DOMESTIC TOURIST EXPERIENCE WITH GREEN INFRASTRUCTURE COMPONENTS TOWARDS PLACE ATTACHMENT AND SATISFACTION IN WEST LAKE, HANGZHOU, CHINA

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by

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LIST OF ABBREVIATIONS

AE	Aesthetic Experience
AMOS	Analysis of Moment Structures
ANOVA	Compress Analysis of Variance
AVE	Average Variance Extracted
CFA	Confirmatory Factor Analysis
CR	Construct Reliability
CU	Culture Experience
ED	Education Experience
EFA	Exploratory Factor Analysis
EN	Entertainment Experience
ES	Escapist Experience
EV	Environment Experience
GI	Green Infrastructure
MLE	Maximum Likelihood Estimation
PA	Place Attachment
SEM	Structural Equation Modelling
SPSS	Software Package for Social Sciences
TE	Tourist Experience
TS	Tourist Satisfaction

LIST OF APPENDICES

PENGALAMAN PELANCONG DOMESTIK DENGAN KOMPONEN INFRASTRUKTUR HIJAU TERHADAP KETERIKATAN TEMPAT DAN KEPUASAN DI WEST LAKE, HANGZHOU, CHINA.

ABSTRAK

Prasarana hijau merangkumi ruang bandar dan persekitaran fizikal yang penting bagi penduduk dan pelancong. Prasarana ini membentuk sistem kompleks ruang hijau yang saling berhubung, yang memelihara manfaat semula jadi ekosistem dan memberikan manfaat berkaitan kepada populasi manusia. Walaupun potensinya untuk meningkatkan daya tarikan estetik, menyediakan peluang rekreasi, serta menyokong kesihatan dan kesejahteraan, peranan prasarana hijau dalam konteks pelancongan telah menerima perhatian terhad dalam kajian akademik. Kajian ini secara strategik memfokuskan kepada hubungan antara komponen prasarana hijau, pengalaman pelancong, kepuasan pelancong, dan kebergantungan terhadap tempat untuk memahami hubungan emosi yang rumit antara komponen prasarana hijau dan pelancong. Matlamat utama tesis ini adalah untuk menyiasat secara terperinci aspek pengalaman pelancong dengan komponen prasarana hijau, kepuasan pelancong, dan keterikatan terhadap tempat melalui pembangunan skala pengukuran serta pengesahan hubungan di antara elemen-elemen tersebut. Secara khusus, penyelidikan ini terbahagi kepada dua komponen utama. Pertama, pembangunan skala pengukuran untuk pengalaman pelancong, kepuasan pelancong, dan kebergantungan terhadap tempat dalam konteks komponen prasarana hijau. Kedua, pengesahan empirikal hubungan di antara elemen-elemen tersebut. Dengan menggunakan teknik statistik canggih, pemodelan persamaan struktur (SEM), kajian ini mengesahkan pembentukan skala untuk pengalaman pelancong dengan komponen prasarana hijau, kepuasan pelancong,

dan keterikatan terhadap tempat. Kajian ini menganalisis 447 data respons dalam talian yang sah dari dua lokasi terpilih di Tasik Barat, Hangzhou, China. Dapatan empirikal menunjukkan bahawa pengalaman positif pelancong dengan komponen prasarana hijau secara signifikan menyumbang kepada kepuasan pelancong dan kebergantungan terhadap tempat, dengan kepuasan pelancong memberikan pengaruh positif yang ketara terhadap keterikatan terhadap tempat. Selain itu, hasil analisis teks mengenal pasti bahawa unsur persekitaran dan kemudahan adalah faktor utama yang menyokong kepuasan pelancong. Keindahan pemandangan, kualiti persekitaran, dan resonansi emosi muncul sebagai penentu utama dalam membentuk kebergantungan terhadap tempat dalam konteks komponen prasarana hijau. Hasil kajian empirikal ini memberikan sumbangan yang bermakna kepada perancangan bandar dan penggubalan dasar, dengan menekankan kepentingan memasukkan prasarana hijau sebagai strategi persekitaran dan penyumbang penting kepada kualiti keseluruhan pengalaman pelancongan bandar.

DOMESTIC TOURIST EXPERIENCE WITH GREEN INFRASTRUCTURE COMPONENTS TOWARDS PLACE ATTACHMENT AND SATISFACTION IN WEST LAKE, HANGZHOU, CHINA

ABSTRACT

Green infrastructure encompasses the indispensable urban spaces and physical environments for residents and tourists. It constitutes a complex system of interconnected green spaces that preserve the inherent benefits of natural ecosystems and bestow associated benefits upon human populations. Despite its potential to augment aesthetic appeal, offer recreational opportunities, and foster health and wellness, the role of green infrastructure in tourism has received limited scholarly attention. This study strategically centres on the intersection of green infrastructure components, tourist experience, tourist satisfaction, and place attachment to comprehensively unravel the intricate emotional nexus between green infrastructure components and tourists. The primary aim of the thesis is to methodically investigate the facets of tourist experience with green infrastructure components, tourist satisfaction, and place attachment by formulating measurement scales and validating the relationship between them. The research unfolds in two pivotal components: the formulation of measurement scales for tourist experience, tourist satisfaction, and place attachment within green infrastructure components, as well as the empirical validation of the relationships among them. Employing advanced statistical techniques, structural equation modelling (SEM), the study validates the construction of scales for tourist experience with green infrastructure components, tourist satisfaction, and place attachment, thereby elucidating nuanced relationships between these constructs by amassing a dataset of 447 valid online responses from two meticulously selected sites

in the West Lake, Hangzhou, China. The empirical findings underscore that positive tourist experiences with green infrastructure components substantially contribute to satisfaction and place attachment, with tourist satisfaction exerting a significantly positive influence on place attachment. Furthermore, results from the textual analysis discern that environmental and facility attributes primarily underpin tourist satisfaction. Scenic beauty, environmental quality, and emotional resonance are pivotal determinants in forming place attachment within green infrastructure components. These empirical insights offer invaluable contributions to urban planning and policymaking, emphasising the significance of incorporating green infrastructure as an environmental strategy and a pivotal contributor to the overall quality of urban tourism experiences.

CHAPTER 1

INTRODUCTION

1.1 Introduction

This chapter endeavours to offer a comprehensive summary of the research, delineating the contents of each section. The research commences by explaining the background of the research topic, illuminating the underlying factors that have motivated the inquiry while concurrently articulating the problem statement. Subsequently, this section delineates the study's determinations, encompassing the aims and objectives derived from research problems, operational definitions, and the organisation of the study. Moreover, this segment expounds on this study's theoretical and practical significance and offers a concise synopsis of the approach, methodology, and scope.

1.2 Backgrounds

The background of this research involves the importance of domestic tourism, the indispensable role of green infrastructure (GI) in tourism, and the urgent need to create competitive destinations. This section provides the context, rationale, and justification for conducting a study on tourist experience (TE), tourist satisfaction (TS), and place attachment (PA) within the framework of GI.

1.2.1 The importance of domestic tourism

With increasing levels of income, extra free time, a desire to see new places, cheaper travel opportunities, and a rising number of sports events, conferences, and business trips, urban tourism has become increasingly important in recent years (Kurt K, 2018). Cities and urban areas compete globally for tourists as part of their international competition and reputation-building, as well as economic development

strategy (Jan & Beesau, 2010). Domestic tourism holds significant importance in driving China's economic and social progress. Firstly, it serves as one of the pillars of the domestic economy. The evolution of the tourism sector has the potential to stimulate employment opportunities, enhance consumer spending, and catalyse the growth of associated industries, including hospitality, culinary services, transit, travel agencies, and booking facilities (Ashworth & Page, 2011; Bauman, 2013; Tan & Zhu, 2023). Secondly, domestic tourism promotes balanced regional development by harnessing and developing various local tourism resources, thereby achieving comprehensive economic growth (Zhang & Zhu, 2023). Additionally, it actively facilitates the conservation of cultural heritage and safeguarding of indigenous attributes, fostering a diverse national culture (Tan & Zhu, 2023).

According to the report published by China's National Bureau of Statistics in 2022, there were over 6.06 billion domestic tourist journeys in 2019. In spite of the impact of the COVID-19 pandemic, the number of domestic travellers remained significant, with 3.25 billion people travelling domestically in 2021 and 2.53 billion in 2022, as illustrated in Figure 1.1.

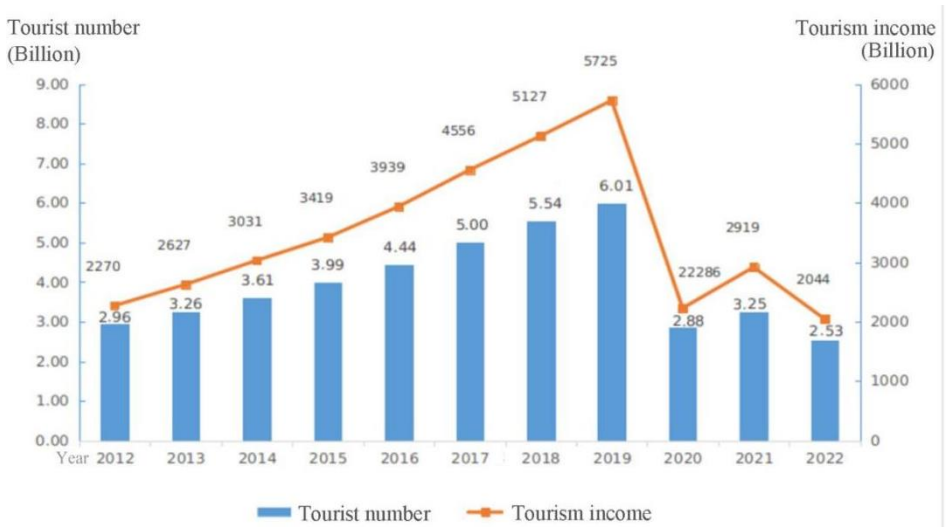

Figure 1.1 The Development of China's Domestic Tourism (Year 2012-2022) (Source: China's National Bureau of Statistics)

1.2.2 The importance of green infrastructure components in tourism

Within the context of striving for green and sustainable development, the concept of GI is progressively gaining prominence and traction within the domain of city development strategies and policies. over the last few decades. The definition of GI has not achieved consensus regarding linked green spaces (Natural England, 2011; Benedict & McMahon, 2002), urban ecology (Naumann et al., 2011; Austin, 2014; Byrne et al., 2010), and stormwater management (United States Environmental Protection Agency, 2023; American Rivers, 2023). This study refers to the definition of linked greenspace, where GI comprises an interlinked system of green spaces that preserve the values and functions of natural ecosystems while delivering related advantages to human communities (Benedict & McMahon, 2002). The GI components include water bodies, marshes, forests, wildlife habitats, trails, parks, farmlands, woodlands, wilderness areas, and various green spaces, both within and surrounding the urban environment across all spatial levels.

GI components are an essential attribute of destination attractiveness. In the tourism realm, GI, as the critical element in city spaces, can provide tourists with leisure, sightseeing, and learning opportunities. They show the aesthetic images of cities by expressing values and beliefs, shaping varied outdoor spaces and landscapes (Straupe & Liepa, 2018), which in turn influence tourists' feelings and behaviours. As Al-Masroori (2006) stated, destinations with industrial attributes or lacking natural features find it challenging to compete against destinations with a wealth of natural attractions.

Furthermore, researchers and urban planners worldwide have proven that GI is an efficient and long-term strategy to mitigate adverse effects such as excessive tourism, gentrification, landscape degeneration, and pollution that emerge along with the rapid development of tourism. Many scholars have stated that applying GI can ensure environmental safety, address stakeholder conflicts, and prevent tourism sites from losing integrity to maintain tourism sustainability (Valánszki et al., 2018). Therefore, it is necessary to study GI in the tourism industry context.

1.2.3 The need to create a competitive destination

Globally, tourism stands as one of the swiftest expanding economic sectors and a pivotal catalyst for socio-economic advancement. As the World Tourism Organization's reported (2020), there were 1.46 billion tourist journeys annually in 2019. Cities can derive multiple benefits from tourism. For instance, the evolution of the tourism sector, encompassing lodging, culinary services, transit, travel agencies, and booking facilities, can boost the local economy and create many job positions for residents (Ashworth & Page, 2011; Mirzaie, 2022).

Given the significant contributions of tourism, many cities worldwide compete globally for tourists as part of their international competition, reputations, and economic development strategy. However, under the impact of globalisation, close connections and increased exchanges between regions have led to cultural convergence, resulting in the gradual disappearance of local individuality and characteristics. Many types of tourism activities and tourist needs can be substituted. Therefore, it is crucial for practitioners and policymakers of destinations to sustain a competitive advantage and ensure their destination's success and prosperity.

To achieve strong competitiveness, tourism destinations must offer experiences that the market demands (Mehmetoglu & Engen, 2011). As stated, In the evolving marketplace, customers are no longer solely seeking uniform excellence in products and services; instead, they prefer unique experiences (Pine & Gilmore, 1998; Oh et al., 2007). Within tourism sector, travellers move between different places and generate a combination of experiences voluntarily and purposefully in their consumer role (Aho, 2001). Tourist experience (TE) has been noted as the essence of the tourism business by many scholars (e.g., Quan and Wang (2004), Uriely (2005)). Oh et al. (2007) also state that TE is fundamental in both travel and tourism studies and in shaping the image of destinations. Moreover, it dictates the perceived value of the destination visited (Oh et al., 2007).

Besides the TE, place attachment (PA) and tourist satisfaction (TS) are of critical importance to destination competitiveness as well. PA is an essential concept that captures the diverse meanings attributed to locales by both tourists and residents. In tourism studies, place attachment is widely used to understand individual-place relationships and manage effectively and market tourism destinations (Dwyer et al., 2019).

TS is another pivotal element in determining the success of tourist attractions (Dodds & Jolliffe, 2016). Understanding the level of TS and their response to the TE within the destination is crucial for destination stakeholders. This comprehension enables them to enhance products and services, ultimately attracting both new and repeat visitors from target markets more effectively, promoting increased utilization, and encouraging ongoing patronage and loyalty (Yu & Goulden, 2006; Mendes et al., 2010).

1.3 Problem Statement

Issues are identified in three main areas: the insufficient focus on the interaction between tourists and GI components at destinations, the oversight of the emotional connection between them, and the constraints of place attachment in China's context. This part serves as the starting point for the entire study and lays the foundation for subsequent sections of this thesis.

1.3.1 Neglection of interaction between tourist and green infrastructure components in destinations

The physical aspects of destinations, including natural and built environments, spatial dimensions, and geographic attributes, are crucial for comprehending TE (Mossberg, 2007; Cutler & Carmichael, 2010). These elements can support activities, offer opportunities for social interactions, and shape perceptions of tourists. The unique spatial and cultural features that separated from tourists' everyday surroundings will captivate them into the destinations (McCabe & Stokoe, 2004).

The spatial attributes of GI components span micro-level features such as living walls, rooftop gardens, street trees, and shrubbery borders to macro-level elements like lakes, reservoirs, urban forests/canopy cover, and regional parks, making it an indispensable part of the city's physical features. As integral parts of urban environments, GI components provide diverse natural and heritage resources and public spaces that shape the urban fabric and influence people's behaviour. Therefore, it is crucial to comprehend how individuals experience these spaces and how these experiences specifically influence tourists.

Nevertheless, numerous tourism researches lack a comprehensive understanding of how physical environments impact visitors' behaviour, and frequently, the development of these environments proceeds without the guidance of professional expertise (Mossberg, 2007). Moreover, additional aspects of experiences with GI components found scattered across various literature have not been thoroughly explored. Notably, cultural experience, highly emphasised in GI and tourism research, have not been adequately integrated into the overall scale of TE with GI components.

The limited understanding of TE with GI may result in a lack of comprehension concerning the significance of GI components in the tourism sector. This, in turn, may lead to the neglect of GI conservation within tourism practices, causing urban planners and policymakers to underestimate its significance and impede its practical application in tourism. While specific studies underscore the potential of GI to enhance the appeal of a destination and stimulate local economic growth, the impact of GI on tourists' emotions and behaviour during destination remains ambiguous (Braiterman, 2011; Boivin & Tanguay, 2019; Wang et al., 2015). This could result in stakeholders pursuing rapid development and exploiting natural resources without proper guidance, thus further jeopardising the integrity and indigenous qualities of the GI on which they depend for development.

1.3.2 Neglection of the emotional connection between tourists and green infrastructure components

Within the context of eco-friendly development and the broader discussions surrounding the significance of GI in sustainable tourism, there is a compelling opportunity to explore the emotional impact GI components have on tourists. While existing literature primarily focuses on the tangible relationship between GI and place development—such as the incorporation of elements like cemeteries (Sallay et al.,

2022) and open spaces (Hamidah et al., 2019) into tourism—there is a noticeable gap in understanding the emotional connection that tourists form with these spaces. This emotional bond, often referred to as PA, is critical as it shapes tourists' behaviours and attitudes towards destinations.

Emotion plays a central role in tourism because it directly influences tourists' willingness to pay, loyalty to a destination, and even their environmentally responsible behaviours (Kyle et al., 2004a; Williams & Vaske, 2003; Lin & Lee, 2019). Understanding the emotional attachment tourists develop with a destination can leads to better insights on how to manage and enhance TE, making these places more attractive, competitive, and sustainable.

Despite its importance, the emotional connection between tourists and destinations—especially in the context of GI—remains underexplored. According to place theory, as tourists visit and experience different locations, they can gradually form deep emotional bonds with those places. These connections are not just fleeting feelings; they are critical to fostering long-term PA, which is key to sustaining tourism over time.

Therefore, studying emotional connections in tourism is not just important for enhancing TE, but also essential for the effective planning and management of tourism resources. By understanding and leveraging place attachment, tourism can be steered towards more sustainable practices, fostering a sense of stewardship among visitors and ensuring the long-term vitality of both destinations and their surrounding environments. Emotion, in this sense, becomes a vital element in the successful integration of GI components into tourism, driving both emotional engagement and sustainable behaviours.

1.3.3 The constraints of place attachment in China's context

Regarding the academic aspects in China, the current researches are more Western-centric. Theories and measurement tools for PA are predominantly developed in Western cultural contexts, such as Scannell and Gifford's three-dimensional framework (person, place, process) (Scannell & Gifford, 2009). These frameworks may not fully capture the unique cultural values of Chinese society, such as "nostalgia for one's hometown" or "attachment to native soil", which are closely tied to collectivism and ancestral worship. Also, there are limited interdisciplinary collaboration. Place attachment research requires insights from psychology, sociology, geography, and urban planning. However, in China, interdisciplinary cooperation and data sharing remain limited, leading to a lack of comprehensive approaches.

In China, the formation and sustainability of PA face several practical challenges, primarily driven by rapid urbanization and limited public participation. For example, the swift pace of urbanization has led to widespread demolition and reconstruction, often displacing communities and eroding the continuity of historical and cultural landmarks. This physical disruption weakens emotional ties to traditional spaces, as residents struggle to maintain connections to environments that have undergone significant transformation or have been entirely replaced. And there exited a limited public participation in planning. A lack of meaningful public involvement in urban development projects hinders the formation of place attachment. In many cases, residents are excluded from the decision-making processes that shape their living environments, leading to feelings of alienation and reducing their emotional investment in the spaces they inhabit.

1.4 Research Questions

Building upon the identified research problems and contextual description, this research is going to explore the following research questions primary aim of this research is to explore the following inquiries:

1) What are the key dimensions of tourist experience with green infrastructure components?
2) Do tourists feel satisfied with the green infrastructure components they visit?
3) Do tourists develop place attachment to the green infrastructure components they engage with?
4) What is the relationship between tourists' experiences, satisfaction, and place attachment in relation to green infrastructure components?

1.5 Research Objectives

This research aims to explore the dimensions of tourists' experiences with green infrastructure components in a destination city, focusing on how these experiences and tourists' satisfaction influence their place attachment. Specifically, this research is guided by the following four objectives:

1) To identify tourist experience with green infrastructure components.
2) To evaluate tourist satisfaction with green infrastructure components.
3) To examine tourists' place attachment to green infrastructure components.
4) To measure the relationship between tourist experience with green infrastructure components, tourist satisfaction, and place attachment.

1.6 Research Scope

In this section, the research scope encompasses two main aspects: 1) green infrastructure components in the tourism industry and its distinctions from ecotourism, nature-based tourism, and environmental tourism, and 2) the geographical focus of the study.

In addressing the first aspect, a comparative analysis is conducted to distinguish it from related concepts such as ecotourism, nature-based tourism, and environmental tourism. This comparative approach aims to elucidate the similarities and disparities among these concepts, thereby establishing a more profound theoretical foundation for subsequent research.

The second aspect focuses on the study's geographical location. A more accurate understanding of the practical operations within diverse geographical environments is provided by precisely defining the specific regional scope of the study. This includes, but is not limited to, specific cities and countries and their application and effects in the context of local tourism development.

1.6.1 Green infrastructure components in tourism

The research subject is GI components within the context of tourism, encompassing all GI features visible to or encountered by tourists. To refine the research scope, this discussion will delineate its relevance with terms such as ecotourism, nature-based tourism, and environmental tourism.

Ecotourism entails visiting pristine, nature-based locations that prioritize conservation awareness among visitors, local communities, and stakeholders. It also includes interpretation and educational components (Wearing & Neil, 2009). It is a specific type of tourism with a primary focus on nature, conservation, and responsible travel. It is driven by a specific intent to engage tourists in environmentally responsible and conservation-focused activities. In contrast, GI components in tourism has a broader scope, encompassing a variety of sustainable practices and features within the overall TE.

Nature-based tourism encompasses all types of tourism where relatively untouched natural environments serve as the main attraction or backdrop (Buckley, 2009; Newsome et al., 2002). It encompasses consumptive and adventurous activities, as well as non-consumptive contemplative activities, which may include ecotourism and conservation tourism (Buckley, 2009). While GI components in tourism may involve sustainable practices that enhance the overall TE, it does not necessarily focus exclusively on nature.

Environmental tourism is a specialised form of tourism that unfolds in natural settings. It places significant emphasis on fostering a profound understanding of and contributing to conserving natural environments. This particular niche within the tourism industry is driven explicitly by a dedicated commitment to preserving biodiversity, protecting ecosystems, and implementing responsible travel practices in natural areas.

1.6.2 Study area

This research focuses on Hangzhou West Lake, situated at the southern part of the Yangtze River Delta and within the Qiantang River Basin, encompassing an area of 16,850 km² in northwest Zhejiang province, China (as depicted in Figure 1.2). West Lake holds national significance as a critical scenic tourism destination celebrated for its innate beauty and captivating panoramas that have enthralled visitors throughout antiquity, resulting in the appellation “Heaven on Earth”. The conscientious management of natural resources by West Lake and the nuanced connotations embedded in its landscapes serve as an illustrative case study reflecting the profound reverence for nature among the Chinese populace.

Figure 1.2 The Location of the Study Area: West Lake area

1.7 Research Significance

Research on TE, TS, and PA in the context of GI contributes significantly to the field of tourism in both theoretical and practical ways. Research on TE, TS, and PA within the realm of GI substantially enriches the field of tourism, offering valuable insights for both theoretical frameworks and practical applications.

Theoretical contributions include advancing the understanding of how tourists interact with GI components, elucidating the mechanisms underlying tourist satisfaction and place attachment, and enriching tourism theories and frameworks. On a practical level, this research informs destination management strategies, helps design and implement sustainable tourism practices, and guides policymakers and practitioners in enhancing the overall tourist experience and fostering destination competitiveness.

1.7.1 Theoretical contributions

Firstly, this study helps identify and address challenges, allowing for developing effective management strategies to enhance the TE in GI components. This provides valuable insights into balancing the preservation of natural environments alongside tourism promotion, ensuring the long-term sustainability.

This study employs a meticulous method for constructing scales to comprehensively capture tourist experience with GI components at destinations, adhering to established guidelines outlined by Churchill (1979). Developing the tourist experience with GI components enhances our comprehension of the overall GI experience. The results further enrich tourism research by studying the relationship between GI experience, satisfaction, and tourists' place attachment.

1.7.2 Practical contributions

As stated, TE involve more than just the tourists, destinations attempt to reorganise and manipulate spaces to produce and stage TE (O'Dell, 2007). Examining on-site experiences of GI components can assist destinations in refining or tailoring their offerings to thrive in a competitive global landscape, especially for domestic or nearby visitors (Margaryan & Fredman, 2017; Ghazvini et al., 2020).

With precision, a comprehensive understanding of tourist experience with GI components and their interplay with PA and TS offers valuable insights for policymakers and destination managers. This understanding can serve as a foundation for formulating sustainable tourism practices, thereby distinguishing the destination from competitors in the market. Consequently, cities relying on natural resources for tourism development can enhance their capacity to manage these resources to benefit the tourism industry judiciously.

In short, this knowledge benefits the academic community, practitioners, policymakers, and businesses involved in the sustainable development and management of green tourism destinations.

1.8 Operational Definitions

The subsequent section delineates the definitions of pivotal terms utilized in this study. These terms are crafted following an in-depth examination of pertinent scholarly literature and are contextualized within the framework of the current research. They represent specific factors and aspects selected to address the highlighted issues in this study.

1.8.1 Green infrastructure components

The definition of GI is expansive and varied, encompassing common themes such as strategically planned networks of green and blue elements that enhance both environmental health and human well-being. This study's definition is drawn from Benedict and McMahon (2002), who define GI as “an interconnected network of green space that conserves natural ecosystem values and functions and provides associated benefits to human populations”. And GI components refer to the various elements that make up green infrastructure system. According to Benedict & McMahon (2012), GI

components are classified as hubs, sites, and links. Hubs are the core of the GI network, acting as destinations or sources for wildlife and ecological processes. These can include large protected areas like parks, forests, or private lands dedicated to conservation. Links connect the hubs, creating pathways that support wildlife movement and ecological functions. These can include greenways, corridors, and flood zones that link natural areas and provide recreational opportunities. Sites are smaller, integrated parts of the GI system, such as local parks or green spaces, which support local biodiversity and offer recreational spaces for people.

1.8.2 Tourist experience

TE are crafted through engaging in activities, learning, and enjoyment in environments outside of one's usual habitat (Stamboulis & Skayannis, 2003). These experiences can only be understood by considering the individuals participating and the contexts in which the experiences take place (Jennings & Nickerson, 2006).

The definition utilised in this study is drawn from the works of Zou and Wu (2003) and Cheng and Chen (2022), which describe it encompass the process of tourists observing or participating in destination attractions or occurrences and the ensuing psychological feelings.

1.8.3 Tourist satisfaction

According to Stedman (2003), TS is described as a comprehensive evaluation encompassing multiple dimensions, reflecting the perceived quality of settings. It entails a comprehensive assessment that considers various dimensions, such as the overall ambience, the availability of amenities and services, and the attractiveness of local attractions in terms of tourists' experiences and interactions within the setting.

1.8.4 Place attachment

PA refers to a favourable connection or emotional bond that exists between an individual and a specific location (Williams & Vaske, 2003). It has been widely applied to examine the relationship between tourists and destinations. In this study, place attachment denotes the cognitive, emotional, and behavioural link between individuals and locations (Lin et al., 2019).

1.8.5 Domestic Tourist

According to the definition provided by the World Tourism Organization in 2008, a domestic tourist refers to a resident who travels within their own country. In the context of China, domestic tourists are defined as Chinese (mainland) residents who travel to China (mainland) for sightseeing, vacationing, visiting families or friends, shopping, therapeutic purposes, attending meetings, or participating in religious, cultural, athletic, or economic activities, without seeking compensation for their endeavours (National Bureau of Statistics of China, 2022). In this study, domestic tourists are Chinese residents who are not from Hangzhou and have visited the study locations.

1.9 Thesis Structure

There are three primary sections to the thesis, as depicted in Fig 1.3. The initial part encompasses the introduction and literature review, providing the study's foundational context and preparatory groundwork. Then, the research methodology is described in detail in the second section. Finally, the results are shown and explained in the third section (chapter 4 and 5). This structured arrangement ensures a coherent and systematic exploration of the research topic, facilitating a comprehensive understanding.

Chapter 1 delves into the theoretical and research underpinnings of GI components in the context of tourism. It highlights the identified problem and subsequently formulates research questions, objectives, and the extent of the research. Additionally, the chapter shows how important this research is to adding to the corpus of information already in existence.

Chapter 2 elucidates and differentiates relevant concepts through a thorough literature review. Following this, the measurement dimensions of tourist experience with green infrastructure components, satisfaction, and place attachment are introduced, laying the groundwork for the subsequent formulation of research hypotheses.

Chapter 3 develops a measurement scale to assess tourist experience with green infrastructure components, their levels of satisfaction, and place attachment. Additionally, the methods used for data collection and analysis are demonstrated in this chapter.

The results of the tourist experience scale implementation and the validation of hypotheses formulated earlier in the study are presented in Chapter 4.

Finally, Chapter 5 provides an explanation of the study's findings, how they relate to earlier research, and its limitations.

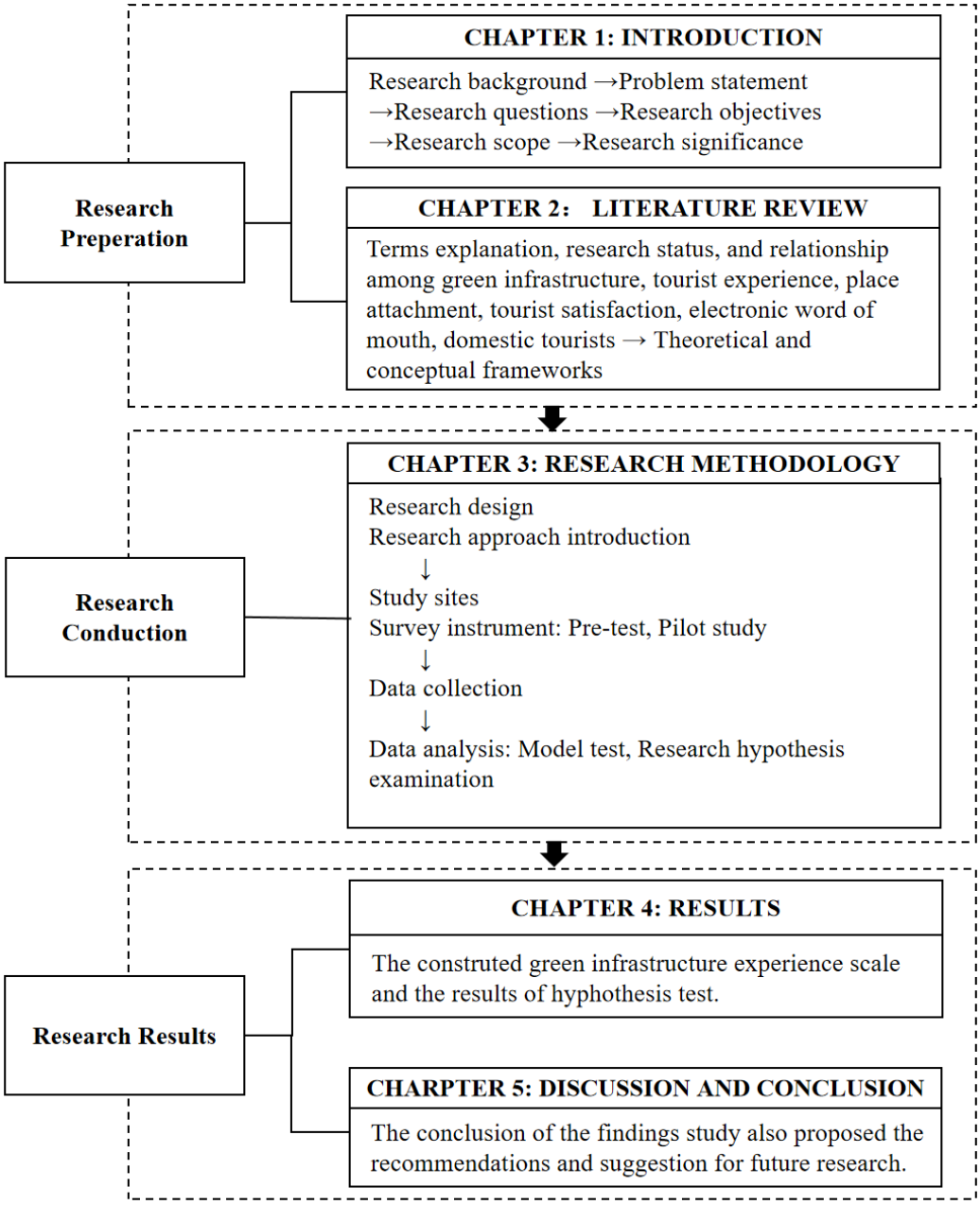

Figure 1.3 Thesis Structure

1.10 Chapter Summary

This chapter provided a comprehensive overview of the research by outlining its objectives and emphasizing their significance from both academic and practical perspectives. The problem statement was introduced, offering a clear rationale for the study and explaining its relevance to the research field. Additionally, the scope of the study was defined to establish its boundaries. The key research questions and objectives were highlighted to provide a focused direction for the investigation. Finally, the chapter previewed the structure of the thesis, summarizing the contents of the following chapters: chapter two focuses on the literature review and hypothesis development, chapter three covers the theoretical framework and research methodology, chapter four presents the findings and discussion, and chapter five concludes with implications, limitations, and future research directions.

CHAPTER 2

LITERATURE REVIEW

2.1 Introduction

Covering topics such as green infrastructure (GI), tourist experience (TE), place attachment (PA), tourist satisfaction (TS), and their intricate relationships, this chapter offers a comprehensive review of relevant literature and theoretical foundations essential to the current study.

2.2 Green Infrastructure

This section significantly enhances the comprehension and application of GI, elucidating its multifaceted advantages and components. By delving into the various aspects of GI, this contributes to a comprehensive understanding of its dynamics, implications, and potential impacts within different contexts.

2.2.1 The origin of green infrastructure

Since its introduction in the mid-1990s, GI has been employed by a variety of agencies, organizations, businesses, community groups, and planners as a component of the sustainability discourse. Notably, the Greenway movement in the USA, attributed to Frederick Law Olmsted, played a pivotal role in the early conceptualisation of GI.

Subsequent developments in the comprehension and utilisation of GI were significantly influenced by Lyle's (1996) concept of the "regenerative system." This conceptual framework underscored GI's multifaceted advantages and seamless integration into spatial planning processes. Lyle's perspective prompted a paradigm shift in how GI was perceived and employed, transcending its traditional role and emphasising its capacity for multifunctionality and resilience within the built environment.

Later, the concept of GI was introduced in Europe and gained political attention in 2009 during an EU workshop on habitat fragmentation. The workshop emphasised GI's role in ecosystem maintenance and restoration, highlighting its benefits in connecting ecosystems, addressing climate concerns, promoting sustainable growth, and preserving cultural heritage.

In summary, the evolution of GI reflects its growing recognition as a vital tool for sustainability, transcending its origins in landscape design to become a multifaceted approach to spatial planning, ecosystem connectivity, and climate resilience, with widespread applications across both the United States and Europe.

2.2.2 The concept of green infrastructure

GI has been defined in various ways, with the three most prevalent approaches emphasizing: 1) interconnected green spaces, 2) urban ecology perspective, and 3) water management concept, primarily addressing stormwater management (Matsler et al., 2021; Adesoji & Pearce, 2024), as shown in Table 2.1.

Some researchers or institutes review the concept of GI in terms of linked green space. For example, Benedict and McMahon (2002) define GI as "an interconnected network of green space that conserves natural ecosystem values and functions, providing associated benefits to human populations". It is also defined by natural England (2011) as a network of carefully designed and implemented high-quality green areas and other environmental elements. The ecosystem of GI can be defined as a multidimensional framework that integrates environmental, social, and operational aspects to address sustainability challenges.

Table 2.1 Definitions of Green Infrastructure in Different Conceptual Categories

Conceptual categories	Sources	Definition
Linked greenspaces	Natural England (2011, p.7)	The strategically planned and delivered network comprises the broadest range of high-quality green spaces and other environmental features.
	Benedict and McMahon (2002, p.12)	An interconnected network of green spaces that conserves natural ecosystem values and functions and provides associated benefits to human populations.
Urban ecology	Tzoulas et al. (2007, p3)	All natural, semi-natural, and artificial networks of multifunctional ecological systems within, around, and between urban areas.
	Naumann et al. (2011); Austin (2014)	A natural or semi-natural network of green and blue spaces and corridors that maintain and enhance ecosystem services.
	The European Commission (2014)	A strategically planned network of natural and semi-natural spaces that provides benefits to people via multiple ecosystem services.
Water & stormwater management	United States Environmental Protection Agency (2023)	A cost-effective, resilient approach to managing wet weather impacts that provides many community benefits.
	American Rivers (2023)	An approach to water management that protects, restores, or mimics the natural water cycle.

In the context of ecology, the European Commission (2014) defined GI "as a strategically planned network of high-quality natural and semi-natural areas with other environmental features, designed and managed to deliver a wide range of ecosystem services and protect biodiversity in both rural and urban settings" This definition is consistent with that proposed by Naumann et al. (2011) and Austin (2014), who defined GI as "a natural or semi-natural network of green and blue spaces and corridors that maintain and enhance ecosystem services".

In other cases, GI is focused explicitly on stormwater management (Meerow & Newell, 2017; Grabowski et al., 2022). The United States Environmental Protection Agency (2023) describes GI as a cost-effective and resilient technique for managing stormwater. This approach not only mitigates wet weather impacts but also offers a variety of benefits to communities (Matsler et al., 2021).

This paper adopts the linked greenspaces concept of GI proposed by Benedict & McMahon (2002), where GI comprises an interlinked system of green spaces that preserve the values and functions of natural ecosystems while delivering related advantages to human communities. The GI components include water bodies, marshes, forests, wildlife habitats, trails, parks, farmlands, woodlands, wilderness areas, and various green spaces, both within and surrounding the urban environment across all spatial levels (Benedict & McMahon, 2012; Abunnasr, 2013).

2.2.3 Green infrastructure and relevant concepts

As illustrated in Table 2.2, the terms associated with GI are classified into three categories: connected greenspace, ecology, and stormwater management.