

## Case study

# A qualitative analysis of Singapore's medical tourism competitiveness



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## ABSTRACT

Medical tourism, a rapidly growing market, has been recognized by many countries as a potential sector for economic diversification. Although Singapore stands out as one of the top destinations of medical tourism, investigation regarding its competitiveness has been limited and narrow in scope. This case study takes a qualitative approach to identify and analyze the factors that position Singapore as a competitive medical tourism destination. Based on a holistic approach, this study has shown that integrating diverse strategies for medical tourism development with sound government policies and proactive management practices have led to significant positive outcomes towards mutual success of tourism, healthcare and other economic sectors of Singapore. Additionally, the study provides strategic insights to drive lasting improvements in both public and private sectors of aspiring countries through efficient management and intelligent utilization of resources within and outside the medical tourism sector.

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## 1. Introduction

Globalization has compelled many economies to reconsider their competitiveness within the context of business performance, particularly, with increasing exposure to international market forces. Further, global competition has raised the potential for the emergence of newly transformed markets; one such market, due to transformation of the healthcare industry, is medical tourism; more precisely, it is a direct result of healthcare globalization (Bernal, 2007).

Medical tourism industry is a fast growing global niche market. According to Transparency Market Research (2013), the global medical tourism market was estimated to be at US\$ 11 billion in 2012 and was expected to reach US\$ 33 billion by the end of 2019, a compound annual growth rate (CAGR) of 18%. Patients Beyond Borders (2014) estimated this market at US\$ 39–55 billion with an annual growth rate between 15% to 25%. Asia is one of the first movers in this area, which positioned itself competitively in the global medical tourism market in terms of affordable and high quality medical care. In Asia, Thailand, Singapore and India have been recognized as the three leading medical tourism destinations with ambitions to control more than 80% of Asia's medical tourism market in the future (Mary, 2014).

A number of studies have revealed that Singapore is one of the most attractive medical tourism destinations in Asia (Alleman et al., 2010;

Lunt & Carrera, 2010; Beladi, Chao, Ee, & Hollas, 2015). Singapore's success as a leading medical tourism destination is attributed to its key competitive advantages including excellence in health care quality, trustworthiness, safe medical practices, and the availability of a large number of internationally accredited hospitals. Further, Singapore's government has played an active role in attracting medical tourists and investors by promoting and nurturing strategic collaboration among different stakeholders and signing agreements with Middle Eastern countries for the provision of medical services (Heung, Kucukusta, & Song, 2011; Hall, 2013). Medical tourism revenue generated by Singapore is estimated to reach US\$ 1.5 billion by 2016, growing at a CAGR of 13.6% (Beladi et al., 2015). In general, Singapore has reinforced its global superiority by shaping an appealing profile and attaining high ranks in various aspects including economic freedom (The Heritage Foundation, 2015), ease of doing business (World Bank, 2014), attractiveness for medical tourism (Medical Tourism Index, 2014), healthcare system efficiency (Bloomberg, 2014), innovation performance (Cornell University, INSEAD and WIPO, 2014), and global competitiveness (World Economic Forum, 2014).

## 2. Study rationale & design

Singapore's success as a leading and distinctive medical tourism destination has led many researchers to suggest that governments can learn from Singapore's experience of developing their own medical tourism sectors (Lunt, Horsfall, & Hanefeld, 2015; Medhekar, 2014a, 2014b; Lim, 2005). However, the topic of Singapore's medical tourism

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competitiveness has remained untapped in the existing literature. Most of the current research surrounding Singapore's medical tourism has a narrow focus with limited scope of investigation, for example, use of SWOT analysis (Wong, Velasamy, & Tengku Arshad, 2014; Phua & Pocock, 2012). The purpose of this study is to provide a broader scope of investigation by conducting a holistic examination of related literature and explicitly, identifying the pillars of competitiveness that make Singapore a success story in the area of medical tourism. This study, including the conclusions and recommendations, will help guide the decisions and actions of policy makers interested in medical tourism development.

In general, tourism competitiveness has been the focus in many countries through institutional work and academic research (Matias, Nijkamp, & Sarmento, 2013). This is also demonstrated through collaborative actions of the international community. For instance, OECD member countries have sought to develop unified assessment and guidance frameworks dedicated to regain their tourism competitiveness as a new source of growth and for socioeconomic development (Dupeyras & MacCallum, 2013). The determinants of tourism competitiveness, despite their variety, have become distinguishable and measurable. They are also considered to be the determinants of the supply of value-added tourism products and increased attractiveness of the location (Hong, 2008). However, there is limited literature relating to the competitiveness of different aspects of tourism. In this context, it can be mentioned that specialist research is necessary to provide an insight into the areas of tourism competitiveness, especially for the emerging tourism segments such as medical tourism. Hence, the present study is aimed at identifying and analyzing competitiveness pillars of medical tourism as well as arriving at a definition of medical tourism competitiveness based on a holistic analysis of the case study of Singapore. This case study will support policymakers in aspiring countries to guide their policies and actions for medical tourism sector development and management, with the aim of embracing the principles of competitiveness.

Since there is no universally-agreed definition of medical tourism competitiveness in the present literature, this case study aims to contribute knowledge fundamentally through answering the main question: how has Singapore achieved a competitive position in the global market of medical tourism? Case study as a research method is considered an appropriate strategy to answer this question and draw meaningful conclusions. This research method is chosen with the purpose of taking a holistic approach for the analysis of Singapore's success as a popular medical tourism destination in Asia. The empirical inquiry of such research method enables intensive description to be included for in-depth qualitative analysis. The investigation in this case study deals with dynamic operational links over time (Yin, 2003). Singapore's medical tourism sector was chosen as a subject of analysis to determine the unique relationship between its success and the identified competitiveness pillars of medical tourism. These pillars were primarily considered to be the determinants which positioned Singapore as a competitive medical tourism hub. Thus, the identified pillars represent investigative themes for initial research and are based on comprehensive examination of relevant primary and secondary data sources. Subsequently, explanations and/or clarifications are provided for each pillar and its relationship to the country's competitiveness in medical tourism is explained.

### **3. Pillars of Singapore's medical tourism competitiveness**

#### *3.1. First pillar: an enabling tourism sector*

Singapore represents a case study of tourism development and success in the context of rapid economic growth in a market oriented global economy. In 1991, Singapore attracted 5.41 million international visitors, and notably this number has tripled over the past 3 years between 2013 and 2015 (STB (Singapore Tourism Board), 2015a). Today,

Singapore is a highly globalized economy, and deeply connected with the world through a myriad of sectors which are not limited to industry, commerce, finance or communications. Out of 141 economies, Singapore had been ranked 11th globally in the Travel and Tourism Competitiveness Index (World Economic Forum, 2015). Despite scarce natural and cultural resources of the country (Hall & Page, 2011), Singapore's government has met with the challenges through various initiatives and one among those is an attractive and lucrative tourism sector, which contributed US\$ 13.7 billion towards Singapore's GDP in 2014 (World Travel and Tourism Council (WTTC), 2015).

Singapore's outstanding achievements in tourism stand as a testimony to its planning excellence in a wide range of tourism related projects including but not limited to the modernization of its economic infrastructure (Lim, 2015); economic liberalization and international openness (Tisdell, 2013); innovative management in developing natural and cultural resources (Hall & Page, 2011); and high quality human resources development. However, Singapore's competitive edge in tourism is mainly driven by prosperity in two types of income generating tourism: leisure tourism (Shen, Song, Li, & Jiang, 2015) and business tourism (Beaverstock, Derudder, Faulconbridge, & Wiltlox, 2016). Truthfully, such flourishing tourism relates more or less directly to the development of medical tourism, and mutually contributes to each other's growth. This is explained later in this section of the study.

Research has shown that Singapore and several other medical tourism destinations in Asia, such as Thailand, Malaysia, Dubai, have competitively positioned themselves in this market through leveraging on the advantages produced by their globalized tourism markets, especially in terms of offered holiday attractions, hospitality, shopping, leisure activities, and world-class amenities of hotels and resorts (Lunt et al., 2015; Connell, 2006). In fact, creative ways were sought by Singapore to ensure that its medical tourism sector meets its potential and also increases its appeal to international tourists. An example is the operation of one-stop service centers to offer special packages of medical care, travel, and tourism services to medical tourists and their companions in Singapore.

On one hand, it is evident how Singapore has utilized its tourism success for a better value proposition for medical tourism. On the other hand, medical tourism is associated with positive spillover effects to other areas of tourism, such as business tourism segment, either by complementing its performance or by creating new opportunities for business investment and for entrepreneurs. For example, medical tourism reputation of Singapore has strengthened international market of MICE (Meetings, Incentives, Conferences and Exhibitions) with distinctive engagement in the medical field (Lee & Park, 2013). Many socioeconomic opportunities, beginning with the attraction of skilled medical professionals to the establishment of world class hospitals and global health insurance companies, are the beneficiaries of this medical tourism initiative (Bernal, 2007; Lee, 2006). In general, it is noted through this investigative case study that Singapore applies central institutional intelligence to ensure that its medical tourism sector is well integrated within the economy and is developed alongside other sectors of tourism.

#### *3.2. Second pillar: strategic planning*

It is crucial that every country crafts a national strategy that provides a clear direction, integrated planning and policy framework for the development and management of the programs of strategic priority. In many countries, central national strategies target priority sectors, and relate to programs such as economic development, security or human development. Simultaneously, national strategies are developed to target sectors such as health, education, tourism, etc. or a specific segment of a sector, such as medical tourism – a segment of the overall tourism sector. The United Nations Environment Program (UNEP) and World Tourism Organization (WTO) (2005), state that "national tourism strategies relate to national tourism vision; overall position and direction for

tourism; overall issues of product-market fit; broad spatial issues of tourism development; fiscal issues; setting standards for the industry; controlling legislation, regulations and other mechanisms; support programs including financial resources; research, and the acquisition and dissemination of knowledge; a marketing and promotion strategy, especially at the international level." This statement can be perceived as a key universal message for governments to undertake strategic planning to ensure successful and sustainable development of tourism sector. Therefore, highlighting the process of strategic planning as a crucial and significant pillar of medical tourism competitiveness is logically valid.

Singapore created a national interagency initiative named "Singapore Medicine" in 2003, a strategic government-industry partnership aimed at boosting and sustaining Singapore's position as a global medical hub. It not only targeted medical tourists but also clinical and biomedical research and development activities; modern medical technologies; international healthcare related conventions and exhibitions; clinical training and medical education; and regional and international medical alliances. A distinctive element of this national strategy that makes it successful is the fact that it is synchronized internally to fit the external market opportunities and is jointly driven by three independent statutory boards: the Singapore Economic Development Board (EDB), which encourages foreign direct investment and develops local business capabilities to meet the needs of the market; the International Enterprise Singapore (IES), which promotes the engagement of Singapore's enterprises in the global market; and the Singapore Tourism Board (STB), which directs international marketing and branding activities and improves people-oriented services. The initiative also recognizes medical service providers and medical travel agencies as vital partners while the entire supervision and monitoring of the strategy implementation is carried out by two ministries, namely the Ministry of Trade & Industry (MTI), and the Ministry of Health (MoH) (Hodges, Turner, & Kimball, 2012; Yap, 2006). In 2012, this initiative was aimed at generating US\$ 2.6 billion value-added to the Singaporean economy through creation of 13,000 new employment opportunities (Phua & Pocock, 2012). Moreover, Singapore's competitive advantage over its medical tourism rivals, such as India and Thailand, is created by establishing the country as a center of high quality diagnostic and interventionist medicine, namely "Clinical Excellence" (Wong et al., 2014). A modern healthcare infrastructure has been established by incorporating centers of medical excellence along with biomedical innovation clusters. It has been concluded by Borg, Gratzer, and Ljungbo (2014) that smart specialization and innovation in medicine, whether at the service or at the organizational level, is related to the increased international competition of medical tourism.

Singapore's strategic approach for medical tourism development has proved that well-integrated institutional strategies had effectively contributed towards making medical tourism planning and management more efficient and beneficial to relevant stakeholders. The influence of such approach has not only enhanced commercial awareness around the emerging opportunities of medical tourism, but it has also led to the creation of differentiated medical tourism products which prominently define the market position of the country and contribute to spillover socioeconomic benefits in other sectors. In other words, medical tourism sector could be reinvented through a central strategy which is to be firstly aligned with national economic priorities, and secondly to be executed in a cohesive manner across the actions of all relevant stakeholders. Indeed, it is this collaborative strategic approach that has made Singapore's experience a challenge to be emulated by other medical tourism rivals.

### 3.3. Third pillar: Public-Private Partnerships (PPPs)

The model of "Public-Private Partnership" (PPP) has emerged in the United States to represent joint public- and private-sector funding for educational purposes. In the 1960s a broader use of the model came

to symbolize public-private joint ventures for urban development. The current forms of public funding of the private sector are diverse and involve the provision of social services, public infrastructure, economic infrastructure, research and development, etc. The term PPP might be interpreted by different authors in different ways depending on the nature of the partnership. It involves elements of ownership, financing, construction or operation. Schaeffer and Loveridge (2002, p.170) defined Public-Private Partnerships (PPPs) as "arrangements between government and private sector entities for the purpose of providing public infrastructure, community facilities and related services. Such partnerships are characterized by the sharing of investment, risk, responsibility and reward between the partners."

Three forms of PPPs recognized through this case study are considered relevant to Singapore's medical tourism competitiveness. They encompass PPPs in healthcare financing, healthcare provision, and medical tourism.

#### 3.3.1. Public-Private Partnerships (PPPs) in healthcare financing

The definition of public-private partnership in healthcare financing was described by Lim (2005) as a form of collaboration where the government mobilizes private sector resources to finance health care services; while the public-private partnership in health care provision referred to the government-led encouragement initiative for private sector involvement within the delivery process of public health services. Costs of health care services have been rising rapidly worldwide due to several factors including the aging population, mutable disease patterns, and increasing expenses of medical technology and medicines. No doubt that governments, employers and insurers attempt to contain such costs by pursuing several cost-efficient strategies regarding payment schemes and coverage (Paolucci, 2011). In recent years, there has been an increasing realization among countries that engaging the private sector in health care services provision and financing can lead to improvements in delivery of healthcare system. However, there is no dearth of debate in the literature about the overall implications of such improvements. (Waitzkin, Jasso-Aguilar, & Iriart, 2007; Lim, 2004). Lim (2005) concluded that Singapore's public-private partnerships in both healthcare provision and healthcare financing created a competitive edge for Singapore over other nations, especially those fronting similar challenges of financial sustainability of the healthcare system. Consequently, this has enabled Singapore to further develop its healthcare infrastructure and to ensure access to affordable medical care for medical tourists. This helps the government to mobilize tourism earnings to finance its residents' health costs.

Taylor and Blair (2003) comprehensively described Singapore's health financing system under the title of Singapore's Innovative Approach. Singapore's health financing system embraces universal medical saving accounts and auxiliary programs to ensure equity of access to health care services. It is known as '3 M' system, comprised of three cornerstone programs namely, Medisave (1984), MediShield (1990) and Medifund (1993). The authors indicated that outcomes of such system are impressive including affordable cost, high health indicators, and consumer empowerment in the selection of medical service providers and high quality care. This assertion is encouraging due to the possibility of transplanting Singapore's model to other nations, due to its distinctive features, different from traditional government-funded or national health insurance schemes. This can be noted from three aspects: incentives granted to individuals upon responsible use of their savings accounts, low cost insurance coverage, and targeted subsidies.

#### 3.3.2. Public-Private Partnerships (PPPs) in healthcare provision

Before discussing the aspects of public-private partnerships in healthcare provision for Singapore, this case study examines the significance of this approach in general. Globally, public hospitals are facing financial burdens, intensified by rising costs and limited public budgets. Such challenges have forced many governments to establish PPP frameworks for innovative and efficient performance of their health care

systems. Taylor and Blair (2002) mentioned that these PPP frameworks are more effective when they embrace sound regulatory arrangements and fiscal strategies. Moreover, as a description of the nature of these PPP frameworks, the authors have stated several mechanisms for private involvement in public hospitals starting from privately operated section/s to sale of entire public health facilities to private entities. This indicates that there are no boundaries for the scope of PPP frameworks. Therefore, it is too difficult to provide a unified definition of PPP that can be universally accepted. Medhekar (2014a), who demonstrated similar academic interest in this area of authorship, examined the role of PPPs for sustainable and inclusive development of healthcare services by the private corporate sector in India. This examination has been embedded with the suggestion that India can learn from Singapore's healthcare financing and provision system to develop its medical tourism sector, mainly through establishing robust PPP frameworks and a market environment free of public policy conflict. The author recommended a model of PPP to be adopted with appropriate regulatory and policy frameworks (Refer to Fig. 1). Overall, the model can be perceived as a practical tool for policy makers to address areas of collaboration between major stakeholders to support medical tourism development on the one hand, while facilitating a better access to medical care for people living in poverty on the other. Therefore, existing evidence indicates that PPP frameworks add a social responsibility component to the competitiveness aspect of the medical tourism sector. In this case study the importance of examining Singapore's PPP in healthcare provision in relation to its medical tourism sector is highlighted.

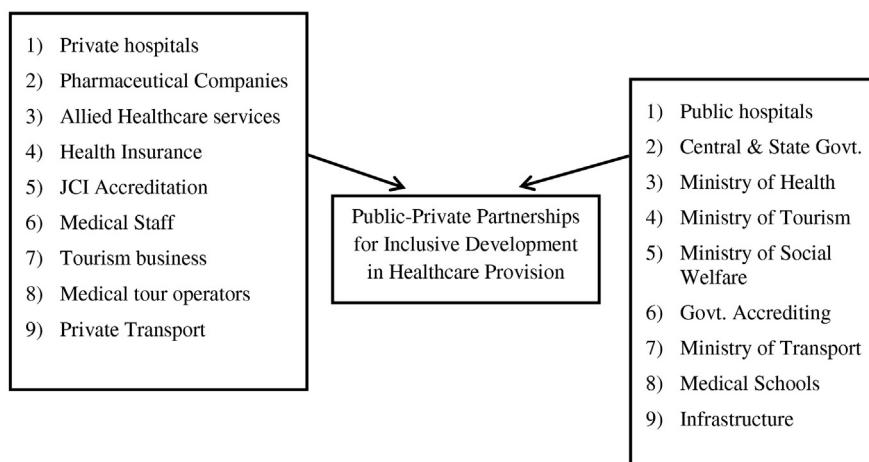
An examination of Singapore's healthcare delivery system reveals that services of primary healthcare, hospital care, specialty care and long-term care are provided through a network of public and private healthcare institutions. Singapore has 8 public hospitals divided into 6 acute general hospitals, a women's and children's hospital and a psychiatry hospital. Singapore also has 8 public specialty centers dedicated to specific medical disciplines such as neuroscience, cardiology, oncology, ophthalmology, dermatology, and dental. The public sector care provides around 80% of hospital care while the remaining is delivered by the private sector which has 10 hospitals and includes two leading integrated healthcare operators known as Raffles Medical Group and Parkway Health. This representation allows the government to influence the supply of beds, launch of advance technology and expensive medicine, and price setting for the private sector. In contrast, 80% of Singapore's primary healthcare services are dominantly provided by the private sector through polyclinics and private general practitioners' clinics, while the other 20% is catered to by 18 public outpatient polyclinics (Singapore MoH, 2015a; Haseltine, 2013).

The development regimes pursued by different governments worldwide for the provision and financing of economic and social infrastructure vary in terms of reforms which can be realized through budgetary, autonomous, corporatization or privatization strategies (Preker & Harding, 2003). However, there is an intense debate around each such strategy regarding their effectiveness when healthcare sector is the target of reform. Moreover, there is limited research assessing the experiences of countries with regard to the adoption of such strategic reforms. In this case study, attention has been paid to the experience of Singapore, particularly to healthcare "corporatization" since healthcare and medical tourism are two faces of the same coin. So, the concept of "corporatization" is explained first through the literature and then an overview of Singapore's profile in relation to this concept is provided.

Generally, Aidemark (2005) referred to the term "corporatization" as the transformation of a government owned entity into a corporation regulated under a corporate law, owned mainly by the public and is usually operated as non-for-profit. Also, corporatization is described as a means towards or a shape of privatization (Falkenberg, 2010). However, it can be argued that there is a distinction between the two strategies especially in terms of government accountability and regulation. In healthcare field, Shi and Singh (2004) described the corporatization of health care delivery in the United States through the establishment of private corporations, although still publicly owned. Whether they operate on for-profit or nonprofit basis, their common goal is to realize specific financial performance targets. Therefore, it can be acknowledged that corporatization as a strategic approach represents an effective way, if applied within appropriate regulatory frameworks, to encourage powerful management tactics and operational efficiency of healthcare facilities.

Singapore's health system underwent a series of reforms mainly on two fronts: network corporatization and financing scheme discussed in the section of PPPs in healthcare financing. In 1987, the Health Corporation of Singapore (HCS) was formed as a holding company to manage all restructured public hospitals and specialty centers, to be operated as private organizations wholly-owned by the government. The HCS is accountable to the MoH and managed like a non-for-profit organization. Such corporatization has been linked to several advantages for public hospitals in terms of greater management autonomy, better financial accountability, and higher market exposure (Singapore MoH, 2015a; Preker & Harding, 2003).

Empirically, the corporatization of Singapore's healthcare institutions on the ground of public-private participation is recognized as a successful model providing valuable lessons to compare different regimes and their reforms with their successes and failures. Lim (2005) highlighted several outcomes of such a model for Singapore in the



**Fig. 1.** Public-Private Partnership model for inclusive development in healthcare provision.  
Developed by Medhekar (2014a, p. 38).

context of efficiency improvement of healthcare delivery, replacement of old bureaucratic structures, enhanced responsiveness to patients' demands with lesser waiting lists, increased patient satisfaction levels, and better health indicators. However, the corporatized structure has created a more market oriented environment where competition is intensified towards modern medical technology acquisition and promotion of new medical services. Such a condition makes the role of government more critical to ensure a balance between the intentions for an efficient and quality health system versus an affordable and equity based healthcare (Haseltine, 2013).

### 3.3.3. Public-Private Partnerships (PPPs) in medical tourism

Joint public-private framework in healthcare provision and financing lead to formation of solid foundation to carry out the activities of medical tourism in a sustainable manner. Other strategic areas under which such cooperation can flourish also directly enable the sector to succeed. As indicated in the recent literature, PPPs may involve sector-wide strategic planning, healthcare quality assurance, marketing management, and insurance coverage (Medhekar, 2010). Furthermore, a PPP framework in medical tourism could have a wider scope through bridging the geographical divide in healthcare quality and affordability, particularly through collaborations which may connect public health care providers with international accrediting agencies, international healthcare providers, "referral providers", and international health insurance (Medhekar, 2011).

Singapore's medical tourism initiative "Singapore Medicine" reflected a unique model of PPP in medical tourism that many of the medical tourism destinations have attempted to replicate. This was aimed at narrowing the gap between different stakeholders of medical tourism sector (Lunt et al., 2015). Singapore's model of PPP in medical tourism is based on wide-ranging and multiagency integration among a variety of government and institutional activities. Remarkably, the government of Singapore has recognized the significance of such a model for attaining optimal outcomes of a sector-wide strategic plan and the development of a well-functioning market. Further, this model strengthens the notion that a PPP framework presents an opportunity for widening the scope within which such cooperation can take place. However, it is equally, if not more, important to ensure consistency and integrity between different stakeholders of the sectors. In return, this will contribute to better allocation of available resources and a greater potential for attracting private investment. PPP potential has been recognized by the government of Singapore and applied to a variety of medical tourism related activities such as marketing and promotion, research and development (R&D), etc.

## 3.4. Fourth pillar: marketing and branding strategies

### 3.4.1. Marketing mix

Kotler and Armstrong (2012, p.75) defined marketing mix as "the set of tactical marketing tools that the firm blends to produce the response it wants in the target market", commonly known as the 4Ps of the marketing-mix: product, price, place, and promotion. The 4Ps represent a practical tool, if managed well, for the achievement of marketing objectives especially those related to the creation of customer value and relationship. Lovelock and Wirtz (2011) extended the concept of marketing mix by adding three Ps namely, people, process, and physical environment. They rationalized this evolution to the importance of developing detailed and valued marketing strategies. In this case study, the analysis of Singapore's marketing strategy in medical tourism is conducted through relying on the 7Ps set.

**3.4.1.1. Product.** Singapore's marketing strategy is based on quality competition rather than price competition; in other words, Singapore has positioned itself on a highly complex quality healthcare system, which makes it expensive in comparison to other Asian medical tourism destinations such as India and Thailand. With an established brand name of

advanced medical care repute, doctors in Singapore utilized innovative technology and state-of-the-art medical equipment to carry out sophisticated diagnostic and surgical procedures especially those related to cardiology, neurology, oncology, ophthalmology, organ transplants, orthopedics, and pediatrics. Singapore has demonstrated several landmark medical advances in a number of the "firsts" in the Asian medical history, such as, the separation of the Siamese twins, the first South East Asian heart and liver transplant, the first percutaneous aortic valve replacement, and the world's first surgery for a rare ectopic pregnancy with single precise incision (STB, Singapore Tourism Board, 2015b; Wong et al., 2014; Wong & Ghazal, 2012; Connell, 2006). Further, Heung et al. (2011) revealed that Singapore's key competitive advantages are clinical excellence, trustworthiness, safety, and international accreditation. Singapore has augmented its medical tourism value chain through developing "one-stop" service and referral centers operated by national and private medical groups and aimed at serving international patients and their companions by offering logistical services, health-travel packages allied with medical networks and travel agencies, and personalized services according to patient's condition for accessing specialist medical facility (Hall, 2013; SHS (Singapore Health Services), 2014a).

**3.4.1.2. Price.** Singapore's competitive advantage lies in its provision of high end complex quality medical care, because of which the offered prices are within higher range than those of its counterparts in Asia such as Malaysia, India and Thailand. While some authors (Lunt et al., 2011; Woodman, 2007; Connell, 2006) pointed to the expensive nature of Singapore's medical treatment, it is still much cheaper than that in the United States, particularly for major surgical procedures. Besides, Singapore's medical tourism services were described as affordable and of reasonable cost with excellence in healthcare quality (Haseltine, 2013; Woodman, 2012). This approach indicates the strategy of best value adopted by Singapore to gain a competitive advantage over its rivals.

**3.4.1.3. Place.** Ryan (2014) discussed the growing trend of pursuing digital marketing strategies by businesses as many targeted markets rely on online channels of information for obtaining information about offered products and for comparing a variety of available choices to arrive at purchasing decisions. Singapore has critically recognized internet based resources as effective means for disseminating healthcare related information and for reaching prospective clients easily while enabling them to make informed decision through these very means of communication. Singapore developed a unique website publicizing valuable information on the country's medical services and promoting the country as a world class medical tourism center. Such online sources aim at providing detailed information on cost, healthcare service providers, novel medical procedures and technology, expert details in medicine, and medical travel agents (Connell, 2011). Through a true presence, STB provides several services mutually with the private medical groups to support and broaden their reach and referral networks in key target markets internationally. Currently, the STB operates twenty regional offices, which have a geographical network in over seven regions globally, to market tourism and to promote investment in medical tourism (STB, Singapore Tourism Board, 2015c; Lunt et al., 2015).

**3.4.1.4. Promotion.** Singapore has extensively leveraged on its free business environment to develop itself as globally best MICE (Meetings, Incentives, Conventions, Exhibitions) country. According to the Union of International Associations (2015), Singapore was ranked first among the top international meeting cities in 2014. STB, which is a division of the Singapore MTI, undertakes the mission of marketing and promoting Singapore as a leading tourism destination, with a clear mission statement "To shape a dynamic tourism landscape for Singapore in partnership with industry and community" (STB, Singapore Tourism Board, 2015c). Overall, this has led to a situation in which medical

professionals travel to Singapore for medical conferences and training in greater numbers than to other countries in the region. Simultaneously, many doctors travel from Singapore to other countries to share expertise and knowledge (Yap, 2006). Nowadays, Singapore stands out as a role model in its ability to fully exploit the MICE sector for medical tourism promotion. A study by Lee and Park (2013) revealed that Korean government can benefit from the policy frameworks applied by the government of Singapore to foster the medical tourism market, especially by means of establishing a stronger strategic role of government entities for building multi-stakeholder alliances while creating an international mutual marketing system for effective deployment of IT systems.

**3.4.1.5. People.** Singapore has emphasized on the creation of a large pool of skilled medical professionals in different specialties and expertise to attract international medical tourists and has carved out its competitive advantage within the hospitals. Singapore Health Services (SHS), the largest healthcare group in Singapore, has introduced a program of wide-ranging excellence awards for honoring medical professionals with outstanding performance and commitment towards patient care and clinical research (SHS, Singapore Health Services, 2014b). Further, Singapore places great efforts to attract a large number of internationally trained doctors and medical professionals annually with professional advancement opportunities. Wong et al. (2014) revealed that one of the reasons of the strength of Singapore's medical tourism sector is the numbers of expatriate doctors comprising a relatively high proportion of the total medical workforce (more than one in three doctors in the public sector is a foreigner). This reflects the intentions of the government to maintain a stable labor pool of medical professionals with varied clinical and academic backgrounds. Truthfully, international competencies provide potential development opportunities in terms of advanced medical care delivery, clinical training, and scientific research prospects. Further, English is a widely spoken language among medical practitioners in Singapore, therefore, issues of miscommunication and associated misdiagnosis errors are largely avoided (Rerkrujipimol & Assenov, 2011).

**3.4.1.6. Process.** In active medical tourism markets, hospitals demonstrated a growing trend of obtaining international accreditations since 2000, particularly, from Joint Commission International (JCI). Around 350 international hospitals worldwide have been accredited by JCI during that year, and this number has tripled between 2007 and 2011 (Woodhead, 2013). JCI accreditation is a not-for-profit US organization which has described itself as "the gold standard in global health care" with a purpose of ensuring excellence in healthcare quality and high standards of patient safety (JCI, Joint Commission International, 2015a). Alleman et al. (2010) and Connell (2006) mentioned that the process of attaining an international accreditation with JCI has become a marketing tool in medical tourism market with a positive influence on customers' perception about quality and safety. Remarkably, Singapore has a high number of JCI accredited organizations in the region with 21 hospitals and medical centers (STB, Singapore Tourism Board, 2015b; JCI, Joint Commission International, 2015b).

**3.4.1.7. Physical evidence.** Singapore's modern healthcare infrastructure and its network of state-of-the-art medical facilities, privately and publicly owned, have created a competitive environment that further encouraged the country to promote itself as a world class medical tourism destination (Haseltine, 2013). Singapore has one of the top 10 hospitals in the world, for medical tourists, with most technologically advanced facilities, namely Gleneagles Hospital. It performs sophisticated surgical procedures through its cutting-edge technology such as medical robots (Medical Travel Quality Alliance, 2013). Furthermore, Singapore has two prominent private medical groups namely, Parkway Medical Group and Raffles Medical Group. Both groups run several well-known hospitals in Singapore while maintaining a strong overseas presence through joint ventures and global strategic alliances with countries

such as China, India, and United Arab Emirates (Wong & Ghazal, 2012; Chanda, 2002).

### 3.4.2. Medical tourism branding

In the global map of medical tourism destinations, Singapore has promoted itself as a center for biomedical and biotechnological activities since 2001 (Cyranoski, 2001). In 2003, Singapore launched the multiagency medical tourism initiative, and since then the STB has been operating as a global player in marketing the medical tourism initiative "Singapore Medicine" as a brand. Also, Singapore has built a positive reputation in quality medical services provision by which it has enhanced its position in the international arena as a regional hub of "medical excellence" (Lunt et al., 2015). Such core branding of "medical excellence" can be interpreted as a means to convey the concepts of quality and high standards within medical practices.

Alleman et al. (2010) mentioned that medical facilities obtaining JCI accreditation could result in enhanced opportunity in terms of attracting more medical tourists. However, Todd (2012) criticized that many medical care seeking patients do not perceive brands through accreditation. Instead, he emphasized on building the brand through creating awareness and enhancing the perception of prospective customers regarding offered services. In fact, this subject has attracted criticism under the debate of medicine commercialization and associated ethical implications. Within the context of the analysis of Singapore's branding approach, it is found that medical tourism branding is crucially based on two themes – the international leadership and advanced medical care, stated explicitly as "Asia's leading destination for advanced medical care". Besides, Singapore's branding strategy aims at a medical tourism image based on a variety of distinctive experiences in medical excellence, high standards of safety, and overall attractiveness of the location (STB, Singapore Tourism Board, 2015b). Obviously, Singapore has strengthened its reputation as a medical tourism destination through outstanding achievements in medicine which are robustly synchronized within the general attributes of the country (such as modern economic infrastructure and thriving tourism sector).

### 3.5. Fifth pillar: technology and innovation

Medicine itself is both science and technology incorporated in a system of practices (Glick, Livesey, & Wallis, 2014). The rising importance of technology in medicine reflects the need to investigate at depth the role of technology in medical tourism. This subsection of the case study focuses on contributions of modern technology towards the development of Singapore's medical tourism sector. It encompasses an analysis of three interrelated areas of medical technology: telemedicine, bio design innovation and medical informatics.

#### 3.5.1. Telemedicine

The World Health Organization (WHO) (2010) defines the term Telemedicine as "The delivery of health care services, where distance is a critical factor, by all health care professionals using information and communication technologies for the exchange of valid information for diagnosis, treatment and prevention of disease and injuries, research and evaluation, and for the continuing education of health care providers, all in the interests of advancing the health of individuals and their communities". In fact, it is found that the affordability and practicality of Telemedicine for both patients and medical practitioners have led to the elimination of patient attendance at a physical spot and the convenient access by professionals to best expertise, research and superior technology (Bernal, 2007; Bashshur, Sanders, & Shannon, 1997; Norris, 2002). Singapore has pioneered Telemedicine through leveraging on its modern ICT infrastructure. It has introduced SingHealth iTAG in late 2003 as a giant telemedicine project through collaborative efforts between the largest national healthcare group (SingHealth) and the Innovative Technology Group (iTAG). Examples of Singapore's distinct Telemedicine projects encompass the "Telecare project for

chronic disease patients", the "Telemedicine project for pediatric emergency transport services using 3G phones", and the "Virtual Podiatrist" project (Seng & Ong, 2007). Singapore has also recognized the necessity for ensuring an appropriate provision of Telemedicine through developing National Telemedicine Guidelines (NTG) which provides compliance to stated recommendations by WHO "Report on the second global survey on eHealth" in terms of governance, policy, and scientific development (Singapore MoH, 2015b; World Health Organization, WHO, 2010).

### 3.5.2. Biodesign innovation

Biomedical technology encompasses a wide-range of products, but as a general description this technology may include: therapeutic or prophylactic pharmaceuticals, radiopharmaceuticals, and clinical instruments whether diagnostics, therapeutic or surgical. Zenios, Makower, and Yock (2012) defined Biodesign as the "process of innovating medical technologies" which required competency of management with regards to several factors such as intellectual property, market dynamics, regulatory and reimbursement frameworks, business models, nature of competition, financing possibilities, clinical trials, technical feasibility, and collaborative teams. It is clear that Singapore has capitalized on the positive states of those factors to develop its entire medical technology sector. This can be proved through the Global Competitiveness Index-GCI in which Singapore was ranked 2nd among 144 countries worldwide for the year 2014 and for the fourth consecutive year (World Economic Forum, 2014).

The contribution of Singapore's medical technology sector reached about US\$ 3 billion in output and around 9000 employment opportunities in 2011. Singapore's EDB has branded the country as "a global medical technology hub" as it is a home for more than 30 multinational firms dedicated to medical technology manufacturing and research and development (R&D) as well as distribution of its innovative technologies to the regional and global markets. Many competitive resources and capabilities are made accessible to such companies, including a key plug-and-play biomedical infrastructure, sophisticated engineering and supply capabilities by domestic firms, a pool of multidisciplinary talents, international alliances with research centers, government investment in biomedical R&D by allocating US\$ 2.7 billion for the period 2011 to 2015, and more significantly, Public-Private Partnerships in R&D, mutual technology utilization, and collaborative science teams. Additionally, Singapore translates its national leadership and commitment towards intellectual capital development and world-class scientific research through a publicly built agency Known as "A\*STAR Agency for Science, Technology, and Research". One of its objectives is to develop biomedical technology and sciences (Singapore Economic Development Board, 2015; A\*STAR, 2015).

### 3.5.3. Medical informatics

The Healthcare Information and Management Systems Society (2015) defines medical informatics as "the interdisciplinary study of the design, development, adoption and application of IT-based innovations in healthcare services delivery, management and planning." A more operational definition provided by Singapore's Center for Health Informatics (CHI) (2012) stated "Health informatics is the study and application of resources, devices, and methods required for optimizing the acquisition, storage, retrieval, and use of information in health and biomedicine."

Singapore has recognized the benefits of medical informatics for reshaping healthcare industry and for revolutionizing medical care services. This is why Singapore has developed as a dedicated center for health informatics to set up training agenda and development programs aimed at advancing medical informatics related human capital. Additionally, the cumulative interests of Singapore in the field of medical informatics has led to the establishment of the Association for Medical and Bio-Informatics (AMBIS) which is "an organization that promotes excellence in Medical and Bio-Informatics and advances the

development of this emerging discipline in Singapore" (AMBIS, Association for Medical and Bio-Informatics, Singapore, 2015).

In association with Singapore's strategic priorities towards healthcare, Lim (2006) elucidated the development of medical informatics in the country at multiple levels. Briefly, those included standardization and integration of medical care services jointly with the private sector, ensuring a life-time health record, population-based disease management, enhancement of clinical and business process performance, and indeed, maximizing global competitiveness in healthcare provision in terms of quality and value.

### 3.6. Sixth pillar: accreditation and governance

There is a rapid trend in healthcare organizations, especially in medical tourism destinations, to seek accreditation locally or internationally. The organizational motive behind such action is primarily related to outcome improvement in areas of quality of services, patient safety, cost efficacy, and reputation of care (Brubakk, Vist, Bukholm, Barach, & Tjomsland, 2015; Grepperud, 2014). Basically, the process of accreditation of hospitals involves self-assessment and external peer assessment for optimal performance in accordance with evidence based standards of quality and patient safety (Myers, 2012). Brubakk et al. (2015) defined hospital accreditation programs as "the systematic assessment of hospitals against accepted standards..." As mentioned earlier, Singapore has recorded a high number of accredited medical centers and hospitals in the region with JCI accreditation. Besides, Singapore has developed many local agencies responsible for accrediting various healthcare facilities in the country, for example, Singapore Accreditation Council (SAC), Singapore's MoH, Singapore Health Promotion Board, and Singapore Laboratory Accreditation System (SINGLAS). In general, there exists a direct relationship between the proliferation of healthcare accreditation and the growth of medical tourism market. However, further research is needed to investigate the nature of this relationship especially in terms of inculcating patient trust and the shaping of the reputation of a destination as a provider of quality healthcare.

Along with the importance of medical facilities accreditation, the execution of effective governance programs in medical practitioners' activities, medical entities' performance, and overall medical tourism key players, is fundamental. This is even more significant due to the many challenges that exist to balance the national economic gains versus the burdens on national health care systems resulting from medical tourism activities. Many researchers on healthcare have sought to address the potential implications of medical tourism, especially those that negatively influence the performance of national health care systems. This issue is much more complex than what the debate suggests. A social dimension of it is related to the international commercialization of healthcare services by means of inbound medical tourism where citizens prefer their health care to remain within national boundaries. Majority of cited implications were associated on a variety of issues (Pocock & Phua, 2011; Johnston, Crooks, Snyder, & Kingsbury, 2010; Vijaya, 2010), for example, 1 - inequality of access of healthcare facilities for citizens and foreign patients in terms of low quality services and/or inability to pay; 2 - migration of health workers or 'Brain drain' from public to private sector, hence straining public healthcare provision; 2 - increased liberalization of healthcare trade and less government intervention; 3 - trading in healthcare services beyond the related commitments stated by the World Health Organization (WHO) or the World Trade Organization (WTO) under the General Agreement on Trade in Services (GATS); and 4 - the lack of formal standards or codes of conduct in medical brokerage industry, thus raising the potential for patient abuse. Therefore, it should be the government's utmost priority to address all potential implications that may arise from uncontrolled or unethical practices in the promotion of delivery of medical tourism services.

Arnwine (2002) described the role of effective governance in healthcare provision through three practices: formulation and

execution of policies, making significant and strategic decisions, and overseeing the organization's activity for compliance with quality standards and financial performance. By examining Singapore's institutional framework, it can be acknowledged that the above cited practices have been adopted by Singapore through the process of corporatizing public hospitals under the umbrella of Health Corporation of Singapore (HCS). It is also noteworthy to mention that role of the governance is not to remain limited to healthcare provision to ensure a trusted medical tourism market for both the investor and the consumer. Singapore's experience raises the necessity for developing cohesive and integrated policy structures among various stakeholders of medical tourism including tourism sector, trade sector, health sector and the social services sector. This is all supported by the fact that Singapore is a corruption free country (Medhekar, 2014b). Singapore has demonstrated that medical tourism governance truly matters in order to support social objectives related to equity of access of medical care by residents and non-residents; to support health financing objective through applying appropriate fiscal practices and tax schemes on medical tourism generated revenues and then reinvesting earnings back into the national health system (Botterill, Pennings, & Mainil, 2013).

Thoroughly, STB, MTI and MoH partners in Singapore Medicine Initiative play a crucial role in ensuring effective, integrated and continuously evolving regulatory and institutional frameworks enforced on medical tourism stakeholders. The STB has settled several regulatory measures (such as the one related to the travelers' insurance and statistics of medical tourist flow) and licensing conditions for travel agents necessary to protect tourists' interests and safeguard the reputation of the tourism sector (STB, Singapore Tourism Board, 2014). Jointly, the MTI formed committees responsible for reviewing and developing policies for providing funding for biomedical firms or helping them access publicly-funded resources (such as medical technologies or experts), to encourage price transparency of medical services, to facilitate smoother and faster processing of medical tourism visas, and such other aspects (MTI, Ministry of Trade and Industry, 2012).

The Singapore MoH is considered to be the main regulator of medical entities and practitioners, and several regulatory agencies come under its umbrella including Singapore Medical Council, Singapore Nursing Board, Singapore Pharmacy Council, Singapore Dental Council, and Allied Health Professions Council, and Health Sciences Authority (Singapore MoH, 2012). The development of several agencies to regulate biomedical sector can be interpreted as a strategy to assure protection of national health and safety. This also seems consistent with the conclusion stated by Pocock and Phua (2011, p.11) that "Unless properly managed and regulated at the policy level, the financial benefits of medical tourism for health systems may come at the expense of access to and use of health services by local consumers."

### 3.7. Seventh pillar: human capital development

Human capital development is one of the fundamental solutions to successfully cater to the international market (Marimuthu, Arokiasamy, & Ismail, 2009). The concept of human capital development and its positive relationship to economic growth, innovativeness or organizational performance – "financial or non-financial" were discussed by several scholars in economics and management theories (Savvides & Stengos, 2009; Marimuthu et al., 2009; Bontis & Fitzenz, 2002; Selvarajan et al., 2007; Noe, Hollenbeck, Gerhart, & Wright, 2003). The Organization for Economic Co-Operation and Development (OECD, Organization for Economic Co-operation and Development, 2001) referred to the term Human Capital as "knowledge, skills, competencies, and attributes embodied in individuals that facilitate the creation of personal, social and economic well-being." Moreover, it is the most valuable asset at the organizational and at the national level, and a major contributor towards sustainable economic growth and competitiveness (Lut, 2011).

#### 3.7.1. Technical competency and excellence

Educational and training programs are fundamental components of human capital development agenda (Lut, 2011). Therefore, it is necessary to directly assess the strategic directions adopted by Singapore in terms of medical education and training. Singapore has several medical academies and research centers such as the National University of Singapore, Genome Institute of Singapore, Human Genome Organization, and A\*Star Agency, which formed international alliances and partnerships with many overseas universities, including the John Hopkins University, Roche, Broad Institute, and Duke University. For instance, Duke University and the National University of Singapore (NUS) have created the joint Duke-NUS Medical School, as a "global initiative" that accepts postgraduate medical students from a variety of reputable international universities such as Harvard, Cambridge, and Oxford Universities. Thereafter, the graduates work in the public medical sector as medical residents. Singapore's Health Manpower Development Plan provides domestic physicians with scholarships for overseas training in the world's most innovative hospitals. Singapore has a unique and inimitable model for developing medical practitioners' knowledge, skills, know-how and talent. Furthermore, public-private collaborations play a vital role for ensuring quality specialist medical training with high quality professional development. This can be briefly exemplified by the outstanding performance of some of the selected key players in medical training: firstly, dedicated committees or "boards" which accredit and oversee medical specialty training in Singapore; secondly, the medical residency programs which are guided by the Accreditation Council for Graduate Medical Education-International (ACGME-I)-USA, and thirdly, the US\$ 14.6 million SingHealth Investigational Medicine Unit (IMU) aimed at developing research capabilities of medical professionals in a variety of medical disciplines (Singapore MoH, 2012; SHS, Singapore Health Services, 2011).

#### 3.7.2. Leadership

Many scholars linked the concept of leadership with organizations' profitability, productivity, and performance (DuBrin, 2004). The subject of medical leadership is critically deliberated due to its direct influence on medical services excellence. Medical leadership is a newly emerging term (Downton, 2008). Edwards (2002) and Chadi (2009) described medical leadership as having well-trained doctors undertaking leadership responsibilities related to medical practices, resources management, decision making, recruitment, consultation, change management in medical facility, team building and sharing of decision power. Countries like the Great Britain and the United States have recognized the significance of supporting medical leadership programs starting from the undergraduate level to the specialist medical professionals (Chadi, 2009). Likewise, Singapore has well-recognized the necessity for building capable leaders in medicine in different specialties. As a national program, SHS Agency has an academy to run three transition leadership programs for healthcare workers: "Emerging", "Performance" and "Organizational" Leadership Programs (SHS, Singapore Health Services, 2011). Further, developing leadership qualities of physicians is a topic of research interest in Singapore to foster best practices in medicine and achieve ultimate patient experience (Kt, 2007).

On a more holistic spectrum, Singapore has cultivated leadership principles at the national level. Government of Singapore, primarily through Public Service Division (PSD), has established a "Public Service Leadership Program" targeting the main sectors of the government. Remarkably, all the public stakeholders of Singapore Medicine Initiative are involved under this program; therefore, leadership should be given appropriate attention with regard to its influence on the success of medical tourism sector at both the organizational level and the national level.

#### 4. Main findings & analysis

How has Singapore achieved a competitive position in the global medical tourism market? Based on the examination of current literature, it can be concluded that Singapore's competitive advantage stems from its outstanding and synergic performance around seven pillars identified in this case study. The pillars are strongly interrelated as well as relevant for developing a competitive medical tourism sector. The strength of the relationships among the different pillars primarily relies on strategic leadership of the central government, in terms of planning and managing its different resources, and response to global market opportunities. In other words, the success of such relationship lies in the balancing of two types of strategies: market-driven strategy and resources-driven strategy. As a market-driven strategy of "outside-in", it is notable that Singapore has adapted its health infrastructure in a way that ensures the provision of high-quality products of medical tourism fulfilling both demand of international medical tourists and interests of foreign healthcare enterprises. In terms of resource-driven strategy of "inside-out", Singapore has leveraged existing strengths of its resources, ranging from modern infrastructure to diversity of tourism products, to encourage the growth of its medical tourism market.

This case study has identified seven interrelated pillars that effectively synthesize what is meant by Singapore's medical tourism model of competitiveness. The first competitiveness pillar "An enabling tourism sector" indicates that tourism should strategically tie in services from healthcare, through revenue generating schemes shared between the sectors, while creating value-added benefits for medical tourists. This partnership also supports the marketing and branding schemes through encouraging positive word-of-mouth marketing of tourists' experience as well as creating opportunities for projects of joint brand-building and investment. The second competitiveness pillar "Strategic Planning" is relevant to more than one set of pillars, as the aim of a strategy for achieving competitiveness. Most strategic management approaches have been primarily adopted for organizational, market, economic, national, or international interests. Singapore has shown a distinct as well as integrated approach, through bridging the gaps between those strategies and their implementation, to successfully develop its medical tourism industry. This case study has provided a clear picture of the content of such strategic approach, primarily by means of identifying the competitiveness pillars of the country's medical tourism sector. In the third competitiveness pillar "PPPs frameworks", it has been noticed that a remarkable and dynamic integration exists between Government of Singapore and private enterprises across the different pillars of medical tourism sector identified in this case study. This is achieved through PPP framework. It is also noteworthy to mention that aligning medical tourism strategy to national priorities of an economy, namely healthcare and tourism, is a key contributing factor for collaboration between different stakeholders. In fact, this collaborative approach has shaped a competitive model of medical tourism characterized by distinctiveness, complexity and difficulty for replication by other countries. Regarding the fourth competitiveness pillar namely, "Marketing and branding strategies", while Singapore has not only differentiated its medical tourism products through the attributes of quality and innovativeness, it also has been serving as a role model for many of the medical tourism destinations. It has promoted the concept of quality and safety of medical services in stark contrast to the misconception that price is the primary driver for medical tourism in international destinations. Indeed, superior quality can be delivered by centers of excellence which necessitate the presence of competent healthcare professionals and a commitment to comply with high standards of medical accreditation. Therefore, the pillar "Marketing and branding strategies" is highly interrelated with other competitiveness pillars namely "Accreditation & Governance", "Technology and Innovation" and "human capital development". The fifth competitiveness pillar, "Technology and Innovation" in healthcare and biomedicine, has

enabled Singapore not only to capture global economic opportunities but also to ensure sustainability of the private sector to engage in medical tourism activities. Science and technology, planning and investment are at their best when aligned with an economic strategy, and facilitated with preparedness within the overall business environment. However, this is unattainable if it is not associated with the competitiveness pillar of "human capital development" which is an engine of economic growth. The sixth competitiveness pillar, "Accreditation & Governance" aims at ensuring that medical services are based on international standards and regulations which enhance the trustworthiness of the market. This process stresses the adoption of feasible ways of dealing with the different pressures of operation by key market players in areas such as compliance versus choice, and profitability versus responsibility, etc. The success of overcoming such tensions is a major driver of stakeholder satisfaction, resulting in better performance and productivity, while upholding the rights of medical tourists. The seventh competitiveness pillar, "human capital development" is crucial to satisfactorily meet the healthcare needs of people, on one hand, and to improve the operation of health care systems and delivery on the other hand. Singapore has built robust and integrated human resource development systems to strengthen industry competencies and to respond to the challenges of the global market. This pillar is the backbone of medical tourism competitiveness; without which other pillars will be made redundant.

Singapore's medical tourism model forms a powerful tool for policy makers to base their decisions and define their priorities in planning or reinventing medical tourism sectors. The government of Singapore has taken the responsibility to carry out improvement initiatives through which the future medical tourism industry will be driven forward as well as be integrated with the country's national economic agenda. No doubt, this is found consistent with the fact that governments are sure to take a lead role in making tourism sector growth sustainable.

#### 5. Conclusion

While a number of studies mentioned that Singapore has the most developed and advanced medical tourism infrastructure, relevant literature throws little or no light on how this country has positioned itself competitively in the growing global market of tourism. This study concludes that Singapore's success as a leading medical tourism destination can be attributed to its long-term and integrated strategic planning headed by its central government with impactful engagement of stakeholders across different competitiveness pillars. It is found that the prosperity of Singapore's tourism has been used in an innovative way and as a value proposition to attract medical tourism investors on one hand, while encouraging the creation of business alliance between healthcare providers and private tourism enterprise on the other. This is recognized as a powerful strategy in marketing medical tourism products and boosting the medical tourism brand awareness for both businesses and clients. The study has found that clinical excellence, which can be assured through the pillars of medical accreditations and robust regulatory frameworks, stems from operational excellence which relies on the effectiveness and range of PPP schemes not only across healthcare systems but also across diverse range of economic sectors. Further, it is clear that R&D as a key strategy for developing a modern and entrepreneurial medical tourism can be maximized through capitalizing on the PPP frameworks. However, it is difficult to achieve any sort of excellence without investing in the knowledge, skills and value of human capital which, in return, demands strong investment in education and training systems.

In the context of this case study, it would be useful to define medical tourism competitiveness as the ability to strategically plan, set viable policy goals, establish effective multi-stakeholder partnerships, maintain an attractive environment; and ensure that all of these capabilities are harmonized to optimize the delivery of medical services that rank high on parameters of quality, innovativeness, affordability and safety. The content of this definition is relevant to Singapore's medical tourism

sector through the identified pillars. Policy makers, interested in medical tourism development, need to put into account not only a synchronized pattern of actions needed between government agencies and relevant private stakeholders to improve the performance of the sector, but to ensure that long-term measures undertaken by the public sector are viable and can diversify the tourism sector. Additionally, there must exist a robust public interest to create an environment that empowers private enterprise. This absolutely necessitates integrated strategic planning, a successful execution strategy and continuous improvement and development solutions.

While there is no 'one-size-fits-all' strategy to address the question of competitiveness in the area of medical tourism development, the competitiveness pillars and related tactics used and implemented in the context of Singapore's medical tourism sector, form a powerful tool for policy makers to base their decision and define their priorities in the planning or reinventing process. It was obvious that the development of a competitive medical tourism industry is complex and requires inter-ministerial coordination, PPPs, and international alliances to exploit economic opportunities. However, sociocultural and ethical aspects need to be taken into consideration to prevent unfavorable outcomes of potential malpractice and conflict of interests within local community, for example, raising the rate of health complications and inequality of access to medical service. Finally, to enrich the principle of medical tourism competitiveness, the study suggests research to be steered towards exploring Singapore's approach to overcome challenges of medical tourism from cultural, political, and legal aspects as well.

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