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Exploring the Impact of Environmental Regulations on Restaurant Performance in Thailand

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Abstract

This study endeavors to investigate the impact of public policy, specifically environmental regulations, on the operational performance of the restaurant industry in Thailand. Through a robust research methodology, questionnaires were administered to employees across the Thai restaurant sector, yielding a sample size of 322 respondents for comprehensive descriptive and regression analyses. Assessment of environmental regulation encompassed various dimensions, including the regulative, normative, and cognitive environments, alongside an evaluation of overall commitment to environmental sustainability. Specific policies targeting biodiversity preservation, energy conservation, and waste management were also scrutinized. Concurrently, business performance metrics such as market share, growth trajectory, return on investment, employee efficiency, and overall organizational performance were meticulously examined. The study's findings elucidated significant and predominantly discernible impacts of diverse environmental regulation factors on the designated business performance indicators. Particularly noteworthy were the intricate relationships observed between environmental sustainability policies—especially those pertaining to biodiversity conservation, energy efficiency, and waste reduction—and performance outcomes within the restaurant industry. However, the study delineated certain limitations that warrant acknowledgment. Chiefly, it primarily concentrated on primary business performance metrics and their associations with key environmental regulation factors extrapolated from the questionnaire responses. Moreover, the study's focus was predominantly restricted to the hotel industry, thereby overlooking potential insights from other sectors within the broader economic landscape. Additionally, the absence of cross-sectional comparisons among different hotel types, alongside the omission of demographic considerations, presents further avenues for exploration. Future research endeavors hold promise in mitigating these limitations and fostering a more comprehensive understanding of the subject matter. By addressing these gaps, subsequent studies can significantly augment both theoretical frameworks and empirical insights, thereby advancing scholarly discourse in this domain. Practically, the implications of this study resonate deeply with stakeholders across the public and private sectors. Insights gleaned from this research offer invaluable guidance to managers, proprietors, and policymakers within government agencies and the restaurant industry. By comprehensively grasping the ramifications of public policies, particularly environmental regulations, on business performance, stakeholders can better navigate the intricacies of regulatory compliance and strategic decision-making processes.

Keywords: Environmental Regulations, Restaurant Industry, Environmental Sustainability Policies

JEL Codes: Q55, L83, M21, O22

1. INTRODUCTION

The notion of policy, whether public or otherwise, encompasses the idea of competence or adeptness in managing various aspects of societal functioning (Ashraf, 2017; Van Wart and Kapucu, 2011; Dron and Abderson, 2014; Jennings and Greenberg, 2009; James, 1989; Berg et al., 2017). Public policy, in particular, embodies the articulated objectives or mandates of governmental entities, delineating courses of action to be pursued within specific domains to advance the overall welfare of society (Anasiru, 2011; Audi and Ali, 2023). In recent decades, there has been a palpable shift in the consciousness of businesses, particularly those in the hospitality sector such as hotels and restaurants, towards embracing environmental sustainability as a fundamental imperative. This transformation reflects a growing recognition of the pressing need to address environmental concerns and mitigate human impact on ecosystems. As highlighted by scholars such as Jantasri & Srivardhana (2019) and Wangchan & Worapishet (2019), businesses in this sector are increasingly acknowledging their role and responsibility in promoting sustainability practices.

The engagement of hotels and restaurants in environmental sustainability initiatives underscores a broader societal shift towards conscientious and environmentally responsible practices (Kaur et al., 2022; Sharma and Chen 2023; Mejia et al., 2022; Abdou et al., 2023; Han, 2021; Bello et al., 2017; Gorus and Groeneveld, 2015; Kumar, 2016; Kunz et al., 2020; Courage et al., 2022; Karatepe et al., 2022; Abdou et al., 2023). This trend reflects an evolving understanding of the interconnectedness between human activities and environmental well-being. As businesses strive to align with sustainability goals, they not only contribute to environmental conservation efforts but also enhance their own resilience and reputation in an increasingly eco-conscious marketplace. In response to the imperative of environmental sustainability, the restaurant and hotel industry has formulated a range of policies aimed at mitigating the environmental

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footprint of their day-to-day activities. These policies are crafted not only with the broader goal of addressing global climate concerns but also with a view towards enhancing operational performance (Bohdanowicz, 2006; Claver-Cortés et al., 2008; Davidson, 2003; Erdogan & Tosun, 2009; Kumar, 2016; Ho and Ran, 2016; Kamran & Omran, 2018).

Scholars such as Bohdanowicz (2006), Claver-Cortés et al. (2008), and Davidson (2003) have underscored the importance of adopting proactive measures within the hospitality sector to minimize environmental impact. This includes strategies aimed at reducing energy consumption, minimizing waste generation, and optimizing resource utilization. Erdogan and Tosun (2009) and Kamran and Omran (2018) have further emphasized the role of policy frameworks in guiding industry practices towards greater sustainability. These policies serve as guiding principles for restaurants and hotels, shaping their operational decisions and investment priorities. By implementing measures such as energy-efficient technologies, waste recycling programs, and sustainable sourcing practices, businesses in the hospitality sector endeavor to align their operations with environmental stewardship objectives while concurrently enhancing their own efficiency and competitiveness (Legrand et al., 2022; Khalil et al., 2022; Khatler, 2023; Matteucci, 2020; Hsieh, 2012; Jones et al., 2016; Okurut and Mbulawa, 2015; Ahmad, 2016; Abdullah and Lim 2023; Bharwani and Mathews, 2023). The evolving understanding of the environment's significance and its profound implications for individuals and communities has underscored the necessity for proactive measures. Central to this endeavor is the role of governmental bodies in crafting and enforcing policies tailored to environmental concerns. Across various economies, regional authorities play a pivotal role in formulating public policy frameworks aimed at delineating, assessing, and executing environmental regulations (Bengston et al., 2004; Sumaira, 2018; Audi et al., 2020; Kamran & Omran, 2018; Sabatier, 1986). These regulations, often encapsulated under the umbrella of environmental management (EM), represent a concerted effort to mitigate adverse environmental impacts while promoting sustainable practices. Within this context, the restaurant industry has emerged as a focal point for integrating environmental considerations into its daily operations. Through adherence to EM principles, restaurants strive to navigate the evolving landscape of environmental responsibility while simultaneously meeting the demands of their clientele and regulatory bodies (JingJing et al., 2008; Gregg, 2013; Lengnick-Hall, and Lengnick-Hall, 2002; Winkler et al., 2020; Ahmad, 2015; Jauhari, 2014).

The Thai Hotels Association (THA) has taken proactive steps to advocate for the implementation of Green Hotel Standards (GHS) within the region, particularly in Thailand. This initiative underscores the industry's commitment to sustainability and environmental stewardship (Govindan et al., 2014; Abdullah and Lim 2023; Marshall et al., 2010). By collaborating with local government authorities, the THA aims to establish comprehensive guidelines that promote eco-friendly practices and foster responsible tourism (Worrachaddejchai, 2018). Such standards not only contribute to mitigating environmental impacts but also position Thailand's hospitality sector as a leader in sustainable tourism, thereby enhancing its appeal to environmentally-conscious travelers. The establishment of Green Hotel Standards (GHS) in Thailand, as reported by Worrachaddejchai (2018), represents a multifaceted approach to address environmental concerns while advancing the hospitality sector. Beyond its immediate environmental benefits, these standards are poised to have far-reaching impacts on various aspects of the industry and society as a whole (Andrews, 1998; Esty and Winston, 2009; Dale et al., 2000; Markard, 2011; Onyeaka et al., 2021). By embracing eco-friendly practices outlined in the GHS, hotels are not only reducing their carbon footprint but also enhancing their appeal to environmentally conscious travelers. This alignment with sustainable principles can bolster the reputation of Thai hotels both domestically and internationally, attracting a growing segment of eco-conscious tourists seeking responsible travel options. Moreover, the implementation of GHS signifies a proactive response to global trends and expectations regarding sustainability in the tourism industry (Yousaf et al., 2021; Rashed et al., 2021; Ruokonen, 2020; Oh and You, 2019; Okafor et al., 2022). As travelers increasingly prioritize destinations and accommodations with robust environmental credentials, Thai hotels equipped with green initiatives are better positioned to capitalize on this evolving market demand. Furthermore, the adoption of Green Hotel Standards underscores Thailand's commitment to fulfilling its environmental obligations and fostering a culture of sustainability. By integrating eco-friendly practices into the fabric of its hospitality sector, the country demonstrates leadership in mitigating the adverse impacts of tourism on natural resources and ecosystems. The significant aim of this collaboration, as highlighted by the authors, was to foster the enhancement of both the natural environment and society through the hospitality industry's operations (Legrand et al., 2022; Bohdanowicz et al., 2011; Pérez-Pineda et al., 2017; Fraj et al., 2015; Molina-Collado et al., 2022). This study specifically focuses on the restaurant industry in Thailand, aiming to explore the relationship between environmental regulations and business performance. To the best of the authors' knowledge, this research represents the first endeavor to investigate such a relationship within the context of the restaurant industry in Thailand.

The structure of the paper is organized as follows: Section two presents a comprehensive review of relevant literature pertaining to environmental regulations and their impact on business performance, particularly within the hospitality sector (Molina-Azorín et al., 2009; Molina-Azorín et al., 2009; Gomezelj, 2016; Hallin and Mamburg, 2008; Sakshi et al., 2020). Section three provides a detailed description of the research methods employed in this study, outlining the approach taken to collect and analyze data to address the research objectives effectively. In section four, the findings of the study are presented and discussed in depth, shedding light on the implications and significance of the observed relationships between environmental regulations and business performance within the restaurant industry of Thailand. This section offers insights into the practical implications of these findings for restaurant owners, policymakers, and other stakeholders involved in the hospitality sector (Revell and Blackburn, 2007; Thomas et al., 2011; Dwivedi et al., 2023; Kahveci, 2023; Sobaih et al., 2021; Buhalis et al., 2019; Janta, 2011; Alrawadieh et al., 2019). Finally, section five offers a conclusive summary of the study, encapsulating key findings, implications, and avenues for future research. This section

also underscores the broader significance of the study's findings in advancing understanding and fostering sustainable practices within the restaurant industry and beyond.

2. LITERATURE REVIEW

The importance of environmental management has grown substantially in recent years, driven by heightened awareness of environmental issues and the need for sustainable business practices. Within the hospitality sector, including restaurants and hotels, the impact of daily operations on the environment is increasingly scrutinized. As a result, stakeholders in this industry are under pressure to adopt environmentally responsible practices to minimize their ecological footprint (Bohdanowicz, 2006; Claver-Cortés et al., 2008; Davidson, 2003; Erdogan & Tosun, 2009; Kamran & Omran, 2018). Environmental regulations play a pivotal role in shaping the behavior of businesses, including those in the restaurant and hotel industry. These regulations are often instituted by governments at various levels to address environmental concerns and ensure compliance with standards aimed at preserving natural resources and minimizing pollution (Bengston et al., 2004; Kamran & Omran, 2018; Sabatier, 1986). As a result, businesses must adapt their operations to adhere to these regulations, which can have significant implications for their performance and bottom line.

In response to the growing emphasis on environmental sustainability, industry associations and governmental bodies have collaborated to establish standards and guidelines for environmentally friendly practices in the hospitality sector. For example, the Thai Hotels Association (THA) has worked with local government authorities to develop Green Hotel Standards (GHS) in Thailand, demonstrating a proactive approach to promoting sustainable practices within the industry (Worrachaddejchai, 2018). These initiatives underscore the increasing recognition of the importance of environmental responsibility within the hospitality industry. By aligning with environmental regulations and adopting sustainable practices, businesses can not only reduce their environmental impact but also enhance their reputation, attract environmentally conscious consumers, and contribute to broader sustainability goals. The concept of environmental regulations is closely intertwined with the broader framework of corporate social responsibility (CSR), which emphasizes the ethical obligations of businesses to operate in a manner that benefits society and protects the environment. Environmental regulations serve as a key component of CSR, reflecting a company's commitment to sustainable practices and responsible stewardship of natural resources (Boström, 2006; Douglas & Wildavsky, 1983; Gill, 2008; Kotler & Lee, 2008). By adhering to environmental regulations, businesses demonstrate their recognition of the interconnectedness between their operations and the health of the environment. Through compliance with these regulations, companies strive to minimize their ecological footprint, reduce pollution, and conserve resources, thereby fulfilling their social and environmental responsibilities (Boström, 2006). Moreover, integrating environmental considerations into business practices can lead to tangible benefits, including cost savings through improved efficiency, enhanced brand reputation, and increased competitiveness in the market (Gill, 2008; Kotler & Lee, 2008).

While the detrimental impact of the restaurant industry on the environment may be relatively low compared to other sectors, scholarly literature has shed light on the environmental consequences associated with its activities. This growing awareness has led to increased scrutiny of the industry's ecological footprint and the need for effective environmental regulation. In developed economies, particularly, the environmental challenges faced by the restaurant and hotel sectors have garnered significant attention. Addressing these concerns, recent research by Ouyang et al., (2019) has made valuable contributions to understanding environmental management (EM) practices within the hotel industry, particularly in the context of regulatory frameworks. The authors examined the concept of EM within hotels against the backdrop of the institutional environment. Their study delved into various dimensions of environmental regulations, considering how factors such as hotel characteristics and industry standards moderate the implementation of EM practices. The findings of Ouyang et al.'s study underscored the positive association between EM practices adopted by hotels and the regulatory frameworks put in place by governments. Moreover, the research highlighted the significance of industry standards and competition in shaping EM practices within the hotel sector. These insights shed light on the complex interplay between regulatory compliance, industry dynamics, and environmental performance, offering valuable guidance for hotel operators and policymakers alike.

Leutwiler-Lee (2018) has conducted a timely examination of sustainability practices within the hotel industry, with a particular focus on addressing the culture of food waste. This study, situated within the context of South Korea's economy, delved into the intricacies of food waste management and the regulatory landscape defined by local government policies. Through Leutwiler-Lee (2018) research, it becomes evident that the issue of food waste is a multifaceted challenge requiring a concerted effort from various stakeholders. The study sheds light on the influential channels that can effectively contribute to mitigating the problem of food waste and improving its management practices within the hotel sector. By analyzing the intersection of sustainability initiatives and government regulations, Leutwiler-Lee (2018) work offers valuable insights into strategies for reducing food waste and fostering a more environmentally responsible approach to hotel operations in South Korea. Business performance, as a multifaceted concept, encompasses various dimensions that extend beyond financial metrics alone. Scholarly discourse on this topic spans across both manufacturing and service industries, shedding light on diverse perspectives and frameworks for evaluating organizational success. Studies such as those by Huselid (1995) and Kamran et al. (2016) have delved into the intricate relationship between human resource management practices and business performance, highlighting the significance of employee engagement, skills development, and organizational culture in driving overall effectiveness. Similarly, research by Omran & Kamran (2018) has explored the role of innovation in enhancing business performance, emphasizing the importance of adaptability and creativity in staying competitive. Moreover, works by Waddock & Graves (1997) and Somjai & Jermisittiparsert (2019) have examined the broader social and environmental dimensions of business performance, advocating for corporate social

responsibility and sustainable practices as integral components of organizational success. These studies underscore the growing recognition of non-financial metrics, such as environmental impact and social responsibility, in evaluating business performance and long-term sustainability. Additionally, research by Waqas & Bahrain (2019) has contributed to understanding the influence of technological advancements and digital transformation on business performance, highlighting the role of information technology in driving efficiency, innovation, and market competitiveness.

The interconnectedness between business performance and environmental performance has garnered significant attention in scholarly discourse. Horváthová (2010) elucidates this correlation, highlighting how organizational efforts towards environmental sustainability can have a direct impact on overall business performance. Similarly, Carter et al., (2000), Elsayed & Paton (2005), Filbeck & Gorman (2004), and King & Lenox (2001) have echoed similar sentiments, emphasizing the symbiotic relationship between environmental practices and organizational success. Research by these scholars underscores the notion that proactive environmental management can yield tangible benefits for businesses, ranging from cost savings and operational efficiencies to enhanced brand reputation and stakeholder trust. By adopting environmentally responsible practices, organizations can mitigate risks associated with regulatory non-compliance, resource scarcity, and reputational damage, while simultaneously tapping into opportunities for innovation, market differentiation, and long-term sustainability. Moreover, these studies suggest that businesses with strong environmental performance are better positioned to adapt to evolving market demands, customer preferences, and regulatory requirements. By integrating environmental considerations into strategic decision-making processes and operational activities, organizations can create value not only for themselves but also for society and the planet at large.

3. VARIABLES AND RESEARCH METHODOLOGY

This study adopts a comprehensive approach by considering various factors influencing environmental sustainability and business performance within the restaurant industry in Thailand. These factors encompass the regulative environment (RENV), normative environment (NENV), cognitive environment (CENV), overall commitment (OVRC), and specific environmental sustainability policies. To measure business performance, the study evaluates four key dimensions: market share, market growth, return on investment (ROI), and employee productivity. These dimensions are crucial indicators of organizational success and effectiveness within the competitive landscape of the restaurant sector. The questionnaire used in this study follows a structured format, with items designed to capture respondents' perceptions and experiences using a five-point Likert scale. Specific environmental sustainability policies, such as biodiversity, business travel, commuting staff, construction and refurbishment, energy usage, carbon emissions, food and catering practices, pollution avoidance, and waste management, are included to assess the level of environmental responsibility and commitment within restaurant operations. Upon development, the questionnaire was distributed among employees working in the restaurant industry across Thailand. A final sample size of 322 respondents was attained, representing a diverse cross-section of industry professionals and providing a robust dataset for subsequent analysis and interpretation.

4. RESULTS AND DISCUSSION

The table 1 provides the outcomes of a regression analysis examining the impact of various factors on market growth. Each row represents a distinct variable, with associated coefficients, standard errors, t-values, and p-values indicating the significance of their impact on market growth.

Table 1: Outcomes market growth

Variables	Coef.	St. Err	t-value	p-value
BIO	0.164	0.062	2.65	0.008
BTRVEL	0.094	0.063	1.49	0.138
CTOSTAF	0.017	0.051	0.34	0.737
CRE	0.283	0.060	4.68	0.000
ENGUSE	0.126	0.053	2.36	0.019
CEMISION	0.004	0.040	0.09	0.928
FCAT	0.040	0.058	0.70	0.484
POLAVOID	-0.062	0.053	-1.19	0.237
WMGT	0.201	0.058	3.48	0.001
_cons	0.481	0.235	2.05	0.041

Beginning with "BIO," it shows a positive coefficient of 0.164, suggesting that an increase in bio-related activities is associated with higher market growth. This relationship is statistically significant at $p = 0.008$, with a t-value of 2.65. Similarly, "BTRVEL" demonstrates a positive coefficient of 0.094, indicating that higher levels of travel-related activities correspond to increased market growth. However, this relationship is not statistically significant at conventional levels ($p = 0.138$). "CTOSTAF" shows a small positive coefficient of 0.017, suggesting a weak positive relationship with market growth, although statistically insignificant at $p = 0.737$. Moving on, "CRE" exhibits a substantial positive coefficient of 0.283, indicating that increased creativity is strongly associated with higher market growth, with a high level of statistical

significance ($p = 0.000$). "ENGUSE" also shows a positive coefficient of 0.126, suggesting that higher levels of energy usage are associated with increased market growth, significant at $p = 0.019$. However, "CEMISION," "FCAT," and "POLAVOID" display coefficients close to zero, indicating weak or negligible relationships with market growth, and are statistically insignificant ($p > 0.05$). Finally, "WMGT" demonstrates a positive coefficient of 0.201, indicating that effective waste management practices contribute positively to market growth, significant at $p = 0.001$. The constant term "_cons" has a coefficient of 0.481, suggesting a baseline level of market growth, significant at $p = 0.041$.

Table 2 presents the outcomes of a regression analysis focusing on market share, showcasing the coefficients, standard errors, t-values, and p-values for each variable. Starting with "BIO," it exhibits a coefficient of 0.241, indicating that an increase in bio-related activities is associated with a higher market share. This relationship is statistically significant at $p = 0.000$, with a t-value of 4.02. Conversely, "BTRVEL" shows a negative coefficient of -0.048, suggesting that higher levels of travel-related activities are associated with a decrease in market share. However, this relationship is not statistically significant at $p = 0.432$. "CTOSTAF" displays a positive coefficient of 0.153, indicating that increased customer service staff is associated with higher market share, with statistical significance at $p = 0.002$. The coefficient for "CRE" is 0.081, suggesting a positive relationship with market share, although not statistically significant at $p = 0.171$. "ENGUSE" exhibits a positive coefficient of 0.155, indicating that higher levels of energy usage correspond to increased market share, significant at $p = 0.003$. "CEMISION," "FCAT," and "POLAVOID" have coefficients close to zero, indicating weak or negligible relationships with market share, and are statistically insignificant ($p > 0.05$). "WMGT" demonstrates a positive coefficient of 0.180, suggesting that effective waste management practices contribute positively to market share, significant at $p = 0.001$. The constant term "_cons" has a coefficient of 0.830, representing a baseline level of market share, significant at $p = 0.000$.

Table 2: Outcomes for market share

BIO	0.241	0.060	4.02	0.000
BTRVEL	-0.048	0.061	-0.79	0.432
CTOSTAF	0.153	0.050	3.06	0.002
CRE	0.081	0.059	1.37	0.171
ENGUSE	0.155	0.052	3.00	0.003
CEMISION	-0.028	0.039	-0.73	0.466
FCAT	0.018	0.056	0.33	0.745
POLAVOID	0.075	0.051	1.46	0.144
WMGT	0.180	0.056	3.21	0.001
_cons	0.830	0.228	3.64	0.000

5. CONCLUSION

In examining the relationship between environmental regulations and business performance in the restaurant industry of Thailand, this study delves into the realm of public policy and its influence. By considering factors such as environmental regulations and their impact on business performance, the study aims to shed light on the dynamics within this sector. To gain insights into these relationships, the study employs a mix of descriptive, correlation, and multiple regression analyses. These analytical approaches help in uncovering patterns, identifying associations, and quantifying the impact of various factors on business performance. The findings of the study reveal compelling insights. Notably, it is discovered that environmental regulations exert a significant influence on certain aspects of business performance, particularly market growth. Factors such as the regulatory environment, normative environment, and cognitive environment emerge as key determinants in shaping market growth within the restaurant industry of Thailand. The study reveals further nuances in the relationship between environmental regulations and business performance within the restaurant industry of Thailand. In addition to market growth, other dimensions of business performance are explored, uncovering additional insights into the impact of environmental factors. Interestingly, factors such as biodiversity demonstrate a positive influence on market growth, underscoring the importance of ecological diversity in driving business success. Moreover, variables like market share, commuting staff, biodiversity, and energy usage emerge as significant determinants with favorable impacts on business performance. When examining return on investment, the cognitive environment, staff commuting, construction and refurbishment, and carbon emissions emerge as key determinants. These findings highlight the multifaceted nature of environmental regulations and their implications for financial outcomes within the restaurant industry. Furthermore, the study identifies biodiversity as a highly influential factor in determining employee productivity, indicating the importance of environmental sustainability measures in fostering a conducive work environment. The study delves deeper into the determinants of business performance within the restaurant industry of Thailand, shedding light on specific factors that significantly impact overall performance metrics.

Among these determinants, biodiversity (BIO), commuting staff (CTOSTAF), construction and refurbishment (CRE), and energy usage (ENGUSE) emerge as key influencers of business performance. These factors exhibit a significant and positive influence on the restaurant sector in Thailand, underscoring their importance in driving operational excellence and market competitiveness. Moreover, the waste management factor emerges as a crucial contributor to enhanced

business performance within the local market. By effectively managing waste and adopting sustainable practices, restaurants can not only minimize environmental impact but also improve operational efficiency and customer satisfaction. The study acknowledges several limitations that warrant consideration for future research endeavors. Firstly, the focus solely on primary measures of business performance and their correlation with key environmental regulatory factors, as assessed through questionnaires, may present an incomplete picture of the broader dynamics at play within the industry. Future studies could incorporate a more comprehensive range of performance metrics and utilize diverse data sources to enrich the analysis. Secondly, the exclusive focus on the hotel industry may limit the generalizability of the findings to other sectors within the economy. To provide a more holistic perspective, future research could explore the impact of environmental regulations on business performance across various industries, allowing for comparative analyses and a deeper understanding of sector-specific dynamics. Thirdly, the absence of cross-sectional comparisons between different types of hotels, as highlighted in demographic details, represents a notable gap in the study. Incorporating such comparisons could offer valuable insights into how environmental regulations affect businesses of varying sizes, structures, and operational models within the hotel industry. Addressing these limitations in future research endeavors would enhance the robustness and applicability of findings, ultimately contributing to a more nuanced understanding of the complex interplay between environmental regulations and business performance across different sectors and contexts.

REFERENCES

- Abdou, A. H., Al Abdulathim, M. A., Hussni Hasan, N. R., Salah, M. H. A., Ali, H. S. A. M., & Kamel, N. J. (2023). From Green Inclusive Leadership to Green Organizational Citizenship: Exploring the Mediating Role of Green Work Engagement and Green Organizational Identification in the Hotel Industry Context. *Sustainability*, 15(20), 14979.
- Abdou, A. H., Al Abdulathim, M. A., Hussni Hasan, N. R., Salah, M. H. A., Ali, H. S. A. M., & Kamel, N. J. (2023). From Green Inclusive Leadership to Green Organizational Citizenship: Exploring the Mediating Role of Green Work Engagement and Green Organizational Identification in the Hotel Industry Context. *Sustainability*, 15(20), 14979.
- Abdullah, N., & Lim, A. (2023). The Incorporating Sustainable and Green IT Practices in Modern IT Service Operations for an Environmentally Conscious Future. *Journal of Sustainable Technologies and Infrastructure Planning*, 7(3), 17-47.
- Abdullah, N., & Lim, A. (2023). The Incorporating Sustainable and Green IT Practices in Modern IT Service Operations for an Environmentally Conscious Future. *Journal of Sustainable Technologies and Infrastructure Planning*, 7(3), 17-47.
- Ahmad, S. (2014). Analyzing the Relationship between GDP and CO2 Emissions in Malaysia: A Time Series Evidence. *Journal of Energy and Environmental Policy Options*, 1(1), 1-3.
- Ahmed, F. A. (2016). Exploring the Environmental Kuznets Curve: Economic Growth and CO2 Emissions Dynamics. *Journal of Business and Economic Options*, 3(3), 67-76.
- Alrawdiah, Z., Karayilan, E., & Cetin, G. (2019). Understanding the challenges of refugee entrepreneurship in tourism and hospitality. *The Service Industries Journal*, 39(9-10), 717-740.
- Anasiru, R. (2011). Kebijakan Publik Dalam Konstelasi Paradigma Pembangunan Kesejahteraan Sosial. *Otoritas: Jurnal Ilmu Pemerintahan*, 1(1).
- Andrews, R. N. (1998). Environmental regulation and business' self-regulation'. *Policy sciences*, 177-197.
- Ashraf, J. (2017). Examining the public sector recruitment and selection, in relation to job analysis in Pakistan. *Cogent Social Sciences*, 3(1), 1309134.
- Audi, M., & Ali, A. (2023). Unveiling the Role of Business Freedom to Determine Environmental Degradation in Developing countries. *International Journal of Energy Economics and Policy*, 13(5), 157-164.
- Audi, M., Ali, A., & Kassem, M. (2020). Greenhouse Gases: A Review of Losses and Benefits. *International Journal of Energy Economics and Policy*, 10(1), 403.
- Bello, F. G., Banda, W. J., & Kamanga, G. (2017). Corporate Social Responsibility (CSR) practices in the hospitality industry in Malawi. *African Journal of Hospitality, Tourism and Leisure*, 6(3), 1-21.
- Bengston, D. N., Fletcher, J. O., & Nelson, K. C. (2004). Public policies for managing urban growth and protecting open space: policy instruments and lessons learned in the United States. *Landscape and urban planning*, 69(2-3), 271-286.
- Berg, J., Osher, D., Same, M. R., Nolan, E., Benson, D., & Jacobs, N. (2017). Identifying, defining, and measuring social and emotional competencies. *Washington, DC: American Institutes for Research*, 51-70.
- Bharwani, S., & Mathews, D. (2023). Sustainable luxury: from an oxymoron to a tautology—the case of the Indian luxury hospitality industry. *Worldwide Hospitality and Tourism Themes*, 15(3), 231-248.
- Bohdanowicz, P. (2006). Environmental awareness and initiatives in the Swedish and Polish hotel industries—survey results. *International Journal of Hospitality Management*, 25(4), 662-682.
- Bohdanowicz, P., Zientara, P., & Novotna, E. (2011). International hotel chains and environmental protection: an analysis of Hilton's we care! programme (Europe, 2006–2008). *Journal of Sustainable Tourism*, 19(7), 797-816.
- Boström, M. (2006). Regulatory credibility and authority through inclusiveness: Standardization organizations in cases of eco-labelling. *Organization*, 13(3), 345-367.

- Buhalis, D., Harwood, T., Bogicevic, V., Viglia, G., Beldona, S., & Hofacker, C. (2019). Technological disruptions in services: lessons from tourism and hospitality. *Journal of Service Management*, 30(4), 484-506.
- Carter, C. R., Kale, R., & Grimm, C. M. (2000). Environmental purchasing and firm performance: an empirical investigation. *Transportation Research Part E: Logistics and Transportation Review*, 36(3), 219-228.
- Claver-Cortés, E., Pereira-Moliner, J., José Tarí, J., & Molina-Azorín, J. F. (2008). TQM, managerial factors and performance in the Spanish hotel industry. *Industrial Management & Data Systems*, 108(2), 228-244.
- company and your cause: John Wiley & Sons.
- Courage Shereni, D. N., & Rogerson, M. (2022). Website disclosures of sustainability practices in the hospitality sector: An analysis of hotel chains in Zimbabwe. *Tourism and hospitality management*, 28(3), 497-517.
- Dale, V. H., Brown, S., Haeuber, R. A., Hobbs, N. T., Huntly, N., Naiman, R. J., ... & Valone, T. J. (2000). Ecological principles and guidelines for managing the use of land sup> 1. *Ecological applications*, 10(3), 639-670.
- Davidson, M. C. (2003). Does organizational climate add to service quality in hotels? *International Journal of contemporary hospitality management*, 15(4), 206-213.
- Douglas, M., & Wildavsky, A. (1983). *Risk and culture: An essay on the selection of technological and environmental dangers*: Univ of California Press.
- Dron, J., & Anderson, T. (2014). *Teaching crowds: Learning and social media*. Athabasca University Press.
- Dwivedi, Y. K., Kshetri, N., Hughes, L., Slade, E. L., Jeyaraj, A., Kar, A. K., ... & Wright, R. (2023). "So what if ChatGPT wrote it?" Multidisciplinary perspectives on opportunities, challenges and implications of generative conversational AI for research, practice and policy. *International Journal of Information Management*, 71, 102642.
- Elsayed, K., & Paton, D. (2005). The impact of environmental performance on firm performance: static and dynamic panel data evidence. *Structural change and economic dynamics*, 16(3), 395-412.
- Erdogan, N., & Tosun, C. (2009). Environmental performance of tourism accommodations in the protected areas: Case of Goreme Historical National Park. *International Journal of Hospitality Management*, 28(3), 406-414.
- Esty, D. C., & Winston, A. (2009). *Green to gold: How smart companies use environmental strategy to innovate, create value, and build competitive advantage*. John Wiley & Sons.
- Filbeck, G., & Gorman, R. F. (2004). The relationship between the environmental and financial performance of public utilities. *Environmental and Resource Economics*, 29(2), 137-157.
- Fraj, E., Matute, J., & Melero, I. (2015). Environmental strategies and organizational competitiveness in the hotel industry: The role of learning and innovation as determinants of environmental success. *Tourism management*, 46, 30-42.
- Gill, A. (2008). Corporate governance as social responsibility: A research agenda. *Berkeley J*.
- Gomezelj, D. O. (2016). A systematic review of research on innovation in hospitality and tourism. *International Journal of Contemporary Hospitality Management*, 28(3), 516-558.
- Gorus, S., & Groeneveld, R. (2015). Vietnam's Development Trajectory: Threshold Cointegration and Causality Analysis of Energy Consumption and Economic Growth. *Journal of Energy and Environmental Policy Options*, 2(1), 8-15.
- Govindan, K., Kaliyan, M., Kannan, D., & Haq, A. N. (2014). Barriers analysis for green supply chain management implementation in Indian industries using analytic hierarchy process. *International journal of production economics*, 147, 555-568.
- Gregg, M. (2013). *Work's intimacy*. John Wiley & Sons.
- Hallin, C. A., & Marnburg, E. (2008). Knowledge management in the hospitality industry: A review of empirical research. *Tourism management*, 29(2), 366-381.
- Han, H. (2021). Consumer behavior and environmental sustainability in tourism and hospitality: A review of theories, concepts, and latest research. *Sustainable Consumer Behaviour and the Environment*, 1-22.
- Ho, Y. J., & Ran, H. (2016). The Impact of Energy Efficiency Programs in South Korea: An Empirical Analysis. *Journal of Energy and Environmental Policy Options*, 3(3), 27-31.
- Horváthová, E. (2010). Does environmental performance affect financial performance? A meta-analysis. *Ecological economics*, 70(1), 52-59.
- Hsieh, Y. C. (2012). Hotel companies' environmental policies and practices: a content analysis of their web pages. *International journal of contemporary hospitality management*, 24(1), 97-121.
- Huselid, M. A. (1995). The impact of human resource management practices on turnover, productivity, and corporate financial performance. *Academy of management journal*, 38(3), 635-672.
- Int'l L.*, 26, 452.
- James, N. (1989). Emotional labour: skill and work in the social regulation of feelings. *The sociological review*, 37(1), 15-42.
- Janta, H. (2011). Polish migrant workers in the UK hospitality industry: Profiles, work experience and methods for accessing employment. *International Journal of Contemporary Hospitality Management*, 23(6), 803-819.
- Jantasri, V. & Srivardhana, T. (2019). The Impacts of Innovativeness and Nostalgia among Restaurant Customers in Bangkok Metropolitan Region. *Asian Administration and Management Review*, 2(1), 97-109.
- Jauhari, V. (Ed.). (2014). *Managing sustainability in the Hospitality and Tourism Industry: Paradigms and Directions for the Future*. CRC Press.
- Jennings, P. A., & Greenberg, M. T. (2009). The prosocial classroom: Teacher social and emotional competence in relation to student and classroom outcomes. *Review of educational research*, 79(1), 491-525.

- JingJing, D., Xinze, L., & Sitch, R. (2008). Ethical consumers: Strategically moving the restaurant industry towards sustainability.
- Jones, P., Hillier, D., & Comfort, D. (2016). Sustainability in the hospitality industry: Some personal reflections on corporate challenges and research agendas. *International Journal of Contemporary Hospitality Management*, 28(1), 36-67.
- Kahveci, E. (2023). Business strategies for small-and medium-sized tourism enterprises during COVID-19: a developing country case. *Journal of Hospitality and Tourism Insights*, 6(4), 1569-1593.
- Kamran, H. W., & Omran, A. (2018). Impact of Environmental Factors on Tourism Industry in Pakistan: A Study from the Last Three Decades *The Impact of Climate Change on Our Life* (pp. 197-212): Springer.
- Kamran, H. W., Chaudhry, N., Murtaza, M. M., Zafar, N., Yousaf, A., & Nazish, H. (2016). Financial Market Development, Bank Risk with Key Indicators and Their Impact on Financial Performance: A Study from Pakistan. *American Journal of Industrial and Business Management*, 6(03), 373.
- Karatepe, T., Ozturen, A., Karatepe, O. M., Uner, M. M., & Kim, T. T. (2022). Management commitment to the ecological environment, green work engagement and their effects on hotel employees' green work outcomes. *International Journal of Contemporary Hospitality Management*, 34(8), 3084-3112.
- Kaur, P., Talwar, S., Madanaguli, A., Srivastava, S., & Dhir, A. (2022). Corporate social responsibility (CSR) and hospitality sector: Charting new frontiers for restaurant businesses. *Journal of Business Research*, 144, 1234-1248.
- Khalil, N., Abdullah, S. N. C., Haron, S. N., & Hamid, M. Y. (2022). A review of green practices and initiatives from stakeholder's perspectives towards sustainable hotel operations and performance impact. *Journal of Facilities Management*, (ahead-of-print).
- Khatter, A. (2023). Challenges and Solutions for Environmental Sustainability in the Hospitality Sector. *Sustainability*, 15(15), 11491.
- King, A. A., & Lenox, M. J. (2001). Does it really pay to be green? An empirical study of firm environmental and financial performance: An empirical study of firm environmental and financial performance. *Journal of Industrial Ecology*, 5(1), 105-116.
- Kotler, P., & Lee, N. (2008). *Corporate social responsibility: Doing the most good for your*
- Kumar, J. (2016). Examining the Causality of Energy Between Growth in Asian Countries: Panel Data Analysis. *Journal of Energy and Environmental Policy Options*, 3(4), 49-55.
- Kunz, J., May, S., & Schmidt, H. J. (2020). Sustainable luxury: Current status and perspectives for future research. *Business Research*, 13, 541-601.
- Legrand, W., Chen, J. S., & Laeis, G. C. (2022). *Sustainability in the hospitality industry: Principles of sustainable operations*. Routledge.
- Legrand, W., Chen, J. S., & Laeis, G. C. (2022). *Sustainability in the hospitality industry: Principles of sustainable operations*. Routledge.
- Lengnick-Hall, M., & Lengnick-Hall, C. (2002). *Human resource management in the knowledge economy: New challenges, new roles, new capabilities*. Berrett-Koehler Publishers.
- Leutwiler-Lee, M. (2018). Sustainability in the hotel industry-how government policies are changing the 'culture of food waste' in the Republic of Korea and creating opportunities for hotels. *International Journal of Tourism Sciences*, 18(4), 247-254.
- Markard, J. (2011). Transformation of infrastructures: sector characteristics and implications for fundamental change. *Journal of Infrastructure Systems*, 17(3), 107-117.
- Marshall, R. S., Akoorie, M. E., Hamann, R., & Sinha, P. (2010). Environmental practices in the wine industry: An empirical application of the theory of reasoned action and stakeholder theory in the United States and New Zealand. *Journal of World Business*, 45(4), 405-414.
- Matteucci, V. (2020). How can the hospitality industry increase corporate value aligned with sustainable development goals? Case examples from Hilton, Meliá and Sun. *Worldwide Hospitality and Tourism Themes*, 12(5), 509-523.
- Mejia, C., Bąk, M., Zientara, P., & Orłowski, M. (2022). Importance-performance analysis of socially sustainable practices in US restaurants: A consumer perspective in the quasi-post-pandemic context. *International Journal of Hospitality Management*, 103, 103209.
- Molina-Azorín, J. F., Claver-Cortés, E., López-Gamero, M. D., & Tarí, J. J. (2009). Green management and financial performance: a literature review. *Management decision*, 47(7), 1080-1100.
- Molina-Azorín, J. F., Claver-Cortés, E., Pereira-Moliner, J., & Tarí, J. J. (2009). Environmental practices and firm performance: an empirical analysis in the Spanish hotel industry. *Journal of Cleaner production*, 17(5), 516-524.
- Molina-Collado, A., Santos-Vijande, M. L., Gómez-Rico, M., & Madera, J. M. (2022). Sustainability in hospitality and tourism: a review of key research topics from 1994 to 2020. *International Journal of Contemporary Hospitality Management*, 34(8), 3029-3064.
- Oh, J. K., & You, E. S. (2019). Stakeholder perceptions in the government policies on the alternative accommodation industry. *Journal of Policy Research in Tourism, Leisure and Events*, 11(2), 276-293.
- Okafor, L., Khalid, U., & Gopalan, S. (2022). COVID-19 economic policy response, resilience and tourism recovery. *Annals of Tourism Research Empirical Insights*, 3(2), 100073.
- Okurut, F. N., & Mbulawa, S. (2015). The Nexus of Electricity, Economy and Capital: A Case Study of Botswana. *Journal of Energy and Environmental Policy Options*, 2(1), 1-7.

- Omran, A., & Kamran, H. W. (2018). Determining the Factors Attracting the Tourists to Visit Kedah State, Malaysia. *Journal of Environmental Management & Tourism*, 9(2 (26)), 355-364.
- Onyeaka, H., Anumudu, C. K., Al-Sharif, Z. T., Egele-Godswill, E., & Mbaegbu, P. (2021). COVID-19 pandemic: A review of the global lockdown and its far-reaching effects. *Science progress*, 104(2), 00368504211019854.
- Ouyang, Z., Wei, W., & Chi, C. G. (2019). Environment management in the hotel industry: does institutional environment matter? *International Journal of Hospitality Management*, 77, 353-364.
- Pérez-Pineda, F., Alcaraz, J. M., & Colón, C. (2017). Creating sustainable value in the hospitality industry: a (critical) multi-stakeholder study in the Dominican Republic. *Journal of Sustainable Tourism*, 25(11), 1633-1649.
- Rashed, A. H., Rashdan, S. A., & Ali-Mohamed, A. Y. (2021). Towards effective environmental sustainability reporting in the large industrial sector of Bahrain. *Sustainability*, 14(1), 219.
- Revell, A., & Blackburn, R. (2007). The business case for sustainability? An examination of small firms in the UK's construction and restaurant sectors. *Business strategy and the environment*, 16(6), 404-420.
- Ruokonen, E. (2020). Preconditions for successful implementation of the Finnish standard for sustainable mining. *The Extractive Industries and Society*, 7(2), 611-620.
- Sabatier, P. A. (1986). Top-down and bottom-up approaches to implementation research: a critical analysis and suggested synthesis. *Journal of public policy*, 6(1), 21-48.
- Sakshi, Shashi, Cerchione, R., & Bansal, H. (2020). Measuring the impact of sustainability policy and practices in tourism and hospitality industry. *Business Strategy and the Environment*, 29(3), 1109-1126.
- Sharma, T., & Chen, J. S. (2023). Expected green hotel attributes: visit intentions in light of climate change and COVID-19 double whammy. In *Advances in Hospitality and Leisure* (pp. 155-176). Emerald Publishing Limited.
- Sobaih, A. E. E., Elshaer, I., Hasanein, A. M., & Abdelaziz, A. S. (2021). Responses to COVID-19: The role of performance in the relationship between small hospitality enterprises' resilience and sustainable tourism development. *International Journal of Hospitality Management*, 94, 102824.
- Somjai, S. & Jermstittiparsert, K. (2019). Mediating Impact of Information Sharing in the Relationship of Supply Chain Capabilities and Business Performance among the Firms of Thailand. *International Journal of Supply Chain Management*, 8(4), 357-368.
- Sumaira. (2018). The Dual Impact of Remittances and Financial Development on Environmental Pollution: Evidence from South Asian Countries. *Journal of Policy Options*, 5(2), 32-38.
- Thomas, R., Shaw, G., & Page, S. J. (2011). Understanding small firms in tourism: A perspective on research trends and challenges. *Tourism management*, 32(5), 963-976.
- Van Wart, M., & Kapucu, N. (2011). Crisis management competencies: The case of emergency managers in the USA. *Public management review*, 13(4), 489-511.
- Waddock, S. A., & Graves, S. B. (1997). The corporate social performance–financial performance link. *Strategic management journal*, 18(4), 303-319.
- Wangchan, R. & Worapishet, T. (2019). Factors Influencing Customer Loyalty in Hotel Business: Case Study of Five-Star Hotels in Bangkok, Thailand. *Asian Administration and Management Review*, 2(1), 86-96.
- Waqas, H., & Bahrain, S. (2019). Risk Management, Capital Adequacy and Audit Quality for Financial Stability: Assessment from Commercial Banks of Pakistan. *Asian Economic and Financial Review*, 9(6), 654-664.
- Winkler, M. R., Zenk, S. N., Baquero, B., Steeves, E. A., Fleischhacker, S. E., Gittelsohn, J., ... & Racine, E. F. (2020). A model depicting the retail food environment and customer interactions: components, outcomes, and future directions. *International journal of environmental research and public health*, 17(20), 7591.
- Worrachaddejchai. (2018). Thai Hotels Association seeking official support for Green Hotels.
- Yousaf, Z., Radulescu, M., Sinisi, C. I., Serbanescu, L., & Paunescu, L. M. (2021). Harmonization of green motives and green business strategies towards sustainable development of hospitality and tourism industry: Green environmental policies. *Sustainability*, 13(12), 6592.