#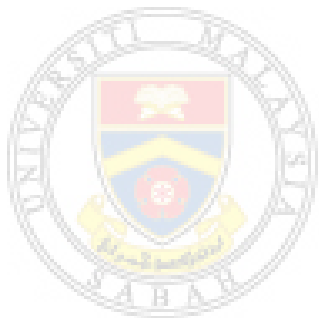 MEDIATING EFFECT OF THE CHOICE OF COMPETITIVE STRATEGY ON THE RELATIONSHIP BETWEEN STRATEGIC MANAGEMENT ACCOUNTING INFORMATION USAGE AND COMPANY PERFORMANCE: MULTIPLE GROUP ANALYSIS ON LIFE CYCLE STAGE

PU ZHAO

FACULTY OF BUSINESS, ECONOMICS AND ACCOUNTANCY
UNIVERSITI MALAYSIA SABAH
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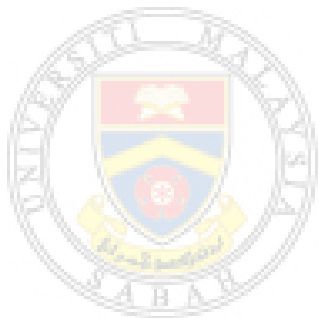
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THESIS SUBMITTED IN FULLFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF DOCTOR OF PHILOSOPHY

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_____
PU ZHAO
DB1821064A

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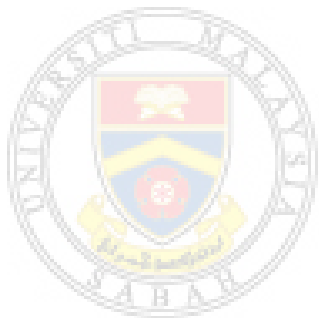Penyelia Utama

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I hereby declare that the materials in this study are my own except for quotation, equations, summaries and references, which have been duly acknowledged.

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Pu Zhao

Pu Zhao
DB1821064A

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MARTRIC :   **DB1821064A**
NUMBER

TITLE   :   **MEDIATING EFFECT OF THE CHOICE OF COMPETITIVE STRATEGY ON THE RELATIONSHIP BETWEEN STRATEGIC MANAGEMENT ACCOUNTING INFORMATION USAGE AND COMPANY PERFORMANCE: MULTIPLE GROUP ANALYSIS ON LIFE CYCLE STAGE**

DEGREE   :   **DOCTOR OF PHYLOSOPHY IN ACCOUNTING**

FIELD   :   **ACCOUNTING**

VIVA DATE :   **16 MARCH 2023**

CERTIFIED BY:

Signature

1. MAIN SUPERVISOR

Assoc. Prof. Dr. Raman B. Noordin

2. CO-SUPERVISOR

Assoc. Prof Dr. Stephen Laison Sondoh Jr.

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Pu Zhao
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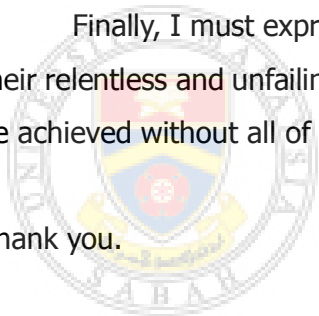
ABSTRACT

China's manufacturing industry is currently facing a high level of volatility, uncertainty, complexity, and ambiguity (VUCA), particularly in the aftermath of the COVID-19 pandemic. The performance of most Chinese manufacturing companies has been adversely affected. Hence, this study aims to identify a method that can assist Chinese manufacturing companies in improving their performance, namely Strategic Management Accounting (SMA). Numerous studies have affirmed that SMA can enhance company performance, but there are two explanations for how SMA can lead to improved results. The first explanation is based on contingency theory's stance that SMA usage can improve company performance by means of strategy-oriented SMA information deployment. The second explanation is based on the definition of SMA, which suggests that SMA can assist companies in developing strategies to enhance performance. This study endorses the second explanation to describe how SMA can help enhance company performance, viewing SMA information, which comprises product-related, customer-related, and competitor-related information, as a resource, and competitive strategy as a capability. From a resource-based view, the research investigates whether the use of SMA information usage can improve company performance via the choice of competitive strategy. Using a questionnaire survey, the study obtains 300 samples from Chinese manufacturing companies. The findings reveal that the choice of competitive strategy can mediate the relationship between SMA information usage and company performance. Given that the relationship between SMA information utilization and competitive strategy choice is not static, it may alter with the corporate life cycle. Thus, this study further investigates the moderating effect of corporate life cycle on the relationship between SMA information usage and the choice of competitive strategy. This study focuses on the growth and maturity stages, which are the most common stages for Chinese manufacturing companies, and compares the relationship between SMA information usage and the choice of competitive strategy in these two stages using multigroup analysis (PLS-MGA). For companies in the growth stage, product-related information in SMA is more beneficial in choosing differentiation strategies. However, in the maturity stage, the product-related and competitor-related information usage is more conducive to selecting cost leadership strategies. This study provides insights into how SMA information usage can aid companies in improving performance and offers

recommendations for companies in the growth and maturity stages to make informed decisions regarding SMA information and competitive strategies. Since PLS-MGA is not ideal for comparing multiple life cycle stages simultaneously, this study suggests that future research should employ a novel omnibus test of group (OTG) approach to investigate all the life cycle stages simultaneously.

Keywords: SMA, Competitive Strategy, Corporate life cycle, PLS-MGA

ABSTRAK

KESAN PENGANTARAAN PILIHAN STRATEGI KOMPETITIF TERHADAP HUBUNGAN DI ANTARA PENGGUNAAN MAKLUMAT DALAM STRATEGI PENGURUSAN PERAKAUNAN DAN PRESTASI SYARIKAT: ANALISIS PELBAGAI KUMPULAN PADA PERINGKAT KITARAN HAYAT

Industri pembuatan China kini menghadapi tahap ketidastabilan, ketidakpastian, kekompleksan, dan ketidakjelasan (VUCA), terutamanya baru-baru ini dalam kesan pandemik COVID-19. Prestasi kebanyakan syarikat pembuatan China telah terjejas. Oleh itu, kajian ini bertujuan untuk mengenal pasti satu kaedah yang boleh membantu syarikat pembuatan China meningkatkan prestasi mereka, iaitu Pengurusan Perakaunan Strategik (SMA). Pelbagai kajian menunjukkan bahawa SMA boleh meningkatkan prestasi syarikat, tapi terdapat dua penjelasan mengenai cara SMA dapat menghasilkan prestasi yang lebih baik. Penjelasan pertama berasaskan teori kontinjensi bahawa penggunaan SMA dapat meningkatkan prestasi syarikat melalui penerapan maklumat SMA berorientasikan strategi. Penjelasan kedua didasarkan pada definisi SMA, yang mengesyorkan bahawa SMA dapat membantu syarikat dalam membangunkan strategi untuk meningkatkan prestasi. Kaji ini menyetujui penjelasan kedua untuk menerangkan bagaimana SMA dapat membantu meningkatkan prestasi syarikat, melihat maklumat SMA, yang terdiri daripada maklumat berkaitan produk, pelanggan, dan pesaing, sebagai sumber, dan strategi saingan sebagai keupayaan. Dari pandangan berasaskan sumber, kajian ini mengkaji sama ada penggunaan maklumat SMA dapat meningkatkan prestasi syarikat melalui pemilihan strategi yang bersaing. Menggunakan kaji selidik soal selidik, kajian mendapatkan 300 sampel daripada syarikat pembuatan China. Hasilnya menunjukkan bahawa pemilihan strategi bersaing boleh membantu mengantara hubungan antara penggunaan maklumat SMA dan prestasi syarikat. Oleh kerana hubungan antara penggunaan maklumat SMA dan pemilihan strategi bersaing tidak statik, ia mungkin boleh berubah bergantung kepada kitaran hayat syarikat. Oleh itu, kaji ini mengkaji kesan pengurusan kitaran hayat ke atas hubungan antara penggunaan maklumat SMA dan pemilihan strategi bersaing. Kajian ini memberi tumpuan kepada peringkat pertumbuhan dan kematangan, yang merupakan

peringkat yang paling biasa bagi syarikat pembuatan China, dan membandingkan hubungan antara penggunaan maklumat SMA dan pemilihan strategi bersaing dalam dua peringkat ini menggunakan analisis multikumpulan (PLS-MGA). Untuk syarikat dalam peringkat pertumbuhan, maklumat berkaitan produk dalam SMA lebih bermanfaat dalam memilih strategi pembezaan. Walau bagaimanapun, dalam peringkat kematangan, penggunaan maklumat berkaitan produk dan pesaing lebih sesuai untuk memilih strategi kepimpinan kos. Kajian ini memberikan wawasan tentang bagaimana penggunaan maklumat SMA dapat membantu syarikat meningkatkan prestasi dan menawarkan cadangan kepada syarikat dalam peringkat pertumbuhan dan kematangan untuk membuat keputusan yang berinformasi mengenai maklumat SMA dan strategi bersaing. Oleh kerana PLS-MGA tidak sesuai untuk membandingkan beberapa peringkat kitaran hayat secara serentak, kajian ini mencadangkan bahawa kajian masa depan harus menggunakan pendekatan ujian kumpulan omnibus (OTG) yang baru untuk menyelidiki semua peringkat kitaran hayat secara serentak.

Kata kunci: SMA, Strategi Persaingan, Kitaran hayat korporat, PLS-MGA

LIST OF CONTENTS

CHAPTER 4: RESEARCH METHODOLOGY

CHAPTER 5: DATA ANALYSIS

CHAPTER 6: DISCUSSION AND CONCLUSION

LIST OF TABLES

LIST OF FIGURES

LIST OF ABBRAVATION

SMA	-	Strategic Management Accounting
PLS	-	Partial Least Square
SEM	-	Structural Equation Modeling
MGA	-	Multiple Group Analysis
MICOM	-	Measurement Invariance of Composite Models
VUCA	-	Volatility, Uncertainty, Complexity and Ambiguity
RBV	-	Resource Based View
CSMAR	-	China Stock Market & Accounting Research Database
CNKI	-	China's National Knowledge Infrastructure

LIST OF APPENDICES

CHAPTER 1

INTRODUCTION

1.1   Introduction

The goal of this chapter is to introduce the main issues addressed by this study. Sections 1.1 to 1.4 present the research background and explain the research purpose of the study in detail. The significance of the research is discussed in Section 1.5, which focuses on both its theoretical and practical significance. Section 1.6 presents the scope of the study. Section 1.7 explains the variable definitions used in the study.

1.2   Background of the Study

The business environment is undergoing dramatic changes that are increasing the volatility, uncertainty, complexity, and ambiguity (VUCA) that companies face (Zhang-Zhang, Rohlfer and Varma, 2022 ; Parameswar, Hasan and Dhir, 2021). These challenges pose a threat to the existing competitive advantages of businesses, particularly in the aftermath of the COVID-19 pandemic, which has further amplified the VUCA faced by businesses (Zhang-Zhang & Varma, 2020 ; Brown and Rocha, 2020). China, in particular, faces a high level of VUCA, which severely impacts the performance of its manufacturing companies (Huang, Hu and Wang, 2023). This high level of VUCA is visible in two ways. First, the sudden outbreak of COVID-19 has

severely affected the performance of many Chinese manufacturing companies, with over 50% of the listed companies reporting negative ROA growth in 2020 (from the China Stock Market & Accounting Research Database). Furthermore, the low labor costs previously enjoyed by Chinese manufacturing companies have vanished as a result of China's family planning policy, which has led to a further labor cost increase (Wang, 2013). This has intensified competition within the industry and affected the competitive advantage of these companies, which is reflected in their performance (Chahal, Gupta, Bhan, and Cheng, 2020). Therefore, to improve the level of their performance under VUCA, manufacturing companies need effective methods of exceeding their operational or goal achievements. The root problem of this study is to explore methods that can improve the performance of Chinese manufacturing companies.

Company performance is considered to be the output of a company's operations or the achievements of its stated goals (Pham,2020). In previous studies, company performance has often been set as a dependent variable (Otley, 2016) because it reflects all of the efforts taken in pursuit of achieving management goals (Cetindere, Duran and Yetisen, 2015). Company performance is commonly divided into financial performance and non-financial performance; financial performance reflects "past performance," and non-financial performance reflects the 'potential of a company' (Demirbag, Tatoglu, Tekinkus and Zaim, 2006). Most research, as well as companies themselves, tend to pay greater attention to financial performance, which is easily obtained from company financial reports (Pham, 2020). Excessive reliance on financial performance as a measurement indicator, however, may result in biased results (Otley, 2016). Therefore, non-financial performance is also worthy of attention, as it better reflects the true operating level of a company as non-financial performance often reflects long-term performance, which reveals the result of the company's strategic operations, such as customer perception, employee attitude, and product innovation indicators (Otley, 1999). Company performance is influenced by

2

both internal factors and external environmental conditions (Parameswar et al., 2021). However, the focus of traditional management accounting is on internal information that cannot be used to help managers obtain a sufficient amount of external information to inform decision-making and monitoring strategies (Hadid and AI-Sayed, 2021). Especially under VUCA, due to the continuous and drastic changes in the external environment, companies cannot easily formulate appropriate strategies with which to maintain their competitive advantage. Therefore, to improve company performance under VUCA, information system strategic management accounting (SMA) with both internal and external information should be used.

SMA was first proposed by Simmonds in 1981. Therefore, it has a forty-year history. Today's market has experienced continuous development, increasing competition and changes in the business environment, which have changed managers' demand for information (Zenita, Sari, Anugerah and Said, 2015). SMA is used to formally respond to the continuous development of the external environment, and it mainly provides decision-makers with external and long-term information accounting methods (Simmonds, 1981; Shank, 1989). Compared with traditional management accounting, SMA places greater focus on market orientation information and competitor information. It is also used to give more attention to the level of cooperation between various departments (Lord, 1996; Bromwich, 1990). SMA information entails 12 practices: attribute cost, brand value, competitor cost evaluation, competitive position monitoring, competitor evaluation based on published financial statements, product life cycle calculation, quality costing, strategic costing, strategic pricing, target costing and the cost of the value chain (Cadez & Guilding, 2008; Cinquini & Tenucci,2010; Cravens & Guilding, 2001; Guilding & McManus, 2002; Guilding, Cravens and Tayles, 2000). SMA information derived from SMA practice can be divided into the three dimensions of product, customer and competitor (Noordin, Zainuddin, Mail and Sariman, 2015). SMA information provides managers with a broader perspective of the market and of its competitors, resulting

3

in more strategic decision-making, which can improve company performance (Rickwood, Coates and Stacey, 1990). The majority of the previous research uses contingency theory to investigate whether SMA information usage improves the level of company performance (Guilding & McManus, 2002; Guilding et al., 2008; 2012; Oboh et al., 2017; Juras, 2014; Noordin et al., 2015). However, Zhang-Zhang et al. (2022) argue that the resource base view (RBV) is better adapted to contemporary highly dynamic VUCA contexts because some of the existing measures may be inappropriate in dynamic environments (Covaleski & Dirsmith, 1981), and new capabilities are required to configure existing resources (Glyptis, Hadjielias, Christofi, Kvasova and Vrontis, 2021). Contingency theory relies on the fit of information systems and contingency variables to ensure optimal performance (Otley, 2016), but the existing information systems or contingency variables have resisted adaptation to today's changing environment. The RBV focuses on the integration of company resources to obtain a competitive advantage through the integration of dynamic capabilities (Teece, Pisano and Shuen, 1997). Compared with contingency theory, the dynamic nature of RBV capabilities is more suitable for today's VUCA. Therefore, this study first regards SMA information as a resource held by companies and applies the resource-based view, rather than contingency theory, as the central theory for investigating the relationship between SMA and performance.

SMA information conforms to the definition of resources advanced in previous studies (Barney, 1991; Helfat & Peteraf, 2003, Savino & Shafiq, 2018). First, it is valuable, especially in the decision-making and strategy-monitoring processes (Simmonds, 1991). Second, SMA information is rare, difficult to imitate and impossible to substitute because different companies exist under different business conditions and thus obtain different results from their SMA practices. In addition, Savino and Shafiq (2018) believe that the information derived from cross-functional cooperation, safety management and quality control can be regarded as the main resources of a company, and these resources are included in the scope of SMA

4

information. Holding valuable resources can improve the efficiency of companies, and heterogeneous resources can effectively enhance the competitive advantages of companies (Barney, 1991; Helfat & Peteraf, 2003, Savino & Shafiq, 2018). Similarly, SMA information provides managers with useful data with which to advance strategic decisions to improve performance (Rickwood, Coates and Stacey, 1990). SMA information is a company resource, and companies can obtain a competitive advantage through the rational use of this resource. Previous research based on the RBV has often used company performance as a reflection of competitive advantage (Chahal et al., 2020). According to RBV theory, the resources held by a company enhance its competitive advantage (Barney, 1991). Cost, quality, reliability, and flexibility are all regarded as company resources (Swink & Hegarty, 1998). However, it is undeniable that the basic resources that constitute a competitive advantage can evolve over time (Halfat & Peteraf, 2003). Resources are the source of a company's competitive advantage and the basis of company development. However, with company growth and continuous changes in the external environment, the value of the resources held by companies has also changed over time, which in turn has led to changes in company's choices of strategies (Liang & Cao, 2007).

Therefore, this study regards competitive strategy as a company's "capability" and uses it as a mediating variable between SMA information usage and company performance (Ortega, Molina-Azorín and Claver-Cortes,2010). According to previous research, the purpose of SMA is to help business managers obtain non-financial and internal information (Simmonds, 1981; 1982; Shank, 1992; Chenhall, 2008; Guilding et al., 2000). At the same time, SMA also provides relevant external information to managers to improve company decision-making and strategic monitoring in an ever-changing competitive market environment. Previous research has often used competitive strategy as a mediating variable between SMA practice and company performance (Guilding and McManus, 2002; Oboh and Ajibolade, 2017; Turner, Way,

5