

**THE ROLE OF GREEN INNOVATION  
TECHNOLOGY AND DESTINATION IMAGE  
TOWARDS INTENTION TO VISIT ABU DHABI  
AS A SUSTAINABLE MEDICAL TOURISM  
DESTINATION**

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**UNIVERSITI SAINS MALAYSIA**

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DESTINATION**

by

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## **LIST OF ABBREVIATIONS**

|      |                           |
|------|---------------------------|
| ADMT | Abu Dhabi Medical Tourism |
| DOH  | Department of Health      |
| GCC  | Gulf cooperation council  |
| GOF  | Goodness of fit           |
| HTMT | Heterotrait-Monotrait     |
| SOR  | Stimuli-Organism-Response |

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**PERANAN TEKNOLOGI HIJAU DAN IMEJ DESTINASI TERHADAP NIAT  
UNTUK MELAWAT ABU DHABI SEBAGAI DESTINASI PELANCONGAN  
PERUBATAN LESTARI**

**ABSTRAK**

Kajian ini berfokuskan niat untuk melawat Abu Dhabi sebagai destinasi pelancongan perubatan yang mampan dengan mengkaji pengaruh pelbagai faktor kemampanan kepada keputusan pemilihan pelancong. Secara khususnya, kajian ini meneliti pengaruh kesedaran mampan (ekonomi, alam sekitar, dan sosial), pengiklanan digital, dan sokongan kerajaan terhadap teknologi inovasi hijau dan bagaimana hubungan-hubungan ini mempengaruhi niat pelancong untuk melawat Abu Dhabi. Kajian ini juga meneliti peranan teknologi inovasi hijau sebagai faktor pengantara dan imej destinasi sebagai faktor penyederhana. Penyepaduan teori pemangku kepentingan, teori pertukaran sosial, dan model rangsangan-organisma-tindak balas melibatkan pembentukan asas teori kepada kajian dan seterusnya membangunkan kerangka teori yang komprehensif untuk lebih memahami tingkah laku tindak balas dalam konteks pelancongan perubatan secara mampan. Data soal selidik berstruktur dikumpul daripada 408 pelancong perubatan yang telah menerima rawatan perubatan di Abu Dhabi dan pelancong perubatan yang berhasrat untuk menerima rawatan perubatan di Abu Dhabi. Keputusan kajian mengesahkan pengaruh signifikan kesedaran mampan, pengiklanan digital, dan sokongan kerajaan terhadap niat untuk melawat melalui teknologi inovasi hijau dan imej destinasi. Kajian ini menawarkan sumbangan teori dan pandangan praktikal untuk pihak penggubal dasar, penyedia penjagaan kesihatan, dan pihak berkepentingan dalam sektor pelancongan

yang bertujuan untuk membangunkan Abu Dhabi sebagai hab pelancongan perubatan yang terkemuka dan mampan.

**THE ROLE OF GREEN INNOVATION TECHNOLOGY AND  
DESTINATION IMAGE TOWARDS INTENTION TO VISIT  
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DESTINATION**

**ABSTRACT**

Focusing on the intention to visit Abu Dhabi as a sustainable medical tourism destination, this study aimed to examine the influence of key sustainability-related factors on tourist decision-making. This study specifically assessed the influence of sustainable awareness (economic, environmental, and social), digital advertising, and government support on green innovation technology, as well as how these relationships would influence tourists' intention to visit Abu Dhabi. This study also assessed the mediating role of green innovation technology and the moderating role of destination image. The integration of stakeholder theory, social exchange theory (SET), and the stimuli-organism-response (SOR) model established the underlying theoretical basis of this study, yielding a comprehensive framework to better understand behavioural responses within the context of sustainable medical tourism. Data were collected from 408 medical tourists—those who had received and those who intended to receive medical treatment in Abu Dhabi—using a structured questionnaire. Results confirmed the significant influence of sustainable awareness, digital advertising, and government support on intention to visit, mediated by green innovation technology and moderated by destination image. This study offered both theoretical contributions and practical insights for policymakers, healthcare providers, and tourism stakeholders aiming to position Abu Dhabi as a leading sustainable medical tourism hub.

# **CHAPTER 1**

## **INTRODUCTION**

### **1.1 Introduction**

This chapter starts with an introduction on the causal linkages of sustainable awareness, digital advertising, and green innovation technology with the intention to visit Abu Dhabi as a sustainable medical tourism destination as this study's dependent variable. Several key areas in Abu Dhabi, such as the tourism and hospitality sector, were investigated in this study. Research gaps are highlighted in this chapter. In particular, this study targeted medical tourists in Abu Dhabi who had engaged with the medical tourism ecosystem. This study's research questions and objectives and the scope and significance of study are also discussed. Besides that, this chapter presents the essential elements generated from the review of related literature. A chapter summary is presented at the end of this chapter.

### **1.2 Background of Study**

Medical tourism and the foreign healthcare system have grasped global popularity and become an international business. Healthcare, which has substantially evolved in the last decade, is among the most important areas for the socioeconomic development of Gulf Cooperation Council (GCC). With the fall of oil prices, governments have increasingly considered private industry engagement as a possible option to maintain healthcare spending (Department of Culture & Tourism, 2020)<sup>1</sup>. As a prominent global metropolis, Abu Dhabi integrates its extensive cultural legacy with

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<sup>1</sup>Department of Culture & Tourism, Abu Dhabi, 2020 <https://dct.gov.ae/en/default.aspx>

sophisticated healthcare services, offering dual attraction for travellers demanding medical attention and culturally enlightening adventure. Private healthcare services in Abu Dhabi play a significant role in shaping the perception of such destination. Through the implementation of green technology and sustainable practices, these healthcare organisations increase their appeal to foreign patients. When it comes to healthcare tourism, a non-profit organisation, known as the Medical Technology Association, helps healthcare professionals and municipalities to create effective programmes (Arjandas et al., 2018).

In 2016, Abu Dhabi's medical tourism sector produced approximately AED 1.4 billion in profit, reflecting a growing requirement for medical treatments in the metropolitan area. At the time, Abu Dhabi's medical tourism consistently recorded an upward trend, including a total of 326,649 healthcare professionals in 2022, which indicated an improvement of 9.5% in relative to that of the prior year. Through the integration of advanced healthcare facilities with tourist-oriented amenities, Abu Dhabi enhances its attractiveness as a medical tourism hub, attracting patients and their families worldwide. This comprehensive strategy enhances the healthcare sector while positioning the city as an attraction that integrates medical treatment with tourism (Kim & Hyun, 2022).

As part of the continuous efforts of advertising Abu Dhabi as a destination for medical tourism in regions that include Russia, Germany, as well as the GCC, healthcare providers, tourist organisations, government departments, insurance providers, and hotel partners incorporate favourable ecological systems that can enhance Abu Dhabi's position as a leading healthcare tourism destination while promoting areas like cardiovascular, cancer, and executive examinations. The goal is

to become the leading healthcare tourism attraction in the region. As part of the global marketing efforts to promote the city as a medical tourism destination, both Department of Health (DOH) and Department of Culture and Tourism work together to attract more medical tourists (Rice University's Baker Institute, 2019). Abu Dhabi was ranked 25<sup>th</sup> (out of 41 cities) in the Health Sciences Survey. Both infrastructures and quality-of-service components were rated above average and ranked 16<sup>th</sup>, demonstrating the capital city's efforts to enhance the overall healthcare experience and medical competencies (Digital, 2021).

The percentage of Asians visiting the United States for medical purposes was 37% in 2013. Arab people represent a significant portion (31%) of Abu Dhabi's total tourist demography, with 15% coming from Europe. The Arab and GCC countries make up an important proportion of this demographic, accounting for 31% of the total visitors. The GCC countries comprise nations like Saudi Arabia, Kuwait, Bahrain, Qatar, and Oman, which are close to Abu Dhabi and share cultural and geographical connections. These countries exhibit significant healthcare needs, especially for specialised medical treatments, which may not be accessible at the same level of excellence as in Abu Dhabi. Abu Dhabi's cultural similarities and connections make it an appealing for healthcare tourism, especially in areas like cardiovascular treatment, surgical procedures for cancer, and executive health evaluations (Digital, 2021).

Increasing healthcare costs in developed nations and the absence of healthcare insurance for certain treatments have increased the demand for healthcare services. Many opt to visit other nations to acquire pharmaceutical, dentistry, and surgical treatments that are unavailable or costly in their homeland (Kim & Hyun, 2022). Findings have highlighted that patients' perceptions of medical tourism services are

based on medical tourism in Abu Dhabi trust with quality services, cost-effectiveness, medical advancement, along with interconnected care. The city's distinctiveness as an attraction for travellers enhances its appeal, providing both exceptional medical facilities and possibilities for relaxation and leisure.

Abu Dhabi's strategic emphasis on excellent superiority, affordable, as well as creative healthcare services establishes the country as an outstanding option for foreign medical patients demanding advanced and sophisticated treatments within the diverse cultural context. Medical tourists are attracted to Abu Dhabi due to its extensive amenities that can uniquely address their healthcare needs. Patients have access to an extensive selection of healthcare specialties within a single location, including preliminary assessment, evaluation, therapy, and rehabilitation, including the follow-up treatment. They are attracted to the city due to its provision of cutting-edge medical innovations, enhancing their confidence in obtaining exceptional treatment. For example, complicated surgeries, such as treatments for cancer, orthopaedic surgery, or myocardial operations, can be performed using the latest methodologies.

Patients are more inclined towards selecting Abu Dhabi for their medical needs when they are aware that they may arrive at the location promptly. Patients seek highly accessible transportation and excellent healthcare, which are offered in Abu Dhabi, making it a desirable healthcare tourism destination. This ease of travel boosts the city's strengths, such as its outstanding amenities and innovative medical equipment. (Nguyen et al., 2021; Taheri et al., 2021). The initial perception of various factors impacting the availability of medical operations in Abu Dhabi significantly impacts the entire interactions with foreign patients.

Abu Dhabi has systematically implemented steps to improve the availability and simplicity of its healthcare facilities, hence influencing their perception. The availability of an online e-portal enhances the availability of healthcare facilities in the nation, including comprehensive data on 30 to 40 doctors with different specialisations. This online platform has been developed for patients with premium medical insurance coverage, enabling them to make educated choices in regards to the doctors and hospitals they visit. The e-portal provides essential information, such as physician credentials, specialisations, along with patient feedback, therefore promoting honesty and trust within the healthcare system. Organising such information enables patients to readily evaluate alternatives and select the appropriate physician according to their medical requirements, choices, and insurance coverage.

The incorporation of technological innovations, direct engagement with healthcare practitioners, residential advantages, and an extensive infrastructure for tourism in Abu Dhabi favourably influence medical the opinions of travellers of the city's healthcare services. These efforts aim to improve patients' satisfaction by promoting versatility, accessibility, and extensive experience that extends medical care, establishing Abu Dhabi as an innovator in the medical tourism sector globally (Arjandas et al., 2018). Abu Dhabi has also established private healthcare infrastructures. As a result, tourists from Europe, Russia, and China can easily apply for a visa, book a doctor's appointment, acquire translation services, and receive the needed medical care (Baker Institute at Rice, 2019).

Medical tourism also serves as a highly profitable source of foreign cash, which has propelled continuous efforts to develop and sustain the sector (McCabe, 2019). Achieving sustainability, which involves striking the right balance between

environmental, social, and economic aspects, in medical tourism is critical to Abu Dhabi's economy. As a consequence, Abu Dhabi has taken steps to encourage sustainable medical tourism and for the benefits of the UAE's citizens as well. Open-heart surgery and cancer therapy are not prevalent in this part of the country, contributing to the focus of the advertisement campaign.

Meanwhile, UAE citizens have access to an insurance scheme for healthcare, known as Daman Insurance. Daman Thiqa and Daman Basic are two primary insurance plans offered by Daman. Daman Insurance assists in making guarantees that everyone in the UAE has access to health insurance by lowering premiums and establishing an equitable arrangement involving the contributions of both employers and employees. With that, families have access to the required medical treatment without exceeding their budgets. However, a fourth child and parents are not insured under the new Daman Basic. As for Daman Thiqa, all cardholders, which were formerly insured at 90% for medical treatment received outside of Abu Dhabi, are insured at 50%. However, in the case of medical treatment being inaccessible in Abu Dhabi, the therapy costs should be fully paid or insured.

Abu Dhabi's achievements within healthcare tourism have stimulated competition within the UAE, which has established themselves as part of a prominent healthcare tourism centre. With the growing challenges, two municipalities have made efforts to draw foreign patients by providing innovative medical procedures, premier facilities, and captivating tourist programmes. The coordination of opulent accommodation, cutting-edge treatment, as well as recreational opportunities have contributed to the trademark of the UAE's medical tourism sector.

### **1.2.1 Gearing Up Sustainable Medical Tourism**

The goal for the UAE to take a lead in medical tourism requires an upgrade of its infrastructure. The tourism industry in the UAE has flourished due to the country's robust health regulatory system. The investments in healthcare coverage by the government and private sectors have fuelled sustainable prosperity in the Middle East region, with the UAE contributing 26% of GCC's governmental healthcare spending in 2016. Key subfields of the 2030 Dubai Strategic To make treatment more easily obtainable and complete, organisations additionally encompass medications with prescriptions including the usage of devices for medical purposes. This media spotlight assists in establishing the country as a world authority in hospital by highlighting the UAE's commitment to technological advancements in medicine, sustainability, and professional practice. The UAE government intended to build 34 manufacturing facilities for pharmaceuticals across the nation by 2020 as a component of its endeavours to enhance the healthcare sector. In order to ensure that the UAE can meet its worldwide and domestic healthcare demands, these manufacturing facilities serve to increase the local manufacturing of pharmaceuticals along with healthcare equipment. Apart from making an advantageous impact on the global pharmaceutical businesses, this approach helps the nation to achieve its goal of being an international hub of sustainable healthcare practices and medical innovation (Sofa, 2022).

### **1.2.2 Medical Tourism in Abu Dhabi**

Apart from seeking for world-class medical treatment, patients who seek rehabilitation in Abu Dhabi are assured that they would be properly taken care of throughout their stay. Patients seek to have quick and fuss-free recuperation and

rehabilitation through flexible healthcare visa, on-ground transport, and strategic involvement of hotels and tourism companies, while still experiencing like they are home (Al-Talabani et al., 2019; El-Saharty, Kheyfets, Herbst, & Ajwad, 2020).

Apart from being a popular tourism destination, Abu Dhabi is a prominent location for healthcare services in the Middle East region. Each year, Abu Dhabi welcomes 15,786 visitors in search of the city's world-class medical treatment. In 2017, approximately 7,404 foreign patients were treated at 36 institutions in Abu Dhabi. In addition, Abu Dhabi possesses a high standard of safety and crime-free culture. The UAE has frequently been named the world's best place to live due to its high levels of technological protection, access to healthcare services, critical infrastructure, and personal protection. Safety and access to high-quality treatment are some of tourists' primary considerations, and Abu Dhabi rates highly in both aspects (Talukder, 2016).

A comprehensive approach to health and wellness is embraced in Abu Dhabi, which encompasses various medical systems, equipment, and treatment options. This separates Abu Dhabi from other cities. With the goal of expanding sustainable medical tourism, Abu Dhabi's cutting-edge medical services and infrastructure establish a place for individuals to seek excellent medical treatment and recovery. These services are in high demand since many look for innovative medical treatments that may not be offered in their home country. With the delivery of specialised care, Abu Dhabi's healthcare facilities have been beyond expectations of foreign patients.

Hospitals make efforts to make international medical professionals feel at home by providing them with a warm and welcoming environment. In order to get precise diagnosis and therapeutic suggestions, patients and their caregivers may

depend on the expertise and wealth of experience of highly trained medical professionals. The primary objective of global Hospital's Tourism along with Public Relations Department is to provide patients medical advice based on their healthcare needs and medical history (Talukder, 2016).

Several key players in this industry have also come forward to provide exceptional top-quality specialised hospital experience. An effective information system of service providers provides a complete system that meets patient needs, with the integration of established local experiences and capabilities in medicine with the world's newest healthcare equipment (Digital, 2021).

### **1.2.3 Sustainable Medical Tourism**

The growth of healthcare tourism has gained immense interest among researchers and practitioners alike (Forgon, 2018). Patients from less developed countries are likely to go to developed nations for treatment due to its inaccessibility in these countries (Connell, 2013). Sustainable medical tourism plays a crucial role in Abu Dhabi, as sustainable development pertains to the sociological-socioeconomic balance (Al-Talabani et al., 2019). Medical tourism involves visiting another country to receive medical care (Cham, Lim, & Sigala, 2022). In most cases, patients who experience costly healthcare treatment in their home countries are prompted to seek more cost-effective treatment options in other countries for the same healthcare treatment (Westwood, 2022). Regardless of where they reside, patients who seek medical care in other countries engage in medical tourism (Kamilova et al., 2022).

Tourists in the UAE have access to the e-portal of Abu Dhabi Medical Technology, a technological platform that provides information on all medical services

and procedures accessible during their stay in the UAE (Abu Dhabi–Global Healthcare Destination, 2021). The e-portal lists a total of 40 private healthcare facilities, all of which comply with the requirements set out by the DOH. More than 287 medical care products and more than 173 specialists from across the nation are part of the JAWDA programme, which focuses on general and specialist healthcare facilities in Abu Dhabi. Portal users also receive health tourism insurance packages and a variety of tourism facilities like consultations with healthcare providers, residence permit issuance, and appointment scheduling (including accommodation and transportation options), and other leisure activities. This ensures the delivery of high-quality amenities and facilities by the healthcare insurance network. Besides that, the DOE evaluates whether healthcare professionals meet the performance targets of the JAWDA programme. Orthopaedic surgery, joint replacement, chemotherapy drugs, and advanced cardiac surgery are some of the accessible medical treatments.

DOH serves as the governing body for healthcare coverage in Abu Dhabi, ensuring the delivery of high-quality care and safety for all (Digital, 2021). Abu Dhabi's DOH is essential for maintaining and advancing good health and well-being. This entails ensuring that healthcare institutions comply with global requirements of medical treatment, protection, and satisfaction among patients. The DOH enforces strong regulation standards to guarantee that all medical tourism facilities function effectively while providing superior treatment. Besides that, it designs the medical system's strategy and analyses and assesses the health and productivity standards of the target population. It also oversees establishing the legal foundation for healthcare services, checking for compliance with laws and regulations, enforcing regulations, and encouraging the UAE's health centres to follow worldwide best practices and competency requirements (Abu Dhabi Global Healthcare Destination, 2017). Abu

Dhabi's medical tourism framework prioritises attracting foreign patients while enhancing and preserving the requirements for health and well-being of both medical personnel and patients. The approach is designed to make sure that all medical professionals, visiting patients, and patients' families experience a conducive and beneficial atmosphere.

Realising the significance of medical tourism, the UAE has made proactive efforts to continue its stance as the global centre and popular tourism destination, especially for those who seek high-quality healthcare services. Well-known healthcare institutions like the Cleveland Clinic, Tawam Hospital Corporation, and Mubadala Medical System have also partnered with the Abu Dhabi government, which further enhance the UAE's healthcare system (Kim & Hyun, 2022), making it a leading attraction destination for medical tourism. In order to better understand the healthcare tourism sector, Caballero-Danell and Mugomba introduced a model that takes into consideration all stakeholders. Accurate information are efficiently provided for a better grasp of the existing state of health tourism and its predicted future growth.

Financially motivated medical travel has grown progressively more common from the viewpoints that include patients and pharmaceutical corporations. Patients often choose their destinations based on the affordability of medical services, and they generally choose regions that provide superior medical procedures at reduced costs in relative to their home countries. The situation is particularly applicable to individuals from areas where medical treatment is either excessively costly or deficient in sophisticated technology. Travel internationally allows people to substantially reduce medical costs despite obtaining high-quality care in areas like surgical procedures, specialist therapies, and diagnostic tests.

Pharmaceutical businesses view medical travel as a means to broaden their markets via collaborations involving healthcare organisations. With the expansion of medical tourism, the pharmaceutical industry provides drugs, medical devices, and advanced therapies to hospitals serving foreign individuals, therefore facilitating access to innovative treatments at more affordable rates (Abu Dhabi Global Healthcare Destination, 2017). Small or medium enterprises (SMEs), property investment and development, financial services, tourism and hospitality, industrial development, and healthcare services are among the economic priorities listed in the UAE's Government Strategy. These economic sectors have expanded and grown in relative terms (Kim & Hyun, 2022).

Since the country's establishment, the UAE and its economy have served as a testing ground for various new ideas. Starting with oil, the business has transitioned from one income source to another and now expanded its earnings from the tourism business. In 2008, the UAE was ranked fifth in the world in terms of oil production (Alfaki & Ahmed, 2017). The UAE, in comparison to several other nations with equivalent natural resources, has recently experienced a significant transformation in its financial sector. The dependence on oil has dropped to only 30%. The UAE is quickly expanding in several sectors, particularly as a significant economic centre.

The UAE prioritises significant sectors like tourism and healthcare. Historically, several individuals had to travel to other countries for medical treatment, generating an annual expense of around USD 2 billion. Currently, the UAE makes efforts to enhance its medical tourism sector. This entails drawing people from other nations towards the UAE for medical care, hence generating revenues for the country.

In 2010, medical tourism contributed around Dh 7 billion in revenue to the national economy (Kim & Hyun, 2022).

The UAE transitions off its oil dependency towards establishing its position as an international leader within medical tourism, therefore benefitting its financial system along with the healthcare sector (Arief et al., 2022). Strategically, the UAE has actively made efforts to establish and strengthen public healthcare facilities and positioned itself a force to be reckoned with when it comes to medical tourism, with its 16<sup>th</sup> rank in the list of international practitioners' preferred destinations. The related administration has also created user-friendly, smart device applications and an electronic portal, introducing integrated healthcare services for foreign patients to engage with. Patients can efficiently schedule operations, passports, flights, accommodation, tours, and insurance through the established reservation portal. With the government's continuous efforts to be innovative in its approach for sustainable medical tourism, the UAE has made its way to become the fifth most popular global tourism destination for healthcare tourists by 2020 (Arief et al., 2022).

With globalisation, tourism provides the opportunities for people to travel to new places, meet people from diverse backgrounds, and participate in new cultural experiences. In most cases, tourism serves as a compelling force that provides numerous advantages to both tourists and the destinations they visit (Gössling & Schweiggart, 2022). The nature and dynamics of the business are constantly evolving. Sustainable tourism focuses on developing tourism opportunities with minimal environmental impact and allows tourists to engage in environmental and related community programmes. Sustainable medical tourism in Abu Dhabi relates to people travelling to the region for non-emergency medical procedures at establishments

sanctioned through the DOH. The Abu Dhabi's healthcare tourism system connects healthcare services, establishing essential offerings like transport, accommodation, and assistance with residence permits. This system combines the necessary arrangements for healthcare tourists, facilitating an additional straightforward along with pleasant experience during their residency and medical care in Abu Dhabi. Emergency in-patient healthcare illnesses, wounds, and responsibilities are all covered under the Health Tourism Essential Health Insurance Plan, a healthcare insurance policy specifically intended for medical tourists (Universal Hospitals, n.d., retrieved September 29, 2024).

One of the numerous benefits of this specialised plan is its extensive coverage from emergency medical care and prescription drugs to in-patient rehabilitation and dental care (Digital, 2021). The provided services also involve the recovery of life-threatening illnesses. With the increasing medical costs, health insurance rates for Abu Dhabi residents, including expatriates, may also rise following the implementation of new levies by the Health Board Abu Dhabi (Haad). This may drive more initiatives that encourage innovative approaches to healthcare.

The reimbursement between Emiratis covered by Thiqa coverage is different from those of Daman forms of insurance for expatriates and their families under the Basic Plan, which involve taking medication from private institutions. Meanwhile, there are specific procedures involved in the case of public hospitals. Under the Basic Plan, insured expatriates of 40 years of age and older may be required to pay half of their monthly membership fee. This is negotiable if their company opts for co-payments, which is a specific amount of the individual policyholder pays directly for medical treatment, with the remainder financed under the insurance policy. For

example, if the physician's consulting fee is 100, employees may need to provide 20 dirhams for the supplemental payment, whereas the medical insurance provider covers the remaining 80 dirhams. The percentage payment indicates the proportion of the total expense that the insured individual is responsible to pay. According to the plan, employees are required to pay half of their spouse's and up to three children's premiums for medical insurance. Certain family members, such as the youngest child and both grandparents and parents, are completely insured.

However, these changes may be negatively perceived by Abu Dhabi citizens. Nonetheless, the ultimate goal of these introduced changes is to create a competent and sustainable health insurance system. The DOH aspires to create a sustainable healthcare system in Abu Dhabi by promoting competition and enhancing the effectiveness and variety of treatment alternatives (Universal Hospitals, n. d., retrieved September 29, 2024).

Making all these changes is an important step towards the aim of creating a healthier Abu Dhabi. According to the performance of healthcare systems, metrics are the precise measures or indications used to monitor performance of healthcare system. These may include factors such as patient happiness, effectiveness in operations, cost management, including healthcare accomplishments. Investment in medical services enhances the infrastructure for healthcare, resulting in improved satisfaction for patients along with supporting the growing number of medical-related enterprises in the UAE. Consequently, the journey to seek wellness services that involve enhanced expertise increases the likelihood of repeat visits. By enhancing the delivery of healthcare along with the tracking of essential data, the UAE can establish a more robust and sustainable healthcare industry that serves both locals and medical tourists.

Investing in medical services boosts related development and infrastructure, which help to enhance patient satisfaction and promote the development of new and existing healthcare businesses (Universal Hospitals, n. d., retrieved September 29, 2024). Tourists would become increasingly fond of the country and more likely to return in the future.

The Abu Dhabi government is promoting sustainable medical tourism; it is essential to understand the policies and approaches used. These initiatives aim at clarifying the objectives of sustainable medical tourism, including the attraction of foreign patients, enhancement of medical care, including reinforcement of the local economy. The clinic's approach is to enhance the quality of healthcare for patients by safeguarding their rights, addressing their specific requirements, and providing cost-effective treatment alternatives. The clinic seeks to protect the freedom and advantages of every customer. This entails including consumers and relatives in the medical care process and considering their requirements and choices in the decision-making process. The clinic's approach focuses on offering a superior, competent healthcare treatment. This may include enhanced communication, individualised care, and the maintenance of elevated medical requirements in therapy. The clinic provides a highly affordable general insurance plan aimed at reducing expenses associated with therapy via cost-effective approaches. This suggests that organisations seek methods to decrease expenses with possibly elevating the quality of service (augmented therapy). The purpose is to provide cost-effective sustainable medical healthcare while maintaining high standards of quality.

When it comes to Abu Dhabi, images of gleaming skyscrapers, designer boutiques, and the Formula One Grand Prix are likely what spring to mind. Natural

features in Abu Dhabi attract foreign and local tourists, as well as expatriates. Al Jubail Island, for instance, is home to mangrove refuge. Jubail Mangrove Garden, which is slated to start, has wooden pedestrian overpasses across the lush flora. Seagulls and turtles are among the many types of birds along the shore (Masdar City: Abu Dhabi's "Greenprint" for Sustainable Cities, 2021). Abu Dhabi is recognised as the world's safest city, according to data released by Numbeo, a global provider of data on economic, social, and safety areas (AlZaabi, 2020).

Al Wathba, a wetlands area with dunes, is about 40 minutes from the country's capital. Al Wathba Fossil Dunes has appeared in several films, notably Star Wars: The Return of the Jedi. The combination of the wind and calcium carbonate produces these fascinating sandy sculptures. Dunes serve as a significant refuge for a variety of animals. Desert animals, such as reptiles, have evolved to survive in environments with extremely fluctuating temperatures. Ecologically active denotes biologically cold-blood, and most of cold-blooded animals depend on external factors to maintain a consistent internal temperature. Through behavioural change, their bodies can survive extremely hot conditions during the day and lower temperatures during the night (Masdar City: Abu Dhabi's "Greenprint" for Sustainable Cities, 2021).

Half of the country is located in the western part of Al Dhafra in Abu Dhabi. Many old archaeological sites can be found in the vicinity (Oxford Business Group, 2020). Abu Dhabi also offers great spots for scuba diving, saltwater fishing, and sightseeing due to the abundance of marine protected zones. Kayaking through mangrove woods is another way to observe marine lifeforms. There are Arabian angelfishes and butterflyfishes among the brightly coloured corals, as well as

threatened birds and green turtles. The world's second-largest group of whales and dolphins are found in Marawah Marine Biosphere Reserve.

There are numerous factors that influence sustainable medical tourism. Tourists travel to Abu Dhabi due to its sophisticated blending of magnificent, cutting-edge architecture of outstanding 21<sup>st</sup>-century megastructures. This is one of the richest cities in the UAE. Abu Dhabi's DOH and Department of Culture and Tourism developed Abu Dhabi Medical Technology e-portal, a computerised infrastructure that allows portal users to engage in all healthcare operations and services.

Healthcare is clearly one of the most rapidly expanding subcategories of the tourism industry. The economy stands to gain immense benefits from this newfound interest in the world's commerce in medical services. Gross domestic product (GDP), quality of service, currency fluctuations, balance of trade, and tourism benefit from the investments in healthcare. Despite the growing prospects of medical tourism, especially in the developing countries like the UAE, studies on this domain has remained limited. Moreover, sustainable medical tourism has remained underexplored. Besides that, health promotion in Abu Dhabi has been hindered by the lack of digitalisation (Digital, 2021).

Addressing that, the current study explored Abu Dhabi's medical tourism innovation from the sustainability viewpoint. In order to promote Abu Dhabi as a sustainable medical tourism destination, the functions of online marketing and computer technology are considered. The sustainability of medical tourism affects the economic growth of UAE. Medical tourists in Abu Dhabi are expected to benefit from sustainable healthcare services provided. In addition, this study intended to demonstrate the significance of environmental, social, and economic aspects and the

approaches implemented to manage Abu Dhabi's medical tourism. The protection of ecological systems and wildlife offer social and economic advantages to the residents of tourism destinations, which is why preserving and enhancing tourism attractions are two of the most important aspects of culture and tradition preservation. The involvement of both locals and tourists in a mutually beneficial relationship creates universally appealing tourism attractions (Universal Hospitals, n. d., retrieved September 29, 2024).

#### **1.2.4 Department of Health (DOH)**

DOH is the regulatory authority of the healthcare system in Abu Dhabi. It aims to improve the population health by organising and coordinating health-related outcomes. In order to closely monitor the general population health and the performance of the healthcare industry, DOH carries out a variety of monitoring and analysis tasks. Apart from that, DOH develops health-related rules and regulations and enforces their implementation among healthcare professionals, as well as the achievement of performance expectations. DOH also controls the scope of services, charges, and reimbursements within the context of the healthcare system. Besides that, it implements initiatives that promotes the acceptance and knowledge of healthy lifestyle practices.

Accordingly, healthcare services are available to all citizens of Abu Dhabi through the Emirate of Abu Dhabi's extensive health service coverage. Professionals constitute part of the healthcare infrastructure, along with the providers and regulators. Compulsory medical insurance (except Thiqa) covers both public and commercial suppliers of healthcare. The medical insurance relies on three major sources of

funding, namely the government, companies and sponsors, and consumers. Participants in the health insurance scheme, including insurers, brokers, third-party administrators, healthcare providers, business associations (such as colleges and universities), and low- and moderate-income shareholders, as well as policyholders, are expected to fulfil their obligations under the health insurance programme (Department of Health – Abu Dhabi, 2024).

### **1.2.5 Innovation Marketing for Sustainable Medical Tourism**

The innovations of the tourism industry should be multi-dimensional. Tourists today are more adaptable and knowledgeable. Tourism businesses must effectively adapt and address the needs and demands of tourists (Sultana, Turkina, & Cohendet, 2023). With the increasing accessibility and immediacy of competitors implementing successful ideas, tourism businesses must be perpetually innovative. In this vein, it is crucial to identify innovations that are challenging for competitors to replicate (Giotis & Papadionysiou, 2022). Tourism as an industry continues to move ahead through creativity and innovation, which improve goods and services, create novel opportunities for travel, and enhance tourist satisfaction. Some examples of technology innovations that have impacted the market include online reservation platforms and smart tourist approaches, including virtual reality expeditions. New ways of managing and structuring businesses in the tourism industry are examples of organisational innovation. Businesses may incorporate environmentally friendly procedures into their organisational strategy, make decisions based on facts, and incorporate flexible organisational models. With these advancements, businesses are able to cater changing consumer demands more effectively and boost operational efficiency.

The Tourism Destination Council initiated the world's first health tourism gateway in April 2016, known as the Abu Dhabi Health Experience, which has offered various health-related services available, such as wellness, skincare products, and dentists' bundles, as well as for urology, orthopaedics, and physical therapy. The platform, which lists 45 healthcare professionals, is also available as a mobile application. There are more than 400 different medical plans available for selection. The system also includes discounted airfares, travel information, and accommodation suggestions (Odes & Silva, 2012).

#### **1.2.6 Role of Health Insurance**

Healthcare stakeholders include all hospital practitioners, such as medical doctors, as well as insurance companies and the agencies that oversee them. In order to create a successful medical tourism centre, each of these components must be integrated to create positive experience for the patients and their families. Health promotion in market segments is made possible through the availability of growing consumer awareness and local competence (Talukder, 2016). Consequently, it is important to conduct essential research to compare the model of medical tourism-based services for hospitals and related institutions in order to cultivate more successful medical tourism destinations for domestic and foreign residents (Jiang, Wu, & Song, 2022). The government must also make proactive efforts to reduce citizens' tendency to seek treatment abroad (Ratnasari, Gunawan, Pitchay, & Mohd Salleh, 2022).

### **1.3 Problem Statement**

In the Arab world, Egypt has emerged as a favoured destination for medical tourism since the 1960s. With the consistent investment in the healthcare sector by the Jordanian government, they managed to surpass Egypt's standing in the 1980s. The UAE is regarded as a global centre and a destination of choice for foreign patients seeking superior-grade services. However, at present, the UAE is not part of the top 10 medical tourism destinations globally. Despite the presence of unique attractions like hot springs, mineral water, and cutting-edge medical technologies in the region, most countries have yet to capitalise on the significant potentials of medical tourism. However, this prospect remains underutilised.

The collaborations between the Abu Dhabi government and prestigious healthcare companies and institutions, such as Cleveland Clinic, John Hopkins University-Al Tawam Hospital partnership, and Mubadala Healthcare, are some of the more prominent drivers in the advancement of the UAE's healthcare sector. Investments in the medical sector increase the country's GDP, improve the quality of services, generate foreign currency, improve the balance of trade, and stimulate tourism (Bulatovic & Iankova, 2021). As compared to other Gulf countries, there is a lack of literature on medical tourism within the UAE context, which propelled the current study to examine factors that drive sustainable medical tourism in the UAE, specifically Abu Dhabi.

Technological advancements have led advertisers to employ digital channels for public relations in order to reach out to broader demographics. Digital advertising helps multinational organisations achieve their objectives (Krishnamurthy & Kucuk). Online marketing has become increasingly important as it enables organisations target

specific audiences. According to Basheer (2010), the Internet enables consumers, businesses, and marketers to have access to and disseminate materials effectively. Consumers can now exchange knowledge, offer comments, and engage with businesses and other consumers on social media platforms and other online networks. Electronic advertising promotes more effective interactions. Odes and Silva (2012) examined whether consumers choose products based on marketing and operational excellence. Advertisement perception matters because consumers are more inclined to purchase products they perceive helpful and meaningful. Abu Dhabi's emphasis on technological advancements in industries allows technologically advanced systems to thrive. Abu Dhabi pioneers both innovation and technology growth.

The recent survey conducted by INSEAD, Europe's top hospitals, identified the UAE as the most innovative Middle Eastern nation due to its sophisticated technology infrastructures and well-educated workforce (INSEAD, 2023). Digital advertising has promoted Abu Dhabi as a place with cutting-edge medical technologies (Digital, 2021). Tourists are given access to medical treatments with special privileges at an affordable price. With the availability of new, cutting-edge equipment, all citizenship holders from across the globe can be treated at Abu Dhabi's hospitals. For the ease of the entire process, Abu Dhabi has put up a package that addresses all needs, ranging from hotel reservations to healthcare care services and transportation. International art, musical, athletics, gastronomic and historical elements, and corporate seminars and vibrant promotional events are also the many parts of Abu Dhabi's offerings for tourists. Abu Dhabi's economy functions from healthcare services as well. However, it is a challenge to obtain information related to medical tourism on the Internet.

The rapid evolution of digital advertising, driven by green innovation technology adoption, has significantly transformed the landscape of tourism marketing, particularly in the UAE. According to the recent statistics, the UAE's tourism sector experienced a 10% increase in the number of tourists in 2023, which was driven in part by targeted digital advertising campaigns<sup>2</sup>. As the UAE aims to bolster its global reputation as a premier travel destination, leveraging cutting-edge digital advertising strategies becomes crucial<sup>3</sup>. Technologies like AI-driven personalised marketing, immersive virtual reality experiences, and advanced data analytics enable more effective engagement with the existing and prospective tourists. A well-crafted digital advertising campaign can enhance the destination image of the UAE, showcasing its unique attractions and experiences, including its emerging role in sustainable medical tourism. Through the promotion of eco-friendly healthcare facilities and sustainable medical practices, the UAE can attract health-conscious tourists seeking high-quality medical services. It is projected that the medical tourism sector can grow by 7% annually. This approach not only boosts the tourism industry but also aligns with the global sustainability goals.

The quality of information technology is anticipated to meet all standards of successful innovation adoption, which can strengthen individual (patient) interactions via a systematic approach that includes all patient-related elements. An organisation consists of people, operations, and technological innovations (Majharul Talukder,

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<sup>2</sup>Economy and Tourism Dubai (2024) <https://www.dubaidet.gov.ae/en/research-and-insights>

<sup>3</sup>Digital Marketing Innovations Shaping the UAE's Business Landscape: Insights for 2024 (2024) <https://www.go-globe.com/digital-marketing-innovations-shaping-the-uae/>