

**ECO-INNOVATION AND SUSTAINABLE  
PERFORMANCE OF PAKISTANI SME HOTELS:  
THE ROLES OF GREEN ENTREPRENEURIAL  
ORIENTATION, ENVIRONMENTAL  
REGULATIONS, COMPETITIVE PRESSURES,  
AND INFORMATION TECHNOLOGY  
CAPABILITY**

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**UNIVERSITI SAINS MALAYSIA**

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by

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**Thesis submitted in fulfillment of the requirements  
for the degree of  
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## LIST OF ABBREVIATIONS

APEC	Asia Pacific Economic Cooperation
CEO	Chief Executive Officer
CFA	Confirmatory Factor Analysis
CP	Competitive Pressures
EcP	Economic Performance
EI	Eco-innovation
ER	Environmental Regulations
EcP	Environmental Performance
FP	Firm Performance
GDP	Gross Domestic Products
GEO	Green Entrepreneurial Orientation
ICT	Information Communication Technology
INNOV	Innovation
IS	Information System
ITC	Information Technology Capability
ITT	Institutional Theory
ITTS	Information Technology Technical Skills
LSM	Large Scale Manufacturing
MM	Measurement Model
PLS-SEM	Partial Least Square Structural Equations Model
PROA	Pro-activeness
R&D	Research and Development
RBV	Resource-Based View
ROA	Return on Assets
SEM	Structural Equation Modeling
SM	Structural Model
SMEDA	Small And Medium Enterprises Development Authority
SMEs	Small And Medium Enterprises
SoP	Social Performance
SP	Sustainable Performance
SPSS	Statistical Package for Social Sciences

## LIST OF APPENDICES

Appendix A	Correlation Outer Model
Appendix B	Pre-Test Forms
Appendix B	Questionnaire

**EKO-INOVASI DAN PRESTASI BERKELANJUTAN HOTEL-HOTEL  
KECIL PAKISTAN: PERANAN ORIENTASI KEUSAHAWANAN HIJAU,  
PERATURAN ALAM SEKITAR, TEKANAN KOMPETITIF, DAN  
KEUPAYAAN TEKNOLOGI MAKLUMAT**

**ABSTRAK**

Pks hotel's memainkan peranan penting dalam industri hospitaliti Pakistan, tetapi prestasi mereka terjejas disebabkan tahap inovasi yang rendah dan peningkatan isu alam sekitar dan sosial. Malangnya, mereka membayar lebih untuk terus hidup dan menjejaskan aspek persekitaran dan sosial prestasi mereka. Pakar industri menyokong prestasi mampan, yang merupakan topik yang agak baharu dalam bidang perniagaan; namun, kesedarannya semakin meningkat setiap hari. Perhatian yang semakin meningkat terhadap kemampanan ini telah memberi tekanan kepada perusahaan untuk berusaha untuk mematuhi norma mereka. Amalan eko-inovasi dipercayai menjadi sebab untuk prestasi mampan kerana kesannya yang ketara terhadap alam sekitar semula jadi dan komuniti tempatan dengan menjimatkan kos. Oleh itu, objektifnya adalah untuk menyiasat faktor yang menyumbang secara positif kepada prestasi ekonomi, sosial dan alam sekitar yang mampan hotel PKS di Pakistan. Dalam konteks ini, ia telah mencadangkan beberapa pembolehubah untuk bertindak balas kepada masalah kajian dan mengatasi jurang literatur. Kajian itu telah mencadangkan bahawa orientasi keusahawanan hijau, peraturan alam sekitar dan tekanan persaingan membawa kepada amalan eko-inovasi dan menghasilkan prestasi yang mampan. Untuk memperdalam pemahaman kami, kami juga membuat hipotesis bahawa orientasi keusahawanan hijau, peraturan alam sekitar dan tekanan persaingan memberi kesan positif kepada prestasi ekonomi, sosial dan alam sekitar. Keupayaan teknologi

maklumat menyederhanakan hubungan antara eko-inovasi dan prestasi ekonomi, sosial dan alam sekitar. Pandangan berasaskan sumber, keupayaan dinamik dan teori institusi mempengaruhi pembolehubah ini. Hotel PKS dipilih sebagai populasi kajian. G\*Power digunakan untuk menentukan saiz sampel. Sebanyak 450 jawapan soal selidik yang telah disahkan telah digunakan dalam kajian ini, yang dikumpul menggunakan persampelan bertujuan dan dianalisis melalui PLS-SEM. Keputusan menunjukkan bahawa orientasi keusahawanan hijau, peraturan alam sekitar dan tekanan persaingan memberi impak positif kepada eko-inovasi dan prestasi mampan (ekonomi, sosial dan alam sekitar). Eko-inovasi secara positif menjadi pengantara perhubungan, manakala peranan penyederhanaan keupayaan teknologi maklumat adalah khusus antara eko-inovasi, alam sekitar dan prestasi ekonomi, ia tidak signifikan dengan prestasi sosial. Oleh itu, hotel PKS Pakistan telah disyorkan untuk menyepadukan amalan EI ke dalam operasi harian mereka. Kedua, keupayaan IT yang kukuh meningkatkan prestasi ekonomi dan alam sekitar mereka. Oleh itu, penyelidikan telah menyerlahkan keputusan ini dan cuba mewajarkannya secara logik. Tambahan pula, ia menawarkan beberapa implikasi teori dan praktikal, mencadangkan arah yang berpotensi untuk penyelidikan masa depan. Kajian ini mempunyai implikasi penting untuk industri hotel dan perkhidmatan kerana ia menunjukkan peranan penting faktor yang membantu PKS hotel dalam meningkatkan prestasi mampan mereka.

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TECHNOLOGY CAPABILITY**

**ABSTRACT**

SME Hotels play a significant role in Pakistan's hospitality industry, but their performance is suffering due to low levels of innovation and rising environmental and social issues. Unfortunately, they pay more to survive and compromise the environmental and social aspects of their performance. Industry experts advocate sustainable performance, which is a relatively new topic in the business field; however, its awareness is growing with each passing day. This growing attention to sustainability has put pressure on enterprises to strive to comply with their norms. Eco-innovation practices are believed to be the reason for sustainable performance due to their significant impact on the natural environment and local communities with saving costs. Therefore, the objectives were to investigate factors that positively contribute to the sustainable economic, social, and environmental performance of SME hotels in Pakistan. Within this context, it has suggested some variables to respond to the research problem and overcome literature gaps. The study has proposed that green entrepreneurial orientation, environmental regulations, and competitive pressures lead to eco-innovation practices and result in sustainable performance. To deepen our understanding, we also hypothesized that green entrepreneurial orientation, environmental regulations, and competitive pressures positively impact economic,

social, and environmental performance. Information technology capability moderates the relationship between eco-innovation and economic, social, and environmental performance. Resource-based view, dynamic capability, and institutional theory influence these variables. SME hotels were chosen as the population of the study. G\*Power was used to determine the sample size. A total of 450 responses validated questionnaires were used in this study, which were collected using purposive sampling and analyzed through the PLS-SEM. Results show that green entrepreneurial orientation, environmental regulations, and competitive pressure positively impact eco-innovation and sustainable performance (economic, social, and environmental). Eco-innovation positively mediated the relationship, whereas the information technology capability moderation role was specific between eco-innovation, environmental, and economic performance, it was not significant with social performance. Hence, it has been recommended that Pakistani SME hotels integrate EI practices into their daily operations. Secondly, strong IT capability enhances their economic and environmental performance. Thus, the research has highlighted these results and tried to justify them logically. Furthermore, it offers some theoretical and practical implications, suggesting potential directions for future research. The present study has important implications for the hotel and service industries because it demonstrates the significant role of factors that help hotel SMEs in improving their sustainable performance.

# CHAPTER 1

## INTRODUCTION

### 1.1 Introduction

Today's environmental issues and fast-paced technological advancements in business have raised serious concerns about business survival (Economics, 2023; OECD, 2020b; World Bank, 2019). In such a situation, firms need to focus on long-term performance instead of short-term financial gains to survive. So far, sustainability has gained popularity in scientific literature and has become a crucial strategic directive (Al-Abbadi & Abu Rumman, 2023). Multiple convincing justifications emphasize the need for sustainability across various sectors. It is a top priority of business to prioritize environmental preservation by implementing sustainable practices (S. Yang et al., 2020), effectively contributing to the mitigation of resource depletion and waste generation (Khatter et al., 2021) by ensuring financial as well as social and environmental advantages. Incorporating sustainability in the services sector, especially in hotels, is of utmost importance in mitigating climate change, as all industries have been identified as substantial sources of greenhouse gas emissions (Ben Youssef & Zeqiri, 2022). There is a growing trend of violating environmental regulations and avoiding eco-friendly practices in the hospitality sector. However, they face several challenges, such as financial constraints, lack of technological advancements, and regulatory issues (Kumar et al., 2024) to act on environmental protection. If these challenges are settled, the hospitality sector could play its full part in the economy. Firms mainly focus on economic performance for their survival rather than on social and environmental aspects. To survive in the current era, focusing only on one parameter is not enough; experts believe in social and environmental performance along with economic benefits (Vávrová et al., 2024). To sustainably

perform in the business arena and maintain their competitive position in the current dynamic environment, hotels need to navigate intricate and demanding circumstances. Although numerous managers regard it as an important factor in the survival and expansion of their firms, maintaining sustainability is one of the many obstacles that organizations face. Nevertheless, the genuine issue is the absence of sustainable performance drivers, as well as the dedication of the organization to contribute to sustainability outcomes. Therefore, incorporating those internal and external factors into companies' strategies is a novel approach to achieving sustainable economic, social, and environmental performance.

Innovation plays an important role in growth and for a competitive advantage in the industry. Unfortunately, the current business conditions in countries like Pakistan are horrible in all sectors, especially when we talk about the hospitality industry of Pakistan and Hotels, which are the backbone of this sector, lack innovation and environmental commitment (Afzal et al., 2022; Threats et al., 2014). Understanding which mechanisms hotels use to achieve better levels of sustainable performance is relevant (J. W. Huang & Li, 2017; W. Jiang et al., 2018a). Secondly, environmental challenges threaten economic growth; corporations consider human health and living circumstances key business activities (Acheampong & Opoku, 2023). Governments and scholars are also focusing more on innovative solutions that result in the betterment of the environment, society and firms (Agrawal et al., 2022). Secondly, growing environmental concerns, healthy competition, and a growing eco-friendly consumer base are also driving this change. Firms with green orientation, proper implementation of environmental regulations, and environmentally friendly innovation can bring change and become the reason for sustainable performance. The significance of eco-innovation in addressing environmental concerns by introducing

new processes and practices has been emphasized in previous research (Aboelmaged, 2018). Businesses use eco-innovation as a source of competitive advantages (W. Chen, 2023; Kasztelan et al., 2020) and as a source of sustainable performance. Profits are increased, and environmental damage is mitigated through eco-innovation (Yurdakul & Kazan, 2020a). Hotels seek eco-innovation to improve environmental performance, boost profits, and follow environmental trends. What factors contribute to eco-innovation as a practice in hotels and lead it to sustainable performance is the major question. Literature suggests green entrepreneurship promotes eco-innovation and reduces environmental damage (Makhloufi et al., 2022; Shafique, 2021). Based on earlier studies, Kohan, 2019 indicates that a GEO firm can compete well and sustainably with eco-innovation techniques. Thus, hospitality is becoming more environmentally sensitive and green. A willingness to participate in green initiatives that will benefit the environment, and the economy is referred to as green entrepreneurial orientation (Jiang et al., 2018; Makhloufi et al., 2022). Profit maximization is not the sole goal of ecological entrepreneurship. Green entrepreneurship also prioritizes non-economic indicators, including the environment and animal health (Bachinger & Rau, 2016). In general, it can be concluded that both factors can be instrumental in the attainment of sustainable performance in small and medium-sized enterprises (SMEs). In recent years, it has been demonstrated that green entrepreneurial orientation (GEO) can enhance financial performance and mitigate environmental impact (Alshebami, 2023a; X. Zhang et al., 2023). GEO is a tendency to see eco-friendly products and services as a means of economic and environmental gain (Dean McMullen, 2007; Gibbs & O'Neill, 2014). The motivation for GEO is explained in prior literature (Walton, 2014), but how to impact sustainable performance at the same time is not known (X. Zhang et al., 2023). According to

some studies, offering green products and services hurts firm performance (Ermawati et al., 2024). GEO has a positive impact on firm performance (Tze San et al., 2022). Due to GEO's varied results regarding the performance of the firms, we focus on how GEO helps to attain social, environmental, and economic performance. Some argue that entrepreneurship should not be encouraged for financial gain or firm expansion (Leoncini et al., 2019a). Due to GEO's variable performance results, we focus on a key external environment element that is rarely considered. The dynamic capability perspective of this study elucidates the relationships between GEO and SME hotels' sustainable performance. Dynamic capability is among the firm-level capabilities (Teece, 2014b). The dynamic capability perspective of this study explains the relationships between GEO and SME hotel's sustainable performance. It is a dynamic capability that is concerned with perceiving, seizing, and transforming. GEO appears to be associated with the notion of dynamic capabilities (York & Venkataraman, 2013).

Prior literature suggests that other variables, such as environmental regulations, promote eco-innovation and support the economic, social, and environmental performance of firms. Governments mandate sustainable practices to enhance public benefits (e.g., reduced pollution), whereas firms try to maximize private profits. Reduced energy and raw material usage boosts profits. Governance often involves regulations (Williamson, 1999), but firms believe those regulations hinder their performance. Environmental regulations' impact on corporate financial performance is a sensitive issue in policymaker-firm relations. Traditional neoclassical economics views regulations as harmful, but modern perspectives suggest that well-designed regulations can improve business performance by encouraging innovation (Porter and van der Linde, 1995b; X. Li et al., 2024). A 'win-win' situation, or Porter's

hypothesis, refers to a corporation meeting regulatory requirements while improving overall performance (Porter, 1991), which shows that government and business initiatives might enhance public and private sustainability benefits. Environmental regulations are an external factor that affects the productivity, competitiveness, and profitability of government-regulated businesses (Shao et al., 2022; P. Tang et al., 2024). These regulations seek to confine the business to following the rules, such as stopping cutting trees, reducing waste, reducing water waste, and reducing noise with measures such as tax and output restrictions. Regulations are believed to increase the process costs in hotels and production costs and damage the firm's performance at one end. But studies also show the positive impact of these rules on the growth and survival of the firms (Z. Cheng et al., 2017; C. Wang et al., 2023a). Regulations are also believed to encourage the adoption of eco-innovation in firms as well (Ben Amara & Chen, 2020; Triguero et al., 2013). So, based on this argument, more research needs to be undertaken.

Environmental regulations, along with pressures from their competitors, create a cohesive impact on the performance of the firm (X. Li et al., 2024; X. Xu et al., 2024). Competitive pressures contribute to the development of any firm, which are the competitive forces surrounding the firm. It gave them a tough time performing as per the expectations of their customers and, at the same time, gave them the chance to perform well (Su et al., 2024). Competitive pressure is perceived as an important element in the attainment of businesses' social agenda in firms and has a positive impact on SME performance (Soewarno et al., 2020). An argument made by Purnama and Subroto (2016) said that the level of competition had a positive effect on innovation. Still, it has a negative effect on how well businesses do. Other studies have shown that competition related to acquiring technology and social and environmental

agenda helps firms to increase their performance (Mady, Abdul Halim, Omar, et al., 2022; Spulber, 2013).

Hotels need to see their overall procedure and use of innovative practices and create information technology base setups. Prior research indicates the effectiveness of IT capabilities in sustainable performance. Firms with strong ITC believe in performing more environmentally friendly and reason of saving their cost in the long run (Chae et al., 2018a). The dynamic capability perspective, which emerged from the RBV, emphasizes resource and competency configuration, coordination, integration, and transformation of resources and capabilities into sustainable economic, social, and environmental performance, especially when success is uncertain. IT capability acts as an important source of performance in the firm (Memon et al., 2019); it constructs, integrates, and deploys IT-based resources. Prior research did not identify the moderating role of IT capability between eco-innovation and sustainable performance. IT capability was utilized as an intermediary variable without assessing its moderator or mediator effects (Wunnava & Ellis, 2009). Here, RBV provides a theoretical reason for examining the relationship between eco-innovation and the economic, social, and environmental performance of SME hotels. IT capabilities appear to moderate the relationship between eco-innovation and the economic, social, and environmental performance of SME hotels in Pakistan. Therefore, this study proposed an interface between green entrepreneurial orientation, environmental regulation, competitive pressures, eco-innovation, and IT capability to understand better how small and medium-sized hotels can foster sustainable environmental, social, and economic performance.

The thesis sampled SME hotels in Pakistan's hospitality sector. The data was collected through a self-administered questionnaire that was distributed to the CEOs, managers, and executives. The rest of this chapter is in the following manner: an overview of the study's background, a statement of the problem, research questions and objectives, the significance of the study, definitions of the key terms, and the thesis's organization.

## **1.2 Research Background**

To make this world safe, the United Nations has emphasized the universality of sustainability with 17 Sustainable Development Goals (SDGs) in 2015 (UN SDG, 1950). These SDGs embrace various dimensions of sustainability, including economic, social, and environmental. They provide a comprehensive framework to harmonize industrial practices with worldwide sustainability objectives (SDG Knowledge Hub, 2023; Trane et al., 2023). Dubai hosted COP28 to assure member nations' commitment to global transformation toward a low-emission and climate-resilient society, stimulate ambitious climate action, and facilitate implementation, including support (SDG Knowledge Hub, 2023). The Paris Climate Accord is progressively altering our production and consumption patterns to contribute to the overarching attempt to establish a sustainable equilibrium among the environment, humanity, and prosperity, as outlined in the 2030 Plan for Sustainable Development of the United Nations. Industries include these SDGs as part of their company vision. Like any other sector, the hospitality sector plays a commendable role in policy design, even in SMEs.

The SME sector holds the dominant share of the private sector by a significant margin on a global scale. According to precise estimates, it comprises 90% of all

businesses and generates 50% of employment (World Bank, 2019b). In the European Union (EU), for example, 99.8 % of all SMEs account for approximately 67% of employment and over 57% of value added (Brodny & Tutak, 2022). Similarly, the Organization for Economic Co-operation and Development (OECD) holds a 99 % share of SMEs among all enterprises, employ approximately 60 %, and generate between 50 and 60 % of value added on average (Hörisch et al., 2017; OECD, 2020a; Solomon, 2023) (OECD, 2020a; Solomon, 2023). Emerging economies witness their contributions reaching as high as 33% of gross domestic product (GDP) and 45% of employment. Similarly, within the United States of America, 99.9% of businesses are classified as SMEs (Dwi Hernanik et al., 2023). These enterprises contribute 33% in exports, 63% in aggregate employment, and 47.5% in new private sector job creation (Summers, 2015; Small Business Administration, 2014). In contrast, small and medium-sized enterprises (SMEs) constitute approximately 99% of the overall business sector in Pakistan (Z. Hussain, 2023). Among private enterprises, over 90% contribute to the nation's GDP, 78% of non-agricultural employment (Xin et al., 2023), 30% of exports, and 35% of value-added SME hotels (Farid, 2017; Pakistan SME Forum, 2014).

The term 'SME' is commonly understood to have a universal definition; nevertheless, its precise meaning varies from country to country and is contingent upon various circumstances. It is, therefore, essential to define it in the context of Pakistan. "A company is deemed an SME if (a) it has a workforce of less than 250 individuals; (b) its yearly revenue does not surpass 250 million rupees; and (c) its paid-up capital does not exceed 25 million rupees." Small SME hotel enterprises have a workforce of no more than 50 individuals, whereas medium-sized SME hotel firms encompass an

additional 50 but no more than 250 workers. The definition of SME as employed by various institutions in Pakistan is presented in Table 1.1

Table 1.1 SME Definition in Pakistan

<b>Enterprise Category</b>	<b>Work Force</b>	<b>Annual Sales</b>	<b>Capital</b>
Small & Medium Enterprise	Less than 250 employees	Up to Rs 250 million	Up to RS 25 million

Source: (SMEDA, 2019)

Aside from SMEDA, other entities in Pakistan have provided various definitions, including SME banks, the State Bank of Pakistan (SBP), the Federal Bureau of Statistics, and provincial industrial development ministries. As a result, there is no single definition for all SMEs throughout Asia (M. W. J. Khan & Khalique, 2014) and for SME hotels as well (Fiorentino, 1995). As a result, the number of employees and total income are used to classify SMEs. SME hotels are those that have employees of less than 250; 50 to 100 employees for small hotels and less than 250 are considered medium-sized hotels (Tunio et al., 2021).

Table 1.2 Firms in Pakistan

<b>Country</b>	<b>No. of SMEs</b>	<b>Large Firms</b>	<b>Total No. of Firms</b>
Pakistan	3.02 m	0.2 m	3.04 m

Source: SMEDA, (2020)

The number of enterprises in Pakistan is around 3.02 million. A total of 3.136 million businesses in Pakistan are classified as SMEs, 2.94 million as establishments, and 0.19 million as household-based enterprises (I. Ullah et al., 2023).

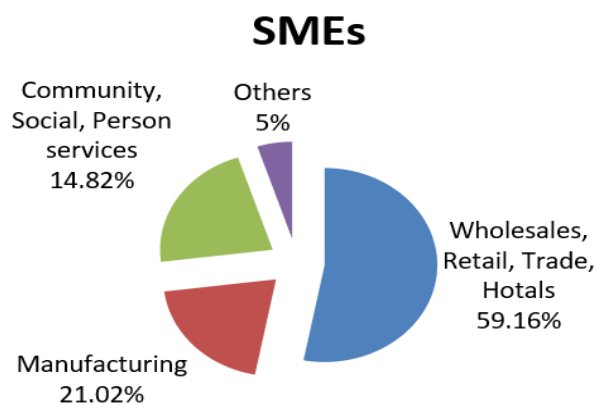


Figure 1.1 SMEs In Pakistan

Around 59.16 % of Pakistan's SMEs are engaged in wholesale, hospitality, retail, and trade, collectively making a significant economic contribution. In contrast, 14.82 % of SMEs engage in personal, social, and community services. The hospitality and tourism sector SMEs contribute to GDP by around 10.6% overall, and the hospitality sector notably around 5.6 % in 2022 (Meo et al., 2023a). Table 1.2 shows the contribution of explaining GDP statistics along with value addition and export earnings.

Table 1.3 Economic Importance of SMEs in Pakistan

Employment	GDP	Value Added
78% (6.8 million)	30%	35%

Source: SMEDA

Pakistan is the world's 6th most populated and 34th largest economy in purchasing power parity (Aqeeq et al., 2023). The country is characterized by an agro-based and semi-industrialized economy, majorly structured in three broad sectors, i.e., agriculture, industrial, and services, with further classifications in subsectors as exhibited in Table 1.6 below:

Table 1.4 Structure of Pakistan's Economy

No.	Main Sector	Categorization	GDP Contribution
1	Services	Reseller, logistics, ownership and dwelling, public Administration and defence, hotels & resorts, community, and social professional services	59.16%
2	Industry/Manufacturing	Manufacturing, mining, construction, electricity, and gas	21.02%
3	Agriculture	Crops, livestock, fishing, forestry	19.82%
		Total	100%

Source (Aqeeq et al., 2023; mordorintelligence, 2023; Pakistan Institute of Development Economics, 2022; Statista, 2023)

Drawing from the sectoral contributions to GDP, as illustrated in Table 1.1 above, one can deduce that Pakistan was formerly heavily reliant on the agricultural sector (Ministry of Finance, 2017; Pakistan Bureau of Statistics, 2016). However, the country has since transitioned towards an economy centered around services and industrial/manufacturing, with both sectors now contributing more than 80% to the GDP. Henceforth, this study will maintain its emphasis on the service and hospitality sectors.

### 1.2.1 Role of Pakistani SME Hotels in the Hospitality Industry and their Challenges

Despite such significant contributions to SMEs in developing economies, Pakistani SMEs face survival issues (Ndiaye et al., 2018). SME hotels are an important part of Pakistan's hospitality industry. The hospitality industry is comprised of the lodging and food and beverage sectors (United Nations World Tourism Organization, 2008a). Hemmington (2007) posits that the concept of hospitality can be delineated in terms of both conduct and encounter. The hospitality sector is defined by the Department of Labor of South Africa (2016) as a profitable enterprise engaged in the

establishment of lodging. The hospitality sector comprises hotels, motels, lodges, guest houses, restaurants, breweries, taverns, and cafés.

Pakistan's economy has encountered intermittent instabilities since its establishment in 1947 to 2024, hindering the nation's sustainable economic development and growth. In recent years, Pakistan's economy has seen a notable expansion in the service sector (Kamal et al., 2023; Manzoor et al., 2019). Over the previous five years, revenue is predicted to expand at a compound annual growth rate (CAGR 2023–2027) of 6.56%, with a projected market volume of US\$1.56 billion by 2027. Additionally, 15.35 million users are anticipated by 2027 (Statista, 2023). In Pakistan, the service sector has contributed 60.2% of the country's GDP. The analysis of the hospitality sector's performance in Pakistan reveals a recurring pattern of rapid growth and fall, commonly referred to as a boom-bust cycle (Rahman et al., 2019).

Conversely, China, India, UAE, and Malaysia have effectively achieved a greater degree of diversification in their hoteling sector through innovation and environmentally friendly practices. This industry is striving to achieve sustainable domestic growth since it has faced numerous obstacles. Arshad (2020) states that Pakistan's hotels are considered the backbone of the hospitality sector (SMEs), encounter obsolete processing and production technologies, as well as a deficiency in the application of environmental regulations and countering the competitive pressures they face in a highly competitive market. To modernize the hospitality sector processes and procedures, adopt novel technologies, enhance efficiency, and provide training, management, and international business practices, facilitation and incentives are necessary.

Where performance is a today concern for the hospitality industry, sustainable performance is beyond needed for their survival, shaping its future trends (Molina-Collado et al., 2022; Piramanayagam et al., 2023). The convergence of expanding populations and depleting resources will give rise to a complicated business environment in which sustainability must be incorporated into every facet of the organization rather than being seen as an independent matter. The authors Sloan et al. (2013) and Hespenheide et al. (2014) contend that a thorough understanding of climate change, global warming, air and water pollution, ozone depletion, deforestation, the loss of biodiversity, and global poverty is essential for all aspiring managers in the hotel industry. Nevertheless, sustainability poses a paradoxical challenge in several aspects of the hotel industry. At the operational level, the sector is making growing efforts to include sustainability in its marketing communications and customer-oriented experiences (Madera et al., 2023). A study by the International Labor Organization revealed that in 2019, 334 million jobs were generated, accounting for 1/10 of the worldwide workforce and 10.4% of the global GDP (Geneva, 2022). This industry accounted for 75% of all new employment in 2018, indicating a strong worldwide demand for the service (Alananzeh et al., 2018). Following the COVID-19 pandemic, the performance of this industry decelerated.

However, due to its poor commercial performance, the hotels in Pakistan are among the service sectors with the lowest economic contributions among all service sectors. Although there are many opportunities for the hotel industry to create jobs and earn income (Al Fardan and Morris, 2019; Chen et al., 2019), the sector only makes up 3% of Pakistan's GDP despite the industry's great potential and abundance of infrastructure. Pakistan has a vast number of small and medium-sized hotels in almost all parts of the country to support the hospitality and tourism sector. Yet, their GDP

contribution is minimal (Nadeem et al., 2019). These hotels have grown rapidly, driving Pakistan's GDP and employment. They provide a variety of services, including lodgings for domestic and international tourists, and they have succeeded in adapting to market changes. However, they are still struggling to adapt according to changing consumer expectations by delivering new amenities, using digital technologies, or personalizing experiences. The COVID-19 epidemic tested these companies, but they recovered and became industry leaders. SME hotels have many challenges. The Small and Medium Enterprise Development Authority (SMEDA) was created to help SMEs grow, but hospitality SMEs still face challenges (Haq & Huo, 2023; Khan & Khalique, 2014). These include financial, infrastructure, regulation, innovation, IT adoption, and resource depletion, which is the biggest. However, this sector has huge growth potential. These businesses may capitalize on Pakistan's growing tourism industry and boost the economy with the correct legislation and support (Khan & Khalique, 2014). Innovation and digital transformation are needed to improve environmental performance and competitiveness (Haq & Huo, 2023).

Similar to emerging nations, these hotels remain highly appealing lodging choices for both local and international tourists due to the excessive costs associated with high-end hotels, particularly when traveling with a family. Conversely, smaller, local, individual hotels that may run lower in price have quality issues. Primarily, the hotels that are deemed suitable for habitation are prohibitively costly, and the more affordable alternatives occasionally exhibit such substandard quality that it causes skin irritation. Given that the average size of a Pakistani household is approximately 6 or 7 individuals, as reported in the 2017 census, it is unlikely that anyone would be inclined to reserve many rooms in a major chain hotel or take the chance of jeopardizing the safety and overall experience of their entire family in a smaller one. However, unlike

major hotel chains with significant financial resources, small and medium-sized hotels cannot uphold cleanliness and appropriate organization of room space while adhering to the regulations established by the ministry and international standards. Ultimately, this damaging situation undermines their reputation and is the cause of the decrease in market share. However, it might be argued that the lifespan of smaller installations is comparatively shorter than that of bigger ones. The sector's resilience and adaptability, despite challenges, indicate a promising future given adequate support and investment.

Travelers enjoy various experiences in Pakistan, from the captivating northern valleys to the historical riches in the south. It is a perfect time to reiterate our commitment to eco-friendly and sustainable tourism. This field has enormous promise for our nation and the rest of the globe as we commemorate World Tourism Day 2023 under the subject “Tourism and Green Investment.” Efficient resource management is more important than ever, as the prosperity of the Pakistani hospitality sector (economic, societal, and environmental) is contingent upon the SME's ability to optimize its resources and sustain its present level of development over the long term. Prioritizing resource efficiency through the promotion of waste reduction and efficient resource usage facilitates sustainable development, economic progress, and environmental protection (Srouji et al., 2023). SME policy (2019) has also emphasized that they need to shift towards higher customer/market value creation and to be responsive to the uncertainties to which they are exposed through best business practices (U. Khan & Afraz, 2019). Most of the hotels in the majority of the tourist places are wrongly built by violating environmental regulations. Recent incidents in SWAT, Murree, KLAM, and Neelum Valley roadside-built SME hotels were badly damaged due to floods and were not built according to the building plan set by the

government. Such kind of actions done by the hotel owners are damaging the local SME.

This transformation necessitates SMEs to develop organizational capabilities that foster competitiveness, innovativeness, and market responsiveness to gain a competitive edge and attain sustainable performance (Ministry of Planning and Development, 2020; SMEDA, 2019). Unfortunately, the effort in this context is least encouraging as the empirical studies have been less frequently conducted to provide a validated, comprehensive framework that addresses internal organizational capabilities for determining the sustainability performance of SMEs. As a result, empirical research is required to close the gap between theoretical and practical knowledge. The impact of internal organizational capabilities and factors on sustainability performance is significantly more significant than that of external factors (S. U. Rehman et al., 2022); therefore, further study is needed.

The loss resulted from travel restrictions prompting hotels to terminate the employment of numerous workers. The Bureau of Labor Statistics (BLS, 2020a) reported that the industry's unemployment rate increased from 5.7% in February 2020 to 39.3% in April 2020. These workers secured employment in the technology industry, which required personnel to address the abrupt demand resulting from lifestyle changes caused by the epidemic. (Riaz, 2023). They struggled to provide the same service and amenities before the pandemic and are on their way to gaining the same momentum, improper infrastructure, and lack of information technology in hotels damaging them to attract foreign tourists and even the local ones.

Stats indicate a consistent decline in growth, suggesting that SMEs are struggling to achieve sustainable performance. Most economic sectors are performing

below the target annual growth rate of 7-8% (S. Khan & Majeed, 2023), and some are even experiencing negative growth trends (Ministry of Finance, 2018). On the other hand, the services sector has experienced an average growth rate of approximately 4% from 2018 to 2022, which falls far below the established aim of 7-8%. The hospitality sector growth rate, calculated as an average of 4.7% throughout the same time, follows a similar pattern (Statista, 2023). A substantial portion of the hospitality industry is responsible for creating jobs; only 200,000 jobs in the hotel sector were held by the top traders in the industry. The percentage of own-account employees and contributing family workers in total employment in hotels and restaurants in only Sindh province alone has climbed from 37.7% in 2014–2015 to 40.9% in 2017–2018, indicating a rise in the rate of vulnerable employment (SBC, 2023). Still, after COVID-19, this figure went down, and soon after that, the political crisis hit the country's overall economy (Meo et al., 2023b), and the strengths and weaknesses of this sector became apparent to the world, especially their impact on climate and increasing opportunities.

Secondly, geographically, South Asia is a unique area with a large, connected landmass and a wide range of landscapes, from grasslands to woods and swamplands to deserts (Camilleri, 2020). This place is even more appealing because it has many natural resources, including beaches, mountains, rivers, scenic views, and different climates (Rao & Holt, 2005). There are eight South Asian countries, including India, Bhutan, Pakistan, Bangladesh, Sri Lanka, Nepal, and the Maldives. Even though these countries have a lot of travel potential, their economies are still not very strong (H. Li et al., 2023). According to Statista (2023), Between 2023 and 2027, the number of users in the 'Hotels' segment of the travel & tourism market in Asia is projected to grow by 110.8 million, representing a 22.56 % rise. Following seven consecutive years

of growth, the indicator is projected to reach 602.06 million users, marking a new peak in 2027 (Statista, 2023).

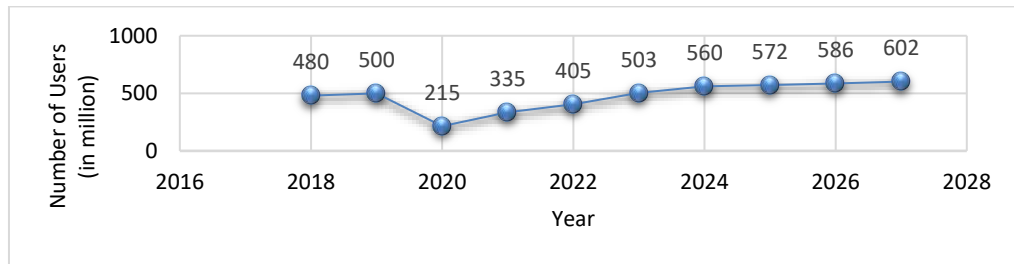


Figure 1.2 Number of Users of Hotels in Asia 2018-2027 (Statista, 2023)

Given the expanding prospects for development, the adverse consequences on the environment pose a significant risk to their future. In parallel with the growth of industrial activity and the observed processes of global warming, environmental degradation, and climate change, the importance of environmental performance is growing. In recent years, hospitality businesses have seen significant efforts to mitigate the ecological impact of their activities on the surrounding environment (Khatter, 2023).

In Pakistan, the most prominent issues are water wastage, soil degradation, and noise, as well as the poor quality of air in most parts of the country, especially Lahore and Peshawar (Umair Riaz, 2023); these cities have a unique position in the country due to tourism, and the famous chains of hotels (Y. K. Kuo et al., 2022). The global hospitality business has experienced notable changes, influenced mainly by technological developments, growing customer demands, and dynamic market circumstances (Meo et al., 2022). In a dynamic and changing environment, Small and Medium-Sized hotels (SMEs) have evolved as dynamic and adaptable entities that significantly shape the global hospitality industry (Momayez et al., 2023). Pakistan

strives to attain parity with the global tempo of digital technology and innovation adoption.

The Pakistani government is working to make the tourist and hospitality sectors competitive, innovative, and value-creating for economic growth. Over several years, these efforts have increased the country's ranking on key worldwide indices (ease of doing business, innovation, and competitiveness)(Mordor intelligence, 2023). It will be good for Pakistan's hospitality and tourism sector in the upcoming years. The growth in this sector is exceptional, with many issues like growing concerns regarding the environment and the impact on the economic well-being of the hotel.

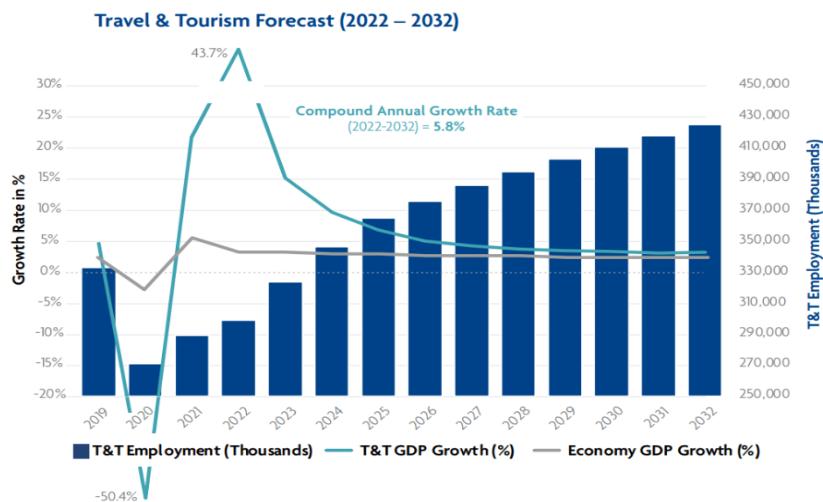


Figure 1.3 Travel and Tourism Forecast

The hotel business plays a pivotal role in the tourist sector. It holds a critical position in safeguarding and conserving the environment, given the substantial consumption of energy, water, and other resources by hotels(Pereira et al., 2021). However, sustainable practices contribute to environmental preservation and lead to cost reduction, such as the temporary closure of hotel floors during periods of low demand and crises like COVID-19 (Langgat et al., 2023). Furthermore, sustainability encompasses not just the natural environment but also society and the economy.

SME hotels are important to Pakistan as a tourism hub, but they require a lot of natural resources and produce a lot of waste and pollution. Hotels have a major role in promoting green consumerism. Most of the studies have proved that hotels' high water, energy, and garbage consumption harms the environment (Yousaf et al., 2021). This service sector harms the environment by using 70% too much soft consumables, energy, and water, but it also contributes to climate change. Hotels use the most energy in tourism. Pakistani hotels are aware of environmental challenges, yet few implement green efforts (Yousaf et al., 2021).

Consequently, it can be asserted that sustainability is critical for a hotel to maintain its competitive edge and, on the one hand, to enhance the natural environment. Green initiatives are gaining traction in the hotel industry, according to Martínez-Pérez et al. (2015), because they are implemented as a novel business model that addresses the growing demand for sustainable products and services of superior quality, incorporates innovative practices into hotel operations, and prioritizes environmental protection. However, the existing body of research on this topic is limited despite the considerable attention given to it in SME hotels and other sectors (Alonso-Almeida et al., 2016; García-Pozo et al., 2015). According to da Cunha and de Oliveira Menezes (2016), although there have been numerous studies conducted on sustainability in the hotel industry (Jones et al., 2014; Jones et al., 2016; Legrand et al., 2005; Sloan et al., 2013), there is a scarcity of research that specifically examines factors impacting eco-friendly innovations.

Another big challenge the Pakistan hotel industry is facing is the wastage of food. “Pakistan wastes an estimated 36 million tons of food annually, which is the same as every resident of Hyderabad, Lahore, and Karachi throwing away their entire

daily lunch and dinner” and its impact on the environment, this sector is the major player in food consumption and production, food wastage is becoming a challenge for Pakistan SMEs due to poor manage it is creating big environment issues (F.H. Mughal, 2018). It is projected that by 2025, around 28 million metric tons (Perkumienė et al., 2023) will contribute to land exploitation and water use, generate greenhouse gas emissions, distract wildlife and limit biodiversity. Figure 1.5 shows a trend in SME hotels in Punjab.

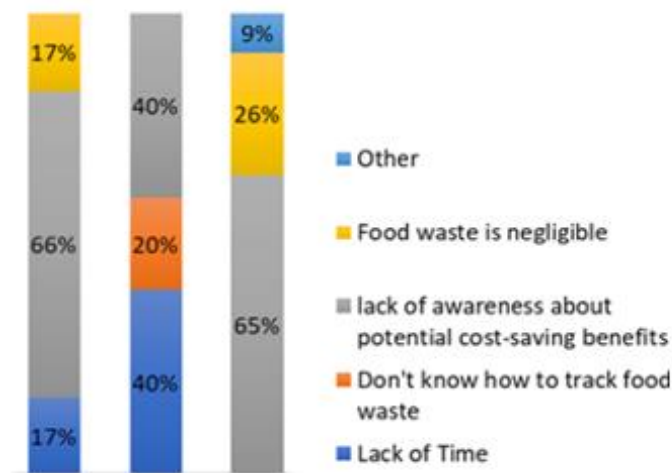


Figure 1.4 Food Waste Trend in SME Hotels

Prior research focuses mainly on the sector’s influence on environmental changes (Lenzen et al., 2018). One of the key factors regarding environmental sustainability includes water use (Prakash et al., 2023; Toha et al., 2020), food wastage (Deloitte, 2015; Hsu et al., 2021; Kamble et al., 2020; Prakash et al., 2023, 2023), wood for fuel (Campos et al., 2015) and electricity (Aqeeq et al., 2023; W. W. Chan & Lam, 2002; X. Zhao et al., 2015a). Hotels are a major driver of economic growth (Sharpley, 2020) and are predicted to approach pre-pandemic levels by 2024, worsening these environmental concerns. Implementing strategies to mitigate the adverse environmental impacts associated with the hoteling sector is of utmost

significance to sustain this sector's positive contributions to the welfare of communities and nations worldwide (Legrand, 2022). The world population is growing at a fast pace and is estimated to grow around 9 billion by 2025 (Lam, 2023). The wastage of food is a global issue, with 1.3 billion tons wasted each year (Roy et al., 2023). In Pakistan, 36 million tons of food are wasted every year, and it badly affects the environment. It is the reason for different diseases in the local population and is a source of pollution (Farooq et al., 2023). Food processing reduces waste and extends product shelf life, solving this problem. The traditional hotel industry is sometimes perceived as unwilling to accept innovative and collaborative tactics (Triguero et al., 2018), so in Pakistan, there is a need to adopt an innovative and entrepreneurial orientation to deal with these issues. The absence and poor implementation of regulations threatens the country's economy, especially private sector SMEs. They try to maximize private benefits (such as reduced energy/raw material consumption) that positively impact sustainability.

In contrast, Pakistani governments try to minimize pollution, food waste, excessive electricity use, and tree burning, where natural gas is scarce, by requiring firms to adopt sustainable practices. Regulations are the typical governance structure (Williamson, 1999). The environmental rules' impact on Economic Sustainable Performance is controversial, according to studies. Traditional neoclassical economics views regulations as harmful to business, but contemporary views suggest that well-designed restrictions increase corporate performance and encourage innovation. A 'win-win' scenario occurs when a company meets regulatory obligations and improves performance. Another important issue is the approval of hotels by the Ministry of Environment, the building plan, classifying the hotel, registering it, applying for a license, training the staff, and optimizing the hotel to international standards to build

and develop international standard hotels in Pakistan. The Department of Tourist Services regulates all Pakistani provinces and the Federal Capital Territory's tourist services. DTS controls the hotel and travel industry, registering and licensing hotels, restaurants, travel agents, tour operators, and tourist guides (DTS Guidelines). The Pakistani government prioritizes tourism, which requires international-standard facilities. However, in recent years, several local hotels and guesthouses have opened without expertise, quality assurance, or training, which damages this sector, and improper implementation of rules after some time causes those SME hotels to quit.

The hoteling sector is highly competitive in Pakistan, with many players vying for market share. This competition leads them to price wars, reduced profit margins, and challenges in differentiating services; the companies are not paying much more for innovation, which leads them down, and they are unable to sustain their performance instead for short-term benefits. The perceived increase in pressure to adopt environmental practices for SMEs in fragmented industries exacerbates the already robust competitive pressure on profit margins, particularly from firms with slack resources that can more easily finance the adoption of environmental practices in the short term to maintain competitiveness in the long term. These challenges are the consequence of competitors who are pioneers in modifying their value chain strategies to incorporate environmental practices, potential reputational damage, and resource conflicts (Darnall et al., 2010; Vermeulen, 2015). SMEs in a fragmented industry respond to competitive pressure in a manner that is distinct from that of large firms or SMEs in more consolidated industries. Lack of innovation also leads to many issues. Competitive pressure allows them to focus on innovation to gain this edge over their competitors. "Competitive Pressures" encompass the market dynamics and competition that organizations face in their industries. This variable is crucial as it

reflects businesses' challenges to stay relevant and competitive. Competitive pressures can drive organizations to seek sustainable solutions, innovate, and optimize their operations to gain a competitive edge in a global market increasingly focused on sustainability. So, SMEs that do not focus on innovation cannot achieve the desired performance. Eco-innovation, also known as green innovation, serves as a pivotal factor in enabling organizations to attain sustainability in their operations.

Eco-innovation refers to innovation that reduces environmental damage and risks (Gürlek & Koseoglu, 2021). To overcome these risks and negative impacts on the environment, eco-innovation practices allow firms to develop or adopt innovative techniques, processes, business practices, and products. The main objective of eco-innovation in the hospitality industry is to develop environmentally friendly services (Y. Wang et al., 2020a). Green entrepreneurial orientation helps firms attain strategic positions by providing procedures, techniques, activities, green actions, and innovative fields (Tze San et al., 2022). The literature suggests that green entrepreneurial orientation without eco-innovation is not successful and easy to understand, causing many hotels to have concerns about implementing it (Guo et al., 2020a). GEO encompasses risk-taking actions, competitiveness, and autonomy. Geo assists businesses in utilizing eco-innovation; in addition, businesses that implement green entrepreneurship combine a variety of resources, mitigate adverse environmental impacts, and identify and capitalize on green innovation opportunities.

Eco-innovation plays an important role in firm growth (Kasztelan et al., 2020). Eco-innovation involves developing and implementing environmentally friendly solutions, products, or processes. It connects the actions driven by green entrepreneurial orientation, Competitive Pressures, and Entrepreneurial Orientation to