



PERCEIVED ENVIRONMENTAL UNCERTAINTY, BUSINESS STRATEGY, BALANCED SCORECARD AND ORGANISATIONAL PERFORMANCE IN SELECTED MANUFACTURING COMPANIES IN JORDAN

ALMOTHANNA JAMIL ABU-ALLAN

FEP 2018 45



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By

ALMOTHANNA JAMIL ABU-ALLAN

**Thesis Submitted to the School of Graduate Studies, Universiti Putra Malaysia,
in Fulfillment of the Requirements for the Degree of Doctor of Philosophy**

October 2018

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DEDICATION

This thesis is dedicated to my homeland Jordan, the symbol of sacrifice; to my great Mother and Father, who never stop giving of themselves in countless ways; to my brothers and sisters, who sacrifice and support me; and to my beloved fiancée, who gives me the light of hope and support.



Abstract of thesis presented to the Senate of Universiti Putra Malaysia in fulfillment
of the requirement for the degree of Doctor of Philosophy

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October 2018

Chairman : Associate Professor Nor Aziah Abu Kasim, PhD
Faculty : Economics and Management

The turmoil in the Arab region and the so-called “Arab Spring” have overwhelmed many aspects in the region. The Jordanian economy has been affected mainly by the situation specifically in regard to the manufacturing sector. Several challenges have hindered the economic growth and the profitability of organisations within the sector. Such challenges include the massive immigration of refugees, the instability in import and export, the drop in demand, and environmental uncertainty. Therefore, the performance of the manufacturing sector in Jordan has declined over the last few decades due to the instability in the Arab region countries. Yet, the lack of information needed to make strategic decisions among manufacturing companies in Jordan is perhaps attributed to their ineffective implement of performance management systems. Many companies in the manufacturing sector in Jordan have adopted performance measurement systems rather than performance management systems, e.g. Balanced Scorecard (BSC), to achieve a competitive advantage and better performance.

In order to better understand the performance management systems; this study utilises the contingency theory theoretical framework to examine the contingent relationships between several contingent factors and the implementation of BSC as a performance management system. The contingent factors consist of perceived environmental uncertainty and business strategy. This study examines the influence of perceived environmental uncertainty on business strategy, BSC implementation, and organisational performance. The influences of business strategy on BSC implementation, as well as, organisational performance were examined. The mediating role of BSC was also examined. 400 questionnaires were distributed to

manufacturing companies in Jordan. A total of 312 usable responses were received representing a response rate of 78%. Structural Equation Modelling (SEM) using AMOS was then used to test eight hypotheses constructed from the conceptual framework of the study.

SEM analysis revealed that: a) perceived environmental uncertainty has a positive influence on business strategy, BSC implementation, and organisational performance; b) business strategy has a positive influence on BSC implementation; c) business strategy does not have positive influence on organisational performance; d) the implementation of BSC has a positive influence on organisational performance; On the other hand, the implementation of BSC has a partial mediation role in the relationship between perceived environmental uncertainty and organisational performance. In contrast, the implementation of BSC has a full mediation role in the relationship between business strategy and organisational performance. Theoretically, the framework of this study provided important contributions to the literature of management accounting by considering contingent factors such as perceived environmental uncertainty and business strategy on the implementation of BSC. Findings of the study enhance the understanding of contingent factors that could influence the BSC implementation among manufacturing companies in Jordan. Besides, this study also assists companies to understand the need to implement BSC effectively in order to use relevant information for decision-making purposes, which in turn, should improve overall organisational performance.

Abstrak tesis yang dikemukakan kepada Senat Universiti Putera Malaysia sebagai memenuhi keperluan ijazah Doktor Falsafah

**PERSEPSI PERSEKITARAN YANG TIDAK MENENTU, STRATEGI
PERNIAGAAN, SKORKAD TERIMBANG DAN PRESTASI ORGANISASI
DALAM SYARIKAT PERKILANGAN TERPILIH DI JORDAN**

Oleh

ALMOTHANNA JAMIL ABU-ALLAN

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Pergolakan di tanah Arab serta gerakan revolusi yang dipanggil “*Arab Spring*” telah memberi kesan dalam banyak aspek di rantau itu. Sebahagian besar ekonomi Jordan telah terjejas ekoran situasi ini terutamanya yang berkaitan dengan sektor pembuatan. Beberapa cabaran telah menghalang pertumbuhan ekonomi dan keberuntungan organisasi dalam sektor tersebut. Antara cabaran itu termasuklah migrasi pelarian secara besar- besaran, ketidakstabilan import dan eksport, kejatuhan permintaan dan ketidakpastian persekitaran. Oleh yang demikian, prestasi sektor pembuatan di Jordan telah merosot sejak beberapa dekad lalu berikutan ketidakstabilan negara- negara di rantau Arab. Namun demikian, kekurangan maklumat untuk membuat keputusan strategik di antara syarikat pembuatan di Jordan mungkin menyebabkan pelaksanaan sistem pengurusan prestasi yang tidak berkesan. Kebanyakan syarikat dalam sektor pembuatan di Jordan telah mengamalkan sistem pengukuran prestasi berbanding dengan sistem pengurusan prestasi, contohnya, Skorkad Terimbang (BSC), untuk mencapai kelebihan bersaing dan prestasi yang lebih baik.

Untuk memperolehi kefahaman yang lebih baik dalam sistem pengurusan prestasi; kajian ini menggunakan teori kontingensi sebagai kerangka kerja untuk mengkaji hubungan antara beberapa faktor kontingen dengan pelaksanaan BSC sebagai satu sistem pengurusan prestasi. Faktor kontingen tersebut terdiri daripada ketidaktentuan persekitaran dan strategi perniagaan. Kajian ini menguji pengaruh ketidaktentuan persekitaran ke atas strategi perniagaan, pelaksanaan BSC, dan prestasi organisasi. Pengaruh strategi perniagaan ke atas pelaksanaan BSC dan prestasi organisasi juga dikaji. Peranan perantaraan BSC juga turut diteliti. Sebanyak 400 borang soal selidik telah diedarkan kepada syarikat- syarikat pembuatan di Jordan. Sejumlah 312 maklum balas yang berguna telah diterima bersamaan dengan kadar maklum balas sebanyak

78%. Pemodelan Persamaan Struktur (SEM) menggunakan AMOS kemudiannya digunakan untuk menguji lapan hipotesis yang telah dihasilkan daripada kerangka kerja konseptual kajian.

Analisis SEM menunjukkan bahawa: a) Tanggapan ketidaktentuan persekitaran memberi pengaruh yang positif terhadap strategi perniagaan, pelaksanaan BSC, dan prestasi organisasi; b) strategi perniagaan memberi pengaruh yang positif terhadap pelaksanaan BSC; c) strategi perniagaan tidak memberi pengaruh yang positif terhadap prestasi organisasi; d) pelaksanaan BSC memberi pengaruh yang positif terhadap prestasi organisasi; Sebaliknya, pelaksanaan BSC memainkan peranan perantaraan yang separa dalam hubungan antara ketidaktentuan persekitaran dengan prestasi organisasi. Sebaliknya, pelaksanaan BSC memainkan peranan perantaraan yang penuh dalam hubungan antara strategi perniagaan dengan prestasi organisasi. Secara teorinya, kerangka kerja kajian ini memberikan sumbangan yang penting kepada kepustakaan perakaunan pengurusan dengan mengambil kira faktor kontingen seperti tanggapan ketidaktentuan persekitaran dan strategi perniagaan ke atas pelaksanaan BSC. Di samping itu, dapatan kajian ini akan meningkatkan kefahaman dalam faktor kontingen yang dapat mempengaruhi pelaksanaan BSC antara syarikat pembuatan di Jordan. Selain itu, dapatan kajian ini juga akan membantu syarikat-syarikat ini memahami keperluan untuk melaksanakan BSC secara berkesan dalam menggunakan maklumat yang berkaitan bagi tujuan membuat keputusan, yang mana secara tidak langsung akan dapat meningkatkan prestasi organisasi secara keseluruhan.

ACKNOWLEDGEMENTS

I thank ALLAH, who led me to this journey, made this work, and gave me this opportunity to learn. First and foremost, I would like to express my sincere appreciations to my supervisor and committee chair, Associate Professor Dr. Nor Aziah binti Abu Kasim, for her supervision and constant support. Her guidance and motivation helped me in all the time of research and writing of this thesis. To my committee members Associate Professor Dr. Mazlina binti Mustapha and Dr. Sabarina binti Mohammed Shah. I would like to express my deep appreciation for their great efforts, patience, support and contribution to this work. My special thanks go to Associate Professor Hashanah binti Ismail, for her sincere efforts. My thanks also go to all staff of the Faculty of Economics and Management, Universiti Putra Malaysia.

Last but most important, my deepest appreciation extended to my parents for their continuous support and love and for their prayers for me to succeed in my life. Additional thanks go to my brothers, sisters who encouraged and supported me. My gratitude goes to my beloved fiancée for her patience and support. Finally, my appreciation goes to my friends, who have been a great source of encouragement, understanding, and camaraderie.

I certify that a Thesis Examination Committee has met on 15 October 2018 to conduct the final examination of Almothanna Jamil Zaher Abu-Allan on his thesis entitled "Perceived Environmental Uncertainty, Business Strategy, Balanced Scorecard and Organisational Performance in Selected Manufacturing Companies in Jordan" in accordance with the Universities and University Colleges Act 1971 and the Constitution of the Universiti Putra Malaysia [P.U.(A) 106] 15 March 1998. The Committee recommends that the student be awarded the Doctor of Philosophy.

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LIST OF ABBREVIATIONS

AMOS	Analysis of Moment Structures
AVE	Average Variance Extracted
BSC	Balanced Scorecard
CBJ	Central Bank of Jordan
CI	Competitive Intensity
CFA	Confirmatory Factor Analysis
CR	Composite Reliability
EFA	Exploratory Factor Analysis
EV	Environmental Volatility
GOF	Goodness of Fit
IFC	International Finance Corporation
MACS	Management Accounting Control System
MT	Market Turbulence
PEU	Perceived Environmental Uncertainty
PMS	Performance Management System
SEM	Structural Equation Modelling
SPSS	Statistical Package for the Social Sciences
VIF	Variance Inflation Factor

CHAPTER 1

INTRODUCTION

1.1 Introduction

This chapter provides the background of the study as well as an overview of the manufacturing sector in Jordan. Importantly, the chapter explains the problem statement and states the research objectives, research questions, research significance and scope of the study, and the organisation of the thesis. The chapter ends with a brief summary.

1.2 Background of the Study

Perceived environmental uncertainty has always been one of the challenging issues faced by top management in organisations (Afshar, 2016; Milliken, 1987), as it has vital effect on strategy development (Mingo, 2013), organisational structure (Koberg & Ungson, 1987), and responses to market (De Villa & Rajwani, 2013). Competition and rapid changes due to the technological advancement and globalisation have increased pressure on organisations to be competitive, productive and to quickly respond to changes in the business environment (Cheng & Humphreys, 2016; Chivat, 2016). Perceived environmental uncertainty can be defined as the lack of information needed to make strategic decisions (Duncan, 1972). Information is very important for decision-makers to make informed decisions and for top management to formulate strategies and make effective strategic decisions (Laudon, Laudon, & Elragal, 2013).

Perceived environmental uncertainty occurs when decision-makers (for example, top management of organizations) perceive that the organisation's environment is unpredictable (Duncan, 1972). It also means that the actions of the task environment is unpredictable and it comprises suppliers, labour unions, regulatory groups and competitors (Demartini, 2013). Perceived environmental uncertainty primarily focuses on several factors external to organisation such as economic, political and social (Otley, 1980). Predicting external changes might seem difficult particularly in an environment that is unreliable and similarly information regarding the environmental factors is scarce. According to Duncan (1972), the uncertain environment is difficult to predict due to the lack of sufficient information among decision-makers about the environmental factors.

Management Accounting Control System (MACS) plays an important role in providing the necessary information to top management in making timely decisions during perceived environmental uncertainty (Al-Mawali, 2015). Performance Management System (PMS), as part of MACS, addresses the developmental changes in business environment and facilitates problem-solving in organisations. The

implementation of PMS is necessary for economic competitions under perceived environmental uncertainty (Kloviene, 2013). In the business environment today, to maintain success and survive in the rapid changing environment, organisations face unprecedented problems particularly in today's marketplace and emerging competition. Consequently, there is an increased demand for effective implementation of PMS in order to face these challenges and for the success of an organisation (Bakar, Abu-Kasim, Mustapha, & Amiruddin, 2014). PMS facilitates the ability of an organisation to gain and manage the resources in several different ways for developing competitive advantage (Awwad, Khattab, & Anchor, 2013).

Previous studies have highlighted the significance of PMS in improving and maintaining organisational performance (Shahryar Sorooshian, Aziz, Ahmad, Jubidin, & Mustapha, 2016; Spencer, Joiner, & Salmon, 2009). Unfortunately, many managers are still making decisions based on a few sets of financial measures rather than non-financial measures, which are considered more appropriate in today's competitive environment (Al-Mawali, 2015; Al-Naser & Mohamed, 2016; Shurafa, Abdullah, & Mohamed, 2016). As indicated by Wu (2009), PMS leads to a review of existing performance and provides decision-makers with accurate information related to the direction of the organisation in the future. However, PMS in the decision making and strategy deployment has not been effectively implemented in the manufacturing sector in general and in developing countries in particular (Myeda, Zaid, Sulaiman, & Mahyuddin, 2014; Yahanpath & Zealand, 2013).

Balanced Scorecard (BSC) is one of the widely used PMS in business and industry (Balanced Scorecard Institute, 2017). The editors of Harvard Business Review argued that BSC is one of the most influential ideas in the last century (Balanced Scorecard Institute, 2017). As an innovative PMS, BSC balances four different perspectives which are financial, learning and growth, internal business process, and customer satisfaction (Kaplan & Norton, 1992; Kaplan & Norton, 2007; Gosselin, 2011; Kaplan & Norton, 2001; Kaplan & Norton, 1996). The integration of both non-financial and financial perspective is one of the benefits of BSC over other models (Striteska & Spickova, 2012). Most of the studies that employed BSC focused only on the financial measures while other measures such as growth and learning, customer satisfaction, and internal process have received lesser attention (Ibrahim, Darus, Yusoff, & Muhamad, 2015; Rahhal & Darabee, 2014)

Findings from previous studies by Alsoboa et al. (2015), Lee & Yang (2011) and Sorooshian et al. (2016) provided evidences that BSC was effective as it had a significant effect on improving organisational performance. It is also a tool used in strategic planning, whereby the decision makers can utilise the information provided by BSC to face the environmental uncertainty and formulate strategies necessary for the improvement of organisational performance (Hendricks, Hora, Menor, & Wiedman, 2012). The organisational performance is influenced by the organisation strategies (Bastian & Muchlish, 2012). In environmental uncertainty, organisations usually face numerous challenges and can only thrive if they follow survival strategies (Bamiatzi & Kirchmaier, 2014).

Furthermore, the two types of business strategies, which are prospector and defender strategies, have been cited as the most widely used strategies at times of environmental uncertainty comparing with other strategies which focus on stable environment. Moreover, prospector strategy is dynamic and constantly seeking for new opportunities while defender strategy is focused on reducing uncertainties and problem-solving (Gosselin, 2011; Jusoh, 2010; Köseoglu, Topaloglu, Parnell, & Lester, 2013; Pleshko & Heiens, 2011; Ramljak & Rogosic, 2012; Ronny, 2016; Yannick & Ricardo, 2016).

Perceived environmental uncertainty and business strategy are contingent in nature (Otley, 1980). The premise of contingency theory is that managing an organisation has no best way or even to make decisions that are effective. Studies of the contingency theory (Dropulić, 2013; Islam & Hu, 2012; Otley, 2016) opined that the outcomes of the organisation are as a result of fit between two or more contingent factors. Additionally, BSC has become an essential part to be considered together with the contingent variables (Otley, 2016). Researchers who investigated the contingency theory suggested that a better understanding of these variables (perceived environmental uncertainty and business strategy) can lead the organisations to achieve superior performance (Khaled, 2013; Lee & Yang, 2011; Mukonje, 2009; Myed et al., 2014; Otley, 2016).

Studies in the past have applied the contingency theory to understand the role of the contingent variables and to explain variation in organisational performance (Asiaei & Jusoh, 2014; Bastian & Muchlish, 2012; Hendricks et al., 2012; Jusoh, 2010; Jusoh, 2008; Taylor & Taylor, 2013). The contingency theory claims that the design and use of management control system is dependent upon several contextual factors but determining the appropriate set of factors is always controversial (Otley, 1980). In the same vein, Otley (2016) argued that contingency studies should be conducted based on identifying an appropriate set of contingent factors in the context of current business environment.

Recently, Otley (2016) suggested the need to undertake further research to describe the management control systems' effectiveness by investigating the best designs suited for contingent factors. This suggestion has provided additional insights for studying PMS. Therefore, the current study investigates the implementation of BSC as a PMS in manufacturing companies in Jordan. This study utilises the contingency theory as a theoretical framework for studying the impact of an appropriate set of contingent variables such as perceived environmental uncertainty and business strategy on BSC implementation. It also examines whether there is an interrelationship match between the contingent factors and whether the BSC implementation is associated with organisational performance.

There is a consensus in the literature that research on the implementation of BSC in developing countries is still largely lacking (e.g. Afonso & Cunha, 2009; Cheerskul, Co-chair, & Kleiner, 2010). More specifically, in Jordan, there was a call to examine

the relationship between BSC implementation, perceived environmental uncertainty, business strategy, and performance of the organisation (AL Sawalqa, Holloway, & Alam, 2011; Rababah, 2014). The researchers postulated that BSC implementation may help the management to focus more on the important points and to improve the top management's perception of environmental uncertainty as well as the formulation of strategy in order to confront environmental uncertainty. If this were true, this suggests that BSC implementation can mediate and enhance the relationship between business strategy and perceived environmental uncertainty together with organisational performance. Since the mediating role of PMS has only been examined by very few studies (Al-Naser & Mohamed, 2017; Aliyu et al., 2014; Jusoh, 2008; Soheilrad & Sofian, 2016), the present study aims to test the mediating role of BSC implementation between perceived environmental uncertainty, business strategy, and organisational performance of manufacturing companies in Jordan. The next section provides a general overview of the Jordanian economy.

1.2.1 Overview of the Jordanian Economy

Jordan has implemented several structural reforms through privatisation and liberalisation in sectors which included education and health in the past 10 years. The Jordanian government has also introduced social protection systems and reformed subsidies with the aim of creating conducive environment for the public-private partnerships in infrastructure. In 2015, the government identified initiatives towards enhancing the investment climate and ease of doing business can lead to better outcomes (The Economic Policy Council, 2017). However, the Jordanian economic growth has been hindered during the years from 2010 till 2016 due to several reasons. This decline was largely attributed to the turmoil caused by the Arab Spring which started in 2010 (The Economic Policy Council, 2017). Furthermore, the unprecedented influx of several thousands of refugees as well as the instability in import and export were the main reasons that burdened the Jordanian economy (The Economic Policy Council, 2017). After years of steady growth, the average growth rate in the years of 2010 till 2016 was 2.5% compared to the average growth rate of 6.5% for the years between 2000 and 2009 (The Economic Policy Council, 2017).

Similarly, the size of exports of goods and services annual growth has significantly declined from 23.7% in 2010 to 3.1% in 2016 (World Bank, 2018a). This drawback was largely attributed to the political conflict in the surrounding countries. The closure of export routes was also among these influential factors in the Jordanian economic decline, where the unemployment rate increased to 18.4% in 2018 compared to 12.5% in 2010 (Department of Statistic, 2018; The Economic Policy Council, 2017). The high level of unemployment rate and slow economic growth in Jordan were repercussions from the Syrian crisis and refugees over than 1.3 million in 2017. Jordan's main challenge is its inability to open new jobs that stimulate its economic growth (The Economic Policy Council, 2017).

1.2.2 Overview of the Manufacturing Sector in Jordan

Manufacturing sector is the second biggest industrial sector in Jordan after services sector and other sectors. The manufacturing sector contributes 18% to the GDP in 2016, while the services sector contributes about 66%, the construction sector contributes 5%, and the agriculture contributes 4% to the total GDP in 2016 (The Economic Policy Council, 2017). The main manufacturing exports in Jordan include furniture, jewelry, plastic products, minerals, chemicals, garments and textiles, electrical appliances, machinery and equipment and pharmaceutical products. In 2016, countries which receive imported goods from the Jordanian market were from the surrounding Arab countries (44%), North America (28%), Asia (21%), EU (3%) and other (3%) (Embassy of Jordan in Washington, 2018).

According to the Economic Complexity Index (ECI), manufacturing sector is the 86th largest export economy in the world in 2015. The destinations that are top for export are Saudi Arabia, Sudan, India, Iraq, and the United States (Economic Complexity Index, 2015). Manufacturing sector is considered as one of the important economic sectors that support the Jordanian exchange rate and increase the budget of the government with USD 1.4 billion as taxes annually (Jordan Chamber of Industry, 2016). An expert in Jordanian economy argued that the sector contributes 75% to the total national export, and it is also the second greatest source of jobs after the public sector in 2015 (Fanek, 2015). The total number of manufacturing companies reached 2,000, and this sector employed 20% of the labour force in 2015 (Fanek, 2015).

The Arab Spring has caused many changes to the region (Yoel & Erez, 2013). Specifically, there are high levels of uncertainty that threaten the future of these countries as well as the business organisations that import and export products from and to these countries (Fanek, 2016a). The Jordan Free Zone Investor Association (2015) has reported that the manufacturing sector in Jordan is adversely affected by the unrest stemmed from countries in the Middle East region. For example, due to the unstable condition in Iraq and Syria, exports were on a declining trend (Obeidat, 2014). Iraq and Syria were considered Jordan's largest export partners within the greater Arab trade zone (Al sharif, 2017). The loss of land routes to the Mediterranean has forced the companies to ship freight via the Suez Canal, rather than transport overland to Syrian or Lebanon ports for transshipment which resulted in severe impact on Jordan's manufacturing sector (The Economic Policy Council, 2017).

Accordingly, the turmoil across the Middle East has resulted in an increase in costs and a decline in profits for the manufacturing sector (Department of Statistics, 2018a; Haddad, 2018). To better understand the current situation of the manufacturing sector in Jordan, preliminary interviews¹ with six managers of the manufacturing companies

¹ Interviews were conducted in 2016 with six managers (CFO and CEO) of manufacturing companies in Jordan. The companies are 1) Sweden Medical & Sterlisation Co, (2) The Jordanian Pharmaceutical Manufacturing Plc, (3) Al-Qaria Food & Vegetable Oil Industries Co. P.L.C, (4) Universal Modern

have been conducted by the researcher. The managers confirmed that the sector is greatly affected by the instability in the Arab region countries. The managers pointed out three other points: the intense competition from other countries (such as Turkey and Gulf countries), the increase of cost, and the decrease of demand. They highlighted that the increase of cost of transportation and delivery of goods because they had to use alternative modes of transportation such as Air Freight. Due to the competition, companies were not able to increase their prices due to the increase in cost. Besides, unstable countries such as Iraq and Syria has also shown a sharp decrease in demand (Obeidat, 2014). All these factors has led the managers to look for strategies that enable them to survive and to reduce cost in order to stay competitive (Fanek, 2016b).

The manufacturing sector in Jordan had low sales because of slumping demand which resulted in a sales decrease of 12% in the manufacturing sector in 2015 (Fanek, 2015b). Fanek (2015b) stated that the huge decline would not only affect the industrial profit, but it could ultimately change the expected profit to losses, the industry could not withstand this for long. Furthermore, the industrial output registered a decline 1.1% in 2015 and industrialists were obliged under fierce competition to reduce their price in the same period by an average of 13.6%, yet they were unable to maintain their share of the market (Fanek, 2015a).

To sum up, the manufacturing companies in Jordan have been facing many challenges resulting from the civil wars surrounding the country. These companies have lost a significant market share in the neighboring countries, and the operational cost like transportation has become a bottleneck to their trade work. Given the high uncertainty, implementing an effective strategy with BSC could improve the organisational performance of manufacturing companies in Jordan (Abu Allan, Abu Kasim, Mustapha & Shah, 2018). The main issues faced by the manufacturing sector in Jordan are related to competition, market and volatility. Therefore, this study aims to investigate the interrelationship between the variables perceived environmental uncertainty, business strategy and BSC implementation that have been argued to be able to enhance the competitive advantage and organisational performance of the manufacturing companies in Jordan.

1.3 Problem Statement

The performance of manufacturing companies in Jordan is adversely affected by the instability in the region due to the Arab Spring (The Economic Policy Council, 2017). Therefore, the performance of manufacturing companies has significantly declined from 2010 to 2016 (Department of Statistics, 2017), which in turn resulted in a decline in profits of 12% from 2014 to 2015 (The Economic Policy Council, 2017), industrial production decreased from 1.6% to -2.1% between 2013 to 2016 (Department of Statistics, 2018b), and an increase of the cost and a reduction of the market share of

Industries, (5) Middle East Specialized Cables Company /Mesc_Jordan Plc, (6) El-Zay Ready Wear Manufacturing

these companies. For example, the exports to Iraq, one of the main importer countries, have declined. In 2013, the exports to Iraq reached USD 1.38 billion, while in 2014, 2015, and 2016 the exports declined to USD 1.28 billion, USD 749 million, and USD 497 million respectively (World Bank, 2018).

The preliminary interviews conducted by the researcher with the managers showed that due to the uncertainty, manufacturing companies find it difficult to predict information on the change in the market demand, market turbulence and their competitors, leading to a lack of accurate information which affected the decision-making process, formulation of their strategy and companies' performance. The weakness in information is perhaps attributed to their failure to make use of effective PMS. Many manufacturing companies in Jordan are still adopting BSC as a traditional performance measurement system that focuses on financial measures and provides only a list of metrics rather than performance management system which provides information that helps in developing the strategies of companies. In this regards, this study extends the literature by investigating the BSC implementation as performance management system while including financial and non-financial perspectives.

Hendrick et al., (2012) found that the way managers perceive environmental uncertainty can affect how they formulate business strategy and manage organisational performance of companies. Nevertheless, limited studies have been conducted in Jordan to investigate the effect of perceived environmental uncertainty on business strategy and the manufacturing companies' performance (Al-Mawali, 2015; Rababah, 2014). Moreover, BSC is an important tool in which the companies can effectively perceive environmental uncertainty which is necessary for the formulation of relevant strategies leading to improved organisational performance (Hall, 2011; Hendricks et al., 2012; Otley, 2016). Therefore, the contingent variables such as perceived environmental uncertainty and business strategy should be linked to the implementation of BSC in order to become an effective system (Otley, 2016).

The interviews conducted by the researcher also revealed that managers of manufacturing companies in Jordan argued that the lack of accurate information due to uncertainty leads to poor decision-making and weakness in the strategy implementation, which leads to poor performance. This is as a result of lack of alignment between BSC implementation with business strategy, few studies give attention to linking strategy with BSC implementation in the context of a developing economy, such as Jordan. In addition, using an appropriate business strategy will help the manufacturing companies in Jordan to survive in this difficult period due to uncertainty. Nevertheless, Cândido & Santos (2015) stated that around 50% to 90% of the companies do not know which strategy to choose and they do not implement the strategy very well. Therefore, this study focuses on defender and prospector strategies as these are expected to have the best outcome for the manufacturing companies in Jordan in the current high environmental uncertainty.

Despite the increasing emphasis placed on the BSC implementation, empirical evidence that supports its ability to improve the performance of organisation is still very limited, particularly in the manufacturing sector in Jordan. Many studies have argued that the implementation of BSC is important in improving organisational performance (Hoque & James, 2000; Hoque, 2014). On the other hand, a number of authors have however equally reported that implementation of BSC is not mostly relevant in many circumstances (Baumgartner, 2009; Chenhall, 2007). This, therefore, implies that the findings of these studies are mixed and inconclusive and which calls for further studies in this respect. In addition, the study that holistically examines the mediating role of BSC implementation, as a performance management system, on the relationship between perceived environmental uncertainty, business strategy, and organisational performance is limited.

Furthermore, the efficiency of the implementation of BSC is contingent on certain characteristics of the organisation and its environment (Otley, 2016). Such studies, largely motivated by early contingency formulations in organisational theory, have adopted the contingency theory as a basis for their analysis. The contingency theorists, driven by efficiency considerations, have examined the implication of a number of contingent factors, including: perceived environmental uncertainty and business strategy. The contingency theory has constituted a dominant paradigm in studies of MACS with a large strand of research providing evidence supporting its propositions (Dent, 1990; Fisher, 1998). However, there is a paucity of research on examining the effective use of BSC as PMS in manufacturing companies in Jordan to enhance the companies' performance (Rababah, 2014; Al Sawalqa et al., 2011).

1.4 Research Objectives

Based on the issues discussed in the problem statement section above, the main purpose of this study is to investigate the effects of several contingent variables such as perceived environmental uncertainty and business strategy on the implementation of BSC and organisational performance. It also aims to identify the mediating role of BSC implementation between perceived environmental uncertainty, business strategy, and organisational performance. More specifically, this study attempts to:

1. To examine the relationship between perceived environmental uncertainty and organisational performance, business strategy, and the implementation of BSC in the manufacturing companies in Jordan;
 - a) To examine the relationship between perceived environmental uncertainty and organisational performance.
 - b) To examine the relationship between perceived environmental uncertainty and business strategy.
 - c) To examine the relationship between perceived environmental uncertainty and the implementation of BSC.

2. To investigate the relationship between business strategy and organisational performance, and the implementation of BSC in the manufacturing companies in Jordan;
 - a) To investigate the relationship between business strategy and organisational performance.
 - b) To investigate the relationship between business strategy and the implementation of BSC.
3. To investigate the relationship between the implementation of BSC and organisational performance of manufacturing companies in Jordan;
4. To examine the mediating role of BSC in the relationship between perceived environmental uncertainty, business strategy, and organisational performance of manufacturing companies in Jordan;
 - a) To examine the mediating role of BSC in the relationship between perceived environmental uncertainty and organisational performance.
 - b) To examine the mediating role of BSC in the relationship between business strategy and organisational performance.

1.5 Research Questions

In light of the above objectives, the research questions were formulated to address the aspect of uncertainty in the manufacturing sector in Jordan. These are:

1. How does perceived environmental uncertainty affect organisational performance, business strategy, and the implementation of BSC in the manufacturing companies in Jordan?
2. How does business strategy affect organisational performance, and the implementation of BSC in the manufacturing companies in Jordan?
3. How does the implementation of BSC affect organisational performance in the manufacturing companies in Jordan?
4. How does BSC mediate the relationship between perceived environmental uncertainty, business strategy, and organisational performance of manufacturing companies in Jordan?

1.6 Significance of the study

This study emphasises the important role of PMS in improving organisational performance in the context of manufacturing companies in Jordan. Particularly, this study contributes to the contingent literature in relation to management accounting and control system about the linkage of contingent factors, such as perceived environmental uncertainty, business strategy with BSC in the manufacturing industry. It also examined how contingent factors influence the design and function of organisations. Contingency theory studies postulate that the organisational outcomes are the consequences of a fit or match between two or more contingent factors. The contingency theory of management accounting indicates that empirical research

conducted to date has examined the impact of few contingent factors (Dropulić, 2013; Jääskeläinen et al., 2012; Otley, 2016). However, further insights can be gained by considering additional contingent factors. Thus, perceived environmental uncertainty and business strategy are considered in this study.

Research on the influence of perceived environmental uncertainty on PMS remains largely scarce (Al-Mawali, 2015; Al-Naser & Mohamed, 2017; Bastian & Muchlish, 2012; Rababah, 2014). Moreover, this study provides evidence on how perceived environmental uncertainty affects the implementation of BSC and how the dimensions of perceived environmental uncertainty (competitive intensity, environmental volatility, and market turbulence) influence organisational performance. In addition, the present study also increases our understanding on the impact of business strategy on BSC and organisational performance through the focus on defender and prospector strategies. Specifically, it deepens our knowledge with regard to the aforementioned strategies that are being used in a situation of the high level of uncertainty, a situation that best describes the Jordanian business environment.

Consequently, this study investigates a wide range of non-financial and financial perspectives such as BSC as a performance management system. There are calls in the literature to examine the extent to which BSC is important to improve the performance of the organisation, and the extent to which BSC is used in performance measurements as well as in evaluation purposes (Hendricks, Hora, & Menor, 2012; Hoque, 2014; Otley, 2016; Rababah, 2014; Al Sawalqa et al., 2011). Furthermore, this study includes BSC as a mediator between the contingency factors and organisational performance framework. It aims to expand the literature about the contingency factors and BSC, as well as BSC and organisational performance (Otley, 2016; Rababah, 2014; Al Sawalqa et al., 2011; Sharabati & Fuqaha, 2014).

Moreover, Otley (2016) reiterated that the inclusion of BSC in the contingency theory helps to explain the variation in the organisational performance. As such, the main contribution of this research views BSC as a strategic performance management system for improving and measuring organisational performance under high environmental uncertainty. It provides further insights into the significant effect of BSC on improvement of the execution of strategy as well as the perception of managers regarding the environmental uncertainty, which ultimately leads to improve organisational performance.

Last but not least, while many of the BSC research studies have been done in the developed countries, limited research has been conducted in developing countries, particularly in the manufacturing sector in Jordan. In recent time, Jordan is facing unprecedented challenges due to uncertainty in the surrounding region. The manufacturing sector, which is the largest exporter and employer after government, is affected negatively by the environmental uncertainty. There is an urgent need for the decision makers to understand the linkage between contingent factors, BSC implementation, and organisational performance. This study is important to help the

manufacturing companies understand the importance of using BSC in situation of high uncertainty, as well as the importance of implementing business strategy in order to achieve the desired performance of the organisation.

Moreover, the results of this study can help the managers of the companies to make better policies and decisions for their companies to enhance performance. In addition, the manufacturing sector in Jordan contributes significantly to employment and GDP if this sector effectively addressed the challenges (The Economic Policy Council, 2017). The results of this study are useful to help the manufacturing companies from failing or stagnating in performance or leaving Jordan leading to the loss of jobs and thus continue to work in the foreseeable future.

1.7 Scope of the Study

The study is limited to investigate the impact of two contingent variables on the implementation of BSC and organisational performance. The two contingent variables namely; perceived environmental uncertainty and business strategy were chosen because perceived environmental uncertainty and business strategy are considered as the heart of the contingency-based studies and the most important factors affecting the effective implementation of BSC (Chenhall, 2003). In addition, Otley (2016) stated that choice of a contingent factor should be appropriate with the current context of the business environment and no single study can include all contingent factors.

As manufacturing companies in Jordan suffer from uncertainty due to the Arab Spring that surrounds Jordan from neighbouring countries, and these companies need an effective business strategy to survive under the condition of environmental uncertainty. Therefore, the contingent factors such as perceived environmental uncertainty and business strategy need to be considered and taken into account in the current study. This study examines three dimensions of perceived environmental uncertainty (market turbulence, environmental volatility, and competitive intensity), which are considered the most important issues facing manufacturing companies in Jordan. Moreover, this study focuses on defender and prospector strategies which are considered the most appropriate strategies to adopt under a situation of environmental instability.

This study is limited to the manufacturing sector. More specifically, this study focused on medium and large manufacturing companies and excluded small-sized companies because BSC is less relevant to small businesses as these companies utilised other performance measurement systems (Giannopoulos, Holt, Khansalar, & Cleanthous, 2013).

1.8 Terms and Definitions

This section shows the main terms and definitions that are used in this study as illustrated in Table 1.1. Additional definitions and explanations can be found in chapter two.

Table 1.1 : Research Terms and Definitions

Term	Definition	Source
Perceived Environmental Uncertainty	The difficulty of firms in predicting future events, due to a lack of relevant and accurate information.	Beckman and Haunschild (2004)
Business Strategy	A set of important decisions that strive to achieve a consistent growth and profit in the company.	Grant (2010)
Balanced Scorecard	A combination of financial and/or non-financial measures to provide managers with a balanced view of their organisational performance.	Jamil and Mohamed (2013)
Organisational Performance	A set of financial and non-financial indicators that provides information on the degree of achievement for the objectives and results.	Lebas and Euske (2007)
Environmental Volatility	The instability of market demand due to environmental uncertainty.	Matanda and Freeman (2009)
Market Turbulence	The rate of change in customer preferences in an industry.	Matanda and Freeman (2009)
Competitive Intensity	The degree of competition in an industry.	Porter (1980)

(Source : Compiled by researcher)

1.9 Organisation of the Thesis

This thesis comprises five chapters. Chapter 1 presents the background of the study, where issues related to environmental uncertainty are discussed, and the important role of BSC and business strategy in the manufacturing sector in Jordan is emphasised. The research problems under investigation are also stated, and the research questions, scope of the study, and significance of the study are given and discussed.

Chapter 2 discusses an array of past studies that are concerned with the definitions and conceptualisations of the research variables as well as their corresponding dimensions: perceived environmental uncertainty, BSC and organisational performance. The chapter also introduces the theories and hypotheses that underpin the study.

Chapter 3 discusses the research methodology in terms of research philosophy, research design, sampling design, research instrument, and variables' measurements. This chapter also describes data analysis in terms of descriptive analysis and inferential analysis. Finally, it presents pre-test procedure, pilot study, and reliability and validity results.

Chapter 4 discusses data analysis techniques and procedures. The descriptive analysis, exploratory factor analysis, confirmatory factor analysis, the measurement model and the structural model used to test the hypotheses of this study are all covered in this chapter. The findings are discussed as well.

Chapter 5 offers the study's results discussions, conclusions, theoretical contributions, managerial contributions, research limitations, and the future research directions.

1.10 Summary

This chapter presented the background of the study and an overview of the manufacturing sector in Jordan. The chapter also presented a set of variables for examination and described the targeted manufacturing companies in Jordan. In addition, the chapter elaborated the problems from both the theoretical and practical perspectives which influenced the research objectives of the study. It also discussed how the potential findings can be significant to the theoretical accounts and insights that could be of benefit to the decision makers amidst prevailing uncertainty in the trade work in the region in general and in Jordan in particular. The next chapter reviews the literature by the examining past research studies carried out in this research field.

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