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## Impact of green marketing on competitive capabilities and business performance of tourism enterprises in Vietnam

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### Abstract

This study aims to explore and analyze how green marketing affects the business performance of travel enterprises in Vietnam. Combining qualitative and quantitative methods, data were gathered from 380 middle-to-senior-level business managers. Structural Equation Modeling (SEM) using SMARTPLS 4 software was employed to assess the model's validity and reliability. The analysis demonstrates that green marketing positively impacts business performance, with competitive capabilities and their components serving as mediating variables. Additionally, Multi-Group Analysis (MGA) reveals statistically significant differences in these relationships based on the operational durations of enterprises. The findings highlight the critical role of green marketing in enhancing competitive capabilities, which, in turn, drive improved performance in the travel sector. These insights underscore the importance of sustainable practices in aligning business strategies with environmental objectives. For tourism stakeholders, this study offers actionable guidance for promoting green marketing strategies that contribute to both environmental sustainability and long-term business success. By integrating green marketing principles, travel enterprises can strengthen their competitive positioning while supporting Vietnam's sustainable tourism development. These results emphasize the need for industry-wide adoption of green practices, fostering a collaborative approach to achieving environmental and economic goals in Vietnam's travel and tourism sector. This study contributes to the growing body of research on sustainable marketing and its implications for emerging markets like Vietnam.

**Keywords:** Impact, Business performance, Competitive capabilities, Green marketing, Tourism enterprises, Vietnam

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**Transparency:** The authors confirm that the manuscript is an honest, accurate, and transparent account of the study; that no vital features of the study have been omitted; and that any discrepancies from the study as planned have been explained. This study followed all ethical practices during writing.

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## 1. Introduction

In the context of increasingly fierce competition, strict environmental policies, higher environmental concerns regarding customers rapid technological development, and sustainable development [1] traditional marketing is gradually being replaced by green marketing [2]. Green marketing was first proposed by Lazer [3] as a social aspect of marketing strategy, emphasizing the scarcity of resources and environmental impact on marketing activities and the greening trend in different aspects of traditional marketing. The concept of green marketing has become much more popular since the early 1990 but there is not universal definition of green marketing. However, a common point that can be seen in the definitions of green marketing is that green marketing focuses on all current marketing activities of enterprises towards sustainable development, strengthening social relations, and exploiting customer value in the long term.

Green marketing is an important area of academic research. According to Bhardwaj, et al. [4] green marketing has evolved significantly over the past two decades, the knowledge of green marketing varies across continents, and the topics have diversified proportionally. Green marketing has received much attention from scholars around the world [5]; Green marketing has been created, developed, and is still a topic of interest for researchers [6] and many studies on this topic have been published. Asia has most published research works (30 works) [7] because of the strong increase in environmental issues in developing countries in Asia [8] and the need to go green from the governments of these countries [9]. In Europe and America, research on green marketing also accounts for a significant volume of 20 studies; the remaining regions, such as Australia and Africa represent a low proportion. Empirical research accounts for the majority of studies, accounting for about 71.6% and only the remaining 28.4% are theoretical research [7].

In terms of research methods, most studies use quantitative methods, accounting for 56.9% of 62 studies; 33 studies used qualitative methods, making up 30.3% and 14 studies use mixed methods, equal to 12.8% [10]. These studies examine the impact of green marketing on the economy in general and business performance in each enterprise. There have been in-depth studies of the relationship between green marketing and business performance, such as Baker and Sinkula [11]; Vaccaro [12]; Lin, et al. [13]; Eneizan, et al. [14] and Goh, et al. [15]. However, these studies have only been conducted in certain areas, so their generalizability is not high. Ngô [10] conducted a literature review and states that there are four main research directions regarding on the impact of green marketing: (1) the impact of green marketing on business performance, (2) the impact of green marketing on competitive capabilities, (3) the impact of competitive capabilities on business performance, and (4) the impact of green marketing on business performance through competitive capabilities. Although these four main research directions have been identified, the results show that there is no consistency in the relationship between green marketing, competitive capabilities, and business performance.

In Vietnam, in-depth studies on green marketing are still limited, mainly focusing on green consumer behavior, environmental awareness, green products, green supply chains, social responsibility, etc. Recent studies have examined the impact of green marketing on business performance [16]; green marketing on the financial performance of small and medium enterprises in Vietnam [17] the competitive capabilities and business performance of small and medium enterprises [10]. It can be seen that in Vietnam, there are few theoretical and empirical studies on the relationship between green marketing and business performance of enterprises to identify the mediating factors of this relationship; especially in service enterprises such as tourism with the research space being the whole of Vietnam.

Given this research gap, this study aims to determine out the impact of green marketing on the business performance of travel agencies in Vietnam and the mediating role of competitive capabilities in this relationship. This study makes important contributions to both theory and practice, as it aims to fill this research gap. To fill this gap, the research team selected travel enterprises in three major cities: Hanoi, Da Nang, and Ho Chi Minh City. These cities represent the three regions of the North - Centre - South region of the country and have a large number of tourists and high tourism revenue in Vietnam. In addition, the research team conducted a multi-group analysis of the MGA to test the path coefficients (beta) to compare the differences between types of enterprises (joint stock companies and limited liability companies (LLC)). The analysis results show that there is no difference in the impact relationships between the two types of enterprises: in both joint stock and LLC companies, the impact relationship is accepted as proposed in the initial hypotheses, and there is no statistically significant difference. The research team conducted a multi-group analysis comparing the path coefficient (beta) to find the difference between enterprises with different years of operation to test the impact of green marketing on business performance. The analysis results show that there is a statistically significant difference between groups of enterprises with different operation years. In those with 11-20 years of operation, business performance is most strongly affected by green marketing.

This research paper is structured into five parts. The remainder of this paper is organized as follows: Section 2 analyzes the theoretical grounds of the research topic and proposes the research model and hypotheses; Section 3 present the research method; and Section 4 present the research results. Finally, there are a discussions and recommendations for future research.

## 2. Theoretical Basis and Research Model

### 2.1. Background Theories

#### 2.1.1. Theory of Competition, Competitive Capabilities

Ritchie, et al. [18] believe that competitive capabilities are “the abilities to create added value and thereby improve national prosperity and socio-economic development.”. In the process of forming and developing theories, there are many mainstream views on competitive advantages built on different views on the factors that create competitive advantages for organizations. The market approach looks for factors that affect enterprises’ the competitive capabilities. This approach suggests that factors related to the field of operation and market orientation determine the performance of enterprises [19].

In contrast, the resource-based approach argues that competitive capabilities are formed by the resources possessed by an enterprise. This theory focuses on the internal environment of enterprises rather than the external environment. This approach emphasizes the use of enterprises' accumulated resources to compete in the business environment. [Wernerfelt \[20\]](#) was one of the first to lay the foundation for resource-based theory to create enterprises' competitive capabilities. The approach to determining an enterprise's competitive capabilities by [Wright, et al. \[21\]](#) applied the "matrix" method. Accordingly, the general model to determine the competitive capabilities of an enterprise must focus on determining two variables: (1) a list of indicators according to the constituent elements and their values and (2) the determination of the importance of the indicators/elements in the list and the weights reflecting the level of their contribution to the competitive capabilities of the enterprise.

Based on the consideration of social responsibility as a tangible asset to meet competitive needs [\[22\]](#) social responsibility will help increase reputation and promote purchasing behavior, and social responsibility is directly related to the business performance of the enterprise [\[23\]](#). Accordingly, new strategies from enterprises must to be implemented amid environmental pressures, which is the effective competitive capability of each enterprise [\[24\]](#). Based on these concepts, [Menon and Menon \[25\]](#) believe that green marketing is a highly effective policy to help enterprises move towards the environment by adjusting activities to meet customer requirements.

#### *2.1.2. Resource-Based Theory*

The Resource-based View Theory (RBV) is considered the foundation of resource studies and is an important theoretical framework that explains how enterprises achieve competitive advantages and how to develop them sustainably. The RBV theory proposes four characteristics of a resource that make this resource the foundation of competitive capabilities: valuable, rare, imperfectly imitable, and nonsubstitutable. In essence, RBV theory is an approach applied to the business environment. Enterprises can achieve sustainable competitive advantages by implementing strategies that create new and different values compared with competitors [\[20, 26-28\]](#). Resources may include physical, human, and other organizational resources.

RBV theory emphasizes the role of resources and capabilities in achieving individual advantages. Resources are owned by the enterprise, which may include physical and financial assets, capable employees, environmental activities, and organizational processes [\[26, 29\]](#). Green innovation is the innovation of the enterprise in the process of implementing environmentally friendly activities, which is an important resource of the enterprise because it can be used to promote the development of the organization. It is rare and difficult for competitors to copy when explained by the RBV theory. [Barney \[26\]](#) argues that RBV theory applies competitive strategies that enable enterprises not only to reduce costs but also to seize market opportunities to achieve competitive advantages that later contribute to improving business performance. An enterprise's performance is considered in terms of financial value, which is the result of the efficient use of firm resources [\[30\]](#). Although enterprises can compete based on similar costs, or by reducing their costs, it is important to ensure that the benefits provided are at least the same. [Newbert \[30\]](#) asserts that enterprises will still benefit from the competitive advantages that increase their performance.

#### *2.1.3. Triple-Bottom Line Theory*

The triple-bottom-line Theory (TBL) was first proposed by [Elkington \[31\]](#). TBL is an accounting framework for measuring and reporting business performance in three dimensions - economic, social and environmental - to encourage organizations to incorporate sustainability into their business operations [\[31, 32\]](#). When the three elements of the TBL are linked, the enterprise can achieve its sustainable development goals. This goal is measured based on the satisfaction of all stakeholders, reputation of the enterprise, and recognition of the brand by the community. These are significant advantages that help enterprises survive and win over competitors.

Studies by [Takala and Pallab \[33\]](#); [Rajesh \[34\]](#) and [Li, et al. \[35\]](#) are all based on the three main components of economic, environmental and social issues as the goal of sustainable development of enterprises. To encourage organizations to incorporate sustainability into business practices, the perspective of sustainable business performance under the impact of green marketing and competitive capabilities is also considered from the economic, social, and environmental perspectives. However, most enterprises are small and medium-sized and often face many difficulties and disadvantages compared to large enterprises or enterprises that have been in business for a long time. According to TBL theory, when conducting business, enterprises will change their thinking, be motivated and willing to make stronger investments in technology and people; thereby, the results achieved will be valuable, sustainable, and long-term.

#### *2.1.4. Stakeholder Theory*

Stakeholder theory was proposed by [Freeman \[36\]](#) which combines corporate responsibility with a range of internal and external stakeholders involved in corporate activities. [Donaldson and Preston \[37\]](#) developed this theory by focusing on three aspects: descriptive, instrumental, and normative approaches. Stakeholder theory is considered a concrete step in the theory of social responsibility, showing that corporate behavior focuses on the sustainability of an economic society. The stakeholder theory emphasizes the importance of cooperation and partnership in achieving common goals. This theory also acknowledges that organizational pressure is not the only major determinant influencing corporate strategic planning and decision making; an enterprise's direction and decisions are also influenced by stakeholders [\[36\]](#). Managers of environmentally proactive enterprises are more committed than are managers of environmentally reactive enterprises [Henriques and Sadorsky \[38\]](#). [Majumdar and Marcus \[39\]](#) point out that when managers achieve a stable balance between

government decisions and policies, they become more effective and innovative; they can then identify the products and resources needed to implement green marketing strategies.

#### 2.1.5. Corporate Social Responsibility Pyramid Model Theory

Carroll proposed the corporate social responsibility pyramid model in Carroll [40] which is based on two economic and legal responsibilities; the higher ones are ethical and philanthropic [23, 41]. Thus, social responsibility can be understood as actions that promoting the advantages of environmentally friendly products/services and develop environmental awareness [42]. Social responsibility has become a fundamental decision that drives corporate environmental behavior [43]. A common understanding of responsibility stems from the concept of stakeholder expectations [40] which is the foundation of green marketing strategies [44]. Social responsibility activities can provide advantages to an organization, facilitating other important business goals such as customer and employee retention [43]. Furthermore, Menguc, et al. [45] find that an enterprise's orientation towards the natural environment links internal strategic resources, such as social responsibility and environmental commitment. Fraj-Andrés, et al. [46] assert that enterprises adopt such an orientation because they recognize the importance of environmental conservation and integrate environmental values into their strategic marketing plans.

### 2.2. Some Basic Concepts

#### 2.2.1. Green Marketing

Nowadays, when people are increasingly concerned about the environment in business activities, green marketing has become a trend from academic research to practical application in the world and Vietnam, from which views on green marketing have gradually been formed over time. Green marketing is also used in synonymous phrases such as "environmental marketing", "ecological marketing", "sustainable marketing", and "marketing for green products" [47]. Through social contexts as well as the development of management theories, the approach and concept of green marketing have gradually changed from directly limiting negative impacts or limiting harmful agents to the environment, from passive behavior to proactive thinking in environmental protection, and from implementing green marketing to increase business benefits to balancing the interests of stakeholders in the enterprise's business environment. The meanings and concepts of green marketing outlined by various authors are listed in Table 1.

**Table 1.**  
Concepts of green marketing.

No.	Concepts	Meanings	Authors
1	Green marketing limits the causes of environmental degradation	Green marketing involves all marketing activities that can help reduce the causes of environmental problems and can improve environmental problems	Henion and Kinnear [48]
2	Green marketing limits the impact on the environment	Green marketing incorporates a range of activities, including product modifications, manufacturing processes, packaging, and advertising, to minimize negative impacts on the natural environment	Thompson and Strickland [49]; Groening, et al. [50] and Alkhatib, et al. [51]
3	Green marketing cares and makes efforts for the environment	Green marketing is the study of all efforts to consume, produce, distribute, communicate, package and recycle products in a way that is sensitive to or responsive to ecological concerns.	Rahbar and Wahid [52]; Leonidou, et al. [53] and Bathmathan and Rajadurai [54]
4	Green marketing is oriented towards social responsibility and sustainable development	Green marketing is a comprehensive management process that is responsible for identifying, anticipating and satisfying the needs of customers and society in a profitable and sustainable manner	Walker and Hanson [55]; Jain and Kaur [56]; Papadas and Avlonitis [57] and Jung, et al. [58]

Our study approaches the concept of green marketing from the fourth perspective, according to which green marketing is a strategic process involving the evaluation of stakeholders to create meaningful long-term relationships with customers while maintaining, supporting and improving the natural environment. The corresponding components of green marketing are a set of elements: (1) green marketing strategy; (2) green marketing tactics; and (3) internal green marketing. These components are based on a long-term approach (strategy), short-term orientation (tactics), and internal activities towards green marketing [59].

#### 2.2.2. Competitive Capabilities

Competitive capabilities, competitiveness, and competitive abilities are terms known to have the same content and are widely used. Despite the importance of competitive capabilities in many aspects, there is still a lack of a unified definition, as microeconomic and macroeconomic approaches define competitive capabilities differently [60, 61]. Moreover, competitive capabilities are a multidimensional concept that can be considered at three levels: (1) country, (2) industry, and



(3) enterprise [19]. In this study, the researchers examined competitive capabilities at the enterprise level. Although there may be many other ways to express the concept of competitive capabilities of enterprises, in essence, it is possible to emphasize some basic characteristics as follows. First, the competitive capabilities of an enterprise depend on both internal factors (strengths and advantages) and external factors (business environment). Second, the competitive capabilities of each enterprise are not determined in isolation, but lie in the evaluation and comparison with competitors in the same field, in the same market. Third, the strengths and advantages that determine an enterprise's competitive capabilities must aim at customer satisfaction (direct goal) to achieve optimal goals, including profit (direct and final goals) [62]. Finally, the competitive capabilities of an enterprise can be demonstrated through many different indicators, including a number of synthetic indicators reflecting production and business results/efficiency (sales, market share, profit) and indicators reflecting the strengths and advantages of the enterprise (technology, finance, human resources, products/services).

There are many different capabilities considered as competitive capabilities at the enterprise level including production technology level, human resources, enterprise financial capabilities, price competitiveness, corporate culture capabilities, export organization capabilities, market research capabilities, image-reputation capabilities (corporate prestige), customer and partner search capabilities, production organization capabilities, adaptability and change management capabilities, international payment capabilities, trade dispute resolution capabilities [49] responsible management capabilities [63] information technology capabilities [64] and dynamic capabilities [65].

However, if we consider the impact of the components of competitive capabilities on each other and business results taking into account environmental factors through green marketing activities, within the framework of the research paper, the authors consider the components of competitive capabilities, including (1) responsible management capabilities, (2) information technology capabilities, and (3) dynamic capabilities. Accordingly, responsible management capabilities include being accountable for all consequences of management decisions made, which is a management method in which decisions are made based on values from the perception of the link between enterprises, society, and the environment [63]. Information technology capabilities include the ability to leverage information technology to leverage [64] to discover, develop, and exploit information technology resources [66] to perform information management tasks in enterprises [64] and create value by using information technology resources and technological know-how [67]. Dynamic capabilities involve identifying, capturing, and transforming the capabilities needed to build and deploy business models [65] that enable enterprises to upgrade their traditional capabilities and direct resources to more profitable activities.

### *2.2.3. Business Performance*

Zin and Abd Manaf [68] argued that business performance is a frequent research topic in most management fields. It is considered a set of analytical and evaluative processes that enables business managers to pursue and achieve pre-selected goals. The term business performance is widely applied in many management fields. Although widely used, its exact meaning is rarely clearly stated [69].

Business performance is understood as efficiency and effectiveness [70] or lean production, competitive capabilities, cost reduction, value added, employment, growth, and survival of the enterprise. [71] defined business performance as a reflection of the benefits they expect when managing business operations, including improving the image of the enterprise, reducing waste, minimizing costs, improving customer satisfaction and productivity, and increasing market share and profits. [35] argue that business performance is the result of simultaneously implementing the economic, environmental, and social goals of an enterprise in a concern for the interests of the enterprise and its stakeholders. Schaltegger and Wagner [72] believe that sustainable business performance is the result of evaluating all aspects of business operations in the direction of the enterprise's sustainability. The development goals of enterprises include three main components that integrate economic, environmental and social issues into business operations [33-35]. The research team has a similar view of approaching this concept of business performance. Accordingly, enterprises' business performance is evaluated based on three components: economic, environmental, and social.

### *2.3. Research Hypotheses*

The theoretical model of this study is designed to include four main components: green marketing (green marketing strategy, green marketing tactics, and internal green marketing), competitive capabilities (responsible management capabilities, information technology capabilities, and dynamic capabilities) and business performance (economic, environmental, and social performance). The research team proposed seven hypotheses that showed the relationship between the components in the model structure.

#### *2.3.1. The Relationship between Green Marketing and Business Performance*

Many problems, such as noise pollution, air pollution, and global warming, that threaten environmental sustainability originate from human behavior [73, 74] and can therefore be managed by changing the relevant behavior to reduce its environmental impact [75]. Green marketing is a feasible and promising approach to change professional purchasing behavior [76]. Professional buyers are willing to pay more for high-quality green products [77] thereby raising business profits. In addition, commercial pressure forces enterprises to promote product introductions to maintain market share and sustain growth. However, any increase in the number of new products incurs greater costs for enterprises and the natural environment. Palmer and Truong [78] showed that a company's green efforts can bring short-term financial benefits when introducing products that apply green technology. New green products differ from internally oriented environmental activities because they are market oriented; therefore, they hold immediate commercial value that can improve the enterprise's short-term and long-term profitability. Sundaram and Inkpen [79] argued that stakeholders (customers,

suppliers, employees, society, etc.) deserve the attention of management. An enterprise is a system of relationships between stakeholders that aims to create wealth for all stakeholders [80]. Thus, through green marketing activities, enterprises create more value for stakeholders, including customers, because green marketing includes a comprehensive strategy of the enterprise with the natural environment, expressed through strategic decisions, tactics and internal culture [59].

An enterprise that wants to develop sustainably must demonstrate its value when it implements social responsibility. Business performance evaluations from a sustainability perspective are becoming a trend. Takala and Pallab [33] state that sustainable business performance focuses on the economic, social, and environmental aspects of sustainable development. This is the goal of implementing social responsibility with stakeholders, and is also the main orientation of green marketing.

*H<sub>1</sub>: Green marketing has a positive impact business performance.*

### 2.3.2. Relationship between Green Marketing and Competitive Capabilities

Green marketing can be a differentiation strategy that creates a competitive advantage for enterprises. Companies that integrate green elements into their competitive strategies are likely to have superior resources and capabilities [81, 82]. This finding highlights the need for green marketing to create important competitive advantages for enterprises.

Green marketing, specifically internal green marketing, spreads the green culture of a company more widely [57] through responsible management capabilities. Management behaviors and capabilities are demonstrated by actions such as communicating and addressing important environmental issues, initiating environmental programs and policies, rewarding employees for environmental improvement, contributing organizational resources to environmental initiatives Menguc, et al. [45] encouraging employees to develop skills and capabilities to implement environmental strategies successfully, and creating environmental experts for the organization [83, 84].

Gupta and Kumar [85] argue that when green initiatives become part of corporate culture, they facilitate superior performance across different organizational functions. According to Papadas, et al. [59] internal green marketing is the degree to which the environmental values of an enterprise are integrated into all internal stakeholders of the organization. This illustrates that this component influences managers' awareness, shapes environmental values in perception, and governs responsibility-oriented management decisions.

*H<sub>2a</sub>: Green marketing has a positive impact on corporate responsible management capabilities.*

Additionally, the use of technology plays an important role in organizational sustainability of the organization [86]. Investing in information technology is a suitable solution. Organizations can enhance information technology capabilities to meet environmental requirements, increase profits, and enhance the competitive position of the enterprise in the market [87]. These benefits enable enterprises to build sustainable development and green marketing orientations, and invest appropriately in this issue. The application of information technology is also the result of the innovation process carried out by the company [88]. This includes innovative content related to green marketing. Therefore, by investing in information technology as a solution to achieve the environmental and social goals of green marketing, enterprises building green marketing strategies tend to invest in information technology as a comprehensive solution. Therefore, this study proposes the following research hypothesis for the impact of this factor:

*H<sub>2b</sub>: Green marketing has a positive impact on information technology capabilities of enterprises.*

With increasingly complex and rapid changes in the market, dynamic capabilities have become a prerequisite strategy for enterprises to gain a competitive advantage. The cultivation and promotion of dynamic green capabilities play a key role, especially in the green development stage of manufacturing enterprises [89]. Green dynamic capabilities emphasize resource integration, resource restructuring, and environmental understanding capabilities [90]. Green marketing encourages enterprises to establish symbiotic and mutually beneficial relationships with stakeholders, create a favorable external environment, and better integrate consumers' knowledge of environmental impacts into products. Enterprises can integrate suppliers' knowledge and capabilities regarding the environmental impacts of components, materials and production processes [91] to enhance their resource integration capabilities.

In dynamic markets, dynamic capabilities depend on the rapid creation of new knowledge and volatile processes [92]. Therefore, green marketing encourages companies to existing cognitive models and promote changes in cognition. By learning, creating, and transferring new knowledge, green marketing can be strengthened at the organizational level and promoted through institutionalization, which can enhance an enterprise's resource restructuring capability [93] also known as resource reconfiguration capability.

Enterprises must always pay attention to and understand environmental and social issues in the green product innovation process. Therefore, green marketing can promote the development of enterprise capabilities in the industry, which can improve the environmental understanding of enterprises [89].

Therefore, this study proposes the following research hypothesis:

*H<sub>2c</sub>: Green marketing has a positive impact on the dynamic capabilities of enterprises.*

### 2.3.3. Relationship between Competitive Capabilities and Business Performance

Previous studies have emphasized the importance of enterprises' resources and capabilities in achieving superior financial positions in the market [94, 95]. In different research contexts, the indications of capabilities and business performance can be adjusted, but most studies confirm similar positive impact results. In this study, the aforementioned competitive capabilities include responsible management, information technology, and dynamic capabilities, which are hypothesized to have a positive impact on the sustainable business performance of the enterprise.

Nonet, et al. [96] describe responsible management, including the development of normative knowledge, critical thinking, and soft skills; a broad and comprehensive understanding of management; the development of a shared vision for the benefit of all stakeholders; and a continuous improvement process through the ability to think proactively and receive feedback from the team. A business manager who possesses all of the above qualities, combined with the necessary ethical standards, will have the basis for promoting enterprises to achieve sustainable goals because to perfect responsible management capabilities, managers must achieve the three core criteria of SRE, including sustainability, responsibility, and ethics in all situations [97]. In other words, to achieve sustainable business performance, enterprises must possess responsible management capabilities. An enterprise with responsible management capabilities will have the basis to pursue economic, social, and environmental goals. Based on these arguments, the following hypothesis is proposed.

*H<sub>3a</sub>: Responsible management capabilities have a positive impact on business performance of the enterprises.*

Information technology is now defined as software, artificial intelligence, big data, machine learning, etc., that can not only change the nature of the product [98] but also change the traditional way of doing business by redefining business processes and relationships Chae, et al. [67]. Chae, et al. [67] argue that enterprises can improve their business performance by leveraging information technology capabilities to increase revenue, reduce costs, or both, which is the economic component of business performance. Companies that achieve a higher level of information technology capabilities are said to be in a better position to manage intangible assets that create market leadership [99].

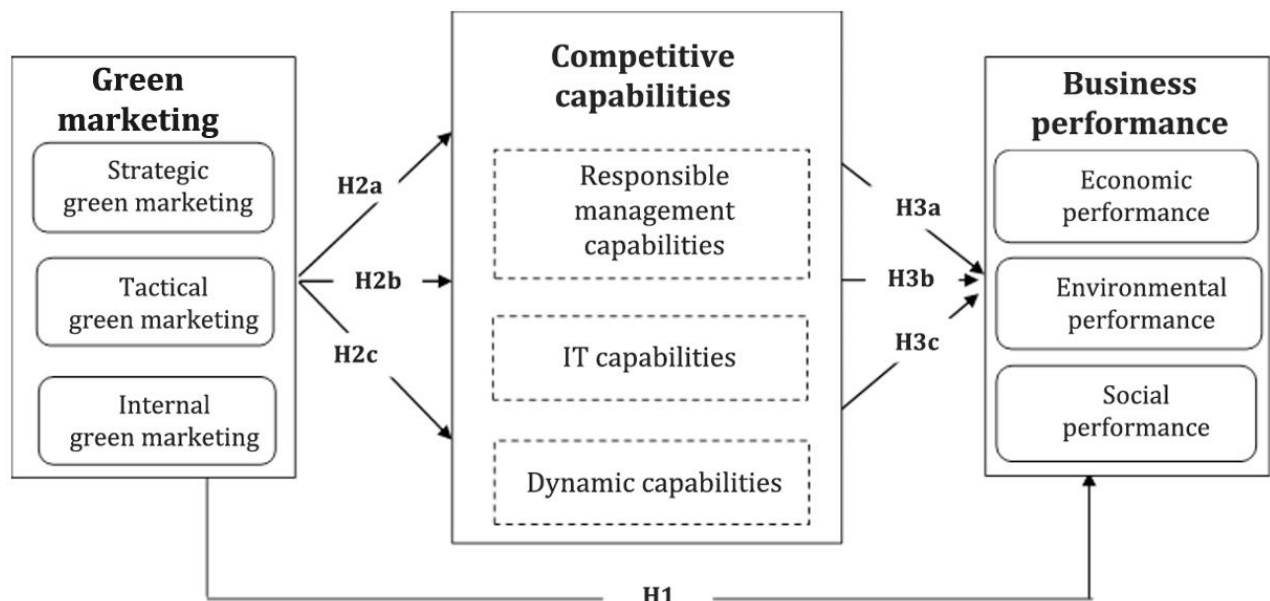
With the increasing importance of information in today's global marketplace [100] achieving information technology capabilities to improve business performance has become a new imperative. Based on this, we propose the following hypothesis:

*H<sub>3b</sub>: Information technology capabilities have a positive impact on business performance of the enterprises.*

An enterprise with strong dynamic capabilities will be able to build and innovate or re-establish resources in a useful way to respond to market changes or even to change the market. The enterprise's resources must be flexibly coordinated with the activities of partner enterprises to bring value to customers [65]. This helps the enterprise achieve better performance. An enterprise with high dynamic capabilities is stronger than its competitors in all three aspects of recognizing, capturing, and transforming [65]. It is an important argument to believe that this capability has a positive impact on an enterprise's business performance. Dynamic capabilities are difficult for competitors to imitate and copy, because they are built on the unique characteristics of business managers and the organization's well-honed habits and culture. This gives dynamic capabilities many similarities to core competencies. In the world of the Internet and changes in information technology, dynamic capabilities may even be the most important capabilities of enterprises [65] that play a role in their success and development, helping enterprises identify the driving forces that create competitive capabilities. Based on these arguments, this study proposes the following hypothesis:

*H<sub>3c</sub>: Dynamic capabilities have a positive impact on enterprises' business performance.*

The proposed research model in this study is shown in Figure 1.



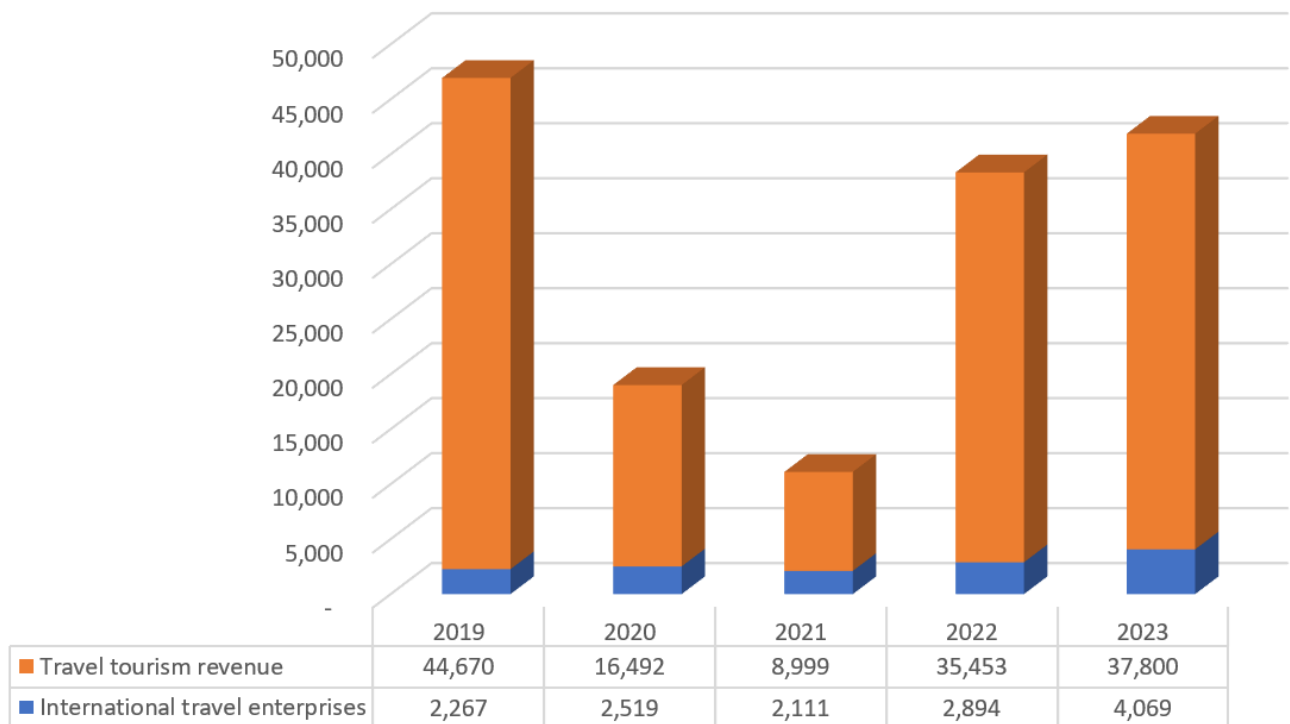
**Figure 1.**  
Research model proposed by the research team.

### 3. Research Methods

#### 3.1. Research Context

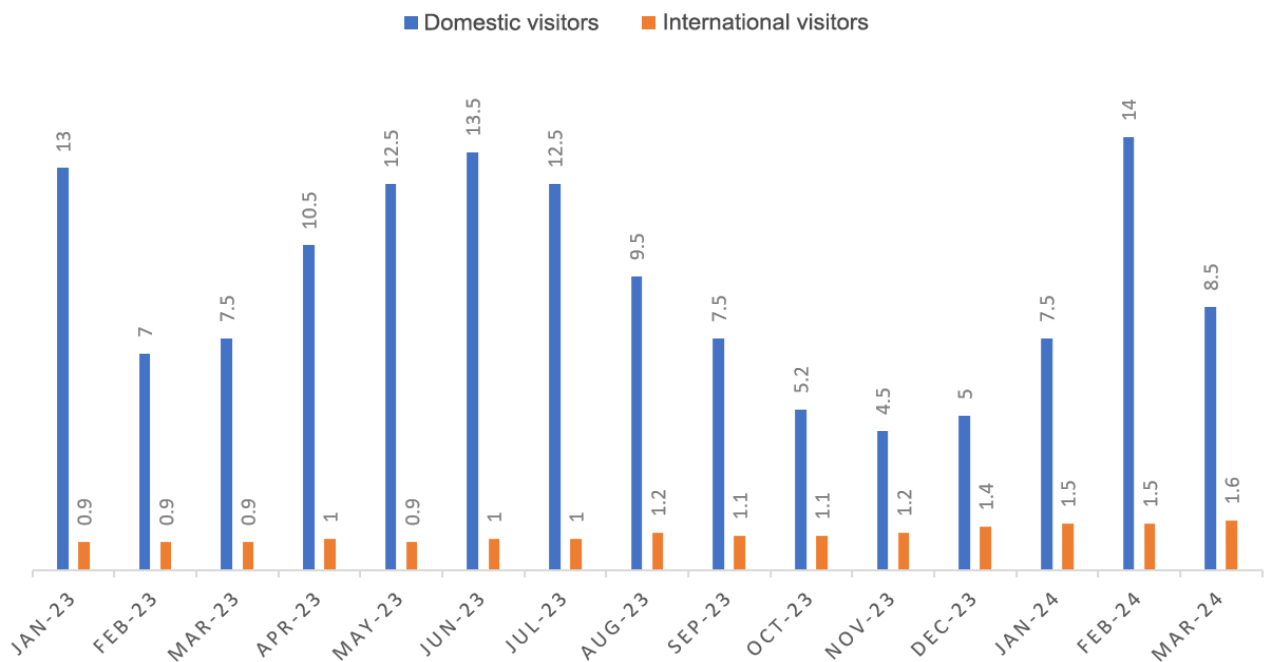
In Vietnam, tourism has been identified as a smokeless industry, creating very high value that contributes to national economic growth. The number of travel enterprises is growing, with a total of 4,067 in 2023 compared to 2,267 in 2019. Despite the impact of the Covid-19 pandemic, especially the most devastating in 2021, the tourism industry in general and

travel tourism in particular are truly bright spots, with positive breakthroughs and important contributions to Vietnam's socio-economic growth. The travel tourism revenue in 2022 and 2023 is 35.5 and 37.8 trillion VND (Figure 2).



**Figure 2.**  
Tourism revenue and number of international travel enterprises from 2019-2023.  
**Source:** General statistics office and Vietnam national administration of tourism.

Regarding the number of international tourists, in 2023, the total number of international visitors reached 12.6 million; the total number of domestic visitors in 2023 was 108.2 million. Service and tourism activities in the first quarter of 2024 were vibrant and grew impressively with revenue from accommodation, food and beverage services and travel reaching VND 189 trillion, up 15.3% over the same period last year, of which accommodation and food services reached about VND 174.9 trillion, up 13.4%; travel and tourism recorded an estimated VND 14.1 trillion, up 46.3% (Figure 3). Vietnam tourism continues to win many prestigious international awards such as: “World's Leading Heritage Destination 2023” and many other awards at the World Travel Awards 2023.



**Figure 3.**  
Number of domestic and international tourists to Vietnam in 2023-2024.  
**Source:** general statistics office and Vietnam national administration of tourism.



Despite successes, the tourism industry is still facing many difficulties and challenges. The development process also has negative impacts on the environment and society at destinations, such as the destruction of natural landscapes, environmental pollution, and the low rate of visitor return. Thus, to develop sustainable tourism services, travel enterprises need appropriate development strategies, increase their social responsibility, and implement green marketing.

Within the scope of this article, to ensure the reliability of the data, the research team collected data from travel enterprises of three tourist destinations: Hanoi, Da Nang, and Ho Chi Minh City. These are the three tourist destinations with the largest numbers of travel enterprises, tourists, and tourism revenue in Vietnam. As such, they ensured the necessary factors to study the impact of green marketing on the business performance of travel enterprises in Vietnam.

### 3.2. Research Process

This study was conducted in two phases: preliminary research and official research. The preliminary research was carried out in two steps. Step 1: First, the research team conducted interviews with 15 experts, including three experts specializing in green marketing and competitive capabilities, three tourism experts, and nine tourism business leaders, to discuss the appropriateness of the proposed research model as well as the measurement scales of variables in the model. Next, the team adjusted the theoretical model and added observed variables to complete the research model. Step 2: The research team conducted online pilot interviews with 80 people from 15 travel enterprises in Hanoi, Da Nang, and Ho Chi Minh City, to check and complete the questionnaire before conducting the official survey.

Official research was conducted using quantitative research methods. The selected survey subjects were middle and senior business administrators (board of directors, board of managers, heads, deputy heads of sales departments, tour management team leaders in markets) of enterprises in Hanoi, Da Nang, and Ho Chi Minh City. The researchers conducted a large-scale survey by directly distributing the questionnaires to the survey subjects and sending the survey link via email via zalo to receive the largest number of responses.

The questionnaire included three parts: the purpose of the questionnaire, demographic information, and content of the questions. The measurement tool is a 5-point Likert scale, with 1 = completely disagree and 5 = completely agree. This is a popular scale in many studies on behavioral and cognitive status. The languages used in the questionnaire were Vietnamese and English. The hypotheses, scales and research models were tested using SMARTPLS 4 software. To determine the impact between the proposed variables in the model, the researchers performed sequential steps, including assessing the reliability of the scale through the Cronbach's alpha index, the composite reliability coefficient (CR), the value (including convergent value and discriminant value) through the HTMT coefficient, the extracted variance AVE, and the correlation matrix between the research variables, testing the theoretical model using linear structural modeling (SEM), and conducting multi-group analysis MGA to determine the differences in research results and some characteristics of the survey sample.

### 3.3. Measurement Scale Development

The scales were inherited from previous studies and revised by qualitative researchers (Table 2).

**Table 2.**  
Measurement scales for variables and reference sources.

Variables	Code	Descriptions	References
Strategic green marketing	CL1	The company adopts environmental policies to select partners	Papadas, et al. [59]
	CL2	The company invests in research and development for environmentally friendly products/services	
	CL3	The company strives to use renewable energy sources	
	CL4	The company is open to feedback on environmental activities	
	CL5	The company conducts market research to develop green demand	
	CL6	The company prioritizes targeting environmentally conscious customers	
Tactical green marketing	CT1	The company prioritizes e-commerce to be more environmentally friendly	Papadas, et al. [59]
	CT2	The company prioritizes digital media to promote products/services to be more environmentally friendly	
	CT3	The company minimizes the use of paperwork at work if possible	
	CT4	The company prioritizes the use of recycled materials in their products/services	
	CT5	The company is willing to accept higher costs for environmentally friendly products/services	

Variables	Code	Descriptions	References
Internal green marketing	NB1	Employees' environmentally-friendly actions are recognized and rewarded	<a href="#">Papadas, et al. [59]</a>
	NB2	Candidates who have participated in environmental activities will be given priority in recruitment	
	NB3	The company communicates to employees about their green marketing strategy	
	NB4	The company encourages employees to use environmentally friendly products/services	
	NB5	Employees believe in the enterprise's environmental values	
Responsible management capabilities	QL1	The company manages based on integrity, truth, professionalism	<a href="#">Edgar, et al. [63]</a>
	QL2	The company manages activities transparently and openly on an ethical basis	
	QL3	When making decisions, the company always avoids influencing stakeholders	
	QL4	The company listens to the views of stakeholders before making decisions	
	QL5	The company manages in a way that is ready to change for the benefit of stakeholders	
IT capabilities	CN1	The company knows how to use information technology to improve operations	<a href="#">Tippins and Sohi [64]</a> Expert correction
	CN2	The company's IT staff is highly skilled	
	CN3	The company has high levels of technical expertise in information technology	
	CN4	The company has the knowledge to communicate with customers and partners via information technology	
Dynamic capabilities	NLD1	The company easily recognizes changes in the environment	<a href="#">Teece [65]</a> Expert correction
	NLD2	The company grasps opportunities in the business environment well	
	NLD3	The company changes quickly to take advantage of opportunities	
Economic performance	KT1	The company achieves its goals within budget	<a href="#">Li, et al. [35]</a> Expert correction
	KT2	The company achieves its financial goals	
	KT3	The company meets the financial goals of its investors	
Environmental performance	MT1	The company succeeds in reducing energy consumption	<a href="#">Li, et al. [35]</a> Expert correction
	MT2	The company succeeds in reducing waste	
	MT3	The company reduces its environmental impact	
Social performance	XH1	The company succeeds in meeting customer needs	<a href="#">Li, et al. [35]</a> Expert correction
	XH2	The company meets user needs	
	XH3	The company meets government requirements	
	XH4	The company succeeds in meeting community needs	

Source: Research team's analysis results.

### 3.4. Ethical Approval

The ethics committee at Thuongmai University rigorously examined our research to ensure that we upheld the highest ethical standards throughout the entire process. This commitment to ethical integrity underscores the credibility and reliability of our findings. All participants were notified of the purpose of the investigation and introduced to finish informed consent before participating. The informed consent was collected in a written form attached to the questionnaire link.

### 3.5. Data Collection and Research Sample

Based on the data found on the website <https://csdl.vietnamtourism.gov.vn/>, the number of travel enterprises in Vietnam as of June 2024 was 6388. The research team selected 3915 enterprises with more than five years of establishment and stable business processes. Thus, the total research population of this article is 3915 travel enterprises, including both international and domestic travel enterprises. The team randomly selected 10% of the population to conduct the survey, resulting in a sample of 392 enterprises. According to Hair, et al. [101] the observation/measured variable ratio is 5:1, meaning that at least five observations are needed, for each measured variable, and the best is 10:1 or more. Thus, with the measured variable parameter determined as 38 and the number of observed samples as 392, the ratio of 10.32/1 is appropriate and ensures reliability.

We contacted the managers and collected their responses to a questionnaire online via email and Zalo. All participants were instructed to read the purpose of the study and complete an informed consent form before answering the survey questions connected to the questionnaire. They were assured of their anonymity and informed that they could withdraw from the study at any time. This ensured that they could provide their comments accurately.

The data collection results showed that the number of questionnaires issued was 392, the number of questionnaires collected was 382, and the response rate was 97.45%, of which two were not eligible for analysis, and the remaining 380 valid questionnaires were analyzed.

The general characteristics of the samples are listed in Table 3.

**Table 3.**

Descriptive statistics of observed sample characteristics.

Characteristics		Number (People)	Percentage (%)
Operation scope	Domestic	59	15.5
	Domestic and international	321	84.5
Years in operation	< 5	0	0
	5-10	225	59.2
	11-20	128	33.7
	> 20	27	7.1
Number of employees	< 10 (micro enterprises)	0	0
	11-50 (small enterprises)	276	72.6
	51-100 (medium enterprises)	77	20.3
	> 100 (big enterprises)	27	7.1
Annual revenue (billion VND)	< 10	0	0
	10-100	235	61.8
	101-300	118	31.1
	> 300	27	7.1
Total capital (billion VND)	< 3	0	0
	3-50	280	73.7
	51-100	73	19.2
	> 100	27	7.1
Types of business	Joint-stock	227	59.7
	Limited liability	153	40.3
	Partnership	0	0
Forms of administration mechanism	Online	0	0
	Functional	0	0
	Online functional	380	100.0

Source: Research team's analysis results.

## 4. Research Results

### 4.1. Evaluation of the Measurement Model of First-Order Variables

The measurement model was evaluated based on reliability and validity, in which reliability was evaluated based on specific measurements, such as Cronbach's alpha reliability and composite reliability coefficient (CR), while validity (including convergent validity and discriminant validity) was evaluated through the HTMT coefficient, AVE, and correlation matrix between research variables (Figure 4).

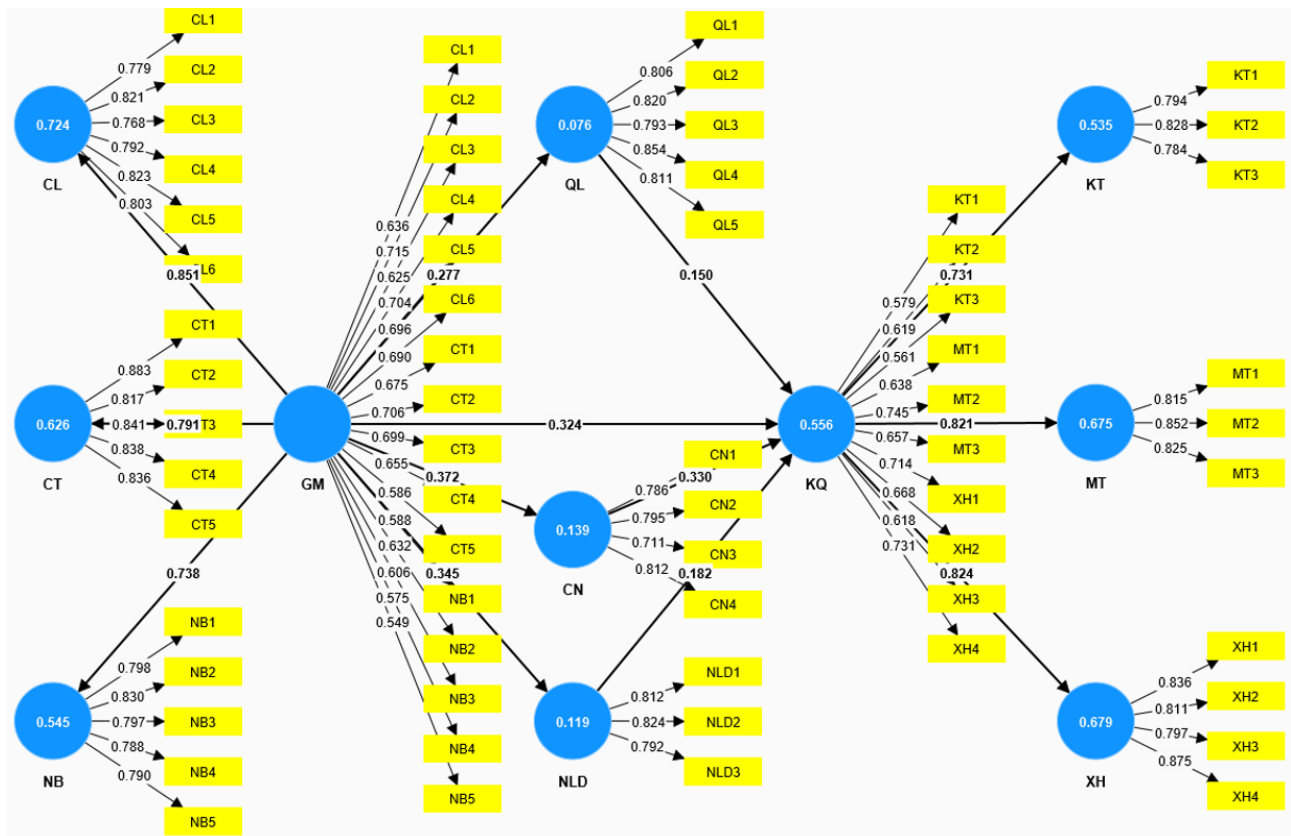


Figure 4.

Measurement model of first-order variables.

Source: Research team's analysis results.

The scale testing results from Table 4 show that the factors loading are all greater than 0.7, the scales are all reliable (Cronbach's Alpha is all greater than 0.7 and the composite reliability CR of the scales is all greater than 0.7), the extracted variance AVE is all greater than 0.5. The measurement scales satisfied both validity and convergent validity.

Table 4.

Scale reliability Cronbach's Alpha, CR, AVE, factors loading.

Structure		Observed variables	Factors loading	Cronbach's alpha	Composite reliability (rho_c)	Average variance extracted (AVE)
GM	CL	CL1	0.779	0.886	0.913	0.637
		CL2	0.821			
		CL3	0.768			
		CL4	0.792			
		CL5	0.823			
		CL6	0.803			
	CT	CT1	0.883	0.898	0.925	0.711
		CT2	0.817			
		CT3	0.841			
		CT4	0.838			
		CT5	0.836			
	NB	NB1	0.798	0.86	0.899	0.641
		NB2	0.830			
		NB3	0.797			
		NB4	0.788			
		NB5	0.790			
QL		QL1	0.806	0.875	0.909	0.668
		QL2	0.820			
		QL3	0.793			
		QL4	0.854			
		QL5	0.811			
CN		CN1	0.786	0.782	0.859	0.603
		CN2	0.795			



Structure		Observed variables	Factors loading	Cronbach's alpha	Composite reliability (rho_c)	Average variance extracted (AVE)
NLD		CN3	0.711	0.737	0.851	0.655
		CN4	0.812			
		NLD1	0.812			
		NLD2	0.824			
		NLD3	0.792			
KQ	KT	KT1	0.794	0.723	0.844	0.644
		KT2	0.828			
		KT3	0.784			
	MT	MT1	0.815	0.776	0.87	0.69
		MT2	0.852			
		MT3	0.825			
	XH	XH1	0.836	0.85	0.899	0.69
		XH2	0.811			
		XH3	0.797			
		XH4	0.875			

Source: Research team's analysis results.

The analysis results from Table 5 show that the square root value of AVE of each concept (located on the main diagonal) is larger than the correlation coefficients between the latent variables in the same vertical and horizontal rows respectively. Therefore, all concepts all reached discriminant validity.

**Table 5.**  
Correlation between research concept structures (Fornell-Larcker).

Variables	CL	CN	CT	KT	MT	NB	NLD	QL	XH
CL	0.798								
CN	0.333	0.777							
CT	0.503	0.299	0.843						
KT	0.363	0.489	0.333	0.802					
MT	0.351	0.485	0.312	0.517	0.831				
NB	0.454	0.247	0.387	0.284	0.431	0.801			
NLD	0.307	0.514	0.219	0.284	0.508	0.298	0.809		
QL	0.259	0.519	0.238	0.34	0.361	0.15	0.466	0.817	
XH	0.393	0.511	0.3	0.359	0.476	0.374	0.455	0.461	0.831

Source: Research team's analysis results.

The research team also considered the HTMT index (discriminant validity), which examines of whether a concept is truly different from other research concepts based on empirical standards. Therefore, calculating discriminant validity indicate that a research concept is unique and reflects a different phenomenon compared to other research concepts in the model. Table 6 shows that all concepts have an HTMT index of less than 0.85. This indicates that the concepts meet the requirements of discriminant validity.

**Table 6.**  
Results of testing the HTMT index for the measurement model.

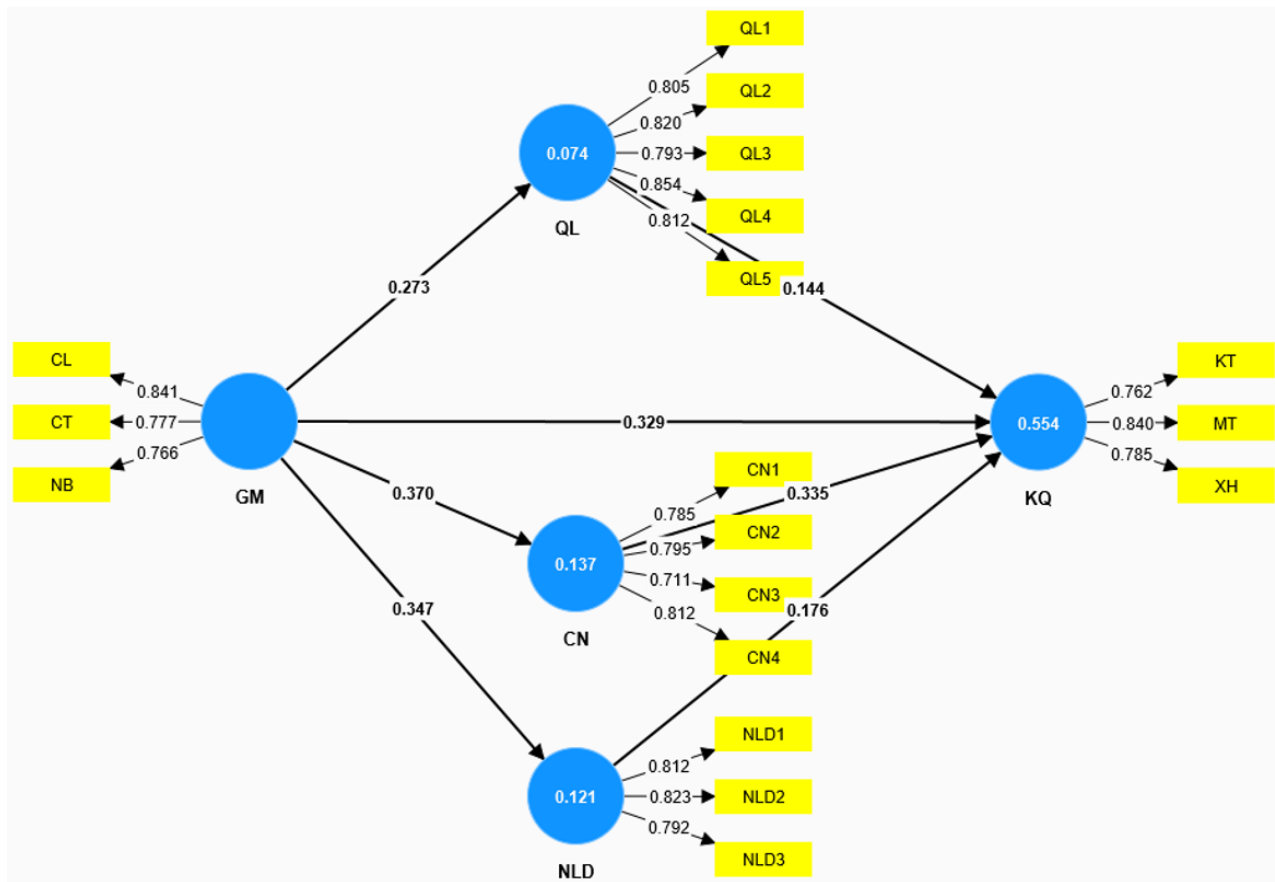
Variables	CL	CN	CT	KT	MT	NB	NLD	QL	XH
CL	-								
CN	0.386	-							
CT	0.558	0.341	-						
KT	0.451	0.636	0.41	-					
MT	0.421	0.617	0.371	0.683	-				
NB	0.516	0.297	0.435	0.358	0.526	-			
NLD	0.379	0.675	0.266	0.39	0.669	0.375	-		
QL	0.295	0.614	0.267	0.427	0.433	0.171	0.576	-	
XH	0.449	0.623	0.34	0.454	0.58	0.437	0.577	0.534	-

Source: Research team's analysis results.

In addition, the study also uses the outer VIF coefficient to check the collinearity between observed variables. The results show that the observed variables all have outer VIF coefficients of less than five, so no collinearity occurs between the observed variables.

#### 4.2. Evaluation of the Measurement Model of Second-Order Variables

The results of the second-order variable measurement model are shown in Figure 5. The analysis results in Table 7 show that the first-order variables of the second-order variable structure have outer loading coefficients greater than 0.7, and the first-order variables are all significant in the model. The second-order variables GM and KQ had Cronbach's Alpha and CR indices greater than 0.7, and AVE greater than 0.5, so the second-order variables GM and KQ had high reliability and convergence.



**Figure 5.**  
Second-order variable measurement model.  
**Source:** Research team's analysis results.

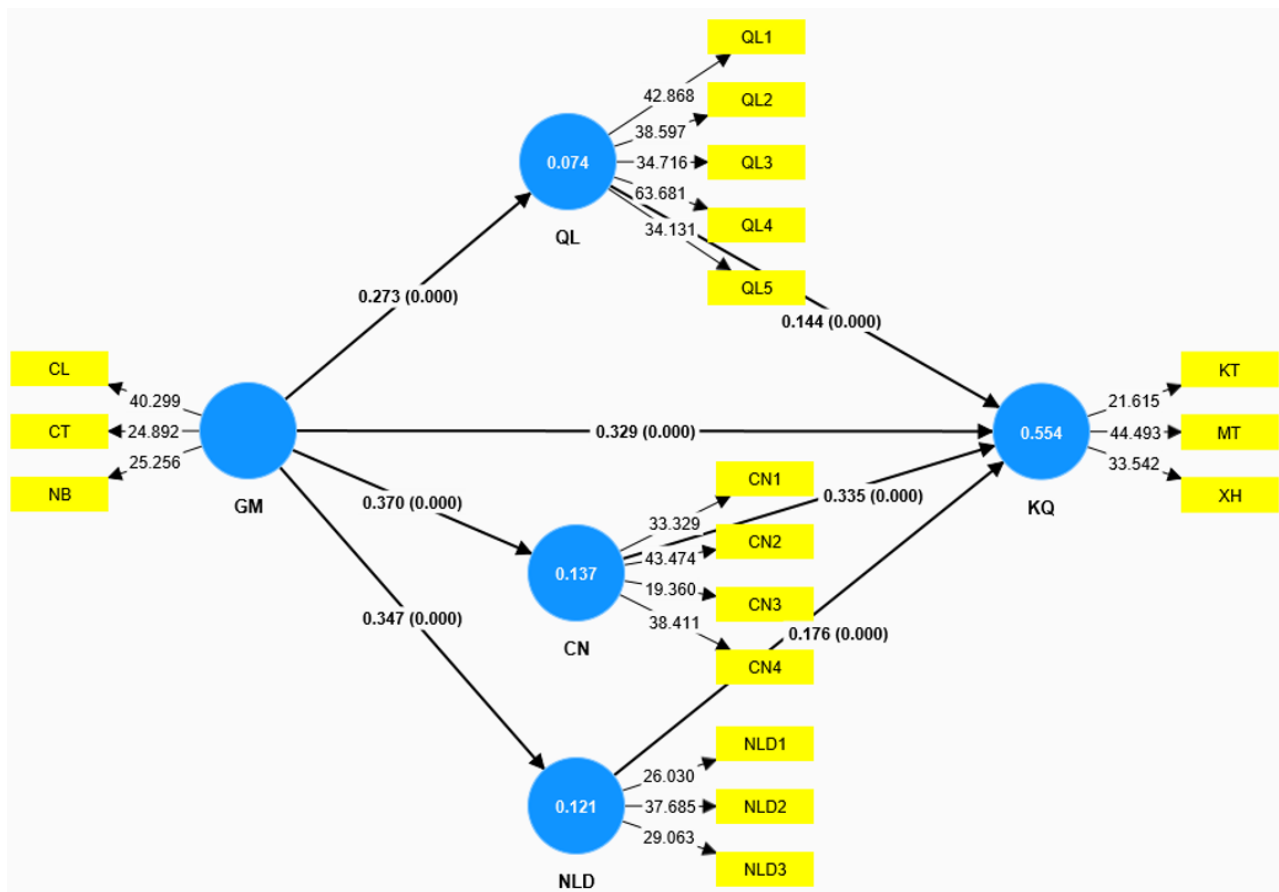
**Table 7.**  
Reliability of Cronbach's Alpha, CR, AVE, and the factor loading of second-order variables.

Measurement scales	Observed variables	Factors loading	Cronbach's alpha	Composite reliability (rho_c)	Average variance extracted (AVE)
GM	CL	0.841	0.709	0.837	0.632
	CT	0.777			
	NB	0.766			
KQ	KT	0.762	0.711	0.838	0.634
	MT	0.840			
	XH	0.785			

**Source:** Research team's analysis results.

#### 4.3. Evaluation of the Structural Model

According to Hair, et al. [102] to test the relationship between research variables and the impact and intensity of independent variables on the dependent variable, the researcher must carry out the following steps: (1) assess the multicollinearity of the structural model, (2) assess the magnitude and significance of the relationships in the structural model, (3) assess the impact coefficient  $f^2$ , (4) assess the coefficient of determination  $R^2$ , and (5) assess the relevance of the forecast  $Q^2$ . Figure 6 shows the SEM structural model results.

**Figure 6.**

SEM structural model results.

**Source:** The research team's analysis results.

In the study, the Inner VIF coefficients of the concept structures are all less than 3, indicating that there is no multicollinearity between independent variables, which does not affect the testing of the research hypotheses and does not limit the value of R-squared or distort/change the sign of the regression coefficients (Table 8).

**Table 8.**

Inner VIF values.

Paths	VIF
CN -> KQ	1.641
GM -> CN	1.000
GM -> KQ	1.209
GM -> NLD	1.000
GM -> QL	1.000
NLD -> KQ	1.515
QL -> KQ	1.482

**Source:** Research team's analysis results.

R2 results give good explanation results, ranging from 0.074 to 0.554, as shown in Table 9, indicating that the model can explain 13.7% of the variation in information technology capabilities, 12.1% of the variation in dynamic capabilities, 7.4% of the variation in responsible management capabilities, and 55.4% of the variation in business performance.

**Table 9.**

Quality of structural model.

Variables	R-square	R-square adjusted
CN	0.137	0.135
KQ	0.554	0.549
NLD	0.121	0.118
QL	0.074	0.072

**Source:** Research team's analysis results.

The structural model is used to analyze the estimated relationship between latent factors. To test the relationship between the variables, the research team tests bootstrapping 5000 times.

First, we test the statistical hypothesis of the significance of the impact relationship through the bootstrapping method on 5000 samples. Then, evaluation using a t-value > 1.96. If there was a statistical significance level of 5% or a p-value < 0.05, the impact was considered statistically significant.

Second, we evaluate the level and direction of the impact relationship using the results of the bootstrapping analysis. Statistically significant relationships had p-values < 0.05. In addition, based on the standardized impact coefficient of the original sample, we evaluated whether the impact coefficient of the relationships in the model is positive or negative.

**Table 10.**

Results of testing research hypotheses in the model.

Hypothesis	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics ( O/STDEV )	P values	Conclusion
H1: GM -> KQ	0.329	0.330	0.046	7.150	0.000	Supported
H2a: GM -> QL	0.273	0.276	0.050	5.492	0.000	Supported
H2b: GM -> CN	0.370	0.373	0.048	7.650	0.000	Supported
H2c: GM -> NLD	0.347	0.351	0.045	7.637	0.000	Supported
H3a: QL -> KQ	0.144	0.143	0.041	3.526	0.000	Supported
H3b: CN -> KQ	0.335	0.334	0.051	6.527	0.000	Supported
H3c: NLD -> KQ	0.176	0.176	0.047	3.706	0.000	Accepted

Source: Research team's analysis results.

The results of hypothesis testing show that hypotheses H1, H2, H3 are all accepted at the 95% significance level. Explanations for the results of the hypotheses are provided in Table 10.

*Hypothesis H<sub>1</sub>: Green marketing has a positive impact on the business performance of travel enterprises ( $\beta=0.329$ ,  $p=0.000$ ). Therefore, H1 is accepted.*

*Hypothesis H<sub>2a</sub>: Green marketing has a positive impact on responsible management capabilities in travel enterprises ( $\beta=0.273$ ,  $p=0.000$ ). Therefore, hypothesis H2a is accepted.*

*Hypothesis H<sub>2b</sub>: Green Marketing has a positive impact on information technology capabilities in travel enterprises ( $\beta=0.370$ ,  $p=0.000$ ). Therefore, hypothesis H2b is accepted.*

*Hypothesis H<sub>2c</sub>: Green Marketing has a positive impact on travel enterprises' dynamic capabilities ( $\beta=0.347$ ,  $p=0.000$ ). Therefore, hypothesis H2c is accepted.*

*Hypothesis H<sub>3a</sub>: Responsible management capabilities positively impact business performance in travel enterprises ( $\beta=0.144$ ,  $p=0.000$ ). Therefore, hypothesis H3a is accepted.*

*Hypothesis H<sub>3b</sub>: Information technology capabilities positively impact business performance in travel enterprises ( $\beta=0.335$ ,  $p=0.000$ ). Therefore, hypothesis H3b is accepted.*

*Hypothesis H<sub>3c</sub>: Dynamic capabilities positively impact business performance in travel enterprises ( $\beta=0.176$ ,  $p=0.000$ ). Therefore, hypothesis H3c is accepted.*

**Table 11.**

The results of indirect impacts.

Paths	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics ( O/STDEV )	P values
GM -> CN -> KQ	0.124	0.124	0.024	5.130	0.000
GM -> NLD -> KQ	0.061	0.062	0.018	3.348	0.001
GM -> QL -> KQ	0.039	0.039	0.013	2.940	0.003

Source: Research team's analysis results.

In addition, the research results also acknowledge the mediating role of competitive capabilities (responsible management capabilities, information technology capabilities, dynamic capabilities) in the relationship between green marketing and business performance (Table 11), the relationship is statistically significant (P values < 0.05). Green marketing increases travel enterprises' competitive capabilities, thereby improving their business performance.

The analysis results of the effect size  $f^2$  show that: green marketing has a small impact on responsible management capabilities and dynamic capabilities (0.080 and 0.137, respectively) and an average impact on information technology capabilities and business performance (0.158 and 0.201, respectively). The variables of responsible management capabilities and dynamic capabilities have a small impact on business performance (0.031 and 0.046), and IT capabilities have an average impact on business performance (0.153).

To determine the forecasting ability of the model, the Q2 coefficient is a standard. The Q2 coefficient values of CN, KQ, NLD, and QL were 0.078, 0.342, 0.077 and 0.047, respectively, all greater than 0. This shows that the research model is of good quality and appropriate, and the forecasting ability of the model is quite good.

#### 4.4. Multi-Group Analysis by Enterprise Type

After testing the hypotheses, the research team conducted a comparative test of the path coefficient (beta) to compare the differences between groups of enterprise types (joint stock companies and limited liability companies).



**Table 12.**

Results of the multi-group comparative analysis.

Paths	Difference (Limited liability company vs Joint-stock company)	1-tailed (Limited liability company vs Joint-stock company) p value	2-tailed (Limited liability company vs Joint-stock company) p value
CN -> KQ	0.021	0.417	0.833
GM -> CN	-0.151	0.939	0.121
GM -> KQ	-0.089	0.836	0.328
GM -> NLD	-0.128	0.912	0.175
GM -> QL	-0.008	0.529	0.942
NLD -> KQ	0.152	0.066	0.132
QL -> KQ	-0.041	0.681	0.638

Source: Research team's analysis results.

The analysis results presented in Table 12 show that there is no difference in the impact between the two types of enterprises, both the joint stock company and the limited liability company acknowledge the impact of the initial hypotheses, there is no difference with statistical significance.

#### 4.5. Multi-Group Analysis by Operational Duration of Enterprises

The research team conducted a multi-group analysis comparing the path coefficient (beta) to find the difference between enterprises with different years of operation in terms of the impact of green marketing on business performance.

**Table 13.**

Results of multi-group comparison analysis (Number of years in operation of enterprises).

Paths	Difference (11-20 years vs 5-10 years)	Difference (11-20 years vs over 20 years)	Difference (5-10 years vs over 20 years)	2-tailed (11-20 years vs 5-10 years) p value	2-tailed (11-20 years vs over 20 years) p value	2-tailed (5-10 years vs over 20 years) p value
GM -> KQ	0.777	0.763	-0.014	0.000	0.004	0.997

Source: Research team's analysis results.

The analysis results presented in Table 13 show that there is a statistically significant difference between groups of enterprises with different operation duration. Specifically, in the group of 11-20 years of operation, the impact of green marketing on business performance is stronger than that of 5-10 years (p-value < 0.05, difference = 0.777) and also stronger than that of the group over 20 years (p-value < 0.05, difference = 0.763). In general, for enterprises with operation duration of to 11-20 years, business performance is most strongly affected by green marketing.

#### 4.6. Research Finding Discussion

This study aims to determine the impact of green marketing on the competitive capabilities and business performance of travel enterprises in Vietnam. It uses qualitative and quantitative research methods with a survey sample of 380 travel enterprises in Hanoi, Da Nang, and Ho Chi Minh City to assess the validity, reliability, and SEM structural model to test the relationship of the research model using SMARTPLS 4 software. The research results show that green marketing through the mediating variable of competitive capabilities and their components has a positive impact on the business performance of travel enterprises in Vietnam; the component with the strongest impact is information technology capabilities with a standardized coefficient of 0.370. The research results also reflect the fit between the theoretical model and market data, and have some similarities with previous research results [10, 25, 59, 103-105].

The research team conducted a multi-group analysis (MGA) to test the path coefficients (beta) and compare the differences between the types of enterprises (joint stock companies and limited liability companies). The results show that there is no difference in the impact relationships between the two types of enterprises, and both joint stock companies and limited liability companies acknowledge the impact of the initial hypotheses, with no statistically difference. The research team conducted a multigroup analysis to compare the path coefficients (beta) and determine the differences between enterprises with different years of operation in terms of the impact of green marketing on business performance. The results show that there is a statistically significant difference between enterprises with different years of operation. In general, business performance is most strongly affected by green marketing for enterprises with an operational duration of 1120 years.

## 5. Conclusion and New Research Directions

In summary, this study makes two main contributions, affirming that it is significant from both theoretical and practical perspectives.

### 5.1. Theoretical Perspective

The study has some theoretical contributions, reaffirming the three strategic components of green marketing, including green marketing strategy, green marketing tactics, and internal green marketing; three components of competitive capabilities, including responsible management capabilities, information technology capabilities, and dynamic capabilities;

and three components of business performance, including economic, environmental, and social performance. In this study, competitive capabilities play the role of an intermediary variable that affects the business performance of travel enterprises. Therefore, the results of this study contribute to theoretical research on green marketing in Vietnam.

## 5.2. Practical Implications

The new contribution of this study is shown in the results of a multi-group analysis (MGA). The research team conducted a test the path coefficient (beta) to compare the differences between the different types of enterprises (joint stock companies and limited liability companies). The analysis results show that there is no difference in the impact relationships between the two types of enterprises, both the joint stock companies and limited liability companies acknowledge the impact of the initial hypotheses, and there is no statistically significant difference. The research team conducted a multi-group analysis comparing the path coefficient (beta) to find the difference between enterprises with different years of operation in terms of the impact of green marketing on business performance. The results show that there is a statistically significant difference between enterprises with different operation times. Results of the empirical study conducted with travel enterprises in three cities of Hanoi, Da Nang, Ho Chi Minh City, contributes to the empirical research on green marketing, especially in the tourism sector of Vietnam. The results show that the business performance of travel enterprises is directly and indirectly affected by many factors: green marketing (strategy, tactics, internal) and competitive capabilities (information technology capabilities, responsible management capabilities, and dynamic capabilities). Accordingly, this study suggests some management implications for tourism enterprises in general and travel enterprises in particular, especially for enterprises with less than 10 years of operation, as follows:

It is necessary to adjust green marketing strategies according to changes in the external and internal environment of enterprises, proactively participate in green marketing activities through tactical activities such as green product policies, green prices, green distribution, and green promotion, while creating a green brand image for enterprises. Competitive capabilities mediate green marketing and business performance, so Vietnamese travel enterprises need to develop strategies and combine competitive components, business performance goals and action plans as well as strategies, tactics and internal factors to create competitive advantages for the enterprises in the market. In particular, travel enterprises need to invest more in information systems and technology to improve their ability to collect and analyze data to support management levels to operate more effectively. Travel enterprises also need to create a flexible internal environment and encourage innovation and creativity in their organizations.

## 5.3. Limitations of the Study and Future Research Directions

Despite its important contributions, this study has some limitations. First, in terms of research space, the research team conducted a survey of travel enterprises in three major cities of Hanoi, Da Nang, and Ho Chi Minh City, via a convenient sampling method. This sample may not be highly representative of the population and may reduce the inference to all travel enterprises in Vietnam. Accordingly, future studies should expand the research sample to other tourist destinations or even enterprises in different service industries to increase representativeness and inference in Vietnam.

Second, this study identifies competitive capabilities as a mediating factor in the impact of green marketing on travel enterprises' business performance. Therefore, more research is needed to test other mediating factors, identify other factors, and add more measurement scales to confirm the general model from both theoretical and practical perspectives.

## References

- [1] G. K. Amoako, R. K. Dzogbenuku, and A. Abubakari, "Do green knowledge and attitude influence the youth's green purchasing? Theory of planned behavior," *International Journal of Productivity and Performance Management*, vol. 69, no. 8, pp. 1609-1626, 2020. <https://doi.org/10.1108/ijppm-12-2019-0595>
- [2] D. Mehraj and I. H. Qureshi, "Determinants of green marketing mix in developing economies: Conceptualisation and scale validation approach," *Business Strategy & Development*, vol. 3, no. 4, pp. 522-530, 2020. <https://doi.org/10.1002/bsd2.114>
- [3] W. Lazer, "Marketing's changing social relationships," *Journal of Marketing*, vol. 33, no. 1, pp. 3-9, 1969. <https://doi.org/10.1177/002224296903300102>
- [4] S. Bhardwaj, K. Nair, M. U. Tariq, A. Ahmad, and A. Chitnis, "The state of research in green marketing: A bibliometric review from 2005 to 2022," *Sustainability*, vol. 15, no. 4, p. 2988, 2023. <https://doi.org/10.3390/su15042988>
- [5] C.-Y. Ho, B.-H. Tsai, C.-S. Chen, and M.-T. Lu, "Exploring green marketing orientations toward sustainability the hospitality industry in the COVID-19 pandemic," *Sustainability*, vol. 13, no. 8, p. 4348, 2021. <https://doi.org/10.3390/su13084348>
- [6] J. Michulek and A. Krizanovna, "Green marketing: A Comprehensive bibliometric analysis," *Littera Scripta*, vol. 16, no. 1, pp. 1-17, 2023.
- [7] K. Du Lich and N. H. T. Quang, "Green marketing research trends - theory and practical application," *Hue University Journal of Science: Social Sciences and Humanities*, vol. 128, no. 6d, pp. 195-209, 2019.
- [8] C. Gurău and A. Ranchhod, "International green marketing: A comparative study of British and Romanian firms," *International Marketing Review*, vol. 22, no. 5, pp. 547-561, 2005. <https://doi.org/10.1108/07363760911001556>
- [9] K. Lee, "Opportunities for green marketing: Young consumers," *Marketing Intelligence & Planning*, vol. 26, no. 6, pp. 573-586, 2008. <https://doi.org/10.1108/02634500810902839>
- [10] T. H. Ngô, "Influence of green marketing on competing capacity and business results of enterprise: A case study of small and medium enterprises in Ho Chi Minh City," PhD Thesis, Lac Hong University, 2023.
- [11] W. E. Baker and J. M. Sinkula, "Market orientation and the new product paradox," *Journal of Product Innovation Management*, vol. 22, no. 6, pp. 483-502, 2005. <https://doi.org/10.1111/j.1540-5885.2005.00145.x>
- [12] V. L. Vaccaro, "B2B green marketing and innovation theory for competitive advantage," *Journal of Systems and Information Technology*, vol. 11, no. 4, pp. 315-330, 2009. <https://doi.org/10.1108/13287260911002477>

- [13] R.-J. Lin, K.-H. Tan, and Y. Geng, "Market demand, green product innovation, and firm performance: Evidence from Vietnam motorcycle industry," *Journal of Cleaner Production*, vol. 40, pp. 101-107, 2013. <https://doi.org/10.1016/j.jclepro.2012.01.001>
- [14] B. M. Eneizan, K. Abd-Wahab, M. S. Zainon, and T. F. Obaid, "Effects of green marketing strategy on the financial and non-financial performance of firms: A conceptual paper," *Singapore Journal of Economics Business and Management Studies* 51, vol. 34, no. 3796, pp. 1-14, 2016.
- [15] W.-H. Goh, Y.-N. Goh, S. K. Ariffin, and Y. Salamzadeh, "How green marketing mix strategies affects the firm's performance: A Malaysian perspective," *International Journal of Sustainable Strategic Management*, vol. 7, no. 1-2, pp. 113-130, 2019. <https://doi.org/10.1504/IJSSM.2019.099032>
- [16] N. T. Duy, "The relationship between social responsibility, green marketing strategy, corporate reputation and business performance: A study of tourism and travel enterprises in Ho Chi Minh City," PhD Thesis, University of Economics Ho Chi Minh City, 2020.
- [17] H. N. T. Xuân, "Impact of green marketing on financial performance of small and medium firms in Vietnam," *Journal of Economics and Development*, vol. 306, pp. 71-80, 2022.
- [18] J. Ritchie, G. I. Crouch, and S. Hudson, "Assessing the role of consumers in the measurement of destination competitiveness and sustainability," *Tourism Analysis*, vol. 5, no. 2-3, pp. 69-76, 2000.
- [19] M. E. Porter, "Industry structure and competitive strategy: Keys to profitability," *Financial Analysts Journal*, vol. 36, no. 4, pp. 30-41, 1980. <https://doi.org/10.2469/faj.v36.n4.30>
- [20] B. Wernerfelt, "A resource-based view of the firm," *Strategic Management Journal*, vol. 5, no. 2, pp. 171-180, 1984. <https://doi.org/10.1002/smj.4250050207>
- [21] P. L. Wright, M. J. Kroll, and J. A. Parnell, *Strategic management: Concepts and cases*. New Jersey: Prentice-Hall, 1998.
- [22] J. R. Martin, "Introduction, special issue on appraisal," *Text*, vol. 23, no. 2, pp. 171-181, 2003.
- [23] A. B. Carroll, "The pyramid of corporate social responsibility: Toward the moral management of organizational stakeholders," *Business Horizons*, vol. 34, no. 4, pp. 39-48, 1991.
- [24] T. N. Gladwin, "The global environmental crisis and management education," *Environmental Quality Management*, vol. 3, no. 1, pp. 109-114, 1993. <https://doi.org/10.1002/tqem.3310030111>
- [25] A. Menon and A. Menon, "Enviropreneurial marketing strategy: The emergence of corporate environmentalism as market strategy," *Journal of Marketing*, vol. 61, no. 1, pp. 51-67, 1997. <https://doi.org/10.1177/002224299706100105>
- [26] J. Barney, "Firm Resources and Sustained Competitive Advantage," *Journal of Management*, vol. 17, no. 1, pp. 99-120, 1991. <https://doi.org/10.1177/014920639101700108>
- [27] M. A. Peteraf, "The cornerstones of competitive advantage: A resource-based view," *Strategic Management Journal*, vol. 14, no. 3, pp. 179-191, 1993. <https://doi.org/10.1002/smj.4250140303>
- [28] D. J. Teece, G. Pisano, and A. Shuen, "Dynamic capabilities and strategic management," *Strategic Management Journal*, vol. 18, no. 7, pp. 509-533, 1997.
- [29] N. Salvadó, S. Butí, M. Cotte, G. Cinque, and T. Pradell, "Shades of green in 15th century paintings: Combined microanalysis of the materials using synchrotron radiation XRD, FTIR and XRF," *Applied Physics A*, vol. 111, pp. 47-57, 2013. <https://doi.org/10.1007/s00339-012-7483-4>
- [30] S. L. Newbert, "Value, rareness, competitive advantage, and performance: A conceptual-level empirical investigation of the resource-based view of the firm," *Strategic Management Journal*, vol. 29, no. 7, pp. 745-768, 2008. <https://doi.org/10.1002/smj.686>
- [31] J. Elkington, *The triple bottom line of 21st century business*. Oxford: Capstone, 1997.
- [32] H. P. Chow, "Procrastination among undergraduate students: Effects of emotional intelligence, school life, self-evaluation, and self-efficacy," *Alberta Journal of Educational Research*, vol. 57, no. 2, pp. 234-240, 2011.
- [33] T. Takala and P. Pallab, "Individual, collective and social responsibility of the firm," *Business ethics: A European Review*, vol. 9, no. 2, pp. 109-118, 2000. <https://doi.org/10.1111/1467-8608.00180>
- [34] R. Rajesh, "A fuzzy approach to analyzing the level of resilience in manufacturing supply chains," *Sustainable Production and Consumption*, vol. 18, pp. 224-236, 2019. <https://doi.org/10.1016/j.spc.2019.02.005>
- [35] Y. Li, R. Ding, L. Cui, Z. Lei, and J. Mou, "The impact of sharing economy practices on sustainability performance in the Chinese construction industry," *Resources, Conservation and Recycling*, vol. 150, p. 104409, 2019. <https://doi.org/10.1016/j.resconrec.2019.104409>
- [36] R. E. Freeman, *Strategic management: A stakeholder approach*. Cambridge: Cambridge University Press, 2010.
- [37] T. Donaldson and L. E. Preston, "The stakeholder theory of the corporation: Concepts, evidence, and implications," *Academy of Management Review*, vol. 20, no. 1, pp. 65-91, 1995. <https://doi.org/10.2307/258887>
- [38] I. Henriques and P. Sadorsky, "The relationship between environmental commitment and managerial perceptions of stakeholder importance," *Academy of Management Journal*, vol. 42, no. 1, pp. 87-99, 1999. <https://doi.org/10.2307/256876>
- [39] S. K. Majumdar and A. A. Marcus, "Rules versus discretion: The productivity consequences of flexible regulation," *Academy of Management Journal*, vol. 44, no. 1, pp. 170-179, 2001. <https://doi.org/10.2307/3069344>
- [40] A. B. Carroll, "A three-dimensional conceptual model of corporate performance," *Academy of Management Review*, vol. 4, no. 4, pp. 497-505, 1979. <https://doi.org/10.2307/257850>
- [41] A. Carroll, "The four faces of corporate citizenship," *Business & Society Review*, vol. 101, pp. 1-7, 1998. <https://dx.doi.org/10.1111/0045-3609.00008>
- [42] N. R. N. A. Rashid, N. I. A. Rahman, and S. A. Khalid, "Environmental corporate social responsibility (ECSR) as a strategic marketing initiatives," *Procedia-Social and Behavioral Sciences*, vol. 130, pp. 499-508, 2014. <https://doi.org/10.1016/j.sbspro.2014.04.058>
- [43] J. Kärnä, E. Hansen, and H. Juslin, "Social responsibility in environmental marketing planning," *European Journal of Marketing*, vol. 37, no. 5/6, pp. 848-871, 2003.
- [44] J. M. Balmer and S. A. Greyser, "Corporate marketing: Integrating corporate identity, corporate branding, corporate communications, corporate image and corporate reputation," *European Journal of Marketing*, vol. 40, no. 7/8, pp. 730-741, 2006.

- [45] B. Menguc, S. Auh, and L. Ozanne, "The interactive effect of internal and external factors on a proactive environmental strategy and its influence on a firm's performance," *Journal of Business Ethics*, vol. 94, no. 2, pp. 279-298, 2010. <https://doi.org/10.1007/s10551-009-0264-0>
- [46] E. Fraj-Andrés, E. Martínez-Salinas, and J. Matute-Vallejo, "A multidimensional approach to the influence of environmental marketing and orientation on the firm's organizational performance," *Journal of Business Ethics*, vol. 88, pp. 263-286, 2009. <https://doi.org/10.1007/s10551-008-9962-2>
- [47] M. J. Polonsky, "An introduction to green marketing," *Global Environment: Problems and Policies*, vol. 2, no. 1, pp. 1-10, 2008.
- [48] K. E. Henion and T. C. Kinnear, *Ecological marketing*. Chicago: American Marketing Association, 1976.
- [49] A. A. Thompson and A. J. Strickland, "Crafting and implementing strategy: Text and readings," Retrieved: <https://cir.nii.ac.jp/crid/1130282272057916416> 1998.
- [50] C. Groening, J. Sarkis, and Q. Zhu, "Green marketing consumer-level theory review: A compendium of applied theories and further research directions," *Journal of Cleaner Production*, vol. 172, pp. 1848-1866, 2018.
- [51] S. Alkhatib, P. Kecskés, and V. Keller, "Green marketing in the digital age: A systematic literature review," *Sustainability*, vol. 15, no. 16, p. 12369, 2023. <https://doi.org/10.3390/su151612369>
- [52] E. Rahbar and N. A. Wahid, "Investigation of green marketing tools' effect on consumers' purchase behavior," *Business Strategy Series*, vol. 12, no. 2, pp. 73-83, 2011. <https://doi.org/10.1108/1751563111114877>
- [53] C. N. Leonidou, C. S. Katsikeas, and N. A. Morgan, "'Greening' the marketing mix: Do firms do it and does it pay off?," *Journal of the Academy of Marketing Science*, vol. 41, no. 2, pp. 151-170, 2013. <https://doi.org/10.1007/s11747-012-0317-2>
- [54] V. Bathmathan and J. Rajadurai, "Green marketing mix strategy using modified measurement scales—A performance on gen Y green purchasing decision in Malaysia," *International Journal of Engineering and Advanced Technology*, vol. 9, no. 1, pp. 3612-3618, 2019. <https://doi.org/10.35940/ijeat.a2699.109119>
- [55] R. H. Walker and D. J. Hanson, "Green marketing and green places: A taxonomy for the destination marketer," *Journal of Marketing Management*, vol. 14, no. 6, pp. 623-639, 1998. <https://doi.org/10.1362/026725798784867671>
- [56] S. K. Jain and G. Kaur, "Green marketing: An attitudinal and behavioural analysis of Indian consumers," *Global Business Review*, vol. 5, no. 2, pp. 187-205, 2004. <https://doi.org/10.1177/097215090400500203>
- [57] K.-K. Papadas and G. J. Avlonitis, "The 4 Cs of environmental business: Introducing a new conceptual framework," *Social Business*, vol. 4, no. 4, pp. 345-360, 2014. <https://doi.org/10.1362/204440814x14185703122928>
- [58] J. Jung, S. J. Kim, and K. H. Kim, "Sustainable marketing activities of traditional fashion market and brand loyalty," *Journal of Business Research*, vol. 120, pp. 294-301, 2020. <https://doi.org/10.1016/j.jbusres.2020.04.019>
- [59] K.-K. Papadas, G. J. Avlonitis, and M. Carrigan, "Green marketing orientation: Conceptualization, scale development and validation," *Journal of Business Research*, vol. 80, pp. 236-246, 2017. <https://doi.org/10.1016/j.jbusres.2017.05.024>
- [60] L. Buzzigoli and A. Viviani, "Firm and system competitiveness: Problems of definition, measurement and analysis," *Firms and System Competitiveness in Italy*, pp. 11-37, 2009.
- [61] M. E. Porter and C. H. Ketels, "UK competitiveness: Moving to the next stage," Retrieved: [https://www.hbs.edu/ris/Publication%20Files/file14771\\_83b42e5a-7e88-49be-9d33-2fc7585a87d9.pdf](https://www.hbs.edu/ris/Publication%20Files/file14771_83b42e5a-7e88-49be-9d33-2fc7585a87d9.pdf). [Accessed 2003].
- [62] M. E. Porter, "The competitive advantage of nations, states and regions. Harvard Business School," Retrieved: [https://www.academia.edu/download/30781758/2011-0707\\_Malaysia\\_VC.pdf](https://www.academia.edu/download/30781758/2011-0707_Malaysia_VC.pdf). [Accessed 2009].
- [63] D. Edgar, E. Bernal, and G. Campayo, "Delivering the responsible management agenda—a framework for responsible mindful management," *Frontiers in Management Research*, vol. 1, no. 2, pp. 65-83, 2017. <https://doi.org/10.22606/fmr.2017.12004>
- [64] M. J. Tippins and R. S. Sohi, "IT competency and firm performance: Is organizational learning a missing link?," *Strategic Management Journal*, vol. 24, no. 8, pp. 745-761, 2003.
- [65] D. J. Teece, "Dynamic capabilities and (digital) platform lifecycles," in *Entrepreneurship, innovation, and platforms*, vol. 37: Emerald Publishing Limited. <https://doi.org/10.1108/S0742-332220170000037008>, 2017, pp. 211-225.
- [66] M. Chen, Y. Chen, H. Liu, and H. Xu, "Influence of information technology capability on service innovation in manufacturing firms," *Industrial Management & Data Systems*, vol. 121, no. 2, pp. 173-191, 2020. <https://doi.org/10.1108/imds-04-2020-0218>
- [67] H.-C. Chae, C. E. Koh, and K. O. Park, "Information technology capability and firm performance: Role of industry," *Information & Management*, vol. 55, no. 5, pp. 525-546, 2018. <https://doi.org/10.1016/j.im.2017.10.001>
- [68] S. M. Zin and K. Abd Manaf, "Role of intellectual capital in women entrepreneurs' business performance," *Women Entrepreneurs and Strategic Decision Making in the Global Economy*, pp. 209-230, 2019. <https://doi.org/10.4018/978-1-5225-7479-8.ch011>
- [69] M. Lebas and K. Euske, "A conceptual and operational delineation of performance," *Business Performance Measurement: Theory and Practice*, vol. 65, p. 79, 2002. <https://doi.org/10.1017/cbo9780511753695.006>
- [70] A. Neely, M. Gregory, and K. Platts, "Performance measurement system design: A literature review and research agenda," *International Journal of Operations & Production Management*, vol. 15, no. 4, pp. 80-116, 1995.
- [71] Z. Hasan and N. A. Ali, "The impact of green marketing strategy on the firm's performance in Malaysia," *Procedia-Social and Behavioral Sciences*, vol. 172, pp. 463-470, 2015. <https://doi.org/10.1016/j.sbspro.2015.01.382>
- [72] S. Schaltegger and M. Wagner, "Integrative management of sustainability performance, measurement and reporting," *International Journal of Accounting, Auditing and Performance Evaluation*, vol. 3, no. 1, pp. 1-19, 2006. <https://doi.org/10.1504/IJAPE.2006.010098>
- [73] G. T. Gardner and P. C. Stern, *Environmental problems and human behavior*. Boston, MA: Allyn & Bacon, 1996.
- [74] D. D. N. Winter and S. M. Koger, *The psychology of environmental problems*. Hillside: Lawrence Erlbaum, 2004.
- [75] L. Steg and C. Vlek, "Encouraging pro-environmental behaviour: An integrative review and research agenda," *Journal of Environmental Psychology*, vol. 29, no. 3, pp. 309-317, 2009. <https://doi.org/10.1016/j.jenvp.2008.10.004>
- [76] C. J. Gelderman, L. van Hal, W. Lambrechts, and J. Schijns, "The impact of buying power on corporate sustainability-The mediating role of suppliers' traceability data," *Cleaner Environmental Systems*, vol. 3, p. 100040, 2021. <https://doi.org/10.1016/j.cesys.2021.100040>



- [77] P. Goebel, C. Reuter, R. Pibernik, C. Sichtmann, and L. Bals, "Purchasing managers' willingness to pay for attributes that constitute sustainability," *Journal of Operations Management*, vol. 62, pp. 44-58, 2018. <https://doi.org/10.1016/j.jom.2018.08.002>
- [78] M. Palmer and Y. Truong, "The impact of technological green new product introductions on firm profitability," *Ecological Economics*, vol. 136, pp. 86-93, 2017. <https://doi.org/10.1016/j.ecolecon.2017.01.025>
- [79] A. K. Sundaram and A. C. Inkpen, "The corporate objective revisited," *Organization Science*, vol. 15, no. 3, pp. 350-363, 2004. <https://doi.org/10.1287/orsc.1040.0068>
- [80] M. E. Clarkson, "A stakeholder framework for analyzing and evaluating corporate social performance," *Academy of Management Review*, vol. 20, no. 1, pp. 92-117, 1995. <https://doi.org/10.5465/amr.1995.9503271994>
- [81] P. Christmann, "Multinational companies and the natural environment: Determinants of global environmental policy," *Academy of Management Journal*, vol. 47, no. 5, pp. 747-760, 2004. <https://doi.org/10.5465/20159616>
- [82] C. N. Leonidou and D. Skarmas, "Gray shades of green: Causes and consequences of green skepticism," *Journal of Business Ethics*, vol. 144, no. 2, pp. 401-415, 2017. <https://doi.org/10.1007/s10551-015-2829-4>
- [83] S. W. McDaniel and D. H. Rylander, "Strategic green marketing," *Journal of Consumer Marketing*, vol. 10, no. 3, pp. 4-10, 1993.
- [84] P. McDonagh and A. Prothero, "Sustainability marketing research: Past, present and future," *Journal of Marketing Management*, vol. 30, no. 11-12, pp. 1186-1219, 2014. <https://doi.org/10.1080/0267257X.2014.943263>
- [85] S. Gupta and V. Kumar, "Sustainability as corporate culture of a brand for superior performance," *Journal of World Business*, vol. 48, no. 3, pp. 311-320, 2013. <https://doi.org/10.1016/j.jwb.2012.07.015>
- [86] P. Suler, L. Palmer, and S. Bilan, "Internet of things sensing networks, digitized mass production, and sustainable organizational performance in cyber-physical system-based smart factories," *Journal of Self-Governance and Management Economics*, vol. 9, no. 2, pp. 42-51, 2021.
- [87] D. Antoni, F. Jie, and A. Abareshi, "Critical factors in information technology capability for enhancing firm's environmental performance: Case of Indonesian ICT sector," *International Journal of Agile Systems and Management*, vol. 13, no. 2, pp. 159-181, 2020. <https://doi.org/10.1504/ijasm.2020.10030232>
- [88] Y. Wang and L. Yu, "Can the current environmental tax rate promote green technology innovation?-Evidence from China's resource-based industries," *Journal of Cleaner Production*, vol. 278, p. 123443, 2021. <https://doi.org/10.1016/j.jclepro.2020.123443>
- [89] L. Qiu, X. Jie, Y. Wang, and M. Zhao, "Green product innovation, green dynamic capability, and competitive advantage: Evidence from Chinese manufacturing enterprises," *Corporate Social Responsibility and Environmental Management*, vol. 27, no. 1, pp. 146-165, 2020. <https://doi.org/10.1002/csr.1780>
- [90] Y.-H. Lin and Y.-S. Chen, "Determinants of green competitive advantage: the roles of green knowledge sharing, green dynamic capabilities, and green service innovation," *Quality & Quantity*, vol. 51, pp. 1663-1685, 2017. <https://doi.org/10.1007/s11135-016-0358-6>
- [91] R. M. Dangelico, D. Pujari, and P. Pontrandolfo, "Green product innovation in manufacturing firms: A sustainability-oriented dynamic capability perspective," *Business strategy and the Environment*, vol. 26, no. 4, pp. 490-506, 2017. <https://doi.org/10.1002/bse.1932>
- [92] D.-y. Li and J. Liu, "Dynamic capabilities, environmental dynamism, and competitive advantage: Evidence from China," *Journal of Business Research*, vol. 67, no. 1, pp. 2793-2799, 2014. <https://doi.org/10.1016/j.jbusres.2012.08.007>
- [93] D. J. Teece, "Business models and dynamic capabilities," *Long Range Planning*, vol. 51, no. 1, pp. 40-49, 2018.
- [94] L. C. Leonidou, C. N. Leonidou, and O. Kvasova, "Antecedents and outcomes of consumer environmentally friendly attitudes and behaviour," *Journal of Marketing Management*, vol. 26, no. 13-14, pp. 1319-1344, 2010. <https://doi.org/10.1080/0267257X.2010.523710>
- [95] C. J. Morgan, R. R. Vallance, and E. R. Marsh, "Micro machining glass with polycrystalline diamond tools shaped by micro electro discharge machining," *Journal of Micromechanics and Microengineering*, vol. 14, no. 12, pp. 1687-1692, 2004. <https://doi.org/10.1088/0960-1317/14/12/013>
- [96] G. Nonet, K. Kassel, and L. Meijs, "Understanding responsible management: Emerging themes and variations from European business school programs," *Journal of Business Ethics*, vol. 139, pp. 717-736, 2016. <https://doi.org/10.1007/s10551-016-3149-z>
- [97] O. Laasch and D. C. Moosmayer, "Responsible management learning: Reflecting on the role and use of paradigms in sustainability, responsibility, ethics research," *CRME Working Papers*, vol. 1, no. 1, pp. 1-35, 2015.
- [98] M. P. Venkatraman, "The impact of innovativeness and innovation type on adoption," *Journal of Retailing*, vol. 67, no. 1, pp. 51-68, 1991.
- [99] H. Itami and T. W. Roehl, *Mobilizing invisible assets*. Cambridge: Harvard University Press, 1987.
- [100] R. Glazer, "Marketing in an information-intensive environment: Strategic implications of knowledge as an asset," *Journal of Marketing*, vol. 55, no. 4, pp. 1-19, 1991. <https://doi.org/10.1177/002224299105500401>
- [101] J. F. Hair, R. E. Anderson, R. L. Tatham, and W. C. Black, *Multivariate data analysis*. Upper Saddle River, NJ: Prentice Hall, 1998.
- [102] J. F. Hair, G. T. M. Hult, C. M. Ringle, and M. Sarstedt, *A primer on partial least squares structural equation modeling (PLS-SEM)*. Thousand Oaks, CA: Sage, 2017.
- [103] Y.-S. Chen, S.-B. Lai, and C.-T. Wen, "The influence of green innovation performance on corporate advantage in Taiwan," *Journal of Business Ethics*, vol. 67, pp. 331-339, 2006. <https://doi.org/10.1007/s10551-006-9025-5>
- [104] L. C. Leonidou, T. A. Fotiadis, P. Christodoulides, S. Spyropoulou, and C. S. Katsikeas, "Environmentally friendly export business strategy: Its determinants and effects on competitive advantage and performance," *International Business Review*, vol. 24, no. 5, pp. 798-811, 2015.
- [105] K. Raharjo, "The role of green management in creating sustainability performance on the small and medium enterprises," *Management of Environmental Quality: An International Journal*, vol. 30, no. 3, pp. 557-577, 2019. <https://doi.org/10.1108/meq-03-2018-0053>