to 38 closed-ended items are outlined in Table 6.11.

The frequency distributions provide preliminary information on the survey data. The outcomes indicate that the vast majority of the research questions received a high number of “Agree” and “Strongly Agree” responses, whereas the “Strongly Disagree” and “Disagree” responses had the lowest frequency.

For the first variable, TQM, the highest frequency of “Agree” and “Strongly Agree” reached more than 90% for many items (i.e., item numbers A1, A5, A9 and A12) and other items reached more than 80% (i.e., item numbers A2, A4, A7, A8 and A10). On the other hand, some items reached more than 75% (i.e., item numbers A3 and A11) and item number A6 reached 71% for both frequencies of “Agree” and “Strongly Agree” for “the organization meets the expectations of our employees”. As per item A1 (The organization’s top management actively participates in TQM and supports the improvement process), this scale obtained the highest score among the TQM scales. The “Strongly Agree” percentage is 58%, which indicates the important role of top management in TQM. Another scale related to top management involvement of TQM is A2, (The organization’s top management encourages employees’ involvement

in TQM); here, the total score was 50% for “Strongly Agree”. On the other hand, item A11 (Our employees are actively involved in TQM-related activities) obtained the lowest percentage compared to the other items of the TQM variable. The score was 30% for “Strongly Agree” and 46% for “Agree”. This indicates that organizations should work hard to improve their performance to meet the level of expectations of their employees.

For the second variable, innovation, the highest frequency of “Agree” and “Strongly Agree” was reached for item number B8 (The organization has the ability to provide patients with a high quality of service), some other items reached more than 80% (i.e., item numbers B1 and B4) and other items reached more than 70% (i.e., item numbers B2 and B3). On the other hand, some items recorded a very low percentage (i.e., item numbers B5, B6 and B7). Organizations should thus pay more attention to investing in research for innovation, as mentioned in item number B5, (The organization has fundamental research expenditures). The score for item B5 was the lowest recorded for the innovation variable, at only 14% for “Strongly Agree” and almost 26% for “Agree” which matches with the respondents’ answers for item B7 (18% for “Strongly Agree” and 39% for “Agree”), indicating that their organizations are not dedicating sufficient investment to research into innovation.

For the third variable, competitiveness, the highest frequency of “Agree” and “Strongly Agree” reached more than 85% for many items (i.e., item numbers C1, C3, C4, C5 and C6). The item C5 (The organization offers products that function according to patients’ needs) had the highest score compared to other scales of the competitiveness variable, at 42% for “Strongly Agree” and 51.5% for “Agree”. This reflects the hospitals’ dynamic way of working based on the needs of patients.

The only item recording a low percentage was item number C2 (25.8% for “Strongly Agree” and 43% for “Agree” respectively), “The organization can sell services at prices that are above average”. Implementing such a pricing strategy is not easy due to the high competition between private hospitals in the UAE.

For the fourth variable, CSR, the highest frequency of “Agree” and “Strongly Agree” reached more than 90% for a few items (i.e., item numbers D10, D11 and D12). Other items reached more than 75% (i.e., item numbers D1, D6, D7, D8 and D9). On the other hand, the lowest numbers were recorded for item number D3 (22.6% for “Strongly Agree” and 51.6% for “Agree”) and item number D4 (16% for “Strongly Agree” and 53.8% for “Agree”). The low score for item number D3 (The organization targets sustainable growth considering sustainable generations) is due to a focus on profitability rather than the sustainability of business. Meanwhile, the low score for item number D4 (The organization supports non-governmental organizations working in problematic areas) indicates that there are no problematic areas in the UAE. This suggests that organizations should pay more attention to new programs for CSR by coordinating with non-governmental organizations to succeed in implementation of the BSC (Table 6.11).

Table 6.11: Frequency distribution for organizational performance items

A. Total Quality Management (TQM)	SD (%)	D (%)	N (%)	A (%)	SA (%)
A1. The organization’s top management actively participates in TQM and supports the improvement process.	0.0	0.0	7.5	34.4	58.1
A2. The organization’s top management encourages employees’ involvement in TQM.	0.0	0.0	10.8	38.7	50.5
A3. The organization’s top management focuses on how to improve the performance of employees apart from relying on financial criteria.	0.0	2.2	19.4	41.9	36.6

Table 6.11: Frequency distribution for organizational performance items (Continued)

A. Total Quality Management (TQM)	SD (%)	D (%)	N (%)	A (%)	SA (%)
A4. The administrative processes in the organization are well aligned with the organization's vision.	1.1	1.1	14.0	46.2	37.6
A5. The organization meets the expectations of our patients.	0.0	1.1	6.5	63.4	29.0
A6. The organization meets the expectations of our employees.	0.0	2.2	26.9	53.8	17.2
A7. The organization collects statistical data to improve the processes.	0.0	0.0	11.8	50.5	37.6
A8. TQM in our organization is continuously improved.	0.0	1.1	11.8	50.5	36.6
A9. The organization has a clear quality manual, quality system documentation and working instructions.	0.0	3.2	4.3	38.7	53.8
A10. The organization organizes training on TQM for employees and encourages employees to participate.	0.0	4.3	15.1	44.1	36.6
A11. Our employees are actively involved in TQM-related activities.	0.0	2.2	21.5	46.2	30.1
A12. Our employees, as the organization's most valuable and long-term resource, are worthy of receiving the necessary education and training in order to achieve the organization's vision.	0.0	3.2	6.5	48.4	41.9
B. Innovation	SD (%)	D (%)	N (%)	A (%)	SA (%)
B1. The organization has customer relationship management capabilities.	0.0	2.2	10.8	53.8	33.3
B2. The organization has a mechanism for inspirational innovation and realization.	0.0	5.4	20.4	50.5	23.7
B3. The organization has the ability to speed up the commercialization of new services.	0.0	2.2	20.4	48.4	29.0
B4. The organization has the ability to attract excellent employees.	0.0	3.2	15.1	49.5	32.3
B5. The organization has fundamental research expenditures.	10.8	12.9	36.6	25.8	14.0
B6. The organization has a progressive capability of innovative technology.	3.2	7.5	26.9	41.9	20.4
B7. The organization has maintained sufficient investment in innovation.	3.2	9.7	30.1	38.7	18.3
B8. The organization has the ability to provide patients with a high quality of services.	0.0	1.1	8.6	41.9	48.4

Table 6.11: Frequency distribution for organizational performance items (Continued)

C. Competitiveness	SD (%)	D (%)	N (%)	A (%)	SA (%)
C1. The organization offers competitive prices.	3.2	0.0	10.8	54.8	31.2
C2. The organization can sell services at prices that are above average.	1.1	3.2	26.9	43.0	25.8
C3. The organization can compete with others based on quality.	1.1	0.0	7.5	37.6	53.8
C4. The organization offers high-quality products to its patients.	0.0	0.0	8.6	38.7	52.7
C5. The organization offers products that function according to patients' needs.	1.1	0.0	5.4	51.6	41.9
C6. The organization alters service offerings to meet patients' needs.	2.2	0.0	10.8	39.8	47.3
D. Corporate Social Responsibility (CSR)	SD (%)	D (%)	N (%)	A (%)	SA (%)
D1. The organization participates in activities that aim to protect and improve the quality of the natural environment.	2.2	4.3	17.2	46.2	30.1
D2. The organization implements special programs to minimize its negative impact on the natural environment.	1.1	6.5	29.0	39.8	23.7
D3. The organization targets sustainable growth considering sustainable generations.	0.0	4.3	21.5	51.6	22.6
D4. The organization supports non-governmental organizations working in problematic areas.	4.3	3.2	22.6	53.8	16.1
D5. The organization contributes to campaigns and projects that promote the well-being of society.	0.0	4.3	7.5	45.2	43.0
D6. The organization encourages its employees to participate in voluntary activities.	1.1	3.2	17.2	40.9	37.6
D7. The organization emphasizes the importance of its social responsibilities to society.	0.0	2.2	19.4	39.8	38.7
D8. The organization's policies encourage employees to develop their knowledge, skills and careers.	0.0	2.2	16.1	41.9	39.8
D9. The organization implements flexible policies to provide a good work-life balance for its employees.	1.1	3.2	17.2	45.2	33.3
D10. The organization provides full and accurate information about its products to patients.	0.0	2.2	4.3	52.7	40.9
D11. The organization complies with legal regulations completely and promptly.	0.0	1.1	2.2	29.0	67.7
D12. Customer satisfaction is highly important for our organization.	0.0	1.1	0.0	30.1	68.8

6.2.3 Constructs of Critical Success Factors

The fourth part of the research questionnaire examines the 13 CSFs, which are categorized into three different constructs (Corporate Purpose, Integration Purpose and Supporting Purpose). The frequency distributions of the responses to 42 closed-ended questions are outlined in Table 6.12 for Corporate Purpose, Table 6.13 for Integration Purpose and Table 6.14 for Supporting Purpose.

The frequency distributions of responses provide preliminary information about the survey data. The vast majority of items in this part of the questionnaire received a different percentage of responses for “Agree” and “Strongly Agree” depending on the type of CSF. The first construct for CSFs is Corporate Purpose (i.e., top management, BSC team and BSC perspectives), as shown in Table 6.12.

The top management factor consists of four items. The highest responses of “Agree” and “Strongly Agree” reached more than 65% (i.e., item numbers A3 and A4); thus, top management should play a significant role in reviewing the BSC project. On the other hand, item numbers 1 and 2 are recorded at 64.5% and 63.4%, respectively. Top management should therefore allocate more resources and more time to the BSC project, as mentioned in item number 1 (Top management has allocated adequate resources and time for establishing the balanced scorecard project). These results suggest that top management should be involved in the BSC implementation process, not only in the introductory phase but throughout, to ensure successful implementation of the BSC in private hospitals in the UAE.

The BSC team consists of three items, the responses to which recorded the lowest percentages among the questionnaire results. According to the respondents’ feedback, organizations need to hire a specialized BSC team that has the relevant skills and

experience. Item numbers 1, 2 and 3 recorded 46.2%, 49.5% and 55.9%, respectively, for the “Agree” and “Strongly Agree” responses. These results suggest that private hospitals in the UAE should pay more attention to having onboard a specific team for the BSC to ensure its successful implementation in their organization. This matches item number 1 regarding having the specialized team (The organization has a specialized team for the balanced scorecard) and the team having direct access to top management, as mentioned in item number 3 (The balanced scorecard team is visible and has access to top management).

The BSC perspectives consist of three items. The first item in the questionnaire recorded the number of users of the BSC in private hospitals in the UAE; that is, 93 responses. The second question asked whether the respondents agreed with the BSC template devised by Kaplan and Norton (1992). The results show that respondents agreed with the BSC’s four main perspectives (93.5% for financial, 98.9% for customers, 94.6% for internal business and 95.7% for learning and growth) for “Agree” and “Strongly Agree” responses. In response to the third question, all respondents agreed that the four perspectives of the BSC can capture the organization’s strategy and therefore provide a balance between financial and non-financial measures (91.4% for the options of “Agree” and “Strongly Agree”). These results indicate that private hospitals should continue using the same perspectives of the BSC to achieve successful implementation of the BSC in the UAE.

Table 6.12: Frequency distribution for corporate purpose items

A. Top Management	SD (%)	D (%)	N (%)	A (%)	SA (%)
1. Top management has allocated adequate resources and time for establishing the balanced scorecard project.	6.5	3.2	25.8	39.8	24.7
2. Top management is committed to the balanced scorecard, not only in the introductory phase but on a permanent basis.	6.5	4.3	25.8	34.4	29.0
3. Top management has played a significant role in the implementation of the balanced scorecard.	5.4	3.2	22.6	43.0	25.8
4. Top management has reviewed and agreed on all the balanced scorecard measures.	5.4	6.5	21.5	40.9	25.8
B. Balanced Scorecard Team	SD (%)	D (%)	N (%)	A (%)	SA (%)
1. The organization has a specialized team for the balanced scorecard.	15.1	17.2	32.3	24.7	21.5
2. The balanced scorecard team members have various relevant skills, knowledge and competencies.	12.9	7.5	30.1	28.0	21.5
3. The balanced scorecard team is visible and has access to top management.	14.0	6.5	23.7	31.2	24.7
C. Balanced Scorecard Perspectives	SD (%)	D (%)	N (%)	A (%)	SA (%)
Question No. 1: What perspectives does the organization use to organize measures for reporting purposes?	The outcomes confirmed that there are 93 users of the BSC in private hospitals in the UAE.				
Question No. 2: To what extent do you agree that the following are important to the organization's balanced scorecard?					
Financial perspective	0.0	0.0	6.5	41.9	51.6
Customer perspective	0.0	0.0	1.1	39.8	59.1
Internal business perspective	0.0	0.0	5.4	44.1	50.5
Learning and growth perspective	0.0	0.0	4.3	44.1	51.6
Question No. 3: The above four perspectives adequately capture the focus of the organization's strategy and provide a balance between financial and non-financial measures.	0.0	1.1	7.5	58.1	33.3

The Integration Purpose construct consists of four scales (i.e., communication, training, KPIs and cause and effect), as shown in Table 6.13. A 5-point Likert scale was used: Strongly Disagree, Disagree, Neutral, Agree and Strongly Agree.

The communication factor consists of three items. The highest frequency of “Agree” and “Strongly Agree” reached 87.1% for item number 1 (Regular team meetings are conducted to compare the performance measures and progress against corporate goals), indicating that communication is very effective among the team. Item numbers 2 and 3 recorded 78.5% and 81.7%, respectively; this is a fairly positive result. It indicates that the respondents are looking to receive more strategic information on a regular basis, as well as receiving the required information from the right people at the right time. This suggests that private hospitals should implement appropriate communication tools to encourage employees to communicate in the right way to succeed in the implementation of the BSC.

The training factor consists of four items. The highest frequency of “Agree” and “Strongly Agree” reached more than 75% for three items (i.e., 1, 3 and 4), except item number 2 (71.0%), which reflects the need to have the required knowledge and skills to develop BSC implementation. This indicates that the hospital’s top management should offer more training to employees in order succeed in the implementation of the BSC in their organizations.

The KPIs factor consists of three items. The highest frequency of “Agree” and “Strongly Agree” reached more than 90% for items 1 and 2. On the other hand, item 3 (The relative weights and appropriate balance among various performance indicators are determined before implementing the balanced scorecard) recorded 80.6%, so organizations need to determine the performance indicators before implementing the

BSC. This indicates that the assignment of appropriate KPIs in private hospitals in the UAE is acceptable. Organizations should continue to focus on assigning KPIs that are connected to the organization's goals and objectives.

The cause-and-effect factor consists of three items. The highest frequency of "Agree" and "Strongly Agree" reached 82% for item number 1 (The organization establishes relationships and linkages between KPIs), which indicates that the organization should establish linkages between the KPIs. On the other hand, item numbers 2 and 3 recorded 76% and 77%, respectively; this is an acceptable percentage, but it suggests that organizations need to highlight the importance of the cause-and-effect factor among the KPIs and therefore take the required action to support KPI measurement.

Table 6.13: Frequency distribution for integration purpose items

D. Communication	SD (%)	D (%)	N (%)	A (%)	SA (%)
1. Regular team meetings are conducted to compare the performance measures and progress against corporate goals.	1.1	2.2	9.7	51.6	35.5
2. The employees receive strategic information on a regular basis.	1.1	5.4	15.1	48.4	30.1
3. The strategic information reaches the right people, in the right format, at the right time and in the right quantity.	0.0	6.5	11.8	47.3	34.4
E. Training	SD (%)	D (%)	N (%)	A (%)	SA (%)
1. Emphasis is placed on skills development and training in the organization.	0.0	6.5	10.8	46.2	36.6
2. Knowledge and skills are developed consistently to meet the changing needs of balanced scorecard implementation, teams and individuals.	2.2	6.5	20.4	46.2	24.7
3. The organization links the education and training of employees to its long-term plans and strategies.	0.0	7.5	14.0	50.5	28.0
4. Top management arranges adequate resources for employees' education and training.	1.1	6.5	10.8	51.6	30.1
F. Key Performance Indicators (KPIs)	SD (%)	D (%)	N (%)	A (%)	SA (%)
1. Actions and objectives are supported by measures or key performance indicators (KPIs).	0.0	1.1	3.2	45.2	50.5
2. Before implementing the balanced scorecard, the organization establishes the relative importance of KPIs.	0.0	1.1	7.5	47.3	44.1
3. The relative weights and appropriate balance among various performance indicators are determined before implementing the balanced scorecard.	0.0	2.2	17.2	48.4	32.3
G. Cause and Effect	SD (%)	D (%)	N (%)	A (%)	SA (%)
1. The organization establishes relationships and linkages between key performance indicators (KPIs).	0	1	17	48	33
2. The organization's balanced scorecard reveals relationships to provide cause-and-effect modeling.	1	5	17	45	31
3. The cause-and-effect relationships between data elements are investigated to ensure that resources are being correctly allocated.	0	5	17	55	23

Supporting Purpose variables (i.e., regular reporting, measurement assessment, problem solving, rewards to stakeholders, corporate alignment and benchmarking) are shown in Table 6.14.

The regular reporting factor consists of three items. The highest frequency of “Agree” and “Strongly Agree” recorded 84.9% for item number 1 (The organization has reporting systems besides the balanced scorecard), indicating that organizations are using a reporting system besides the BSC. This is followed by item number 3 (The balanced scorecard improves feedback to responsible managers so that adjustments to the strategic plan can be made during the operating period), which recorded 76.3%. On the other hand, item number 2 (The results of the balanced scorecard measures are incorporated into a regular reporting system) recorded a low percentage compared to the items of regular reporting, which was 72.0%, suggesting that the organization should incorporate the BSC measures into a regular reporting system. This means that there is a defect in regular reporting and the team should report on updates to BSC perspectives on a regular basis.

The measurement assessment factor consists of three items. The highest frequency of “Agree” and “Strongly Agree” recorded more than 85% for item numbers 1 and 3; meanwhile, item number 2 recorded 83.9% for the need for results of the BSC to assess the organization’s performance. This indicates that organizations are reviewing measurement assessment frequently and need to identify the right combination of measures to increase the success of BSC implementation.

The problem-solving factor consists of three items. The highest frequency of “Agree” and “Strongly Agree” recorded more than 80% for item numbers 1 and 3 (81.7% and 82.8%, respectively). On the other hand, item number 2 (The balanced scorecard

results help the organization solve its problems) recorded 73.1%, suggesting that organizations are looking to the BSC results to help solve their problems. This indicates that there is more space to implement the factor of problem solving to enhance performance among competitors in the market; such initiatives should entail effort from all employees.

The rewards to stakeholders factor consists of four items. The highest frequency of “Agree” and “Strongly Agree” recorded more than 70% only for item number 1 (The focus is on individuals’ contributions in relation to specific tasks in the organization). On the other hand, three items (i.e., 2, 3 and 4) recorded less than 70%. The respondents were looking to link the BSC to compensation, which would stimulate employees’ commitment to the BSC. This indicates that top management or executives should relate employees’ individual rewards to the implementation of the BSC, which in turn will help ensure successful implementation of the BSC in their organizations.

The corporate alignment factor consists of three items. The highest frequency of “Agree” and “Strongly Agree” recorded less than 70% for all items, suggesting that the BSC should be aligned with the organization’s strategy and therefore sustain alignment with the BSC. This indicates that organizations should encourage the BSC measures to be connected with corporate alignment by encouraging employees to achieve the organization’s objectives.

The last factor in the Supporting Purpose construct is benchmarking, which consists of three items. The highest frequency of “Agree” and “Strongly Agree” recorded 89.2% for item number 1 (Benchmarking with other competitive organizations is used in the organization), which states that benchmarking is used in the organization. On the other hand, respondents highlighted the need for the BSC to benchmark

performance against competitors; this recorded 72.0% for item number 2 (The balanced scorecard is used to benchmark performance against other relevant organizations). Item number 3 (The organization's targets are systematically stretched as a motivational tool for employees and units) recorded 77.3%, suggesting that the organization's targets are stretched as a vital tool to motivate employees. This indicates that organizations should use the BSC effectively to benchmark their performance among the competitors in the market (Table 6.14).

Table 6.14: Frequency distribution for supporting purpose variables

H. Regular Reporting	SD (%)	D (%)	N (%)	A (%)	SA (%)
1. The organization has reporting systems besides the balanced scorecard.	2.2	3.2	9.7	44.1	40.9
2. The results of the balanced scorecard measures are incorporated into a regular reporting system.	3.2	4.3	20.4	49.5	22.6
3. The balanced scorecard improves feedback to responsible managers so that adjustments to the strategic plan can be made during the operating period.	2.2	2.2	19.4	50.5	25.8
I. Measurement Assessment	SD (%)	D (%)	N (%)	A (%)	SA (%)
1. The organization has realized the significance of its strategies and operational goals.	0.0	2.2	11.8	51.6	34.4
2. The results of the balanced scorecard help the organization to assess its performance.	3.2	2.2	10.8	53.8	30.1
3. Implementation of the balanced scorecard enables the organization to review its measures frequently and identify the right combination of measures.	1.1	2.2	10.8	55.9	30.1
J. Problem Solving	SD (%)	D (%)	N (%)	A (%)	SA (%)
1. The employees in the organization are empowered to resolve problems and improve processes.	0.0	6.5	11.8	53.8	28.0
2. The balanced scorecard results help the organization solve its problems.	4.3	2.2	20.4	45.2	28.0
3. The organization encourages a culture of teamwork and problem solving.	0.0	3.2	14.0	45.2	37.6

Table 6.14: Frequency distribution for Supporting Purpose variables (Continued)

K. Rewards to Stakeholders	SD (%)	D (%)	N (%)	A (%)	SA (%)
1. The focus is on individuals' contributions in relation to specific tasks in the organization.	0	6	19	56	18
2. The reward system is linked to the balanced scorecard to create a cultural change to improve performance.	4	6	24	43	23
3. The linking of compensation and measuring employees' awareness to scorecard results is significant in sustaining the balanced scorecard system.	4	10	20	46	19
4. Recognition and reward activities effectively stimulate employees' commitment to the balanced scorecard implementation.	3	8	23	46	20
L. Corporate Alignment	SD (%)	D (%)	N (%)	A (%)	SA (%)
1. The balanced scorecard system has succeeded in aligning the organization's strategy with performance measures.	6.5	5.4	19.4	43.0	25.8
2. The balanced scorecard facilitates achieving sustainable alignment.	5.4	3.2	18.3	48.4	24.7
3. The measures used in the scorecard system motivate employees to work in congruence with the organization's objectives.	4.3	3.2	26.9	45.2	20.4
M. Benchmarking	SD (%)	D (%)	N (%)	A (%)	SA (%)
1. Benchmarking with other competitive organizations is used in the organization.	1.1	3.2	6.5	50.5	38.7
2. The balanced scorecard is used to benchmark performance against other relevant organizations.	4.3	11.8	11.8	43.0	29.0
3. The organization's targets are systematically stretched as a motivational tool for employees and units.	2.2	4.3	16.1	44.1	33.3

6.3 Assessment of the Measurement Model

According to Hair Jr et al. (2016), the PLS structural model needs to be evaluated in two parts: (1) the constructs must be assessed individually with regard to the

relationships with their indicators; and (2) the inner structural model should be appraised for the relationship between the higher-order construct and its dimension.

There are five main steps to evaluate internal construct reliability and reliability at both indicator and construct levels. These steps will be discussed in the present section, including Cronbach's alpha, composite reliability (Pc), indicator reliability, convergent validity and discriminant validity.

6.3.1 Cronbach's Alpha

Cronbach's alpha measures internal consistency, which assumes equal indicator loadings, as well as providing an estimate of reliability based on the intercorrelations of the observed indicator variables (Hair et al., 2006). Cronbach's alpha assumes that all indicators are equally reliable (i.e., all indicators have equal outer loadings on the construct). In order to have good internal consistency, Cronbach's alpha should be >0.70 . This measure can be calculated using SmartPLS software through the reliability analysis option.

Cronbach's alpha is estimated based on the 93 complete responses using the SmartPLS statistical software. As shown in Table 6.15, the measurement model constructs have high Cronbach's alpha values. The Cronbach's alpha based on all sample responses is 0.724 for the Corporate Purpose construct, 0.861 for the Integration Purpose construct, 0.914 for the Supporting Purpose construct and 0.897 for the Organizational Performance construct, which means that the research has good reliability based on the intercorrelations of the observed variables.

Table 6.15: Cronbach's alpha values for the research variables

No of Var.	Indicator Name	Construct Name	No. of Items	Cronbach's Alpha for Indicator	Cronbach's Alpha for Construct
1	Top management	Corporate Purpose	4	0.926	0.724
2	BSC team		3	0.926	
3	BSC perspectives		3	0.505	
4	Communication	Integration Purpose	3	0.784	0.861
5	Training		4	0.829	
6	KPI		3	0.836	
7	Cause and effect		3	0.909	
8	Regular reporting	Supporting Purpose	3	0.819	0.914
9	Measurement assessment		3	0.874	
10	Problem solving		3	0.831	
11	Rewards to stakeholders		4	0.888	
12	Corporate alignment		3	0.845	
13	Benchmarking		3	0.759	
14	TQM	Organizational Performance	12	0.896	0.897
15	Innovation		8	0.852	
16	Competitiveness		6	0.754	
17	CSR		12	0.915	

Cronbach's alpha is somewhat sensitive to the number of items in the scale and generally tends to underestimate internal consistency; it may thus be used as a conservative measure of internal consistency only. Due to this limitation, it is recommended that additional measures of internal consistency, such as composite reliability, be applied. Therefore, the next section will consider the composite reliability of the results.

6.3.2 Composite Reliability

Composite reliability measures internal consistency; however, unlike Cronbach's alpha it does not assume equal indicator loadings. Composite reliability varies between 0 and 1, with higher values indicating higher levels of reliability (Hair Jr et al., 2016).

It is generally interpreted in the same way as Cronbach's alpha. Composite reliability values of 0.6 to 0.70 are acceptable in exploratory research, according to Hair Jr et al. (2016); meanwhile, values between 0.70 and 0.90 can be considered appropriate for reliability in some advanced stages of research (Nunnally & Bernstein, 1994).

As shown in Table 6.16, composite reliability is very high: the value for Corporate Purpose is 0.844, Integration Purpose is 0.906, Supporting Purpose is 0.933 and Organizational Performance is 0.916.

Table 6.16: Composite reliability of the research

Construct or Variable	Composite Reliability
Corporate Purpose	0.844
Integration Purpose	0.906
Supporting Purpose	0.933
Organizational Performance	0.916

6.3.3 Indicator Reliability

According to Hair (2006), high outer loadings on a construct indicate that the associated indicators have much in common, which is captured by the construct. This characteristic is also commonly called indicator reliability. Reliability analysis refers to the fact that a scale should consistently reflect the construct it is measuring. Therefore, the reliability of an indicator is the proportion of indicator variance that is explained by the latent variable, so the values range from 0 to 1.

The indicators' outer loadings should be statistically significant. The outer loading is significant if the value is 0.708 or higher. An outer loading between 0.4 and 0.70 represents acceptable reliability; meanwhile, if the outer loading is less than 0.40, the corresponding indicator should be removed.

As shown in Table 6.17, the outer loadings for the CSFs and organizational performance indicators are high and statistically significant. The outer loadings of the indicators for the Corporate Purpose construct are 0.926 for top management, 0.926 for the BSC team and 0.505 for the BSC perspectives. The reason for this relatively medium value of the outer loading of the BSC perspectives indicator is probably that private hospitals in the UAE do not focus on applying an identical template of the four perspectives of the BSC theory, but usually build their own perspectives according to market demands. It is common to find many private hospitals in the UAE creating their own tailored perspectives based on the market, although they usually base these on the BSC measurement system.

The outer loadings for the second construct, Integration Purpose, are 0.784 for communication, 0.829 for training, 0.836 for KPIs and 0.909 for cause and effect. The outer loadings for the third construct, Supporting Purpose, are 0.819 for regular reporting, 0.874 for measurement assessment, 0.831 for problem solving, 0.888 for rewards to stakeholders, 0.845 for corporate alignment and 0.759 for benchmarking.

In regard to the organizational performance variables, the outer loadings have very high values (i.e., 0.896 for TQM, 0.852 for innovation, 0.754 for competitiveness and 0.915 for CSR). The results of this analysis confirm the reliability of the indicators used in the model.

Table 6.17: Outer loadings for CSFs and organizational performance variables

Variables	Loading Corporate Purpose Construct	Loading Integration Purpose Construct	Loading Supporting Purpose Construct	Organizational Performance
Corporate Purpose Construct				
Top management	0.926			
BSC team	0.926			
BSC perspectives	0.505			
Integration Purpose Construct				
Communication		0.784		
Training		0.829		
KPIs		0.836		
Cause and effect		0.909		
Supporting Purpose Construct				
Regular reporting			0.819	
Measurement assessment			0.874	
Problem solving			0.831	
Rewards to stakeholders			0.888	
Corporate alignment			0.845	
Benchmarking			0.759	
Organizational Performance				
TQM				0.896
Innovation				0.852
Competitiveness				0.754
CSR				0.915

6.3.4 Convergent Validity

Convergent validity refers to the degree to which two measures of a construct, which should theoretically be related, are in fact related. Convergent validity is the extent to which a measure correlates positively with alternative measures of the same construct. High correlations between test scores are clear evidence of convergent validity.

Convergent evidence is best interpreted relative to discriminant evidence. That is, patterns of intercorrelations between two dissimilar measures should be low, while correlations with similar measures should be substantially greater.

Average variance extracted (AVE) is used as a measure of convergent validity in reflective measurement models. It represents the average amount of variance in indicators that a construct has been able to explain (Hair Jr et al., 2016). A construct with reflective indicators should have an AVE of at least 0.50 in order to be considered valid. As shown in Table 6.18, the BSC implementation model, which is operationalized through four reflective constructs (three constructs for CSFs representing Corporate Support, Integration Support and Supporting Purpose and one construct representing Organizational Performance), meets the convergent validity criterion.

Table 6.18: Convergent validity with AVE for the structural model

Construct or Variable	AVE
Corporate Purpose	0.675
Integration Purpose	0.707
Supporting Purpose	0.701
Organizational Performance	0.734

6.3.5 Discriminant Validity

Discriminant validity refers to the extent to which a reflectively measured construct is truly distinct from other constructs in the structural model. Thus, establishing discriminant validity implies that a construct is unique and captures phenomena not represented by other constructs in the model. Discriminant validity can be measured by examining the cross-loading of the indicators (Hair Jr et al., 2016).

The indicator's outer loading on the associated construct should be greater than all of its loadings on other constructs (i.e., the cross-loadings). The presence of cross-loadings that exceed the indicator's outer loadings represents a discriminant validity problem. This criterion is generally considered rather liberal in terms of establishing discriminant validity (Hair Jr et al., 2016). That is, it is likely to indicate that two or more constructs exhibit discriminant validity. Table 6.19 displays the discriminant validity measures for the research model, which satisfies the cross-loading criterion described. The entire cross-loading analysis for individual constructs of the structural model is included in Appendix B.

Table 6.19: Discriminant validity for the research model

Construct or Variable	Corporate Purpose	Integration Purpose	Organizational Performance	Successful Implementation of BSC	Supporting Purpose
Corporate Purpose	0.811				
Integration Purpose	0.406	0.841			
Organizational Performance	0.435	0.769	0.857		
Successful Implementation of BSC	0.671	0.783	0.650	1.000	
Supporting Purpose	0.605	0.732	0.616	0.885	0.837

6.4 Evaluation of the Structural Model

According to Hair Jr et al. (2016), assessment of the PLS structural model requires evaluation of the constructs individually, such as the relationships with their indicators and appraisal of the inner structural model, such as the relationship between the higher-order construct and its dimensions.

The assessment of the inner model involves four main steps. These steps will be discussed in the present section, including VIF collinearity, coefficient of

determination R^2 values, f^2 effect size and predictive relevance (Q^2). The guidelines for these measures are summarized in Table 6.20.

Table 6.20: Structural model assessment procedure

Evaluation Criterion	Measurement	Guidelines for Criterion
VIF collinearity	Predictors of the same construct	$VIF \geq 5$ indicates collinearity
Coefficient of determination (R^2)	Model's predictive accuracy	0.25 is weak 0.5 is moderate 0.75 is substantial
f^2 size effect	Size of the contribution	0.02 is small 0.15 is medium 0.35 is large
Predictive relevance (Q^2)	Model's predictive relevance	Greater than zero

Source: (Hair Jr et al., 2016)

6.4.1 Variance Inflation Factor Collinearity

Collinearity arises when two predictors are highly correlated. When more than two predictors are involved, this is referred to as multicollinearity. In order to assess the level of collinearity, the researcher should either compute the tolerance, which represents the amount of variance of one predictor not explained by the other predictors of the same endogenous construct, or the VIF, which is the reciprocal of the tolerance (Hair Jr et al., 2016).

With regard to the collinearity of predictors, an absence of multicollinearity is reflected by a tolerance value of each predictor that is higher than 0.20 (or equivalently a $VIF < 5$). Otherwise, the researcher should consider eliminating indicators, merging indicators into a single index, or creating higher-order constructs to address the collinearity problems (Hair Jr et al., 2016). As shown in Table 6.21, the outer VIF values are 0.724 for the Corporate Purpose construct, 0.861 for the Integration Purpose construct and 0.914 for the Supporting Purpose construct. On the other hand, the VIF

for the Organizational Performance construct is 0.879. All these VIF measures are lower than 5, which indicates an absence of multicollinearity among the predictor constructs in the model.

Table 6.21: Outer VIF values for the structural model of the research

Type of Variable	VIF for Individual Variable	VIF for Construct	Type of Construct
Top management	2.638	0.724	Corporate Purpose
BSC team	2.643		
BSC perspectives	1.118		
Communication	1.727	0.861	Integration Purpose
Training	1.990		
KPIs	2.144		
Cause and effect	2.920		
Regular reporting	2.476	0.914	Supporting Purpose
Measurement assessment	3.086		
Problem solving	2.725		
Reward to stakeholders	3.330		
Corporation alignment	2.692		
Benchmarking	1.818	0.879	Organizational Performance
TQM	2.629		
Innovation	2.271		
Competitiveness	1.749		
CSR	3.082		

6.4.2 Coefficient of Determination, R^2

The coefficient of determination (R^2) is commonly used to evaluate structural models. It is a measure of the model's predictive accuracy and can be calculated as the squared correlation between the specific endogenous construct's actual and predicted values. It is also interpreted as a measure of the proportion of an endogenous construct's variance that is explained by its predictor constructs (Hair Jr et al., 2016). Thus, higher R^2 values will indicate better predictive accuracy. The level of R^2 depends on the particular model and research discipline, but it can be described as substantial for 0.75, moderate for 0.50 and weak for 0.25.

As shown in Table 6.22, the coefficient of determination of the structural model of BSC implementation is 0.856 for successful implementation of the BSC and 0.422 for organizational performance, thus revealing the substantial predictive accuracy of the inner structural model by the former construct and close to moderate predictive accuracy by the latter constructs (CSFs and organizational performance variables).

Table 6.22: Coefficient of determination (R^2)

Construct or Variable	R^2 Adjusted	P-value
Successful implementation of BSC	0.856	0.000
Organizational performance	0.422	0.000

6.4.3 F^2 Effect Size

The f^2 effect measure refers to situations in which the path coefficient describes the relative contribution of an exogenous construct on its associated endogenous construct. It assesses an exogenous construct's contribution to an endogenous construct's R^2 value. So, in this case, the f^2 effect size is estimated based on the change in R^2 value when a specified exogenous construct is omitted from the model (Hair et al., 2013). F^2 can be assessed based on three categories: 0.02 represents a small effect of the exogenous construct, 0.15 represents a medium effect of the exogenous construct and 0.35 represents a large effect of the exogenous construct.

The f^2 effect size is confirmed in Table 6.23. The f^2 effect value for Corporate Purpose is 0.235 (medium effect of the successful implementation of the BSC), Integration Purpose is 0.307 (large effect of the successful implementation of the BSC), Supporting Purpose is 0.658 (large effect of the successful implementation of the BSC)

and Successful Implementation of the BSC is 0.731 (large effect of organizational performance).

Table 6.23: F^2 effect size

Construct or Variable	Successful Implementation of the BSC	Organizational Performance
Corporate Purpose	0.235	
Integration Purpose	0.307	
Supporting Purpose	0.658	
Successful Implementation of BSC		0.731

6.4.4 Predictive Relevance, Q^2

According to Table 6.20, the predictive Q^2 is an essential step in the evaluation of the structural model. Stone–Geisser’s Q^2 (Geisser, 1974; Stone, 1974) is an indicator of the model’s predictive relevance. The Q^2 value can be measured through the SmartPLS software blindfolding procedure for a certain commission distance (D). Blindfolding is a sample reuse technique that omits every data point in the endogenous construct’s indicators and estimates the parameters with the remaining data points (Henseler et al., 2009; Tenenhaus, 2008). The researcher used the omission distance value (7), for which it is recommended to use an omission distance value of between 5 and 10. A Q^2 value of more than zero will indicate the path model’s predictive relevance for the particular construct (Aldhaheri et al., 2018).

Figure 6.1 shows that the Q^2 values for Successful Implementation of the BSC and Organizational Performance are 0.825 and 0.292, respectively. Since their values are greater than zero, this indicates that the three CSF constructs have predictive relevance for the Successful Implementation of the BSC, which has predictive relevance for Organizational Performance.

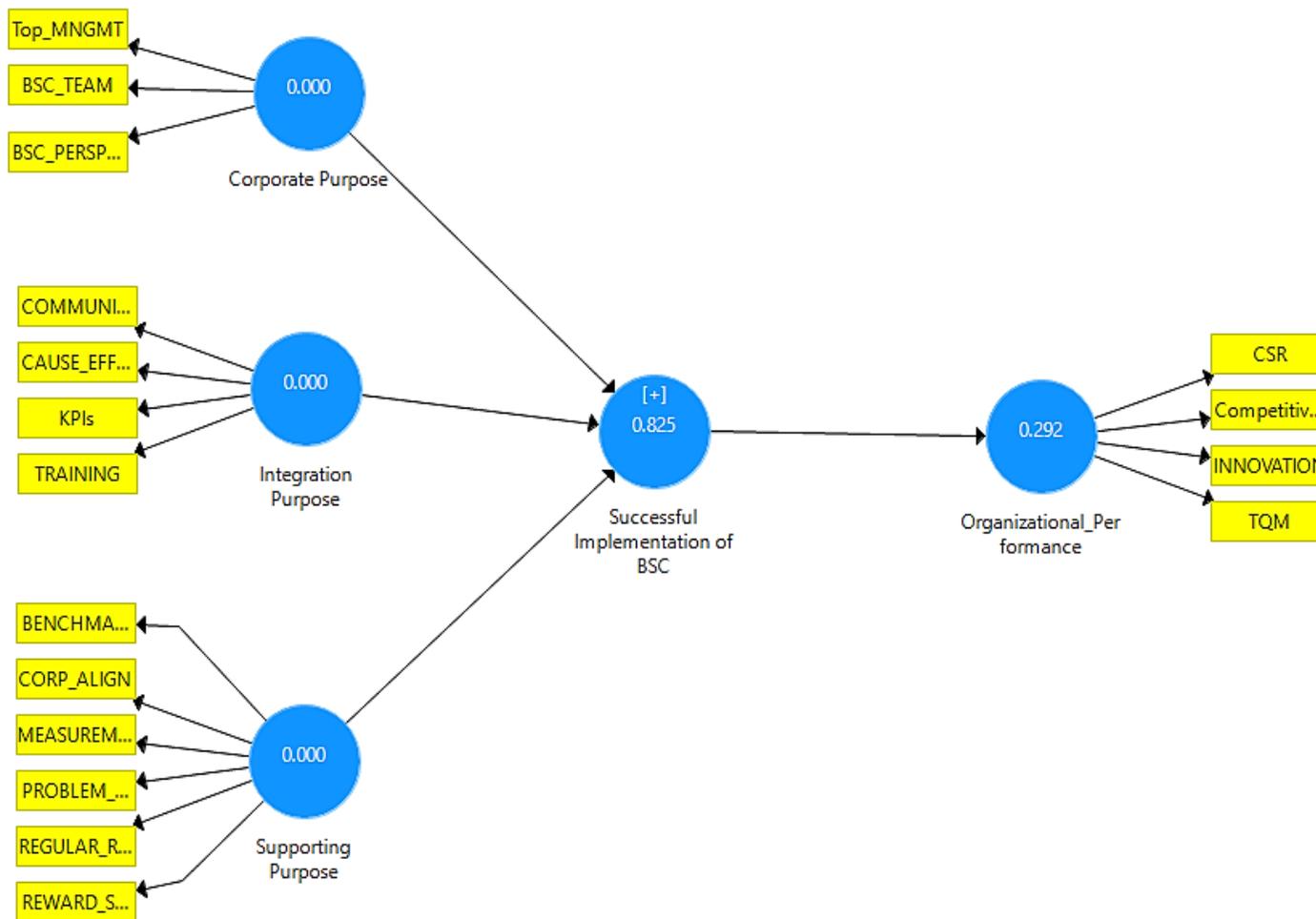


Figure 6.1: Blindfolding analysis (Q^2) of the conceptual model of the research

6.5 The Effect of Critical Success Factors on the Implementation of the Balanced Scorecard

It is challenging for researchers to examine their constructs. Researchers can deal with first-order components, in which consider a single layer of constructs; however, the present research consists of second-order constructs can be operationalized at higher levels of abstraction. Higher-order models usually involve testing second-order structures that contain several layers of constructs and involve a higher level of abstraction.

As mentioned in Chapter 5, Section 5.3, the conceptual model of the research study is conceptualized as a reflective model for the CSFs and organizational performance variables, whereas BSC implementation is a second-order construct. The Corporate Purpose construct is measured by three factors (i.e. top management, BSC team and BSC perspectives), the Integration Purpose construct is measured by four factors (i.e., communication, training, KPIs and cause and effect) and the Supporting Purpose construct is measured by six factors (i.e., regular reporting, measurement assessment, problem solving, rewards to stakeholders, corporate alignment and benchmarking). The SmartPLS 3.0 software was used to fit the model and assess its validity and reliability.

The conceptual model, as shown in Figure 4.1, is divided into three stages: (1) the measurement model for the CSF variables that can affect positively BSC implementation; (2) the relationship between the CSFs and successful implementation of the BSC; and (3) the effect of successful implementation of the BSC on organizational performance.

The conceptual model consists of a measurement model relating 13 reflective indicators to 3 CSF constructs, 4 reflective organizational performance indicators to a construct of Organizational Performance and a structural model regarding the impact of the CSFs on successful implementation of the BSC and the impact of the latter on organizational performance; refer to Figure 6.1.

The coefficient representing the relationship between the dimension and its corresponding reflective indicators for CSFs and organizational performance is called the “outer loading”. This refers to the parameter measuring the relationship between the focal construct and its reflective indicator (Hair Jr et al., 2016), while the coefficient measuring the relationship between two constructs, for example, successful implementation of the BSC and organizational performance, is called the “path coefficient”.

Path coefficient analysis assumes that all variables are measured without error, so path analysis is used to describe the directed dependencies among a set of variables and is known as a cause-and-effect relationship among a set of independent variables on the dependent variable. The path coefficients have standardized values between -1 and +1. A path coefficient close to +1 indicates a strong positive relationship; a path coefficient close to -1 corresponds to a strong negative relationship; while a coefficient close to zero indicates a weak relationship.

The inner structural path coefficients, given their statistical significance, can be interpreted relative to one another. In other words, if one path coefficient is larger than the coefficient of another path, its effect on the related endogenous construct is greater (Aldhaheri et al., 2018).

Figure 6.2 outlines the path coefficients for the conceptual model of the research computed through the SmartPLS bootstrapping option. The path coefficients and P-values are reported for the inner model, whereas the outer model displays the outer loadings with P-values. More information about the results presented in Figure 6.2 will be presented in the following four subsections.

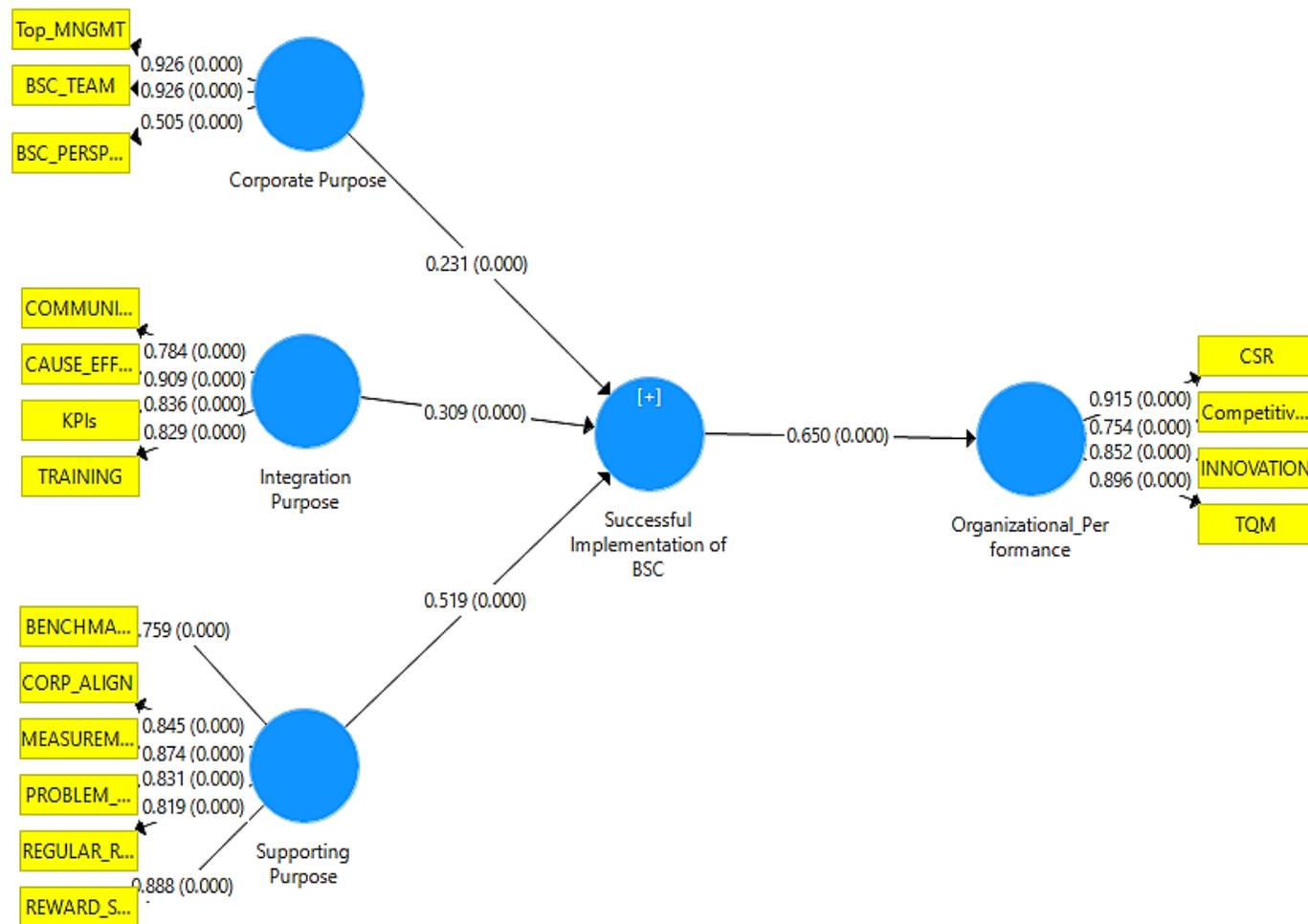


Figure 6.2: Path coefficients, outer loadings and P-values for the model of BSC implementation

6.5.1 The Effect of the Corporate Purpose Construct on Successful Implementation of the BSC

The Corporate Purpose construct consists of three factors (i.e., top management, BSC team and BSC perspectives). The Corporate Purpose construct is expected to play a significant role in BSC implementation.

Top management is the main factor in the Corporate Purpose construct. It is not possible to successfully implement the BSC without executives' support and involvement. The outer loading of the Corporate Purpose construct on the top management factor is 0.926, which indicates a strong relationship between the construct and its indicator since the coefficient is greater than 0.70. The top management outer loading P-value is 0.000, which reveals the statistical significance of the relationship at a 5% significance level (i.e., P-value <0.05). Thus, top management is a positive and significant indicator of the Corporate Purpose construct. This result is consistent with previous study outcomes, such as those by Kaplan and Norton (2001), Assiri et al. (2006), Assiri (2006), Lingle and Schiemann (1996) and Braam and Nijssen (2004).

The BSC team is the second factor in the Corporate Purpose construct that is essential for BSC implementation. The organization should select the smartest people in the organization to empower implementation of the BSC. The outer loading of the Corporate Purpose construct on the BSC team factor is 0.926, which indicates a strong relationship between the construct and its indicator since the coefficient is greater than 0.70. The BSC team outer loading P-value is 0.000, which reveals the statistical significance of this relationship at a 5% significance level (i.e., P-value < 0.05). The BSC team is a positive and significant indicator of the Corporate Purpose construct.

This result is consistent with previous study outcomes, such as those by Kaplan and Norton (2001), Assiri et al. (2006), Assiri (2006), Braam and Nijssen (2004), Brewer et al. (2004), Alsharari et al. (2019) and Albright et al. (2005).

BSC perspectives form the third factor in the Corporate Purpose construct. As mentioned by Kaplan and Norton (1992), the BSC has four perspectives (i.e., financial, customer, internal process and learning and growth) that form a template that is appropriate for most companies and industries globally.

The outer loading of Corporate Purpose on the BSC perspectives factor is 0.505, which indicates a moderate relationship between the construct and its indicator, since this coefficient is less than 0.70. The reason for this low value for BSC perspectives is that private hospitals in the UAE do not use the same template of BSC perspectives as that confirmed by Kaplan and Norton (1992). Private hospitals tailor their perspectives to market demand. Therefore, some private hospitals have their own perspectives and call them by other names according to the hospital's need. The BSC perspectives outer loading P-value is 0.000, which reveals the statistical significance of the relationship at a 5% level (i.e., $P\text{-value} < 0.05$). The BSC perspectives factor has a positive and moderately significant relationship with the Corporate Purpose construct. This result is consistent with previous study outcomes, such as those by Assiri (2006); Assiri et al. (2006); Kaplan and Norton (1992); Kaplan and Norton (2001); Papalexandris et al. (2004).

The Cronbach's alpha for the Corporate Purpose construct is 0.724, which is higher than 0.70. This suggests that the three factors (top management, BSC team and BSC perspective) are reliably consistent indicators of Corporate Purpose. Moreover, the path coefficient measuring the impact of the Corporate Purpose construct on successful

implementation of the BSC is 0.231, with a P-value of 0.000. This confirms that Corporate Purpose has a significantly positive moderate impact on successful implementation of the BSC. This result implies that the research hypothesis H1, “The critical success factor Corporate Purpose is positively associated with successful implementation of the BSC”, can be accepted.

The above analysis reveals significant positive relationships of the factors top management, BSC team and BSC perspectives with the Corporate Purpose construct and a positive significant impact of the latter on successful implementation of the BSC. These findings confirm that top management, the BSC team and BSC perspectives are essential factors for successful implementation of the BSC.

6.5.2 The Effect of the Integration Purpose Construct on Successful Implementation of the Balanced Scorecard

The Integration Purpose construct consists of four factors (i.e., communication, training, KPIs and cause and effect). The Integration Purpose construct is less critical than the Corporate Purpose construct and is expected to play a significant role in BSC implementation.

Communication is the most critical factor in this construct; in that coherent communication should run from top to bottom among those who are engaged in BSC implementation. Communication should be conducted within a collaborative environment to ensure the success of BSC implementation. The outer loading of the Integration Purpose construct on communication is 0.784, which indicates a strong relationship between the construct and its indicator, since the coefficient is greater than 0.70. The communication outer loading P-value is 0.000, which reveals the statistical significance of the relationship at a 5% significance level (i.e., P-value < 0.05). Thus,

communication is a positive and significant indicator of the Integration Purpose construct. This result is consistent with previous study outcomes, such as those by Kaplan and Norton (2001); Assiri et al. (2006); Amini and Babil (2012); Assiri (2006); Lingle and Schiemann (1996); Papalexandris et al. (2005).

Training is the second factor in the Integration Purpose construct. Training is very important for successful implementation of the BSC. Therefore, the offered training should align with the organization's strategy to transfer objectives into action. The outer loading of the Integration Purpose construct on the training factor is 0.829, which indicates a strong relationship between the construct and its indicator, since the coefficient is greater than 0.70. The training outer loading P-value is 0.000, which reveals the statistical significance of the relationship at a 5% significance level (i.e., $P\text{-value} < 0.05$). Thus, training is a positive and significant indicator of the Integration Purpose construct. This result is consistent with previous study outcomes, such as those by Kaplan and Norton (2001), Assiri et al. (2006), Assiri (2006), Zelman et al. (2003), Andersen et al. (2004) and Radnor and Lovell (2003b).

The third factor in the Integration Purpose construct is KPIs. These comprise quantifiable measurements that can motivate and guide stakeholders to improve organizational performance. The outer loading of the Integration Purpose construct on the KPIs factor is 0.836, which indicates a strong relationship between the construct and its indicator, since the coefficient is greater than 0.70. The KPIs outer loading P-value is 0.000, which reveals the statistical significance of the relationship at a 5% level (i.e., $P\text{-value} < 0.05$). Thus, KPIs are a positive and significant indicator of the Integration Purpose construct. This result is consistent with previous study outcomes,

such as those by Assiri et al. (2006), Assiri (2006), Kaplan et al. (2004), Rodgers (2011) and Vokurka (2004).

The fourth factor in the Integration Purpose construct is cause and effect, which presents the relationship among the BSC's four perspectives. Any organization should build its measures according to cause-and-effect linkages. The outer loading of the Integration Purpose construct on the cause-and-effect factor is 0.909, which indicates a strong relationship between the construct and its indicator, since the coefficient is greater than 0.70. The cause and effect outer loading P-value is 0.000, which reveals the statistical significance of the relationship at a 5% level (i.e., P-value < 0.05). Thus, cause and effect is a positive and significant indicator of the Integration Purpose construct. This result is consistent with previous study outcomes, such as those by Assiri et al. (2006), Assiri (2006), Kaplan and Norton (1996), Inamdar et al. (2002), Radnor and Lovell (2003b) and Sim and Koh (2001).

Cronbach's alpha for the Integration Purpose construct is 0.861, which is higher than 0.70. This suggests that the four factors (communication, training, KPIs and cause and effect) are reliably consistent indicators of Integration Purpose. Moreover, the path coefficient measuring the impact of the Integration Purpose construct on successful implementation of the BSC is 0.309, with a P-value of 0.000. This confirms that Integration Purpose has a significant positive moderate impact on successful implementation of the BSC. This result implies that the research hypothesis H2, "The critical success factor Integration Purpose is positively associated with successful implementation of the BSC", can be accepted.

The above analysis revealed significant positive relationships of the factors of communication, training, KPIs and cause and effect with the Integration Purpose

construct and a positive significant impact of the latter on successful implementation of the BSC. These study findings confirm that communication, training, KPIs and cause and effect are essential factors for successful implementation of the BSC.

6.5.3 The Effect of the Supporting Purpose Construct on Successful Implementation of the Balanced Scorecard

The Supporting Purpose construct consists of six factors (i.e., regular reporting, measurement assessment, problem solving, rewards to stakeholders, corporate alignment and benchmarking). Regular reporting will help top management to control their business and therefore to invest the proper time and resources in a professional manner to ensure successful implementation of the BSC. The outer loading of the Supporting Purpose construct on the regular reporting factor is 0.819, which indicates a strong relationship between the construct and its indicator, since the coefficient is greater than 0.70. The regular reporting outer loading P-value is 0.000, which reveals the statistical significance of the relationship at a 5% level (i.e., P-value < 0.05). Thus, regular reporting is a positive and significant indicator of the Supporting Purpose construct. This result is consistent with previous study outcomes, such as those by Assiri et al. (2006); Assiri (2006); Walker (1996); Debnath et al. (2004); Andersen et al. (2004).

The second factor is measurement assessment, which is needed to define the organization's goals. Therefore, this variable is very important for successful implementation of the BSC. The outer loading of the Supporting Purpose construct on the measurement assessment factor is 0.874, which indicates a strong relationship between the construct and its indicator since the coefficient is greater than 0.70. The measurement assessment outer loading P-value is 0.000, which reveals the statistical

significance of the relationship at a 5% level (i.e., $P\text{-value} < 0.05$). Thus, measurement assessment is a positive and significant indicator of the Supporting Purpose construct. This result is consistent with previous study outcomes, such as those by Assiri (2006); Assiri et al. (2006); Kaplan and Norton (2001); Rodgers (2011); Niven (2002); Doran et al. (2002).

The third factor is problem solving, which will help stakeholders to take the intended action to reach the problem's root causes and, therefore, follow the right steps to solve it. The outer loading of the Supporting Purpose construct on the problem-solving factor is 0.831, which indicates a strong relationship between the construct and its indicator since the coefficient is greater than 0.70. The problem-solving outer loading P-value is 0.000, which reveals the statistical significance of the relationship at a 5% level (i.e., $P\text{-value} < 0.05$). Thus, problem solving is a positive and significant indicator of the Supporting Purpose construct. This result is consistent with previous study outcomes, such as those by Assiri et al. (2006); Assiri (2006); Tucker et al. (2002); Rooney and Hopen (2004); Gooderham (1997).

The fourth factor is rewards to stakeholders, which is a good step to connect employees' performance with rewards and incentives. The rewards concept for the organization's employees will strengthen the BSC toward its successful implementation. The outer loading of the Supporting Purpose construct on the rewards to stakeholders factor is 0.888, which indicates a strong relationship between the construct and its indicator, since the coefficient is greater than 0.70. The rewards to stakeholders outer loading P-value is 0.000, which reveals the statistical significance of the relationship at a 5% significance level (i.e., $P\text{-value} < 0.05$). Thus, rewards to stakeholders is a positive and significant indicator of the Supporting Purpose construct.

This result is consistent with previous study outcomes, such as those by Assiri et al. (2006), Assiri (2006), Behery et al. (2014), Olve et al. (1999), Kaplan and Norton (1996, 2001a); Kaplan et al. (2004).

The fifth factor is corporate alignment. The organization's tangible, such as financial and intangible assets, should be aligned with the organization's strategy to ensure successful implementation of the BSC. The outer loading of the Supporting Purpose construct on corporate alignment is 0.845, which indicates a strong relationship between the construct and its indicator, since the coefficient is greater than 0.70. The corporate alignment outer loading P-value is 0.000, which reveals the statistical significance of the relationship at a 5% level (i.e., P-value <0.05). Thus, corporate alignment is a positive and significant indicator of the Supporting Purpose construct. This result is consistent with previous study outcomes, such as those by Assiri et al. (2006); Assiri (2006); Kaplan et al. (2004); Lingle and Schiemann (1996); Albright et al. (2005); Waal (2002).

The last factor in this construct is benchmarking. Organizations should use benchmarking information to set their targets. Benchmarking is the process of measuring and proposing products and services in the market that can be identified globally. Benchmarking tasks will have a positive impact on successful implementation of the BSC. The outer loading of the Supporting Purpose construct on the benchmarking factor is 0.759, which indicates a strong relationship between the construct and its indicator since the coefficient is greater than 0.70. The benchmarking outer loading P-value is 0.000, which reveals the statistical significance of the relationship at a 5% level (i.e., P-value < 0.05). Thus, benchmarking is a positive and significant indicator of the Supporting Purpose construct. This result is consistent with

previous study outcomes, such as those by Assiri et al. (2006); Assiri (2006); Kaplan and Norton (2001); Goldberg and Godwin (2004); Ahire et al. (1996); Bhutta and Huq (1999); Zairi (1992); Zairi and Youssef (1995).

Cronbach's alpha for the Supporting Purpose construct is 0.914, which is higher than 0.70. This suggests that the six factors (regular reporting, measurement assessment, problem solving, rewards to stakeholders, corporate alignment and benchmarking) are reliably consistent indicators of Supporting Purpose. Moreover, the path coefficient measuring the impact of the Supporting Purpose construct on successful implementation of the BSC is 0.519, with a P-value of 0.000. This confirms that Supporting Purpose has a significant positive moderate impact on successful implementation of the BSC. This result implies that the research hypothesis H3, "The critical success factor Supporting Purpose is positively associated with successful implementation of the BSC", can be accepted.

The above analysis reveals significant positive relationships of the factors regular reporting, measurement assessment, problem solving, rewards to stakeholders, corporate alignment and benchmarking with the Supporting Purpose construct and a positive significant impact of the latter on successful implementation of the BSC. These study findings confirm that regular reporting, measurement assessment, problem solving, rewards to stakeholders, corporate alignment and benchmarking are essential factors for successful implementation of the BSC.

6.5.4 The Effect of Successful Implementation of the Balanced Scorecard on Organizational Performance

This research focuses on the healthcare industry in the UAE and represents the first attempt in the country to explore organizational performance through the concept of

the BSC. The researcher argues that the conceptual framework is appropriate for healthcare organizations in the UAE. Organizational Performance is an essential variable in academia for measuring the organization's success through a number of variables. As shown in the conceptual framework in Figure 4.1, the researcher decided to measure Organizational Performance through four variables (i.e., TQM, innovation, competitiveness and CSR).

TQM is the first and most important variable for Organizational Performance measurement. The research process revealed that private hospitals in the UAE give more attention to TQM for achieving high organizational performance. TQM is essential for organizations that are looking for high-quality products that lead to customer satisfaction and customer loyalty, which will lead to high performance regarding service toward customers.

The outer loading of the Organizational Performance construct on the TQM factor is 0.896, which indicates a strong relationship between the construct and its indicator since the coefficient is greater than 0.70. The TQM outer loading P-value is 0.000, which reveals the statistical significance of the relationship at a 5% level (i.e., P-value < 0.05). Thus, TQM is a positive and significant indicator of the Organizational Performance construct. This result is consistent with previous study outcomes, such as those by Ahire et al. (1996), Singh et al. (2018), Bayraktar et al. (2008) and Calvo-Mora et al. (2013).

The second variable is innovation, which pertains to creativity in proposed products as the main driver for organizational performance measurement. Innovation is the process of the implementation or adoption of useful ideas by the organization's employees. The outer loading of the Organizational Performance construct on the innovation

factor is 0.852, which indicates a strong relationship between the construct and its indicator since the coefficient is greater than 0.70. Innovation's outer loading P-value is 0.000, which reveals the statistical significance of the relationship at a 5% level (i.e., $P\text{-value} < 0.05$). Thus, innovation is a positive and significant indicator of the Organizational Performance construct. This result is consistent with previous study outcomes, such as those by Blacha and Brzoska (2016), Yamin et al. (1999), Panayides (2006) and Sethibe and Steyn (2016).

The third factor is competitiveness. An organization becomes competitive when it produces a product of superior quality at lower costs compared to its competitors in the market. The outer loading of the Organizational Performance construct on the competitiveness factor is 0.754, which indicates a strong relationship between the construct and its indicator since the coefficient is greater than 0.70. Competitiveness's outer loading P-value is 0.000, which reveals the statistical significance of the relationship at a 5% level (i.e., $P\text{-value} < 0.05$). Thus, competitiveness is a positive and significant indicator of the Organizational Performance construct. This result is consistent with previous study outcomes, such as those by Stefan et al. (2016), Eiriz et al. (2010) and Buckley et al. (1988). The fourth factor is CSR. As mentioned in Chapter 3, CSR entails recognition on the part of management that their firm has an obligation to the society it serves, in terms not only of maximizing economic performance but also of implementing humane and constructive social policies.

The outer loading of the Organizational Performance construct on the CSR factor is 0.915, which indicates a strong relationship between the construct and its indicator since the coefficient is greater than 0.70. CSR's outer loading P-value is 0.000, which reveals the statistical significance of the relationship at a 5% significance level (i.e.,

P-value < 0.05). Thus, CSR is a positive and significant indicator of the Organizational Performance construct. This result is consistent with previous study outcomes, such as those by Arsoy et al. (2012), Lin et al. (2009), Choi et al. (2010), McGuire et al. (1988) and Javeed and Lefen (2019).

Cronbach's alpha for Organizational Performance is 0.897, which is higher than 0.70. This suggests that the four factors (TQM, innovation, competitiveness and CSR) are reliably consistent indicators of Organizational Performance. Moreover, the path coefficient measuring the impact of successful implementation of the BSC on Organizational Performance is 0.650, with a P-value of 0.000. This confirms that successful implementation of the BSC has a significant positive moderate impact on Organizational Performance. This result implies that the research hypothesis H4, "Successful implementation of the BSC impacted by CSFs is positively associated with organizational performance", can be accepted.

The above analysis reveals significant positive relationships of the successful implementation of the BSC with Organizational Performance (i.e., TQM, innovation, competitiveness and CSR). These study findings confirm that TQM, innovation, competitiveness and CSR are essential factors for Organizational Performance measurement.

6.6 Conclusion

This chapter provides a comprehensive analysis of various descriptive statistics and multivariate analysis. From the questionnaire outcomes, it is clear that BSC implementation is in a good position among private hospitals in the UAE. There were 93 BSC users of the theory out of 114 total respondents to the questionnaire. The

results also show that 45% of the organizations were in the research or development stage of using the BSC, while 55% of the organizations had started using the BSC. Considering also the results of other sections of the questionnaire, the general findings indicate that the concept of the BSC is well developed in the healthcare sector in the UAE.

As confirmed earlier, this research is divided into three parts. The first part outlines the CSFs according to three main constructs (i.e., Corporate Purpose, Integration Purpose and Supporting Purpose); the second part pertains to the effect of CSFs on successful implementation of the BSC; and the third part explores the effect of successful implementation of the BSC on organizational performance.

The BSC structural model was built using the SmartPLS statistical technique. The model fit measurement was also examined, where the generated structural model was proved to adequately fit the data. The high degree of reliability and validity of the BSC conceptual model suggests that it may be used for performance measurements of healthcare organizations in the UAE. The results reveal that CSFs have a significant positive moderate impact on successful implementation of the BSC. In addition, the results show that successful implementation of the BSC has a significant positive moderate impact on organizational performance. The findings are important to the theoretical BSC framework and will help executive management to succeed in BSC implementation in the healthcare sector in the UAE. The next chapter will build on Chapters 5 and 6 by discussing the recommendations of the research.

Chapter 7: Conclusions and Recommendations

7.1 Introduction

As stated in Chapter 1, the aim of this research is to improve BSC implementation in the UAE by identifying the CSFs that could positively affect BSC implementation in the healthcare sector and to assess the impact of such implementation on organizational performance. Four main objectives were outlined for this research. The objectives were (1) to explore the concept of BSC in the healthcare sector in the UAE, (2) to identify the CSFs that contribute to the successful implementation of the BSC in the healthcare sector in the UAE, (3) to examine the effect of using the BSC on organizational performance in the healthcare sector in the UAE and (4) to determine the relationship between CSFs, BSC practices and organizational performance in the healthcare sector in the UAE.

The study was primarily motivated by the fact that healthcare improvement and sustainability are crucial issues for the UAE government and are included in the country's vision 2020 to be a world-class site for healthcare. The motivation of this study also arose based on the nature of the healthcare sector, which is continuously changing globally and faces many forces demanding unprecedented levels of change.

The present chapter is structured into five sections. Section 7.2 presents the findings of the study; Section 7.3 outlines the research implications and recommendations; Section 7.4 delineates the limitations of the study and Section 7.5 presents the future research directions.

7.2 Research Findings

As confirmed in Chapter 6, the researcher collected 114 responses from 73 private hospitals in the UAE, with results showing that 93 out of 114 were BSC users. This high percentage helped the researcher obtain an idea of the extent to which the BSC is used in the UAE. It is worth mentioning that the researcher was unaware of the BSC situation in private hospitals in the UAE before starting this research.

Another insight gained from the questionnaire is related to the nature of the research sample, which included many respondents with high-level roles (i.e., executives, directors and managers). Executives and directors represented 51.5% of the sample (48 responses), whereas managers represented 48.5% (45 responses). This indicates the high quality of the collected data from different levels of management, including top leaders in private hospitals.

The structural model of the research, as shown in Figure 4.1, is divided into three stages: the first stage, on the left side of the model, proposes 13 CSFs distributed into three different constructs (i.e., corporate purpose, integration purpose and supporting purpose); the second stage, in the middle, is represented by successful implementation of the BSC; and the third stage, on the right side of the model, proposes four variables for organizational performance measurement (i.e., TQM, innovation, competitiveness and CSR).

As mentioned in Chapter 6, the Corporate Purpose construct consists of three factors (i.e., top management, BSC team and BSC perspectives) and is essential for successful implementation of the BSC in the healthcare sector in the UAE. The results reveal that the Corporate Purpose construct has a positive and significant effect on successful implementation of the BSC. The results also show that top management and BSC team

are positive and significant factors within the Corporate Purpose construct. This highlights the importance of these two factors in achieving successful implementation of BSC. Therefore, top management in healthcare organizations should form a specialized BSC team that has the relevant skills, knowledge and competencies to ensure effective implementation of the BSC.

On the other hand, the results show that the BSC perspectives represent a positive but moderately significant factor of the Corporate Purpose construct. The reason for this result may be because healthcare organizations in the UAE use the BSC as a management tool, but do not use the same template suggested by Kaplan and Norton (1992). The respondents from private hospitals highlighted the importance of having a specialized team to ensure successful implementation of the BSC through applying a standard template.

The second construct, Integration Purpose, consists of four factors (i.e., communication, training, KPIs and cause and effect). The results reveal that the Integration Purpose construct has a positive and significant effect on successful implementation of the BSC. Regarding the four factors of the second construct, the results highlight an important point regarding the frequency distribution for the training factor. Organizations should focus on providing the right training to employees involved in the BSC project to keep the process under control. There is space for improvement in the training factor, since the results show a low frequency of responses for the second item in the questionnaire compared to other items for the training factor; thus, top management should ensure that knowledge and skills are developed consistently to meet the changing needs of BSC implementation, teams and individuals. This proposed improvement in the second construct will positively impact

BSC implementation in the healthcare sector. The third construct, Supporting Purpose, consists of six factors (i.e., regular reporting, measurement assessment, problem solving, rewards to stakeholders, corporate alignment and benchmarking). The results show that this construct has a positive and significant effect on successful implementation of the BSC.

There is significant competition in the healthcare sector in the UAE among healthcare providers. Each provider is looking to generate the highest revenue, as well as providing best-in-class service to its patients. One interesting result regarding the six factors for the Supporting Purpose construct is that the frequency distribution for the rewards to stakeholders factor was low. Therefore, executives or top management should link the rewards system to the BSC project to improve organizational performance.

Other findings relate to the benchmarking factor. The results show that benchmarking is a positive and significant factor within the Supporting Purpose construct. This factor is important because of the significant competition in the UAE among healthcare providers. Therefore, healthcare organizations should focus on the benchmarking factor to enhance the implementation of the BSC by benchmarking their performance against other relevant organizations, as stated in the second scale of the benchmarking factor.

As a summary of the CSFs section of the structural model, executives should focus on improving the Supporting Purpose construct, which was found to be the factor with the strongest impact on BSC implementation compared to the other two constructs (i.e., Corporate Purpose and Integration Purpose). This could significantly enhance BSC implementation in the healthcare sector in the UAE.

The results regarding the Organizational Performance factors reveal positive and significant indicators according to the questionnaire responses. Healthcare organizations should focus on improving their competitiveness by offering the best service at a reasonable cost to their patients. The TQM factor should be controlled by the main governmental regulatory bodies in the UAE; as outlined in Chapter 2, each regulatory body controls organizations' performance based on their commitment to the quality factor, which in turn positively impacts service.

7.3 Research Implications and Recommendations

The previous section outlined the main research findings. The study considers BSC implementation in private hospitals in the UAE. The implementation of the related theory itself is still in an early stage. BSC users thus require more guidance to succeed in their implementation of the BSC. The BSC is applied globally in many different sectors, such as hospitality, manufacturing, local government and municipality, insurance and healthcare.

The healthcare sector is essential to many stakeholders, such as investors, executives and the government. The sector deals with patients and there are many challenges to achieving patient satisfaction. The research outcomes will help executives and senior managers of healthcare organizations to control the performance of their organizations through effective implementation of the BSC, which will positively impact performance. Executives should focus on the CSFs that could affect the theory implementation and should remain involved in the process.

The research outcomes can also be used in future studies in the healthcare sector in the UAE since this study is the first to consider the BSC in the UAE in the context of

healthcare. The outcomes of the study will guide researchers to conduct further studies on topics related to BSC theory in other countries. Other studies can also be conducted in the GCC due to the similarities in the market and culture of these countries and researchers can then compare countries in the Gulf region.

In spite of the relatively high number of BSC users in the healthcare sector in the UAE, the BSC implementation process is still complex and unclear. This research identified the most relevant CSFs from the literature and application of the proposed structural model shown in Figure 4.1 will ensure maximum benefits for healthcare organizations in terms of performance.

The healthcare sector in the UAE is under development, as well as under scrutiny from the UAE government; in fact, the government has a specific strategy in place to improve this sector and provide best-in-class service to patients. The official government bodies in the UAE (i.e., HAAD, DHA, DHCC and MOHAP), as mentioned in Chapter 2, should encourage healthcare providers to use the most appropriate management tools, such as the BSC, to control the organizational performance outcomes. There are a number of awards that offer recognition to private and governmental organizations and persons based on their performance and contributions to the medical field. Examples include the award of Sheikh Hamdan Bin Rashid Al Maktoum for Medical Sciences and the Abu Dhabi Award. Both can serve as incentives for employees (locals and expatriates) and organizations to improve the healthcare sector, as well as sectors related to sports, education and leadership.

The researcher recommends implementing a standard template of BSC perspectives, which will help to streamline theory implementation and therefore offer benefits from other iterations of the BSC in the USA and Europe. Healthcare organizations should

focus on the supporting construct factors, such as the regular reporting factor. As per the research outcomes, there is an inefficiency in the reporting system in private hospitals due to employees' busy job schedules and commitments. Another recommendation from this research study is for hospitals to have a specialized BSC team that has relevant expertise to control the BSC in their organizations and update executives frequently.

The UAE government should encourage private hospitals to pay more attention to organizational performance factors (i.e., TQM, innovation, competitiveness and CSR). Another recommendation is to focus on activities related to TQM, innovation, competitiveness and CSR, due to the nature of the healthcare sector itself, which deals with patients. The research outcomes showed that private hospitals in the UAE usually pay more attention to the four items of the organizational performance construct. Official governmental bodies should create stricter rules to govern and improve the implementation of activities related to the four factors. Thus, decision makers should focus on exploring additional ways to ensure high-quality products, which in turn will lead to customer loyalty and then to high organizational performance.

7.4 Research Limitations

This study provides several insights into improving BSC implementation in the UAE. However, like other studies, it has limitations that should be considered for further research. One limitation is that the researcher did not approach governmental organizations in this study, due to difficulties regarding getting access to the right persons, since governmental hospitals have very strict rules on access due to confidentiality issues. The researcher applied for special approval from the three main

regulatory bodies (i.e., HAAD, DHA and MOHAP) to access private hospitals in the UAE to conduct this research, which consumed significant time.

The second limitation of this research is that the maximum number of respondents for each hospital was limited to two. This limitation was put in place by the hospitals, because they have very strict rules due to confidentiality, as well as time restrictions. This represents a serious limitation of the study and the researcher believes that having access to additional relevant respondents would have increased the sample size and thus improve the quality of the results.

The third limitation of this research pertains to the topic itself, the BSC, which meant that the researcher had to directly contact executives and directors of the hospitals. This created a sensitive environment in which the hospital leaders showed limited cooperation with the researcher due to the confidentiality issue. As a result, many organizations decided to not disclose important information related to their profitability. This meant that the researcher had to use other relevant constructs to capture the missing data. This prevented the researcher from using a qualitative approach to collect more information about the management tool used, the CSFs and the BSC implementation in each private hospital. Such information could have led to extensive insights into how the BSC is implemented and its effect on organizational performance in these private hospitals.

7.5 Future Research Directions

In Section 7.4, the researcher highlighted the research limitations, which in turn serve as seeds for future research studies. The current section provides an overview of these opportunities. Further research should be conducted separately in each private

healthcare sector in the UAE, such as private hospitals in the Emirate of Abu Dhabi, in the Emirate of Dubai and in the Northern Emirates. A comparative study between the main private hospitals in the UAE could provide a good overview of BSC implementation in the healthcare sector.

Another area of research is to focus on governmental organizations; thus, future research can be conducted in HAAD in the Emirate of Abu Dhabi, DHA in the Emirate of Dubai and MOHAP in Northern Emirates and the effectiveness of BSC implementation among the main three governmental organizations in the UAE compared to understand the extent to which governmental organizations use the BSC.

Further research would be useful to obtain an overview of the effectiveness of BSC implementation in the healthcare sector in the UAE in both government and private sectors and compare BSC implementation performance in consideration of the differences and similarities between CSFs and organizational performance among these sectors. Finally, a comparative study between governmental organizations in the UAE and Saudi Arabia would be useful to measure the effectiveness of BSC implementation in the healthcare sectors; this would help to provide a robust overview of theory usage in the GCC.

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Appendices

Appendix A: DBA Dissertation's Questionnaire



جامعة الإمارات العربية المتحدة
United Arab Emirates University

UAEU

Title: The Effect of Balanced Scorecard Implementation on Organizational Performance: The Case of the Healthcare Sector in the UAE.

Dear Survey Participant,

I invite you to participate in this study which is conducted as part of completing the Doctorate of Business Administration (DBA) Degree at UAE University.

I am conducting this study under the supervision of Prof. Khaled Aljifri and Prof. Taoufik Zoubeidi. This study will contribute to better understand the effect of Balanced Scorecard implementation on organizational performance in the Healthcare Sector in the UAE. A summary report of the results will be available to all interested participants. If you are interested in receiving this summary, please provide your email address below.

Participant Email:

Your participation is critical for the success of this study. Please be assured that your responses will be held strictly confidential based on the Ethical approval No. ERS_2018_5775. Only overall summary results in anonymous form will be reported, with no references made to individual responses, respondents, or organizations. Kindly also note that your participation is voluntary, you may withdraw from the study at any time.

If you have questions regarding this study, please do not hesitate to contact the researcher directly (as per the contact information below).

Thank you in advance for your valuable contribution to this important study.

Alaa Salah Mushtaha

Doctorate of Business Administration (DBA) Student

College of Business and Economics,

United Arab Emirates University (UAEU)

Mob: 050-6350618

Email: 201390009@uaeu.ac.ae

Title: The Effect of Balanced Scorecard Implementation on Organizational Performance: The Case of the Healthcare Sector in the UAE.

1- Personal Information

Please tick in the appropriate box

Q1. Gender

<input type="checkbox"/> Male	<input type="checkbox"/> Female
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Q2. Age

<input type="checkbox"/> 19-29	<input type="checkbox"/> 30-39	<input type="checkbox"/> 40-49	<input type="checkbox"/> 50-59	<input type="checkbox"/> 60 or over
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Q3. Nationality

<input type="checkbox"/> Local	<input type="checkbox"/> Expatriate
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Q4. Educational level

<input type="checkbox"/> University degree	<input type="checkbox"/> Post graduate degree	<input type="checkbox"/> Other
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Q5. Your role in the organization

<input type="checkbox"/> CEO	<input type="checkbox"/> CMO	<input type="checkbox"/> COO	<input type="checkbox"/> CFO
<input type="checkbox"/> Director	<input type="checkbox"/> Senior Manager	<input type="checkbox"/> Strategic Manag	<input type="checkbox"/> HR Manager
<input type="checkbox"/> Quality Manager	<input type="checkbox"/> Other, please specify:		

2- Background Information

Please tick in the appropriate box

Q6. Your organization is based in

<input type="checkbox"/> Abu Dhabi	<input type="checkbox"/> Al Ain	<input type="checkbox"/> Dubai	<input type="checkbox"/> Sharjah
<input type="checkbox"/> Ajman	<input type="checkbox"/> Umm Al Quwain	<input type="checkbox"/> Ras Al-Khaimah	<input type="checkbox"/> Fujairah

Q7. Number of employees

<input type="checkbox"/> 50 or less	<input type="checkbox"/> 51-100	<input type="checkbox"/> 101-150	<input type="checkbox"/> 151-200	<input type="checkbox"/> Over 201
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Q8. Organization age

<input type="checkbox"/> Less than one year	<input type="checkbox"/> 1-5 years	<input type="checkbox"/> 6-10 years	<input type="checkbox"/> More than 10 years
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Q9. Are you familiar with the concept of Balanced Scorecard?

<input type="checkbox"/> Yes	<input type="checkbox"/> No
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Q10. At what stage is your organization's use of the Balanced Scorecard?

<input type="checkbox"/> Not considered	<input type="checkbox"/> Researching	<input type="checkbox"/> Starting to use
<input type="checkbox"/> Development	<input type="checkbox"/> In use for some time	

3- Organizational Performance Variables

Q11. Please indicate the level of importance for each statement. Please place an X underneath numbers (from 1 to 5) after each statement according to the following scales:

1	2	3	4	5				
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree				
A. TOTAL QUALITY MANAGEMENT (TQM)				1	2	3	4	5
A1. The organization's top management actively participates in TQM and supports the improvement process.								
A2. The organization's top management encourages employee's involvement in TQM.								
A3. The organization's top management focuses on how to improve the performance of employees apart from relying on financial criteria.								
A4. The administrative processes in the organization are well aligned with the organization's vision.								
A5. The organization meets the expectations of our patients.								
A6. The organization meets the expectations of our employees.								
A7. The organization collects statistical data to improve the processes.								
A8. TQM in our organization is continuously improved.								
A9. The organization has a clear quality manual, quality system documentation and working instructions.								
A10. The organization organizes training on TQM for employees and encourages employees to participate.								

A11. Our employees are actively involved in TQM related activities.					
A12. Our employees, as the organization's most valuable and long-term resource, are worthy of receiving the necessary education and training in order to achieve the organization's vision.					
B. INNOVATION	1	2	3	4	5
B1. The organization has customer relationship management capabilities.					
B2. The organization has a mechanism for inspirational innovation and realization.					
B3. The organization has the ability to speed up the commercialization of new services.					
B4. The organization has the ability to attract excellent employees.					
B5. The organization has fundamental research expenditures.					
B6. The organization has progressive capability of innovative technology.					
B7. The organization has maintained sufficient investment in innovation.					
B8. The organization has the ability to provide patients with high quality of services.					
C. Competitiveness	1	2	3	4	5
C1. The organization offers competitive prices.					
C2. The organization can sell the services at prices that are above average.					
C3. The organization can compete with others based on quality.					
C4. The organization offers high-quality products to its patients.					
C5. The organization offers products that function according to patients' needs.					
C6. The organization alters the services offerings to meet patients' needs.					
D. Corporate Social Responsibility (CSR)	1	2	3	4	5

D1. The organization participates in activities which aim to protect and improve the quality of the natural environment.					
D2. The organization implements special programs to minimize its negative impact on the natural environment.					
D3. The organization targets sustainable growth considering sustainable generations.					
D4. The organization supports non-governmental organizations working in problematic areas.					
D5. The organization contributes to campaigns and projects that promote the well-being of society.					
D6. The organization encourages its employees to participate in voluntary activities.					
D7. The organization emphasizes the importance of its social responsibilities to society.					
D8. The organization policies encourage employees to develop their knowledge, skills and careers.					
D9. The organization implements flexible policies to provide a good work-life balance for its employees.					
D10. The organization provides full and accurate information about its products to patients.					
D11. The organization complies with legal regulations completely and promptly.					
D12. Customer satisfaction is highly important for our organization.					

4- Implementation of Balanced Scorecard Variables									
Q12. Please indicate the level of importance for each statement. Please place an X underneath numbers (from 0 to 5) after each statement according to the following scale:									
0	1	2	3	4	5				
Not Applicable	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree				
A. <input type="checkbox"/> Top Management				0	1	2	3	4	5
1. Top management has allocated adequate resources and time for establishing the Balanced Scorecard project.									
2. Top management is committed to the Balanced Scorecard, not only in the introductory phase, but on a permanent basis.									
3. Top management has played a significant role in the implementation of the Balanced Scorecard.									
4. Top management has reviewed and agreed on all the Balanced Scorecard measures.									
B. <input type="checkbox"/> Balanced Scorecard Team				0	1	2	3	4	5
1. The organization has a specialized team for the Balanced Scorecard.									
2. The Balanced Scorecard team members have various relevant skills, knowledge and competencies.									
3. The Balanced Scorecard team is visible and has access to top management.									
C. <input type="checkbox"/> Balanced Scorecard Perspectives									

Question No.1: What perspectives does the organization use to organize measures for reporting purposes? (Please tick only one)

- A. Kaplan-Norton four perspectives (Financial, customer, Internal process, learning & growth)
- B. Accenture's Value Dynamics (physical, customer, financial, employee & supplier, organization)
- C. Baldrige Criteria (leadership, strategic planning, customer, information & analysis, HR, focus, process management, business results)
- D. European Foundation for Quality Management – EFQM perspectives (leadership, people, Policy & Strategy, Partnerships and Resources, Processes-Results: people, customer, society, key performance)

If the above are not used, how many perspectives does your Balanced Scorecard comprise? Please list:

- 1)
- 2)
- 3)
- 4)

Question No.2: To what extent do you agree that the following are important to the organization's Balanced Scorecard:	0	1	2	3	4	5
• <input type="checkbox"/> Financial perspectives						
• <input type="checkbox"/> Customer perspective						
• <input type="checkbox"/> Internal Business perspective						
• <input type="checkbox"/> Learning and growth perspective						
Question No.3: The above four perspectives adequately capture the focus of the organization's strategy and provide a balance between the financial and non-financial measures.						
D. <input type="checkbox"/> Communication	0	1	2	3	4	5
1. Regular team meetings are conducted to compare the performance measures and progress against corporate goals.						
2. The employees receive strategic information on a regular basis.						
3. The strategic information reaches the right people, in the right format, at the right time and the right quantity.						
E. <input type="checkbox"/> Training	0	1	2	3	4	5

1. Emphasis is placed on skills development & training in the organization.						
2. Knowledge and skills are developed consistently to meet the changing needs of Balanced Scorecard implementation, teams and individuals.						
3. The organization links the education and training of employees to its long-term plans and strategies.						
4. Top management arranges adequate resources for employees' education and training.						
F. <input type="checkbox"/> Key Performance Indicators (KPIs)	0	1	2	3	4	5
1. Actions and objectives are supported by measures or key performance indicators (KPIs).						
2. Before implementing the Balanced Scorecard, the organization establishes the relative importance of KPIs.						
3. The relative weights and appropriate balance among various performance indicators are determined before implementing the Balanced Scorecard.						
G. <input type="checkbox"/> Cause & Effect	0	1	2	3	4	5
1. The organization establishes relationships & linkages between key performance indicators (KPIs).						
2. The organization's Balanced Scorecard reveals relationships to provide cause & effect modelling.						
3. The cause & effect relationships between data elements are investigated to ensure that resources are being correctly allocated.						
H. <input type="checkbox"/> Regular Reporting	0	1	2	3	4	5
1. The organization has reporting systems besides the Balanced Scorecard.						
2. The results of the Balanced Scorecard measures are incorporated into a regular reporting system.						
3. The Balanced Scorecard improves feedback to responsible managers so that adjustments to the strategic plan can be made during the operating period.						
I. <input type="checkbox"/> Measurement Assessment	0	1	2	3	4	5

1. The organization has realized the significance of its strategies and operational goals.						
2. The results of the Balanced Scorecard help your organization to assess its performance.						
3. Implementation of the Balanced Scorecard enables the organization to review its measures frequently and identify the right combination of measures.						
J. <input type="checkbox"/> Problem Solving	0	1	2	3	4	5
1. The employees in the organization are empowered to resolve problems and improve processes.						
2. The Balanced Scorecard results help the organization solve its problems.						
3. The organization encourages a culture of teamwork and problem solving.						
K. <input type="checkbox"/> Rewards to Stakeholders	0	1	2	3	4	5
1. The focus is on individuals' contribution in relation to specific tasks in the organization.						
2. The reward system is linked to Balanced scorecard to create a cultural change to improve performance.						
3. The linking of compensation and measuring employees' awareness to scorecard results is significant in sustaining the Balanced Scorecard system.						
4. Recognition and reward activities effectively stimulate employees' commitment to the Balanced Scorecard implementation.						
L. <input type="checkbox"/> Corporation Alignment	0	1	2	3	4	5
1. The Balanced Scorecard system has succeeded in aligning the organization strategy with performance measures.						
2. The Balanced Scorecard facilitates achieving sustainable alignment.						
3. The measures used in the scorecard system motivate employees to work in congruence with the organization's objectives.						
M. <input type="checkbox"/> Benchmarking	0	1	2	3	4	5

1. Benchmarking with other competitive organizations is used in the organization.						
2. The Balanced Scorecard is used to benchmark performance against other relevant organizations.						
3. The organization targets are systematically stretched as a motivational tool for employees and units.						

Thank you so much for your valuable time and efforts.

Appendix B: Discriminant Validity for Individual Constructs for the Structural Model

	Corp. Purpose	Integ. Purpose	Supp. Purpose	Successful Implementation of BSC	Org. Performance
Corporate Purpose Group					
TopMNGMT_AVG	0.926	0.399	0.636	0.635	0.430
BSC TEAM_AVG	0.926	0.352	0.546	0.636	0.400
BSC PERSPECTIVE_AVG	0.505	0.206	0.165	0.275	0.165
Integration Purpose Group					
COMMUNICATION_AVG	0.218	0.784	0.501	0.576	0.575
CAUSE_EFFECT_AVG	0.427	0.909	0.717	0.750	0.659
KPI_AVG	0.255	0.836	0.566	0.615	0.630
TRAINING_AVG	0.433	0.829	0.653	0.674	0.720
Supporting Purpose Group					
REWARD_STAKHOLDER_AVG	0.558	0.675	0.888	0.811	0.586
MEASUREMENT_ASSESS_AVG	0.520	0.688	0.874	0.744	0.564
REGULAR_REPORTING_AVG	0.559	0.551	0.819	0.740	0.342
PROBLEM_SOLVING_AVG	0.418	0.723	0.831	0.746	0.688
CORP_ALIGN_AVG	0.499	0.459	0.845	0.711	0.376
BENCHMARKING_AVG	0.481	0.567	0.759	0.685	0.526
Organizational Performance Group					
TQM_AVG	0.417	0.751	0.595	0.634	0.896
INNOVATION_AVG	0.352	0.619	0.518	0.532	0.852
Competitiveness_AVG	0.182	0.486	0.389	0.369	0.754
CSR_AVG	0.472	0.728	0.570	0.632	0.915