

# Article Framework for Establishing a Sustainable Medical Facility: A Case Study of Medical Tourism in Jordan

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Abstract: A significant number of studies have assessed the impact of medical tourism from economic, technological and social perspectives. Few studies, however, have explored the development of the medical tourism sector from a sustainability perspective. This research brings a sustainability lens to medical tourism by extending Hart and Milstein's framework (2003) for creating sustainable business value to advance the development of sustainable medical tourism facilities. To inform the analysis, the study conducted nine semi-structured interviews with members of the Jordan Medical Tourism Network (JMTN). Interview results confirmed the primary factors that motivate medical tourists, and characteristics of a sustainable medical tourism facility. The research provides insights on how sustainability is a driver of medical tourists' decisions and a core aspect to be managed. The study also provides direction to advance sustainable medical tourism facilities in Jordan with replicability in other jurisdictions. The research proposes a path for medical tourism facilities to play further roles in their contribution to sustainable development by introducing a framework that aims to integrate four business strategies for establishing sustainable value through the integration of stakeholders' interests and environmental practices.

**Keywords:** sustainable tourism; sustainable value; medical tourism; medical facility; sustainable development goals

# 1. Introduction

Practitioners and scholars have described medical tourism as 'the future of health services', 'the ultimate out-sourcing', 'a new era', 'an international business', and a 'new phenomenon' [1–4]. To understand the impact of this emerging industry, studies have assessed the impact of medical tourism from economic, technological and social perspectives [1–4]. Few studies, however, have explored the impact of medical tourism from a sustainability perspective. To this end, this research applies a sustainability lens to medical tourism by extending Hart and Milstein's framework [5] for creating sustainable business value to advance the development of sustainable medical tourism facilities. Research objectives include: (1) identifying the primary factors that motivate medical tourists to travel abroad for medical treatment; (2) extending Hart and Milstein's framework to advance sustainable medical tourism facilities.

Previous studies to identify the primary factors that motivate patients to travel abroad seeking alternative medical treatments have focused on US and European citizens [6–8]. This study focuses on motivational factors of patients from Arab and international regions to travel abroad for medical treatments and links these factors to the development of the medical tourism sector in Jordan. The study then uses the Hart and Milstein's framework as a starting point to consider strategies for sustainable medical tourism facilities. The framework integrates four sustainability strategies which are social responsibility (identifying the link between current needs with future needs), stakeholders needs, new technology, and pollution prevention [5]. By incorporating these strategies into business operations, a firm



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**Copyright:** © 2021 by the authors. Licensee MDPI, Basel, Switzerland. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license (https:// creativecommons.org/licenses/by/ 4.0/). builds sustainable value, which is described by Hart and Milstein as value that provides benefits to the triple bottom line (i.e., environmental, social, and economic benefits).

Extending Hart and Milstein's framework in this study requires firstly to identify the sustainable value of medical tourism. According to Hudson [9], the primary value of a tourism product is the overall experience of the tourist. Since medical tourism is part of the service industry, we argue that the value of medical tourism treatment/service is the overall experience of the patient/medical tourist. Secondly, identifying the primary actors that contribute to create the overall experience for the medical tourist is essential for aligning the four strategies of the medical facility with the needs of stakeholders. Hudson defines the main actors of the service marketing triangle as the company, the employee, and the customer. Accordingly, the primary actors for developing the medical tourism treatment are the medical facility, the physician, and the patient/medical tourist. Yet, this construct does not consider the community or the environment. Thus, establishing sustainable value for a medical tourism facility requires maintaining a strong relationship across the three main actors for achieving competitive advantage through enhancing the experience of the patient while integrating sustainability practices. Extending Hart and Milstein's framework to the medical tourism sector, using Jordan as a case example, provides a starting point for advancing sustainable medical facilities that attract international patients, improves the local quality-of-life, while also remaining within ecological limits.

The global medical tourism market generated over USD 44.8 US billion in 2019, and it is expected to grow by 20% between the years of 2020–2027 [10]. According to the World Bank Organization, Jordan generates over USD 1 billion by attracting 250,000 patients from neighboring countries every year [11]. Additionally, Jordan has been ranked as the number one medical tourism destination in the region and fifth worldwide by the World Bank organization [12]. The wide expansion and development of the medical tourism sector in Jordan are attributed to political stability, state-of-the-art hospitals, advanced medical technology, and skilled physicians [12]. Using the Jordan medical tourism sector as a case study provides an opportunity to identify other factors that motivate patients to travel abroad for medical treatment, and to consider characteristics of a sustainable medical facility from the perspective of practitioners. The article is organized as follows, in Section 1, we present a literature review of medical tourism with an emphasis on the primary factors that drive the globalization of medical tourism and the underlying components of a sustainable medical facility. In Section 2, we present the research methodology. In Section 3, we share results and, finally, in Section 4, we discuss our results, and integrate current sustainable business thinking, to offer insights on building a sustainable medical tourism facility. We conclude by proposing priority areas for future studies and a path forward to build a sustainable medical tourism sector.

#### 1.1. Medical Tourism Definition

There is no agreed upon definition of medical tourism [2,13]. Lee and Spisto [2] (p. 1) have defined medical tourism in a simple context as "travel activity that involves a medical procedure or activities that promote the wellbeing of the tourist." Medical industry practitioners have defined medical tourism as the act of travelling beyond a home country to receive a healthcare treatment that is either less expensive or more accessible [6]. Additionally, Bookman and Bookman's study [8] (p. 2) defines medical tourism as "an economic activity that entails trade in services and represents the splicing of at least two sectors: medicine and tourism." Jagyasi [14] (p. 1) defines it as a "set of activities in which a person travels often long distances or across the border, to avail medical services with direct or indirect engagement in leisure, business or other purposes". In this study we adopt Kim and colleagues' definition [6] as it describes the main factors that motivate patients to travel abroad seeking medical treatments, which has also forced medical facilities to incorporate tourism activities to compete in the global market of medical tourism.

The globalization of medical tourism is explained by Bookman and Bookman [8] as a reality that is evolving gradually thanks to the rapid growth of international trading in services such as tourism products. Smith and Forgione [15] divide the main drivers for the globalization of the medical tourism into two main categories to explain the indicators that have played a primary role in the decision-making process of international patients. The first category is the external factors: economic condition, political climate, social behavior and regulatory standards. These factors have a significant impact on selecting a medical tourism destination. The second category is the internal factors: cost, accreditation, quality of care and physician training. These factors have a direct impact on the decision of international patients for selecting the medical facility. Both categories reflect on the motivations of medical tourists traveling abroad seeking medical treatments. International medical facilities have assigned these factors into their operational strategies for attracting international patients and remaining competitive within the global market [2].

The globalization of the medical tourism market has led to the establishment of international organizations to regulate the flow of these goods and services across borders. For example, the Joint Commission of Accreditation for Health Care Organizations (JCAHO) was established to evaluate and accredit healthcare facilities and organizations in order to improve safety and quality of healthcare and medical service [16]. Additionally, a part of the JCAHO's duties is to promote quality business practices by encouraging international healthcare facilities to comply with a list of criteria that aims to achieve six goals for safeguarding international patients: (1) identify patients correctly; (2) improve effective communication; (3) improve the safety of high-alert medication; (4) ensure safe surgery; (5) reduce the risk of healthcare; and (6) reduce the risk of patient harm resulting from falls.

Nonetheless, the main notion behind these criteria is to create prodigious and safe experiences across the main actors of the medical tourism product which are medical facilities, physicians and medical tourists. The relationship across the three main actors can be described through the "service marketing triangle" [17]. The purpose of the triangle is to illustrate three interconnecting groups that work together to develop, promote and deliver services for the company, the customer, and the provider. Across the interconnecting groups, a long-term relationship should be maintained and developed for providing safe and advanced medical treatments [17].

The long-relationship across the three interconnecting groups should also move beyond the traditional boundaries of meeting the expectations of stakeholders to one that promotes innovative ideas and implements sustainability practices for approaching a new market niche [18]. For instance, the sustainability perception of international tourists has forced hotels to promote sustainability practices such as energy consumption reduction, minimizing water contamination, and participating in community development projects [19]. Melisson and colleagues [20] argue that to achieve sustainability two primary elements should be taking into the account which are: needs and limitations. Needs refer to the quality of life that people are aiming to achieve, and limitations refer to the environmental capacity that is able to host these needs [20]. Therefore, a medical facility should not only aim to provide advanced and safe medical treatments to medical tourists, but also integrate sustainability practices while maintaining a long-term relationship across internal and external stakeholders.

#### 1.3. Creating Sustainable Value

Given a sustainable medical tourism facility's mandate of establishing an innovation strategy that includes mitigating poverty and environmental impacts, it is helpful to consider Hart and Milstein's [5] win-win approach for creating sustainable value for firms. The term sustainable value can be defined as "strategies and practices that contribute to a more sustainable world while simultaneously driving shareholder value" [5] (p. 2). The sustainable value framework was based on the sustainable development definition articulated by the Brundtland Commission and the eight Millennium Development Goals (MDGs) [21].

According to World Commission on Environment and Development report [22] (p. 43), sustainable development can be defined as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs". Thus, medical facilities should focus on providing high quality medical treatments to patients while respecting the limited capacity of environmental assets and contributing to the local community.

Managing pollution prevention, particularly in a developing country, requires proactive efforts from business [23,24]. Medical facilities have been recognized as substantial sources for physical and chemical material waste and greenhouse gas emissions. A study conducted by Practice Greenhealth Organization [25] found that every bed in the hospital generates on average; 29 pounds of waste, 90% of this waste goes to the dump area putting the life of local residents at risk in some developing countries [25]. In contrast, the medical tourism market generates substantial revenue which has become one of the main pillars of the global economy. A study by Grand View Research estimated that the global market of medical tourism was valued at USD 44.8 billion in 2019 [10]. Therefore, maintaining the growth of medical tourism while paying attention to the triple bottom line requires a framework that fosters the integration of innovative technology and promoting collaborative strategies for reducing environmental impacts and enhancing the quality-of-life of the local residents.

In 2015, United Nations (UN) announced 17 Sustainable Development Goals (SDGs) for eradicating poverty and achieving prosperity [26]. Kumar and colleagues argue that the SDGS improve upon the Millennium Development Goals (MDGs) as they integrate the important role that civil organizations can play to promote a collaborative strategy with the private sector to achieve sustainability [27]. Engaging in a collaborative strategy can bring significant benefits to businesses [28,29]. Hart and Milstein's framework integrates four types of strategic goals for the firm (short-term internal, short-term external, long-term internal, and long-term external). The four strategies frame sustainable value through the lens of stakeholder collaboration, the use of clean technologies, the prevention of pollution and improvement of management systems, and community and market development.

The simplicity of Hart and Milstein's framework has allowed researchers from various hospitality and tourism backgrounds to evaluate the hospitality and tourism firms' performance with regard to the SDGs [21]. For instance, a study conducted by Perez-Pineda and colleagues [30] applied the sustainable value framework by adopting a multi-stakeholder's approach for evaluating the sustainability performance of 16 hotels within the Dominican Republic. Consequently, the findings of the study exposed vital evidence that hotels tend to adopt a multi-stakeholder approach for providing mutual benefits such as innovation and education; cost reduction by using renewable energy; and implementing environmental protection initiatives [30]. The study suggests that future research should develop the sustainable value framework by adopting an integrated approach that motivates collaboration between stakeholders and policy for identifying the sustainable value from all perspectives [30]. Therefore, this study aims to define the strategies and goals of the medical facility while promoting innovation, reducing material waste and pollution and maintaining the interrelationship among the three main actors that contributes to the overall experience of the medical tourist (medical facility, physician and patient) in addition to the community. To achieve this goal, this study adopts Hart and Milstein's framework as a starting place for identifying the primary characteristics for establishing a sustainable medical facility.

Fetschrien and Stephano [7] proposed a universal measurement tool named the Medical Tourism Index (MTI) to assess the suitability of a country as a medical tourism destination. The index combines four dimensions: country environment, tourism, medical cost, medical facility and services. The index includes 34 indicators for measuring the development of a medical tourism sector within a particular region. The index was derived using data from US respondents. The MTI was constructed based on the pull and push factors that motivate patients to travel abroad seeking alternative medical facilities. One of the pull factors that motivate US medical tourists to seek alternative medical treatment is the medical facility. Furthermore, medical facilities are not merely providing advanced medical technology, but also providing skilled physicians and staff, accreditation, affordable medical services and tourism activities. However, the study did not include indicators related to the sustainability as part of the MTI. The World Trade Organization (WTO) has urged countries, hotels, educational institution, etc., to include the SDGs as part of their operational strategy for eradicating poverty and promoting prosperity [31]. Therefore, medical facilities should adopt a framework for enhancing the overall experience of the medical tourist by promoting innovation, implementing sustainable business practices and providing benefits to the local community and natural environment.

## 2. Materials and Methods

In order to gain a complete and multidisciplinary understanding of the complexities of a medical tourism facility within the context of sustainable development, this study has employed a qualitative case study method. According to Stake [32], a case study methodology is one of the most recommended methods by scholars because it reflects the various experiences and perspectives about the issue or the phenomenon. Additionally, a case study method can be used to examine an existing theory, framework or principles and how it fits in reality. This adopted approach allowed the study to include the different perspectives of stakeholders involved in a medical tourism network.

Table 1 shows the study's participants with their organizations. Each interviewee was selected for an interview based on their role in the Jordan Medical Tourism Network (JMTN). There were 10 organizations involved in the steering committee of JMTN, and all of these were invited to participate. Nine of the ten accepted the invitation. The private medical facilities that participated in the study have received an international accreditation by the Joint Commission International (JCI) as a safe facility for hosting international patients, thus increasing the potential generalizability of the results.

Interviewee #	Type of Organization
Interviewee 1	Non-Governmental Organization
Interviewee 2	Non-Jordanian Organization
Interviewee 3	Governmental Organization
Interviewee 4	Private Medical Facility
Interviewee 5	Private Medical Facility
Interviewee 6	Private Medical Facility
Interviewee 7	Private Medical Facility
Interviewee 8	Private Medical Facility
Interviewee 9	Governmental Organization

Table 1. Study's interviewees.

Potential interviewees were sent an email requesting their participation. Upon receipt of a positive response from a potential interviewee, a second email was sent to provide more information regarding the study, request the consent of the interviewee (consent for: participation, including their organization names in a list of participants, audio recording of the interview, and use of anonymous quotations) and to confirm appropriate times to complete the telephone interview. The interviewees reviewed and completed the consent form before each interview was completed.

The data were collected through nine semi-structured, one-on-one interviews lasting 30–45 min in length. The authors created 23 questions (Appendix A). These questions were then forwarded to the Office of Research Ethics at the researchers' university for approval. The names and titles of the interviewees were eliminated from the study as part of the ethics procedures.

The data analysis was conducted by implementing several steps [33]. The first step was transcribing all the interviews, deductive coding the transcripts, and then inductive coding the transcripts. The second step was creating a shorter list of all the codes under the categories of factors, roles, drivers, environment considerations, recommendations, and challenges. The third and forth steps involved merging and refining the relevant codes to represent meaningful groups. Factors were grouped into two categories: factors belonging to the medical tourism destination, and factors belonging to the medical tourism facility [15]. Figure 1 provides the final categories and sub-categories that resulted from coding the data.



Figure 1. Data structure.

In terms of data validity and reliability, Daly argues that replicability is an essential component of reliability [34]. Therefore, researchers engaged other researchers to analyze and interpret a segment of data to see the extent to which both come to the same conclusions about the data [34]. Additionally, the coding of the data was done by a group of researchers to eliminate the effects of individual interpretations.

Jordan is used as case study given the county's leading position as a destination for medical tourism. According to the United States Agency for International Development (USAID), in 2009, Jordan hosted over 250,000 foreign patients [35]. Table 2 provides further details about the healthcare sector and the medical tourism performance in Jordan. To maintain this growth, Jordan has established a medical tourism network (JMTN) to ensure the medical tourism sector reflects the interest of various stakeholders such as medical facilities, governmental/non-governmental institutions, and external medical institutions to collaborate among each other to promote Jordan's medical tourism sector as one sole unit [36].

Country	Medical Tourism Pe	rformance [11]	International Pa	tients [11]	The Ratio of Heal for Every 10,000 J	thcare Workers ordanians [12]
	Worldwide Ranking	Fifth place	Palestinians	25,000	Nurses	44.8
	Regional Ranking	First place	Iraqis	45,000	Physicians	28.6
Jordan	International Patients	250,000	Sudanese	25,000	Pharmacists	17.8
	Annual Revenue	USD 1 billion	UK Citizens	1200	Dentists	10.4
	Number of Private Medical Facilities	69	US Citizens	1800		
			Canadians	400		
			Others/Companions	150,000		

Table 2. Jordan Healthcare Statistics.

# 3. Results

The results of the study have been divided to reflect on three themes: the motivational factors of medical tourists traveling to Jordan seeking alternative medical treatments; the characteristics of a medical tourism facility; and the need for a framework for establishing a sustainable medical tourism facility.

## 3.1. The Motivational Factors of Medical Tourists

The results of the study have divided the primary factors that motivate patients to travel to Jordan seeking high quality medical services into two categories: factors belonging to the medical tourism destination and factors belonging to the medical tourism facility. Table 3 lists the factors gleaned from the literature review and interview sessions, and then compares these factors to define the gap between Smith and Forgione's [15] factors, Lunt and Carrera [37], and interviewees' factors.

Interviewees		Smith and Fo	Lunt and Carrera (2010)	
Internal Drivers (Medical Facility)	External Drivers (Medical Tourism Destination)	Internal Drivers (Medical Facility)	External Drivers (Medical Tourism Destination)	Five Main Drivers
Costs	Infrastructure Flight ICT	Costs	Economic Condition	Familiarity
Skilled Physician	Regulatory Requirements	Physician Training	Regulatory Standards	Availability
Accreditation	Political Stability	Accreditation	Political Climate	Cost
Medical Technology	Culture, Religion and Language	Quality of Care	Social Behaviour	Quality and Duration of Medical Treatment
Accommodation Services and Native Language	Tourist Attractions			Bio-ethical Legislation

Table 3. The primary factors that motivate medical tourists to travel abroad.

Factors belonging to the medical tourism destination are those factors that reflect the strengths of a country in terms of competing for medical tourists. Interviewees mentioned that infrastructure, regulatory requirements, political stability, culture, and tourism attractions; all play a primary role for encouraging patients to travel to a particular tourism destination for medical treatments. Interviewees mentioned that infrastructure is important to accelerate the development of the medical tourism market. They mentioned that the infrastructure should include a well-developed hospitality industry, advanced communication technology that allows medical facilities to share knowledge and transfer patients' documents quicker, shopping centers, and medical institutions. All these elements play

a primary role for increasing the country's reputation as a competitive medical tourism destination. For instance, Cisco, which is an international network company, announced an investment in Jordan worth USD 10 million to enhance the medical network and create sustainable jobs within the medical sector [38]. This network will allow medical facilities in Jordan to share information with medical institutions and physicians around the globe, which will increase the quality of medical care in Jordan. Nonstop flight is a factor that impact patients' choice for medical tourism destination. Foreign patients prefer to travel to a country that provides direct flights to take advantage of the time [39]. Additionally, indirect flights could be inconvenient for patients with certain health conditions. Therefore, medical tourism facilities in Jordan are cooperating with the Royal Jordanian flight company to offer direct flights for countries such as Sudan, Russia, Canada, USA, and UK. Additionally, the Royal Jordanian airline offers express services for VIP passengers and patients who are willing and able to pay additional fees for expedited border-crossing processing [40].

According to the interviewees, regulatory requirements are critical to build a medical tourism industry. The Ministry of Health should have direct cooperation with medical facilities to prevent malpractices among medical staff and physicians. Creating a law for malpractice is important to force private medical facilities to have insurance coverage. American patients are attracted to travel to a country that provides similar regulations and law to reduce the risk of malpractice and force medical institutions to keep the patients' profiles confidentially [15]. According to interviewees, medical facilities in Jordan have developed a proposal for the government to implement a law that requires physicians and medical facilities to have insurance coverage before conducting any medical treatments for foreign patients. Political stability is also an important factor for medical tourism. For instance, in 1994, Jordan signed a peace treaty with Israel to establish a safe environment for economic development and to attract foreign investment [41].

In terms of cultural requirements, patients are motivated to a medical tourism destination that offers same language, religion, and culture. For instance, most of Jordan's foreign patients are from Arab countries; this is because of several factors. Firstly, the native language in Jordan is Arabic. Arab patients prefer to travel to Jordan, because they feel more comfortable using their mother language to clarify their medical issues. Secondly, religion is an important factor motivating destination choice. Arab patients, for example prefer a medical tourism destination that provides various services for the Muslim community such as mosques, halal restaurants, and Islamic attractions. Additionally, tourist attractions are a primary factor that attract foreign patients who are looking to spend a holiday while they are receiving adequate medical services. Interviewees mentioned that Jordan is developing the Dead Sea area to become an destination for patients to heal their body after a complex surgery.

Factors belonging to the medical facility, which are factors that enhance the competitive advantage of the medical tourism facility include: costs, skilled physicians, accreditation, medical technology, accommodation and hospitality services, and language. According to the interviewees, a medical tourism facility should be accredited and prepared with advanced medical technology and skilled physicians in order to offer an outstanding quality of medical care. Cost is also critical, for instance, an interviewee mentioned that *"if a medical facility is to attract a significant number of foreigners, the cost of its medical service should be at least 25% cheaper than that of the medical services available in the prospecting patient's home country."* However, the cost of medical tourism services should not compromise high-quality medical treatment. An interviewee who represents a state-of-the-art medical facility in Jordan, mentioned that:

"Medical staff should be well educated and internationally recognized in order to deliver the best possible medical service, also quality of care is a concept used by medical facilities when referring to the overall and holistic treatment and approach that they offer—And this includes all the tools or methods that help to elevate the overall standard of quality of care." Accreditation, the availability of skilled physicians and advanced technology, and the cost of services form part of the overall quality of care. To receive international accreditation, a private medical facility should attract skilled doctors to work within the facility, as well as hire professional medical staff to deliver outstanding medical services. On top of this all, a medical facility should always be watchful of and consider the costs of running the business or the prices that patients are charged. All these factors work together to maintain the sustainability of the medical tourism market.

Despite the importance of medical costs for attracting foreign patients, interviewees have mentioned that private medical facilities in Jordan are aiming to integrate advanced medical devices within their facilities. For instance, Jordan medical device market has generated over US USD 240 million [42]. In addition, interviewees discussed projects being led by the Jordan Medical Tourism Network to enhance medical information technology for medical facilities such as Hakeem program and e-health initiative system that aim to make the file of patients accessible by medical facilities and physicians, while protecting the privacy of the patient [43].

In terms of accommodation and hospitality services, many foreign patients travel with companions and they want their companions to stay close to them. In response, some medical facilities have expanded their facilities to include rental apartments, car rentals, and special needs services for arranging touristic medical tourism trips to international patients. Many patients tend to travel to medical facilities that provide post-operative services. Medical facilities often connect with family doctors to monitor the health of their patients following their medical procedures. Furthermore, most private medical facilities recruit bilingual staff to communicate with patients who speak foreign language and provide them with all details about their health condition in their native language.

## 3.2. The Characteristics of a Medical Tourism Facility

Ten characteristics were identified by interviewees on what shapes a medical facility that remains competitive in the medical tourism market while integrating sustainability practices. The following Table 4 shares the characteristics of the medical tourism facility that has been defined by the interviewees. These overlap somewhat with the drivers of why medical tourists come to a medical facility but are from the perspective of the facility and the core elements they need to manage for.

The first characteristic is accreditation. Medical accreditation is very important for approaching new market segments. Foreign patients are looking for medical facilities that compare with those found in their home country. Official accreditation of Jordanian facilities means they have met the medical standards and quality of the US medical sector. The second characteristic is advanced medical technology. In such cases, patients often travel abroad in order to receive advanced medical services not permitted in their home countries. Not surprisingly, medical facilities tend to allocate adequate budgets for updating their medical technology in order to keep up with the market competitiveness. The third characteristic is skilled physicians. Many medical facilities in Jordan affiliate with western medical institutions in order to advance the experiences and the skills of Jordanian physicians. Following this, many private medical facilities are developing local networks that motivate local and international physicians to connect and join their efforts to innovate and use new methods for medical treatments.

Private institutions can be found operating many different types of facilities within the medical tourism sector including medical labs, tourism agents, hotels, restaurants and healthcare resorts. The role of private institutions within the medical tourism sector is to provide patients with access to advanced medical technologies and laboratories, a high quality of medical care, and to organize full medical trips for foreign patients. Thus, the fourth characteristic is accommodation services. Foreign patients often travel abroad with their companions or dependents. Those companions need to stay close and have easy access to the medical facility for visitations. To address this issue, certain private facilities have built accommodation facilities to host patients' companions. An interviewee mentioned that: "As you know that the second element of medical tourism facility is the cost, therefore the hospital has built an accommodation facility for patients' companions to offer adequate medical costs and make them close to the hospital for fast visitations. Thus, patients do not have to rent rooms at hotels and pay extra fees."

Table 4. The characteristics of medical tourism facility.

Interviewees (Medical Tourism Facility)		
No.	Characteristics	
1	Accreditation	
2	Advanced Medical Technology	
3	Skilled Doctor	
4	Accommodation	
5	Hospitality Services	
6	Foreign Patient Affairs	
7	Affiliation with External Organizations	
8	Collaboration with Tourism Stakeholders	
9	Social Responsibility	
10	Environmental Responsibilities	

The fifth characteristic is hospitality services. Because officials at private medical facilities have realized that foreign patients are attracted to facilities that provide incentive services such as hotel accommodations, they are pushing to incorporate them into the overall experience. To this end, a number of private medical facilities, such as the Specialty Hospital and Al Khalidi Medical Center in Jordan have renovated their reception areas to resemble hotels and they provide various services such as car rentals, touristic trip packages, gift stores, and general information about the country's shopping centers, historical and tourism sites, currency exchange, and consultation about arranging post-operation services. Many private facilities believe that the patients' trip should be planned by the medical facility in order to protect the patients' rights (privacy rights, medical agreement rights and discloser rights). Conversely, the government of Jordan encourages private medical facilities to take on the role of tourism operator and to provide foreign patients with all the necessary tools and information to make their trip safe. Respectively, the sixth characteristic of a medical tourism facility is foreign patient affairs, because many foreign patients seek information regarding their treatment on a regular basis (e.g., pre- and post- operation requirements)—Private medical facilities have established specific departments that help foreign patients with their medical trip from their arrival through to their departure.

The seventh characteristic is affiliation with external organizations. Private medical facilities insist on offering their patients quality medical care that is competitive with and comparative to the treatments available in their home countries. Often, foreign patients seek treatment abroad because their home country lacks the level of quality health care they need; other times, they travel abroad because the cost of accessing high quality medical care back home is prohibitive. To know those high standards, and to educate their own physicians on the best medical practices available, private medical facilities in Jordan have developed affiliations with other countries to deliver high quality medical care. It is in this vein that some private medical facilities conduct conference calls with other physicians and facilities around the world by telephone, video, or the internet—The idea is to learn from each other and share knowledge.

The eighth characteristic is collaboration with tourism stakeholders. A private medical facility cannot by itself reach foreign patients. The USAID encourages private medical facilities to collaborate with tourism agencies and the Jordan Tourism Board (JTB) in order to reach foreign patients and promote their medical sector facilities. Additionally, private medical facilities cooperate with travel agents to arrange flights and tourism tours

for foreign patients. By providing extensive tourism services, medical facilities are able to attract patients who are looking to travel for medical purposes as well as to enjoy memorable tourism experiences. Combining tourism values with medical services make the medical facility more attractive and friendly to foreign patients, and it motivates patients to travel as much for medical purposes as for vacation away from work and other everyday commitments.

The ninth characteristic is social responsibility. Medical facilities have realized the importance of the local community for enhancing the image of the facility among stakeholders. Thus, certain medical facilities have developed a department for funding campaigns that raise awareness about social issues such as breast cancer, and children and women rights, offer local health services, and further the local economy. Medical tourism facilities should pay attention to the integral role that the local community can play to enhance the development of the medical tourism sector. For instance, one interviewee from the study who works as a Deputy Manager in a medical facility, highlights projects that are designed for the local community:

"I work on four things: promoting the medical services; patient care services, promoting the articles that the hospital is working on, and also I promote education programs and training sessions for universities and other institutions. On the other hand, I work on organizing cancer campaigns for cancer controls and public awareness, and the role that I have been working on within the realm of medical tourism—I represent the Cancer Center in this field (Medical Tourism). Therefore, I negotiate the agreements between facilitators and other operators for the Cancer Center, and I also facilitate the communications and other documents work between the Cancer Center and the government."

Evidently, private medical facilities are offering opportunities to attract people from the local community to get involved within the medical tourism sector. These also motivate local people to participate in the development of the sector via investments, volunteer opportunities and employment. This, in turn leads to a sense of pride and ownership, a phenomenon that helps market the quality of the medical facilities even further.

The tenth characteristic is environmental responsibility. Interviewees mentioned that green programs have become a core value for enhancing the image of private institutions among local and international communities. While private medical facilities are established with the objective of generating profits, it is expected that they should do so while impacting the natural environment as little as possible. For example, Jordan has two separate areas for disposing medical waste that comes from both public and private medical facilities. These areas have become polluted with medical waste and consequently, the government of Jordan has introduced methods to process medical waste that minimizing negative impacts. The Ministry of Health in Jordan has cooperated with the Directorate of Health and Environment Office and the Royal Society for the Conservation of Nature for developing an eco-friendly incinerator for medical waste for private medical facilities.

Another environmental initiative adopted by Jordanian medical facilities is raising awareness to employees about best environmental practices including reducing water contamination, energy consumption and recycling. King Hussein Cancer Center has implemented a recycling program by distributing color coded bins. However, to succeed the program requires employee cooperation and awareness of the advantages of recycling materials. To encourage compliance King Hussein Cancer Center offered educational materials to medical staff about the best methods for reducing pollution and energy wastage. An interviewee works in a medical facility mentioned in an interview that: *"The green hospital (Green Thinking) is the only program available we have at this moment, and we are working on raising awareness about the best business practices for reducing the waste, which at the end it returns some benefits for the environment. However, we hope that this plan takes another level on a bigger scale".* 

The concept of green hospital has evolved and in the last decade has grown to include more factors, including community services, training and development, environmental leadership program, and internal and external stakeholders engagement. Green hospital program can be considered as an effective tool for medical facilities to achieve competitive advantage through integrating environmental strategies that aims for cost reduction or awarding environmental recognition [44].

## 3.3. The Development of a Sustainable Medical Tourism Facility Framework

This section highlights the need for developing a conceptual framework for establishing a sustainable medical tourism facility that remains competitive with other medical facilities while paying attention to the triple bottom line (economic, social, environment). Interviewees have seen green hospital program as a means to implement and integrate sustainability practices. However, a majority of interviewees were not informed about how a medical tourism project could be managed to protect the environment. Other interviewees mentioned that the government of Jordan is developing an incineration area to dispose of medical waste in the most efficient way while reducing some of the negative impacts on the environment. The following table presents different opinions of interviewees on the issue of how medical tourism facilities can be managed to protect environment and ensure community development (see Table 5).

Table 5. How medical tourism projects or private medical facilities can be managed to protect the environment?

Interviewee	Perspectives
Interviewee 1	"The government of Jordan is developing a project to dispose the medical wastes without harming the environment; and this project will be lunched in two months. And this project will be very good for hospitals to reduce the additional costs for medical wastes. Now, we have another theme of hospitals called green hospital"
Interviewee 2	"Recently, we are focusing on developing the Jordanian medical tourism sector in terms of attracting local community to be involved through various means such as health providers, investors or trainees"
Interviewee 3	"This thing is not part of the cluster agenda, and it's far away from our objectives, it will be our least concerns for the cluster. I think because we are new in this field, and the cluster can be the first step that will lead us to pay more attentions to other issues such as the environment"
Interviewee 4	"Of course, you should talk with the Ministry of Health because they know well about this subject. All hospitals within Jordan must sign an agreement with the Ministry of Health for relieving medical waste according to the Jordanian law"
Interviewee 5	"We have distributed color coded recycling binds throughout our medical facility and hired third a waste management company to process the material waste such as plastic, glass, and paper"
Interviewee 6	"We are recently contacting a green certification body to have an idea about the requirements and the criteria that we need to comply to for becoming a recognized green hospital"
Interviewee 7	"It depends what the patients are looking to do in the host country. Patients who are willing to come to Jordan for open heart surgery may not be able to visit environmental attractions, while patients who are coming to Jordan for wellness and to improve their health conditions, they have more probability to visit these environmental attractions such as the Dead Sea"
Interviewee 8	"The green hospital (Green Thinking) is the only program that we have to offer at this moment, and we are working on raising awareness about the best business practices for reducing the waste, which in the end could return some benefits for the environment. However, we hope that this plan will take off on a larger scale"
Interviewee 9	"Conducting campaigns to raise awareness about the best practices for water and energy consumption to Jordanians through various means such as TV, workshops, and Radio station"

Table 5 raises the point that most interviewees do not have a clear image of how a medical tourism facility can be managed in order to protect the environment. However, three interviewees noted that the green hospital program is an effective way to educate employees and also local residents about ecofriendly practices. For example, King Hussein Center has established a department for implementing social responsibility initiative programs; the department has launched a green initiative program that aims to educate employees and local residents about the benefits of recycling. Therefore, implementing a sustainable medical tourism facility requires the adoption of a framework that imposes sustainable practices, subsequently achieving shareholder value while delivering benefits to the triple bottom line.

In addition to the environmental factors for implementing a sustainable medical tourism facility, interviewees in this study mentioned other issues facing the development of medical facilities in the global market of medical tourism, including medical facility capacity to host local patients, medical tourism cost to treat local patients, and community participation in advancing the medical tourism sector. Table 6 illustrates the different views of participants about the impact of medical tourism sector on the quality of life of local people.

**Table 6.** The impact of medical tourism on the quality of life of Jordanians.

Interviewees	Do You Think That Medical Tourism Could Impact the Quality of Life of Jordanians Citizens?
Interviewee 1	"Medical tourism could not have a negative impact on the public health services. We have one physician and one nurse for every 10,000 patients. Some hospitals are expanding their capacity and adding more medical beds. I'm against the rapid growth of medical development, the development should be growing under specific and organized steps, and the trend should be growing gradually in order to sustain our position globally. This is also part of our job now is to increase the number of medical beds in small and medium hospitals."
Interviewee 2	"I think medical tourism could provide work opportunities for local people, which we call it economic development projects. However, if we talk about the medical services and the cost of medical services, then I think medical tourism will improve the medical services for local people by attracting skilled doctors and providing updated technology, then local people will receive a good quality of healthcare services"
Interviewee 3	"Jordan relies on skilled physicians from its boundaries to attract patients. We are developing the medical tourism sector to convince skills physicians in Jordan to stay and not seeking alternative working opportunity abroad. Also, our market is competitive which motivate physicians to provide an outstanding medical service to local patients"
Interviewee 4	"Most Jordanians are covered by their own budget, and minority portion are covered by insurance companies. However, private hospitals in Jordan focus on the quality of medical services for treating international patients. Jordanian patients when they approach these hospitals could be very expensive for them; in some cases, international patients could compete Jordanians with the capacity of private hospitals. Despite the two negative impacts such as the capacity and the price, Jordanians could receive some benefits from medical tourism such as, skilled physicians, updated medical technologies, and work opportunities"
Interviewee 5	"Our medical facility brings tourism dollars by attracting international patients which would attract more Jordanian skilled physicians to be involved in this sector and not going abroad seeking better opportunity"
Interviewee 6	"As long as the medical market is growing rapidly, this will bring a positive impact on the Jordanian economy. Do you believe that each hospital offers over 56 professions, and each profession has its own equipment and tools that are available in the market? If this profession was occupied by local person, then the local market will be impacted. For example, if a commercial building was under construction, the entire construction sector will be impacted. Also, hospitals have the same attributes as construction business. The Hospital is not working as an isolated entity. Hospitals are working as a part of the total picture of the Jordanian healthcare sector"
Interviewee 7	"Medical tourism could impact the quality of life of Jordanian citizens, because when patients visit Jordan, they bring their family or relative with them. While the patient is receiving a medical treatment at a particular medical facility, the patient's companion will visit other attractions such as the shopping centers, restaurants, malls, hotels, and other activities. So medical tourism will not only affect the hospitals but also will affect the owners of other facilities such as car rental, coffee shop, hotels and so on"
Interviewee 8	"We have received over one billion dollars from medical tourism industry only, so for sure there some positive impact on the Jordanian citizens. However, this impact may be small and needs to be more visible. The main challenge, that we miss the strong management and the big picture of medical tourism. As I told you before, if we have a clear plan that directs our resources and anticipates the outcome of medical tourism industry in the future, then we can determine very will how medical tourism could impact the quality of life for Jordanian citizens"
Interviewee 9	"Medical facilities are generating medical waste, which require to be incinerated to prevent chemical and biological risks. However, Medical facilities in Jordan needs to reduce the medical waste to reduce the negative impact on the environment which would lead also to enhance the quality of life of local people"

Interviewees mentioned that there are positive and negative impacts that medical tourism facilities can generate on local communities. Positive impacts of medical tourism have been described by interviewees as generating tourism dollars, attracting Jordanian skilled physicians to stay, treating local patients with advanced technology, and providing synergic benefits to small and medium tourism and medical enterprises (travel agents, medical labs, car rentals, and medical devices companies). In contrast, some interviewees have

described the impact of medical tourism on the quality of life of Jordanians as a negative impact. The rapid growth of medical tourism drives decision making and resources to support international patients at the expense of local patients. The high demand on medical services by international patients, for example, could lead to higher costs of medical services to residents. One interviewee mentioned that enhancing the quality of life of local communities requires a strong management plan that provides an opportunity to all stakeholders to play a role in the development of medical tourism sector by integrating all the resources (skilled labors, technologies, and tourism attractions) for maximizing the revenue of the medical tourism sector while providing opportunities for future generations.

#### 4. Discussion

The results of the study identify the medical tourism factors that affect the choice of a medical tourism destination and a medical tourism facility. Factors belonging to the medical tourism destination are those factors that reflect the strengths of a country in terms of competing for attracting medical tourists. According to Smith and Forgione [12], American patients define medical destinations based on several factors that include: economic condition, political climate, social behavior and regulatory standards. Additionally, Lunt and Carrera [36] argue that there are five main factors that motivate European medical tourists to travel abroad, which are: familiarity, availability, cost, quality and bioethical legislation (abortion tourism, fertility tourism, and euthanasia) [36]. In contrast, interviewees in this study noted that infrastructure, flight duration, political stability, culture, religion, language, and tourism attractions all play a primary role for encouraging patients to travel to a particular tourism destination for medical treatments.

Arab patients are more attracted to medical tourism destinations that offer similar language, religion and social norms. Smith and Forgione [12] have grouped these factors under the social behavior factor. Nonetheless, Smith and Forgione [12] did not explicitly define the other forms of social factors, instead, they mentioned social behavior and how the perception of local people about medical tourism could motivate North American patients to select a medical tourism destination. Most foreign patients that come to Jordan are from the Arab Muslim countries. According to the World Bank, in 2007, Jordan hosted 45,000 Iraqis, 25,000 Palestinians, 1800 US citizens, 1200 UK citizens, 400 Canadians, and other patients from the neighboring countries such as Saudi Arabia, Sudan, Libya, and the Gulf countries [35].

Another insight that emerged during the interviews is how flight duration and tourism attractions are primary factors influencing destination choice. Both factors have not been mentioned in previous studies. For instance, some patients cannot tolerate a long-distance flight. Therefore, medical tourism facilities in Jordan are cooperating with the Royal Jordanian flight company to offer direct flights for countries such as Sudan, Russia, Canada, USA, and UK [39]. While flight arrangements are a crucial element of a medical tourism destination, tourist attractions have also been defined as a pull factor for attracting foreign patients. For instance, Jordan has developed the Dead Sea area to become an attractive destination for patients to heal their body after a complex surgery. Tourist attractions clearly play a primary role in the rehabilitation services or post-surgery treatments. However, Smith and Forgione [12] mention tourist attractions and infrastructure reflect the strength of the economic condition of the host country. Developing tourism attractions require highly advanced infrastructure equipped with facilities and services such as transportation networks, banks, hotels, malls and food establishments. Thus, interviewees mentioned tourist attractions of the economic condition of the econom

Medical facilities have been defined by Smith and Forgione [12] as a pull factor for attracting foreign patients by offering affordable medical fees, trained physicians, high quality medical services and international accreditation. The interviewees introduced five factors relevant to quality of care that motivate Arab patients to select the most appropriate medical facility. These factors include costs, medical technology; services for religious patients; accommodation; tourism services; and native language. Smith and Forgione [12] stressed that quality of care is also an important cornerstone of a medical facility's ability to attract foreign patients. Quality of care is a concept used by medical facilities when referring to the overall treatment and approach that they offer—and this includes all the tools or methods that help elevate the overall standard of quality of care [3]. Despite the importance of quality of care as one of the main factors that attract foreign patient, cost is the dominant driver that affect the decision of international patients. Interviewees mentioned that competition in the global market of medical tourism has prompted medical facilities to comply with international accreditation such as the Joint Commission International (JCI) accreditation which has led to the increase of medical treatments on local and international patients.

According to the various views of interviewees about the impact of medical tourism sector and facilities on the environmental and social dimensions of sustainability, interviewees were not able to provide a clear picture of the role that medical tourism facilities can play to prevent the negative impact on the environmental assets and to enhance the positive impact on the quality of life of residents. Most interviewees have described the impact of medical tourism facilities on the social dimension as attracting local physicians, integrating advanced technology, and generating revenues to other sectors (transportations, accommodations, travel agencies). None of the interviewees mentioned gender equity, poverty, and cultural awareness. The lack of a comprehensive view by interviewees about the social dimension of sustainability supports the findings of Prayag and colleagues [45], Jones and colleagues [46] and Santos and colleagues [47]. Their studies assessed the sustainability perception of hotels' stakeholders. They concluded that most managers have weak sustainability perception as they pay high attention to the environmental dimension of sustainability to achieve competitive advantage through integrating environmental practices (clean energy, waste reduction, and energy consumption), while the social dimension has been neglected by most stakeholders. Viewing sustainability as one dimensional approach has been referred to the lack of sustainability awareness lack of by stakeholders [46].

Hart and Milstein [5], Gibson [48], and Boley and Uysal [49] suggest that firms should adopt an integrative approach that aims to develop a business strategy that is aligned with all stakeholders' needs while integrating sustainability practices and creating opportunities for future generations. Medical tourism facilities should aim to develop business strategies that motivate stakeholders to view sustainability as a multi-dimensional approach, which aim to attract international patients, skilled physicians, local community interaction, and investors while motivating the integration of sustainability practices through training and leadership programs, innovation, collaboration, social and environmental initiative programs. Therefore, developing a framework to establish a sustainable medical facility is required to maintain and improve the medical tourism sector within the boundaries of sustainability.

Hart and Milstein [5] developed a framework for achieving sustainable value, which implies anything that needs to be maintained sustainably in order to provide benefits for both the current generation, and the next generation. Hart and Milstein's framework was developed in the context of manufacturing firms to foster increased efficiency, enhancement of reputation, achieving innovation, and growth. Because the base purpose of Hart and Milstein's framework is similar to the needs of the medical tourism industry, this study has adopted it for achieving certain objectives. These include efficiency and accountability, reputation, innovation, and growth. While the medical tourism facility is striving to achieve these objectives, management of medical tourism facilities should pay attention to the relationship among internal stakeholders (physicians, and employees) and external stakeholders (community members, government bodies, educational institutions, industry and professional representatives, and facilitators). The ultimate goal in this respect is to achieve a strong relationship among internal and external stakeholders. In order to develop a long-term relationship with internal and external stakeholders, future goals and objectives should be worked out according to stakeholders' ideas, within the implementation and expansion process.

The framework (Figure 2) contains four quadrants; each quadrant is associated with the services marketing triangle to keep long-term relationships with the stakeholders. The quadrants are short-term internal, short-term external, long-term internal and long-term external. The ultimate aim of this framework is to build a medical tourism facility on a solid



foundation for global medical market demands and meeting the needs of present and future generations (local community). Additionally, the framework would help a medical facility assess their operation impact from the lens of supporting the 17 SDGs.

Figure 2. Framework for establishing a sustainable medical facility.

## 4.1. Short-Term Internal: Efficiency and Accountability

This quadrant captures internal strategic initiatives that can further the sustainability of the medical facility in one to three years. Medical facilities should offer high quality healthcare services to host foreign patients. The medical facility should have standards and regulations, and be strict in monitoring these, to ensure they are providing a high quality of healthcare in the most efficient way. The standards should be in line with local and international medical law. The medical facility management should be very conscious of the implementation of regulations and standards in order to prevent malpractice suits. At this stage, the medical facility will adopt a specific management model for operation, which is a mechanistic organizational structure.

According to Daft and Armstrong [50], a mechanistic organizational structure means that the information transferred among the staff and management moves vertically from upper-level employees to lower-level employees. In this model, there is a structure that provides employees with rules to resolve problems without communicating directly with their managers. However, if lower-level employees are not able to resolve a problem themselves, this model suggests that they pass it to the next level above them, until the problem gets resolved. The information system of this model is actively used by managers, which could mean that employees have no direct access to their managers to express their points of views. However, the goal of using this organization structure is to achieve efficiency and accountability, once the organization has achieved this goal, the mechanistic organizational structure can gradually transform into a dynamic organizational structure [50]. Such a transformation to a more dynamic organization is required to support medical facilities in integrating some of the sustainability practices into the operations system.

Interviewees in this study mentioned the green hospital program has been adopted which promotes recycling waste, saving energy and an environmental incineration system. However, a complete view of the implementations and advantages of adopting such a green hospital program has not been explicitly reflected in the study. A green hospital program can include various activities such as leadership, safe chemical, waste reduction, energy consumption, water contamination, green purchasing policy, organic food sources, green transportation, safe disposing of medical waste, and building design for decarbonization [51]. Other social sustainability initiatives related to living wage, and health and safety of staff are also relevant. Thus, to adopt such a change toward sustainability, a medical facility should adopt a dynamic organizational structure for allowing the adaptation of sustainability strategy for competing in the medical tourism market and remaining within ecological constrains.

#### 4.2. Short-Term External: Build a Reputation

This quadrant captures externally oriented strategic initiatives that can further the sustainability of the medical facility in one to three years. Once a communication and sustainability program have been adopted by the medical tourism facility, enhancing the reputation of the organization will be the next aim for the organization. For example, the Specialty Hospital in Jordan is cooperating with the Private Hospital Association and the USAID to promote its facility to foreign patients. According to an interviewee, Specialty Hospital representatives attend medical conferences every year in order to meet with external stakeholders and conduct partnered business for mutual benefits. Private medical facilities in Jordan have participated in the medical tourism network to promote Jordan's medical tourism sector as one entity. Daft and Armstrong [50] have mentioned that collaborative network models for developing relationships with other organizations, provides various benefits such as resources for enhancing the reputation of the organization through collaboration, enhancing competitiveness, and increased chance of survival via exchange of resources. Engaging in a collective strategy through the medical tourism network and/or local sustainability network can provide a wide range of benefits to the medical facility [52], though they need to build strategic capabilities to leverage collaborative advantage [53].

Lane & Bramwell [54] outline the importance of attracting various stakeholders with different interests in terms of quality service, innovation, product development, marketing, and competitive edge [54]. The benefit of drawing different stakeholders into the mix is creation of multiple paths for innovation and development (which leads to increased reputation). The rapid growth of partnership projects within the tourism industry helps maintain competitiveness in the global market by bringing together capital, resources, and expertise from several stakeholders [55]. Having said this, tourism projects, including a medical tourism facility, should not look at stakeholders as merely and exclusively financial solutions, but also as potential contributors to the decision-making process [56]. Thus, the medical tourism facility should allow participation of the local community via funding educational campaigns, holding educational sessions, or planning events to raise awareness about community issues.

In addition, there might be opportunities to help influence local sustainable development initiatives or provide charitable contributions. Additionally, the medical facility should cooperate with local and international organizations to enhance its reputation among foreign patients. The medical facility should work in partnership with tourism operators to reach foreign patients and deliver an attractive image about the facility. Private medical facilities in Jordan are collaborating with governmental institutions to plan marketing campaigns for promoting the medical tourism sector within Jordan as an entity. According to the interviewees in this study, a private medical facility cannot promote its services alone, but should plan a marketing campaign with various stakeholders in order to reach foreign patients. Ganguli and Ebrahim [57] outlined that the medical tourism collaborative network model allows organizations to assign and achieve their goals collaboratively. For instance, a study was conducted by Al-Aomar and Hussain to develop a framework for promoting and assessing a green supply chain management in hotels. They concluded that achieving and implementing a green supply chain management strategy require collaborative efforts across all stakeholders within the hospitality sector [58]. Thus, medical facilities should collaborate with all stakeholders to promote and implement green practices during the stages of producing, storing, delivering, preparing, and consuming the product or service.

#### 4.3. Long-Term Internal: Innovation

This quadrant captures internal strategic initiatives that can further the sustainability of the medical facility in four to ten years. Once stages 1 and 2 have been adequately developed, management of the medical tourism facility will have a strong relationship with internal stakeholders such as employees and physicians; because of this relationship, the management style can be transformed from a vertical to a horizontal style by implementing a dynamic organizational structure [50]. In this stage, collaboration among management and internal stakeholders will be more active and direct. The decision-making process can be conducted using a teamwork approach because of the climate of trust developed among internal stakeholders. As a result, the medical staff will be motivated to share ideas and knowledge, which will drive innovation. An interviewee from Al-Khalidi Medical Center mentioned that *"we communicate with our physicians and employees via internal network that allow all facility staff to collaborate with each other for determining solutions"*. According to Daft and Armstrong [50], the dynamic organizational structure allows employees and managers to work as an integrated team for problem resolution and knowledge sharing by using a horizontal information linkages model.

This model provides extensive benefits in terms of information system development and use. Going a step further and making this a computerized information system enables employees to exchange information, ideas and advice. For instance, Siemens Company, which is an international organization, uses an information system that provides a digital network for 450,000 employees to share information and knowledge regarding the quality of customer services [50]. According to interviewees, medical facilities in Jordan have developed an information network for hospitals to share knowledge and motivate employees to enhance their medical skills by cooperating with other skilled physicians. Ultimately this can lead to new innovative practices, and new service offerings.

#### 4.4. Long-Term External: Growth

This quadrant captures externally oriented strategic initiatives that can further the sustainability of the medical facility in four to ten years. In this stage the medical facility should enhance its relationship with external stakeholders such as, universities, patients, and international organizations (JCI). Foreign patients are looking for a medical facility that provides follow-ups to make sure that the medical services delivered were conducted safely and with no negative impacts on the patient's health. The medical tourism facility should define new ways to follow up with foreign patients after they have received their medical treatments.

Medical facilities in Mexico have established offices within the United States solely to follow up with American patients and refer them to appropriate local physicians for further medical treatments, and to keep the patient's health status up to date in the medical facility records [59]. According to interviewees, certain medical facilities in Jordan have also established a specific department to follow up with foreign patients after they leave the country. Building a follow up system will enhance the relationship between foreign patients and the medical facility [39]. Additionally, a new market segment will be opened for those who are searching for high quality medical services and a spa resort to heal their body after a complex surgery [39]. However, these individuals are now more educated about medical tourism destinations, and will be conscious when they pick their next medical tourism facility.

Private medical facilities could also collaborate with governmental institutions to put forward the ideas of incentive services for foreign patients, including post-operation services, tourism value, and medical consultations. For example, Jordan Tourism Board has offices around the world to promote their tourism attractions to foreign visitors; these could include medical facilities. These incentive services will draw foreign patients from new countries and lead the medical facility to a new market segment. However, medical tourism has not paid attention to the poor people within Jordan. Private medical facilities have no direct cooperation with public hospitals because they have different purposes: public hospitals are dedicated to treating Jordanians who cannot afford to be treated in private medical facilities, and they cannot update their medical technology due to limited budgets. In contrast, private medical facilities have advanced medical technologies and skilled physicians. Private medical facilities target wealthy patients.

Nonetheless, 20 per cent of the Jordanian population lives in rural areas under poor conditions and lacks adequate access to health care [60]. There is a gap within the medical tourism system that fails to provide adequate medical services for poor patients. The government of Jordan has been working to attract foreign investments in projects like malls, hotels, resorts, and hospitals located in areas that lack running water. The German Society for International Cooperation has funded a medical clinic that has been built in the Jordan Valley to provide local communities with adequate health access [60]. To expedite this process, private medical facilities in the medical tourism sector could help poor people gain access to their facilities by cooperating with the government and the bank sector in order to offer subsidized programs for poor patients. Under this scenario, the medical tourism project could be turned from an economic development project into a community development project.

#### 4.5. Challenges

## 4.5.1. Adopting a Collaborative Strategy

The study has defined a primary challenge facing the development of the medical tourism sector in Jordan which is the collaboration among private medical facilities for sharing data and promoting Jordan as a medical tourism destination. Collaboration is an essential element for enhancing the image of the medical tourism industry and understanding the impact of medical tourism on the local economy [57]. The issue of collaboration is captured by an interviewee works in a medical facility: *"To understand the big picture of the medical tourism industry requires the development of a marketing plan for at least five years. Also, we need a strong management that is qualified to lead the plan, put it into practice, and facilitate all the efforts between all members"*. An interviewee notes: *"The reasons that we could not accurately determine the number of patients, is because some hospitals keep the number of their patients confidential for competition reasons"*. Adopting a collaborative strategy will allow stakeholders to establish strong management, share valuable information concerning the medical tourism market and credible statistics on the impact of medical tourism on the local economy [57]. With such information, medical facilities will be better able to predict the future of the medical tourism market and determine their objectives and goals accordingly.

## 4.5.2. The View of Green Hospital

Despite the importance of environmental sustainability, interviewees have not been able to identify an accurate image of a green hospital. As some of the interviewees have mentioned, a green hospital program is not part of the medical tourism network's agenda. In contrast, other interviewees have mentioned that private hospitals have listed green hospital programs as a top priority. Therefore, the medical tourism network in Jordan should establish a sustainability assessment tool for motivating private medical facilities to be recognized as green hospitals. For instance, Malaysia has established a sustainability assessment tool, "Malaysia Carbon Reduction and Environmental Sustainability Tool (Mycrest)" [61] for retrofitting buildings to achieve a green building certificate. Christian and collogues [61] mention in their study that the Malaysia Healthcare Travel Council have cooperated with medical facilities to retrofit international hospitals' buildings to be recognized as a green building and become more competitive in the global market of medical tourism.

## 5. Conclusions

This study has aimed to fulfill two primary objectives: determine the main factors that motivate foreign patients to travel abroad; and determine the characteristics that shape a sustainable medical tourism facility; with the aim to develop a conceptual framework for establishing a sustainable medical tourism facility. The semi-structured interviews have helped the study to identify new factors that motivate medical tourists to travel abroad seeking alternative medical treatments such as religion, native language and medical facility services. The primary factors have played a role in shaping the characteristics of a medical tourism facility that would meet the expectations of medical tourists while integrating sustainability practices. The study found that there is little attention given to promoting environmental practices and awareness across the medical tourism sector. Most interviewees mentioned the green hospital program but they have little information or none about the layout of the program. Therefore, this study has used the foundation of Hart and Milstein's framework for developing a conceptual framework that provides guidance for establishing a sustainable medical tourism facility. The framework focuses on four strategies: efficiency by implementing eco-friendly and people-oriented practices; reputation by implementing a collaborative strategy with external stakeholders; innovation by implementing a dynamic organizational structure; and sustainability by supporting local sustainable development. These stages and objectives were built in line with feedback from interviewees, and in accordance with existing literature that exposes the primary factors that motivate foreign patients to travel abroad for medical services.

In terms of study limitations, most of the participants in the study were marketing or public relation managers, which was essential for the study to discover the medical tourism perspective. However, interviewing physicians would have been useful to understand the relationship between the physician and international patient. Physicians who are treating international patients have busy schedules and it is challenging to conduct interviews with them. Thus, identifying a specific method for collecting data from physicians to explore further the sector of medical tourism from the perspective of healthcare would be an opportunity for future research. Another recommendation for future research is an assessment of what types of organizational structures are being adopted by medical tourism facilities in other parts of the world to understand global trends in the sector and approaches to measure the triple bottom line. Like this study, further research can help medical facilities reposition their future goals to provide benefits to the environment, people, and the economy while generating financial rewards and profits.

This study has made three important contributions. Firstly, the study identifies other motivational factors that motivate foreign patients to travel abroad seeking alternative medical treatment such as cultural requirements, hospitality services and tourism attractions. Secondly, the study reveals the characteristics of a medical tourism facility, which can also play an integral role in contributing to the SDGs. our study also suggests new indicators to expand the medical tourism index introduced by Fetscherin and Stephano [7] including indicators that measure environmental practices, social responsibility initiatives, and hospitality and tourism infrastructure. Thirdly, extending Hart and Milstein's framework to the medical tourism sector, using Jordan as a case example, provides a starting point for advancing sustainable value for medical tourism facilities that attract international patients, improves the local quality-of-life, while also remaining within ecological limits. Additionally, the research proposes a path for medical tourism facilities to contribute to the achievement of the SDGs by introducing a framework that integrates four business strategies for establishing sustainable value.

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Informed Consent Statement: Informed consent was obtained from all subjects involved in the study.

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# Appendix A

# Interview Questions

Who: Various stakeholders (physicians, professors, government employees, policy-makers, tourism agents, and facilitators)?

How: In person or over the phone for 30 min

Outline of the semi-structured interview:

- 1. Introduction to my purpose of research and opportunity to answer any questions
- 2. Sign letters of consent
- 3. Interview

## Introduction questions:

- 4. Please tell me about the organization you work for.
- 5. What is your role?

## Can you tell me more about about medical tourism?

- 6. Please tell me about any projects you have worked on for developing the medical tourism industry?
- 7. What were the motivations for taking on these projects?
  - a. Which was the highest motivation?
- 8. Were there any challenges or obstacles on your project?

Can you tell me more about this?

#### Jordan specific questions:

- 9. What is your overall impression of the medical tourism industry within Jordan?
- 10. What are the foundations that allow Jordan to host patients from outside the country?
- 11. Why is medical tourism considered as an important industry in Jordan?
- 12. What are the critical issues within the medical tourism industry?

## Stakeholder questions:

- 13. Did you work with any partners or other organizations?
  - a. If so, can you tell me about their role(s).
    - i. Government?
    - ii. Universities?
    - iii. Tourist operators?
    - iv. Medical professionals?
    - v. Community groups?
    - vi. Anyone else?
- 14. Is there any current collaborative strategy between any of the organizations?

15. How can educational institutions motivate medical tourism industry in Jordan?

#### **Impact questions:**

- 16. Does medical tourism impact the public health facilities for Jordanian citizens?
- 17. What kind of infrastructure is required for medical tourism projects?
- 18. Does medical tourism impact the environment?
  - a. In which ways?
- 19. How do you think medical tourism can be managed to protect the environment and enhance the quality of life for local community?

## **Closing thoughts:**

- 20. Do you think Jordan has a plan to increase its reputation in the global market as one of the best medical tourism destinations?
- 21. What do you think is the future of the medical tourism industry within Jordan?
- 22. Is there anything you'd like to add? Anything else I should consider?
- 23. Do you have any final questions for me?

Thank you

## References

- 1. Horowitz, M.D.; Rosensweig, J.A. Medical Tourism–Health Care in the Global Economy. *Physician Exec.* 2007, 33, 28–30.
- Lee, C.; Spisto, M. Medical Tourism, the Future of Health Services. In Proceedings of the 12th International Conference on ISO, National Chin-Yi University of Technology, Taichung, Taiwan, 9–11 April 2007; pp. 1–7.
- 3. Marlowe, J.; Sullivan, P. Medical Tourism: The Ultimate Outsourcing. Hum. Resour. Plan. 2007, 30, 8–10.
- 4. Nath, S.V. Global Medical Tourism: Dawn of a New Era. J. Inf. Technol. Case Appl. Res. 2007, 9, 1–5. [CrossRef]
- 5. Hart, S.L.; Milstein, M.B. Creating Sustainable Value. Acad. Manag. Perspect. 2003, 17, 56–67. [CrossRef]
- 6. Kim, H.M.; Leong, P.; Heob, E.; Anderson, B.; Gaitz, C. Medical Tourism from US to Border Region of Mexico. Current Status and Future Prospects. *Med. Tour. Mag.* **2009**, *13*, 70–73.
- Fetscherin, M.; Stephano, R.-M. The Medical Tourism Index: Scale Development and Validation. *Tour. Manag.* 2016, 52, 539–556. [CrossRef]
- Bookman, M.Z.; Bookman, K.R. Medical Tourism in Developing Countries; Palgrave Macmillan: New York, NY, USA, 2007; ISBN 978-1-349-36941-6.
- 9. Hudson, S. Marketing for Tourism and Hospitality; Nelson Canada: Scarborough, ON, Canada, 2009; ISBN 978-0-17-644047-3.
- Grand View Research Medical Tourism Market Size, Share & Trends Analysis Report By Country (Thailand, India, Costa Rica, Mexico, Malaysia, Singapore, Brazil, Colombia, Turkey, Taiwan, South Korea, Spain, Czech Republic), and Segment Forecasts, 2020–2027. Available online: https://www.grandviewresearch.com/industry-analysis/medical-tourism-market (accessed on 9 May 2021).
- 11. Hazaimeh, H. Jordan Tops Region as Medical Tourism Hub. Jordan Times 2008, 8, 8.
- 12. Anshasi, R.J.; Alsyouf, A. Views on Medical Tourism: Jordan as a Medical Hotspot. Int. Med. J. 2020, 25, 9.
- 13. García-Altés, A. The Development of Health Tourism Services. Ann. Tour. Res. 2005, 32, 262–266. [CrossRef]
- 14. Jagyasi, P. South Africa: The Rising Star on Medical Tourism Horizon. Med Tour. Mag. 2009, 320, 14.
- Smith, P.C.; Forgione, D.A. Global Outsourcing of Healthcare: A Medical Tourism Decision Model. J. Inf. Technol. Case Appl. Res. 2007, 9, 19–30. [CrossRef]
- 16. JCI A Proven Pathway to Accreditation. Available online: https://www.jointcommissioninternational.org/accreditation/ (accessed on 11 June 2020).
- 17. Zeithaml, V.A.; Bitner, M.J.; Gremler, D.D. Services Marketing: Integrating Customer Focus across the Firm; McGraw-Hill Education: New York, NY, USA, 2018.
- Fukey, L.N.; Issac, S.S. Connect Among Green, Sustainability and Hotel Industry: A Prospective Simulation Study. *Energy Conserv.* 2014, 6, 8.
- 19. Horng, J.-S.; Liu, C.-H.; Chou, S.-F.; Tsai, C.-Y.; Chung, Y.-C. From Innovation to Sustainability: Sustainability Innovations of Eco-Friendly Hotels in Taiwan. *Int. J. Hosp. Manag.* 2017, 63, 44–52. [CrossRef]
- Melissen, F.; van Ginneken, R.; Wood, R.C. Sustainability Challenges and Opportunities Arising from the Owner-Operator Split in Hotels. *Int. J. Hosp. Manag.* 2016, 54, 35–42. [CrossRef]
- 21. Cardoni, A.; Kiseleva, E.; Taticchi, P. In Search of Sustainable Value: A Structured Literature Review. *Sustainability* 2020, 12, 615. [CrossRef]
- 22. World Commission on Environment and Development. *Our Common Future*; Oxford University Press: London, UK, 1987; Volume 17, pp. 1–91.
- Hoque, A.; Clarke, A.; MacDonald, A. Implementing a Developing Country's Global Environmental Commitments: Industry Perspectives on Potential Pollution Prevention Programs in Bangladesh. In *Collaboration for Sustainability and Innovation: A Role For Sustainability Driven by the Global South?* Vazquez-Brust, D.A., Sarkis, J., Cordeiro, J.J., Eds.; Springer: Dordrecht, The Netherlands, 2014; pp. 149–175, ISBN 978-94-007-7632-6.
- 24. Hoque, A.; Clarke, A.; Huang, L. Lack of Stakeholder Influence on Pollution Prevention: A Developing Country Perspective. *Organ. Environ.* **2016**, *29*, 367–385. [CrossRef]
- 25. Practice Greenhealth Understand Hospital Waste Streams, How to Measure Them, and How to Reduce Waste at Your Facility. Available online: https://practicegreenhealth.org/topics/waste/waste-0 (accessed on 9 May 2021).
- Biermann, F.; Kanie, N.; Kim, R.E. Global Governance by Goal-Setting: The Novel Approach of the UN Sustainable Development Goals. *Curr. Opin. Environ. Sustain.* 2017, 26–27, 26–31. [CrossRef]
- Kumar, S.; Kumar, N.; Vivekadhish, S. Millennium Development Goals (MDGS) to Sustainable Development Goals (SDGS): Addressing Unfinished Agenda and Strengthening Sustainable Development and Partnership. *Indian J. Community Med.* 2016, 41, 1. [CrossRef] [PubMed]
- Clarke, A.; MacDonald, A.; Ordonez-Ponce, E. Implementing Community Sustainability Strategies through Cross-Sector Partnerships. In *Business Strategies for Sustainability*; Borland, H., Lindgreen, A., Maon, F., Vanhamme, J., Ambrosini, V., Florencio, B.P., Eds.; Routledge: Abingdon, UK; New York, NY, USA, 2018; pp. 402–416. ISBN 978-0-429-45885-9.
- 29. Ordonez-Ponce, E.; Clarke, A.C.; Colbert, B.A. Collaborative Sustainable Business Models: Understanding Organizations Partnering for Community Sustainability. *Bus. Soc.* 2021, *60*, 1174–1215. [CrossRef]
- Pérez-Pineda, F.; Alcaraz, J.M.; Colón, C. Creating Sustainable Value in the Hospitality Industry: A (Critical) Multi-Stakeholder Study in the Dominican Republic. J. Sustain. Tour. 2017, 25, 1633–1649. [CrossRef]
- 31. UNWTO. History. Available online: https://www.unwto.org/history (accessed on 11 June 2020).
- 32. Stake, R.E. The Case Study Method in Social Inquiry. Educ. Res. 1978, 7, 5–8. [CrossRef]

- 33. Gioia, D.A.; Corley, K.G.; Hamilton, A.L. Seeking Qualitative Rigor in Inductive Research: Notes on the Gioia Methodology. *Organ. Res. Methods* **2013**, *16*, 15–31. [CrossRef]
- 34. Daly, K. Qualitative Methods for Family Studies & Human Development; SAGE Publications, Inc.: Thousand Oaks, CA, USA, 2007; ISBN 978-1-4129-1403-1.
- 35. Ababneh, A. Background and Perspectives of Medical and Health Tourism in Jordan; Yarmouk University: Irbid, Jordan, 2017.
- 36. Mohammed, A.; Kafa, H.; Kafa, N.; Mohammad, M.; Majed, M.; Mohammed, A.R.; Mohammed, A.R. Medical Tourism and Its Role in Marketing Jordan Abroad. *Int. Rev. Manag. Mark.* **2017**, *7*, 180–185.
- 37. Lunt, N.; Carrera, P. Medical Tourism: Assessing the Evidence on Treatment Abroad. Maturitas 2010, 66, 27–32. [CrossRef]
- Cisco. Cisco Announces \$10 Million Investment to Support Sustainable Job Creation and Economic Development in Jordan. Available online: https://newsroom.cisco.com/press-release-content?type=webcontent&articleId=1365607 (accessed on 11 June 2020).
- 39. Dunn, P. Medical Tourism Takes Flight. Hosp. Health Netw. 2007, 81, 40-44.
- 40. Royal Jordanian Traveling with Special Needs. Available online: https://rj.com/en/info-and-tips/special-services/passengerwith-special-needs-ada (accessed on 11 June 2020).
- Lukacs, Y. Israel, Jordan, and the Peace Process. In Syracuse Studies on Peace and Conflict Resolution, 1st ed.; Syracuse University Press: Syracuse, NY, USA, 1997; ISBN 978-0-8156-2720-3.
- 42. Nazer, L.H.; Tuffaha, H. Health Care and Pharmacy Practice in Jordan. Can. J. Hosp. Pharm. 2017, 70. [CrossRef] [PubMed]
- 43. EHS. Hakeem Program. Available online: https://ehs.com.jo/hakeem-program/about-hakeem-program (accessed on 10 June 2021).
- 44. Orsato, R.J. When does it Pay to be Green? In *Sustainability Strategies*; Palgrave Macmillan: London, UK, 2009; pp. 3–22, ISBN 978-1-349-30334-2.
- 45. Prayag, G.; Dookhony-Ramphul, K.; Maryeven, M. Hotel Development and Tourism Impacts in Mauritius: Hoteliers' Perspectives on Sustainable Tourism. *Dev. South. Afr.* 2010, 27, 697–712. [CrossRef]
- 46. Jones, P.; Hillier, D.; Comfort, D. Sustainability in the Global Hotel Industry. Int. J. Contemp. Hosp. Mngt. 2014, 26, 5–17. [CrossRef]
- 47. Dos Santos, R.A.; Méxas, M.P.; Meiriño, M.J. Sustainability and Hotel Business: Criteria for Holistic, Integrated and Participative Development. J. Clean. Prod. 2017, 142, 217–224. [CrossRef]
- 48. Gibson, R.B. Beyond the pillars: Sustainability Assessment as a Framework for Effective Integration of Social, Economic and Ecological Considerations in Significant Decision-Making. *J. Environ. Assess. Policy Manag.* **2006**, *8*, 259–280. [CrossRef]
- 49. Boley, B.B.; Uysal, M. Competitive Synergy through Practicing Triple Bottom Line Sustainability: Evidence from Three Hospitality Case Studies. *Tour. Hosp. Res.* 2013, *13*, 226–238. [CrossRef]
- 50. Daft, R.; Armstrong, A. Organization Theory & Design, 2nd ed.; Nelson Education Ltd.: Toronto, ON, USA, 2012.
- 51. Johnson, S.W. Summarizing Green Practices in U.S. Hospitals. Hosp. Top. 2010, 88, 75–81. [CrossRef] [PubMed]
- Clarke, A.; MacDonald, A. Outcomes to Partners in Multi-Stakeholder Cross-Sector Partnerships: A Resource-Based View. Bus. Soc. 2019, 58, 298–332. [CrossRef]
- 53. MacDonald, A.; Clarke, A.; Huang, L.; Seitanidi, M. Partner Strategic Capabilities for Capturing Value from Sustainability-Focused Multi-Stakeholder Partnerships. *Sustainability* **2019**, *11*, 557. [CrossRef]
- 54. Lane, B.; Bramwell, B. Collaboration and Partnerships for Sustainable Tourism. J. Sustain. Tour. 1999, 7, 179–181.
- 55. Kotler, P. Marketing Management: Analysis, Planning, Implementation and Control; Kotler, P., Ed.; Prentice Hall: Hoboken, NJ, USA, 1997; p. 8.
- 56. Joppe, M. Sustainable Community Tourism Development Revisited. Tour. Manag. 1996, 17, 475–479. [CrossRef]
- 57. Ganguli, S.; Ebrahim, A.H. A Qualitative Analysis of Singapore's Medical Tourism Competitiveness. *Tour. Manag. Perspect.* 2017, 21, 74–84. [CrossRef]
- Al-Aomar, R.; Hussain, M. An Assessment of Green Practices in a Hotel Supply Chain: A Study of UAE Hotels. J. Hosp. Tour. Manag. 2017, 32, 71–81. [CrossRef]
- 59. De Arellano, A.B.R. Patients without Borders: The Emergence of Medical Tourism. Int. J. Health Serv. 2007, 37, 193–198. [CrossRef]
- 60. Tarawneh, M.; Husban, A.H.A. Rural Poverty in Jordan: Assessment and Characterisation. Anthropol. Middle East 2011, 6. [CrossRef]
- 61. Christian, O.C.; Stanley, N.; Imoudu, E.W.; Hadina, H. Promoting Malaysia Medical Tourism Through Mycrest Oriented Retrofitted Hospitals. *e-Bangi* 2019, *16*, 8.