



**MARKETING INFORMATION SYSTEM, BUSINESS STRATEGIC
ORIENTATION, AND BUSINESS PERFORMANCE AMONG YEMENI
FOOD AND BEVERAGE SMALL ENTERPRISES**

By

AKRAM ABDULSAMAD ALI SAIF

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

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DEDICATIONS

To whom it perfumed with his soul and blood the heavens and the dust of homeland.

“Martyrs of Yemen” With Pride and Glory.

To the one who raised me, my good role model in life, and the owner of love and giving.

"My beloved father" with Pride and Reverence.

To whom was her prayer and deep love the secret of my success and power.

“My beloved mother” with Love and Gratitude.

The title of love, soulmate, and life mate. To the one who supports, motivates me, and bears the trouble in my life.

“My beloved wife” with Love and Appreciation.

For those with whom I gained strength and boundless love, I knew the meaning of a sweet life with them.

“My dear sister and brother” with Thanks and Appreciation.

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of the requirement for the degree of Doctor of Philosophy

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Chairman : Professor Noor Azman bin Ali, PhD
School : Business and Economics

Small enterprises (SEs) in the food and beverage sector play a crucial role in the economies of developed and developing countries by generating significant employment and income. However, in Yemen-a developing nation-many SEs within this sector face high failure rates due to their weak competitiveness. According to statistical reports from the Ministry of Industry and Trade, the growth rates of the added value of SEs in the food and beverage sector were inconsistent between 2020 and 2022, showing fluctuations of -28%, 3%, and 2%, respectively. Despite a slight improvement in 2021 and 2022, these rates remain low and insufficient. Additionally, studies have observed a decline in the average growth rate of these SEs to 3.39%, leading to an average decrease of 17.2% in the nation's GDP. The inconsistent findings on the relationship between entrepreneurial orientation (EO), market orientation (MO), and business performance (BP) highlight the need for further investigation to resolve these contradictions and enhance theoretical understanding in diverse contexts. Research suggests that transforming organizational intangible resources, such as MO

and EO, into superior performance necessitates a reliable information system to improve decision-making. In this context, the current study explores the mediating role of marketing information systems (MrkIS) in the relationship between EO, MO, and BP in Yemen's food and beverage SEs. A simple random sampling technique was used to select 626 SEs for the study, and data were collected through questionnaires distributed to managers and owners, yielding 321 valid responses. SPSS was employed for data screening and preliminary analysis, while SmartPLS 4 software was used for structural equation modelling (SEM). The findings revealed that both EO and MO positively and significantly impact BP. However, the dimensions of MO and EO vary in their influence on BP, with customer orientation and risk-taking showing insignificant effects. Therefore, SE managers in Yemen should foster a culture that actively promotes innovation, anticipates market trends, and effectively manages risks. Additionally, a deep understanding of competitors' strategies and promoting solid internal communication and collaboration are essential for enhancing market positioning and operational efficiency. Moreover, the study identified a significant relationship between MrkIS and BP, suggesting that integrating MrkIS in firms with 4–9 employees in Yemen's food and beverage sector offers substantial opportunities for improving business performance and sustainability. The research also found that MrkIS partially mediates the relationship between EO, MO, and BP, indicating that SEs adopting EO and MO leverage MrkIS to achieve superior performance. However, the study's focus on the food and beverage sector limits its generalizability, and the exclusion of objective performance measures, longitudinal methods, and mixed methods presents additional limitations. Future research should address these gaps, exploring the indirect effects of EO and MO dimensions on BP through MrkIS.

Keywords: Business Performance, Entrepreneurial Orientation, Market Orientation, Marketing Information Systems, Small Enterprises

SDG: GOAL 9: Industry, Innovation and Infrastructure



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Oleh

AKRAM ABDULSAMAD ALI SAIF

April 2024

Pengerusi : Profesor Noor Azman bin Ali, PhD
Sekolah : Perniagaan dan Ekonomi

Perusahaan kecil (SE) di sektor makanan dan minuman memainkan peranan penting dalam ekonomi negara maju dan membangun dengan menjana pekerjaan dan pendapatan yang ketara. Walaubagaimanapun, di negara membangun seperti Yemen, banyak perusahaan kecil dalam sektor ini menghadapi kadar kegagalan yang tinggi disebabkan oleh daya saing mereka yang lemah. Menurut laporan statistik daripada Kementerian Perindustrian dan Perdagangan, kadar pertumbuhan nilai tambah dalam sektor makanan dan minuman adalah tidak konsisten antara 2020 dan 2022, menunjukkan turun naik masing-masing sebanyak -28%, 3% dan 2%. Walaupun terdapat sedikit peningkatan pada 2021 dan 2022, kadar ini kekal rendah dan tidak mencukupi. Di samping itu, kajian mendapati terdapat penurunan dalam kadar pertumbuhan purata ini kepada 3.39%, membawa kepada penurunan purata sebanyak 17.2% dalam KDNK negara. Penemuan yang tidak konsisten tentang hubungan antara orientasi keusahawanan (EO), orientasi pasaran (MO) dan prestasi perniagaan (BP) menyerlahkan keperluan untuk kajian lanjut bagi menyelesaikan percanggahan ini dan

meningkatkan pemahaman teori dalam pelbagai konteks. Penyelidikan dicadangkan supaya sumber tidak ketara organisasi seperti MO dan EO, diubah kepada prestasi unggul. Ini memerlukan sistem maklumat yang boleh dipercayai bagi menambah baik pembuatan keputusan. Kajian ini meneroka peranan pengantara sistem maklumat pemasaran (MrkIS) dalam hubungan antara EO, MO dan BP dalam perusahaan kecil makanan dan minuman di Yemen. Teknik persampelan rawak mudah digunakan untuk memilih 626 perusahaan kecil bagi tujuan kajian, dan data dikumpul melalui soal selidik yang diedarkan kepada pengurus dan pemilik, menghasilkan 321 respons yang sah. SPSS digunakan untuk pemeriksaan data dan analisis awal, manakala perisian SmartPLS 4.0 digunakan untuk Pemodelan Persamaan Struktur (SEM).

Penemuan mendedahkan bahawa kedua-dua EO dan MO memberi kesan positif dan ketara kepada BP. Walau bagaimanapun, dimensi MO dan EO berbeza dalam pengaruhnya terhadap BP, dengan orientasi pelanggan dan pengambilan risiko menunjukkan kesan yang tidak ketara. Oleh itu, pengurus perusahaan kecil di Yemen harus memupuk budaya yang menggalakkan inovasi secara aktif, menjangka arah aliran pasaran dan mengurus risiko dengan berkesan. Selain itu, pemahaman mendalam tentang strategi pesaing dan promosi komunikasi dan kerjasama dalaman yang kukuh adalah penting untuk meningkatkan kedudukan pasaran dan kecekapan operasi. Kajian juga mengenal pasti hubungan yang signifikan antara MrkIS dan BP, mencadangkan bahawa penyepaduan MrkIS dalam firma dengan 4–9 pekerja dalam sektor makanan dan minuman Yemen menawarkan peluang yang besar untuk meningkatkan prestasi perniagaan dan kemampunan. Kajian ini juga mendapati bahawa MrkIS sebahagiannya menjadi pengantara hubungan antara EO, MO dan BP, menunjukkan bahawa perusahaan kecil yang mengguna pakai EO dan MO,

memanfaatkan MrkIS untuk mencapai prestasi unggul. Namun begitu, tumpuan kajian pada sektor makanan dan minuman mengehadkan kebolehenralisasian hasilnya. Selain itu, pengecualian ukuran prestasi objektif serta ketiadaan kaedah membujur dan campuran, menambahkan batasan kepada kajian ini. Kajian selanjutnya perlu bagi menangani jurang ini dengan meneroka kesan tidak langsung dimensi EO dan MO terhadap BP melalui MrkIS.

Kata kunci: Orientasi Keusahawanan, Orientasi Pasaran, Perusahaan Kecil, Prestasi Perniagaan, Sistem Maklumat Pemasaran.

SDG: Matlamat 9: Industri, Inovasi dan Infrastruktur

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Noor Azman bin Ali, PhD

Professor
School of Business and Economics
Universiti Putra Malaysia
(Chairman)

Anuar Shah bin Bali Mahomed, PhD

Associate Professor
School of Business and Economics
Universiti Putra Malaysia
(Member)

Haslinda binti Hashim, PhD

Associate Professor
School of Business and Economics
Universiti Putra Malaysia
(Member)

ZALILAH MOHD SHARIFF, PhD

Professor and Dean
School of Graduate Studies
Universiti Putra Malaysia

Date: 7 November 2024

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LIST OF ABBREVIATIONS

AR	Firm's Annual Revenue
AVE	Average Variance Extracted
BP	Business Performance
BSO	Business Strategic Orientation
CO	Competitor Orientation
CR	Composite Reliability
CUO	Customer Orientation
DM	Marketing Decision Support System
EO	Entrepreneurial Orientation
GDP	Gross Domestic Product
HPWS	High-Performance Work Systems
ICT	Information and Communications Technology
IFC	Inter-Functional Coordination
INN	Innovativeness
INR	Internal Record
INTG	Marketing Intelligence
IT	Information Technology
KBV	Knowledge-Based View Theory
LO	Learning Orientation
MIS	Management Information System
MO	Market Orientation
MR	Marketing Research
MrkIS	Marketing Information System
NE	The Number of Employees

PR	Proactiveness
RBV	Resource-Based View Theory
RT	Risk-Taking
SEM	Structural Equation Modeling
SEs	Small Enterprises
UAE	United Arab Emirates
VIF	Variance Inflated Factor
WEF	World Economic Forum
YCSO	Yemeni Central Statistical Organization
YMIT	Yemen Ministry of Industry and Trade

CHAPTER 1

INTRODUCTION

1.1 Introduction

This research endeavours to explore the correlation between business strategic orientation, specifically, market orientation (MO) and entrepreneurial orientation (EO), and the performance of small enterprises (SEs) in Yemen's food and beverage sector, along with their influence on the marketing information system. Additionally, the study explores the mediating effect of marketing information systems (MrkIS) on the relationship between business strategic orientation and business performance (BP). This chapter discusses the research background, problem statement, significance of the study, scope of the study, and definitions of the key terms.

1.2 Research Overview

Rapid evolution in the world has led to deregulation, globalisation, organisational evolution, and a high level of competition between companies, and the acquisition of customers and markets has become seriously challenging for business organisations and their leaders. This challenge has, in turn, presented business organisations with a new reality that they must find ways to deal with and adapt to. If this is addressed, they can thrive in the market, achieve their goals, and grow steadily (such as, Demirbag et al., 2006; Kurniawan et al., 2020; A. M. Shehu & R. Mahmood, 2014). The long-term survival of organizations in the market depends on their efficiency, creativity, and

proactivity (Serwer & Sookdeo, 1994). Therefore, companies are making efforts to improve their performance by adopting a strategic orientation (Suliyanto & Rahab, 2011).

The literature notes that entrepreneurial orientation (EO) and market orientation (MO) are more comprehensive and rigorous types of strategic orientation (Mu et al., 2017; Solano Acosta et al., 2018), which help firms generate and pursue their competitive advantage; thus, they both most likely have the highest effect on the firm's performance (Ghantous & Alnawas, 2020; Morgan & Anokhin, 2020; Solano Acosta et al., 2018; Yang & Meyer, 2019).

Firms employing EO are often characterized by taking a risk to develop new products, services, and markets, being willing to innovate, proactively exploring new prospects, and contending successfully with rivals (Covin & Slevin, 2017a; Wiklund & Shepherd, 2005). and often exhibit higher performance (Wahyuni & Sara, 2020). Moreover, EO represents a firm's attitude toward entrepreneurship, indicating its likelihood of making strategic decisions on ventures (W. Wales et al., 2011).

On the other hand, market orientation (MO) represents the culture of an organization that leads to better value for the customer via customer orientation (CUO), competitor orientation (CO), and inter-function coordination (IFC), thus achieving competitive advantage (Afsharghasemi et al., 2013; Herman et al., 2018; Safarnia et al., 2011; Talaja et al., 2017; Udriyah et al., 2019). Moreover, firms that adopt a MO can attain superior performance to firms that are not or are less dependent on the strategy of MO (Amin et al., 2016; Y.-K. Lee et al., 2015; Šályová et al., 2015; Udriyah et al., 2019).

Despite the importance of both entrepreneurial orientation (EO) and market orientation (MO) in improving SEs' performance, some researchers have confirmed that EO and MO have no positive impact on performance (e.g., Agus Zainul Arifin, 2020; Kurniawan et al., 2020; Pratono & Mahmood, 2015; Taheri et al., 2019; Vega-Vázquez et al., 2016). Thus, these mixed results have driven scholars to call for further investigation of the direct relationship between EO, MO, and business performance (BP) in different contexts, sectors, and firm types. Buli (2017); Osuagwu (2019); W. J. Wales et al. (2011), the comprehensive role and value of both EO and MO on SEs' performance in developing economies are still not totally understood.

However, some authors have reported conflicting outcomes in the relationship between entrepreneurial orientation (EO), market orientation (MO), and business performance (BP) because they have not thoroughly investigated the direct effect of both EO and MO components on performance, which are considered independent actors (Arshad & Rasli, 2018; Basco et al., 2020; Mubarak, 2019). Moreover, Homaid et al. (2018); Rezaei and Ortt (2018); Wang (2008); Wang and Zhou (2015) indicated that the direct impact of EO and MO on performance does not provide a complete picture of the mechanism by which EO and MO improve company performance. Consequently, they confirm the importance of studying the indirect effects of EO and MO on performance.

The market information system (MrkIS) represents a proper ground for effective management; it also facilitates the acquisition, transmission, and accurate and timely use of information (Ślusarczyk, 2020). This enables the manager to determine and take vital action to achieve higher performance (Ahmed Mohammed Fahmi et al., 2019a;

Koçoğlu et al., 2017). In the literature, many studies have been conducted within both the service and industry sectors to reveal the influence of MrkIS on brilliant financial performance, performance, marketing performance, competitive strategies, and decision-making (Al-Janabi & Mhaibes, 2019; Alhamdi, 2020; Bakkad, 2021; Ahmed Mohammed Fahmi et al., 2019a; Muala et al., 2013; Sadeghipor et al., 2019). However, most of these studies focus on large firms in high-income countries (Alhamdi, 2020; Alwattar, 2021; Eryigit, 2014).

According to Hariyati et al. (2019), there is a strong interaction between business strategy and information systems. Hutahayan (2020) has found that the innovation strategy affects the need for a reliable information system. Adel and Younis (2021) confirmed that entrepreneurial orientation (EO) affects information systems related to human resources. While, Chatzipanagiotou et al. (2008) found a strong relationship between market orientation (MO) components and marketing information systems (MrkIS). Nevertheless, the relationship between EO, MO, and MrkIS has not yet been intensively investigated. Moreover, the indirect effect of “strategic orientations (EO and MO) on SEs' performance” through MrkIS has not yet been studied.

1.3 Research Background

This research background sets the stage for understanding the context of Yemen's food and beverage sector and small enterprises, examining how geographic, demographic, and economic factors shape the country's business landscape. It offers an overview of the sector's economic importance and the unique challenges it faces, while also exploring the status of small enterprises, including their administrative definitions, government support, and the barriers they encounter.

1.3.1 Yemen as the Research Context (Geography, Demographics, and Economics)

Yemen, situated in the southwestern region of the Arabian Peninsula, boasts a diverse tapestry of history and cultural traditions. Bordered by Saudi Arabia to the north and Oman to the northeast, its southern frontier meets the Indian Ocean. At the same time, maritime boundaries extend to Eritrea, Djibouti, and Somalia across the Horn of Africa. Spanning over 527,970 square kilometres (203,861 square miles), Yemen ranks as the second-largest country in the Arabian Peninsula, featuring a coastline stretching approximately 2,000 kilometres (1,200 miles) (YCSO, 2020). In 2022, Yemen's population stood at 31,888,000, predominantly comprising Yemeni citizens, with a minority composed of non-Yemeni residents. Among this population, there were roughly 16,223,000 males and 13,665,000 females. However, the country grappled with a notable unemployment rate of about 13.5% in the same year, reflecting ongoing economic challenges (YCSO, 2021-2022).



Figure 1.1: Yemen Map

In Yemen, Arabic is the predominant language in speech and writing, reflecting the country's cultural and linguistic heritage. Islam is the official religion, with most of Yemen's population adhering to its teachings (YCSO, 2018). The nation boasts a rich historical tapestry dating back to ancient civilisations, including the renowned Sabaean and Himyarite kingdoms, which left enduring legacies in the region. In a more contemporary context, Yemen's modern state emerged in 1990 following the unification of the Yemen Arab Republic (North Yemen) and the People's Democratic Republic of Yemen (South Yemen). This union saw Sanaa declared as the political capital, while Aden assumed the role of the economic and commercial hub (YNIC, 2019).

Yemen operates as a republic with a bicameral legislature. The governance structure comprises an elected president, a 301-seat Assembly of Representatives, and an appointed 111-member Shura Council, which collectively share authority. The president serves as the head of state, while the prime minister assumes the head of government, each playing a crucial role in the nation's political landscape. Yemen is divided into 22 governorates, each with its unique administrative jurisdiction. These governorates encompass a diverse range of regions, including Ibb, Abyan, Sana'a, Al-Baidha, Taiz, Al-Jawf, Hajjah, Al-Hodeidah, Hadramout, Dhamar, Shabwah, Sadah, Al-Amanh, Aden, Lahj, Mareb, Al-Mhweit, Al-Mhrah, Amran, Al-Dhalae, Sqatra and Reimah (YNIC, 2019).

Yemen's economy was primarily based on agriculture, with coffee being a significant export product. However, the discovery of oil in the 1980s marked a turning point for the country's economy (Wenner, 2024). Unlike many regional oil producers, Yemen

relies heavily on foreign oil companies with production-sharing agreements with the government. Income from oil production constitutes 70 to 75 per cent of government revenue and about 90 per cent of exports (CBY, 2022; YCSO, 2020). However, experience has shown that these revenue sources are not sustainable since oil and fossil fuels are non-renewable energy resources. Moreover, the instability and decline of oil prices pose a significant challenge to Yemen. On the other hand, the conflict in Yemen has led to a sharp decline in oil production, further exacerbating the country's economic challenges (YCSO, 2021-2022).

Recognizing the inherent risks posed by overreliance on oil revenue and the destabilizing effects of conflict, Yemen has faced mounting pressure to diversify its economy. In response, the Yemeni government has embarked on national strategies aimed at enhancing the role of other non-oil sectors in the Yemeni economy. One of these strategies was The National Development Strategy for Small and Medium Enterprises (SMEDS), which aimed to achieve robust economic growth in various non-oil sectors, increased employment rates, a more resilient economy capable of withstanding external shocks and internal conflicts, and improved living standards for the Yemeni population (Mansour, 2011).

1.3.2 An Overview of the Food and Beverage Sector

The food and beverage sector is considered one of the critical sectors that has a massive effect on the economics of many countries. In 2021, the global food and beverage market was worth 281.14 billion U.S. dollars. The market is predicted to grow at a compound annual rate of approximately 9.5 per cent between 2021 and 2028. By 2028,

the market is forecasted to be worth more than half a trillion U.S. dollars (See Figure 1.2).

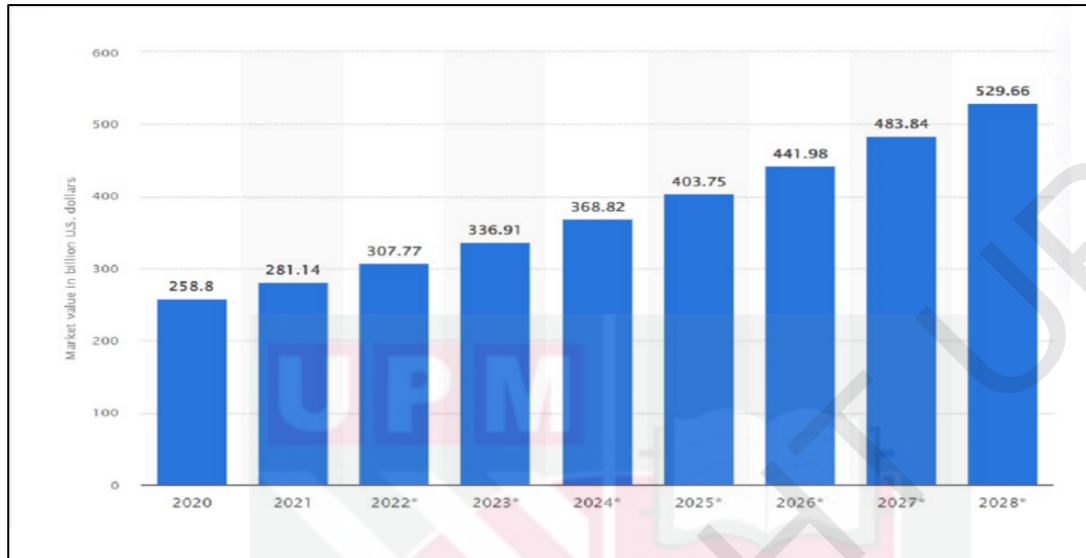


Figure 1.2: Size of Worldwide Food and Beverage Market 2020-2028

*The figure for 2020 -2021 with a forecast to 2028

(Source: <https://www.statista.com> 2021)

In Yemen, the Food and Beverage sector is a cornerstone of the manufacturing industry, consistently contributing over 42% of the total added value annually. This sub-sector peaked at YR 323.482 million in 2019, slightly decreasing to YR 274.418 million by 2022 (refer to Table 1.1 and Figure 1.3) of the total manufacturing sector (YMIT, 2020, 2022). Its substantial contribution is due to the industry's reliance on domestic raw materials and significant government support, including profit tax exemptions and legal provisions to protect domestic goods (Jandab et al., 2019). In comparison, the Tobacco subsector, while consistently the second-largest contributor with around 12%, reflects steady demand and production. Other notable subsector, such as Metal and Non-Metallic Products and Wrought Metal Products, collectively contribute approximately 22-24% of the total value, highlighting their importance in industrial and construction activities.

Between 2019 and 2022, Yemen's manufacturing sub-sectors experienced notable fluctuations, significantly influenced by the COVID-19 pandemic, ongoing conflict, and economic challenges. In 2020, all sub-sectors saw a substantial decline, with the Food and Beverage sector decreasing by 22.01%, the Tobacco sector by 18.15%, Rubber and Plastic Products by 26.56%, Metal and Non-Metallic Products by 29.81%, Wrought Metal Products by 29.73%, and the other category by 22.79%. These declines reflect the adverse impacts of the global pandemic and Yemen's internal situation.

Yemen's manufacturing sub-sectors experienced notable fluctuations. In 2020, all sub-sectors saw a substantial decline, with the Food and Beverage sector decreasing by 28.22%, the Tobacco sector by 23.78%, Rubber and Plastic Products by 6.35%, Metal and Non-Metallic Products by 42.50%, Wrought Metal Products by 42.30%, and the other category by 29.57%. These declines reflect the adverse impacts of the global pandemic and Yemen's internal situation (M. A. K. Saleh & K. R. Manjunath, 2020). Despite these setbacks, 2021 and 2022 marked periods of slight recovery and growth. The Food and Beverage sector rebounded with a 5.03% increase in 2021 and a further 3.19% in 2022, reaching YR 274.418 million. The Tobacco sector saw modest growth of 1.38% in 2021 and 2.60% in 2022. Similarly, Rubber and Plastic Products increased by 6.89% in 2021 and 5.19% in 2022, Metal and Non-Metallic Products grew by 4.94% in 2021 and 4.62% in 2022, and Wrought Metal Products saw increases of 6.19% in 2021 and 5.37% in 2022 (See Table 1.1). These trends highlight the resilience of Yemen's manufacturing sector amid challenging circumstances, gradually regaining momentum and stabilizing post-2020.

Table 1.1: Added Value of Manufacturing Sub-Sectors

Sectors	2019		2020		2021		2022	
	%	Value	%	GR	Value	%	GR	Value
Food and beverage	42.21%	323.482	43.30%	-28.22%	252.293	43.17%	3.19%	274.418
Tobacco	11.85%	90.784	12.59%	-23.78%	73.342	12.01%	2.60%	76.358
Rubber and Plastic Products	6.57%	50.344	6.35%	-36.16%	36.973	6.49%	6.89%	39.709
Metal and Non-Metallic Products	13.37%	102.435	12.34%	-42.50%	71.885	12.36%	4.94%	75.623
Wrought Metal Products	10.71%	82.095	9.90%	-42.30%	57.692	10.05%	6.19%	61.499
Other	15.30%	117.229	15.53%	-29.57%	90.478	15.55%	4.96%	95.198
Total	100.00%	766.370	100.00%	-31.53%	582.663	100.00%	4.80%	612.063
								635.646

(Source: Ministry of Industry and Trade, Annual Statistical Report (2020 & 2022); GR= Growth Rate; Added Values in millions of YR)

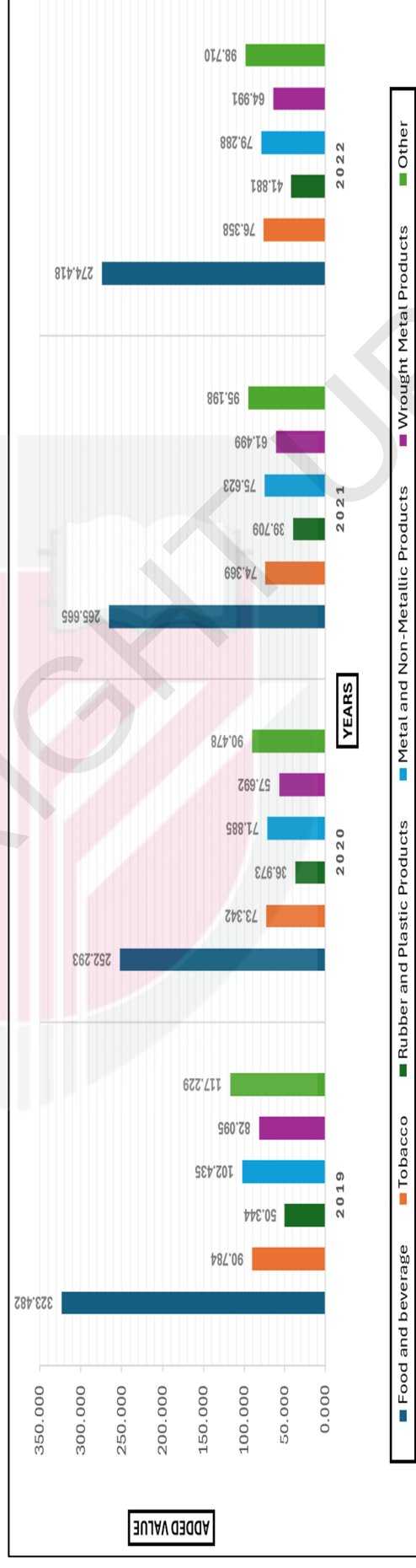


Figure 1.3: The Percentage of Manufacturing Sub-Sectors based on Added Value

[Source: Ministry of Industry and Trade, Annual Statistical Report (2020 & 2022)]

The food and beverage sector is a significant contributor to the proliferation of small-sized enterprises (SEs), which play a crucial role in fostering economic growth, promoting income equality, reducing poverty, and generating employment opportunities in numerous countries (Mamun et al., 2018; Yadav et al., 2021; Zacca & Alhoqail, 2021). According to the Ministry of Trade and Industry's report issued in 2020, the food and beverage sector boasted 2,667 registered SEs, contributing substantially to job creation by employing 9,391 individuals by the end of 2022. Additionally, SEs within this sector generated an impressive added value of 17,523.58 million YR compared to SEs in other sectors (see Table 1.2 and Figure 1.4). These data underscore the integral role of food and beverage SEs in Yemen's economy and their potential for further positive impact in the years to come.

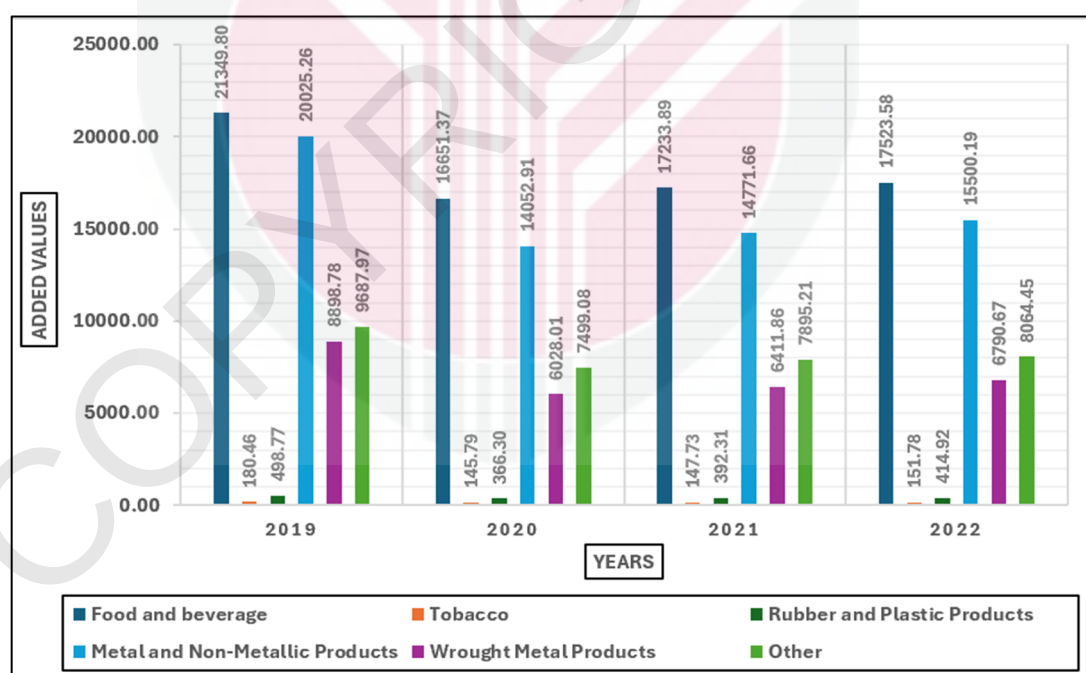


Figure 1.4: Added Values of Small Enterprises in the Manufacturing Sub-Sectors.

[Source: Ministry of Industry and Trade, Annual Statistical Report (2020 & 2022)]

Despite its paramount position within the manufacturing sector, the sharp 28.22% decline in added value in 2020 highlights its vulnerability to external shocks, such as the COVID-19 pandemic and ongoing socio-political instability. Furthermore, the gradual increases of 3.38% in 2021 and 1.65% in 2022 indicate that the sector is not recovering optimally (refer to Table 1.2 and Figure 1.4 above). The number of firms also decreased by 14.42% in 2020, with only marginal growth in subsequent years, underscoring the difficulties in sustaining and scaling businesses. This weakness calls for more robust strategies within food and beverage SEs.

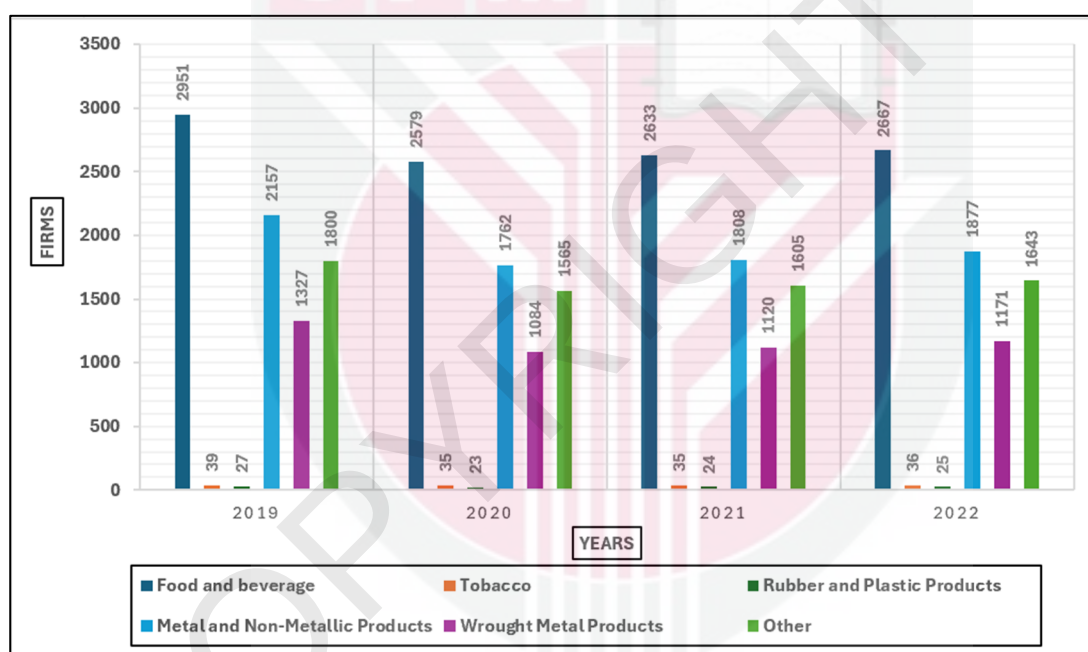


Figure 1.5: Small Enterprises, Number and Value Add, and the Number of Employees in the Manufacturing Sub-Sectors

[Source: Ministry of Industry and Trade, Annual Statistical Report (2020 & 2022)]

Moreover, the Yemeni market grapples with a significant food deficit. This challenge is exacerbated by the persistent surge in domestic demand for various food products, the majority of which are imported from foreign sources - a fact emphasized by Jandab et al. (2019) and the Yemen Central Statistical Organization (YCSO) report of 2020. Consequently, there is an urgent need to enhance the performance of companies operating within these sectors and actively promote investment expansion. This necessity becomes even more imperative considering the crucial role of food commodities in meeting escalating domestic demand. Effectively addressing this challenge by bolstering local production and striving for self-sufficiency within the food and beverage sector is necessary and strategic. Such actions are essential for ensuring the nation's food security and economic stability.

1.3.3 An Overview of Small Enterprises in Yemen

The importance of small-sized enterprises (SEs) has expanded dramatically over the past two decades, owing to the role that SEs play at an economic and social level. They are considered essential for sustainable economic growth at the global and national levels. SEs are crucial contributors to gross domestic product (GDP) and play a significant role in decreasing the rate of unemployment in countries, particularly developing countries. Moreover, SEs increase international trade by diversifying economic activity and fostering flexibility and innovation via entrepreneurship (N. A. AlQershi et al., 2021). Therefore, developing SEs in various sectors is urgently necessary for developing countries, especially in Yemen.

In the context of Yemen, a growing interest in industrial SEs emerged in Yemen by the government and some local and international financial institutions since 1990 (Read sub-section 1.3.3.2 on page 18 for more information about government support SEs) due to the steady rise in the number of graduates from universities and technical institutes in Yemen and political and social pressures. Despite the growing interest in SEs through the provision of financial and technical support and consultancy, SEs still face several obstacles that constitute a stumbling block to their competitiveness locally and globally (Jandab et al., 2019; YMIT, 2018, 2020).

Regarding government support, the challenges firms face in Yemen's SEs can be categorized into two main types. The first type includes challenges that firms can address through development, operational improvements, and specific strategies and plans. The second type comprises challenges that require government intervention to create a conducive business environment, allowing SEs to grow, expand, and contribute to inclusive development and economic welfare.

SEs in Yemen operate in a highly unstable environment due to ongoing political and economic turmoil, exacerbated by the impact of the COVID-19 pandemic. This instability has led to many challenges, which can be classified as historical or temporary. Yemen, one of the least developed countries in the region, has been facing a prolonged crisis that has severely impacted business operations, resulting in high unemployment rates and negatively affecting the performance of SEs

Despite being an underdeveloped economy, Yemen relies heavily on SEs, crucial in job creation, income generation, and GDP growth. However, various factors often

hinder their performance, including financial constraints, marketing challenges, political instability, legal issues, and limited managerial capacity. The need for government support is particularly significant, and for SEs in Yemen to move toward increased performance, they must overcome these obstacles by securing essential resources and infrastructure. The following subsections shed light on the most important obstacles faced by SEs and the definition of SEs in Yemen.

1.3.3.1 Administrative Definition of Small Enterprises in Yemen

There is no globally fixed and accepted definition of small-sized enterprises (SEs), as definitions differ by nation and organization. Therefore, most nations depend on SEs' definitions of their industrial development levels and other economic criteria, which are subject to change (Ali et al., 2020). The definitions of SEs in Yemen have differed from the definitions that have been set by some countries in the Middle East, especially the United Arab Emirates (UAE) and Qatar, wherein their definitions focus on the firm's annual revenue (AR) and the number of employees (NE). The thresholds of the criteria (AR and NE) differ from one sector to the other (See Table 1.3). In 1997, the Yemen Ministry of Industry and Trade (YMIT) outlined the definition of SEs, which depends only on the number of employees working in the firm. A small enterprise is a firm with employees between 4 and 9.

Table 1.3: Definition and Classification of UAE, Qatar, and Yemen SEs

Sector	Criteria	UAE	Qatar	Yemen
	Size	Small	Small	Small
Agriculture	No. of Employees	-	6 -30	4-9
	Annual Revenue	-	1 - Less than 20	-
Manufacturing	No. of Employees	10 to 100	6 – 50	4-9
	Annual Revenue	less than 20	3 - Less than 20	-
Creative	No. of Employees	-	6 -30	4-9
	Annual Revenue	-	1 - Less than 20	-
Construction	No. of Employees	-	11-50	4-9
	Annual Revenue	-	3 - Less than 20	-
Trad	No. of Employees	6 to 50	6 – 50	4-9
	Annual Revenue	less than 50 million	3 - Less than 20	-
Other Services	No. of Employees	6 to 50	6 – 50	4-9
	Annual Revenue	up to 250	3 - Less than 20	-

[Sources: Abu Dhabi Chamber 2019 (<https://abudhabichamber.ae>) and Qatar Development Bank 2019 (<https://www.qdb.qa/en>).]

*Annual Revenue is measured in a million UAD and QR

In Yemen, the significance of SEs cannot be overstated. According to the Yemeni Ministry of Industry and Trade (YMIT) report (2018), a substantial portion of a country's businesses fall within the SEs category. SEs play a pivotal role in driving economic growth, manifesting their importance through substantial contributions to the national gross domestic product (GDP). Beyond its economic impact, SEs have also emerged as potent tools to address unemployment issues and elevate income levels. SEs are the second most prominent source of employment in Yemen, which annually creates 27350 employment opportunities, further underscoring their vital role in the Yemeni economy, as noted by Al-Hattami et al. (2022); Jandab et al. (2019). Therefore, the sustained growth and support of SMEs remain crucial for the nation's economic development and the well-being of its populace.

Moreover, the statistics provided by the Ministry of Industry and Trade in Yemen (YMIT) (See Table 1.2 on page 13) paint a clear picture of the manufacturing sector in the country, revealing that it comprises approximately 7472 SEs. It is particularly noteworthy that most of these entities (approximately 2667 SEs) are actively engaged

in the food and beverage sector. This numerical dominance signifies the paramount importance of food and beverage SEs within the Yemeni manufacturing sector, which accounts for 35.70% of the entire manufacturing landscape in 2022. However, SEs in Yemen, especially those within the food and beverage sector, face a myriad of challenges that impede their growth and development (AlQershi et al., 2020; Jandab et al., 2020; YCSO, 2018, 2020; YMIT, 2020). The following section will examine the most significant challenges and obstacles confronting these enterprises in Yemen.

1.3.3.2 The Role of the Yemeni Government in Supporting Small Enterprises

In Yemen, the government's recognition of the critical role that small and medium-sized enterprises (SMEs) play in economic development has led to substantial efforts to support and nurture this sector. Over the past few decades, strategic initiatives and reforms have been implemented to foster a conducive environment for SMEs to thrive. These efforts are aimed at stimulating economic growth, promoting inclusive development, addressing unemployment, and enhancing the country's overall economic resilience.

One of the cornerstone strategies driving these efforts was The National Development Strategy for Small and Medium Enterprises (SMEDS), implemented in phases during the years 1995, 2000, 2005, and 2010, as well as a comprehensive period from 2011 to 2021 (Mansour, 2011; Saleh et al., 2021). This strategy encompassed six main pillars: improving financial assistance for micro, small, and medium enterprises; enhancing policies and regulatory reforms for these enterprises; fostering a culture of innovation and entrepreneurship; developing technical and managerial skills;

providing quality business support; and offering technological and informational support, as well as facilitating business establishment (SMED, 2010; YCSO, 2018).

To further these objectives, establishing The Social Fund for Development in 1997 played a significant role in providing necessary financing for SMEs, distributing funds received from donor countries as soft loans for MSMEs. In addition, the government encouraged private banks to enter the SME finance sector (Qaied & Basavaraj, 2020; YMPIC, 2007). Notably, in 2006, the International Islamic Solidarity Bank established a loan program specifically for SMEs, followed by the establishment of Al-Amal Microfinance Bank and Al-Kuraimi Bank for Islamic Microfinance in 2007 (Mansour, 2011). To bolster these efforts, the Central Bank of Yemen, in cooperation with the Social Fund for Development, established a law regulating microfinance activities, approved by the Yemeni parliament in 2009, leading all private banks in Yemen to create unique programs to finance SMEs (Al-Iryani et al., 2015; SMED, 2010).

The government established the Small and Micro Enterprise Promotion Services Agency (SMEPS) in 2005, affiliated with the Social Fund for Development. SMEPS focuses on development projects linked to humanitarian work, pursuing innovative strategies for small and micro enterprises by enhancing the economic and technical capabilities of the market-driven private sector (Mansour, 2011; YCSO, 2019). The Yemeni government also activated business incubators, accelerators, and clubs, enhancing SMEs' capabilities through advisory support and developing human capabilities and technology. Prominent incubators in Yemen include Block One, Noah's Ark, Al Mahatta, and Enjaz, alongside the Yemeni Business Club (Qaid, 2022).

To enhance the competitiveness of SMEs, the Yemeni government has collaborated with international partners to launch programs aimed at improving managerial and financial capacities, promoting investment, and enhancing infrastructure. These initiatives aim to create a conducive environment for SMEs to grow and contribute to economic stability and job creation, particularly for youth and women (YMIT, 2020).



Table 1.4: Government and International Programs Supporting SE Development in Yemen

Program	Partners	Objectives
SME Financing Program	United States Agency for International Development (USAID) and the United Nations Development Programme (UNDP).	Provides affordable loans, financial facilities, and business management and innovation training.
Women's Empowerment in Small Businesses Project	International Labour Organization (ILO) and UN Women	Enhances women's participation in the economy by providing training and funding for women-led small businesses
Entrepreneurship Support Program	World Bank, NGOs	Encourages youth entrepreneurship and provides technical support and mentorship to establish and grow small businesses
Project for Improving the Regulatory Environment for SMEs	United Nations Development Programme (UNDP) and Economic Co-operation and Development (OECD)	Reform policies and regulations to create a better business environment for SMEs
Vocational Training and Skills Development Program	International Labour Organization (ILO) and World Bank	Improves the skills of workers in SMEs through specialized training programs
Market Access Improvement Project and foster knowledge and technology.	The German Agency for International Cooperation (GIZ) and The United Nations Industrial Development Organization (UNIDO)	Helps SMEs improve product quality, access new markets, and use knowledge and technology.
Innovation Enhancement Project for SMEs	World Bank and the Organisation for Economic Co-operation and Development (OECD).	Promotes innovation in the private sector by providing grants and technical support for innovative solutions
Managerial and Financial Capacity Building Program	the Japan International Cooperation Agency (JICA) and the International Monetary Fund (IMF)	Strengthens the managerial and financial capacities of SME owners and managers
SME Investment Promotion Project	the Islamic Development Bank (IsDB) and the United Nations Development Programme (UNDP)	Attracts investments to SMEs by providing investment incentives and financial facilities
Supporting Infrastructure Improvement Program for SMEs	World Bank, European Union	Develops and improves essential infrastructure to support the growth of SMEs

[Source: Ministry of Industry and Trade Report (2020), Ministry of Planning and International Cooperation (2022)]

Recognizing the importance of information, the Yemeni government established the National Information Center. This governmental body links information centres in various sectors and coordinates them within a national network. This network provides data and information to various industries, stakeholders, and decision-makers, aiding in the preparation, implementation, follow-up, evaluation, and development of plans, programs, and policies. The Center collects, classifies, and analyses data from multiple sources- national and international- making it accessible for research and decision-making purposes. It issues periodic reports and statistical bulletins covering various aspects of economic and social life in Yemen, enhancing transparency and supporting the decision-making process (UN, 2009; YNIC, 2000).

As part of the Yemeni government's efforts to develop small and medium-sized companies and enhance their competitive capabilities, the government has given SMEs registered with the Yemeni Ministry of Trade and Industry access to all the information provided by the National Information Center. This access is vital to their growth and development (YCSO, 2019). The centre offers reports and statistics on the economic situation, commercial activities, and market trends, helping companies understand the economic environment, analyse market competition, and identify potential opportunities and threats. This information enables SMEs to develop effective marketing and competitive strategies. Additionally, the Center provides modern studies and demographic data, aiding SMEs in creating realistic business plans and understanding customer preferences. The updated data from the Center also helps SMEs adapt to economic, political, and social changes, ensuring sustainability in their operations.

1.3.3.3 Obstacles Faced by Small Enterprises in Yemen

Small enterprises (SEs) in Yemen have been suffering from multiple problems, contributing to an increase in their failure rate compared with large firms. According to a report by the Yemen Ministry of Industry and Trade (2020), 63% of SEs close during the first three years of a start-up. The report of the Yemen Ministry of Industry and Trade (2018) has determined the problems that SEs encounter in Yemen, which are (I) The SEs and employers' ineptitude in obtaining funds needed for industrial activities; (II) lack of trained and technical personnel resulting in technical problems; (III) marketing, administrative, and organisational problems; (IV) information problems arising from obtaining information based on investment and technologies utilised in the field; (V) complex laws and legislation established for projects; (VI) failure of indigenous industries to compete in local and international markets, and the struggle to compete with foreign products; (VII) unclear industrial development strategy; and (VIII) poor interest in industrial research and development (R&D) centres.

On the other hand, the World Economic Forum 2019 issued the Global Competitiveness Report 2019 and pointed out Yemen's low ranking in competitiveness, ranking 140th out of 141st countries in 2019, compared with the United Arab Emirates (UAE) and Qatar, which ranked 25th and 29th, respectively. In addition, the report stated that Yemen is still late compared to the two nearest Middle Eastern countries in several indexes. For example, information and communications technology (ICT) adoption, Product market, Market size, Financing of SMEs, Innovation capability, Entrepreneurial culture, Skills of the current workforce, and Domestic competition (See Table 1.5).

Table 1.5: Global Competitiveness Index details Yemen, Qatar, and the United Arab Emirates

Index Component	Yemen		Qatar		United Arab Emirates	
	Score *	Rank/141	Score *	Rank/141	Score *	Rank/141
ICT adoption	17.6	139	83.8	8	91.9	2
Product market	46.1	123	66.8	13	71.7	4
Market size	44.5	94	60.4	53	70.3	32
Financing of SMEs	23.3	138	70.1	4	66.2	9
Innovation capability	25.3	130	50.0	38	52.3	33
Entrepreneurial culture	36.7	135	65.6	12	67.4	8
Skills of the current workforce	35.2	138	69.2	11	67.7	15
Domestic competition	38.3	132	67.5	14	70.8	6

[Source: Global Competitiveness Report (2019).]

*Scores are on a 0 to 100 scale, where 100 represents the optimal situation or 'frontier.'

Following the discussion of the practical issues, it is to the author's benefit to investigate particular factors that might improve the performance of SEs food and beverage in Yemen, as these may benefit owner-managers of food and beverage and other stakeholders in food and beverage SEs. Therefore, this study investigates the linkage of exogenous factors, which are entrepreneurial orientation (EO), market orientation (MO), and marketing information systems (MrkIS), for the endogenous variable, which is the business performance of SEs. Moreover, this research aims to understand the role of marketing information systems as a mediator and its relationship with business performance.

1.4 Problem Statement

Small enterprises (SEs) can provide better growth and development opportunities to the world economy than large firms (Burli et al., 2011). Moreover, SEs create more employment openings more rapidly than large organisations. Additionally, they serve as suppliers to large companies. (Amin et al., 2016; Chahal et al., 2016). Although the essence role of SEs has been emphasised, Mahmood and Hanafi (2013) indicated that the performance of SEs is still low in some countries due to massive squeezes caused

by merging countries into the world economy, shortage of staffing (skilled human resources), technological constraints, management systems, poor quality products, insufficient utilisation of information technology (IT), and weak entrepreneurial capabilities.

Similarly, the Global Competitiveness Report of 2019 sheds light on the significant challenges facing Yemen in terms of competitiveness on the global stage. The country's ranking of 140th out of 141st countries underscores the substantial gap between Yemen and its neighbouring nations, such as the United Arab Emirates (UAE) and Qatar, which are positioned much higher in the rankings at 25th and 29th, respectively. This glaring disparity is evident across various vital indexes, including information and communications technology (ICT) adoption, product market, market size, financing for SEs, innovation capability, entrepreneurial culture, skills of the current workforce, and domestic competition (See Table 1.5 on page 10, and Figure 1.6).

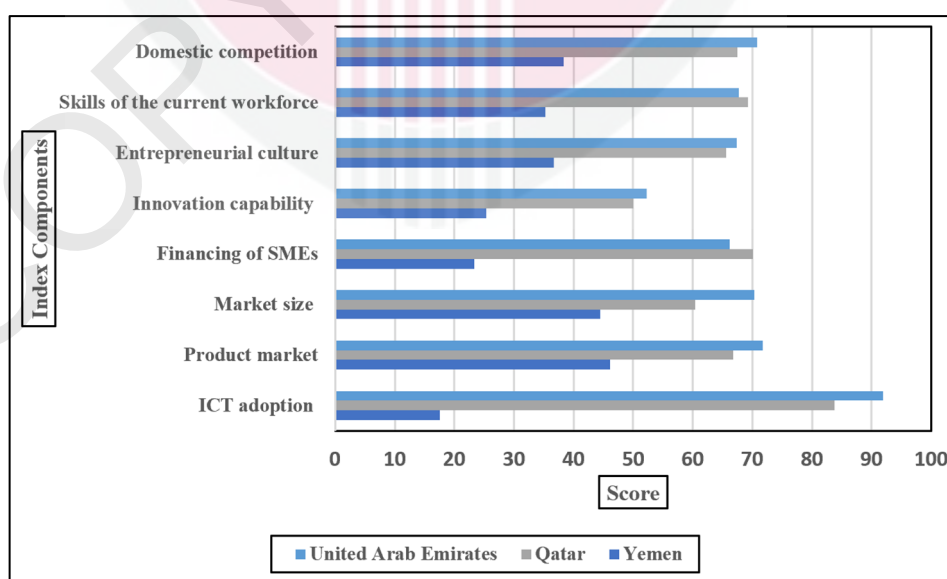


Figure 1.6: Global Competitiveness Index details for Yemen, Qatar, and the United Arab Emirates

[Source: The Global Competitiveness Report (2019).]

Furthermore, Yemeni food and beverage SEs face many challenges that significantly impact their competitiveness and overall performance, such as a deficiency in entrepreneurial skills and a lack of expertise in implementing robust business plans. These challenges extend to marketing their products and services both domestically and internationally, ultimately impeding their competitive edge in the market (Alhakimi & Mahmoud, 2020; N. A. AlQershi et al., 2021; Jandab et al., 2019; YMIT, 2018). This is confirmed by the distressing statistics on SEs in Yemen, indicating that 63% of SMEs in Yemen close within the first three years of a startup. This underscores the urgent need for a comprehensive enhancement of SEs' performance to become more competitive (YMIT, 2018).

Small enterprises (SEs) operating within the food and beverage sector hold the top spot in terms of relative importance within the manufacturing sector, with 2667 SEs' food and beverage work within this sector, which formed 35.70% in 2022 (See Table 1.2 on page 13). Despite their significant presence, these enterprises have faced substantial challenges, reflected in their fluctuating performance and diminishing contribution to the national GDP. Historically, the contribution of SEs in this sector to GDP decreased by 15% between 2005 and 2010, after reaching 19% between 1990 and 1994) AlQershi et al., 2020; World Bank, 2015; YCSO, 2018). More recently, USAID reported that by 2020, SEs in Yemen contributed a mere 9.9% to GDP, a stark contrast to the higher percentages seen in other developing economies M. A. Al-Hakimi et al. (2021); AlQershi et al. (2020).

On the other side, Jandab (2020), in his study about SMEs running within the food and beverage sector, indicated a disturbing trend in the food and beverage sector, wherein

an average growth rate declined by 3.39% over 2016-2018. This decline significantly impacted the nation's economy, resulting in an average GDP decrease of 17.2%. Furthermore, between 2019 and 2022, the added value of SEs in this sector showed inconsistent growth (refer to Table 1.2 on page 13, Figure 1.7, & Figure 1.8). In 2020, despite an increase in their relative share to 37%, the added value dropped by 28%, illustrating the sector's vulnerability to external shocks and internal inefficiencies. Although there was a modest recovery with a 3% growth in 2021, followed by a 2% growth in 2022, these rates are insufficient to counteract the overall downward trend.

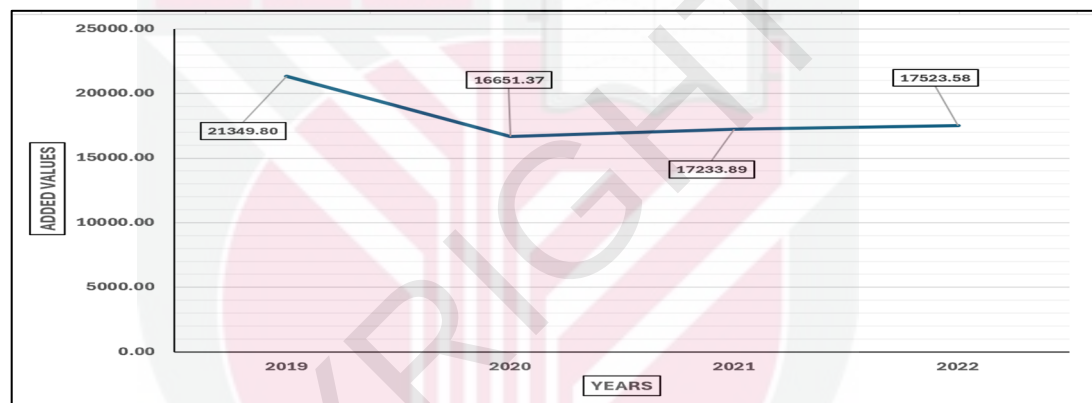


Figure 1.7: Add Values of Small Enterprises within the Food and Beverage Sector (2019-2022/ YR.1M)

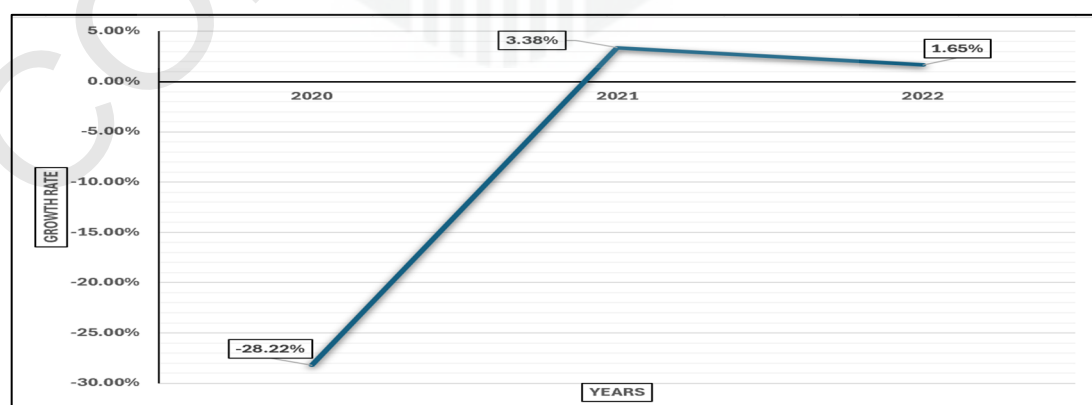


Figure 1.8: Growth Rate of Add Values of Small Enterprises within the Food and Beverage Sector (2019-2022)

Based on all the statistics and facts mentioned above, it is evident that a critical issue is plaguing small-sized enterprises (SEs) within Yemen's food and beverage sector. This issue pertains to a notable decline in their performance and competitive capacity. This decline in performance and competitive capacity threatens not only the sustainability of these enterprises but also the broader economic stability and development of the country. Addressing these challenges is imperative for empowering Yemeni SEs and fostering long-term economic growth (M. A. Al-Hakimi et al., 2021; AlQershi et al., 2020; Hattami et al., 2021; Jandab, 2020).

With the rapid development of information technology, firms are ready to acquire information in significant quantities and faster than ever (Sheth, 2017). A marketing information system (MrkIS) represents a proper ground for effective management (Ślusarczyk, 2020). It also facilitates the acquisition, transmission, and use of information accurately and promptly. Moreover, MrkIS provides methods for interpreting the information it delivers, which is very important for planning and analysis (Hakhu et al., 2013). This enables managers to determine and take vital actions to achieve higher performance (Ahmed Mohammed Fahmi et al., 2019a; Koçoğlu et al., 2017).

In this study, the understanding of the relationship between marketing information systems (MrkIS) and business performance (BP) is related to the theory of knowledge-based view (KBV). This theory is a crucial theoretical framework for understanding firm success, emphasising the importance of firms' capacity to generate and leverage various forms of knowledge (Grant, 2014). It is seen as one of the most important firm's resources that contribute to increasing the added value (Grant, 1997) and achieving its competitive advantage (Jasinskas et al., 2015).

In marketing information system (MrkIS) literature there has been an upsurge of interest in topics such as influence of MrkIS on brilliant financial performance (Ahmed Mohammed Fahmi et al., 2019a), product innovation, and customer orientation (Alwattar, 2021), competitive strategies (Sadeghipor et al., 2019), performance (Muala et al., 2013; Theodosiou & Beheshti, 2021), marketing performance (Alhamdi, 2020), customer loyalty, satisfaction, and service quality (Hendratta et al., 2021). All previous empirical studies confirmed that the marketing information system (MrkIS) is a firm's prominent resource in terms of its contribution to value-added products and strategic significance.

However, the vast majority of research in the literature has focused on the analysis of marketing information system (MrkIS) implementation for larger firms, which limits the decision-making process for SEs (Alhamdi, 2020; Alwattar, 2021). Moreover, Eryigit (2014) pointed out that studies in MrkIS literature mainly focused on high-income countries. In contrast, little attention has been paid to SEs in middle-and low-income countries. Consequently, more studies about MrkIS in small enterprises (SEs) may benefit those countries to increase the added value of SEs to their economies.

Strategic orientation represents the strategic direction a firm implements to create proper behaviour for the continuous superior performance of the business (Kumar et al., 2012). In the past, the literature has highlighted two primary forms of strategic orientation, namely entrepreneurial orientation (EO) and market orientation (MO), which are widely regarded as comprehensive and rigorous approaches to achieving sustainable business performance (Mu et al., 2017; Solano Acosta et al., 2018).

Firms embracing entrepreneurial orientation (EO) tend to exhibit qualities such as constant “innovativeness (INN), proactiveness (PR), and penchant for risk-taking (RT),” all of which contribute to their superior performance (Covin & Slevin, 2017a; Wiklund & Shepherd, 2005). On the other hand, market orientation (MO) underscores the importance of understanding and meeting customer needs and wants more efficiently and effectively than competitors (Narver & Slater, 1990). In essence, both EO and MO represent potent strategies that can significantly influence a firm's overall performance and ability to thrive in a dynamic business environment (Abu-Rumman et al., 2021; Ghantous & Alnawas, 2020; Morgan & Anokhin, 2020; Solano Acosta et al., 2018; Yang & Meyer, 2019).

The explanation of the correlation among entrepreneurial orientation (EO), market orientation (MO), and business performance (BP) is routinely based on the theory of the resource-based view (RBV) (Aljanabi & Noor, 2015; Dabrowski et al., 2019; Nurhilalia et al., 2019; Poudel et al., 2020; Wales et al., 2021). This theory indicates that resources (intangible and tangible) that have a sustainable competitive advantage and have an impact on performance must have four characteristics of VRIN criteria (“Valuable, Rare, Inimitable, and Non-substitutable”) (J. Barney, 2016). From this perspective, both EO and MO are intangible resources that are inimitable, valuable, rare, and un-substitutable (J. Barney, 2016; J. B. Barney, 2016). Thus, EO and MO resource allocation diversity leads to a distinction in the company's performance (Buli, 2017; Lekmat et al., 2018; Morgan & Anokhin, 2020).

The relationship between entrepreneurial orientation (EO), market orientation (MO), and business performance (BP) has been the subject of extensive research within the

strategic orientation literature, with a predominant consensus favouring their positive influence on SEs' performance. However, the findings across some studies have indicated otherwise; for example, Andersén (2010); Arshad et al. (2014); Kreiser et al. (2012); Pratono and Mahmood (2015); Taheri et al. (2019); Vega-Vázquez et al. (2016), have concluded a negative relationship and, other cases, reached even a weak outcome and non-linear between EO and BP. Similarly, a few researchers have found that MO has a negative impact on business performance (Agus Zainul Arifin, 2020; Demirbag et al., 2006; Kurniawan et al., 2020; Maming et al., 2020; A. M. Shehu & R. Mahmood, 2014; Wurjaningrum & Hartami, 2020). Consequently, these inconsistent findings have motivated researchers to call for further investigation to resolve conflicting findings and deepen the theoretical understanding of the relationship between MO, EO, and business performance in several contexts (non-profit/profit organisation, time, and sector. etc.).

The collision results between Entrepreneurial Orientation (EO), Market Orientation (MO), and Business Performance (BP) offer valuable insights into the perspectives presented by Homaid et al. (2018); Rezaei and Ortt (2018); Wang (2008); Wang and Zhou (2015). These scholars argue that the direct impact of MO and EO on a firm's performance is insufficient to explain comprehensively the mechanisms through which EO and MO enhance company performance. Instead, it is influenced by a complex interplay of various factors. To unravel how EO and MO positively influence firm performance, researchers have delved into the examination of numerous mediating variables, as evidenced by studies conducted by Danso et al. (2017); Homaid et al. (2018); Horchani and Zouaoui (2019); Lekmat et al. (2018); Madhoushi et al. (2011). These endeavours underscore the need for further research on mediating factors,

reinforcing the requirement for a deeper comprehension of the complex association between EO, MO, and BP.

Ngo (2021) stated that to transform the organisational intangible resource, which “entrepreneurial orientation (EO) and market orientation (MO)” are one of them, into superior performance, the firm needs a trustworthy information system that meets the firm's vital information to improve decision-making. Moreover, Hutahayan (2020) indicated that matching information with the decision-makers' needs would increase the quality of decisions and, ultimately, the firm's performance. This viewpoint reinforces the work of Horchani and Zouaoui (2019), who conclude that EO leads to different types of innovation through information systems. Similarly, Ngo (2021) pointed out that when SMEs follow a market-oriented approach, they use management accounting system information more to achieve superior performance. Interestingly, the indirect impact of strategic orientation, namely EO and MO, on the performance of SEs through marketing information systems (MrkIS) remains an underexplored area within the existing literature. Further investigation in this domain could shed valuable light on the complex interplay between SEs' strategic orientations, marketing information systems, and business performance.

Moreover, as a theoretical problem, performance has garnered considerable scholarly attention in the literature. The performance of SEs has likewise undergone extensive examination, as evidenced by the studies conducted by Alam et al. (2022); Tang et al. (2020). These studies explored SEs' performance in developed countries. Therefore, performance may not have been given due consideration by SE operators in developing countries, specifically in Arab and Middle Eastern countries, which is potentially

attributable to the informal management method of business (M. A. Al-Hakimi et al., 2021; AlQershi et al., 2020).

In the Yemen context, several researchers have delved into the performance of SMEs, as noted in the works of (N. A. AlQershi et al., 2021; AlQershi et al., 2020; Hattami et al., 2021; Jandab et al., 2019). However, to the best of the researcher's knowledge, a limited number of studies have specifically concentrated on the performance of food and beverage SEs, as seen in studies of Jandab et al. (2020); Jandab et al. (2019), which focused on product development performance. The scarcity of research on food and beverage SMEs in Yemen underscores a significant gap in the existing literature.

To address the research problem and provide evidence and empirical comprehension of the elements influencing business performance in the context of Yemen, specifically SEs in the food and beverage sector. This study seeks to introduce a novel framework to model Yemeni food and beverage SEs' performance by connecting it to strategic “orientation, market orientation (MO), and entrepreneurial orientation (EO).” Moreover, the framework proposes a mediating role of the marketing information system (MrkIS) in the relationship between strategic orientation (MO and EO) and business performance.

1.5 Research Question

According to the preceding discussion in the problem statement about the importance of conducting this study, the critical questions of the present research focus on how

business performance is affected by those elements. The following are the questions that need to be answered in this study:

1. What is the nature of the relationship between entrepreneurial orientation (EO), its dimensions, namely innovativeness (INN), proactiveness (PR), and risk-taking (RT), and business performance among food and beverage SEs in Yemen?
2. What is the nature of the relationship between market orientation (MO) and its dimensions, namely customer orientation (CUO), competitor orientation (CO), Inter-functional coordination (IFC), and business performance among the food and beverage SEs in Yemen?
3. What is the nature of the relationship between the marketing information system (MrkIS) and business performance among food and beverage SEs in Yemen?
4. What is the nature of the relationship between entrepreneurial orientation (EO) and the marketing information systems (MrkIS) within the food and beverage SEs in Yemen?
5. What is the nature of the relationship between market orientation (MO) and the marketing information system (MrkIS) among food and beverage SEs in Yemen?
6. Does the marketing information system (MrkIS) mediate the relationships between business strategic orientation, namely, entrepreneurial orientation (EO), market orientation (MO), and business performance among food and beverage SEs in Yemen?
7. The answer to these questions will reveal the correlations between business strategic orientation (EO and MO), business performance (BP), and marketing information systems (MrkIS). In addition, it will reveal the mediating role of MrkIS in these relationships in the food and beverage SEs in Yemen.

1.6 Research Objectives

This research mainly aims to investigate the mediating effect of marketing information systems on business strategic orientation, namely, entrepreneurial orientation (EO), market orientation (MO), and business performance (BP) among small food and beverage enterprises in Yemen. The researcher further narrowed down the objectives as follows.

1. To investigate the nature of the relationship between entrepreneurial orientation (EO), its dimensions, namely innovativeness (INN), proactiveness (PR), and risk-taking (RT), and business performance among food and beverage SEs in Yemen.
2. To investigate the nature of the relationship between market orientation (MO) and its dimensions, namely customer orientation (CUO), competitor orientation (CO), and inter-functional coordination (IFC), and business performance among the food and beverage SEs in Yemen.
3. To determine the nature of the relationship between the marketing information system (MrkIS) and business performance among food and beverage SEs in Yemen.
4. To investigate the nature of the relationship between entrepreneurial orientation (EO) and marketing information system (MrkIS) among food and beverage SEs in Yemen.
5. To discover the nature of the relationship between market orientation (MO) and Marketing information Systems (MrkIS) among the food and beverage SEs in Yemen.
6. To examine the mediating effect of the marketing information system (MrkIS) on the relationship between business strategic orientation, namely entrepreneurial orientation (EO), market orientation (MO), and business performance among food and beverage SEs in Yemen.

1.7 Scope of Study

This research emphasizes on the influence of strategic orientation, which includes entrepreneurial orientation (EO) and market orientation (MO), and marketing information systems (MrkIS) on business performance (BP). Additionally, it investigates the mediating role of MrkIS between business strategic orientation and performance. The primary scope of this study encompasses small enterprises (SEs) within the food and beverage sector across the entire province of the Republic of Yemen. This is due to the food and beverage-based SEs' existing relevance and major contributions to Yemeni manufacturing. SEs also boost economic growth, poverty reduction, and job creation (Mamun et al., 2018; Yadav et al., 2021; Zacca & Alhoqail, 2021).

The statistics provided by the Ministry of Industry and Trade in Yemen (See Table 1.2 on page 13) paint a clear picture of the manufacturing sector in the country, revealing that it comprises approximately 7472 SEs. What is particularly noteworthy is that most of these entities, approximately 2667 SEs, are actively engaged in the food and beverage sector. This numerical dominance signifies the importance of food and beverage SEs in the Yemeni manufacturing sector, accounting for an impressive 35.70% of the entire manufacturing sector. These firms have also contributed immensely to job creation by employing 9391 individuals till 2022. Moreover, SEs operating in the food and beverage sector have generated an impressive added value of 17523.579 million YR compared to SEs running in other sectors (See Table 1.2 on page 13). This data underscores the food and beverage SEs' integral role in Yemen's economic landscape and its potential for further positive impact in the future.

This study focused on two types of strategic orientation, which are entrepreneurial orientation (EO) and market orientation (MO) because they are more comprehensive and stricter than other strategic orientations (Mu et al., 2017; Solano Acosta et al., 2018). This study depended on Covin and Slevin (2017a) perspective, which includes a three-dimensional model of “innovativeness (INN), proactiveness (PR), and risk-taking (RT)” because it possesses better validity (Kreiser et al., 2017). The study also focused on the cultural perspective of market orientation by Narver and Slater (2018), which involves three dimensions which are “customer orientation (CUO), competitor orientation (CO), and inter-functional coordination (IFC)”. Moreover, the perspectives of Kotler et al. (2020) on marketing information systems (MrkIS) and Suliyanto and Rahab (2011) on business performance (BP) were considered in this research.

The unit of analysis in the current research is the organization, while the respondents are SEs' managers/owners of food and beverage. Therefore, the results and conclusions obtained from this study represent SEs operating in Yemen's food and beverage industry. A quantitative approach was used to reach the present research objectives, and a questionnaire was used to collect data from the owners/managers. This research focused on food and beverage enterprises listed in the Ministry of Trade and Industry that have been operating for six years in the food and beverage sector; nevertheless, to ensure adherence to this criterion, the researcher also incorporated a filter for firm age within the questionnaire form. To avoid unreliable responses from managers or owners who have held their positions for less than six years, the respondents confirmed that they had comprehensive knowledge of the company's performance over the previous six years and had access to relevant performance data, including historical financial records and performance reports.

Lastly, according to Krejcie and Morgan (2016), the study sample size was 313, but in order to take care of the non-response rate and minimise error in sampling, as suggested by Hair et al. (2008), the sample size was doubled. Therefore, 626 questionnaires were distributed among the managers/owners of SEs in Yemen. To explore the study model and analyze the data, SPSS and smart LPS-SEM were used to obtain results.

1.8 Research Significance

The study results are expected to be useful for prospective entrepreneurs, current food and beverage small enterprise owners, academics, and researchers in several ways. The

study's importance, however, is based on its potential to provide greater insight into the linkages between entrepreneurial orientation (EO), market orientation (MO), marketing information system (MrkIS), and SEs' performance in Yemen's food and beverage sector. Furthermore, this research provides more insight into the MrkIS as a mediator variable to discover the interfering impact on relationships. This importance can be understood through its theoretical and practical significance.

1.8.1 Theoretical Significance

The present study is one of the few pioneering studies that examines the primary constructs of small enterprises (SEs) performance within the food and beverage sector. The combination of entrepreneurial orientation (EO) with market orientation (MO) and marketing information systems (MrkIS) from the SEs food and beverage managers' viewpoint is scarce (as far as the researcher knows), and the results contribute to the field of SEs and strategic orientation by extending the body of knowledge.

Specifically, this study contributes to the literature by empirically examining the direct impact of “entrepreneurial orientation (EO), market orientation (MO),” and its components, and marketing information system (MrkIS) on the business performance (BP) of SEs. Additionally, this research seeks to analyze the influence of EO and MO on marketing information systems. Although much research has examined EO and MO's influence on SEs' performance, their findings have been inconsistent. These mixed results call for additional investigation to solve this conflict. Thus, the role of the marketing information system as a mediator in this relationship will contribute to

a better comprehension of the mechanism of EO and MO to boost the performance of SEs.

Finally, due to the paucity of studies on the impact of business strategic orientation – “entrepreneurial orientation (EO) and market orientation (MO)” - on marketing information systems (MrkIS) in SEs, current research seeks to fill this gap via testing the effect of EO and MO on marketing information systems (MrkIS). Furthermore, this research contributes to increasing current literature relevant to resource-based view theory (RBV) and knowledge-based view (KBV) by investigating the relationship among MO, EO, and the SEs’ performance” in the presence of marketing information systems (MrkIS).

1.8.2 Practical Significance

The researcher expects the current study to contribute to several practical implications concerning business strategic orientation and marketing information systems (MrkIS) in Yemen. The research outcomes would be necessary to industrial banks, industrial and trade chambers, and the small and medium enterprise development agency of Yemen (SMPS) that provides small enterprises (SEs) organizational and financial services to assess SEs' ability to boost their performance in the market.

The findings of this study will be advantageous for government representatives at various levels. It will also facilitate the terms of policymaking and significant recommendations for small firms’ outgrowth and development in Yemen by decision-makers. Furthermore, it will help researchers and academia improve their knowledge and understanding of the variables studied within the context of SEs in Yemen.

Moreover, the results of this study will serve as a guide for owners and managers of SEs regarding the importance of adopting various strategic business orientations to achieve better performance and competitiveness.

1.9 Definition of Key Terms

This section provides a brief definition of the terminology used in this research.

Small Enterprises (SEs): Small firms are defined as those with an employee size of less than ten but more than three people (Ministry of industry and trade & organization, 2013).

Business Performance (BP): BP is a firm's desire to succeed in business (Suliyanto & Rahab, 2011).

Business Strategic Orientation (BSO): A company's strategic orientation is carried out to generate appropriate behaviours for the business's consistently superior performance (Gatignon & Xuereb, 2018).

Entrepreneurial Orientation (EO): The organisation's ability to become involved in product marketing innovation, undertake risk, and become the first to bring out proactive innovations (Covin & Slevin, 2017a).

Market Orientation (MO): The direction companies take towards their customers and competitors and the functional integration between their departments. It also represents the most influential corporate culture that produces the behaviours needed

to develop higher customer value and attain a high-performance level, including “competitor orientation,” “customer orientation,” and “Inter-function coordination” (Narver & Slater, 2018).

Marketing Information Systems (MrkIS): is defined as a “set of people and procedures dedicated to assessing information needs, developing the needed information, and helping decision-makers use the information to generate and validate actionable customer and market insights” (Kotler et al., 2020, pp. 119-120).

Internal Records (INR): refers to “collections of consumer and market information obtained from data sources within the company network, including websites and social media, records sales, costs, cash flows, and operational reports of production, shipments, and inventories” (Kotler et al., 2020, p. 121).

Marketing Intelligence (INTG): represents a “set of procedures and sources that managers use to obtain information about developments in the marketing environment, such as newspapers, trade publications, customers and suppliers, social media, email lists and blogs, and meetings with other company managers” (Kotler et al., 2019, p. 155).

Marketing Research (MR): is defined as “the systematic design, collection, analysis, and reporting of data relevant to a specific issue or situation facing an organisation” (Kotler et al., 2020, p. 123).

Marketing Decision Support System (DM): a coordinated collection of data, models, analytic tools, and computing power that enables firms to turn information into a basis for making decisions (M Alasiri & Salameh, 2020).

1.10 Thesis Organization

This thesis comprises five chapters, with Chapter One serving as the introduction. It begins with a research overview, followed by the research background, which includes sections on Yemen as the research context, covering its geography, demographics, and economic conditions. Additionally, an overview of the food and beverage sector is provided, along with a detailed discussion of small enterprises in Yemen. The chapter then presents the problem statement, followed by the research question and research objectives. The scope of the study is outlined, as well as the research significance, which is divided into theoretical and practical significance. Key terms used throughout the thesis are defined, and the chapter concludes with an overview of the thesis organization, providing a roadmap for the remaining chapters.

Chapter two provides a detailed literature review, divided into several key sections. It begins by exploring the performance of small enterprises (SEs), followed by definitions and concepts related to entrepreneurial orientation, market orientation, and the marketing information system (MrkIS). The chapter also examines how these concepts relate to business performance. To offer a deeper theoretical foundation, the chapter introduces the resource-based view (RBV) and knowledge-based view (KBV) theories, providing a comprehensive understanding of the study's model. These theoretical perspectives are used to analyze the relationships between the study

variables. The chapter concludes by presenting the study's conceptual framework and outlining the hypotheses that guide the research.

Chapter three outlines the research methodology used in the study. It begins with a discussion of the research philosophy guiding the study, followed by an explanation of the research design and the research method chosen for data collection and analysis. The sampling design is then detailed, and the data collection method is also described. The unit of analysis is identified, and the operationalization of the survey instrument and variables is discussed, with specific focus on the questionnaire design. Additionally, the questionnaire translation process is explained to ensure accuracy across different languages. The chapter also covers the pre-test study and a pilot study to refine the instrument. Finally, the methods of data analysis are outlined, detailing the statistical techniques and tools used to analyze the collected data.

Chapter four presents a comprehensive analysis of the collected data and discusses the results from various tests. It begins by addressing the response rate, followed by data screening and preliminary analyses. Additionally, this chapter offers a descriptive analysis of the demographic profiles of the firms and participants (managers/owners), including measures of central tendency and dispersion. The chapter proceeds with the evaluation of both the measurement and structural models. Mediation testing is also performed to determine whether any variables mediate the relationships between the independent and dependent variables. The chapter concludes with a summary of the research hypotheses, indicating which were supported or rejected based on the findings.

Chapter five provides a comprehensive discussion of the findings and their implications, culminating in the study's conclusion. It begins with a summary of the key findings, followed by a detailed discussion of each research objective (RO). The implications of the study are then considered, highlighting both theoretical contributions, which enhance the understanding of key constructs and relationships, and practical implications, which offer valuable insights for businesses and policymakers. The chapter also acknowledges the limitations of the research and provides suggestions for future research directions to build on these findings. Finally, the chapter concludes by summarizing the overall contributions and outcomes of the study.

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