Economic Motives and Problems of Health Tourism in Asia Pacific

Nguyen Duc Khoa[1], Dang Thi Nhu Y[2]
email: mocnuong@gmail.com, y.dang@vnuk.edu.vn

[1] *High-Level People's Procuracy in Danang, Danang, Vietnam*

[2] *VN-UK Institute for Research and Executive Education, The University of Danang, Danang, Vietnam*

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Abstract

Nowadays, health tourism has emerged as a multi-billion-dollar industry due to the fact that people have frequently traveled in order to improve their wellbeing. The internationalization of health tourism has also motivated production and consumption of healthcare services as well as increased variety of intermediaries and ancillary goods and services to support this sector. Although the significant benefits of health tourism, its actual contribution to economic growth and related issues have remained ambiguous. Therefore, this paper aims to: (i) Discuss the potential economic aspects of health tourism based on the published figures of major destinations in Asia Pacific with an international focus and (ii) Examine the economic risks related to health tourism that either directly or indirectly harm the process of economic growth. The results indicate that development of health tourism satisfies patients' demand for high quality healthcare at competitive prices, boosts the value of foreign exchange inflow and expands job opportunities. Health tourism services have become the subject of international earnings which has elevated economic opportunities of potential destinations. Besides that, increasing international health tourist flows with high income could evaluate costs of healthcare services, brain drain of healthcare professionals, inequitable health care access. Additionally, increases in international traveling might produce a new economic burden of communicable diseases, environmental degradation; brokers and organ transplants associated with black-market in some destinations. Hence, sustainability and responsibility have been considered as key criteria in the health tourism industry in order to improve tourists' health performance and maximize benefits for local communities. Such economic analysis also enables us to evaluate benefits and losses from health tourism development and track the balance of trade around this economic sector.

Keywords

Health tourism, tourism market, economic motives, economic risks

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Introduction

Since ancient times, people have been aware of the health-giving properties of water, sea, thermal or mineral water and traditional medicines (Smith & Puczkó, 2014) combined with health caring therapies such as massage, acupuncture, aroma, reflexology, spiritual and steam (Revathi & Jansi Rani, 2019). They have visited mineral springs frequently to improve their health such as healing from ailments such as skin conditions and arthritis (Sharma et al., 2015). India's Yoga and Ayurvedic (1000 years ago) healing technique has attracted many pilgrims around the world to look for both mental and physical health improvement (Kumar & Hussian, 2016). The 'Onsens' – a type of spa in Japan or Steam Baths in Australia (1000 years ago) had opened for tourists which offered healthy food, accommodations, outdoor baths and indoor soaking tubs (Blazevic, 2016; Ile & Tugu, 2017). Thai massage – a technique is around 2,500 years old which offers tourists to visit the 'homes' for certain practices such as stretching, loosening joints and easing muscle tension (Smith & Puczkó, 2014). Travelers from the Western countries are interested in alternative therapies offered in Asian countries, such as ayurvedic practices in India, shiatsu in Japan and Chinese acupuncture (Sarantopoulos & Demetris, 2015). From the 1980s–1990s, demands for aesthetic surgical procedures and dentistry have increased worldwide and hence promoted a large number of providers in Asia joining this sector with low costs or cover by insurance. Nowadays, the health tourism industry in Asia has been growing sharply because of rising costs of healthcare in developed countries and long waiting lists coupled with rising incidence of chronic conditions creating great opportunity for Asia countries as health care services become obligatory. As a result, numerous health tourists travel across intercontinental countries to Asia to look for mental, physical restoration, improvement and care services such as cosmetic surgery, dentistry to organ transplants, sex change operations, plastic surgery and in-vitro-fertilization (Turner, 2008; Kumar & Hussian, 2016). Progressively more, services also cover a broad range such as health screenings, stress reduction, weight loss, anti-aging (Ile & Tigu, 2017). Along with diversity of destinations, world - class healthcare facilities, skilled healthcare workers, quality service at affordable cost, strong presence in advanced healthcare, high success rate in treatment, less waiting time in the hospitals combined with 'indigenous system of medicine' has strengthened some Asia countries as a preferred destination for international health tourist (Gupta et al., 2015).

Despite a millenary history, until 1973, health tourism was first categorized as a commercial sector by the International Union of Travel Officials (Sharma et al., 2015). Since the late 1990s, travel for health purposes has been considered as a huge interdisciplinary potential as a result of globalization, international travel, industrialization, economic restructuring and the development of mass culture (Rab-Przybylowicz, 2016). It is estimated that 3 – 4% of the world population travels internationally for health purposes with a share of 20% for medical tourism and 80% for health tourism (Santinha et al., 2015). According to the World Tourism Organisation, the number of people engaged in health tourism has increased by 32% between 2005 and 2010 (Heung et al., 2010). The global health tourism market size is expected to reach US$3 trillion by 2025 with

annual income of more than 25% (Ile & Tugu, 201; Kim et al., 2019). The increasing market size of health tourism is in line with the increasing demand for services. As one of the fastest growing tourism sectors, health tourism has been significantly concerned and strategically planned to stimulate economic growth in many nations constituting huge economic potential not only in industrialized countries but also in less developed countries (Mohamad et al., 2012). More than 50 nations in all continents have declared health tourism as a national industry (Sharma et al., 2015) with a remarkable increase of privatization and marketisation of healthcare facilities.

The development of health tourism market largely depends on destination choices of travelers leading to competition for world-class healthcare facilities; cost and time saving potential; quality of healthcare; package attractiveness among destinations as well as support of public local authorities (Heung, et al., 2010; Mohamad et al., 2012). Due to the shifts of supply and demand in the health tourism industry worldwide as well as customer experience, the wide range of the services, the destinations and the number of health tourists has increased sharply (Pagan & Horsfall, 2020). In fact, though there are a diversity of destinations on global, nowadays, Asia countries have become the swift uptake in global interest (Mohamad et al., 2012) with top destinations for health tourists namely India, Thailand, Singapore, Malaysia, South Korea and Taiwan (Herrick, 2007; Pagan & Horsfall, 2020). In which, the highest share of the health tourism market in Asia are Thailand, Singapore and India (Kim et al., 2019) based on the existence of medical specialties, international accreditations and competitive prices compared to other potential competitors (Pagan & Horsfall, 2020). Asian countries attract more than 4 million health tourists annually from all over the world (Heung *et al*, 2010; Kumar & Hussian, 2016). Ramirez de Arellano (2007) emphasized that investing in the healthcare sector is an effective pathway to boost economies through improving healthcare services, increasing income, generating foreign exchange earnings and a more favorable balance of trade.

Health tourism development also includes particular sectors such as travel, hospitality, safety, health system, government, destination management and marketing, education, research and sustainability (Ile & Tigu, 2017). Trend of health tourism destinations is evaluated by International Healthcare Research Centre, known as Medical Tourism Index (MTI) that measures the "attractiveness of a country as a medical tourism destination in terms of overall country image and environment; healthcare attractiveness and infrastructure; availability and quality of medical facilities and services" (Ile & Tigu, 2017; Table 1). Data in 2020 and 2021 reveals that Asia countries such as Singapore, Japan and India take the 2nd, 3rd and 10th place on 10th rank, respectively (Table 1). The MTI profile country considers Singapore an environmentally friendly nation; tourists can enjoy a safe city with English as the most spoken language.

Table 1 Medical Tourism Index in 2020 – 2021 of medical tourism destinations (Source: authors' own design based on Medical Tourism, 2021)

Rank	Medical Tourism Index (overall rank)	
1	Canada	76.47
2	Singapore	76.43
3	Japan	74.23
4	Spain	72.93
5	United Kingdom	71.92
6	Dubai	71.85
7	Costa Rica	71.73
8	Israel	70.78
9	Abu Dhabi	70.26
10	India	69.80

Obviously, health tourism in Asia Pacific has developed as a multi-billion-dollar industry in recent decades because of cost effectiveness as well as availability of specialty medical treatment, facilities and skilled healthcare professionals. Thus, this paper aims to discuss the potential economic aspects of healthcare tourism based on the published document of major destinations in Asia Pacific with an international context including economic performance and economic risks related to medical tourism that either directly or indirectly affects the process of economic growth.

Methodology

Terminology

In this study, the terms of "health tourism", "medical tourism" and "wellness tourism" need to be carefully distinguished. The term "health tourism" is used to cover types of tourism which have contributions to physical, mental and/or spiritual health of travelers through medical and wellness activities (World Tourism Organization and European Travel Commission, 2018). Therefore, "health tourism" is the umbrella term for not only medical tourism but also wellness tourism. The term "medical tourism" is referred to as a tourism activity which uses medical healing resources and services including diagnosis, treatment, cure, prevention and rehabilitation (World Tourism Organization and European Travel Commission, 2018). Whereas "wellness tourism" indicates a type of tourism activity which improves physical, mental, emotional, occupational, intellectual and spiritual aspects of humans (World Tourism Organization and European Travel Commission, 2018).

Data collection

This study analyzes and synthesizes various scientific information sources of health tourism with emphasis on medical tourism from the top journals, articles, books and online materials published from 1994 to 2021. The relevant and high - quality literatures in health - medical - wellness tourism were searched using a set of selected keywords (Zhong et al., 2021). A total of 64 publications were selected using the following keywords related to the concept of health - medical - wellness tourism and economics including 'health - medical - wellness tourism and motivates', 'health - medical - wellness tourism and economic risks' and 'health - medical - wellness tourism and problems'. Relevant studies in health tourism were manual checked and chosen to ensure that studies extracted from various channels and journals are of comparable quality, international recognition and comprehensiveness. Those materials involved concepts and related subjects were assessed, collected data and information for this paper. There are 57 selected articles and proceedings were collected from prominent journals such as Journal of Tourism, Heritage & Services Marketing, Global Social Policy, Economic Modelling, Globalization and Health, Social Science & Medicine, Indiana Law Journal, Journal of Development Economics, International Journal of Research in Medical Sciences, Health Policy and Planning, Journal of Travel & Tourism Marketing, Journal of Public Health Policy, International Journal for Equity in Health, International Journal of Environmental Research and Public Health, Journal of Tourism & Hospitality, Social Science & Medicine, Tourism Review, Scientific Research, Current Issues In Tourism, Sustainability, The Open Public Health Journal, Global Health, International Journal of Travel Medicine & Global Health, World Applied Sciences Journal, International Journal of Health Services, International Journal for Equity in Health, BioSocieties, Tourism Management. Other significant information from the updated website (2) and books and scientific reports (5) were also collected in order to deliver a higher number of relevant databases.

Data analysis

The data and information were analyzed to achieve two main aims of the paper in order to provide key economic dimensions of health tourism with attention to significant contribution and risks across major Asia countries as well as policy considerations for sustainable growth. The first goal was to analyze and discuss the economic motivates of health tourism including high quality healthcare at competitive prices that save treatment cost for health travelers; increasing of foreign exchange inflow, job opportunities in the health care sector and related industries. Through these benefits, the paper also elucidates opportunities for destinations to invest in advanced technology, improve economic performance, living standards and health conditions in the short term and long term. The second aim of this research was to discover the potential economic risks related to health tourism that either directly or indirectly harm the process of economic growth. This highlight possible problems associated with health tourism development to maintain and protect the destination's reputation such as evaluating costs of healthcare services in host countries, brain drain

of healthcare professionals and increased health care prices as well as reducing labor productivity. In addition, other problems of increasing international movement of patients are also analyzed such as communicable diseases and environmental degradation, emergence of brokers and organ transplants.

Results

Health tourism has proven to be a real developmental challenge and choice for reaching national, regional and international competitiveness. The results provide crucial economic aspects (significant contribution and risks) of health tourism through analyzing data and information of 64 selected materials from journals, books and websites. Major concerns also focus on benefits and losses from health tourism development in the Asia Pacific Region.

Economic motives of health tourism

Health tourism has developed rapidly in line with capitalizing on the popularity of culture, religion, human resources and the natural beauty destinations in Asia (Widiasih et al., 2021). With economic positive effects, development of health tourism in Asia pacific not only helps international patients save cost but also strongly supports economic growth through generating incomes, investing modern equipment, technology as well as creating more employment opportunities for destinations. The major economic motives are (1) Cost saving for health travelers; (2) Generating foreign exchange earnings and revenues; (3) Business and employment opportunities.

Financial benefits for health travelers

Generally, health tourists are willing to obtain overseas healthcare services due to high quality of care at affordable prices, domestically unavailable, shorter waiting times for treatments (Perkumien et al., 2019) and other ethical as well as religious reasons. Cost, quality and safety seem to be the most critical factors patients consider in choosing specific destinations for healthcare. Despite the long distance, Asia countries such as India, Thailand, Malaysia and Singapore are common destinations for healthcare tourists around the world. Because of global competition, patients can be offered prices in advance with a full healthcare package including the whole procedure and the cost for treating any complications. Most overseas health cares have provided key information with unprecedented price transparency to international customers through their websites which list the prices they charge or provide free quotes on request (Cortez, 2008). The cost savings for tourists seeking health care offshore can be remarkable because fees for treatments in Asia in some cases are even 90 percent lower depending on destination country and type of procedure performed (Table 2).

Table 2 Cost comparison of healthcare procedures in major destinations (US$) (Source: authors' own design based on Medical Tourism, 2021)

Procedures	USA	India	Malaysia	Singapore	S. Korea	Thailand
Heart Bypass	123,000	7,900	12,100	17,200	26,000	15,000
Angioplasty	28,200	5,700	8,000	13,400	17,700	4,200
Heart valve Replacement	170,000	9,500	13,500	16,900	39,900	17,200
Hip Replacement	40,364	7,200	8,000	13,900	21,000	17,000
Spinal Fusion	110,000	10,300	6,000	12,800	16,900	9,500
IVF Treatment	12,400	2,500	6,900	14,900	7,900	4,100

In addition to this, food and lodging during recuperation in Asia countries are likely less expensive than Western destinations. Moreover, excellent medical clinics, hotels, facilities and health services are engaged in development to obtain a bigger share of the market of health tourism of many host countries (Han & Hyun, 2015). Hence, patients benefit from not only developed infrastructure for healthcare but also good communication links between hospitals, insurance and tourism agencies (Yu & Ko, 2012). Some healthcare instructions in Thailand have secured contracts with airlines to reduce ticket rates for foreign patients (Buzinde & Yarnal, 2012) or Taiwan has invested US $318 million in developing medical equipment (Sharma, 2013). Many healthcare institutions approved by JCI, trained physicians, staffs fluent English, 5-star hotels close to hospitals to accommodate patients and their relatives such as in Thailand, Singapore, Turkey (Wong et al., 2014). Some Asia destinations could offer international patients world-class advanced medical infrastructure, standards of cleanliness, namely Singapore, Thailand (Wong et al., 2014). Foreigner patients comprise more than one-third of its patients at Bangkok's Bumrungrad International Hospital-a world-class private health care facility in Thailand.

Generating foreign exchange earnings and revenues for host destinations

In the global context, health tourism is a selective form of tourism which includes a diversity of products and services from wellness aspects to health problems (Blazevic, 2016) for healthy people as well as people with pre-existing diseases. Thus, people become voluntary customers and/or necessity customers of wellness and medical tourism, respectively (Blazevic, 2016) in which many tourists combine a holiday with health care. As a result, there is an increased volume of individuals taking part in transnational economic practices with a focus on healthcare commercialization to expand the international healthcare marketplace (Ormond & Lunt, 2019). These practices following the criteria of 'First-World health care at Third-World prices' (Ormond & Lunt, 2019) enhance understanding of the economic climate, advertising strategies, consumption and production patterns of domestic and overseas health services. It seems to be that health tourism would have positive impacts to the national and also global economy. Since the Asian economic crisis (1990s), many nations have recognized the vital role of economic diversification including in health tourism (Rad et al., 2010). Development of local health tourism industries has become national strategies to attract

foreign investment, enhance advanced technology development and specialized medical services as well as retain professional healthcare workers (Snyder et al., 2013). Therefore, economic benefits are likely the main reason behind health tourism that many countries decide to promote this niche tourism.

There are numerous estimates indicating that health tourists spend more than leisure tourists (Connell, 2011) with three times higher in Singapore Turner (2007) or even 12 times higher in Malaysia (Musa et al., 2012). Nearly half of the expenses are related to healthcare services (cost of medical treatment) and the remaining expenses are related to tourism namely international airfares, accommodation, organized tours, shopping, food, beverage and domestic transportation (Musa et al., 2012; Sarantopoulos & Demetris, 2015). Moreover, health tourists are typically accompanied by at least one person, and they tend to stay longer than leisure tourists (Sarantopoulos & Demetris, 2015). International patients often use high-end beds, pay higher prices for the same treatment and provide more profit for healthcare facilities.

Although the growth rate and revenue of health tourism are optimistic (Connell, 2013), there has been a lack of accurate estimates of the size and contribution of health tourism to the economy in Asia countries due to privacy and data protection legislation. According to the "Patients Beyond Borders Portal", Asia's revenues generated US$3.4 billion in 2007 with an annual growth rate of more than 20% (Lajevardi, 2016). India has a potential to attract millions health tourists per annum which contribute for the expansion of Indian economy with the market is expected to record a Compound Annual Growth Rate (CAGR) of 17 percent, healthcare revenue is set to US$280 billion by 2020 contributing 8.5% GDP (Gupta et al., 2015; Revathi & Jansi Rani, 2019). Thailand's health tourism industry has become one of the largest markets which earned approximately US$4.5 billion from 2.5 million international tourists by 2012, up to US$6 billion in revenue by 2017 (Nooseisai et al., 2016). Health tourism revenue accounted for 0.16% of Thailand's gross domestic product (GDP) in 2013 (Beladi et al., 2019). This industry is considered as one of the leading revenue generating niches of the tourism industry in many Asia nations which encourages countries to maximize health resources in terms of labor, technology and capital (Epundu et al., 2017). In 2017, world travelers made 830 million international and domestic wellness trips with an average spent US$1,528 per trip, 53 percent more than the typical international tourist (Global wellness institute, 2021). Wellness tourism grew by 6.5 percent annually from 2015–2017, more than twice as fast as tourism overall (Global wellness institute, 2021, Table 3). Foreign income from health tourism could be invested in equipment and facilities or subsidize health care for the local residents or other social service and accredited medical service offers (Uygun & Ekiz, 2016) leading to huge cost savings for the local economy. Thus, health tourism development can promote host countries' economic growth through generating foreign exchange, increasing GDP and upgrading their medical schools, facilities, technology and overall health care infrastructure.

Table 3 Wellness tourism expenditures by region 2015 and 2017 (Source: authors' own design based on Global Wellness Institute, 2021)

Region	Expenditures (US$ billions)	
	2015	2017
North America	215.7	241.7
Europe	193.4	210.8
Asia-Pacific	111.2	136.7
Latin America-Caribbean	30.4	34.8
Middle East-Africa	12.5	15.5
Total Wellness Tourism Industry	563.2	639.5

Business and employment opportunities

Healthcare tourism can be seen as positive motives for host countries in Asia through guaranteeing business and employment opportunities for both the healthcare sector and related segments (accommodation, food and beverage, transportation, entertainment combined with landscape, attractions, know-how, human resources, marketing, etc) (Ile & Tigu, 2017). Like general tourism- "human interaction industry", health tourism is a labor-intensive form of tourism requiring a wide range of skills across tourism, hospitality, health, healing, fitness, sport and spirituality (Ordabayeva & Yessimzhanova, 2016). This is the sector where state-of-the-art technology cannot reduce the number of jobs. At the same time, such tourism, especially in no-industrial regions, can provide the local population with a possibility to earn a certain income (Ordabayeva & Yessimzhanova, 2016). Moreover, promotion of health tourism as a competitive economy makes efficient use of resources. Increasing flows of foreign capital into local economies as a result of expanding health tourism will in turn generate a variety of associated services and jobs. The development of health tourism can attract educated and skilled labor to the potential destinations (Pagan and Horsfall, 2020). Health tourism not only provides work for thousands of plastic surgeons and dentists but also many working in the associated wellness hotels (Mainil et al., 2017). Income and labor forces of health tourism, in turn, can be used to service health care infrastructure for host countries.

The health care sector in Asia has witnessed an enormous growth in infrastructure in the public and private sector. For instance, 75% of healthcare services in India are provided by the private sector. India' healthcare industry can annually create 60 million new jobs (Swain & Sahu, 2008). An unprecedented number of nations are restructuring their health care systems with increasing both public and private sector investment for health care, insurance and telecommunications. Privatization is attracting foreign direct investment (FDI) to modernize health care infrastructure; tourist inflows with correspondent revenue can create additional resources for investment in health care (AbuKhalifeh & Martinez Faller, 2015). India, Indonesia, Nepal, Maldives, Sri Lanka and Thailand have opened their health care markets to foreign investors establishing hospitals, clinics, diagnostic and treatment centers, nursing homes. These investments also have a considerable impact on local

health care infrastructure and attraction of foreign patients by creating international healthcare chains. Parkway Group and the Raffles Medical Group (Singapore) have established joint ventures with local health care providers in Malaysia, India, Sri Lanka and form over fifty joint ventures throughout Asia (Cortez, 2008). Development of the health tourism industry with it has a number of potential benefits that work to address some existing health system problems related to infrastructure development and retention of health human resources thus benefiting local patients. Another direct benefit resulting from the new infrastructure necessary for attracting medical tourists is the creation of long-term, high skilled jobs necessary for a strong tertiary health care system (Johnston et al., 2010). To maintain the quality of care at par with international standards, hospitals and healthcare setups started looking for quality accreditation/certification as mandatory requirements. For example, the Indian government has also made efforts in the direction of modernizing and expanding airports; strengthening healthcare in the country (Gupta et al., 2015).

Many Asia countries such as India, Malaysia, Singapore and Thailand have responded to these opportunities to expand healthcare services for international visitors (Lajevardi, 2016) with heavy investments in healthcare facilities and services to attract patients from around the world. Health tourism not only spurs growth of the local healthcare industry, but also boosts retail trade, hotels, transportation and infrastructure industries simultaneously (brokers, health care providers, insurance provision, website providers and conference and media services) (Hopkins et al., 2010). A variety of support services also are introduced such as visa applications, airport services, appropriate transfer of health tourists, entertainment and recreation and safety provisions of destinations (Ulaş & Anadol, 2016). For example, medical tourism created approximately 19,587 jobs in Malaysia in 2007, including 14,839 jobs in the related sector (Sarantopoulos & Demetris, 2015). Private health care providers involved in health tourism tend to offer more lucrative remuneration, better working conditions and more promising career prospects to health professionals (Lautier, 2014) that may prevent the international out-migration of domestic health workers and increase the quality of care in the domestic health system. The Apollo Group alone states that there are more than 138 Indian healthcare workers that have returned from overseas due to the emergence of world-class facilities (Cortez, 2008).

In order to attract foreign direct investment in health facilities, some countries have introduced tax incentives for hospital construction and medical equipment purchases and tax exemptions on revenue earned from foreign patients (Beladi et al., 2019). Increased number of tourists would result in an increase in demand for catering, communication, recreation and other tourist services that serve benefits for the whole country (Pourkhaghan et al., 2013). In Southeast Asia, healthcare tourism is emerging as a lucrative business opportunity with rapid expansion of the private sector (Pocook & Phua, 2011). Some governments introduce tax breaks and preferential access to land for private sector growth as seen in Malaysia, where tax incentives are available for building hospitals, using medical equipment, staff training and service promotion (Pocook & Phua, 2011). Regional players also accelerate direct investing in neighboring countries like Singapore's Holdings (one of the largest hospital operators in Asia) and the Raffles medical group acquiring hospitals in Singapore, Malaysia,

Brunei, India and China (AbuKhalifeh & Martinez Faller, 2015). Since 1985, in Singapore, the corporatization of hospitals has granted hospitals greater autonomy and exposure to the market (AbuKhalifeh & Martinez Faller, 2015). The rapid growth of healthcare tourism also enhances the development of the pharmaceutical market and medical devices in Asia (Cortez, 2008). As health care spending continues to rise, more insurers stretch well beyond to consider using off-shore providers (Cortez, 2008). For instance, the Blue Cross Blue Shield and the British insurer Bupa helps its members obtain emergency and non-emergency care overseas through its BlueCard Worldwide program for treatment in India, Thailand (Cortez, 2008).

Economic problems arising from health tourism development

Governments in many nations have made efforts to gain macroeconomic advantages while at micro level, healthcare providers are in competition for more foreign income from healthcare tourism (Pourkhaghan et al., 2013). Despite the positive impacts of healthcare tourism on host countries such as foreign currency earnings, investments on infrastructure, tax revenue and employment opportunities; it is likely to be either directly or indirectly harmful to economies. It cannot cause damage by itself; however, negative externalities may come from incompetent management and misuse of science, technology, natural potentials and human resources. These externalities are (1) Increase in healthcare costs and inequality in the health system; (2) Shift patterns of human resources availability; (3) The possibility of contagious disease and environmental degradation; (4) Trade human organs.

Increase in healthcare costs and inequality in health system

High quality and specialized care are typically provided to meet the demand of increasing healthcare services aggravated by foreign patient inflows with middle to high income (Pocook & Phua, 2011). Healthcare facilities offering services tend to have very high nurse-patient ratios to improve quality of care, but it could also be an overuse of nursing resources, thus adding to overall healthcare costs. In some countries, the government set bonuses to the salary policy for healthcare workers based on how much revenue they generated. This is likely a reason of over-prescribe non-routine diagnostics and drugs, resulting in a dramatic rise in high-technology medical investments and novel pharmaceutical products (Alsharif et al., 2010). Total healthcare costs are also affected by construction of new facilities and the adoption of costly technology through the purchase and installation of expensive new medical technology causing healthcare cost inflation (Phua, 2016). Moreover, Chee (2010) suggested that as middle-class fee-paying patients decide to undertake treatment abroad, their domestic health systems lose out financially (AbuKhalifeh & Martinez Faller, 2015). Currently, governments must confront health tourists traveling overseas alone. For example, the Australian government recently issued a travel advisory for medical tourists visiting Thailand, warning patients not to be "lured to discount or uncertified medical establishments where standards can be lacking, resulting in serious and possibly life-threatening complications" (Cortez, 2008). The

integration of information and communication technologies into health tourism business also promotes in the emergence of a third party intermediary "that are not health specialists, but brokers between international patients and hospital networks" (Connell, 2006), act as advisers and help the consumer select, negotiate and access health care abroad (Sarantopoulos et al., 2014). The existence of middlemen without any experience and knowledge can increase total costs for patients through using accommodation services that commission the middleman (Momeni et al., 2018). In order to obtain more commission, middlemen may also convince patients to have extra and unnecessary services such as procedures, radiology and so on (Momeni et al., 2018). However, the healthcare brokerage industry without codes of conduct and training raises questions about healthcare facility selection for prospective patients (Pocock & Phua, 2011).

Destinations attracting numerous health tourists could witness price increases and the diversion of services away from their low-income citizens (Béland & Zarzeczny, 2018). In some countries in Asia, governments have taken a number of initiatives to encourage the private sector participation in health tourism. As a result, a number of super-speciality and multispeciality corporate hospitals surfaced in urban India amplifying the costs of healthcare services. The National Sample Survey Organisation (NSSO, India) reported that the average expenditure for an episode of hospitalization has almost doubled in both rural and urban areas between 1996 and 2004; the maximum rise recorded in the private sector hospital services in urban areas placing an enormous burden on underprivileged households (Mondal, 2013). The NSSO indicated that the number of untreated ailments due to financial reasons in 1986–87 was reported to be 28% in rural and 20% in urban areas (Mondal, 2013). The middle and low-income households are often unable to recover healthcare expenses resulting in depletion of assets and a permanent fall in income, into poverty (Mondal, 2013). Moreover, specialized care is typically provided in private hospitals served for middle to high income patients. As a result, when local consumers seek specialist, essential surgery (e.g., cardiac, transplantation procedures), they have to pay a specialist in a private hospital as the only option (AbuKhalifeh & Martinez Faller, 2015). In India, it states that "there is a general perception that there have been adverse effects on the public health care system and these benefits have been limited to the affluent urban population." (Cortez, 2008). Cost-escalation puts the sustainability of the social insurance schemes at risk (Selvaraj & Karan, 2009). Thus, a financing implication of healthcare development is that differential pricing for foreign patients could drive up costs of services for local consumers through time.

Health tourists possibly cope with major medical complications upon return to their home countries or require some form of post-operative care. For instance, an Australian study suggested that treating an acutely infected total joint arthroplasty that had been performed abroad resulted in costs that were nine times what would have been spent had the patient received the procedure in a domestic hospital (Johnston et al., 2010). In Thailand, the average charges for these procedures increased substantially during 2006–2008, by 10–25% per year in most hospitals in this study (NaRanong & NaRanong, 2011). At the same time, domestic insurers as well as cross-border

insurers have confronted some problems such as fraud, abuse and moral hazard (overconsumption of health care because they are insured) (Cortez, 2008). Thus, growth in health tourism in Asia is predicted to increase the costs of care, limiting access for the poor; and to worsen the severe shortage of healthcare professionals, especially those in the public system.

Shift patterns of human resources availability

Healthcare tourism also impacts on national and global migration of health workers to host countries that have potential harms on health worker training, health worker distributions, local provision of care and economies in both source and destination countries. These effects have been commonly documented in healthcare tourism destinations in Thailand, Malaysia and India. In Thailand, major healthcare facilities are situated in urban areas to serve international patients and hence affect the geographical distribution of healthcare professionals or more doctors who specialize in plastic surgery as a result of demand from international customers. Moreover, health tourism also may create pressures on public health systems in destination countries by encouraging health workers to work for the private sector with better working conditions such as India and Thailand causing existing shortages among specialists in the public sector.

Likewise, recent works also suggest that health tourism dampens the external brain-drain of skilled and scarce healthcare workers but worsens internal brain-drain (Phua et al., 2016). Consequently, health systems in some countries have to cope with challenges in guaranteeing basic health services for their own population. For example, in Thailand, major healthcare facilities are situated in urban areas to serve international patients and hence affect the geographical distribution of healthcare professionals or more doctors who specialize in plastic surgery as a result of demand from international customers. At the same time, dual practice allows public sector doctors to also work for the private sector to earn more by treating fee-for-service patients. Obviously, this preferential treatment of foreign patients is disadvantageous to the local population who largely depend on the public sector services (Phua et al., 2016). Specialist healthcare workers shortage persists to varying degrees in Southeast Asia as demand for health services from foreign patients increases (Pocook & Phua, 2011). As a result, this undermines health equity within countries with fewer health workers being trained according to the needs of the local population and public system. As a way to counteract harms, policy makers should pay attention to global justice and health equity (includes the fairness of processes and non-discrimination in the delivery of healthcare) for relevant to local health system needs. Also, the allocation of medical resources for international patients may evaluate treatment costs for the local population (Ile & Tigu, 2017). Potential impact of health tourism on health systems, especially equity of access for local and foreign patients, is growing concerns how to improve the capacity of poor people in destination countries to access health services. The rise of health tourism in Asia and governments' endorsement of the trend has raised concerns about its potential impact on health systems, particularly the exacerbation of existing inequitable resource distribution between the public and private sectors. It needs to have policy

mechanisms that mitigate the risks associated with health tourism while harnessing the potential benefits for the local population (AbuKhalifeh & Martinez Faller, 2015).

The possibility of contagious disease and environmental degradation

Health tourism is also burdened with the risk of nosocomial infection, infection-related deaths and hence overseas healthcare treatments are not without risk of disease infections. The appearance of various drug resistant pathogenic bacteria due to improper prescribing and consumption of antibiotics in some Asia countries that infect foreign medical tourists through the nosocomial route and that may add to total healthcare costs. Similarly, it is also considered as an important channel of unknown disease transmissions for the local population. Rising morbidity rate could reduce labor productivity and related outputs due to sick workers being less productive. Average growth rate of real GDP tends to be low (reduced by approximately 1.2–1.5%) whenever epidemic is high (i.e. AIDS) (Cuddington & Hancock, 1994). A study by NaRanong & NaRanong (2011) in Thailand indicated that the dominance of international health tourists may cause an increase of healthcare fees across the country. Another critical concern is the risk of surgical complications resulting from travel and vacation activities extending stay contributes to the expense. Some complications and the costs associated have been reported that commercial organ transplants in China, India and Pakistan increase morbidity and mortality rates (Kennedy et al., 2005). Consequently, that harms local patients through increasing medical fees and thus decreasing the opportunity to access quality medical services (Hazarika, 2010). Thus, healthcare tourism cannot be guaranteed benefiting the economy as a whole.

Health tourism activities carry out in the surrounding environment; hence it also has impacts on environmental resources such as mineral and thermal water, therapeutically caves, gas and mud, microclimate, sand, forests, rivers and lakes, etc (Ile & Tigu, 2017). Obviously, health tourism seems to be the culprit for a number of environmental problems that pose health hazards to the local population. However, there is limited research evidence supporting numerous anecdotal accounts of environmental problems caused by health tourism.

Trade of human organs

There are rising concerns about certain categories of health tourism such as organ transplant tourism. Organ transplantation services also develop and practice worldwide leading the development of the organ trade. Namely, the scarcity of donated organs affects a broad range of Canadians in need of a transplant and the option to obtain an organ from abroad is often determined by one's ability to purchase such health services from the black-market (Turner, 2007). India is a commonly known organ exporting country with the underground organ market still existing and resurging (Shimazono, 2007). Approximately 1300 renal transplants were performed in 2005 on foreigners In Pakistan or 110 cases on foreigners in the Philippines in 2003 (Shimazono, 2007). Although commercial trade in human organs is prohibited, it has been estimated at US$840 million and $1.7 billion globally each year (Table 4).

Table 4 Estimation of rates of Illegal commercial transplantation and prices on global (Source: authors' own design based on May, 2017:104)

Organ	Number of illegal transplants (per year)	Price (US$)
Kidney	7,995	50,000-120,000
Liver	2,616	99,000-145,000
Heart	654	130,000-290,000
Lung	469	150,000-290,000
Pancreas	469	110,000-140,000

Conclusions

Undeniably, health tourism can enhance economic growth, employment opportunities and incomes for Asia countries. It benefits healthcare facilities, healthcare workers, local people and the whole economy. Hence, it makes remarkable economic and social values for the development of the whole tourism sector and the surrounding business through well regulating healthcare services as well as financial protection. Many countries widely recognize that sustainable development of health tourism is critically important to stimulate economic growth. Despite positive impacts, it may also bring numerous disadvantages that are either directly or indirectly harmful to the sustainability of economy, social and environment. Ideally, countries would cooperate to regulate providers and intermediaries as well as standardize professional credentials, hospital accreditation, insurance practices, outcomes reporting and other aspects of the medical tourism trade. Mover, future research should continue paying attention to statistical, strategies and economic impact measurements of health tourism for the augmentation of tourism destination awareness. Sustainable development of health tourism is important to meet the needs of present tourists' demand and host countries, meanwhile, to protect and enhance opportunities for the future toward less pollution, saving energy and protection of natural resources, biodiversity. It will strongly encourage and support healthcare facility development in both private and public institutions and for professional growth of healthcare workers which in turn satisfy physical, social, spiritual demand of tourists through high quality of healthcare services.

While the paper elucidates the positive and negative economic impacts of health tourism development in Asia in a global context, it also presents limitations which need to be considered for further research. The number of papers selected is quite small to illustrate the general trend of health tourism in Asia for a long period, as a result the contribution of papers and journals to this area has not been shown. This limitation restricted analysis data about possible benefits and harms of health tourism development in a local context. Thus, an effort should be made in future work to collect a larger number of articles, and wider time to analyze comprehensive contributions of publications on economic aspects of health tourism in Asia. Current research also provides poor information about health travelers' characteristics such as geographically, behavior of local as well as international patients. Such a specific database should be collected to gain more insights about the development

and attraction of health tourism in Asia as well as forecast trends, opportunities and risks on local and global scale. This will be beneficial for policy makers, destinations as well as local and international health travelers.

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