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Digital consumer behavior in tourism: A cross-national analysis in Asian countries

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Abstract

The development of information and communication technologies has transformed communications and consumer activity on the Internet. This article discusses the degree of Internet penetration in Asian countries, as well as the similarities and differences in the behavior of Internet consumers in tourism in these countries, and whether country's cultural resources influence online travel sales.

Our results point to different behaviors and trends in online travel across Asia. Although, we quantitatively show the weak correlation between the spread of the Internet and the use of ICT in tourism, but nevertheless, online travel-related purchases vary depending on the economic development, cultural resources of the country and the tendency of residents to travel.

Keywords: Internet, ICT, e-tourism, consumer behavior, digital tourism.

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Analytics”, “Financial Modeling in Excel”, “Business Forecasting”. “Mathematics for Economists”, “Probability Theory and Mathematical Statistics”.

1. INTRODUCTION

Asian countries are becoming increasingly attractive to tourists who are drawn by their cultural and natural features. The Travel and Tourism Competitiveness Index in 2017 compared to 2015 showed the highest growth (+ 2.5%) in the countries of the Asia-Pacific region, compared to the rest of the world (Crotti and Misrahi, 2017a). Among them such countries as Japan (4th place), Korea (19th place), India (40th place), Vietnam (67th place) are noted.

The active use of SM and the exchange of views, experience and knowledge on these platforms are growing worldwide. According to Criteo (2016), orders for mobile travel services as a share of the total number of online orders worldwide increased by 230% in 2015-2016.

According to Bremner and Nelson (2013a), the Asian Cruise Association has identified 80 more cities as potential Asian cruise stops, including destinations in China, Malaysia, South Korea, and Vietnam.

1.1 Digital Tourism Development in Central Asia

Statistics on online travel sales to residents for Central Asian countries is not available, therefore, we did not consider these countries for analysis, but only provided a general description.

According to the Travel and Tourism Sector Competitiveness Index for 2017 (the Index is calculated every two years), out of 136 countries of the world, Kazakhstan takes the 81st place, Tajikistan the 107th place, and the Kyrgyz Republic the 115th place. According to the country's readiness for Information and Communication Technology (ICT) Kazakhstan takes the 52nd place, the Kyrgyz Republic the 103rd place, Tajikistan the 129th place (World Economic Forum-WEF, 2017). It can be noted that Kazakhstan is a leading country in Central Asia in terms of Internet penetration and the use of ICT in tourism.

In terms of Internet penetration, Kazakhstan ranks first in this region, 70% of the population are connected to the Internet (Euromonitor International, 2018). The online travel market in Kazakhstan is no more than 8-10% of total sales. (*How is online tourism developing in Kazakhstan?* 2018). This is the highest rate among the rest of the Central Asian countries. There are already a lot of services for booking travel in the Kazakhstani market: Tickets.kz, Chocotravel.com, Aviata.kz, Aviabilet.kz, Bestar.kz.

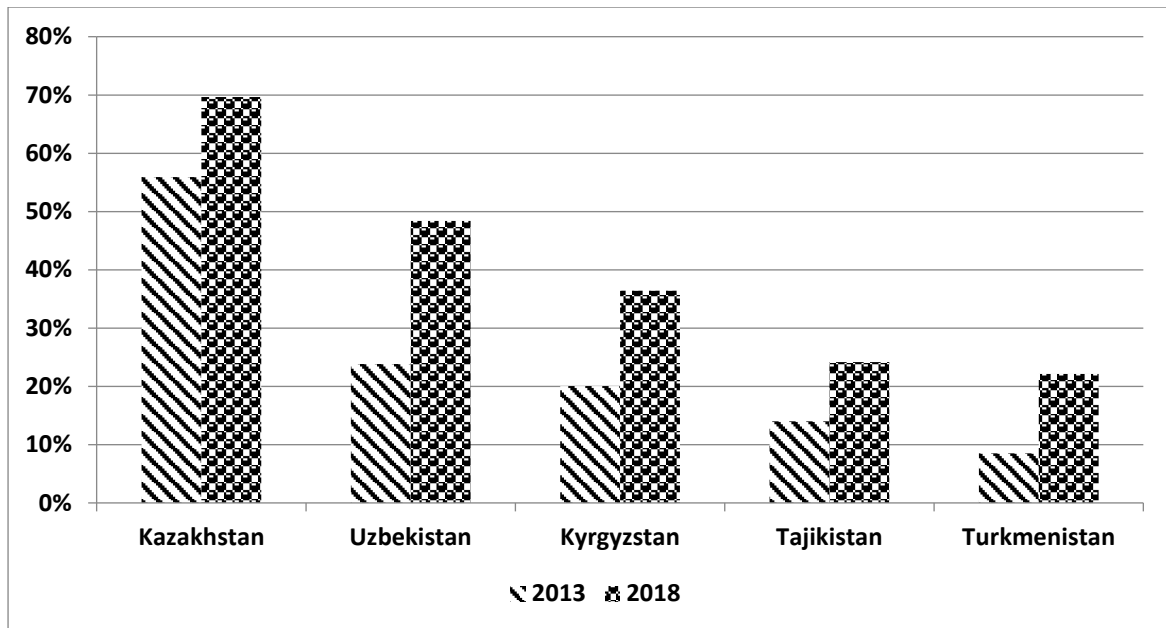


Figure 1: Percentage of individuals using the internet 2013, 2018

Source: Own processing based on data of Euromonitor (2013, 2018)

In Turkmenistan, low rates in the field of online travel can be explained by the very low level (24%) of the Internet penetration in the country. Turkmenistan is an autonomous and secretive country. A visa for Turkmenistan is one of the most expensive in the world, and the local government strictly restricts movement within the country, which is the reason for the underdevelopment of tourism in this country (Euromonitor International, 2015c).

In 2018, Uzbekistan practically did not develop in the field of online travel sales. The country is still adapting to the idea that the Internet can be a source of purchases of goods and services, and not just a source of information (Euromonitor International, 2018f).

According to Travel.ru, in 2014 Bishkek (Kyrgyzstan) was among the top 10 most popular cities in the CIS (Countries of Independent States, post-soviet countries) for summer travel (Euromonitor International, 2015a). But in terms of the Internet usage, it lags behind Kazakhstan and Uzbekistan, where it amounted to about 48%.

In Tajikistan, online sales are only observed in airlines and hotels. However, their respective shares in total online sales amounted to 1% in 2014 (Euromonitor International, 2015b).

1.2 Digital tourism in the Asia-Pacific region countries

This study analyzes statistics for the following countries in the Asia-Pacific region: Japan, Hong Kong, Singapore, China, South Korea, Malaysia, Taiwan, Thailand, India, Vietnam, Indonesia, and the Philippines. In these countries, online travel is showing significant growth. Booking accommodation, air and train tickets through online channels are becoming increasingly popular, and booking via mobile phone is currently a common option. It can be expected that in the coming years this trend will be further strengthened due to an increase in OTA (online travel agencies) sales and direct online sales from the supplier (Tatsunori, 2018).

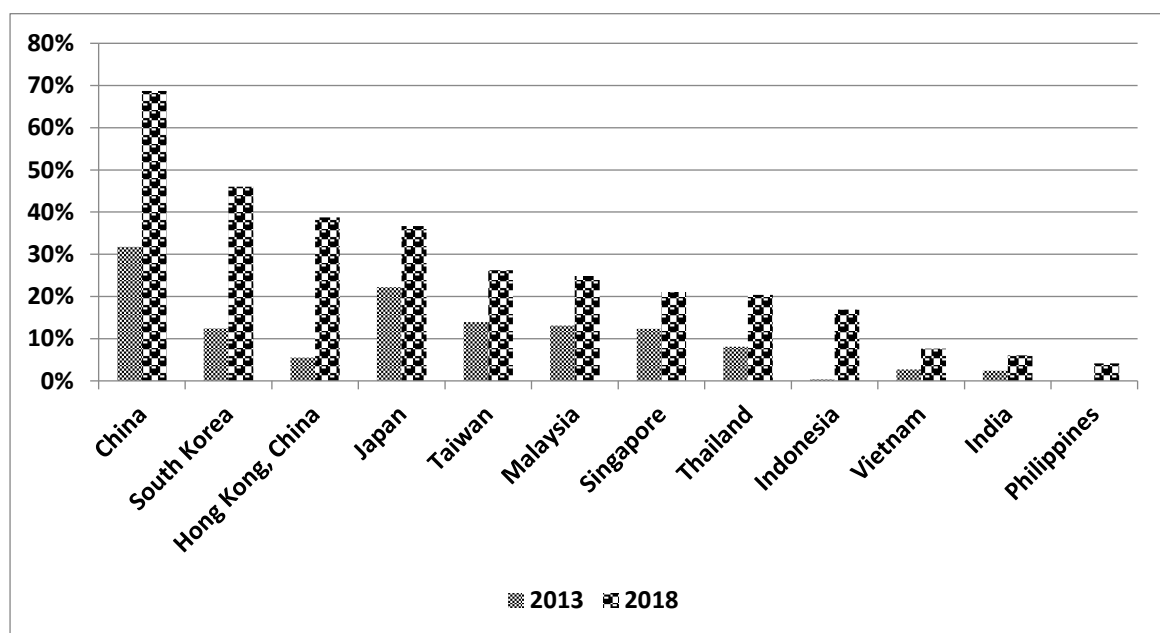


Figure 2: Percentage of Mobile Travel Sales to Residents 2013, 2018

Source: Own processing based on data of Euromonitor (2013, 2018)

India. The advent of low-cost air carriers has also contributed to an increase in the number of tourists. Proximity and lower prices help young Indian users choose destinations in Southeast Asia such as Thailand, Vietnam, Cambodia and Bhutan. Expedia India is actively promoting online travel companies through social networks. MakeMyTrip has over 1 million downloads of its mobile travel app. 70% of all 4- and 5-star hotels in first-tier cities in India have established their presence on social networks (Bremner and Nelson, 2013).

Online travel sales to residents skyrocketed in retail terms at current prices in 2017. Growth in 2017 was driven by the urban population. These consumers view travel as a lifestyle choice, and not just as an annual family holiday. Railway orders via PayTM have become common in the country, as even consumers in second and third tier cities have begun switching to the online channel (Euromonitor International, 2017d).

Japan. For Japan, a significant increase in inbound tourism was one of the key growth factors in the tourism industry; most tourists come from countries in the Asia-Pacific region. Outbound tourism in Japan is stagnating. According to a Travelport survey, only 29.4% of Japanese people surveyed said they were planning a trip abroad in the next couple of months, unlike domestic travel, where this figure was 73%. The survey results showed that one of the main reasons for this was the high price – 68% of respondents (Tatsunori, 2018). Low birth rates and aging society have a negative impact on the tourism industry. Online sales growth is slowing. This will be held back by the aging population as older consumers are still reluctant to buy travels online (Euromonitor International, 2017f).

China. The growth of disposable income, the improvement of transport infrastructure and the spread of the Internet technologies led to the rapid development of the tourism industry in China in 2018. Despite a steady increase in inbound and outbound tourism, domestic tourism also showed a significant improvement in sales, reflecting an increased desire to travel among Chinese residents. Online travel sales to residents recorded a steady growth in their current value by 19% in 2017, mainly due to transportation costs and housing. With the growing number of elderly people in China, the demand for cruise travel and medical tourism is developing (Euromonitor International, 2017b).

Hong Kong, China. Online sales to residents recorded a current value increase by 22% in 2017. Traditionally, Hong Kong was an offline market, relying on long-established travel agencies selling organized trips and vacation packages offline. The proliferation of online travel agencies has changed this situation because they offer more flexible and independent vacation packages that suit any budget. Hong Kong consumers usually start a Google search. They would like to see what is being offered before making the transition to a particular website. (Euromonitor International, 2017c).

Taiwan has changed its brand strategy for overseas markets. Currently, the country is eagerly promoting new types of destinations and experiences, such as rural landscapes. "Tourism 2020 – Taiwanese Sustainable Tourism Development Program" is promoting smart tourism, with numerous digital and mobile initiatives (Euromonitor International, 2017a). It is expected that online travel sales to residents will continue to grow at a steady pace, but slower than in the early years of the survey (Euromonitor International, 2017).

Vietnam. Inbound tourism flows to Vietnam continued to grow at double-digit growth rates in 2018. Online sales of all tourism products continued to mount up strongly in 2018, including air travel, hotels and resellers. Vietnam's average disposable income also continued to increase. At the same time, the number of rich people also rocketed dramatically (Euromonitor International, 2018g). Sales of online tours to residents in 2017 increased significantly due to the growth of Internet penetration and a deeper understanding of the possibilities of online payments. In addition, players also focused on building better websites to attract more customers on the Internet. During the forecast period, online sales of tourism services are expected to grow more slowly compared to the review period as the market is slowly reaching maturity (Euromonitor International, 2017m).

Philippines. As one of the fastest growing countries in Asia, the Philippines' economy showed strong and stable growth in 2017. The travel and tourism industry accounted for 21% of GDP. Among hotels, the average price segment is seen as a key factor. Among airlines, AirAsia and Cebu Air are still the first choice among budget travelers. The number of eco-tourists, both inbound and outbound, is expected to increase as travelers have become more informed about tourism and its impact on the environment and society (Euromonitor International, 2018e). Although the issue of trust in online transactions has existed for a long time, it is expected to disappear, which will lead to the resumption of online transactions (Euromonitor International, 2017).

Thailand. Thailand has great potential in the tourism industry due to its abundance of natural resources, unique culture and hospitality, but it is still lagging behind the other markets when it comes to travel technologies such as electronic payments and other relevant mobile applications (Euromonitor International, 2018d). Online travel sales to residents recorded a double-digit rise in their value in 2017 due to tourism growth, which led to an increase in demand for direct airline ticket sales and online sales of travel agencies to residents (Euromonitor International, 2017k).

South Korea. A significant increase in trips abroad and within the country led to considerable positive results on travelling to South Korea in 2018, as leisure trips remained an important trend and consumers sought to spend time with family and friends. In addition, number of arrivals has slowly recovered after a sharp decline in the number of Chinese travelers in 2017, as political tension between neighboring China and North Korea has eased (Euromonitor International, 2018c). Direct online sales by airlines to residents were the winners in terms of growth in actual cost. While direct online sales of other modes of transport to residents showed the lowest growth rates in this category. As other transport, housing and car rental operators are small or family-owned companies, they do not have sufficient resources to adapt online platforms as fast as the large companies do (Euromonitor International, 2017i).

Indonesia. While Indonesia's economy was gradually gaining momentum in 2018, successive terrorist attacks in the first half of 2018 had a negative impact on the country's tourism industry. Chinese tourists make up the fastest growing group of arrivals. In 2017, online travel sales services to residents increased by 10%. This was mainly due to the ongoing consumer shift towards the purchase of tourism products over the Internet and the rapid development of e-commerce platforms in Indonesia, supported by domestic demographic data. First, there is a surge in middle-income population growth. Secondly, it is believed that the Millennials generation makes a more significant contribution to the travel and tourism industry (Euromonitor International, 2017e).

Malaysia. In 2018, Malaysia expanded its marketing activities in such markets as India, Europe and China, with the aim of increasing the number of visitors. As the country is focused on the Visit Malaysia 2020 initiative, within its framework it seeks to attract more than 36 million tourists by developing medical tourism and eco-tourism. Malaysia's tourism industry has been strongly influenced by digitalization (Euromonitor International, 2018a). Online travel sales to residents grew at the same pace in 2017-2016, which further increased offline sales. As the already high mobile phone penetration rate in Malaysia continued to grow, this further encouraged residents to explore online booking options for their trips. (Euromonitor International, 2017g).

Singapore. Singaporean travelers are increasingly exploring and booking, moreover, mobile booking is a key growth factor (Euromonitor International, 2018b). Online travel sales to residents continued to show significant growth, furthermore sales rose by 6%. More and more Singaporeans are choosing to plan their trips, from sourcing to booking, online and autonomously. According to a study by the KAYAK meta-search site, the number of Singaporeans accessing online travel agents (OTA), social networks, and travel inspiration blogs has more than doubled compared to just 10 years ago. The share of Singaporeans booking online tickets has also increased significantly up to 89%; whereas 10 years earlier it was only 36% (Euromonitor International, 2017h).

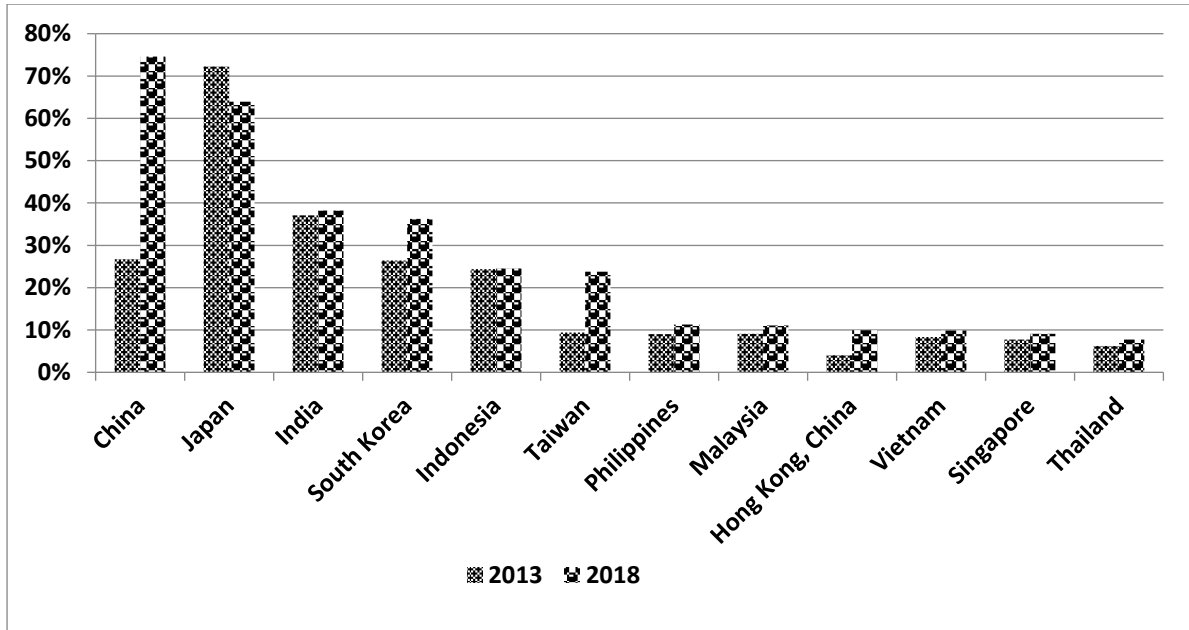


Figure 3: Percentage of individuals using the internet for travel and accommodation services in 2013, 2018

Source: Own processing based on data of Euromonitor (2013, 2018)

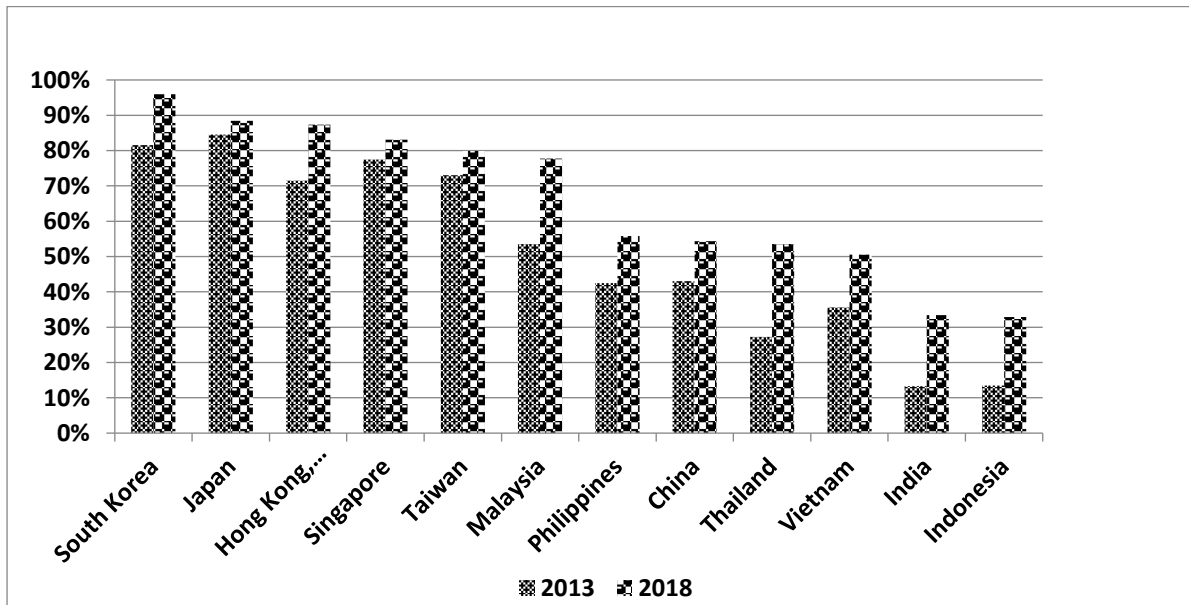


Figure 4: Percentage of individuals using the internet in 2013, 2018

Source: Own processing based on data of Euromonitor (2013, 2018)

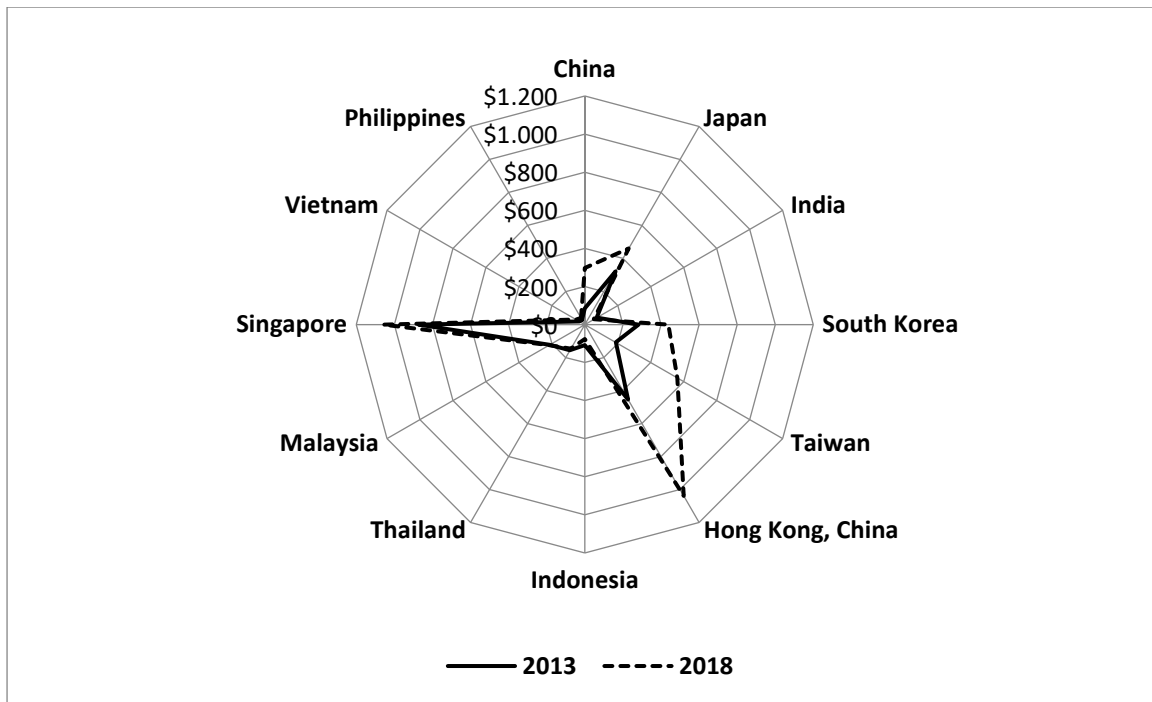


Figure 5: Online Travel Sales to Residents per capita (USD) 2013, 2018

Source: Own processing based on data of Euromonitor (2013, 2018)

The population of Singapore (5 638 676) and Hong Kong (7 451 000) are the smallest in comparison with other countries analyzed (World Bank, 2018). But in these countries, the indicator of online costs per person is the highest compared to other countries analyzed, 1,057 and 1,039 US dollars respectively. Hong Kong is one of the ten countries in the world whose population likes to travel a lot inside the country. On average, one person travels 4 times a year (Sheth, 2019). Due to the small size of Singapore and the limited number of domestic attractions, many Singaporeans have a strong penchant for traveling abroad. This is one of the expenses that Singaporeans spend the most on (Euromonitor International, 2018b). The lowest online sales per person in the Philippines, Vietnam, India, and Indonesia are less than \$ 100. Only in India there is a decrease of this indicator by 17 US dollars compared with 2013. In these countries, respectively, the rate of Internet use is lower than in other countries analyzed.

2. LITERATURE REVIEW AND HYPOTHESES

2.1. Digital tourism

The future of e-tourism will focus on consumer-oriented technologies in order to serve new sophisticated and experienced consumers (Buhalis and O'connor, 2005). Benckendorff et al. (2014) suggest that the use of IT in tourism is due to the intangible nature of its products, as well as the informational nature of the industry. The Internet is one of the most influential technologies that have revolutionized operational and strategic practice in travel and tourism (Buhalis and Law, 2008; Xiang et al. 2015). Digital technology has a significant impact on the tourism industry (Benckendorff et al., 2014; Law et al., 2014). Web sites, social media (SM), and smartphones have had a major impact (Leung et al., 2013; Sigala et al., 2012). One of the factors that influence the decision to buy online is how the purchase process, payment mode, order, delivery, service, and consumer relationships are regulated (Kardes et al., 2011). Internet consumers who use web sites to collect information and purchases can be divided into five categories of online users, which differ in their behavior and methods of using web pages: direct searches for information, indirect searches for information, buyers, casual shoppers and leisure seekers (Chaffey, 2010, p. 492-493; Laudon and Traver, 2009).

2.2. Relationship of cultural aspects with the development of tourism.

Tourism culture is best seen as a link between the cultural attractions of the host country and the cultural needs of the guest. The host's culture is indigenous to the area: its specific arts and crafts, traditional roles, festivals and ways of doing things (Tsartas, 1992; Simpson, 1993; Tapper, 2001; Smith, 2009). In the case of small islands, they are often unusually rich and distinctive cultures due to their relative isolation (Royle, 2003, 2008; Berry, 2009). It is known that small islands are far from homogeneous, and even the closest neighbors often have completely different economic, social, cultural and natural landscapes (Milne, 1992). Local facilities, infrastructure, natural and cultural landscapes, and even a sense of local identity develop along with tourism (Cooper, 1995; Hampton and Christensen, 2007; Canavan, 2013).

Hypothesis 1. We assume that the level of Internet penetration in countries does not correlate with the level of ICT use in the tourism sector.

Hypothesis 2. We assume that the level of ICT use in the tourism sector can be closely linked with the country's cultural resources.

3. METHODOLOGY AND DATA

The research methodology has been slightly adapted from a previous study (Navio-Marco et al., 2017).

The purpose of the study is to determine the relationship between the two indicators:

- 1) Internet penetration rate and online shopping of travel services.
- 2) the country's cultural resources and online shopping of travel services.

The availability of data allowed us to conduct analysis in twelve countries of the Asia-Pacific region (Japan, Hong Kong, Singapore, China, South Korea, Malaysia, Taiwan, Thailand, India, Vietnam, Indonesia, and the Philippines).

Data were obtained from International Euromonitor Passport, a database of 781 cities and 210 countries. International Euromonitor Passport works closely with organizations such as the United Nations World Tourism Organization (UNWTO), World Travel Market (WTM) and World Travel and Tourism Council (WTTC). Data on the populations of Asian countries are taken from a World Bank source.

For illustration, we showed in Figures 4 and 5 the percentage of Internet users for personal purposes and the share of online travel sales to residents in the total Outbound Expenditure and Inbound Receipts in each analyzed country during the study period.

The basis of the calculation method is the concept of the revealed comparative advantage (RCA), proposed by Balassa (1965; 1977). RCA indicates whether a country is specialized in relation to a product exported to the rest of the world. Various authors have used this index in tourism studies, in particular (Wattanukuljarus and Coxhead, 2008; Algieri, Aquino and Succurro, 2016; Navio-Marco et al., 2017). The Data inaccessibility did not allow us to use the traditional IITur index for the studied countries. Therefore, we compiled a modified tourism index to analyze specialization in e-commerce in tourism. Comparing the obtained indicators, we can see a weak correlation between the two MIITur and IITic indices. Conversely, there is a strong correlation between the MIITur and SICr indices (Subindex: Cultural resources and business travel). Cultural resources and business travel are an integral part (sub-index) of the Travel and Tourism Sector Competitiveness Index.

The first MIITur indicator: Modified Index of Internet Tourism, we received from the Online Travel Sales to Residents of each country (Retail Value RSP, million US dollars) in relation to the total Outbound Expenditure and Inbound Receipts in tourism, in million US dollars. It is calculated by the following formula:

$$MIITur = (X_{tc} / X_{tAc}) / (X_{cc} / X_{cAc})$$

X_{tc} – Online Travel Sales to Residents of each country (Retail Value RSP), million USD (Euromonitor Data).

X_{tAc} – Online Travel Sales to Residents in twelve Asian countries (Retail Value RSP), million USD (Euromonitor Data).

X_{cc} – total Outbound Expenditure and Inbound Receipts in tourism to each country, million USD (Euromonitor Data).

X_{cAc} – total Outbound Expenditure and Inbound Receipts in tourism in twelve Asian countries, million USD (Euromonitor Data).

The second indicator IITic: Index of internet usage integration in the twelve Asian countries, is obtained by analyzing the use of the Internet in each country, compared to the use of the Internet in the remaining twelve countries of Asia.

$$IITic = (X_{ip} / X_{iAc})(X_{pp} / X_{pAc})$$

X_{ip} : Internet users of each country (Euromonitor Data).

X_{iAc} : Internet users of twelve Asian countries (Euromonitor Data).

X_{pp} : population of each country in the corresponding year (World Bank-Population).

X_{pAc} : population of twelve Asian countries in the corresponding year (World Bank-Population).

4. EMPIRICAL ANALYSIS AND RESULTS

Testing Hypotheses 1.

Countries (12 Asian countries studied) with higher MIITur and IITic indices are classified as countries with a higher specialization in online tourism and Internet penetration. A value below the average will indicate a degree of specialization lower than the average of twelve Asian countries. The values obtained using the proposed indices for 2013 and 2018 are shown in Table 1.

Table 1: MIITur and IITic (2013-2018)

MIITur			IITic		
Countries	2013	2018	Countries	2013	2018
China	1.18667	1.75844	China	1.360802	1.158219
Japan	3.205286	1.507847	Japan	2.675785	1.882948
India	1.645168	0.901771	India	0.420154	0.710974
South Korea	1.171406	0.855418	South Korea	2.580454	2.043431
Hong Kong, China	0.178417	0.234259	Hong Kong, China	2.262835	1.860114
Indonesia	1.079894	0.577781	Indonesia	0.427459	0.70058
Thailand	0.27486	0.183001	Thailand	0.862478	1.140751
Malaysia	0.403437	0.26075	Malaysia	1.692914	1.656252
Taiwan	0.418025	0.561439	Taiwan	2.309669	1.701392
Singapore	0.341592	0.214737	Singapore	2.452291	1.770073
Vietnam	0.36997	0.232893	Vietnam	1.125827	1.076158
Philippines	0.400687	0.266536	Philippines	1.342929	1.187744

Source: Our research using Euromonitor

In 2013, the MIITur index in China, Japan, India, South Korea, and Indonesia was higher than the average for the study region. This means that in these countries, online travel sales to residents are

higher than in other countries in the region. In 2018, only in Indonesia there was a decrease in this index, perhaps this was due to political events, namely terrorist acts.

The penetration of the Internet in the countries of this region is reflected in the IITic index. As can be seen from Table 1, the index value for Japan, South Korea, Hong Kong, Malaysia, Taiwan and Singapore decreased from 2013 to 2018, but the IITic value remained above the average for the group of countries studied, i.e., relatively high Internet penetration.

To study the relationship between the MIITur and IITic indices in 2013-2018, the corresponding correlation coefficients were calculated. As can be seen from Table 2, the values of the correlation coefficients between the indices show a weak and decreasing dependence: $r_{2013} = 0,138604604$ and $r_{2018} = 0,005864866$.

Table 2: Correlation between MIITur and IITic

	IITic 2013	MIITur 2013		IITic 2018	MIITur 2018
IITic 2013	1		IITic 2018	1	
MIITur 2013	0,1386046	1	MIITur 2018	0,0058649	1

Testing Hypothesis 2. Since there is no strong correlation between Internet penetration and the use of ICT in tourism, the relationship between MIITur and SICr (Subindex Cultural resources) in the study region was further investigated.

SICr includes an assessment of 5 indicators: 1. Number of cultural heritage objects, 2. Oral and intangible cultural heritage, 3. Huge sports stadiums, 4. Number of meetings of International Associations (average for 3 years), 5. Digital demand for cultural recreational tourism (estimated 0-100 points).

This index is calculated once every two years. Given that the index has not been calculated yet for 2018, so further comparative analysis is carried out for 2013 and 2017.

Table 3: Comparison for indicators MIITur and SICr

#	Countries	MIITur 2013	SICr 2013	MIITur 2017	SICr 2017
1	Japan	3.205285723	5.9	1.601783651	6.5
2	Hong Kong, China	0.178416716	3.3	0.214914867	3
3	Singapore	0.341592348	3.6	0.221442671	3.1
4	China	1.186669898	5.5	1.74338976	6.9
5	South Korea	1.171405633	6	0.848968489	4.9
6	Malaysia	0.403436699	3.9	0.265657866	2.9
7	Taiwan	0.418024954	3.6	0.515942177	3.2
8	Thailand	0.274859746	3.6	0.188394275	2.8
9	India	1.645168125	4.7	0.929656416	5.3
10	Vietnam	0.369970456	4.1	0.244241434	3
11	Indonesia	1.079893528	3.5	0.614806973	3.3
12	Philippines	0.400686796	2.1	0.244308554	1.9

Source: Our research using Euromonitor, The Travel and Tourism Competitiveness Report 2017

The analytical dependence between the MIITur and SICr indices in 2013 and 2018 is shown in Figures 6 and 7.

As can be seen from the figures, there is a strong dependence between the studied indices. Moreover, in 2013, the correlation coefficient was 0.711933141, and in 2017 it increased to 0.963125508.

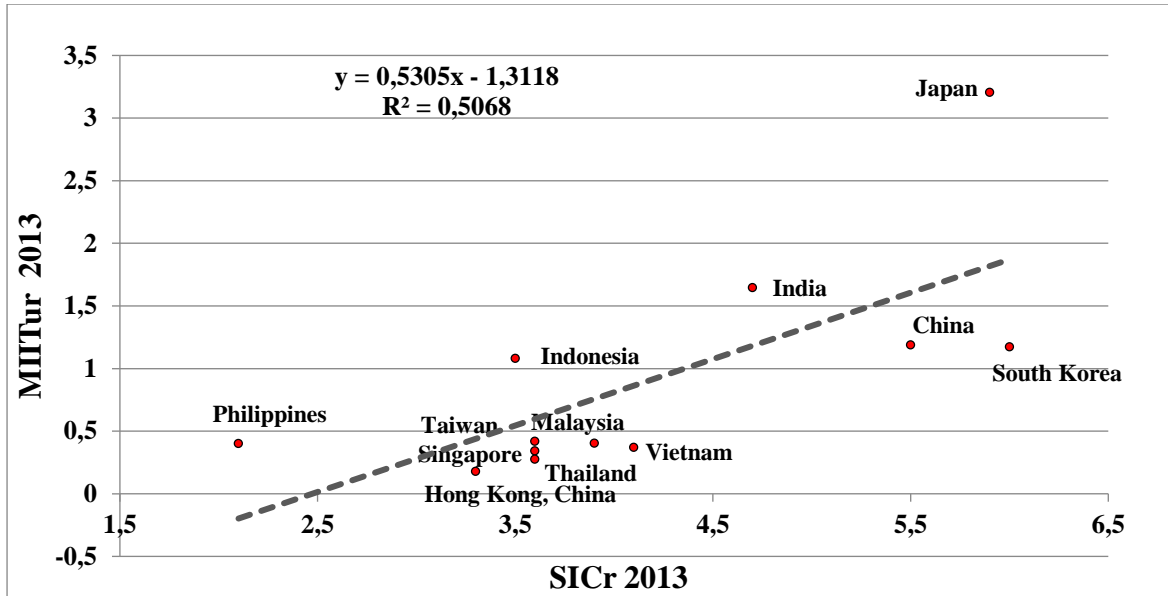


Figure 6: Comparison for indicators MIITur and SICr 2013

Source: Own processing based on data of Euromonitor and Travel & Tourism Competitiveness Index (2013)

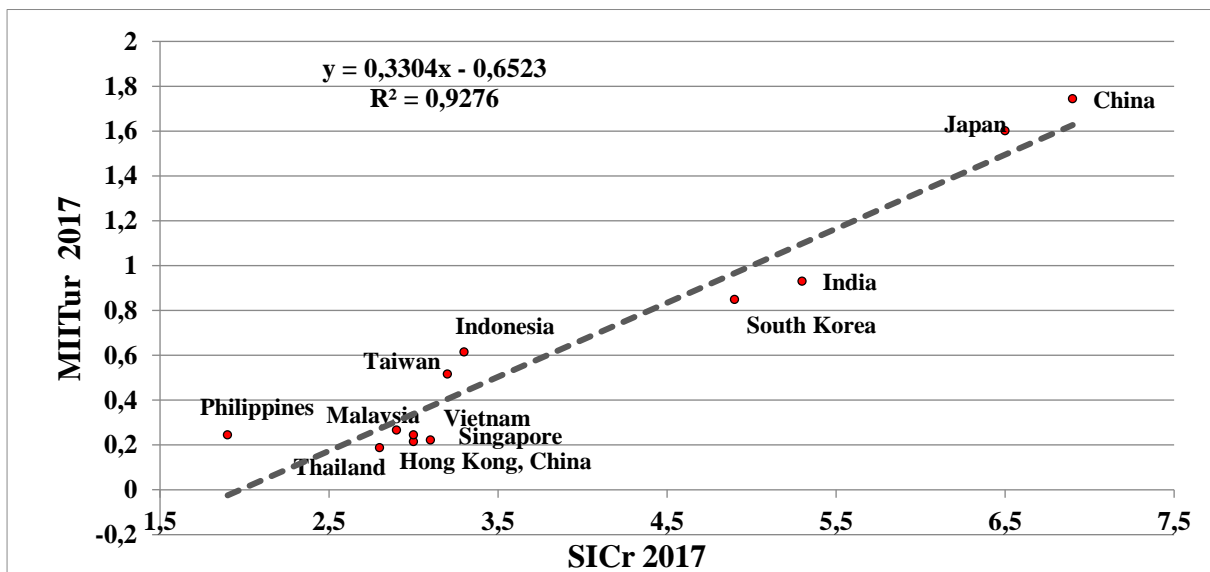


Figure 7: Comparison for indicators MIITur and SICr 2017

Source: Own processing based on data of Euromonitor and Travel & Tourism Competitiveness Index (2017)

Table 4: Correlation between MIITur and SICr

	MIITur 2013	SICr 2013		MIITur 2017	SICr 2017
MIITur 2013	1		MIITur 2017	1	
SICr 2013	0,711933141	1	SICr 2017	0,963125508	1

Table 5: Regression Line Results for 2013 and 2017 years

2013	2017
$y = 0.5305x - 1.3118$	$y = 0.3304x - 0.6523$
$R^2 = 0.5068$	$R^2 = 0.9276$
$r=0.711933$	$r=0.963126$

Table 6: Variance and Standard Deviation Results for 2013 and 2017

MIITur	2013	2017
Variance	0,753540774	0,299915842
Standard Deviation	0,868067264	0,547645726
SICr	2013	2017
Variance	1,357272727	2,549090909
Standard Deviation	1,165020484	1,596587269

Thus, the regression lines of 2013 and 2017 were constructed connecting the MIITur and SICr indices. As can be seen from Table 5, the value of R^2 increases from 0.5068 in 2013 to 0.9276 in 2017. The high value of R^2 in 2017 confirms that the coefficient linking the indices indicates that a change in the SICr index has a strong effect on the MIITur index.

The results obtained for the variance and standard deviation in the indices were as follows: we see that both variance and standard deviation decreased in 2013 compared to 2017, which allows

us to say that countries behaved more uniformly. In our case, the variance and standard deviation of the SICr subindex have increased.

The answer to the question of why SICr is increasing in Japan, China and India, and decreasing in other countries, may be interesting for further research.

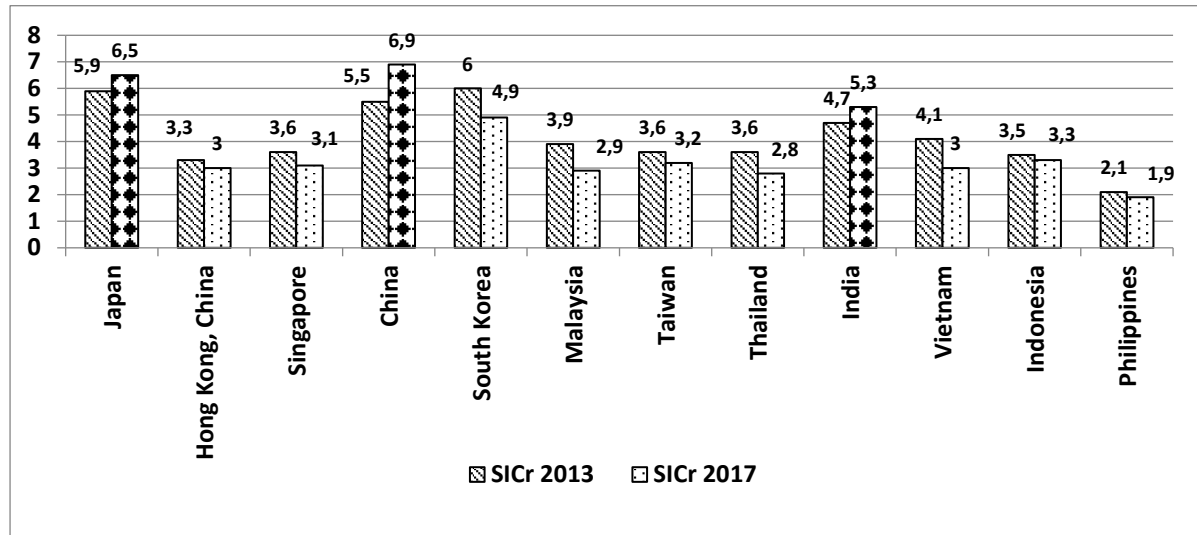


Figure 8: Comparison Index SICr in 2013, 2017

Source: Own processing based on data Travel and Tourism Competitiveness Index (2013, 2017)

5. CONCLUSIONS AND DISCUSSION

By analyzing the online behavior of Asian citizens in the tourism sector and its trends in recent years, we find a clear increase in ICT competencies, which led to the convergence of Asian countries during the 5-year study period (2013-2018). However, this positive trend does not apply to tourism ICT habits. Geographic differences in the use of ICTs decreased, but not in terms of travel and accommodation, where the spread between countries was large, despite the fact that a lot of time passed. Although these results allow us to answer our research questions, we cannot argue that the penetration of the Internet helps the end consumer to purchase travel products on the Internet.

Given the weak correlation between the two MIITur and IITic indices, it became necessary to compare the performance of Asian countries regarding the relationship of their cultural heritage with the use of ICT in tourism. The correlation turned out to be strong, and when we compared 2013 to 2017, in 2013 the correlation was lower than in 2017. We assume that this is due to the improvement and multiplication of the country's cultural heritage over time, which influenced the greater attraction of tourists, including online shopping. This study has limitations, especially because it is due to the use

of aggregated data, which complicates a more detailed analysis of our results. In any case, the real observations described here give us new data on the reality of Asian tourism in the digital age.

In any case, this article contributes to the academic literature on this subject. However, the spread of ICT and the development of cultural resources in tourism can create favorable social and economic conditions for both developed and developing countries.

REFERENCES

- Algieri, B., Aquino, A. and Succurro, M. (2016) 'Drivers of comparative advantages in tourism: The eu-case', *Annals of Tourism Research*. Elsevier Ltd, 61, pp. 247–250. doi: 10.1016/j.annals.2016.09.006.
- Balassa, B. (1965) 'Trade Liberalisation and "Revealed" Comparative Advantage', *The Manchester School*, 33(2), pp. 99–123. doi: 10.1111/j.1467-9957.1965.tb00050.x.
- BALASSA, B. (1977) "'REVEALED" COMPARATIVE ADVANTAGE REVISITED: AN ANALYSIS OF RELATIVE EXPORT SHARES OF THE INDUSTRIAL COUNTRIES, 1953–1971', *The Manchester School*, 45(4), pp. 327–344. doi: 10.1111/j.1467-9957.1977.tb00701.x.
- Benckendorff, P., Sheldon, P. J. and Fesenmaier, D. (2014) *Tourism Information Technology*. CABI Publishing.
- Berry, R. J. (2009) *Islands*. Harper Collins.
- Bremner, C. and Nelson, P. (2013) *WTM Global Trends Report*. London. Available at: www.euromonitor.com/travel-and-tourism.
- Buhalis, D. and Law, R. (2008) 'Progress in information technology and tourism management: 20 years on and 10 years after the Internet-The state of eTourism research', *Tourism Management*, 29(4), pp. 609–623. doi: 10.1016/j.tourman.2008.01.005.
- Buhalis, D. and O'connor, P. (2005) *Information Communication Technology Revolutionizing Tourism*.
- Canavan, B. (2013) 'The extent and role of domestic tourism in a small island: the case of the Isle of Man', *Journal of Travel Research*, 52(3), 340–352.
- Cooper, C. (1995) 'Strategic planning for sustainable tourism: the case of the offshore islands of the UK', *Journal of Sustainable Tourism*, 10(5), 363–383.
- Criteo (2016) *Travel Flash Report: Get ready for a mobile summer*. Available at:

<http://www.criteo.com/media/4290/travel-report-q2-2016-pdf.pdf>.

Euromonitor International (2015a) *Travel in Kyrgyzstan, COUNTRY REPORT [online]*. Available at: <https://www.euromonitor.com/travel-in-kyrgyzstan/report> (Accessed: 1 October 2015).

Euromonitor International (2015b) *Travel in Tajikistan, COUNTRY REPORT [online]*. Available at: <https://www.euromonitor.com/travel-in-tajikistan/report> (Accessed: 1 October 2015).

Euromonitor International (2015c) *Travel in Turkmenistan, COUNTRY REPORT [online]*. Available at: <https://www.euromonitor.com/travel-in-turkmenistan/report> (Accessed: 1 October 2015).

Euromonitor International (2017a) *City Travel Briefing: Taipei, Taiwan, STRATEGY BRIEFING [online]*. Available at: <https://www.euromonitor.com/city-travel-briefing-taipei-taiwan/report> (Accessed: 1 September 2017).

Euromonitor International (2017b) *Online Travel Sales To Residents in China, COUNTRY REPORT [online]*. Available at: <https://www.euromonitor.com/online-travel-sales-to-residents-in-china/report> (Accessed: 1 September 2017).

Euromonitor International (2017c) *Online Travel Sales To Residents in Hong Kong, China, COUNTRY REPORT [online]*. Available at: <https://www.euromonitor.com/online-travel-sales-to-residents-in-hong-kong-china/report> (Accessed: 1 September 2017).

Euromonitor International (2017d) *Online Travel Sales To Residents in India, COUNTRY REPORT [online]*. Available at: <https://www.euromonitor.com/online-travel-sales-to-residents-in-india/report> (Accessed: 1 September 2017).

Euromonitor International (2017e) *Online Travel Sales To Residents in Indonesia, COUNTRY REPORT [online]*. Available at: <https://www.euromonitor.com/online-travel-sales-to-residents-in-indonesia/report> (Accessed: 1 September 2017).

Euromonitor International (2017f) *Online Travel Sales To Residents in Japan, COUNTRY REPORT [online]*. Available at: <https://www.euromonitor.com/online-travel-sales-to-residents-in-japan/report> (Accessed: 1 October 2017).

Euromonitor International (2017g) *Online Travel Sales To Residents in Malaysia, COUNTRY REPORT [online]*. Available at: <https://www.euromonitor.com/online-travel-sales-to-residents-in-malaysia/report> (Accessed: 1 September 2017).

Euromonitor International (2017h) *Online Travel Sales To Residents in Singapore, COUNTRY REPORT [online]*. Available at: <https://www.euromonitor.com/online-travel-sales-to-residents-in-singapore/report>

singapore/report (Accessed: 1 September 2017).

Euromonitor International (2017i) *Online Travel Sales To Residents in South Korea, COUNTRY REPORT [online]*. Available at: <https://www.euromonitor.com/online-travel-sales-to-residents-in-south-korea/report> (Accessed: 1 September 2017).

Euromonitor International (2017j) *Online Travel Sales To Residents in Taiwan, COUNTRY REPORT [online]*. Available at: <https://www.euromonitor.com/online-travel-sales-to-residents-in-taiwan/report> (Accessed: 1 September 2017).

Euromonitor International (2017k) *Online Travel Sales To Residents in Thailand, COUNTRY REPORT [online]*. Available at: <https://www.euromonitor.com/online-travel-sales-to-residents-in-thailand/report> (Accessed: 1 September 2017).

Euromonitor International (2017l) *Online Travel Sales To Residents in the Philippines, COUNTRY REPORT [online]*. Available at: <https://www.euromonitor.com/online-travel-sales-to-residents-in-the-philippines/report> (Accessed: 1 September 2017).

Euromonitor International (2017m) *Online Travel Sales To Residents in Vietnam, COUNTRY REPORT [online]*. Available at: <https://www.euromonitor.com/online-travel-sales-to-residents-in-vietnam/report> (Accessed: 1 September 2017).

Euromonitor International (2018a) *Travel in Malaysia, COUNTRY REPORT [online]*. Available at: <https://www.euromonitor.com/travel-in-malaysia/report> (Accessed: 1 October 2018).

Euromonitor International (2018b) *Travel in Singapore, COUNTRY REPORT [online]*. Available at: <https://www.euromonitor.com/travel-in-singapore/report> (Accessed: 1 September 2018).

Euromonitor International (2018c) *Travel in South Korea, COUNTRY REPORT [online]*. Available at: <https://www.euromonitor.com/travel-in-south-korea/report> (Accessed: 1 September 2018).

Euromonitor International (2018d) *Travel in Thailand, COUNTRY REPORT [online]*. Available at: <https://www.euromonitor.com/travel-in-thailand/report> (Accessed: 1 October 2018).

Euromonitor International (2018e) *Travel in the Philippines, COUNTRY REPORT [online]*. Available at: <https://www.euromonitor.com/travel-in-the-philippines/report> (Accessed: 1 September 2018).

Euromonitor International (2018f) *Travel in Uzbekistan, COUNTRY REPORT [online]*. Available at: <https://www.euromonitor.com/travel-in-uzbekistan/report> (Accessed: 1 October 2018).

Euromonitor International (2018g) *Travel in Vietnam, COUNTRY REPORT [online]*. Available at: <https://www.euromonitor.com/travel-in-vietnam/report> (Accessed: 1 September 2018).

Euromonitor International (2018) *Travel in Kazakhstan, COUNTRY REPORT [online]*. Available at: <https://www.euromonitor.com/travel-in-kazakhstan/report> (Accessed: 1 October 2018).

Hampton, M. and Christensen, J. (2007) 'Competing industries in islands, a new tourism approach', *Annals of Tourism Research*, 34(4), 998–1020.

How is online tourism developing in Kazakhstan? (2018). Available at: <https://24.kz/ru/tv-projects/digital-kz/item/238328-digital-kz-kak-razvivaetsya-onlajn-turizm-v-kazakhstane> (Accessed: 7 May 2018).

Milne, S. (1992) 'Tourism and development in South Pacific microstates', *Annals of Tourism Research*, 19, 191–212.

Navio-Marco, J., Sevilla-Sevilla, C. and Ruiz Gómez, L. M. (2017) *European Union Short-Term Tourism Trends, Volume 1, 2017-4*. World Tourism Organization (UNWTO). doi: 10.18111/9789284419098.

Royle, S. (2003) 'Exploitation and celebration of the heritage of the Irish Islands', *Irish Geography*, 36(1), 23–31.

Royle, S. (2008) 'From marginality to resurgence, the case of the Irish Islands', *Shima: the International Journal of Research into Island Cultures*, 2(2), 42–55.

Sheth, K. (2019) *Countries That Travel The Most, Worldatlas [online]*. Available at: <https://www.worldatlas.com/articles/countries-whose-citizens-travel-the-most.html> (Accessed: 15 March 2019).

Simpson, R. (1993) 'Tourism and tradition: from healing to heritage', *Annals of Tourism Research*, 20, 164–181.

Smith, M. K. (2009) *Issues in Cultural Tourism Studies*. London: Routledge.

Tapper, R. (2001) 'Tourism and socio-economic development: UK tour operators business approaches in the context of the new international agenda', *International Journal of Tourism Research*, 3(5), 351–366.

Tatsunori, K. (2018) *WIT Japan and North Asia 2018 Recap: Tourism crossing the border of Online and Offline, is Japan ready?*, *Euromonitor International [online]*. Available at: <https://blog.euromonitor.com/tourism-online-offline-japan/> (Accessed: 24 July 2018).

Tsartas, P. (1992) 'Socioeconomic impacts of tourism on two Greek isles', *Annals of Tourism Research*, 19, 516–533.

Wattanakuljarus, A. and Coxhead, I. (2008) 'Is tourism-based development good for the poor?. A general equilibrium analysis for Thailand', *Journal of Policy Modeling*, 30(6), pp. 929–955. doi: 10.1016/j.jpolmod.2008.02.006.

World Economic Forum-WEF (2017) *The Travel & Competitiveness Report 2017*. Edited by R. Crotti and T. Misrahi. World Economic Forum Geneva. doi: ISBN-13: 978-1-944835-08-8.

Xiang, Z., Magnini, V. P. and Fesenmaier, D. R. (2015) 'Information technology and consumer behavior in travel and tourism: Insights from travel planning using the internet', *Journal of Retailing and Consumer Services*. Elsevier Ltd, 22, pp. 244–249. doi: 10.1016/j.jretconser.2014.08.005.