INTERNATIONAL TOURISM IN OIC MEMBER COUNTRIES

Empowering Smart and Sustainable Tourism for Development

2024

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Please cite the work as follows: SESRIC (2024). *International Tourism in OIC Countries: Empowering Smart and Sustainable Tourism for Development*. Economic Development Studies. The Statistical, Economic and Social Research and Training Centre for Islamic Countries. Ankara.

Contents

Acronyms

ACES	Access Communications Environment Services
AI	Artificial Intelligence
AR	Augmented Reality
BCE	Before Common Era
CE	Common Era
COVID-19	Coronavirus Disease 2019
CPF	COMCEC Project Finance
DET	Dubai's Department of Economy and Tourism
DMO	Destination Management Organization
DOSM	Department of Statistics Malaysia
DST	Dubai Sustainable Tourism
DTCM	Dubai's Department of Tourism and Commerce Marketing
DTI	Destino Turístico Inteligente
FDI	Foreign Direct Investment
GCC	Gulf Cooperation Council
GCI	Global Cybersecurity Index
GDP	Gross Domestic Product
GIS	Geographic Information System
GMTI	Global Muslim Travel Index
GPM	GMTI Performance Matrix
GSTC	Global Sustainable Tourism Council
HRM	Human Resource Management
IICAS	International Institute for Central Asian Studies
ICT	Information and Communication Technology
ICTM	Islamic Conference of Tourism Ministers
IoT	Internet of Things
ITU	International Telecommunication Union
LAYS	Learning Adjusted Years of Schooling
MCs	Member Countries
ML	Machine Learning
MSME	Micro, Small, and Medium-sized Enterprise
NSO	National Statistical Office
NTP	National Tourism Policy

OIC	Organisation of Islamic Cooperation
OIC-StatCom	OIC Statistical Commission
OTM	Medellín Tourism Observatory
SDGs	Sustainable Development Goals
SEGITTUR	State Mercantile Society for the Management of Innovation and Tourism Technologies
SESRIC	Statistical, Economic and Social Research and Training Centre for Islamic Countries
SME	Small and Medium-sized Enterprise
SMIT	Société Marocaine d'Ingénierie Touristique
SSC	Smart Sustainable Cities
STAN	Singapore Tourism Analytics Network
STD	Smart Tourist Destination
TIH	Tourism Information and Services Hub
TLD	Top-level Domains
TTDI	Travel and Tourism Development Index
TTCI	Travel and Tourism Competitiveness Index
TVO	Tourism Visa Openness
UAE	United Arab Emirates
UN	United Nations
UNECE	United Nations Economic Commission for Europe
UNESCO	United Nations Educational, Scientific and Cultural Organisation
UNPD	United Nations Population Division
UNWTO	United Nations World Tourism Organisation
USD/$	United States Dollar
VR	Virtual Reality
WBES	World Bank Enterprise Surveys
WEF	World Economic Forum
WTTC	World Travel and Tourism Council

Foreword

International tourism is a cornerstone of global economic growth and cultural exchange, facilitating connections between peoples and nations around the world. However, the outbreak of the COVID-19 pandemic has unleashed a wave of unprecedented challenges and led the tourism industry into a period of unpredictability. The sudden suspension of travel and the imposition of strict restrictions have brought all segments of the dynamic tourism industry to a standstill. In the wake of these disruptions, the resilience and adaptability of the sector have been put to the test. In particular, countries whose economies are heavily dependent on tourism have suffered significant economic losses, resulting in a sharp decline in revenue and widespread job losses across the industry. This loss of revenue had a ripple effect, impacting businesses across the tourism value chain, from hotels and restaurants to tour operators and souvenir shops.

Over the last two years, however, the tourism sector has recovered strongly, with tourist arrivals gradually rebounding and international tourism receipts exceeding pre-pandemic levels. The recovery of international tourist arrivals was faster in the group of OIC countries, demonstrating the enduring appeal of OIC destinations and the untapped potential for further growth and development. As a result, the share of OIC countries in total international tourist arrivals increased from the pre-pandemic level of 12.8% in 2019 to 14.8% in 2022. Meanwhile, tourism receipts of OIC countries increased from USD 238 billion in 2019 to USD 257 billion in 2022, thus increasing its share in the world from around 14% to 21% in the same period. However, the road to recovery is full of challenges, which requires ensuring infrastructural development and accessibility to remote areas to cater to diverse tourist preferences, enhancing digital infrastructure and technological capabilities to keep pace with global trends, and promoting sustainable tourism practices while preserving cultural heritage and natural resources.

Considering the ever-increasing technology adoption in the tourism sector and the changing preferences of travellers with rising digitalization, this edition of the report focuses specifically on empowering smart and sustainable tourism in OIC countries to drive the development of the tourism sector and advocates for the adoption of innovative technologies and practices to drive the industry forward. The integration of innovative technologies such as artificial intelligence, big data, and augmented reality has revolutionized the tourism industry, improving efficiency, inclusivity, and sustainability. These technologies enable the development of smart destinations, offering tailored travel experiences by leveraging real-time data and situational influences.

In this context, the smart and sustainable development of tourism becomes both a necessity and an opportunity for OIC countries. The report presents selected cases of best practices around the world to utilize smart tourism and showcases exemplary initiatives of some OIC countries to embrace smart and sustainable tourism. Apparently, there are both challenges and opportunities for the digital transformation of tourism in the OIC countries. Limited technological infrastructures, lack of digital skills, and changing consumer preferences pose formidable obstacles to smart and sustainable growth of the tourism sector. Rich cultural and natural attractions, increasing accessibility to digital technologies, vibrant youth population, an expanding Halal tourism industry, and the widespread adoption of sustainable tourism practices are among the opportunities supporting the development of the tourism sector through the integration of digital technologies in OIC countries.

As we emerge from the challenges posed by the pandemic, it becomes imperative for all stakeholders in the OIC region to prioritize the formulation and implementation of comprehensive smart and sustainable tourism strategies. These strategies should include investing in robust digital infrastructure, preparing the workforce for the digital future, and incentivizing the development of smart tourism. By taking these initiatives, we can pave the way for a tourism industry that is not only more resilient to future uncertainties, but also more inclusive and sustainable in its approach. Through strategic collaboration and forward-looking initiatives, we can harness the transformative power of digitalization to boost economic growth, preserve cultural heritage, and promote environmental sustainability for tourism development in OIC countries.

In this context, this state of affairs necessitates that the OIC countries effectively utilise the platform of the Islamic Conference of Tourism Ministers (ICTM), with 12 sessions from 2000 to 2024, to enhance policy dialogue and spearhead intra-OIC cooperation in this domain. In addition, some programmes and initiatives within the framework of the OIC can also provide a great opportunity for enhancing South-South cooperation and for promoting the knowledge sharing among the OIC countries in areas such as how to speed up the recovery efforts, formulate effective strategies towards smart and sustainable tourism and increase the resilience of the tourism sector. These include the COMCEC Working Group on Tourism, SESRIC's OIC Tourism Capacity Building Programme (Tr-CaB), and the OIC Strategic Roadmap for Development of Islamic Tourism.

Finally, I would like to express my sincere appreciation to all those who have contributed to the preparation of this important report. I am confident that the findings of this report will serve as a valuable resource for informing and guiding joint efforts within the OIC to promote and enhance intra-OIC cooperation for the development of a resilient tourism sector.

Zehra Zümrüt SELÇUK
Director General
SESRIC

Executive Summary

The global tourism industry, pivotal for economic growth and cultural exchange, has faced unprecedented challenges due to the COVID-19 pandemic. This report examines recent trends and developments in international tourism, offering insights into the industry's resilience, economic impacts, and future prospects by specifically focusing on OIC countries. The report also reviews on the issues related to smart and sustainable tourism development and provides recommendations on how to promote innovation and technology adoption in tourism sector in OIC countries.

Global Trends in International Tourism

The pandemic caused a significant decline in international tourist arrivals in 2020, whereby subsequent years saw signs of recuperation. By 2023, global arrivals have rebounded to 88% of pre-pandemic levels, with regions like Middle East, Europe and the Americas leading the resurgence. However, Asia and the Pacific faced continued challenges, reflecting the varying impact of travel restrictions. Despite the recovery, the tourism sector experienced substantial economic losses, with international tourism receipts plummeting by 62% in 2020. While there has been a rebound in subsequent years, with receipts reaching $1.1 trillion in 2022, the industry remains below pre-pandemic levels. Moreover, employment in the tourism sector, a vital source of global income, has been severely affected, highlighting the need for targeted recovery efforts.

A full recovery in international tourism is expected by 2024, driven by emerging destinations, digitalization, and sustainable practices. However, geopolitical uncertainties and economic instabilities pose ongoing challenges. As the industry navigates the path to recovery, prioritizing sustainability, resilience, and inclusive growth will be essential to ensure its long-term viability. The global tourism industry has demonstrated remarkable resilience in the face of hardships, but challenges still persist. By embracing sustainable practices, leveraging technology, and fostering inclusive growth, stakeholders can plan a course towards a more resilient and prosperous tourism landscape. As the world works towards recovery, coordinated action and investment in the sector are crucial for fostering a resilient and brighter future for global tourism.

International Tourism and Development in OIC Countries

There was a gradual recovery in tourist arrivals in the OIC, despite the challenges posed by the pandemic, with numbers reaching 96 million in 2021. This recovery gained momentum in 2022, with international tourist arrivals to OIC countries significantly increasing to 224 million, a 77%

of the pre-pandemic level. Similarly, following a moderate recovery in 2021, the number of intra-OIC tourists surged to 78.8 million in 2022, corresponding to 71% of pre-pandemic levels. The number of tourist arrivals per population in OIC countries has also shown a significant increase, reaching 15 visitors per hundred inhabitants in 2022. However, this figure remains 25% lower than the pre-pandemic levels of 20 visitors per hundred inhabitants.

The international tourism receipts of OIC countries have shown an even more impressive performance. It surged to $257 billion in 2022, surpassing pre-pandemic levels and reaching historically the highest level. It is important to mention that, in 2022, the largest portion of the international tourism receipts in OIC countries went to high income member countries, totalling $118 billion, as this income group has achieved the most significant growth over the last three years. Additionally, OIC countries demonstrated high receipts per arrival over the entire period, initially slightly below developed countries prior to the pandemic, but experiencing a significant increase afterwards, surpassing all other country groups including developed countries and attaining $1,148 in 2022.

Overall, international tourism has a multifaceted impact on the economy, benefiting both tourist destinations and outbound countries. In 2023, the international tourism sector contributed $753.5 billion to the economy, accounting for 6.9% of the total GDP of the OIC countries as a group. The estimated number of jobs created by tourism in OIC countries in 2023 was 45.7 million, accounting for 6.8% of total employment. OIC countries have a great potential for development, particularly in Islamic tourism, as well as heritage and sustainable tourism. In particular, the OIC countries as destinations have a vivid advantage over non-OIC countries with an average Global Muslim Travel Index (GMTI) value of 54 compared with the world average of 41. In addition, out of the 1,199 world heritage sites recorded between 1978 and 2023, around 231 (19%) are located in OIC countries. Out of these, 187 are classified as cultural heritage sites, 35 as natural heritage sites, and 9 as a combination of both natural and cultural.

Empowering Smart and Sustainable Tourism for Development

Over the past two decades, the tourism sector has undergone a profound transformation, largely driven by its dependence on technology and the recent emergence of virtual tourism. The digital revolution has significantly enhanced the traveller's experience by offering accurate information and simplified booking processes, enabling interaction with destinations before and during trips. Social media has emerged as a platform for sharing travel moments and experiences, fostering an exchange of insights among tourists. The development of virtual and augmented reality technologies has further allowed individuals to explore destinations and tourist attractions through immersive interactive experiences. Additionally, blockchain technology has played a crucial role in improving secure and efficient cross-border payments and reservations. This rapid transformation shows how technology is opening new horizons for the growth and development of the sector.

The integration of innovative technologies like the internet of things, artificial intelligence, and augmented reality has revolutionized the tourism industry, enhancing efficiency, inclusivity, and sustainability. These technologies enable the development of smart destinations, offering tailored travel experiences by leveraging real-time data and situational influences. Smart tourism practices empower tourists with access to information and services, while promoting sustainable practices

to ensure long-term community well-being and economic growth. Thereby, smart tourism creates a mutually beneficial scenario for visitors and destinations. It elevates the tourist experience by offering smooth and enjoyable moments, while simultaneously boosting revenue for destinations to continually enhance their products, services, public systems, and resources. Several destinations, including some OIC countries, have successfully implemented smart tourism initiatives, showcasing innovative approaches to enhance the tourist experience, promote sustainability, and integrate the latest technology.

The development of information and communications technology emerges as a significant driver of change, transforming the tourism value chain, market dynamics, required skills, and job characteristics. The future of tourism hinges on its adaptability to key trends and changes, necessitating recognition and strategic responses to short, medium, and long-term shifts. The digital transformation of tourism in OIC countries is not without its challenges, demanding strategic policy measures for effective implementation. Some of the key challenges include limited technological infrastructure, digital skills gap, access to technology, and cyber security concerns. However, amidst these challenges lie unique opportunities stemming from the distinct characteristics of the region. Many OIC countries have rich cultural and natural attractions, making them increasingly popular tourist destinations. The growing tourism industry provides an opportunity to leverage digital technologies for better management and promotion.

Several OIC countries have been actively working on smart and sustainable tourism initiatives. Examples include Malaysia's National Tourism Policy with a focus on digital transformation, Türkiye's exploration of big data for sustainability, Saudi Arabia's transformation of tourism industry in line with its Vision 2030, and the UAE's Tourism 2.0. These initiatives leverage technology, data analytics, and sustainable practices to enhance the tourism experience and contribute to economic development while preserving cultural and natural heritage.

In order to accelerate the technology adoption in tourism to enhance competitiveness and improve efficiency, four major actions are recommended. First one is development of a comprehensive digital tourism strategy. The development of a comprehensive digital tourism strategy is imperative as it aligns with the evolving landscape of the global tourism industry. Second one is preparing the tourism workforce for the digital future. A robust digital infrastructure is needed for tourists and tourism-related businesses to leverage technological solutions effectively. Third one is improving digital infrastructure and accessibility to digital services. A skilled workforce capable of leveraging digital tools and understanding emerging technologies is essential for tourism businesses to stay relevant and thrive in a rapidly changing landscape. Finally, the fourth one is providing incentives for smart and sustainable tourism investments. Tourism sector development relies heavily on the performance of private sector, requiring governments to implement proper mechanisms for firms to embrace smart and sustainable tourism solutions.

CHAPTER ONE

Global Trends in International Tourism

T ourism is a significant and rapidly developing industry, contributing to a broad part of the global economy. It is a key driver of economic growth and development across the world. Besides being a significant contributor to the economy, the global tourism industry also plays a vital role in cultural exchange and sustainable development. Understanding the current trends in international tourism can shed light on the interconnectedness of the world, the impact of regulations and technological advancements on travel, and the change in travel behaviours. Therefore, it is important to monitor global trends in tourism. In this connection, this chapter aims to provide an overview of the current trends in the global tourism industry by covering international tourism trends, economic impacts, and prospects.

1.1 International Tourism Trends

Analysing international tourism trends involves a range of measures and concepts that provide insights into the dynamics of the global tourism industry. Key indicators include international tourist arrivals that represents inbound tourism and reflect the number of visitors entering a country. Additionally, assessing the rankings of countries, outbound tourism from various nations, the purpose of visits (such as leisure, business, or visiting friends and relatives), and the means of transport used for travel all contribute to understanding the complexities of international tourism trends.

The number of international tourist arrivals is the most commonly used indicator to quantify the international tourism volume. This amount refers to overnight visitors who stays at least one night in a collective or private accommodation in the country visited. According to UN Tourism (previously UN World Tourism Organization, UNWTO), international tourist arrivals globally has recorded stable increases until the onset of the COVID-19 pandemic in early 2020 and reached almost 1.5 billion in 2019 (*Figure 1.1a*). However, the pandemic has had a significant impact on the global tourism industry. As a result, the international tourist arrivals declined sharply by 72% to around 400 million in 2020 compared to previous year (*Figure 1.1b*). The sudden and drastic drop in numbers led to widespread concern and uncertainty within the tourism sector.

Figure 1.1: International Tourist Arrivals Worldwide
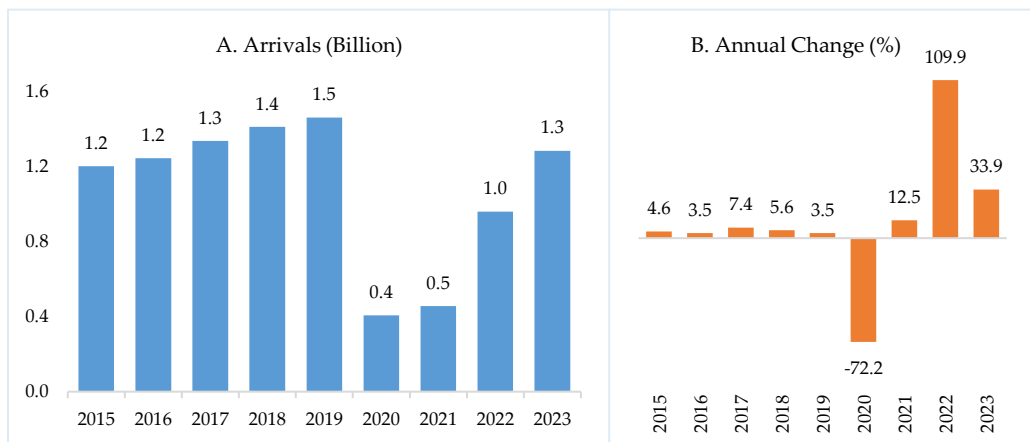
Source: UNWTO Global Tourism Dashboard, January 2024. Note: 2023 data is provisional.

> **BOX 1.1:** *Tourism Statistics*
>
> The UN Tourism is designated by the UN as the main authority for global tourism statistics, which compiles data from official statistics provided by governments or national tourism administrations, subject to quality checks before publication, and publishes them in the Compendium of Tourism Statistics and the Yearbook of Tourism Statistics. The data is also made available through dissemination channels such as the UNWTO website (*Key Tourism Statistics*), UNWTO E-library (*Tourism Barometer*), and data visualization platforms like the *Country Fact Sheets* and *Tourism Data Dashboard*. These are also the main source of the analyses in Chapter 1. However, not all countries provide complete datasets, leading to potential gaps in certain series for specific countries and periods. This makes it particularly challenging for estimating and analysing OIC level tourism statistics. For the sake of completeness on the analysis of tourism development in OIC countries, various proxies and estimation techniques are used to fill such gaps, as explained under relevant Figures of Chapter 2. However, this approach leads to discrepancies in aggregate statistics used in Chapter 1, where aggregate data disseminated by the UN Tourism reflects only the sum of the available individual country statistics, as compared to the aggregated statistics used in Chapter 2, where missing data for major tourism destinations have been filled by SESRIC staff, leading to higher aggregate regional and global values. Keeping these methodological differences in mind, readers should exercise caution in interpreting the data in these chapters.

Despite these challenges, the tourism industry has demonstrated resilience and begun to show signs of recovery. Following the record-low numbers, a slight recovery began to take place in 2021. This momentum continued in 2022 and 2023, with arrivals doubling compared to the previous year, reaching 960 million visitors in 2022. According to the provisional data available for 2023, international tourist arrivals has further increased by 34%, reaching 1.3 billion. This growth trend is expected to continue, with the number of arrivals soon reaching pre-pandemic levels.

The global trend in international tourist arrivals reflects a similar pattern across all regions. Sharp declines were recorded in all regions in 2020 with the pandemic dragging tourism activity down (*Figure 1.2*). Asia and the Pacific region saw the largest decline in relative terms as compared to other regions, mainly due to being the first affected by the pandemic and imposing strict travel restrictions. There were nearly 300 million fewer arrivals in the region compared to 2019, corresponding to 84% decline in arrivals. Europe, with the highest amount of arrivals in 2019, recorded the highest decline in absolute terms with 500 million fewer tourist arrivals in 2020, or 68% fall. While all regions began to recover slightly, Asia and the Pacific continued to struggle with worsening levels of arrivals in 2021. Asia and the Pacific to be more heavily affected by the pandemic would be expected, as the pandemic started to spread from this region with limited knowledge on how to contain the disease. Yet, over the past two years, all regions have seen significant growth in the number of tourist arrivals, parallel to the global trend. The Americas and Europe showed a swift recovery with the highest relative increases in 2022. While the Middle East surpassed 2019 levels in 2023, all other regions except for Asia and the Pacific have nearly reached pre-pandemic levels.

In addition to the absolute values, the pandemic has also had effects on the distribution of regional shares of tourism (*Figure 1.3*). The Asia and the Pacific region faced a sharp decline, with its share dropping from 25% in 2019 to just 5% in 2021, as a result of being the originator of the pandemic and having the strictest travel restrictions. As a result, there was a noticeable shift towards Europe,

Figure 1.2: International Tourist Arrivals by Region (Million)
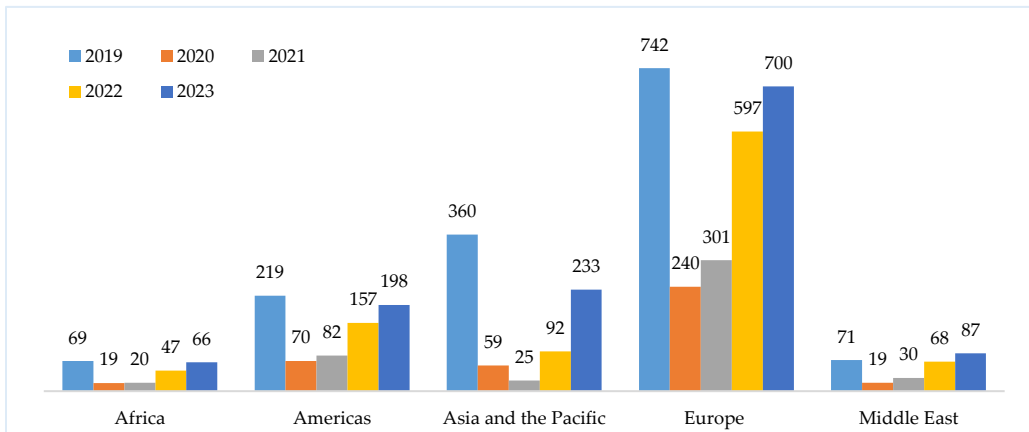
which saw its share in global arrivals increase from 51% in 2019 to 66% in 2021. Meanwhile, Africa, the Americas and the Middle East experienced minimal changes in their share of arrivals during this period. However, with the recovery of the international tourism in 2022 and beyond, there were adjustments in regional shares again, with Europe recording a decrease in its share, and Asia and the Pacific region attaining higher shares.

At the individual country level, France, Spain, the United States of America (USA), Türkiye, and Italy emerged as the leading international tourist destinations, collectively accounting for almost one third (31.6%) of global arrivals in 2022 (*Figure 1.4*). When top ten countries are considered collectively, they received 47.3% of all global arrivals during that year.

In terms of tourism expenditure, the USA, China and Germany were the leading tourism spenders in the world with the highest demand for international travel (*Figure 1.5*). They collectively

Figure 1.3: International Tourist Arrivals by Region, Share in the World (%)
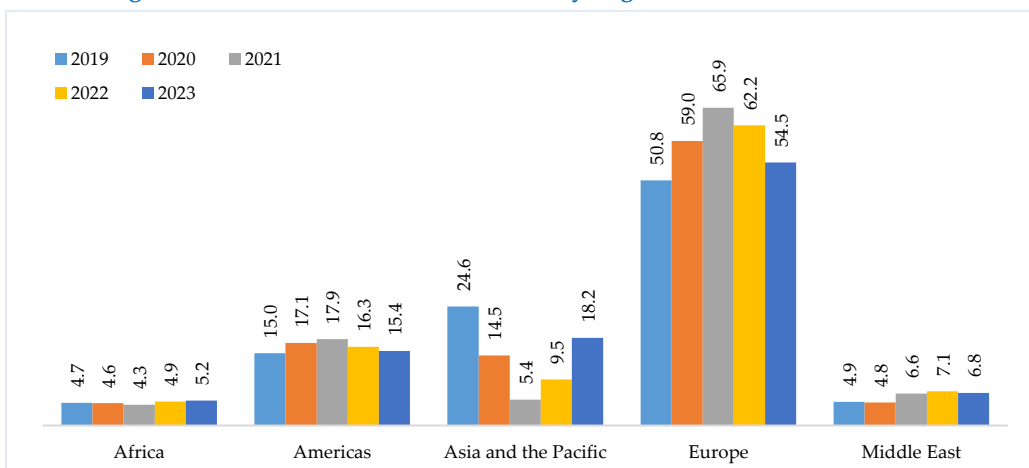
accounted for 31.7% of international travel expenditures in 2022. Top ten countries with the highest tourism expenditures in the world accounted for 58.4% of global travel expenditures during that year.

Outbound tourism, which represents international tourist arrivals from the perspective of residents traveling abroad, offers another point of view on global tourism trends. Prior to the pandemic, international arrivals originating from each region had been steadily increasing. However, there was a sharp decline in outbound tourism in 2020 in all regions (*Figure 1.6a*). Travels originating from Europe was hit the hardest in absolute terms, decreasing from 705 million in 2019 to 236 million in 2020. On the other hand, Asia and the Pacific region was hit proportionately the hardest, with outbound tourism decreasing from 383 million in 2019 to 59 million in 2020, corresponding to 85% decline in outbound tourism. Before the

Figure 1.4: World's Top 10 Destinations (Million Arrivals, 2022)
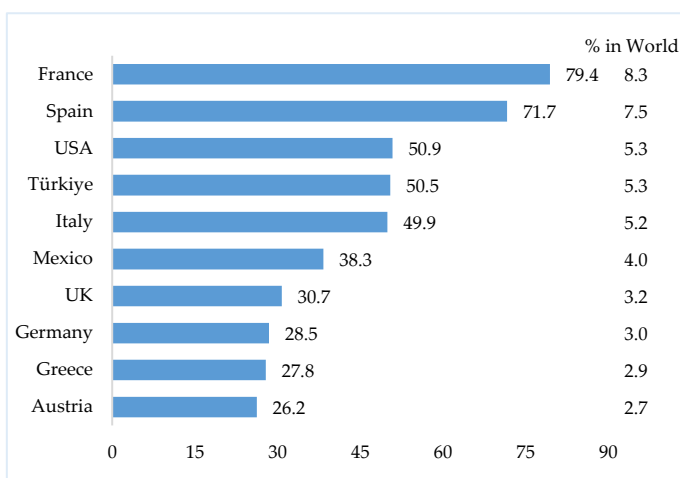
Source: UNWTO Global Tourism Dashboard, January 2024.

Figure 1.5: World's Top 10 Tourism Spenders (USD Billion, 2022)

Source: UNWTO Global Tourism Dashboard, January 2024.

pandemic, tourists traveling from Americas formed the third largest region, but the ranking of regions changed during the pandemic due to variations in travel policies and border restrictions (*Figure 1.6b*). Tourism originating from Europe, due to its more flexible policies and early implementation of pandemic measures, increased its share of outbound tourism in world total from 48.2% in 2019 to 60% in 2021. On the other hand, Asia and the Pacific region saw a decrease in its share from 26.1% in 2019 to 8.2% in 2021. The Americas also experienced an increase in its share from 16.7% in 2019 to 20% in 2021.

Figure 1.6: Outbound Tourism by Generating Region, Million (left) and Share (right)
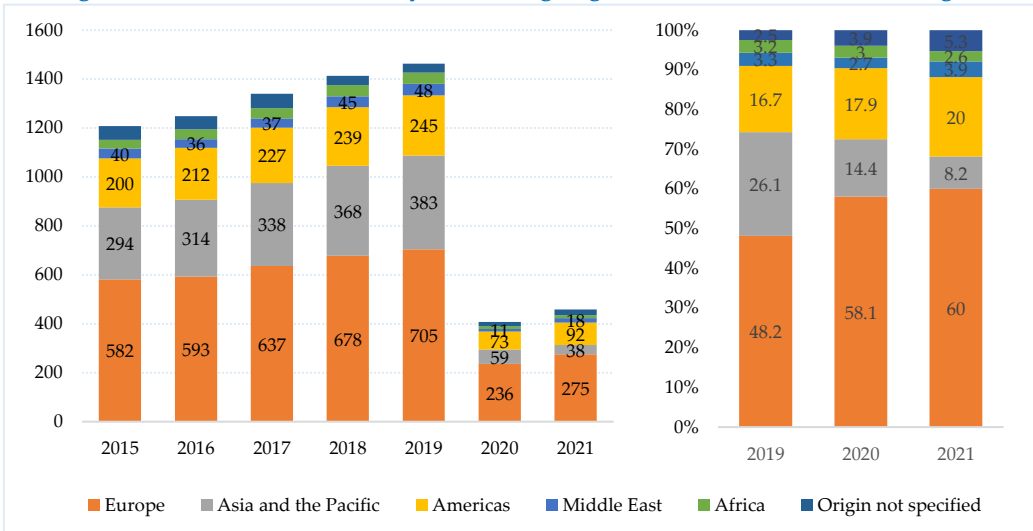
Source: UNWTO Tourism Statistics Database. Note: Origin not specified: Arrivals not allocated to a specific region of origin either because source market data is missing, or it is grouped into a broad category such as 'Other countries of the world'.

While the investigation of inbound and outbound tourism trends gives major information about the international tourism performance, analysing the purpose of visits and means of transport provides further insights into tourism trends. In recent years, there has been a slight decrease in the share of travel for business and professional purposes across all visit purposes (*Figure 1.7*). There was a minor increase in its share during pandemic, possibly because of postponement or cancellation of personal travels due to health concerns. Despite this slight increase, the share of business and professional travels continued to decline to reach its lowest level of 9.6% in 2022. This decline could be attributed to the changing work environment, with more organizations adopting flexible work arrangements. As remote work becomes more prevalent, individuals may have fewer reasons to travel for business purposes, leading to a decrease in this category of tourism.

The composition of tourism in terms of transport means has also undergone significant changes in recent years. The share of land travel increased from 47.1% in 2019 to 54.9% in 2020, possibly due to its perception as a more

Figure 1.7: Inbound Tourism by Purpose of Visit (%)
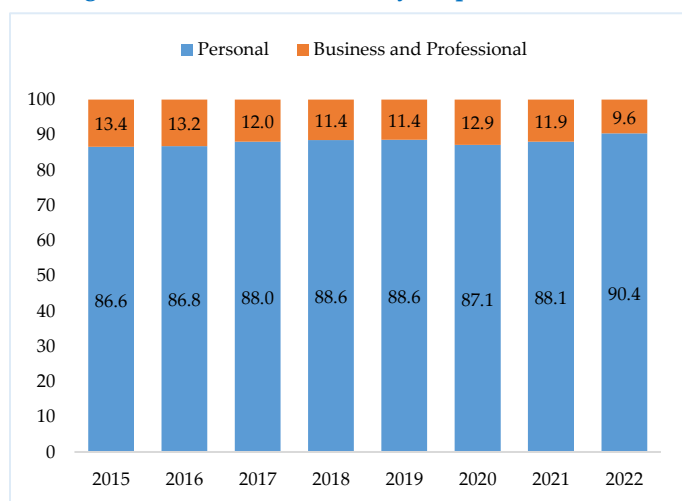
Source: UNWTO Tourism Statistics Database.

isolated mode of transport than others during the pandemic (*Figure 1.8*). In the following years, however, the share of land travel declined, reaching 39% in 2022, the lowest of value observed since 2015. Similarly, the share of air travel decreased from 48.1% in 2019 to 40.9% in 2020, but it rebounded in the following years, reaching 56.9% in 2022. Accounting for more than 5% before the pandemic, water transport saw a decline in its share to 2.5% in 2021, which partly recovered to 3.8% in

Figure 1.8: Inbound Tourism by Means of Transport (%)

■ Air ■ Water ■ Land

	2015	2016	2017	2018	2019	2020	2021	2022
Land	49.8	48.5	47.9	47.2	47.1	54.9	51.9	39.3
Water	5.9	5.7	5.4	5.2	4.8	4.2	2.5	3.8
Air	44.3	45.8	46.7	47.6	48.1	40.9	45.6	56.9

Source: UNWTO Tourism Statistics Database.

2022. Overall, there has been a shift in preferences regarding means of transport, with a recent trend towards increased reliance on air travel compared to land travel.

1.2   Economic Impacts

After examining a descriptive portrait of tourism performance by investigating international tourism trends, the next important step is to analyse the economic impacts. Global tourism impacts economies evidently in various ways, including its contribution to gross domestic product (GDP), em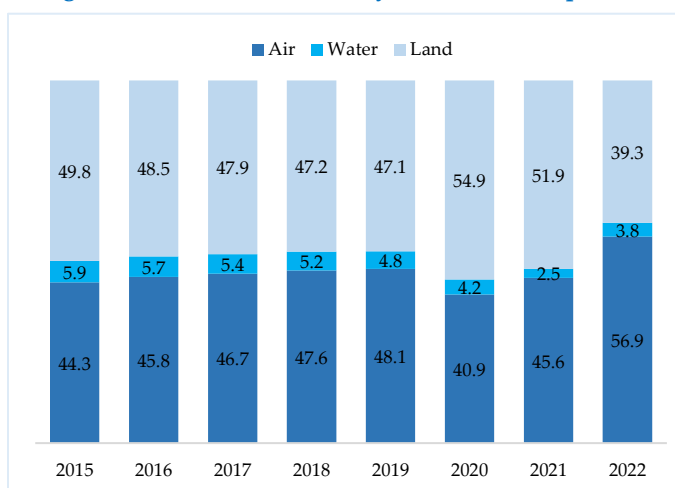ployment generation, foreign exchange earnings, infrastructure development, and investment opportunities. One of the key economic impacts of global tourism is its contribution to GDP, both directly and indirectly. Tourism generates revenue through various channels, such as accommodation, food and beverage services, transportation, travel agencies, entertainment, and retail, thereby boosting the GDP of host countries. Furthermore, global tourism plays a significant role in employment generation. The industry provides opportunities for job creation across various sectors, including accommodation, food and beverage, transportation, travel agencies, entertainment, and retail.

In addition to its impact on GDP and employment, global tourism also contributes to foreign exchange earnings. International tourists spend money in the host countries, leading to an inflow of foreign currency. This helps countries to strengthen their balance of payments, improve their financial stability, and support their overall economic growth. Moreover, the development of tourism infrastructure and facilities has a positive impact on the economy, stimulating investment. Overall, investments in tourism-related infrastructure, such as hotels, resorts, airports, transportation networks, and tourist attractions, create opportunities for economic growth and development in host regions.

Among the indicators of economic impacts of tourism, international tourism receipts are analysed at first place. International tourism receipts typically follow a similar trajectory to international tourist arrivals. After steadily increasing for most of the last decade, there has been a sharp

Figure 1.9: International Tourism Receipts
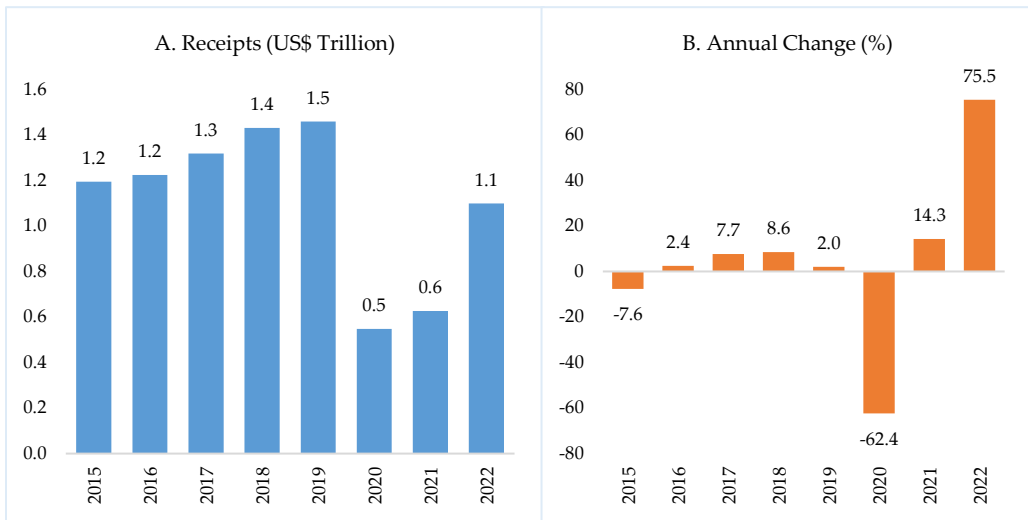
Source: UNWTO Global Tourism Dashboard, January 2024.

decrease in receipts by 62.4% in 2020 compared to the previous year (*Figure 1.9b*). Beginning to slightly recover in 2021 and gaining momentum in 2022, international tourism receipts reached $1.1 trillion, still below the pre-pandemic level of $1.5 trillion in 2019 (*Figure 1.9a*). This strong bounce seen in 2022 is expected to continue, indicating a positive outlook for the future.

Average international tourism spending (receipts) per arrival increased during the pandemic, even though tourism earnings (receipts) declined, along with the arrivals. The receipts per arrival increased from nearly $1,000 in 2019 to $1,369 in 2021 (*Figure 1.10*). This increase can be attributed to several factors, including global inflation and prolonged trips as a result of travel restrictions.

Figure 1.10: International Tourism Receipts and Arrivals
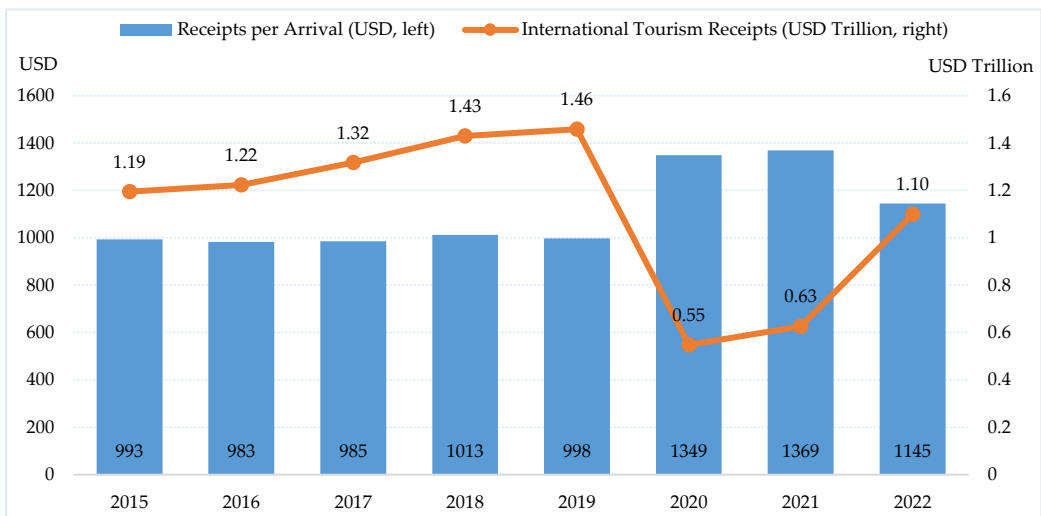
Source: UNWTO Global Tourism Dashboard, January 2024.

However, in 2022, as travel restrictions began to ease and normalization efforts took place, the average spending per arrival regressed to $1,150. Nonetheless, this figure remains higher than the pre-pandemic levels, indicating a lingering impact of the pandemic on travel behaviours and spending patterns.

Distributional effects on the regional share of international tourism receipts mirrors the trends observed in tourist arrivals. Europe and the Middle East regions increased their share of international tourism receipts, primarily at the expense of Asia and the Pacific (*Figure 1.11*). In 2022, Europe accounted for half of the total international tourism receipts, while the Americas earned nearly a quarter. Other regions' earnings constituted the remaining quarter. This shift underscores the changing dynamics in global tourism expenditure patterns, with Europe dominating global tourism receipts. The Middle East's increased share also reflects its growing appeal as a tourist destination. Meanwhile, Asia and the Pacific, which previously held a significant share of international tourism receipts, experienced a decline in their contribution to the global total.

Figure 1.11: Regional Share of International Tourism Receipts in Total (%)

Source: UNWTO Global Tourism Dashboard, January 2024.

The USA, Spain and the United Kingdom (UK) emerged as the top international tourism earners, collectively accounting for 25% of global receipts in 2022 (*Figure 1.12*). These countries have established themselves as premier tourist destinations, offering a diverse range of attractions and experiences that appeal to travellers from around the world. The top ten countries, which also includes two OIC countries (United Arab Emirates and Türkiye), received 51% of all international tourism receipts during that year.

Figure 1.12: World's Top 10 International Tourism Receipts (US$ Billion), 2022
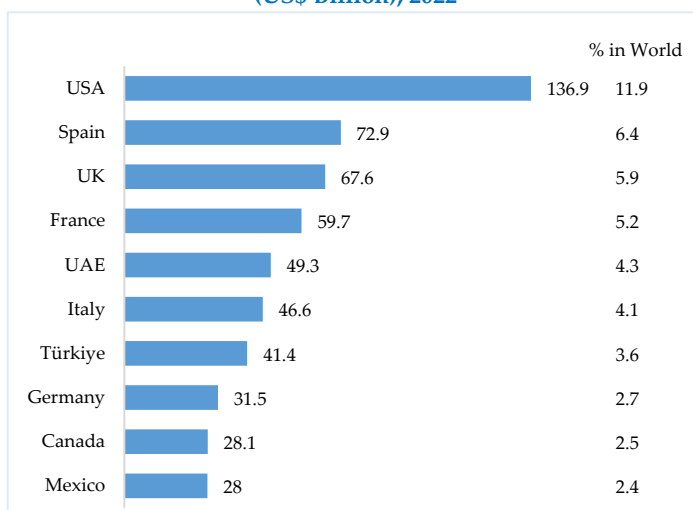
Source: UNWTO Global Tourism Dashboard, January 2024.

In terms of international tourism receipts per arrival, Australia, Hong Kong and Luxembourg emerged as the top three countries in 2022 (*Figure 1.13*). Among OIC countries, Lebanon and Qatar were also achieved among the world's top countries in terms of tourism receipts per arrival. These countries achieved high average spending per tourist arrival, reflecting factors such as longer stays, higher expenditure on accommodation, dining, shopping, and other tourism-related activities. It is worth mentioning that the countries listed as top ten per arrival earners differ from the top ten overall earners. This disparity could be attributed to several factors, including differences in travel patterns, tourist preferences, economic conditions, and the availability of luxury amenities.

Another important indicator is the tourism direct gross domestic product (TDGDP), which is a macroeconomic aggregate that measures the direct contribution of tourism to the economy (UNWTO, 2023a). It is one of the key indicators used for monitoring progress towards achieving the Sustainable Development Goals (SDGs), particularly targets 8.9.1 and 12.b.1, which focus on tourism's economic and environmental sustainability. The direct contribution of tourism to world GDP fell from $3,340 billion in 2019 to $1,510 billion in 2020 (*Figure 1.14*). However, there was a notable recovery in the economic contribution of the sector, which increased to $1,740 billion in 2021. With an even stronger recovery in 2022, tourism GDP reached $2,510 billion. Despite this recovery, tourism GDP remained below pre-pandemic levels. In terms of the share of tourism GDP in

Figure 1.13: World's Top 10 International Tourism Receipts per Arrival, 2022 (USD)
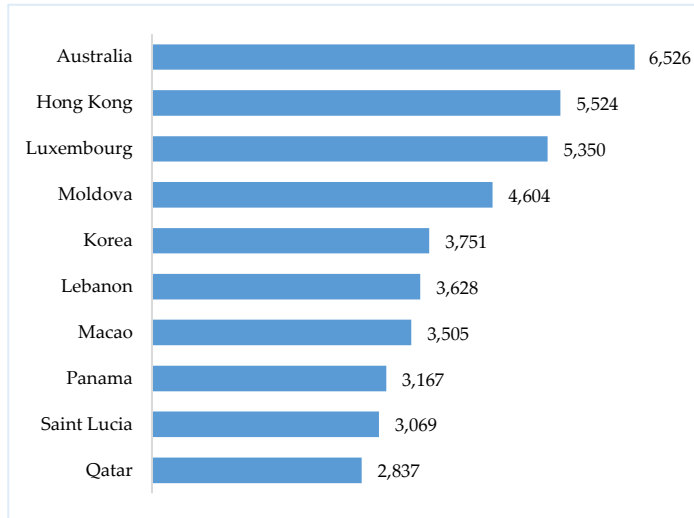
Source: UNWTO Global Tourism Dashboard, January 2024.

Figure 1.14: Economic Contribution of Tourism to World GDP
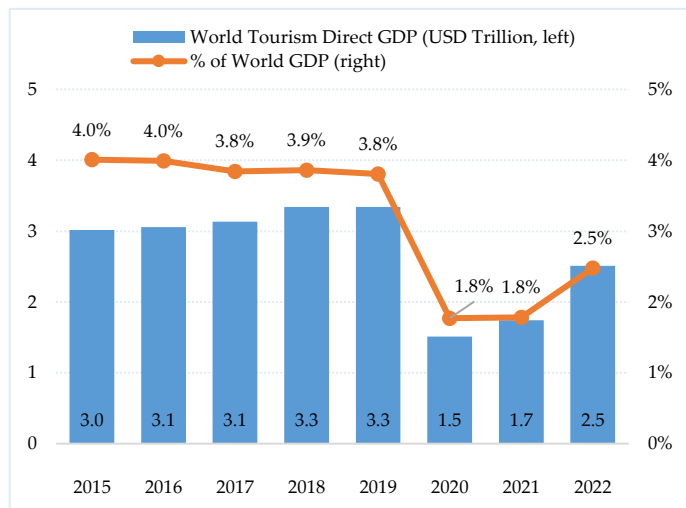
Source: UNWTO and World Bank World Development Indicators.

Figure 1.15: Economic Contribution of Tourism to GDP by Region (USD Billion)
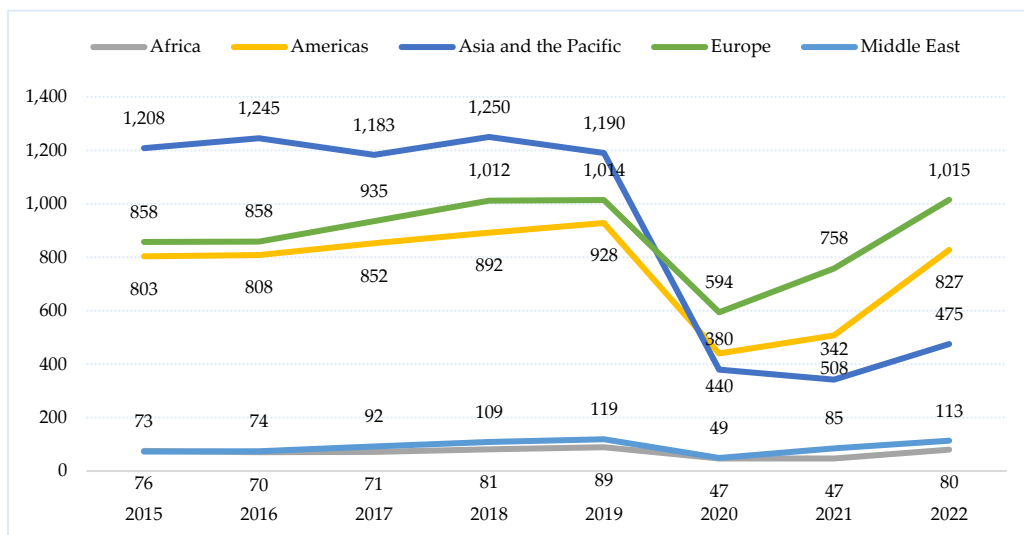
Source: UNWTO Tourism Statistics Database.

the global economy, there was a significant decrease from 3.8% in 2019 to 1.8% in 2020 and remained unchanged in 2021. This share rebounded to 2.5% in 2022, remaining still lower than pre-pandemic levels, indicating the ongoing challenges faced by the tourism sector in recovering from the impacts of the pandemic.

The direct contribution of tourism to GDP varied across regions, with Asia and the Pacific region recording the highest contribution in 2019 with $1,190 billion (*Figure 1.15*). The region recorded a dramatic fall in the next two years to reach as low as $342 billion in 2021 and followed by a modest recovery to only $475 billion in 2022. In contrast, Europe rebounded quickly from the pandemic-induced downturn and reached its pre-pandemic levels with $1,015 billion in 2022. This performance

Figure 1.16: Economic Contribution of Tourism to GDP by Region (% of GDP)
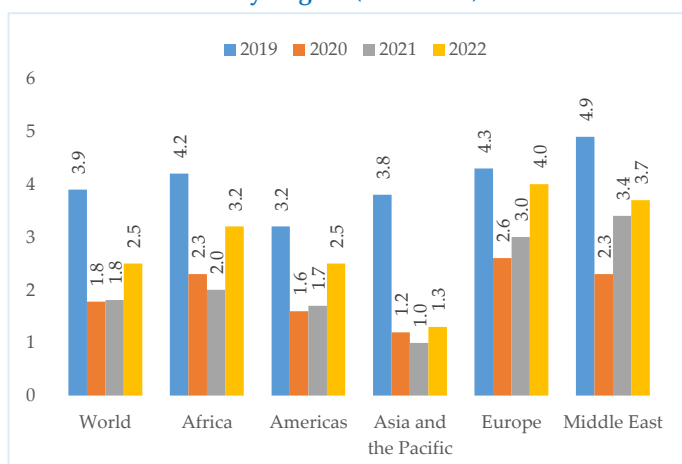
Source: UNWTO Tourism Statistics Database.

positioned Europe as the top contributor region to tourism GDP. Tourism in the Americas contributed $827 billion to their GDP in 2022 and ranked as second biggest contributor region.

Figure 1.17: International Tourism Exports, World
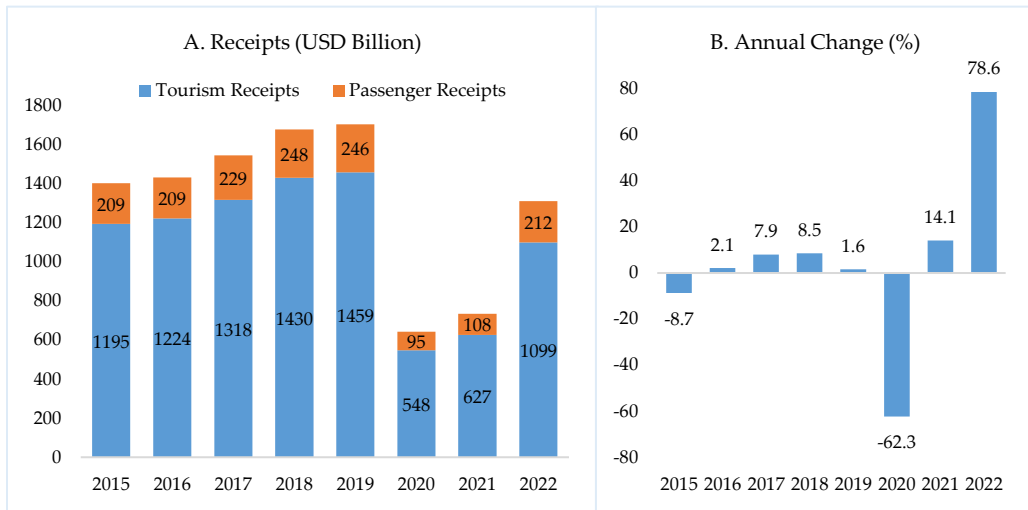
Source: UNWTO Global Tourism Dashboard, January 2024.

Similarly, the Middle East and Africa regions approached pre-pandemic levels in 2022, with tourism contributing $113 billion and $80 billion, respectively, to their GDPs.

Across all regions, the share of tourism in economy declined with the effect of pandemic nearly by half (*Figure 1.16*). This decline was even more pronounced in Asia and the Pacific region, where the share of tourism in GDP decreased by two-thirds, reaching 1.3% in 2022. The economic contribution of tourism to GDP in Europe almost approached its pre-pandemic values with 4.0% in 2022. Similarly, the sector is closer to regain its pre-pandemic contribution level in Middle East with 3.7% in 2022. However, both Africa and the Americas have more ground to fully recover their previous levels of contributions from tourism.

In economic impact analysis of tourism, another important indicator to be monitored is tourism exports, also equalling to tourism expenditures. Tourism is an export sector and a source of foreign exchange earnings (Adeleye et al., 2022). International tourism export revenues are composed of

Figure 1.18: Global Share of Tourism Exports in Total and Services Exports (%)
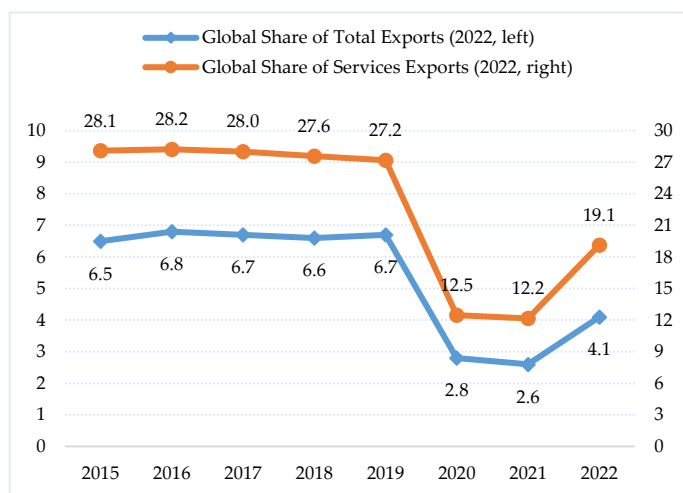
Source: UNWTO Global Tourism Dashboard, January 2024.

international tourism receipts and passenger transport receipts. Before the pandemic, international tourism export revenues showed a steady growth, with the exception of a minor interruption in 2015. However, they declined sharply by 62.3%, plummeting from $1,705 billion to $643 billion in 2020 (*Figure 1.17*). Bouncing back in the following years, the revenues reached $1,311 billion in 2022, marking a remarkable increase of 78.6% compared to the previous year.

The share of tourism exports in total exports declined from 6.7% in 2019 to 2.8% in 2020 and further down to 2.6% in 2021 (*Figure 1.18*). However, it rebounded to 4.1% in 2022. The share of tourism exports in services exports followed a similar trend declining from 27.2% in 2019 to 12.5% in 2020 and further down to 12.2% 2021. This share then increased to 19.1% in 2022, remaining still below the pre-pandemic levels. These fluctuations are mainly due to the fact that tourism export revenues experienced a more significant decline compared to total exports revenues and services exports revenues during the pandemic.

Figure 1.19: Regional Share of Tourism Exports in Total Exports (%)

Source: UNWTO Global Tourism Dashboard, January 2024.

At regional level, the share of tourism in total exports declined in all regions with the effect of pandemic in 2020 (*Figure 1.19*). However, the Middle East region has shown more resilience, with its share of the tourism sector reaching 9.4% in 2022 as compared to the pre-pandemic level of 9.7% in 2019. In contract, other regions still have room for further recovery to regain their previous share of tourism in exports.
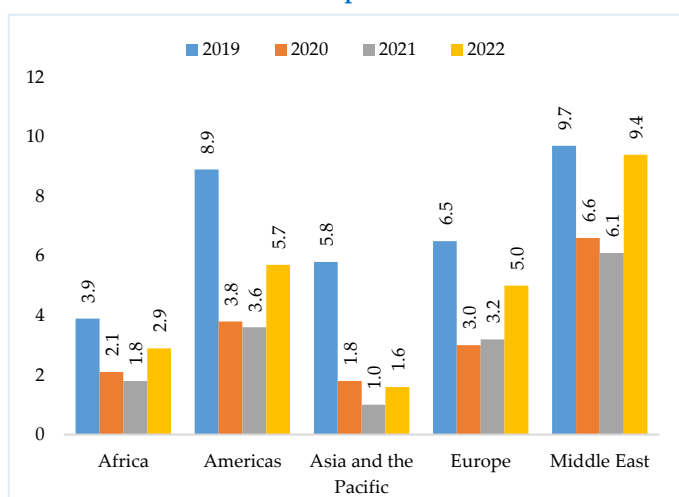
Figure 1.20: Regional Share of Tourism Exports in Services Exports (%)

Source: UNWTO Global Tourism Dashboard, January 2024.

The effect of pandemic on the sector is reflected similarly in the share of tourism exports in services exports. Declines in the shares were observed across all regions, mirroring the trends seen in shares in total exports. Diversely, the share in Africa has surpassed pre-pandemic levels, due possibly to the shift

in the composition of services exports towards tourism services (*Figure 1.20*). On the other hand, the share in Middle East even worsened in 2022 when compared with 2019 and 2020, possibly due to the shift in the composition of services exports away from tourism services. These shifts demonstrate the dynamic nature of the tourism sector within the broader context of services exports and reflect changes in global trade patterns influenced by the pandemic.

Figure 1.21 demonstrates the world's top ten tourism exporters in terms of the shares of tourism exports in total exports (*Figure 1.21*). With the shares exceeding 80%, Maldives and Comoros are the two OIC countries that are ranked at the top positions of the global ranking. For the top seven countries in the list, tourism exports represent more than 50% of total exports. This highlights the substantial contribution of tourism as a major export sector for these countries.

Figure 1.21: World's Top 10 Tourism Exporters, 2022 (Tourism as % of Exports)

Country	%
Maldives	89.3%
Comoros	83.7%
Bahamas	78.9%
Aruba	76.3%
Macao	61.5%
Jamaica	56.5%
Samoa	52.3%
Gambia	49.3%
São Tomé Príncipe	47.2%
Belize	46.5%

Source: *UNWTO Global Tourism Dashboard, January 2024.*

Notably, most of these countries are Small Island Developing States (SIDS), reflecting the importance of tourism as a vital economic driver for these nations.

Employment in tourism is another important indicator as it provides insights into the job creation and income generation within the sector. The ILO and UN Tourism refer to tourism to be one of the most dynamic sectors of economic activity, generating a wide range of benefits for tourism host and tourist-generating countries and destinations, including employment generation, foreign exchange earnings and contribution to GDP (ILO, 2013). Moreover, the tourism industry plays a vital role in fostering economic diversification, particularly in rural and remote areas, by providing business and employment opportunities across various sectors such as accommodation, food and beverage, transportation, and retail. The importance of the sector for job creation, economic development, culture, products and services is reflected in SDGs, particularly Targets 8, 12, and 14, which include tourism-specific objectives. Jobs created in the tourism sector are of particular importance for women, young people and migrant workers, who make up a large share of workers in the sector. Micro, small and medium-sized enterprises (MSMEs) represent the majority share of the industry and its workers, and are key drivers of employment (ILO, 2022).

Nearly 230 million workers, constituting 7.2% of the global workforce, were employed in tourism industries (ILO, 2023). These figures indirectly generate employment through spillover effects. Taking into account both direct and indirect jobs, it was estimated that 1 out of every 10 jobs worldwide, and 1 out of every 4 newly created jobs, were linked to the tourism sector in 2019 (ILO, 2023).
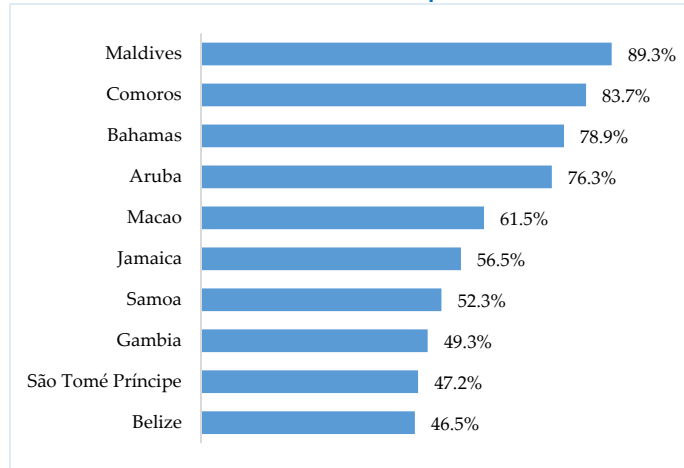
Employment in all tourism industries is characterized by high shares of self-employment and employment in MSMEs, and high informality rates as shown in *Table 1.1* (ILO, 2023). In all of the tourism industries, the share of workers in informal jobs exceeds the share of workers employed in formal sector. This points out that there are many workers employed in formal sector who have informal jobs. As a result, these workers have only limited access to social protection and other legal rights. Addressing these circumstances is essential to solve the structural problem of the work environment in tourism industries.

Table 1.1: Informality and MSMEs in Tourism Industries

	Total	*Accommodation, Travel and Logistics*	*Food Beverage Services*	*Land Transportation*	*Arts, Culture, Sports and Recreation*
Share of informal employment in total employment	65%	56%	62%	73%	43%
Share of employment in informal sector	39%	25%	42%	45%	21%
Share of employment in self-employment and MSMEs	78%	73%	80%	81%	70%

Source: ILOSTAT.

1.3   Prospects

As the world gradually emerges from the effects of the pandemic, the revival of the tourism industry offers hope for a return to stability and growth. Despite the challenges faced, the global tourism sector has shown notable resilience and adaptability. The path of the tourism industry towards recovery is reflected in international tourist arrivals data. This recovery indicated a positive shift in the industry. As previously shown, data demonstrate that the number of arrivals will soon return to pre-pandemic levels.

The recovery of international tourism has been remarkable, with tourist arrivals reaching 87.9% of 2019 levels globally in 2023, according to the provisional data (*Figure 1.22*). The Middle East have already surpassed 2019 levels by an additional 22.1% increase in tourist arrivals. The strong growth in tourist arrivals is connected with major international events that took place in the region, such as the FIFA World Cup in Qatar, Expo 2020 in Dubai, and the COP28 UN Climate Change Conference in Dubai, amongst others. Africa, the Americas and Europe have all made substantial recoveries by achieving nearly 96.1%, 90.4% and 94.3% of pre-pandemic tourist arrivals, respectively, in 2023. However, as the hardest hit region, Asia and Pacific could recover only by 64.8%. Despite this, these developments suggest a trajectory towards full recovery by 2024.

The positive outlook for tourism recovery is also reflected in the UN Tourism Panel of Tourism Experts Surveys (UN Tourism, 2024a). Over the first three years of the survey, experts consistently pointed towards 2024 as the expected time for recovery (*Figure 1.23*). In the last survey conducted in January 2024, 33% of tourism experts indicated that the recovery has been already achieved. Additionally, 30% of experts anticipate recovery in 2024, while 31% believe it could occur by 2025 or later. Thus, according the latest survey, the recovery timeframe seems imminent, with a significant portion of experts indicating that it has already been achieved or will happen soon.

Figure 1.22: International Tourist Arrivals (% change over 2019)

■ 2020 ■ 2021 ■ 2022 ■ 2023

World: -72.2, -68.7, -34.3, -12.1
Africa: -72.9, -71.5, -31.3, -3.9
Americas: -68.2, -62.7, -28.6, -9.6
Asia and the Pacific: -83.6, -93.2, -74.6, -35.2
Europe: -67.7, -59.4, -19.6, -5.7
Middle East: -72.8, -57.7, -4.9, 22.1
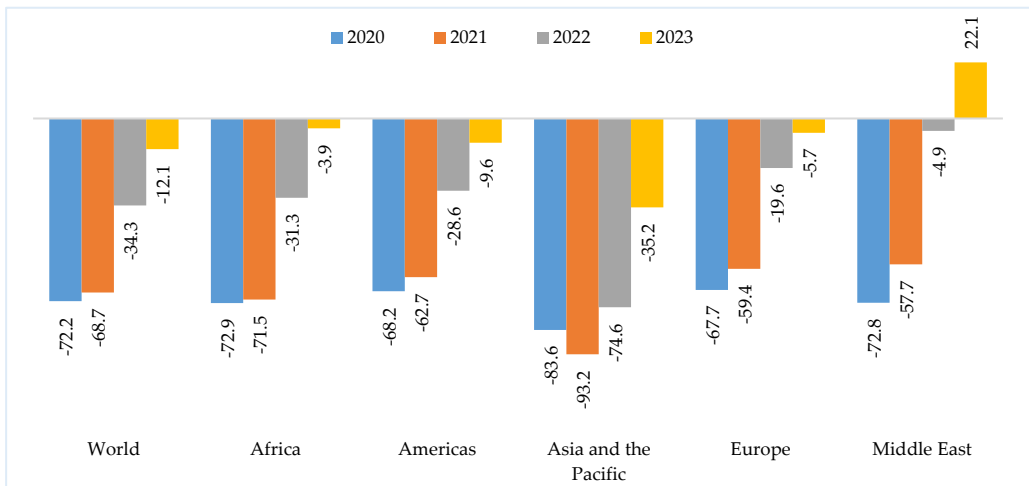
Source: UNWTO Global Tourism Dashboard, January 2024. Note: 2023 data is provisional.

There are several factors shaping the tourism industry and supporting its recovery in the post-pandemic era. These include newly emerging destinations, digitalization and technology, sustainability in tourism, and new concepts such as experience based tourism and global events. However, alongside these positive trends, unstable geopolitical and economic factors can pose challenges to the tourism industry. Political conflicts, economic downturns, natural disasters, and health crises can disrupt travel patterns, deter tourists, and impact the overall stability of the tourism sector.

The period of recovery presents an opportunity to execute measures that enhance the tourism industry's ability to bear future challenges. Looking ahead, it will be crucial to prioritize sustainability and resilience. Discovering sustainable practices, fostering responsible tourism, and leveraging technology for improved efficiencies will be vital in shaping a more resilient and growing tourism landscape.

Furthermore, examining the prospects of the global tourism industry involves forecasting

Figure 1.23: Answers to the Survey Question "When do you expect international tourism to return to pre-pandemic 2019 levels in your country?" (Share as % of Total)

■ January 2021 ■ January 2022 ■ January 2023 ■ January 2024

Already achieved: 1, 0, 8, 33
2022: 15, 4, 0, 0
2023: 43, 32, 28, 6
2024: 41, 64, 39, 30
by 2025 or later: 0, 0, 26, 31
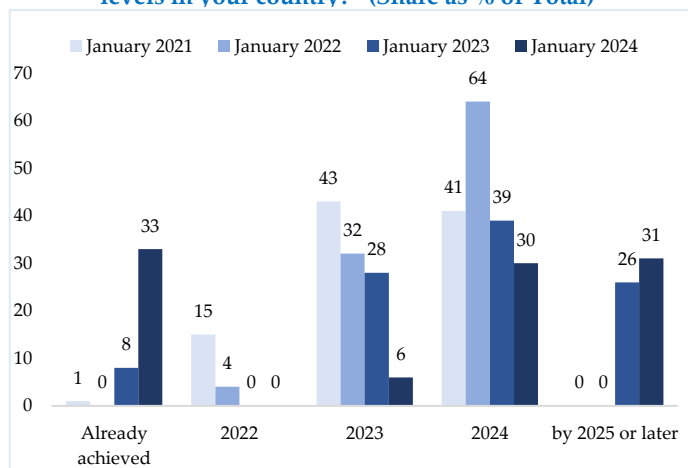
Source: UNWTO World Tourism Barometer.

future trends, anticipating changes in consumer preferences, and evaluating the potential impact of geopolitical events and natural disasters on international travels. Gaining a deeper understanding of these factors could enable stakeholders to understand and adapt to ensure the long-term sustainability and resilience of the sector.

The global call to action adopted by the International Labour Conference in June 2021 calls for a human-centred recovery from the COVID-19 crisis that is inclusive, sustainable and resilient. It acknowledges tourism as one of the hardest-hit sectors and calls for urgent and coordinated action to facilitate a speedy recovery towards a sustainable travel and tourism sector, bearing in mind its labour-intensive nature and its key role in countries highly dependent on tourism (ILO, 2022).

BOX 1.2: *SESRIC's Tourism Capacity Building (Tourism-CaB) Programme*

Considering their rich and diverse natural, geographic, historical and cultural heritage assets, the OIC member countries as a group, have a high potential for the development of a sustainable international tourism sector. However, despite these resources, the region's presence in the global tourism market remains modest, with tourism activities concentrated in only few member countries. Much of the tourism potential within the OIC region remains underutilised, hampered by factors such as underdeveloped sustainable tourism practices, a shortage of skilled personnel, ineffective governance, and substandard service quality.

To address these challenges and to enhance the expertise and experiences of OIC member countries in tourism, SESRIC initiated the *Tourism Capacity Building (Tourism-CaB) Programme* in 2015. Since its inception, the programme has conducted 35 capacity building activities, including training courses, workshops, webinars, study visits, etc, benefitting 56 OIC countries.

These activities have been conducted in collaboration with both national and international stakeholders, including the Standing Committee for Economic and Commercial Cooperation (COMCEC), the Islamic Centre for Development of Trade (ICDT), UN Tourism, the Islamic Tourism Centre (ITC) of Malaysia, as well as relevant ministries/national agencies within OIC member countries.

The capacity building activities, delivered through both on-site and online platforms, have covered various topics essential for sustainable tourism development. Themes have included Tourism Marketing Strategies, Muslim-Friendly Tourism Development and Promotion, Cross-Border Parks and Protected Areas, Effective Strategic Planning for Sustainable Tourism, Gastronomy Tourism in OIC Countries, and more. For further details, please refer to: *https://www.sesric.org/cbp-oic-tourism.php*.

CHAPTER TWO

International Tourism and Development in OIC Countries

I nternational tourism is a dynamic and interconnected sector that upholds intricate relationships with the economy, culture, infrastructure, trade, and development. It possesses a tremendous potential to induce positive transformations and foster economic growth within host communities. In this context, comprehending the development impact of tourism is paramount, especially for OIC countries, as they seek to harness the benefits of this dynamic industry.

This section evaluates the performance of OIC countries in the tourism industry and their potential for development. It begins by analysing recent trends in tourist arrivals and receipts using various techniques to provide a comprehensive understanding of the sector's dynamics. Then, it addresses the economic impact of international tourism in OIC countries, exploring how tourism contributes to economic growth and job creation. Finally, it discusses the potential for further developing the travel and tourism industry in OIC countries while highlighting their natural and historic heritage sites and their appeal to Muslim tourists.

2.1   International Tourist Arrivals

International tourist arrivals to OIC countries demonstrated a significant rise from 222 million arrivals in 2015 to 291 million arrivals in 2019. However, this positive trend was abruptly interrupted by the COVID-19 pandemic, leading to a sharp decline in arrivals to 75 million in 2020 due to travel restrictions. Despite the challenges posed by the pandemic, there was a gradual recovery in tourist arrivals, with numbers reaching 96 million in 2021. This recovery gained momentum in 2022, with international tourist arrivals to OIC countries significantly increasing to 224 million (*Figure 2.1*).

Figure 2.1: International Tourist Arrivals (Millions), 2015-2022

Source: SESRIC staff calculations based on UNWTO Tourism Statistics Database. Estimated based on data for 191 countries (43 OIC, 38 developed, 110 non-OIC developing). Calculated as the sum of overnight visitors and same-day visitors, according to the UNWTO Methodology. For 66 countries, only overnight visitors were used as an estimate due to a lack of same-day visitors' data for the period 2015-2022. In 2021, data for 11 countries was estimated based on 2020 data adjusted with a 12.6% global growth rate, and data for 44 countries in 2022 was estimated based on 2021 data adjusted with a 109.9% global growth rate, as reported on the UNWTO Tourism Data Dashboard.

The recovery of international tourist arrivals has been faster in the group of OIC countries and developed countries, compared with non-OIC developing countries. Consequently, the share of the OIC countries in global tourist arrivals increased from 12.8% in 2019 to 14.8% in 2022. The share of developed countries amplified even faster from 51.5% to 56%. In contrast, the proportion of tourist arrivals hosted by non-OIC developing countries fell from 35.7% to 29.2% over the same period.

Figure 2.2: International Tourist Arrivals, Percentage Recovered from 2019 levels
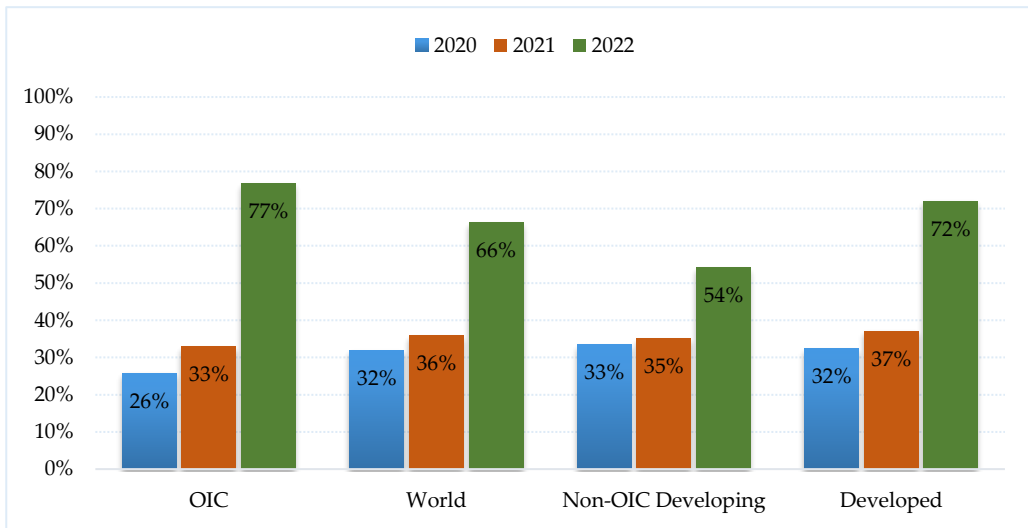
Source: SESRIC staff calculations based on UNWTO Tourism Statistics Database. Calculated using the estimates from Figure 2.1.

Figure 2.2 illustrates the impact of travel restrictions on the tourism sector, highlighting the disparities among different country groups. In 2020, OIC countries experienced a more severe decline, receiving only 26% of the arrivals compared to 2019, whereas non-OIC developing countries and developed countries received 33% and 32% respectively, aligning closely with the global average. In 2021, the recovery in the number of arrivals compared to 2019 was sluggish across all country groups, with OIC countries reaching 33%, slightly below non-OIC developing countries (35%), developed countries (37%), and global average (36%). By 2022, international tourism witnessed a robust recovery, with OIC countries surpassing other country groups by recovering around 77% of the 2019 arrivals. In the same year, the global recovery stood at 66%, with non-OIC developing countries achieving 54% and developed countries achieving 72% of their pre-pandemic tourism arrivals (*Figure 2.2*).

The UN Tourism estimates for 2023 indicate that almost 88% of the global tourist arrivals have been recovered, with the Middle Eastern OIC countries demonstrating the most substantial performance by surpassing the 2019 levels by 22%. In fact, the Middle East stands out as the only region surpassing its 2019 values, contributing to upward trend in both global and OIC values. Africa has achieved a remarkable 96% recovery, while Europe has seen 93% of arrivals recovered compared to 2019 numbers, as of 2023 (UN Tourism Barometer). These varying performance across regions demonstrate the resilience and gradual recovery of the tourism sector following the disruptions caused by the pandemic, with certain regions leading the way in the resurgence of international travel.

Figure 2.3 displays the distribution of tourist destination countries within OIC countries by income group. In 2022, eight upper middle income OIC countries collectively hosted 94 million tourists, surpassing the eight high income member countries by 30 million visitors in the same year. Whereas, 17 lower middle income and 10 low income member countries hosted 59 million and 5.9 million tourists, respectively (*Figure 2.3*).

Figure 2.3: International Tourist Arrivals to OIC by Income Group, 2015-2022
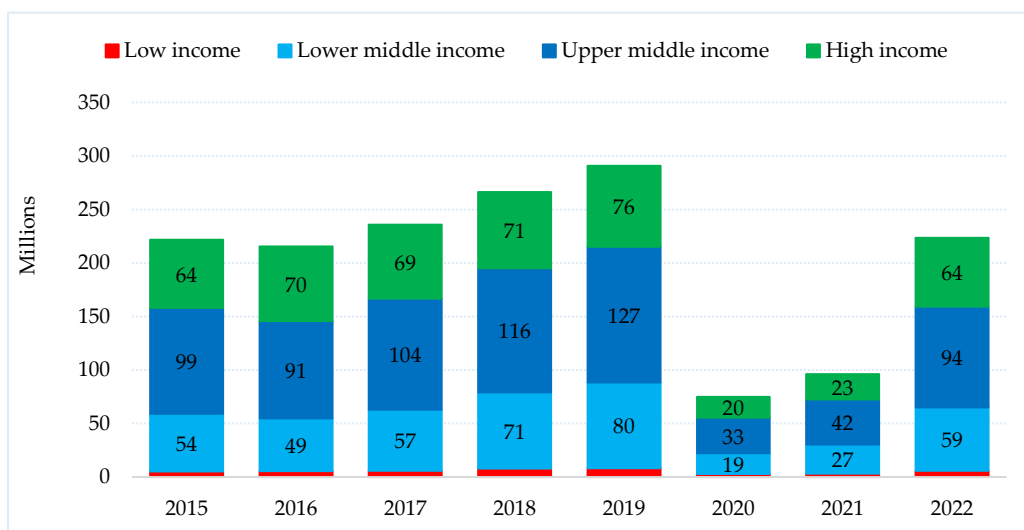
Source: SESRIC staff calculations based on UNWTO Tourism Statistics Database. Estimated based on data available for 43 MCs: 8 high income, 8 upper middle income, 17 lower middle income, 10 low income. For 14 countries, only overnight visitors were used as an estimate of international tourist arrivals due to a lack of same-day visitors' data for the period 2015-2022. In 2021, data for 4 countries was estimated based on 2020 data adjusted with a 12.6% global growth rate, and data for 15 countries in 2022 was estimated based on 2021 data adjusted with a 109.9% global growth rate, as reported on the UNWTO Tourism Data Dashboard.

Normalising tourist arrivals data by population provides valuable insights into the importance of tourism sector to the economy, the degree of countries' dependence on tourism, and the potential effects of tourism on areas like culture, environment, and infrastructure. Comparing tourism numbers across different country groups after normalisation, it becomes evident that developed countries have been more successful in leveraging their tourism potential. This could be attributed to several factors, including their well-connected regional and city infrastructure, facilitated travel arrangements, and less stringent travel restrictions. These countries typically have a more organised and structured travel industry, with well-developed infrastructure that facilitates access to various destinations. As a result, international tourists are more inclined to visit and explore places in these countries, leading to higher tourism numbers compared to other country groups.

In OIC countries, the number of tourist arrivals per population have shown a significant increase, reaching 15 visitors per hundred inhabitant in 2022. However, this figure remains 25% lower than the pre-pandemic levels of 20 visitors per hundred inhabitants. The severity of the situation becomes more apparent in the non-OIC developing countries, where the number of tourists received per hundred population was only nine in 2022. Tourist arrivals per hundred population in developed countries also rose significantly to reach 79 in 2022, but remained well below its pre-pandemic level of 110 in 2019 (*Figure 2.4*).

Figure 2.4: International Tourist Arrivals per 100 People, 2015-2022
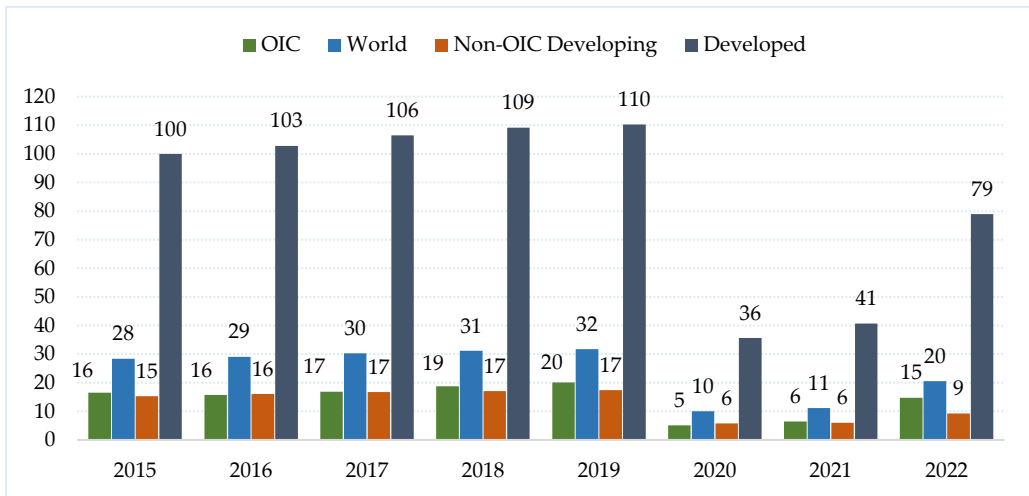
Source: SESRIC staff calculations based on UNWTO Tourism Statistics Database and UNPD World Population Prospects 2022 revision data. Number of arrivals are estimated based on the methodology used in Figure 1 and then weighted with the population.

Similarly, there is a significant disparity in income groups within the OIC, which is comparable to the disparities observed in the global country groups (*Figures 2.4 and 2.5*). In 2022, high income OIC countries with 108 arrivals per population exceeded the number of arrivals per population in developed countries as a group. Upper middle income OIC countries hosted 22 tourists per population, which was above the global average of 20. On the other hand, low income and lower middle income OIC countries received only 3 and 7 tourists per population, respectively, in 2022 (*Figure 2.5*).

Figure 2.5: International Tourist Arrivals per 100 People in the OIC by Income Group, 2015-2022
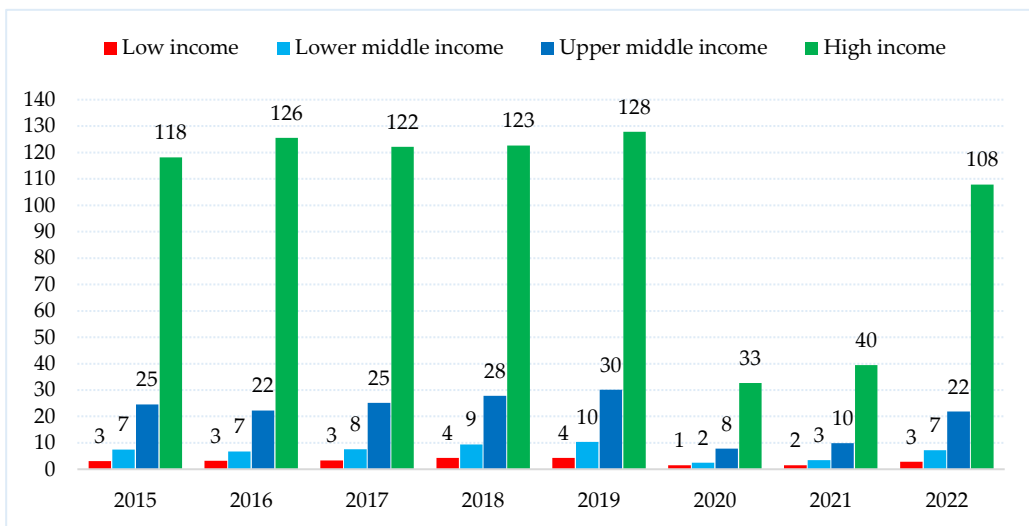
Source: SESRIC staff calculations based on UNWTO Tourism Statistics Database and UNPD World Population Prospects 2022 revision. Figure is estimated based on data available for 43 MCs: 8 high income, 8 upper middle income, 17 lower middle income, 10 low income. Number of arrivals are estimated based on the methodology used in Figure 1 and then weighted with the population.

At the individual country level, Türkiye led among OIC countries with the highest number of international visitors, welcoming 50.5 million arrivals. Türkiye also was among the top 5 countries globally. It was followed by the United Arab Emirates with 22.7 million, Saudi Arabia with 16.6 million, Egypt with 11.7 million, and Morocco with 10.9 million international tourist arrivals in the same year (*Figure 2.6*). These five countries collectively accounted for 50% of total international tourist arrivals to the OIC region, whereas top 10 OIC countries accounted for 66% of total tourist arrivals in 2022.

An important aspect of international tourist arrivals is intra-OIC tourism. Intra-regional tourism plays a vital role in promoting socio-economic development, cultural enrichment, and cooperation among member states of the

Figure 2.6: Tourist Arrivals, Highest Performing OIC Countries in 2022

International Arrivals (in Millions)

Country	Arrivals
Türkiye	50.5
UAE	22.7
Saudi Arabia	16.6
Egypt	11.7
Morocco	10.9
Malaysia	10.1
Albania	7.2
Tunisia	6.4
Indonesia	5.9
Uzbekistan	5.2

Source: UNWTO Tourism Data Dashboard and SESRIC OIC Stat Database.

OIC. In 2020, the number of intra-OIC tourist arrivals, like international tourist arrivals, experienced a sharp decline from 110.8 million to 26.5 million. Following a moderate recovery in 2021, the number of intra-OIC tourists surged to 78.8 million in 2022, corresponding to 71% of pre-pandemic levels (*Figure 2.7, left*). This significant rebound indicates a notable recovery in intra-OIC tourism, showcasing the resilience and adaptability of the sector despite the challenges posed by the pandemic. Yet, the recovery in intra-OIC tourism remains below the recovery in international tourism in OIC countries, requiring further policy measures to support intra-OIC tourism.

At the individual country level, Saudi Arabia leads in intra-OIC tourist arrivals, welcoming 14.1 million tourist from other OIC countries. Türkiye follows closely with 10.5 million, followed by Bahrain with 9.9 million, the United Arab Emirates with 8.5 million, and Kyrgyzstan with 6.1 million intra-OIC visitors (*Figure 2.7, right*). These five countries collectively accounted for 62% of total intra-OIC tourist arrivals, whereas top 10 OIC countries accounted for 84% of total intra-OIC tourist arrivals in 2022.

2.2   International Tourism Receipts

The analyses in the previous section focused primarily on international tourist arrivals from different angles. The focus of this section will shift to tourism receipts, particularly its economic contribution, role, and importance. Tourism receipts encompass the expenditures made by tourists during their visits, including accommodation, food, transportation and other touristic activities. By examining tourism receipts, we can gain valuable insights into how tourism contributes to the economy of OIC countries compared to other country groups.
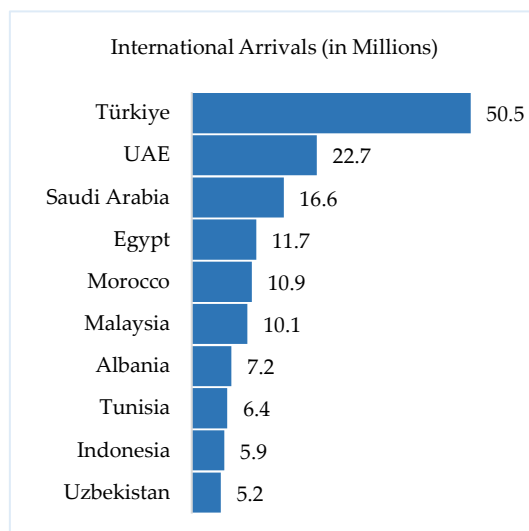
Figure 2.7: Intra-OIC Tourist Arrivals (in Millions), 2015-2022
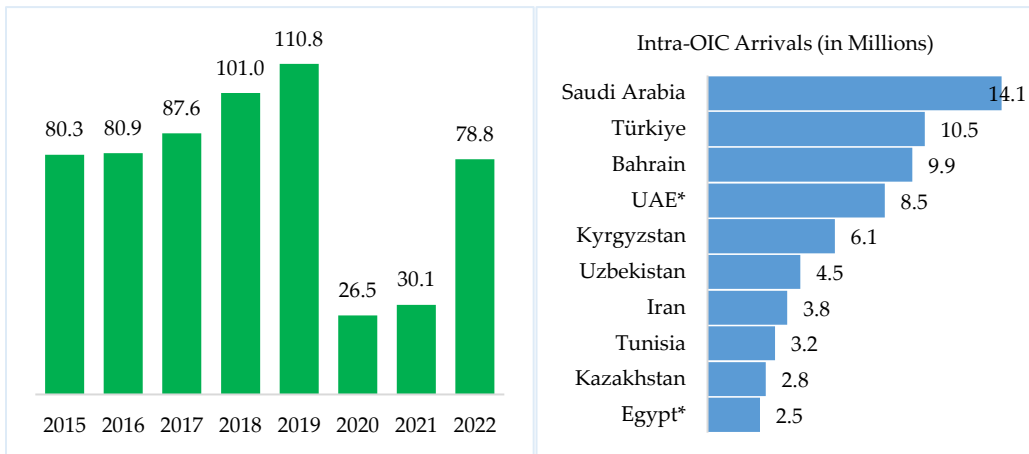
Source: SESRIC staff calculations based on OICStat Databases. Figure is estimated based on data available for 39 OIC MCs. In 2021, data for 4 countries was estimated based on 2020 data adjusted with a 12.6% global growth rate, and data for 16 countries in 2022 was estimated based on 2021 data adjusted with a 109.9% global growth rate, as reported on the UNWTO Tourism Data Dashboard. *Intra-OIC arrivals data for Egypt and UAE are rough estimates based on their 2020 values and global growth rates in 2021 and 2022.

Various factors can influence tourists' expenditures in destination country, including safety, economic stability, and tourism infrastructure. However, the most crucial instrument available to key stakeholders, such as policymakers, tourism development agencies and entrepreneurs, is the development of the quality and appeal of tourist attractions and activities. Well-preserved historical sites, cultural events, and natural landscapes that attract visitors play a significant role in shaping tourist spending patterns. Additionally, promoting unique experiences and providing high-quality services can also influence how tourists allocate their expenditures. By improving and diversifying their tourism offerings, OIC countries have the opportunity to enhance international tourism receipts and stimulate growth in tourism industry.

According to the UN Tourism classification, the international tourism receipts can be grouped into two broad categories: travel and passenger transport receipts. Travel expenditures make up the most part of the total tourist expenditures that includes, accommodation, food and beverage, entertainment, shopping, and other expenditures to tourism-related activities throughout the travel. Passenger transport expenditures cover the costs related to transportation, primarily including airfare, cruises, and train tickets, as well as other means of passenger transportation to the destination and within it.

The international tourism receipts of OIC countries surged to $257 billion in 2022, surpassing pre-pandemic levels and reaching historically the highest level. This growth even outpaced the receipts of the non-OIC developing countries, which totalled $249 billion in 2022, as the latter group has not yet fully recovered to pre-pandemic levels of $382 billion (*Figure 2.8*). The remarkable performance of OIC countries resulted in a surge in their share in global tourism receipts from 14.4% in 2019 to 20.5% in 2022.

According to estimates from the World Travel and Tourism Council (WTTC), international visitors' spending comprised 54.2% of the total tourism receipts of the OIC in 2019. Due to travel

Figure 2.8: International Tourism Receipts, 2015-2022

restrictions, the tourism sector strategy of OIC countries has shifted focus to domestic tourism. As of 2022, domestic tourist spending made up 56.4% of the total tourism receipts of the OIC, equivalent to $282.3 billion, while international visitor spending made up the remaining 43.6% (WTTC, 2023a). This indicates a significant pivot towards domestic tourism as OIC countries adapt to changing travel patterns and restrictions.

In 2022, the largest portion of the international tourism receipts in OIC countries went to high income member countries, totalling $118 billion. Meanwhile, the group of upper middle income countries, which accounted for the largest share of tourist arrivals, earned $87 billion in the same year. International visitor spending in lower-middle income countries amounted to $47 billion, while low-income countries received only $4.5 billion (*Figure 2.9*). This clearly shows that the varying levels of economic development and tourism infrastructure across different income groups within OIC countries impact their ability to attract and capitalise on international tourism expenditure.

International tourism receipts per arrival serve as an important metric for assessing the economic impact of the tourism sector, offering insights into the average spending of tourists in a country. There are multiple factors, including the economic conditions in both the host and home countries of visitors, exchange rates, travel and transportation costs, and the attractiveness of the destination. Besides, it provides an indication of countries' performance in attracting high-spending tourists.

OIC countries demonstrated high receipts per arrival over the entire period, initially slightly below developed countries prior to the pandemic, but experiencing a significant increase afterwards, surpassing all other country groups including the developed countries and attaining

Figure 2.9: International Tourism Receipts in the OIC by Income Groups, 2015-2022
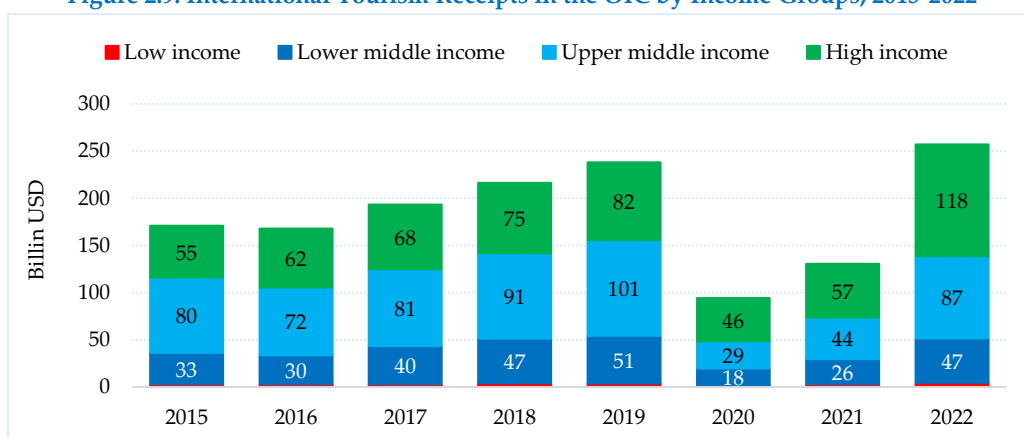
Source: SESRIC staff calculations based on UNWTO Tourism Statistics Database. Data is available data for 50 MCs, calculated as the sum of travel expenditures and passenger transport expenditures, according to UNWTO Methodology. For 7 countries, only travel expenditures were used as an estimate due to a lack of passenger travel expenditures' data for the period 2015-2022. In 2021, data for 3 countries was estimated based on 2020 data adjusted with a 8.3% global growth rate, and data for 17 countries in 2022 was estimated based on 2021 data adjusted with a 74.6% global growth rate, as reported on the UNWTO Tourism Data Dashboard.

$1,148 in 2022. OIC countries consistently excel in offering a wide range of facilities, services, and tourist attractions that encourage higher visitors spending. Developed countries, as a group, received the largest number of tourists from other developed and high income countries, resulting in high receipts per arrival throughout the period under consideration, reaching $869 in 2022. On the other hand, non-OIC developing countries showed stable low level growth in receipts per arrival, increasing from $450 in 2015 to $569 in 2022, remaining the lowest performing group in this regard (*Figure 2.10*).

Figure 2.10: International Tourism Receipts per Arrival (USD), 2015-2022
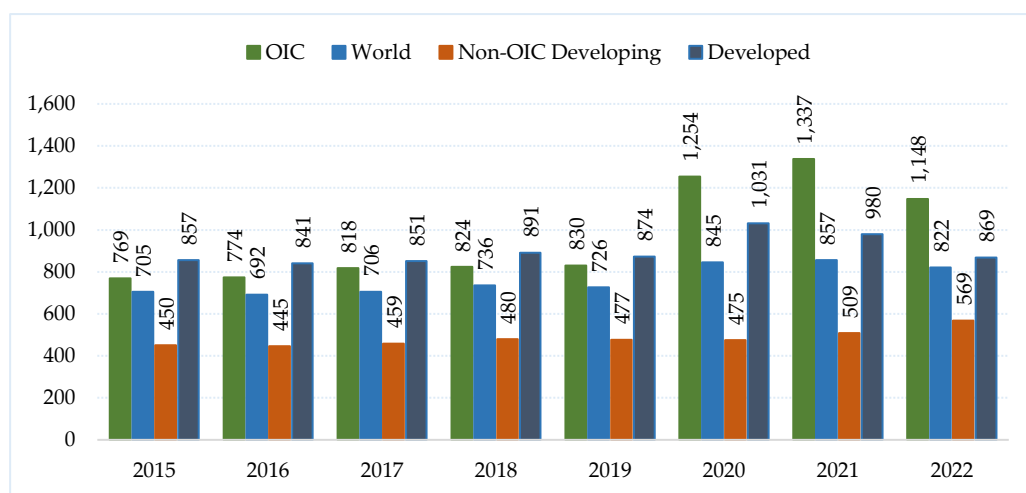
Source: SESRIC staff calculations based on UNWTO Tourism Statistics Database. Data is available for 176 countries (40 OIC, 37 non-OIC developed, 99 non-OIC developing). Calculated through dividing receipts by the number of arrivals, after matching countries. Estimates for the number of arrivals and international tourism receipts are obtained using the methodologies in Figure 2.1 and Figure 2.8.

The progress of OIC countries in the last three years can be largely attributed to the significant growth in tourism receipts in high income countries. International tourism receipts of the high income OIC countries almost doubled from $864 to $1,837 between 2015 and 2022. The flow of receipts per arrival in upper and lower middle income OIC countries mirrored the trajectory of the global and developed countries' average receipts per arrival during the same period. In upper middle income OIC countries, which host the most tourists, receipts per arrival increased from $774 in 2015 to $887 in 2022. Similarly, in lower middle income OIC countries, it increased from $655 to $820 during the period under consideration (*Figure 2.11*). Evidently, the tourism sector in OIC countries, particularly in high-income members, has the potential to make significant contribution to overall economic development and prosperity of the region.

Figure 2.11: International Tourism Receipts per Arrival in the OIC by Income Group (USD), 2015-2022
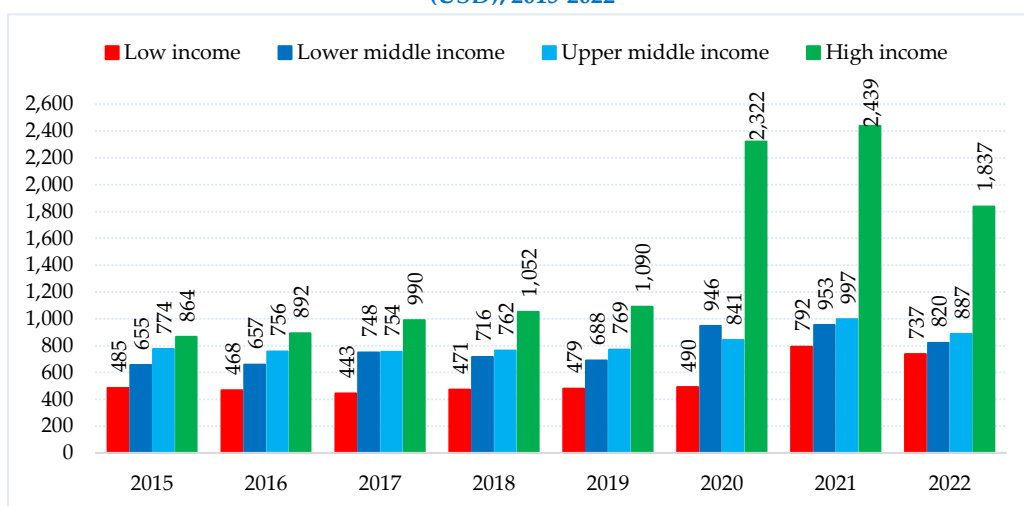
Source: SESRIC staff calculations based on UNWTO Tourism Statistics Database. Calculated through dividing receipts by the number of arrivals, after matching countries. Estimates for the number of arrivals and international tourism receipts are obtained using the methodologies in Figure 2.3 and Figure 2.9.

The positive trend in tourism receipts per international tourist arrival across all income groups is an important indicator of economic growth and development in OIC countries, especially considering the concurrent growth in total arrivals and arrivals per population. This increase reflects overall growth in the tourism sector, which is associated with positive improvements in tourism infrastructure, services, and the overall tourist experience. In this regard, continual monitoring and assessment of these indicators are essential for sustainable growth and prosperity in the OIC region. Among OIC countries, the United Arab Emirates experienced a notable increase in tourism receipts, rising from $30.7 billion in 2019 to $49.3 billion, making it the top performer among the OIC. Türkiye came next with $41.4 billion, followed by Saudi Arabia with $23.5 billion. In terms of spending per arrival, Kuwait led the way at $5,530, followed by Lebanon ($3,628) and Qatar ($2,837) (*Figure 2.12*).

Figure 2.12: International Tourism Receipts, Highest Performing OIC Countries in 2022
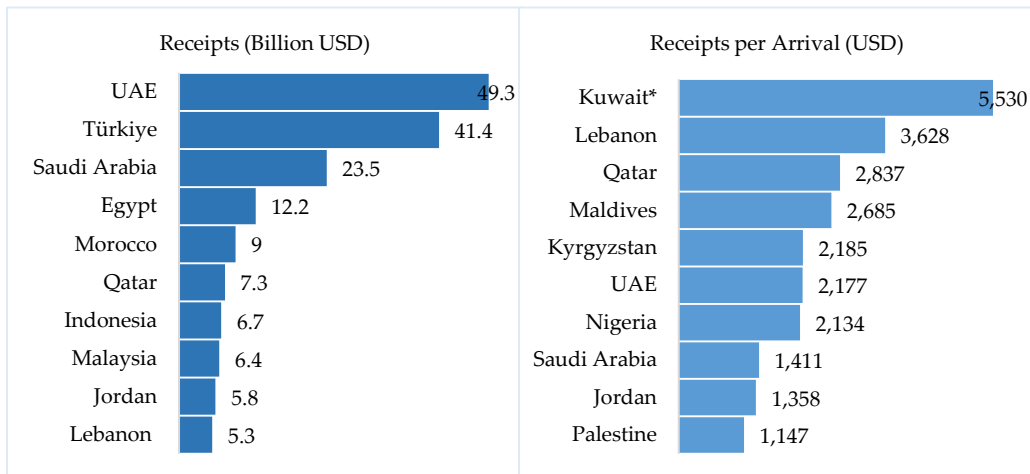
Source: UNWTO Tourism Data Dashboard. * Kuwait's data is for 2021

2.3   Economic Role of International Tourism

International tourism has a multifaceted impact on the economy, benefiting both tourist destinations and outbound countries. Direct economic benefits stem from revenue generation from foreign exchange earnings. Tourists typically spend on accommodation, food, transportation, shopping, and various attractions at the destination sites, thereby boosting the local economy. Besides, the development of international tourism fosters job creation not only within the tourism sector, including hotels, restaurants, and hospitality, but also across other sectors such as retail, sales, entertainment and more. That ultimately leads to higher GDP growth, increased foreign direct investment (FDI) inflows, better infrastructure, a positive balance of payments thanks to foreign exchange inflows, diversification of the economy, and the development of entrepreneurship. In a nutshell, international tourism plays a crucial role in driving economic growth and development by stimulating various sectors and fostering socio-economic prosperity in both destination and outbound countries.

The international tourism sector serves as a pivotal engine of sustainable growth and overall wellbeing for people and communities, employing a significant proportion of labour force and contributing to GDP. However, the pandemic hit the sector the hardest, especially in low income countries, creating additional vulnerabilities on the welfare of population. Addressing these vulnerabilities is essential for fostering more resilient and sustainable development, ensuring that the tourism sector remains a key driver of growth and wellbeing for communities. As of 2023, international tourism generated $9.5 trillion,

Table 2.1: Contribution of Tourism Industry to GDP

	OIC		World	
	Billion USD	% of Total	Trillion USD	% of Total
2019	781	7.8	10.0	10.4
2022	638	6.0	7.7	7.6
2023	754	6.9	9.5	9.2
2033	1,247	8.2	15.5	11.6

Source: WTTC (2023a).

comprising 9.2% of the global GDP. However, the process of the recovery is still ongoing and has not yet reached the levels observed before the pandemic in 2019. The WTTC projections indicate that over the next decade, international tourism will continue to play a significant role, contributing to 11.6% of the global GDP by generating $15.5 trillion across all tourism sector activities (*Table 2.1*).

Figure 2.13 shows the contribution of the tourism sector, including the value generated by both domestic, inbound, outbound and international tourism, to the economy at the individual country level. This indicator serves as a critical measures of the economic importance of the tourism industry. Based on available data for 24 OIC countries, the sector appears to be highly important for the OIC as a whole. Notably, Morocco stands out with economic contribution of the sector accounting for over 7% of its GDP. Morocco is followed by United Arab Emirates (6.2%), Jordan (6%) and Sierra Leone (5.6%) (*Figure 2.13*).

Figure 2.13: Tourism Direct GDP as a Proportion of Total GDP in Selected OIC Countries (%)
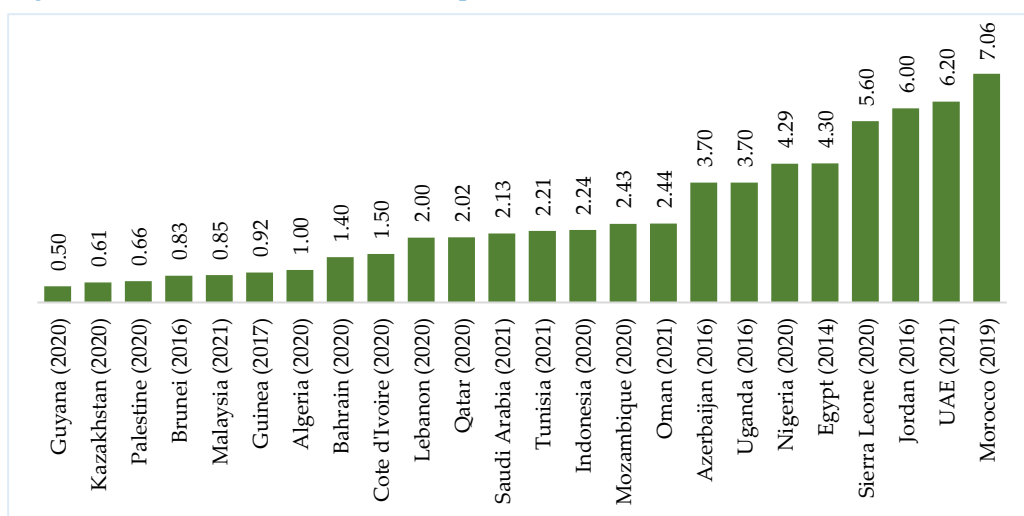
Source: UN SDG Database.

In 2023, the international tourism sector contributed $753.5 billion to the economy, accounting for 6.9% of the total GDP of the OIC countries as a group (*Table 2.1*). The estimated number of jobs created by tourism in OIC countries in 2023 was 45.7 million, accounting for 6.8% of total employment. This figure was below the global average where the sector accounted for 9.6% of total employment, with 320 million people working in the sector. If the tourism sector continues to develop at the same pace, OIC

Table 2.2: Travel and Tourism Industry Jobs

	OIC		World	
	Million	% of Total	Million	% of Total
2019	46.6	7.3	334	10.3
2022	43.4	6.6	295	9.0
2023	45.7	6.8	320	9.6
2033	65.3	8.1	411	11.8

Source: WTTC (2023a).

countries are projected to employ only 8.1% of workers in the tourism sector by 2033, compared to the global average of 11.8% (*Table 2.2*). However, the share of the OIC countries in the global tourism sector, in terms of contribution to GDP, is expected to increase from 7.9% in 2023 to 8.3% in 2033. Similarly, the share of the OIC countries in employment within the tourism sector will also rise, with OIC countries projected to be responsible for

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BOX 2.1: *Commemorative Initiatives of SESRIC for the OIC City of Tourism*

The challenges facing tourism and the development of a sustainable tourism sector in the OIC member countries are multifaceted, considering the diversity of tourism characteristics, level of development, and national priorities and policies. This is often accompanied by limited communication systems and technological services, resulting in a lack of publicity promotion and mass media exposure.

In this context, the OIC City of Tourism initiative serves as a platform for disseminating information about tourism potentials, cultural history, Islamic monuments, and natural wonders. At the OIC Islamic Conference of Tourism Ministers (ICTM), member countries nominate their cities for consideration for the annual "OIC City of Tourism" award, recognizing exceptional contributions to tourism enhancement within OIC countries.

The "OIC City of Tourism" award is an important tourism development initiative with the potential to significantly contribute to the sustainable and long-term economic development of regions, while also enhancing the welfare and livelihood of its peoples. It aims to encourage regular visits to OIC cities for sightseeing and leisure, creating new tourism destinations and attracting investments to these cities. Over the past five years, this esteemed recognition has been awarded to:

- Dhaka, People's Republic of Bangladesh, named the OIC City of Tourism 2019,

- Gabala, Republic of Azerbaijan, named the OIC City of Tourism 2020,

- Şanlıurfa, Republic of Türkiye, named the OIC City of Tourism 2023, and

- Khiva, Republic of Uzbekistan, named the OIC City of Tourism 2024.

In alignment with this initiative, SESRIC organises commemoration programmes in collaboration with multiple stakeholders, typically in the form of seminar and/or training course. For example, SESRIC conducted a one-day commemoration programme for Dhaka as the OIC City of Tourism 2019 on 15 October 2019, featuring two segments: an International Seminar on "*Development of Muslim Friendly Tourism in the Dhaka City*" and an "*Award Ceremony for the best Tour Operators in Dhaka*", recognizing the notable contributions of three tour operators to the city's tourism development.

Recently, as part of the preparations to celebrate Khiva, the OIC City of Tourism for 2024, SESRIC in collaboration with the Islamic Tourism Centre, under the Ministry of Tourism, Arts and Culture of Malaysia, organised an Online Training Course on "*Halal Tourism and Muslim-Friendly Hospitality Services*" on 8-12 January 2024. During the training, participants gained practical insights spanning various crucial areas, from refining hotel services to mastering Ziyarah etiquette, maintaining ethical standards for personnel, and ensuring food standards for Muslim tourists.

15.9% of the world tourism sector employment in 2033 compared to 14.3% in 2023. These projections by the WTTC indicate the potential for growth and development within the tourism sector in OIC countries, with increasing contributions to both GDP and employment. However, efforts to enhance productive employment within the sector need to be prioritised to ensure that OIC countries can fully leverage the economic benefits offered by tourism.

2.4   Potential for Development of Tourism Industry

The previous sections have provided an examination of the current state of tourism in OIC countries, analysing key indicators such as arrivals, receipts, and the sector's economic significance. Building upon this analysis, this section further explores the potential for further development of the tourism industry in OIC countries, leveraging their rich cultural heritage and abundance of touristic sites in nature, with a focus on sustainable tourism. By taking advantage of these opportunities and tackling issues like political instability and security concerns, OIC countries can attract more tourists and reap the economic benefits associated with a thriving tourism sector. In addition to developing infrastructure and promoting sustainable tourism practices, OIC countries can further enhance their tourism sector by improving marketing strategies, and fostering international partnerships. Effective marketing campaigns can raise awareness of the unique attractions and experiences offered by OIC countries, attracting a broader range of tourists.

The Travel and Tourism Development Index (TTDI) evaluates policies and other factors essential for promoting sustainable and resilient development in the tourism sector, which in turn contributes to overall development. The TTDI allows assessing the effectiveness of the existing policies and infrastructure for the development and potential growth of the sector while also allowing policymakers to make informed decisions, develop strategies, allocate resources effectively, and introduce innovative approaches in order to achieve full potential, long-term success and sustainability of the tourism industry (WEF, 2022). It builds on the Travel and Tourism Competitiveness Index (TTCI) by incorporating additional pillars like non-leisure resources, socioeconomic resilience and conditions, and travel and tourism demand pressure and impact, highlighting the sector's role in economic and social development.

The top performing OIC countries in terms of the TTDI in 2021 were the United Arab Emirates (4.5), Indonesia (4.4), and Saudi Arabia (4.3), ranking 25th, 32nd, and 33rd globally, respectively. However, the index values were below the average of developed countries (4.7). Following closely were five other member countries, including, Bahrain, Egypt, Türkiye, Qatar, and Malaysia, with the index values above the global average of 4. The average TTDI value for OIC countries was 3.6. Notably, five OIC countries, namely Chad, Yemen, Mali, Sierra Leone, and Cameroon, had index values below 3 (*Figure 2.14*). These findings highlight variations in tourism development across OIC countries, with some performing above the global average while others lag behind. Addressing the factors contributing to lower TTDI values in certain countries can help foster sustainable and resilient tourism development across the OIC region.

The OIC countries possess significant untapped potential to attract international tourists, thanks to their rich cultural and natural heritage. Hence, many OIC countries are focusing on the development of sustainable tourism and heritage tourism sites.

Figure 2.14: Travel and Tourism Development Index, 2021
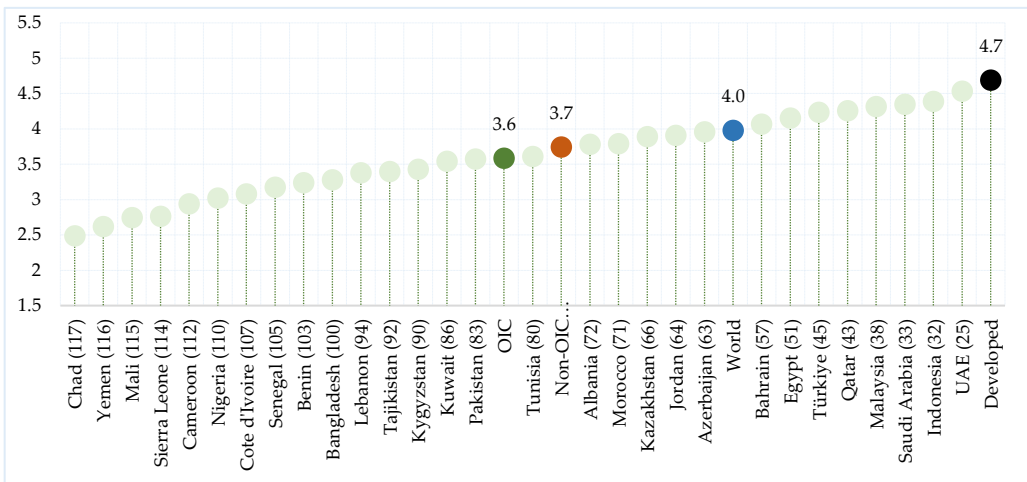
UNESCO's World Heritage List contains 1,199 sites, with 933 being cultural and 227 natural. Out of the 1,199 world heritage sites recorded between 1978 and 2023, around 231 (19%) are located in OIC countries. Out of these, 187 are classified as cultural heritage sites, 35 as natural heritage sites, and 9 as a combination of both natural and cultural. In 2023 alone, UNESCO included 45 new sites to the World Heritage List, with 14 of them being in OIC countries (*Figure 2.15*).

The addition of "Silk Roads: Zarafshan-Karakum Corridor" to the World Heritage list in 2023 is crucial for promoting heritage tourism in Uzbekistan, Tajikistan, and Turkmenistan. This corridor, detailed in *Box 2.2*, showcases the historical significance of the Silk Roads and offers a unique cultural experience for visitors. Likewise, the inclusion of "Cold Winter Deserts of Turan" as a natural site in the same year is noteworthy. This transboundary site, spanning Kazakhstan, Turkmenistan, and Uzbekistan, highlights the diverse natural landscapes of the region and presents opportunities for ecotourism and outdoor exploration.

Figure 2.15: World Heritage Sites (Number)
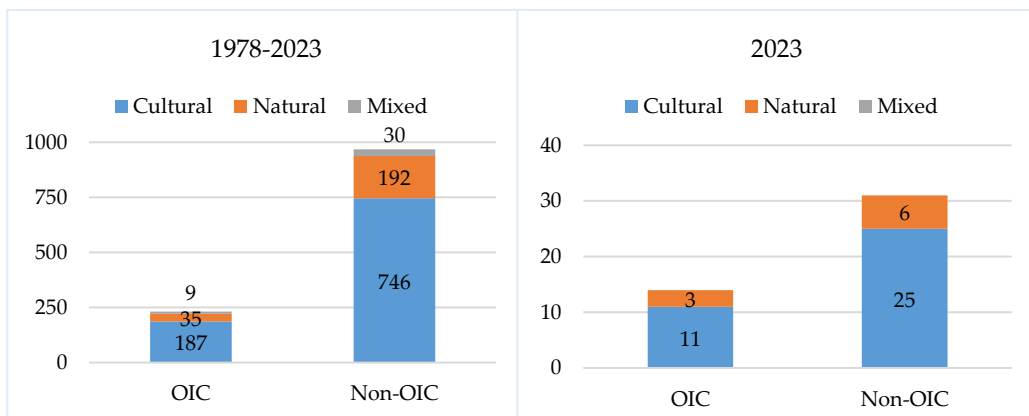
> **BOX 2.2:** *Silk Roads: Zarafshan-Karakum Corridor*
>
> The Zarafshan-Karakum Corridor is a vital part of the Silk Road in Central Asia, which also connected various corridors from different directions. This 866-kilometer corridor runs east to west along the Zarafshan River and passes through the Karakum Desert to the Merv Oasis. It had a major impact on trade and travel along the Silk Roads, particularly, from 200 BCE to 1600 CE. A variety of ethnicities, cultures, religions, sciences, and technologies converged in the corridor. It witnessed the flourishing of the merchants during the rule of empires such as the Sogdian, Parthian, Sassanian, Timurid, and Seljuk. The corridor facilitated the trade of various goods and local products. It was also a place where people settled, conquered, and were defeated.
>
> Throughout its history, the corridor experienced three prosperous periods and exhibited an important interchange of human values and cultural traditions: the rise of Sogdians merchants between the 5th and 8th centuries CE; the thriving trade with the Muslim world and beyond between the 10th and 12th centuries CE, and significant development of science, culture, urban planning and economics under the Turk-Mongols' rule from the 13th century to the 17th century CE. The territory of the corridor is rich in cultural depositions, reflecting the societies shaped by trade and exchange. It represents human interaction with nature, showcasing traditional settlements and land use in diverse geographic areas. The property demonstrates integrity at both the corridor level and the individual component part level, with attributes that convey its outstanding universal value. Its authenticity remains intact, with unchanged geographical conditions and well-preserved sites.
>
> The International Institute for Central Asian Studies (IICAS), based in Samarkand (Uzbekistan) facilitates information sharing and acts as the secretariat for the nomination. Ministries of Culture of the States Parties, including; Uzbekistan, Tajikistan and Turkmenistan are responsible for the management of the cultural heritage, while the costs of management, conservation, and monitoring are covered by government budgets and international aids, with technical support from resources and institutions. Staff capacity has been improved, but there is a need for further strengthening. It is recommended to develop site management plans and interpretation strategies for each component part.
>
> *Source: UNESCO World Heritage Centre*

2.5   Islamic Tourism in OIC Countries

The niche of Muslim tourism and heritage tourism has a great potential due to the wealth of heritage sites, monuments, and facilities in the OIC countries. Recognising this potential, the "Strategic Roadmap for Development of Islamic Tourism" was adopted by the OIC Member Countries during the 10th Islamic Conference of Tourism Ministers (ICTM) held in Dhaka, Bangladesh on 5-7 February 2018. This strategic roadmap, prepared by SESRIC, outlines five major areas for cooperation to enhance the attractiveness of OIC countries as preferred destinations for Muslim tourists, thereby contributing to the growth and development of the tourism sector across the region. The focus areas include data analysis and monitoring, policy and regulation development, marketing and promotion, destination and industry development, and capacity building for tourism professionals. By prioritising these thematic areas and implementing strategic initiatives, OIC countries can unlock the immense potential of Muslim tourism and increase their international tourist arrivals.In 2022, Muslim international arrivals reached 110 million, capturing 68% of the 2019 pre-pandemic levels. According to the projections from the Global Muslim Travel Index (GMTI) 2023 Report, the number of Muslim visitors is anticipated to

reach 160 million in 2024, which represents a return to pre-pandemic levels of arrivals. Furthermore, the report forecasts that by 2028, the number of Muslim visitors will reach 230 million, generating an estimated $225 billion in Muslim tourism receipts (GMTI, 2023). Obviously, there is a significant growth potential of Muslim tourism and there is a need for policies catering to the needs and preferences of Muslim travellers in the global tourism industry.

The Global Muslim Travel Index (GMTI) serves as a benchmark indicator to assess the performance of OIC countries in the sectors highlighted in the above mentioned Strategic Roadmap. By offering a comprehensive view of destinations favoured by Muslim tourists, the GMTI identifies areas for improvement and informs planning strategies for OIC countries in the market. In Muslim friendly tourism, OIC countries as destinations have a vivid advantage over non-OIC countries with an average GMTI value of 54 compared to the world average of 41 (*Figure 2.16*). Malaysia has consistently maintained its position at the top of the GMTI rankings, while Indonesia has made significant progress from 6th place in 2015 to share the top position with Malaysia in 2023. Other countries such as Iran, Egypt, and Uzbekistan have also showed promising improvements, moving up from 14th, 16th, and 27th positions in 2015 to 7th, 9th, and 13th positions by 2023, respectively (GMTI, 2023).

Figure 2.16: Global Muslim Travel Index 2023
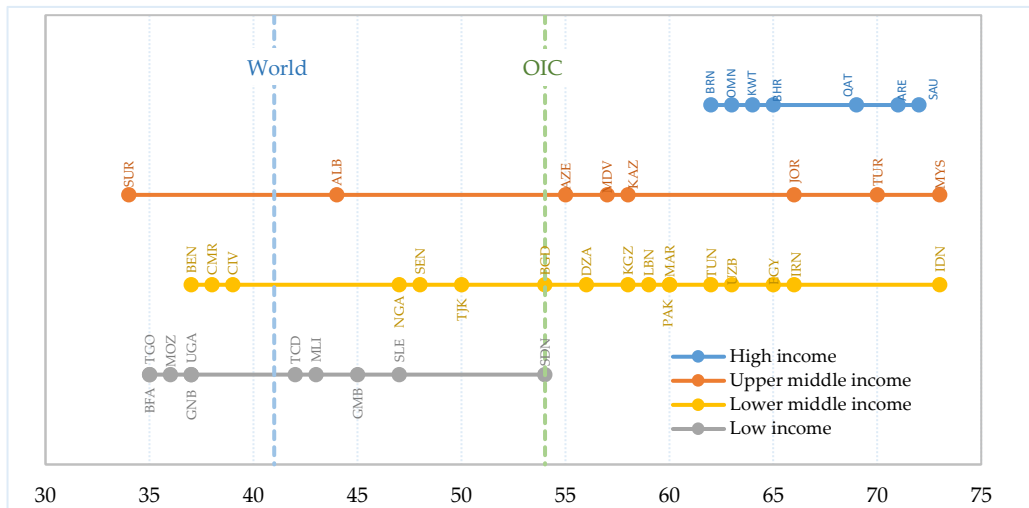
Source: SESRIC staff calculations based on the Global Muslim Travel Index 2023.

Notable advancements in catering to Muslim travellers have been observed in non-OIC countries as well, demonstrating the growing recognition among non-OIC countries on the importance of catering to the needs and preferences of Muslim travellers. Singapore, for example, has led non-OIC destinations in the GMTI rankings over the period from 2015 to 2023, showcasing its appeal and capabilities in catering to Muslim tourists. Thailand's position in the top five also highlights its attractiveness to Muslim tourists, alongside the United Kingdom. Furthermore, Spain's impressive advancement from ninth place to sharing the seventh place by 2023 demonstrates its determination to tap into its potential in the niche market of Islamic tourism, leveraging the wealth of Islamic heritage remaining from Andalusia (GMTI, 2023).

The ACES framework serves as the basis for estimating the GMTI, comprising four key components: Access (10% weight), Communications (20%), Environment (30%), and Services (40%). This framework offers valuable insights for stakeholders in the tourism industry. Access assesses factors such as air and land connectivity, visa requirements, and transport infrastructure quality. Communications evaluates a destination's communication capabilities and marketing efforts targeted at Muslim travellers, including the availability of information and promotional materials tailored to their needs. Environment analyses general safety, faith restrictions, climate suitability, Muslim visitor arrivals, and sustainability initiatives within the destination. Services assess the range and quality of services specifically catering to Muslim travellers, such as prayer places, halal dining options, Muslim-friendly airports, accommodations, heritage experiences, and attractions.

Figure 2.17 depicts the rankings of the OIC countries in the GMTI for the year 2023, from left to right, along with their performances in each criterion of the ACES framework. A notable trend observed across OIC countries, regardless of their ranking, is the deficiency in the communications criterion. The communications criterion evaluates the effectiveness of marketing strategies aimed at attracting Muslim tourists and educating industry stakeholders. It considers factors such as engagement with the Muslim market through digital content, quality of visitor guides, media exposure, and proficiency in foreign languages among local stakeholders. This aspect of destinations attractiveness can be improved through organising capacity-building initiatives and exchange of the best practices. On the other hand, in order to improve their performance in services and access criteria, low-ranking OIC countries must invest significantly in infrastructure and facility development projects. Improvements in these areas can enhance the overall attractiveness of OIC countries as destinations for Muslim tourists and contribute to their competitiveness in the global tourism market.

Figure 2.17: ACES Framework of GMTI, 2023
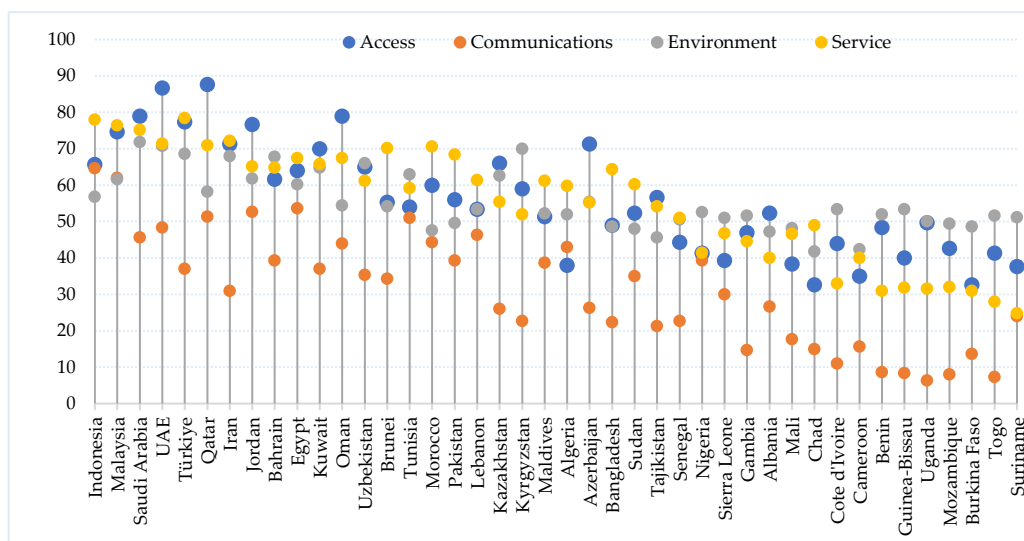
Source: SESRIC staff calculations based on Global Muslim Travel Index 2023

The GMTI Performance Matrix categorises OIC countries into four quadrants based on their GMTI scores and the proportion of Muslim tourists (*Figure 2.18*). This framework serves as a valuable tool for OIC countries to assess their current status in the Muslim travel market and develop targeted growth strategies. These quadrants are as follows:

▪ *Emerging Destinations Quadrant*: This quadrant consists of destinations that are in the initial stages of addressing the needs of Muslim tourists. Countries such as Benin, Burkina Faso, Cote d'Ivoire, Guinea-Bissau, Mali, Nigeria and Togo fall into this category as they are beginning to develop their Muslim-friendly tourism offerings.

▪ *Trailblazers Quadrant:* Leading destinations that already cater well to Muslim tourists are categorized in this quadrant. Examples include Algeria, Azerbaijan, Bahrain, Brunei, Egypt, Indonesia, Iran, Jordan, Kazakhstan, Kuwait, Kyrgyzstan, Lebanon, Malaysia, Morocco, Oman, Pakistan, Qatar, Saudi Arabia, Sudan, Tajikistan, Tunisia, Türkiye, United Arab Emirates and Uzbekistan. These countries have established themselves as attractive destinations for Muslim travellers and offer a wide range of Muslim-friendly services and amenities.

▪ *Untapped Potential Quadrant*: Destinations with significant potential to attract Muslim tourists but have yet to fully tap into this opportunity are placed in this quadrant. Countries like Albania, Cameroon, Chad, Gambia, Mali, Mozambique, Senegal, Sierra Leone, Suriname and Uganda possess cultural and natural attractions that could appeal to Muslim travellers, but they have not fully developed comprehensive Muslim-friendly services and amenities.

▪ *Potential Leaders Quadrant:* This quadrant consists of countries that show promise in becoming leaders in catering to Muslim tourists. Bangladesh and the Maldives are identified as potential leaders due to their appealing offerings and services for Muslim visitors. These countries have the potential to further develop their Muslim-friendly tourism infrastructure and attract more Muslim travellers in the future.

Figure 2.18: GMTI Performance Matrix (GPM) for OIC Countries, 2023
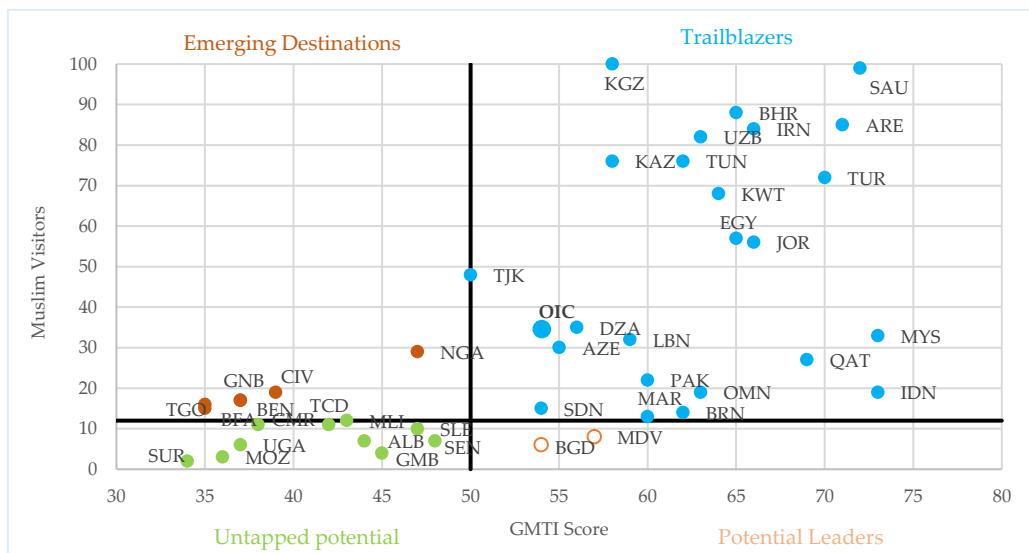
Source: SESRIC staff calculations based on Global Muslim Travel Index 2023 Report data and methodology.

> ### BOX 2.3: *Advancing Halal Tourism Globally*
>
> The concept of "Halal", once confined primarily to food and beverages, has now expanded to encompass a wide range of products and activities, including pharmaceuticals, cosmetics, tourism, finance and media. This evolution is driven by growing demand from Muslim consumers and global trends towards ethical consumption and sustainability.
>
> Islamic tourism has emerged as the fastest-growing sector, showing rapid expansion and becoming a significant segment in the global tourism market. Despite the potential for OIC countries to lead the Halal industry, some national ecosystems are not yet fully prepared due to cultural, socio-economic factors, and existing challenges. To ensure stability and growth, there is an urgent need for skilled human resources, particularly in management, operations and logistics.
>
> In response to this, SESRIC collaborates with OIC national and international stakeholders to enhance Halal tourism performance and activities, not only within OIC member countries, but also globally. For instance, through the COMCEC Project Funding (CPF), several SESRIC projects have been financed since 2014. One such project was focused on "Improving Islamic Tourism Ecosystem in OIC Member Countries: Destination and Industry Development", selected within the 2018 implementation period of CPF. Building upon the "*Development and Promotion of Muslim-Friendly Tourism*" project implemented by SESRIC in 2017, its aim was to increase the capacity of the relevant government officials from Tourism Ministries of the OIC countries through capacity development training and exchange of experience. This included two days training course and two days study visits in the area. The main objective of the programme was to provide participants with an exceptional opportunity to learn how to develop a sound Islamic tourism destination and industry in their countries.
>
>
>
> Additionally, SESRIC, in collaboration with the Ministry of National Development Planning of the Republic of Indonesia (BAPPENAS) and the Islamic Centre for Development of Trade (ICDT), organised an Online Workshop on "*Halal Industry Development in OIC Member Countries*" on 24-25 May 2024 under its Tourism Capacity Building (Tourism-CaB) and Halal Capacity Building (Halal-CaB) Programmes. Attended by 220 participants from 25 OIC Member Countries, the workshop brought together representatives from academia, ministries and government agencies relevant to trade, industry, tourism, and Islamic finance and economics affairs. The workshop aimed to facilitate knowledge sharing and the exchange of best practices in Halal industry development, including Halal tourism, among relevant national institutions in OIC countries. Furthermore, SESRIC is also exploring potential cooperation with UN Tourism for initiatives on developing a unified halal tourism certification.

Chapter Three

Empowering Smart Tourism in the Age of Digital Transformation

Technology has become a fundamental component of contemporary travel, influencing everything from trip planning, communication, transactions and beyond. The tourism and hospitality industry is undergoing swift transformation propelled by digital advancements. In this evolving landscape, some industry leaders are at the forefront, leveraging data-driven approaches and digital tools to provide innovative and personalized experiences for guests, whereas many others are exploring the opportunities for digital transformation. This shift underscores the imperative for businesses in the tourism and hospitality sector to embrace technology, not only to meet guest expectations but also to remain competitive in an increasingly digitalized marketplace.

Digital transformation holds immense significance for businesses, particularly in the tourism and hospitality industry, as it addresses key imperatives for success. First and foremost, it revolves around enhancing the customer experience by refining processes and utilizing technology to craft exceptional and personalized journeys. Understanding customer needs is facilitated through data-driven insights, enabling tailored experiences that elevate satisfaction. The adoption of digital tools and automation not only improves operational efficiency but also allows for more personalized, human-centric services. Informed decision-making is empowered by data insights, providing essential information for effective business and destination management. Additionally, the promotion of industry collaboration emerges as a critical aspect, with shared data and resources enhancing collective knowledge, offsetting costs, and fostering synergy among stakeholders. Ultimately, embracing digital transformation emerges as a strategic imperative for businesses aiming to thrive in a rapidly evolving digital landscape.

In this connection, this chapter re views the latest advancements in digital transformation of tourism services in the world and elaborates on the smart tourism concept by focusing on smart destinations, travel facilitation and sustainability. A number of good practices are also presented to demonstrate alternative perspective on implementation of smart tourism.

3.1   Digitalization of Tourism Services

Digital technologies have brought about a transformative revolution in the tourism cycle, reshaping how travellers engage with every aspect of their journey. From the initial stages of planning and booking adventures through online travel agencies, to the post-trip phase where experiences are shared on social media platforms through reviews and holiday pictures, the entire travel landscape has been significantly impacted by the integration of digital tools.

The digital transformation in the tourism industry entails incorporating modern solutions into the daily tasks of organizing travel. This includes adopting contemporary approaches for tasks such as selecting destinations, planning itineraries, booking flights and various modes of transportation, reserving hotels, and generating offers that are highly customized to meet customers' needs. Additionally, it involves the utilization of virtual tours, allowing individuals to explore destinations virtually before making their final travel decisions.

Digital transformation in the travel industry involves the integration of digital technologies such as cloud platforms, internet of things (IoT), artificial intelligence (AI), and machine learning (ML) across all facets of a business. This transformation extends beyond technology to impact people and processes, necessitating a comprehensive culture shift throughout the organization.

Automation, real-time data utilization, and agile processes enable travel companies to enhance responsiveness, adapt to market shifts, and effectively compete. The adoption of these digital transformation pillars empowers marketing teams to create seamless and highly personalized customer journeys, thereby elevating overall customer experiences. The ultimate outcome is digitally enabled growth within the travel and tourism industry (OECD, 2020).

There are five major trends associated with the digitalization of tourism sector. These include transformation of customer experience, data-driven decision making, global reach and market access, sustainable tourism management and innovations in marketing and branding.

Transformation of Customer Experience: Digitalization has fundamentally altered the way travellers engage with the tourism sector, providing a heightened level of personalization and convenience. From sophisticated booking platforms to AI-driven travel recommendations, digital tools have elevated the overall customer experience. Travelers now expect user-friendly interfaces, and businesses are compelled to adapt to these evolving expectations.

The entire tourism experience, from pre-booking to the post-trip phase, undergoes a comprehensive transformation. In the pre-booking phase, the internet and social networks significantly influence destination choices, with online opinions weighing more than traditional sources. Social media's role in creating an imitation effect among users further shapes travel decisions. The purchase phase witnesses a shift toward disintermediation, where travellers autonomously book trips online, emphasizing the strategic importance of a strong digital presence for businesses. During the journey, social networks continue to play a pivotal role, with travellers using them extensively to share experiences. Smartphones have become indispensable tools, influencing information consumption, content sharing, and the crucial aspect of leaving reviews. The post-trip phase reflects a cyclical dimension of tourism, where shared content on social networks influences others' travel decisions. Digital transformation has not only changed behaviours and expectations of tourists but also provided operators with tools to cater to the more digitally savvy and demanding consumer.

Data-Driven Decision-Making: The integration of digital technologies has inaugurated an era of data-driven insights in the tourism industry. This transformation enables tourism businesses to leverage analytics and machine learning, extracting valuable information on customer behaviours, preferences, and market trends. This data-driven approach enhances strategic planning, facilitating targeted marketing initiatives, personalized services, and the optimized allocation of resources for improved operational efficiency. Digital tourism also represents a new approach to the kind of experience that professionals in the sector can offer tourists. It is thanks to Big Data that all these operators can perfectly profile their clients and build a highly personalized offer that is in line with their characteristics and preferences.

Global Reach and Market Access: Digitalization has not only revolutionized the operational landscape but has also gone beyond geographical boundaries, offering tourism businesses, irrespective of their size, an expansive platform to connect with a global audience. The advent of online booking systems, social media marketing, and digital advertising has democratized market access, dismantling traditional barriers and empowering small enterprises to compete on a broader stage. This democratization of the digital space has sparked increased market diversification, providing a wealth of economic opportunities for a wide array of businesses

within the tourism sector. Now, even modest-sized enterprises can harness the power of digital tools to showcase their offerings, attract international clients, and participate in the global tourism ecosystem, fostering a more inclusive and dynamic industry landscape.

Sustainable Tourism Management: Smart technologies and digital tools are instrumental in fostering sustainability within the tourism sector. Destination management systems utilize IoT devices, data analytics, and smart infrastructure to optimize resource utilization, reduce environmental impact, and enhance the overall sustainability of tourist destinations. Digitalization supports eco-friendly practices, aligning tourism with global sustainability goals. The utilization of smart technologies allows for the implementation of innovative solutions such as smart transportation systems, eco-friendly accommodations, and conservation initiatives. These not only enhance the visitor experience but also contribute significantly to the preservation of natural resources and the protection of local ecosystems.

Innovations in Marketing and Branding: The digital era has reshaped marketing strategies within the tourism sector. Influencer collaborations, content marketing, and targeted advertising campaigns dominate the digital landscape. Social media platforms serve as powerful tools for destination promotion and engagement with potential travellers. Tourism businesses must strategically navigate these digital marketing avenues to build brand presence, foster positive perceptions, and effectively compete in the highly dynamic online environment.

Technology can be as a key enabler and differentiator for tourism destinations. Destinations embracing technology gain a competitive edge, ensuring sustainability and responsiveness to evolving guest needs, epitomizing a shift towards intelligent, guest-centric tourism models. Integration of technology into core operations facilitates excellence in efficiency, innovation, and customer satisfaction. This integration results in maximized returns on technology investments, surpassing business objectives for both immediate gains and long-term strategic growth. The approach also enables a harmonious blend of personalized guest experiences with efficient destination operations, enhancing both guest satisfaction and operational effectiveness. Moreover, technology fosters collaboration among destinations, encouraging the sharing of best practices and insights to drive innovation and strategic development (PwC, 2024).

3.2   Smart Tourism

The incorporation of technologies like the IoT, location-based services, artificial intelligence, augmented and virtual reality, and blockchain has significantly enhanced the appeal, efficiency, inclusivity, and sustainability of the tourism industry. This integration has led to the development of smart destinations, optimizing travel experiences by detecting seasonal and situational influences in specific locations. For instance, algorithms in trip booking platforms leveraging these technologies can intelligently recommend destinations based on favourable weather conditions and avoid overcrowded locations, ensuring a more tailored and enjoyable travel experience for tourists (U4SSC, 2022).

These technologies are helping to make almost everything 'smart'. People use smartphones, construct smart residences equipped with smart TVs and smart appliances, and live in smart cities that leverage advanced technologies for enhanced living experiences. As a result of the rise of

information technology and the need for sustainability, the smart phenomenon has also penetrated into the tourism sector.

The concept of "smart tourism" harnesses the potential of information and communication tools to integrate digital information and services into the tourist experience seamlessly (Visa Index, 2023). It is tourism supported by integrated efforts at a destination to collect and aggregate/ harness data derived from physical infrastructure social connections, government/ organizational sources, and human bodies/ minds in combination with the use of advanced technologies to transform that data into on-site experiences and business value propositions with a clear focus on efficiency, sustainability, and experience enrichment (Gretzel et al., 2015). Its aim is to provide tourists with more personalized, convenient, efficient, and safe travel options. Moreover, it contributes to the economic growth of host countries, preserves cultural heritage, and minimizes the environmental impact of the tourism industry. Investing in information and communication based technology enhances visitor engagement, ultimately attracting more tourist revenue. To this end, this section provides some general information on the advantages and applications of smart tourism based mainly on Xiang et al (2022) and Hassan (2022).

3.2.1 Empowering Smart Tourism for Sustainable Travel Experiences

Adopting and applying smart tourism practices involves several key strategies. Firstly, countries need to be open to embracing innovative technologies that support the creation of new tourism products and services aligned with smart tourism objectives. This might involve the integration of mobile applications, websites, and IoT devices that offer tourists flexible solutions through various digital touchpoints. These technologies can enhance the overall tourist experience by providing real-time information about attractions, transportation, and events, as well as facilitating easy access to services. Mobile apps and websites can be especially effective in connecting with tourists on the go, providing them with a centralized platform for planning and navigating their trips.

Moreover, smart tourism practices encourage the promotion and incorporation of sustainable practices to ensure the long-term well-being of communities and economies. Collaboration between countries and cities is crucial to fostering dialogue, sharing successful practices, and developing an international knowledge base for future innovations in tourism. Promoting sustainability can help countries not only enhance the longevity of their tourist destinations but also contribute to global efforts to reduce the environmental impact of tourism.

Practical applications of smart tourism extend to providing tourists with personalized recommendations based on individual preferences. These technologies can also incorporate augmented reality, offering immersive and interactive experiences at historical sites and landmarks. Furthermore, integrating more technological solutions can contribute to reducing the carbon footprint of the local tourism sector by minimizing the need for excessive driving and the use of paper products.

For host countries, the data gathered from various digital touchpoints can be utilized to gain valuable insights into visitor behaviour. This information is instrumental in creating tailored marketing strategies, optimizing resource use, and implementing more effective and efficient tourism management practices. Thereby, smart tourism applications play a pivotal role in transforming how travellers engage with destinations, enhancing convenience, personalization, and sustainability in the tourism industry. Adopting smart tourism practices is not just a trend; it's a strategic imperative for creating efficient, personalized, and sustainable travel experiences that align with the expectations of 21st-century tourists.

3.2.2 Applications of Smart Tourism

Smart tourism encompasses various types and applications, each geared toward enhancing different facets of the travel experience. One category is destination management systems, which leverage data analytics and IoT technology to optimize resource allocation and promote sustainability in tourist destinations. These systems play a crucial role in efficient management and environmental responsibility.

Convenient informational solutions form another aspect of smart tourism, with mobile applications and websites delivering real-time information. These solutions are instrumental in providing navigation assistance and personalized recommendations for attractions and dining, contributing to a seamless and personalized travel experience. Augmented and virtual reality solutions are also part of smart tourism, offering immersive and educational experiences for tourists. Particularly effective at historical sites or cultural attractions, augmented reality and virtual reality technologies enhance engagement and understanding of the destination's heritage.

Smart tourism extends to the implementation of smart transportation systems, incorporating real-time information on traffic, public transportation, smart parking solutions, and ride-sharing. This integration enhances local mobility, making transportation smoother for tourists and benefiting residents by mitigating traffic issues, noise pollution, and overcrowding in residential areas.

Innovative safety measures are integral to smart tourism, addressing tourists' concerns about safety during travel. Host countries or cities can deploy surveillance cameras, emergency alert systems, and crowd monitoring to create a secure and well-managed tourism sector, instilling confidence in travellers about their well-being during their visit.

3.2.3   Advantages of Smart Tourism

Smart tourism has advantages for both tourists and local residents. Tourists benefit from enhanced convenience, gaining easy access to real-time information about attractions, transportation, and services, streamlining planning and navigation. Smart safety features contribute to a sense of security, and AR/VR experiences enrich their visits with immersive explorations of favourite sites.

For host destinations, smart tourism ensures preparedness for increased tourist numbers, facilitating the smooth operation of the tourism sector over the long term. By promoting sustainability and responsible tourism, it safeguards the local environment and heritage. Improved transportation, safety measures, and community monitoring also provide residents with increased local conveniences. Additionally, host destinations can achieve tourist quotas and foster economic growth.

In this connection, it can be argued that smart tourism creates a mutually beneficial scenario for visitors and destinations. It elevates the tourist experience by offering smooth and enjoyable moments, while simultaneously boosting revenue for destinations to continually enhance their products, services, public systems, and resources.

3.2.4   Strategies for Implementing Smart Tourism

Implementing a successful smart tourism infrastructure requires a holistic approach that considers long-term goals and the impact on the community. Collaboration among stakeholders is crucial to align objectives with smart tourism principles and local needs. Extensive research is essential to ensure the benefits for both tourists and residents. Once a plan is developed, securing adequate funding is paramount. Project managers need to choose technology wisely, such as IoT sensors, mobile apps, and data analytics systems, creating a budget with sustainability in mind. As smart tourism projects evolve, revenue can be reinvested in larger systems and digital platforms, fostering job creation and benefiting local communities.

A well-executed smart tourism initiative should be dynamic and collaborative, allowing for continuous improvement and safeguarding local treasures. In this era of technological advancement, smart tourism exemplifies innovation in travel, revolutionizing exploration in an interconnected world. Beyond convenience, it strives for sustainability and security, offering a glimpse into a future where travel combines technology with adventure. The future of tourism is undoubtedly smarter and more promising, assuring extraordinary journeys and unforgettable memories.

According to MIDA (2021), implementing smart tourism involves various methods to enhance accessibility, sustainability, information sharing, research, and the overall tourist experience:

- **Accessibility:** A smart tourism initiative should ensure accessibility for everyone, encompassing physical and digital aspects without discrimination. Language, communication modes, and detailed information on tourism products must be inclusive.

- **Sustainability:** Focusing on sustainability involves reducing the carbon footprint, adopting eco-friendly practices, and considering host communities. Smart technology, such as solar-powered lighting and eco-labelled products, plays a crucial role in promoting sustainable tourism.

- **Information Sharing:** Digital tools like social media, QR codes, and mini-programs facilitate efficient information sharing with tourists. These tools enhance engagement throughout the visitor's journey, allowing companies to run smarter promotional and marketing campaigns.

- **Research and Management:** Tourism organizations utilize research and management tools, such as customer relationship management programs and tourism flow monitors, to improve business outcomes. Smart tools like parking apps contribute to congestion reduction and enhanced visitor accessibility.

- **Tourist Experience:** Innovations in technology are transforming the tourist experience. From AR applications to gaming and virtual reality, tourism providers are adopting various technological approaches. For instance, destinations like Qiandao Lake in China offer virtual reality hot air balloon experiences, adding a new dimension to tourist attractions.

3.3   Smart Destinations

Information and communication technologies (ICTs) have fundamentally transformed the industries, including tourism, affecting processes, products, and responses to evolving client demands. To ensure sustainability and innovation, destinations must adapt their tourism models, integrating technologies that contribute positively to residents' quality of life and safeguard nature and culture. In the face of emerging challenges such as the COVID-19 pandemic, destinations must prioritize becoming more sustainable, safer, and resilient, with technology playing a crucial role in achieving these goals. The Smart Tourist Destinations (STDs) framework emerges as essential for shaping the "tourism of the future," characterized by sustainability, safety, inclusivity, resilience, economic and social benefits, environmental preservation, and the central role of ICTs and renewable technologies in destination planning.

The concept of STDs evolves from the definition of smart cities (U4SSC, 2022). The International Telecommunication Union (ITU), together with the United Nations Economic Commission for Europe (UNECE), developed the following definition for smart sustainable cities (SSC): *"A smart sustainable city is an innovative city that uses information and communication technologies (ICTs) and other means to improve quality of life, efficiency of urban operation and services, and competitiveness, while ensuring that it meets the needs of present and future generations with respect to economic, social, environmental as well as cultural aspects".*

In this connection, a tourist destination is smart when it makes intensive use of the technological infrastructure provided by the smart city in order to improve the tourism experience of the visitors, personalize it and make them aware of the tourism products and services available in the destination (U4SSC, 2022). Furthermore, the STDs framework provides access to data generated, directed, and processed through the destination's technological infrastructure. This empowers Destination Management Organizations (DMOs), local institutions, and tourism businesses to make informed decisions and take strategic actions based on the insights derived from this data (Lamsfus et al., 2015). A STD can also be understood as a system linking visitors, citizens and all local organizations, which allows services to be obtained in real time (Buhalis et al, 2015).

Figure 3.1: Key Features of a Smart Destination

Governance

Strong tourism governance that must create a strategic vision for the future of the destination, identify and implement all actions identified as strategic for the destination.

Technology

Digital transformation of the destination across the board, deploying and incorporating cutting edge technologies for critical processes.

Accessibility

Develop a "universal design for everybody" that allows anyone full access to the destination, without exclusions of any kind, guaranteeing the equal right to fully enjoy the destination.

Innovation

A continuous improvement process, carried out systematically, to bring new ideas and facilitates value generation, helping to reduce risks.

Sustainability

Treating the authenticity and cultural diversity of the destination with respect, and expanding the opportunities and benefits of tourism to the local population are key to social and economic sustainability.

Source: U4SSC (2022). The methodology has been proposed by the State Mercantile Society for the Management of Innovation and Tourism Technologies (SEGITTUR) of Spain. This methodology is also supported by UN World Tourism Organization.

Tourism has far-reaching impacts on both the social and economic activities within the territory it encompasses. As a result, effective management of tourism cannot occur in isolation or fragmentation. STDs should be comprehended as complex and interdependent systems that involve various sectors and stakeholders. These stakeholders form a cohesive ecosystem where all actors are interconnected. Key features of a smart destination include the following five pillars: governance, innovation, technology, sustainability and universal accessibility (*Figure 3.1*).

Governance highlights the importance of robust tourism governance, involving public-private partnerships, government support, and strategic vision for effective implementation. Innovation fosters continuous improvement in services and marketing, encouraging creativity and value generation. The technology pillar focuses on the digital transformation of destinations, utilizing cutting-edge tools for enhanced tourist experiences, online reservations, and data analysis. Sustainability emphasizes a long-term perspective, integrating responsible tourism policies, cultural conservation, and environmental preservation. Lastly, accessibility ensures universal design, promoting equal access for all, encompassing physical and sensory considerations along with adherence to international standards.

As a good practice in Spain, the Secretariat of State for Tourism and SEGITTUR jointly coordinate the Smart Destinations Network (Red DTI) since its creation in February 2019. The Network provides advice on how the methodology can be applied, and promotes an exchange of experience and best practice among its members. It is a meeting point and support tool for destinations in their transformation process towards a smart, digital management model and more sustainable

tourism development. Only those destinations that obtain a score of 80% or more in meeting the requirements set out in the Smart Tourist Destination methodology are worthy of the Smart Tourism Destination recognition. The Network currently has 618 members. Of these, 437 are destinations, 87 are institutions, 91 are companies, and 3 are observers (as of January 2024).[1]

The concept of smart destinations impacts various management aspects, fostering transparency, digital transformation, sustainability, and economic development. The integration of multiple stakeholders in tourist destinations presents opportunities for cross-sectoral improvements, including safety, communication, healthcare, transportation, and leisure. The development of STDs is crucial for addressing congestion issues in cities and promoting the redistribution of visitors to less-visited areas.

The Spanish Secretariat of State for Tourism has contributed to the development of STDs through standards such as UNE 178501, defining requirements for STD management systems, UNE 178502, providing indicators and tools, UNE 178503, establishing semantics for tourism, and UNE 178504, outlining requirements for transforming accommodations into smart, connected entities within tourist destinations or smart cities. These standards create a consistent framework for the development of STDs aligned with the principles of smart cities, enhancing governance, innovation, technology, universal accessibility, and sustainability.

Today, travellers have high expectations for efficiency and a low tolerance for barriers to global mobility. Smart tourism would help authorities to improve their capacities on these dimensions. Challenges in smart tourism include an ineffective approach to travel security and border control due to overlapping government agencies, leading to inefficiencies and compromised security. Additionally, tourism SMEs with limited digitalization hinder the adoption of digital tools, limiting inclusion in digital business ecosystems and impeding support for innovative digital companies.

The use of technology also improves the response capacities of relevant institutions to emerging needs and challenges and facilitates their adaptation to new environment. *Table 3.1* demonstrates a number examples to such situations.

Accelerating digital transformation in tourism, especially in destination management, is crucial for natural resource conservation, heritage preservation, and overall liveability. The fourth industrial revolution and data convergence offer opportunities to transform tourism through technologically enhanced innovations. Smart tourism can enhance inhabitant engagement, decision-making, social inclusion, and citizen-centric services, treating tourists as temporary inhabitants, ensuring holistic and integrated engagement (SEGITTUR, 2023).

There are a number of success cases in developing STDs. Several cities in Spain, such as Cáceres, Las Palmas de Gran Canaria, Valencia and La Nucia, have embraced smart tourism initiatives. In Cáceres, a Smart Tourist Destination Platform enhances city management by visualizing its state, allowing unified strategies with various stakeholders, and tailoring services for an improved tourist experience. Las Palmas de Gran Canaria employs an open IoT and Big Data platform to integrate diverse sources, providing valuable information for citizens, tourists, and managers to make informed decisions. Valencia emphasizes decarbonizing tourism for a model contributing to social and environmental well-being, protecting cultural heritage. La Nucia stands out as a Smart Sports Destination, transforming the approach to sports tourism with innovative projects centred around the Camilo Cano Sports City (U4SSC, 2022).

Table 3.1: Possible Solutions and Expected Benefits to Potential Challenges in Destination Management

	Challenge	Solution	Benefits
Tourism spatial management	In situations where social distancing and tourist safety play vital roles, it is essential to transform the experience by guaranteeing safe experiences, in open spaces, and in cultural and heritage sites.	The solution would involve two modules: one for monitoring space flow and capacity, and the other for managing climatological and comfort variables to preserve historical and cultural heritage. It facilitates maintenance tasks and resource optimization through data analysis.	▪ Increased competitiveness through better use of tourism resources. ▪ Improved quality of stay for visitors and quality of life for residents. ▪ Promoting the sustainable development of the destination in terms of its environmental, economic, cultural and safety aspects.
Promotion and tourist relations channels	The main challenge involves providing tourists with contents and tools that contribute to improving their experience at the destination, in addition to offering updated information on the different areas and services of the territory, making them feel safer and more welcome.	The solution for this would include a manager who provides tourists with content and tools that contribute to improving their experience at the destination, while offering updated information on the different areas and services in the territory that contribute to increasing the tourist's perception of safety.	▪ Maintaining the interaction with the tourist in all phases of the trip (planning, during and after the trip) through multiple channels. ▪ Enabling the channels to adapt to new usage trends and their contents to the new tourist demand. ▪ Constant evaluation of the feedback and digital interaction of the tourist's online behaviour.
Local service supply and demand management	When destinations are struggling to maintain their competitiveness, the management body has the critical role of implementing a cooperation strategy between the different businesses to increase their productivity through synergies among the different players.	Collaborative platform designed to let the managing entity centralize and harmonize the entire tourism offer in a professional portal adapted to the destination's strategy. Thus, complete experiences are generated as a sum of individualized and personalized offers for each tourist segment.	▪ Optimizing digital sales and promotion channels and e-commerce of the destination's businesses. ▪ Increased direct sales of the destination, localizing the supply chain. ▪ Reinforcing the branding and brand positioning of the destination through the incorporation of all its offerings and assets under a single identity.
Tourism intelligence	Broadening knowledge about visitors to the destination by aggregating and centralizing data on origin, reason for the trip, socio-demographic information, mobility, length of stay, etc., in order to identify patterns, relationships and trends that can be used to plan and optimize services	Management system (collection, storage and processing) of information about visitors captured by Wi-Fi sensors, mobile data and digital media, to obtain insights that help to know and understand tourists, and to analyse the evolution of the activity to always adapt the offer and services to the needs of the visitor.	▪ Managing tourist flows in the destination and combating saturation. ▪ Adaptation of tourism resources to the current and future needs of visitors, improving their experience before, during and after the trip. ▪ Optimization of the strategy based on visitor habits and defining the tourist experience in relation to the destination.

Source: U4SSC (2022).

3.4   Travel Facilitation

Travel facilitation plays an important role in achieving smart and sustainable tourism by removing barriers and enhancing the overall travel experience. Simplified visa procedures, efficient border crossings, and streamlined transportation systems contribute to smoother travel logistics, attracting more tourists and encouraging repeat visits. By making travel easier and more convenient, travel facilitation allows a broader range of travellers to explore destinations. Moreover, it supports sustainable tourism practices by reducing carbon emissions associated with long waiting times and inefficient transportation systems.

New technologies are supporting the efforts to facilitate travel. Digital technologies, such as online visa application systems, electronic passports, and automated border control systems, enable travellers to complete administrative procedures more conveniently and quickly. IT integration further strengthens this by linking various components of the travel process, such as immigration, customs, and transportation, into a cohesive and interconnected system. This integration allows for real-time data sharing and smoother coordination between stakeholders, ultimately reducing waiting times, enhancing security, and optimizing resource allocation.

There are various measures of travel facilitation that can be used to assess the ease and convenience of international travel for tourists. They encompass factors such as the information required for visas, the duration of the visa application process, including in-person appointments if necessary, and the time taken for visa issuance. Additionally, the length of validity of visas, visa costs, and the number of countries exempt from visa requirements, as well as those offering eVisa and visa-on-arrival options, are critical indicators. Furthermore, the presence of regional visa cooperation programs highlights collaborative efforts to streamline travel procedures and promote regional tourism. These measures collectively inform policymakers and travellers alike about the accessibility and attractiveness of destinations, influencing travel decisions and shaping tourism flows.

Visa regulations create a framework that can either facilitate or hinder international travel, impacting everything from personal vacations to business trips. UN Tourism plays a crucial role in monitoring and analysing the evolution of visa policies worldwide. Through regular reports and indices, such as the Tourism Visa Openness (TVO) Index, UN Tourism assesses the degree to which destinations facilitate tourism and the openness of countries in terms of visa facilitation for tourism purposes. The TVO Index provides insights into how easily tourists can travel to different destinations based on visa requirements and procedures. It evaluates factors such as visa-free access, visa-on-arrival policies, and eVisa availability, among others, to measure the overall openness of a country to tourism.

According to the latest edition of the TVO Index, traditional visa requirements affect nearly half (47%) of the world's population, leading to cumbersome bureaucratic processes and potentially discouraging travel. Conversely, eVisa systems, serving 18% of the global population, offer an online application process that mitigates barriers to entry and aligns with the goal of reducing visa requirements. Visa-on-arrival policies cover 14% of the population, providing a more expedient route to international travel by allowing travellers to obtain visas directly at the destination. Notably, 21% of the global population is exempt from visa requirements, symbolizing the utmost

convenience in international travel and fostering tourism, cultural exchange, and diplomatic collaboration (UNWTO, 2024).

Figure 3.2 illustrates the evolution of visa regulations and their impact on global mobility over the past decades. Initially, in 1980, 75% of the world's population needed visas for international travel, with 5% having the option of visas on arrival and 20% exempt from visa requirements. However, by 2023, the proportion requiring traditional visas decreased to 47%, marking a significant shift towards more open travel policies. Visa on arrival policies saw a steady rise, particularly between 2010 and 2012. Conversely, the percentage of the population exempt from visa requirements remained stable at around 20-21%. Furthermore, the adoption of eVisa systems increased from 3% in 2013 to 18% by 2023, reflecting a global trend towards digitalization to simplify visa processes while maintaining security measures.

Figure 3.2: World Population Subject to Different Types of Visa Policies
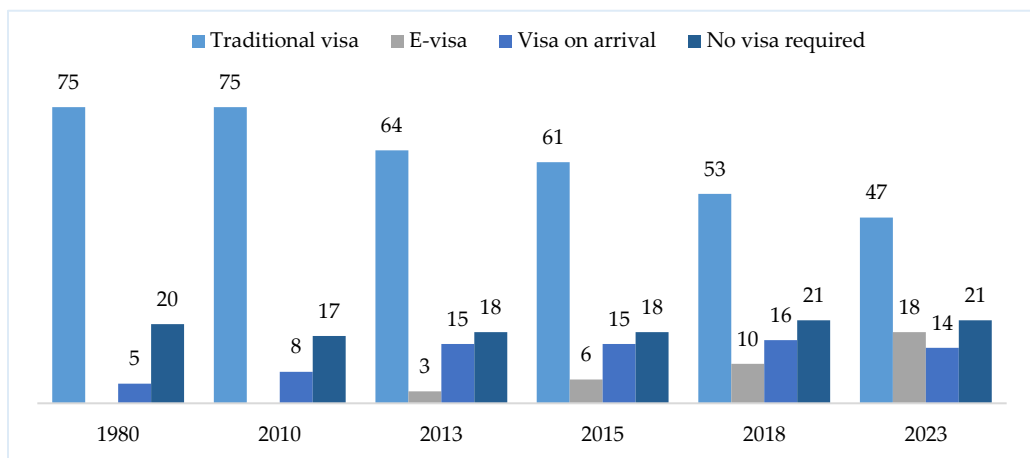
Source: UNWTO (2024).

The report underscores the pivotal role of visa policy improvements in fostering tourism growth. Key recommendations include increased integration of tourism perspectives into visa strategies, targeted visa-exemption programs for low-risk traveller markets and expanded visa on arrival facilities. In addition, clear communication on visa policies is vital, along with a streamlined visa application process, accelerated processing times and optimized entry procedures for an enhanced visitor experience (UNWTO, 2024).

Table 3.2 presents the TVO Index values for OIC countries, indicating the percentage of world population subject to different visa regulations, based on UNWTO (2024). Countries like Malaysia, Albania, and Guinea-Bissau demonstrate relatively high tourism visa openness with more open visa policies, including visa exemption, visa on arrival and eVisa options. On the other hand, countries like Turkmenistan, Iraq, and Afghanistan have very low visa openness, with virtually all travellers requiring traditional visas. In Djibouti, Comoros, Maldives and Somalia, it is possible for all travellers to obtain their visa on arrival, whereas in Suriname, all travellers can get their visa online. This analysis highlights the significant variation in visa policies among OIC countries, impacting global mobility and tourism opportunities. Countries with more open visa policies tend to attract more tourists and benefit from higher economic growth through tourism-driven revenue streams.

Table 3.2: Visa Openness Index in OIC Countries, 2023

Country	Tourism Visa Openness Index	No visa	Visa on arrival	eVisa	Traditional Visa
Malaysia	80.48	47%	36%	16%	0%
Albania	71.64	43%	0%	57%	0%
Guinea-Bissau	71.60	5%	95%	0%	0%
Mauritania	70.42	2%	98%	0%	0%
Djibouti	70.00	0%	100%	0%	0%
Comoros	70.00	0%	100%	0%	0%
Maldives	70.00	0%	100%	0%	0%
Somalia	70.00	0%	100%	0%	0%
Kazakhstan	68.66	46%	0%	45%	9%
Benin	68.42	37%	0%	63%	0%
Sierra Leone	67.84	5%	76%	19%	0%
United Arab Emirates	67.80	36%	0%	64%	0%
Senegal	67.45	42%	37%	0%	22%
Kyrgyzstan	63.90	28%	0%	72%	0%
Uzbekistan	63.26	45%	0%	36%	19%
Iran	61.38	23%	0%	77%	0%
Bahrain	58.32	1%	44%	53%	2%
Türkiye	56.60	27%	2%	57%	14%
Guinea	53.99	8%	0%	92%	0%
Jordan	53.90	3%	72%	0%	24%
Côte d'Ivoire	53.86	8%	0%	92%	0%
Nigeria	53.69	3%	10%	86%	0%
Tajikistan	53.47	26%	0%	54%	19%
Indonesia	53.16	5%	68%	0%	26%
Togo	52.62	5%	0%	95%	0%
Qatar	52.29	1%	74%	0%	26%
Uganda	52.14	4%	0%	96%	0%
Burkina Faso	51.98	6%	0%	92%	2%
Mozambique	51.40	3%	0%	97%	0%
Gabon	51.07	2%	0%	98%	0%
Morocco	50.97	50%	0%	2%	48%
Oman	50.36	1%	0%	99%	0%
Suriname	50.00	0%	0%	100%	0%
Pakistan	48.17	0%	45%	33%	22%
Gambia	47.03	44%	4%	0%	52%
Azerbaijan	45.75	5%	26%	45%	24%
Brunei	40.13	27%	19%	0%	54%
Lebanon	37.94	0%	54%	0%	46%
Tunisia	29.64	30%	0%	0%	70%
Bangladesh	28.20	3%	36%	0%	61%
Guyana	25.32	25%	0%	0%	75%
Saudi Arabia	24.81	0%	34%	2%	64%
Egypt	20.87	1%	28%	0%	71%
Kuwait	12.96	1%	17%	0%	82%
Mali	11.17	11%	1%	0%	89%
Niger	6.04	6%	0%	0%	94%
Chad	5.37	5%	0%	0%	95%
Syria	4.20	3%	2%	0%	95%
Cameroon	3.70	3%	0%	0%	96%
Yemen	2.46	0%	4%	0%	96%
Sudan	2.16	1%	2%	0%	97%
Algeria	1.47	1%	0%	0%	99%
Libya	0.13	0%	0%	0%	100%
Afghanistan	0.00	0%	0%	0%	100%
Iraq	0.00	0%	0%	0%	100%
Turkmenistan	0.00	0%	0%	0%	100%

Source: UNWTO, 2024. The Tourism Visa Openness Index scores range from 0 to 100. The higher the score on the Tourism Visa Openness Index, the more visas are facilitated. Openness indicates to what extent a destination is facilitating tourism. It is calculated by summing the percentage of the world population exempt from obtaining a visa with the percentages of no visa weighted by 1, visa on arrival weighted by 0.7, eVisa by 0.5 and traditional visa weighted by 0.

It is important to recognize the importance of travel facilitation in fostering tourism development by simplifying entry procedures and reducing barriers to travel. Simplified visa processes, shorter processing times, reduced costs for obtaining visas and efficient border control measures make destinations more accessible to international travellers, thereby encouraging tourist inflows. By prioritizing travel facilitation, OIC countries can attract a larger number of tourists, boost tourism revenues, create employment opportunities, and stimulate economic growth in local communities. Additionally, improved travel facilitation supports the growth of the hospitality sector, transportation infrastructure, and other tourism-related industries, further bolstering the overall tourism ecosystem.

To effectively enhance travel facilitation and stimulate tourism growth, OIC countries can adopt several strategic measures and capitalize on areas of opportunity. One crucial aspect involves formalizing the integration of traveller data to bolster security measures, ensuring a balance between facilitating travel and maintaining safety standards. Leveraging advanced technology is another key strategy, allowing for the automation and digitization of various processes to streamline visa applications, entry procedures, and security checks. Expanding differentiated treatment for frequent and known travellers can further expedite processes, offering tailored services and expedited clearance for trusted individuals. Additionally, implementing eVisa programs or reducing visa requirements altogether can significantly enhance accessibility and attract more visitors, thereby boosting tourism revenue and promoting economic development. Collaboration with industry stakeholders is also essential, fostering partnerships to expand bilateral or regional agreements that facilitate visa-free travel or offer preferential treatment for tourists. By embracing these instruments and seizing opportunities for innovation and collaboration, OIC countries can create a more welcoming and efficient travel environment, ultimately driving sustainable growth in the tourism sector.

3.5   Best Practices

Several destinations have successfully implemented smart tourism initiatives, showcasing innovative approaches to enhance the tourist experience, promote sustainability, and integrate the latest technology. Destino Turístico Inteligente (DTI) of Spain collects examples of best practices in implementation of smart tourism initiatives across all regions (DTI, 2024). In this section, benefiting from the DTI collection, including its earlier publication (SEGITTUR and Red DTI, 2021), this section provides a selection of best practices in facilitating and empowering smart tourism in several countries, including OIC countries.

[COLOMBIA] The Medellín Tourism Observatory: Open Data to Monitor the Impact Tourism Has on the Destination and Optimise the Decision-Making Process

The Medellín Tourism Observatory (OTM) is an initiative aimed at collecting detailed, consistent, timely, and representative statistical information on both internal and incoming tourism. Addressing the demand for tourist products and services, the OTM focuses on quantifying and characterizing tourist flows to and within Medellín. Additionally, it estimates the contribution of tourism expenditure to the regional economy, utilizing both primary and secondary

sources. The ultimate goal is to facilitate the sharing of valuable information and knowledge among various tourism sectors in the city and the region. This, in turn, supports decision-makers and contributes to the overall strengthening and enhancement of the tourist industry.

The current information provided by the OTM encompasses key aspects such as accommodation, including the percentage of hotel occupancy, average rates, and the number of local and foreign guests. It also covers stations, capturing data on passenger and vehicle arrivals at major city stations, as well as migration patterns, focusing on people entering and leaving the country, both in terms of incoming and outgoing tourism. Additionally, the OTM includes information on sites of interest and museums, offering insights into tourist entries at various attractions.

The OTM is actively working towards transforming into a Tourism Intelligence Unit. This evolution involves a focus on providing information for prospective decision-making, leveraging insights into sector trends. The unit will accumulate historical data on tourist behaviour in the city and region, positioning itself as a primary information source for industry stakeholders. Ultimately, this data will serve as the foundation for developing strategies and actions aimed at positioning Medellín as a Smart Destination.

[JAPAN] Kyoto Tourism Navi, Big Data and Artificial Intelligence to Detect and Predict Tourist Overcrowding and Offer Alternative Routes

Kyoto Tourism Navi, a collaborative initiative led by the Kyoto City Tourism Association in collaboration with private companies, stands at the forefront of smart tourism solutions. This innovative tool leverages the power of Artificial Intelligence to forecast tourist comfort levels in Kyoto for up to six months in advance. It achieves this by analysing historical data spanning the past three years, considering variables such as visit density at specific urban locations, geo-location data from mobile phones, weather conditions, and the day of the week the destination was visited.

The outcomes of this sophisticated analysis are made accessible to the public through the official Kyoto Tourist Office website. The results are systematically categorized into five levels of congestion, ranging from "You can enjoy peaceful tourism" to "Occupied by lots of tourists." What sets this initiative apart is its commitment to continuous improvement – the predictions are regularly updated, enhancing their precision and quality. Moreover, users have the flexibility to refine predictions through a questionnaire, addressing any discrepancies between the comfort level indicated on the app and the perceived actual level.

The platform provides comprehensive insights into global indices reflecting tourist density across Kyoto. It further scrutinizes the comfort levels in three specific areas, pinpointing main points of interest and tourist attractions on an interactive map. Simultaneously, it estimates the level of crowding at different times for each location. Visitors can personalize their experience by selecting the preferred time of day for their visit. Based on the predicted congestion levels, the platform generates tailored routes and plans for each area, offering an interactive map to assist users.

The initiative aims to improve tourists' experiences by mitigating the negative effects of excessive tourism on the destination, and to optimise management by local administrators and authorities by decentralising and rearranging tourist flows. Overall, this initiative represents a commendable effort to harmonize technological innovation with sustainable tourism practices, ensuring a positive and memorable experience for tourists while preserving the cultural and environmental integrity of Kyoto.

[SINGAPORE] Digital Information and Intelligence System for the Whole Tourist Ecosystem

The Tourism Information and Services Hub (TIH) stands as a collaborative platform offering a diverse array of digital resources for entities within a destination's tourism ecosystem. Functioning as an open data and digital services portal, TIH facilitates seamless collaboration and information sharing among stakeholders. Through API connectivity, tourism suppliers can access real-time data, empowering them to enhance their services and elevate tourist satisfaction.

Key benefits for tourism operators include access to up-to-date information on players and stakeholders, travel software services for digital channels, comprehensive tourism information covering attractions and offers, downloadable resources for digital content promotion (such as images and videos), and opportunities to forge partnerships and commercial associations, fostering collaborations and synergies within the industry.

To complement TIH, administrators have introduced the Singapore Tourism Analytics Network (STAN), leveraging aggregate data from both TIH and the industry. STAN aims to derive actionable insights about visitors, contributing to informed decision-making and further enhancing the overall efficiency and effectiveness of the destination's tourism management.

[SPAIN] Big Data and Business Analytics for Managing Santiago de Compostela's Heritage

Turismo de Santiago led the BODAH project (Big and Open Data for the development of new processes towards Atlantic Heritage management), in which a total of 8 entities from Spain, France, Portugal, Ireland and the United Kingdom participated during its implementation between 2019 and 2022. The project aimed to strengthen a more holistic sustainable development of tourism and citizen flows and the redistributions of socio-economic impacts thanks to the use of data and smart technologies. The project plans to develop new tools, solutions and knowledge in line with the current sectoral changes and characteristics of smart destinations, able to collect, generate, integrate and analyse information and transform it into behaviour changes and decision making processes.

In this project, a total of 30 indicators have been defined to monitor five fundamental issues related to the development of tourism activity at the destination, including most visited tourist sites, visitors received, anticipating and preventing possible saturation, how visitor flows affect the resource's conservation status, resident's perception of tourism, socio-economic impact of tourism

on the city. Currently, the BODAH consortium is still working on analysing the results obtained from the indicators and designing technological solutions adapted to the needs of each destination.

[TUNISIA] Using Influencers to Attract Young Europeans via the Web Series #TrueTunisia

#TrueTunisia stands out as an innovative digital marketing campaign, presented in the form of a captivating web series available on the official YouTube channel Discover Tunisia. With the active participation of renowned YouTubers and international influencers, the campaign strategically targets Millennials, Gen Z, and European tourists. The web series employs an innovative and enjoyable format to acquaint prospective visitors with Tunisia's rich cultural and natural heritage, tourist attractions, and unique adventures, fostering positive expectations and a desire to explore the destination.

An exceptional feature of #TrueTunisia is the utilization of drones for aerial perspectives and surround audio to deliver an immersive viewing experience, providing enticing glimpses of the landscapes. To enhance appeal for European tourists, street interviews expressing the desire to visit Tunisia were showcased on screens in busy areas of five European cities. The campaign's impact is reflected in its impressive metrics, amassing over 40 million views and gaining 18,000 subscribers across two seasons.

The first season, featuring a French journalist, spotlighted Tunisia's alluring natural and cultural heritage. The second season elevated the campaign by engaging five prominent YouTubers from various European regions, showcasing their two-week journey exploring key attractions, participating in diverse activities, and interacting with residents. This strategic approach aimed to leverage Electronic Word of Mouth (eWOM) through influencers' substantial impact on social media and the YouTube platform. #TrueTunisia exemplifies an effective fusion of entertainment, exploration, and influencer collaboration in the realm of digital tourism marketing.

[UAE] 360º 3D Tour of Abu Dhabi: Drones and Virtual Reality to Recreate the Destination's Key Points of Interest

The Abu Dhabi 360º Tour is an initiative that offers a virtual exploration of key tourist attractions through immersive 360º 3D panoramic video experiences. This innovative project, led by the Department of Culture and Tourism in Abu Dhabi, leverages cutting-edge technology, including drones and virtual reality, to create captivating videos. Users are immersed in a first-person perspective, allowing them to interactively navigate and choose attractions. What sets this initiative apart is its attention to detail, incorporating customized audio to provide a fully immersive experience that can be enjoyed across various devices.

Collaborating with content creation and marketing companies, Abu Dhabi's aim is twofold. Firstly, the initiative serves as a dynamic marketing campaign, seeking to enhance the visibility of Abu Dhabi's tourist attractions and showcase the destination's rich natural and cultural heritage.

The goal is to attract tourists by offering an engaging preview of what the destination has to offer, leveraging the immersive capabilities of virtual experiences. Secondly, the initiative aims to redefine Abu Dhabi's brand perception, moving beyond being perceived merely as a stopover destination and establishing itself as a unique and compelling travel experience. This strategic approach aligns with the broader goal of positioning Abu Dhabi as a prominent and desirable destination in the minds of potential travellers.

[ESTONIA] Big Data & Analytics to Design More Efficient Routes and Change the Location of Bus Stops or the Frequency of Services

The Estonian city of Tartu recognized inefficiencies in its urban bus routes despite having a modern fleet and infrastructure. To address this, the city undertook a strategic restructuring of its bus network, analysing the existing 27 lines. It replaced circular routes with pendulum-shaped routes, reducing total journey time and wait times between changes. Leveraging Big Data & Analytics techniques, the city compiled extensive data on tourist and resident mobility to assess alternative bus networks based on factors like running costs, bus numbers, journey times, accessibility, and emissions.

To ensure the new models aligned with residents' preferences, the city implemented a survey system to gather input on transport preferences. Collaborating with a private company specializing in mobile device data collection through geo-positioning, the city sought to tailor the new timetables and routes to residents' needs. The results were impressive, with individual bus journeys increasing by 40%, monthly subscriptions up by 10%, and 90-day subscriptions growing by 21% between September 2018 and September 2019. Additionally, the average service time improved, reducing to seven minutes.

CHAPTER FOUR

Promoting Innovation and Technology Adoption in Tourism Sector in OIC Countries

T ourism stands as a pivotal sector capable of driving inclusive growth, job creation, poverty reduction, and sustainable development on a global scale. Contributing to around 10% of the world's GDP and employment, tourism profoundly influences exports, job markets, infrastructure development, and social inclusion. The sector's cross-sectorial nature stimulates entrepreneurship, particularly in micro, small, and medium-sized enterprises (MSMEs), fostering innovation and job creation. However, tourism confronts challenges related to social and environmental accountability, effective management of digitalization, and heightened competitiveness. The industry has undergone shifts in business models and consumer behaviour due to global economic changes, technological advances, and the rise of digital platforms and big data.

The development of information and communications technology emerges as a significant driver of change, transforming the tourism value chain, market dynamics, required skills, and job characteristics. The future of tourism hinges on its adaptability to key trends and changes, necessitating recognition and strategic responses to short, medium, and long-term shifts. Challenges such as outdated regulations, fear of failure, lack of awareness, and insufficient collaboration among stakeholders hinder the sector's adaptation to the technological revolution. Nevertheless, with the right policies, training, and management, innovation and technology possess the potential to create new, improved jobs and business opportunities in tourism, enhancing societal wellbeing and contributing to a more sustainable future.

To this end, this chapter reviews the major challenges and opportunities faced by OIC countries in promoting innovation and technology in tourism sector. It also provides some recent initiatives of selected OIC countries in adapting smart, sustainable and digital tourism. The chapter concludes with some policy recommendations on how to promote technology adaption in tourism sector in OIC countries.

4.1 Barriers and Opportunities for Digital Transformation of Tourism in OIC Countries

The digital transformation of tourism in OIC countries is not without its challenges, demanding strategic policy measures for effective implementation. However, amidst these challenges lie unique opportunities stemming from the distinct characteristics of the region. This section provides a brief summary of these challenges and opportunities.

4.1.1 Barriers

The digital transformation of tourism in OIC countries faces several challenges that can impact the adoption and implementation of digital technologies in the tourism sector. Some of the key challenges include limited technological infrastructure, digital skills gap, access to technology, and cyber security concerns.

Limited Technological Infrastructure: Technological infrastructure is vital for the successful implementation of digital strategies in tourism. It provides the foundation for the deployment of smart technologies, facilitates data processing, and supports innovative solutions such as augmented reality, mobile applications, and online platforms. Many OIC countries face challenges

related to inadequate technological infrastructure, including limited access to high-speed internet and lack of sufficient data centres, which can hinder the widespread adoption of digital solutions.

As an important component of digital infrastructure, data centres play a crucial role in smart tourism by serving as the backbone for processing and storing vast amounts of data generated through various digital channels. The centralized nature of data centres ensures quick access to information, facilitates real-time decision-making, and contributes to the development of innovative smart tourism solutions, making them indispensable for the successful implementation of digital strategies in the tourism industry. Yet, majority of OIC countries lack infrastructure needed to handle the explosive growth in data and expand digitalization. Only around 6% of globally available data centres are being hosted in OIC countries, where Türkiye, Indonesia and Malaysia take the lead (*Figure 4.1*).

Figure 4.1: Number of Data Centres, March 2024
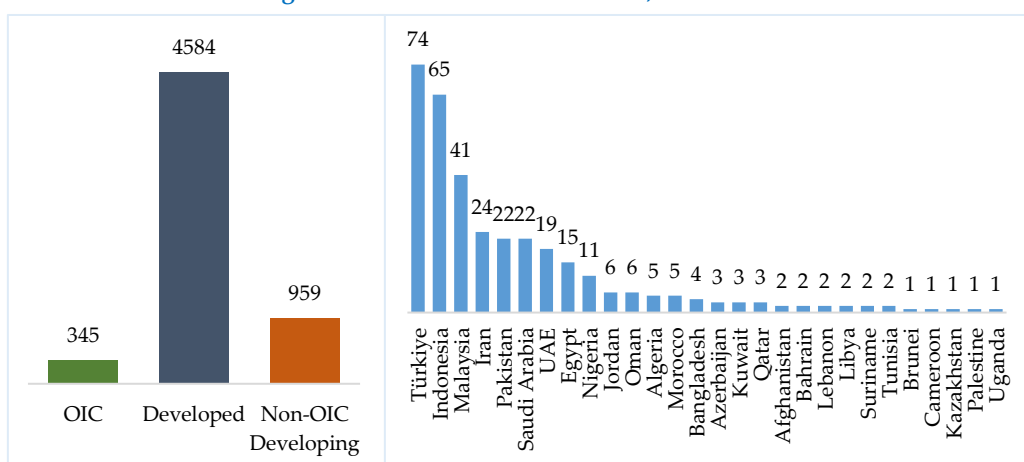
Source: www.datacentermap.com. Accessed on 09/03/2024.

Lack of Access to Digital Technologies and Services: Bridging the digital divide and promoting equitable access to ICT is essential for ensuring that the benefits of technology are accessible to all. However, the access to electricity in OIC countries, as an important indicator of access to digital services, on average continues to remain below the world average. Moreover, a robust network of fixed broadband subscriptions signifies a technologically advanced and connected environment, capable of supporting advanced digital applications. Despite having similar shares of individuals using internet, fixed broadband subscriptions are at comparably lower levels in many OIC countries than in developed countries.

As discussed thoroughly in SESRIC (2023), digital transformation is tightly connected to the internet. Providing a greater share of the population with internet access enables these people to learn and interact through online tools, and become active members of the digital economy. *Figure 4.2* demonstrates the progress in OIC countries in increasing the internet users measured per 100 inhabitants over the last decade. In five GCC countries, almost all individuals have access to internet, with a particularly sharp rise observed in Saudi Arabia from 47.5 in 2011 to 100 in 2021. In 26 OIC countries, the share of internet users is above the world average of 62.6 in 2021. The most significant improvement was observed in Djibouti, where the number of internet users per

Figure 4.2: Internet Users per 100 Inhabitants, Total
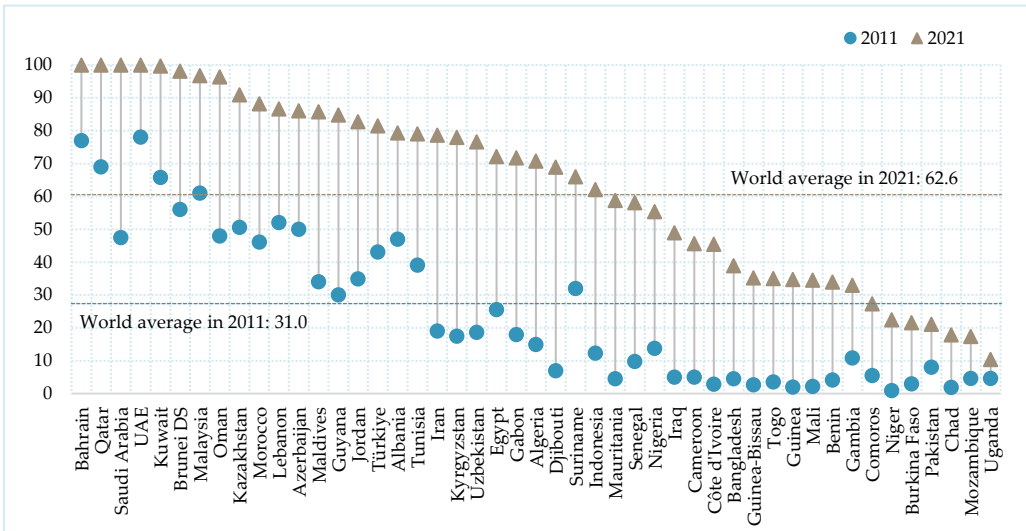
Source: ITU. SDG Indicators Database 17.8.1.

100 inhabitants increased by 61.9, followed by Kyrgyzstan (60.4), Iran (59.6) and Uzbekistan (58). The least progress was observed in Uganda, where there were only 10.3 internet users per 100 inhabitants in 2021.

SESRIC (2023) also reports that there are huge differences across OIC countries in their digital infrastructure. Being relatively more important for speedy access to the internet, fixed broadband subscriptions remain relatively low in most of the OIC countries. The highest share is observed in United Arab Emirates (38.2%), Saudi Arabia (29.5%), Uzbekistan (22%), Türkiye (21.4%) and Suriname (20.1%). In 20 OIC countries, this share is below 1%. Similarly, despite the progress over the years, access to electricity in African OIC countries remains significantly below the world average, which is a critical indicator in enabling access to digital services (*Figure 4.3*).

Moreover, facing with relatively higher ICT prices, lower software spending, limited broadband subscriptions, and lower availability of generic top-level domains (TLDs), it is crucial for OIC countries to recognize the urgent need for digital infrastructure development SESRIC (2023). High ICT costs and limited software access hinder economic growth and digital inclusion. Therefore,

Figure 4.3: Access to Electricity
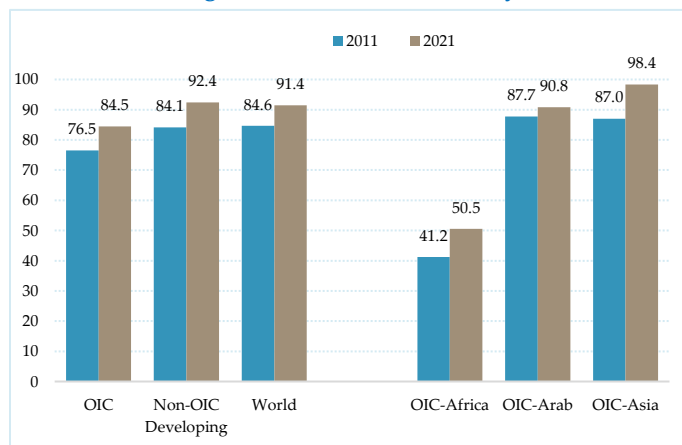
Source: World Development Indicators, World Bank. Weighted averages of 56 OIC, 39 developed and 119 non-OIC developing countries.

concerted efforts are needed to reduce ICT costs, increase investment in software and digital services, expand broadband access, and promote the availability of diverse TLDs. This requires collaborative public-private initiatives, policy reforms, and investments in digital infrastructure to bridge the digital divide, foster innovation, and unlock the full potential of the digital age for all.

Digital Skills Gap: A lack of digital literacy and skills among the workforce can impede the integration of digital technologies in the tourism industry. A common indicator measuring the investment in skills is the learning adjusted years of schooling (LAYS). In the digital age, it is not enough to have more years of schooling; individuals need relevant, practical skills. Learning-adjusted years recognize the importance of adaptable, technology-focused curricula that prepare students for the demands of the digital workforce. These metrics drive educational institutions to produce graduates who can actively contribute to digital innovation and competitiveness, ultimately shaping the success of digital transformation efforts in a society. According to the latest data provided by the World Bank, the LAYS is 6.4 in OIC countries, whereas this is 7.3 in non-OIC developing countries and 11.1 in developed countries (*Figure 4.4*). Within the OIC, Asian countries outperform African countries with average LAYS values of 7.8 and 4.6, respectively.

Figure 4.4: Learning Adjusted Years of Schooling (2020)
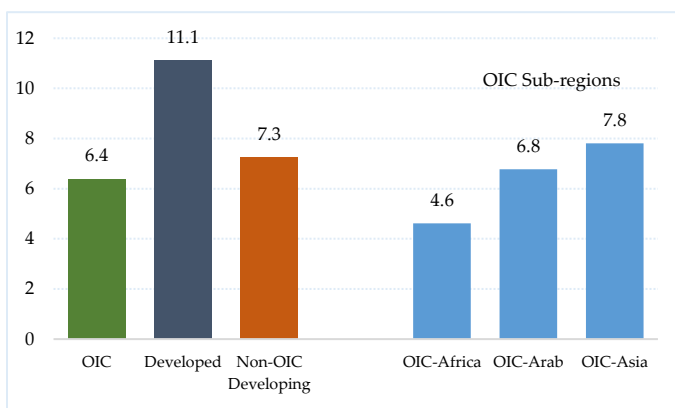
Source: *World Development Indicators, World Bank. Simple averages of 49 OIC, 36 developed and 89 non-OIC developing countries.*

Digital transformation in tourism requires training employees to use digital technology. This includes training workers on many digital technologies and platforms to ensure service delivery digitally. Without skilled workers, innovative ideas, and investments in research and development, countries are likely to struggle to keep pace with technological advancements, hindering their ability to compete in the global digital economy. To adapt to digitalization successfully, it is necessary to invest in improving the quality of education to meet the skills requirement of the digital age (OECD, 2021). Therefore, OIC countries must prioritize education, innovation, and technology investment to build the necessary foundations for economic transformation in the digital era.

Security Concerns: Cybersecurity and data privacy issues can be significant barriers. Tourists and businesses may be hesitant to embrace digital solutions if there are concerns about the safety and security of personal information. Secure internet servers are crucial because they safeguard data, privacy, and digital operations, preventing unauthorized access, data breaches, and cyberattacks, which can have severe consequences for individuals, businesses, and society. They positively impact innovation outputs by fostering a safe environment for digital collaboration, data sharing, and the development of new technologies. When we look at the number of secure internet servers

per 1 million in OIC countries, we observe that there is only one OIC country that is above the world average. The OIC average is below 0.1%, whereas the world average is 1.1% (SESRIC, 2023).

Developed by the International Telecommunications Union (ITU), The Global Cybersecurity Index (GCI) is a composite index of indicators that monitors the level of cybersecurity commitment in the five pillars of the Global Cybersecurity Agenda. Its main objective is to measure the type, level, and evolution over time of cybersecurity commitment within countries and relative to other countries. According to the GCI index, some OIC countries occupy the top rankings in the world, including Saudi Arabia, United Arab Emirates, Malaysia and Türkiye, while some others are among the least performing countries, such as Djibouti, Comoros and Afghanistan (*Table 4.1*).

Table 4.1: Global Cybersecurity Index, 2020

Rank		Score	Rank		Score	Rank		Score
2	Saudi Arabia	99.5	71	Jordan	71.0	114	Guyana	28.1
5	UAE	98.1	72	Uganda	70.0	121	Sierra Leone	25.3
5	Malaysia	98.1	75	Côte d'Ivoire	67.8	122	Palestine	25.2
11	Turkey	97.5	79	Pakistan	64.9	123	Mozambique	24.2
21	Oman	96.0	80	Albania	64.3	126	Syria	22.1
23	Egypt	95.5	85	Brunei DS	56.1	129	Iraq	20.7
24	Indonesia	94.9	92	Kyrgyzstan	49.6	130	Guinea	20.5
27	Qatar	94.5	93	Cameroon	45.6	133	Mauritania	18.9
31	Kazakhstan	93.2	95	Chad	40.4	137	Somalia	17.3
40	Azerbaijan	89.3	96	Burkina Faso	40.0	138	Tajikistan	17.1
45	Tunisia	86.2	100	Senegal	35.9	144	Turkmenistan	14.5
47	Nigeria	84.8	102	Sudan	35.0	156	Niger	11.4
50	Morocco	82.4	104	Algeria	34.0	157	Gabon	11.4
53	Bangladesh	81.3	105	Togo	33.2	160	Mali	10.1
54	Iran	81.1	107	Gambia	32.1	161	Guinea-Bissau	9.9
56	Benin	80.1	108	Suriname	31.2	171	Afghanistan	5.2
60	Bahrain	77.9	109	Lebanon	30.4	175	Comoros	3.7
65	Kuwait	75.1	113	Libya	28.8	179	Djibouti	1.7
70	Uzbekistan	71.1						

Source: ITU (2021). Ranks shows the global rank of each country out of 182 countries included in the index.

While cybersecurity remains a constraint in many OIC countries, insufficient access to digital infrastructure also poses a significant impediment to the efficient progress of digitalization efforts. Specifically, the lack of high-speed broadband in regional and rural areas presents a notable challenge, hindering the smooth operation of businesses in these locations. Furthermore, the absence of high-speed Wi-Fi connections contributes to obstacles in innovating visitor experiences, impacting the potential for enhanced digital interaction and services in various tourism settings. Uncertain benefits, fear and anxiety of the unknown in relation to costly or novel technologies can also be a challenge for business to adapt new technologies (OECD, 2020).

In addition to these challenges, companies and institutions in the digital tourism industry may be challenged by the high cost required for initial investment in advanced digital tools. These financial costs constitute an obstacle, especially for many small and medium-sized companies, especially at the beginning of their journey towards digital transformation. Moreover, there may

be also a gap between tourists with digital skills and those without, which can hinder some tourists from taking full advantage of digital travel experiences.

An investigation at the firm level reveals additional insights on the challenges faced by tourism and hospitality firms. The World Bank Enterprise Surveys (WBES) are nationally representative firm-level surveys that covers a broad range of business environment topics as well as firms' characteristics and performance measures. Specific to tourism and hospitality sector, a recent survey conducted over the past few years was available only for seven OIC countries in the firm level database of the WBES. *Figure 4.5* shows the percentages of firms that indicate a specific subject matter as a major or very severe constraint for their business in these countries. Access to electricity is a major challenge for about 20% of firms, but particularly in Mozambique and Egypt (*Figure 4.5a*). Access to land is a major challenge for almost one quarter of firms in Bangladesh, but

Figure 4.5a: Share of Firms Indicating Access to Electricity as a Major Obstacle
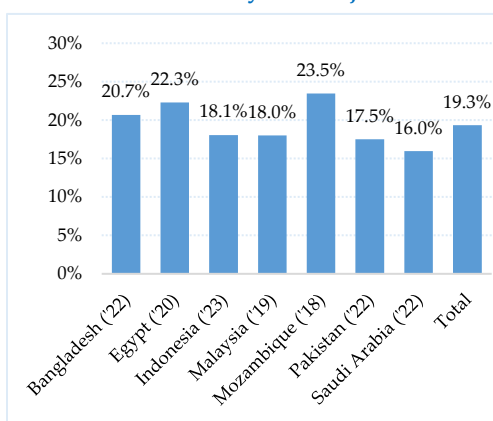
Figure 4.5b: Share of Firms Indicating Access to Land as a Major Obstacle
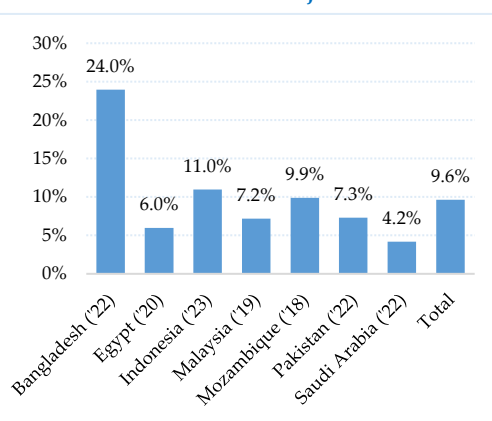
Figure 4.5c: Share of Firms Indicating Access to Finance as a Major Obstacle
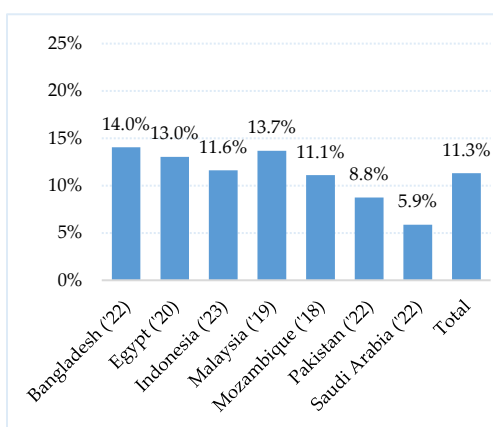
Figure 4.5d: Share of Firms Indicating Inadequately Educated Workforce as a Major Obstacle
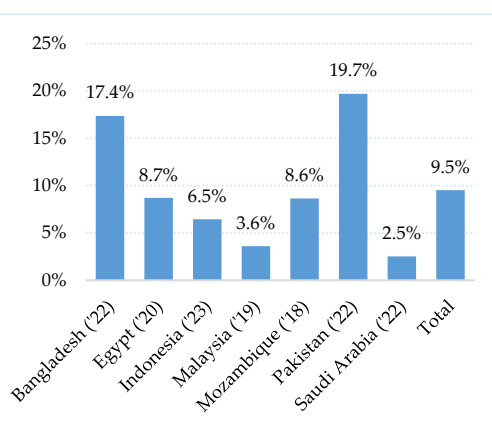
Source: SESRIC staff calculation based on World Bank Enterprise Surveys Database. Data includes only the firms that operate in tourism and hospitality sector. The percentages reflect the share of firms indicating the subject matter is a major or a very severe constraint for their business. Total reflects the sum of all seven OIC countries. The numbers in parenthesis show the year of survey, which ranges between 2018 and 2023.

a moderate challenge for other OIC countries (*Figure 4.5b*). Access to finance is relatively more demanding for tourism firms in Bangladesh and Malaysia with around 14% of firms indicating it as a major challenge, whereas less than 6% of firms in Saudi Arabia consider it as a challenge (*Figure 4.5c*). Finally, inadequately educated workforce is a particularly exigent in Pakistan, where almost 20% struggles to find educated workforce (*Figure 4.5d*). On average, access to electricity appears to be the most challenging for the OIC countries for which data are available.

4.1.2   Opportunities

Many OIC countries have rich cultural and natural attractions, making them increasingly popular tourist destinations. The growing tourism industry provides an opportunity to leverage digital technologies for better management and promotion. The integration of smart technologies can revolutionize destination management by providing real-time insights, personalized services, and data-driven decision-making, contributing significantly to the sector's sustainable growth and global competitiveness. Moreover, governments in OIC countries are increasingly investing in e-government initiatives. This provides a foundation for integrating digital solutions into various sectors, including tourism. By leveraging digital platforms, governments can create centralized hubs for tourism information, making it easily accessible to both local businesses and international visitors. In addition to these, there are other opportunities supporting the development of tourism sector through integration of digital technologies.

Mobile Technology Penetration: In many OIC countries, mobile phone penetration is high (SESRIC, 2023). The widespread and steadily increasing use of mobile phones with high speed network coverage in OIC countries represents a substantial opportunity to leverage mobile technologies for a wide range of tourism services. Creating user-friendly mobile applications can enhance the travel experience by offering services such as mobile payments, personalized travel itineraries, location-based services, and real-time communication with tourists. The widespread availability of mobile devices provides a direct and effective channel to engage with travellers, delivering convenient experiences throughout their journeys and fostering stronger connections between tourists and the destinations.

Dynamic Population: Majority of OIC countries have a young demographic, which presents a fertile ground for nurturing innovation and digitalization. Engaging and empowering the youth with digital skills can contribute to the digital transformation of the tourism sector. Investing in digital education and training programs for the youth can cultivate a technologically adept workforce, capable of driving innovation and leveraging digital tools for tourism advancement. Encouraging entrepreneurship and supporting start-ups within the youth community can lead to the development of innovative solutions tailored to the evolving needs of the tourism industry, ensuring its resilience and adaptability in the rapidly evolving digital landscape.

Promotion of Halal Tourism: Given the significance of Halal tourism in OIC countries, digital platforms can be utilized to promote and facilitate services that align with Halal travel requirements. Online platforms can offer a comprehensive range of Halal-friendly accommodation, dining options, and travel experiences, catering to the specific needs and preferences of Halal-conscious travellers. Embracing digital marketing strategies can effectively reach and attract this market segment, fostering a more inclusive and diverse tourism landscape that aligns with cultural and religious sensitivities.

Sustainable Tourism Practices: Many OIC countries have already started to embrace sustainable tourism practices, ranging from Mount Elgon Region of Uganda to Sustainable Go-Türkiye projects. Digital technologies can contribute to the promotion of sustainable tourism practices by facilitating eco-friendly initiatives, responsible tourism, and the monitoring of environmental impacts. Implementing smart solutions, such as data analytics for resource management, digital platforms for promoting eco-friendly initiatives, and real-time monitoring systems for environmental impacts, can contribute to a more sustainable and responsible tourism industry. These technologies enable better management of tourist flows, energy consumption, and waste, leading to the long-term preservation of natural and cultural assets. Furthermore, embracing digital platforms for sustainable tourism practices enhances the overall resilience of the tourism sector in the face of global challenges and changing consumer preferences.

BOX 4.1: *SESRIC Statistical Capacity Building (Stat-CaB) Programme*

Accurate, timely, reliable and consistent statistical data is of the utmost importance for policy-making and strategy development in any country. The OIC member countries have varying levels of capacities for producing statistical data in accordance with the relevant internationally accepted statistical standards. Thus, SESRIC's Statistical Capacity Building (StatCaB) Programme for the National Statistical Offices (NSOs) of OIC member countries aims at matching the statistical needs and capacities of the NSOs of OIC member countries and then organizing capacity-building activities in order to close the statistical capacity gaps and thus contributing to the improvement of National Statistical Systems of the member countries.

The Centre, in its capacity as the Secretariat of the OIC Statistical Commission (OIC-StatCom), regularly reports the implemented StatCaB activities to the Follow-Up Meetings and Annual Sessions of the OIC-StatCom.

Webinar on "Towards a Methodology for Production and Dissemination of Islamic Tourism Indicators"
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Through the StatCaB Programme, the Centre continued its efforts, towards enhancing the technical capacities of the NSOs and Ministries of Tourism of the OIC Member Countries on several themes such as tourism statistics, sustainable tourism and Islamic tourism indicators. In this context, three statistical training courses and one webinar have been organized recently, as seen below. 186 participants from 41 OIC Member Countries benefited from these activities.

For more information on the programme and the activities, please refer to: *https://www.oicstatcom.org/statcab.php*

4.2   Smart and Sustainable Tourism Initiatives in Selected OIC Countries

The concepts of digital tourism and sustainable ecotourism have garnered considerable global attention, representing two closely intertwined trends crucial to the tourism sector. Modern digital technologies play a pivotal role in advancing communication and guiding tourists to heighten their awareness of the significance of sustainable tourism practices. Sustainable tourism is an approach that seeks to safeguard the environment and cultural heritage, advocating for tourism activities that preserve these resources to meet the needs of both current and future generations. The synergy between digital tourism and sustainable ecotourism reflects a growing commitment within the industry to leverage technology for enhancing communication, promoting awareness, and fostering responsible tourism practices.

Several OIC countries have been actively working on smart and sustainable tourism initiatives. Examples include Malaysia's National Tourism Policy with a focus on digital transformation, Türkiye's exploration of big data for sustainability, Saudi Arabia's transformation of tourism industry in line with its Vision 2030, and the UAE's Tourism 2.0. These initiatives leverage technology, data analytics, and sustainable practices to enhance the tourism experience and contribute to economic development while preserving cultural and natural heritage.

4.2.1   *Malaysia*

Tourism sector plays an important role in Malaysia economy. In the last few years before the outbreak of COVID-19, Malaysia launched the "Visit Truly Asia Malaysia 2020" campaign with a target of 30 million visitors and RM100 billion in tourist revenue for 2020. However, the COVID-19 outbreak severely impacted the Malaysian tourism industry, which led to the cancellation of the campaign (MIDA, 2023). Malaysia's tourism industry rebounded remarkably in 2023 to almost pre-pandemic level of 26.1 million tourists back in 2019. According to the Department of Statistics Malaysia (DOSM) Malaysia's gross value-added tourism industries recorded 251.5 billion ringgit (53.7 billion U.S. dollars) in 2022, contributing 14% to its GDP. Furthermore, the tourism industry contributed to 23.4% of total employment, employing 3.6 million people in 2022 (Xinhuanet, 2023).[2]

The Malaysian government launched the National Tourism Policy (NTP) 2020-2030 in December 2020, with a focus on ensuring the resilience of the country's tourism industry and positioning Malaysia as a global tourist destination. The NTP emphasizes strategies such as effective industry recovery, enhanced competitiveness, sustainable and inclusive tourism development, and disaster risk management. A key element of the NTP is the adoption of 'Smart Tourism,' acknowledging the transformative impact of digital technology on travel. The ultimate aim of smart tourism is to improve resource management efficiency, enhance tourism experiences, maximise competitiveness, and enhance sustainability through technological innovation and practices (MIDA, 2023).

The NTP (2020) notes that "embracing whole spectrum of digitalization will provide the necessary tools for the tourism industry to be internationally connected, perform rigorous data analytics of tourism futures, and shorten supply chain". To achieve this, four strategic actions were identified in NTP:

- Optimise e-marketing through smart partnership between the government and the tourism industry,

- Embrace but regulate the Sharing Economy to encourage innovation,

- Advance the use of Big Data Analytics in tourism planning and management,

- Consolidate the Visitor Economy to optimise the tourism value chain.

The Malaysia Smart Tourism 4.0 initiative, launched by Tourism Malaysia in April 2018, aims to leverage digital opportunities for industry advancement, fostering innovative sub-sectors and creating employment in alignment with the NTP and the UN SDGs (HRD Corp, 2021). A key segment of Smart Tourism 4.0 is ecotourism, which focuses on sustainable and responsible ways for travellers to visit and experience new places, ensuring that Malaysia's natural heritage can be enjoyed by future generations. A study by Monitor Deloitte suggests that embracing 'Smart Tourism' could potentially elevate Malaysia's tourism-based revenues from $25 billion to $110 billion by 2030, marking a significant four-fold increase (MIDA, 2023). One of the government's plans in smart tourism is to attract China's market for Malaysia's inbound tourism. China's Tencent Holdings Ltd plans to establish a data centre in Cyberjaya as part of its Smart Tourism 4.0 initiative in collaboration with Tourism Malaysia. Mafengwo, a Chinese travel service and social media platform will assist tourism players by creating rich travel contents and build localized marketing in Malaysia for Chinese travellers (Azmi and Ahmad, 2022). Some of these initiatives suffered significantly from the COVID-19 pandemic and led to delay in implementation.

The government has introduced several initiatives to address barriers to Smart Tourism through human capital development. In 2021, the government-agency of Tourism Malaysia has revamped its website by releasing "Interactive Digital Brochure". Users can virtually interact and explore destinations in Malaysia from the microsite digital brochure as compared to before (Azmi and Ahmad, 2022). In 2022, these initiatives, combined with post-pandemic recovery measures, included a wage subsidy program, specific financing, and upskilling programs, benefiting thousands of employers and employees in the tourism sector (HRD Corp, 2021).

However, some domestic and international tourists remain doubtful. A questionnaire conducted by students from the International Islamic University of Malaysia found that the most common concerns include the country's spotty internet infrastructure, which makes it difficult to access travel applications (Amir et al., 2020). Another recent study investigating the experience of tourists with the smart tourism technology in Malaysia also suggested that the majority (more than 90%) of respondents found difficulty searching for information about the local attractions in each state of Malaysia during travel, which caused a greater decline in their excitement to do local traveling. With reliable centralized mobile apps that exist for all tourism sectors in Malaysia, research findings showed that they could increase tourists' revisit intentions and happiness, which consequently boosts the revenue of the economy (Ruslan et al., 2022).

The Malaysian government should continue its commitment to promoting smart tourism by further investing in digital infrastructure, fostering innovation, and providing targeted financial incentives and support to tourism businesses, ensuring they embrace digital technologies, adapt to smart tourism practices, and capitalize on the opportunities presented by the digital age, ultimately enhancing Malaysia's competitiveness as a global tourist destination.

4.2.2 *Saudi Arabia*

Probably the most remarkable transformation in tourism sector is now taking place in Saudi Arabia. Tourism development is considered as an important driver of growth for the future of Saudi Arabia. It is one of the key pillars at the heart of Vision 2030's plan to help diversify the economy and reduce reliance on oil. The Ministry of Tourism, the Saudi Tourism Authority and the Tourism Development Fund were established in line with international best practice and with clear remits to support the growth of this significant sector and help it to flourish. As of 2023, it is estimated that tourism sector contributes to 9.7% of total GDP of the Kingdom, with 2.2 million jobs corresponding to 16.1% of total employment (WTTC, 2023b).

Since launching the National Tourism Strategy in 2019, the Saudi tourism sector has experienced rapid growth in investments due to major reforms as part of Saudi Arabia's economic transformation. Tourism is swiftly becoming a cornerstone of Saudi Arabia's economy, poised to offer substantial employment opportunities and contribute up to 10% of the Kingdom's GDP by 2030. To achieve this, the Kingdom intends to invest $1.25 trillion in improving its tourism infrastructure and services, with a goal to attract more than 150 million tourists annually (PwC, 2024).

Among them, NEOM is the world's most ambitious tourism project with a total estimated budget of $500 billion. Built on an ancient land, enhanced by world-leading design, immersive digital experiences and seamless travel, it will reshape the possibilities of global travel, according to the official website of the project. Nurturing raw, untouched landscapes and spectacular coastal waters, this project is expected to be a new model for measurably regenerative tourism. NEOM is already being built and the first destinations will come online in 2024. The Red Sea Global is another major project with a budget of $23.6 billion (PwC, 2024). The Red Sea destination opened its first resort in 2023, will continue opening the 16 resorts of its first phase over 2024/2025, and will be completed in 2030 with 50 resorts, as noted in project website. It has also won the World's Best Smart Hospitality Project in 2023 by the World Travel Tech Awards.

In order to develop local tourism sector in conjunction with emerging technologies, the Kingdom's Digital Tourism Strategy was launched in 2022. The strategy includes nine programs and 31 initiatives that are being implemented for three years to be completed by 2025 (MCIT, 2023). These initiatives focus on enhancing the digital transformation journey within the tourism sector, fostering a better experience for tourists and stakeholders. Key axes of the strategy include simplifying travel procedures, launching a unified platform for tourism providers, fostering innovation in digital tourism solutions, supporting extended tourism reality applications, promoting sustainability, enabling data-driven decision-making, cultivating a professional digital workforce, and attracting investors through digital platforms. The strategy aims to propel the prosperity of the Kingdom's tourism industry and establish a comprehensive platform meeting diverse requirements (KSA Unified National Platform, 2024).

Digital tourism strategy framework in the Kingdom includes developing a flexible and effective system that supports the sector's digital transformation journey and contributes to adopting a culture of innovation. In 2022, the Ministry of Tourism launched ten new regulations to develop the sector ranging from tourist guide regulation to regulation of tourist hospitality facilities. As of

Q4 2019, the country began receiving tourists from abroad with an electronic tourist visa valid for one year, allowing them to stay within the Kingdom for a continuous period of up to 90 days.

NEOM encompasses multiple mega projects including vertical city THE LINE, business hub Oxagon, luxury yachting destination Sindalah and the mountain resort of Trojena

In partnership with other national and international partners, the Saudi Tourism Authority aims at developing tourism in the Kingdom and enhancing the tourism experience for visitors using state-of-the-art technologies in the tourism sector. These partnerships stipulated several projects to improve and develop the tourism experience in the Kingdom, particularly in the Two Holy Mosques. The Authority launched the "Haramain Exhibition" application, which enables visitors worldwide to explore the exhibition of the architecture of the Two Holy Mosques in Mecca virtually, browse the archaeological collectibles and photographs on display, and learn about their details. Cooperation also includes developing and promoting tourist attraction sites using advanced technologies across various platforms (MCIT, 2023).

Furthermore, the Saudi Tourism Authority adopted a traveller-centric approach to technology planning and implementation and is developing a digital infrastructure that will provide the foundational technology capabilities for a seamless, digital, visitor-centred travel experience (Deloitte Insights, 2022). *Visit Saudi* is a comprehensive online platform designed to serve as the ultimate guide for tourism in Saudi Arabia. This platform, available through a website and app, offers features to help travellers plan, book, and enjoy various experiences across the kingdom. This service is complemented with additional tools such as *Saudi Calendar* offering a unified view of all events and locations, *Saudi Map* allowing travellers to explore attractions, *Saudi Smart ID* facilitating digital and physical identification across tourism services, and *Saudi Smart Pass* enabling access to multiple attractions via a single pass.

4.2.3 Türkiye

Travel and tourism is an important economic pillar in Türkiye. Contributing 11% to the country's gross domestic product (GDP) and 9.2% to total employment in 2019, tourism generated 2.6 million jobs in Türkiye, boosting regional and rural development (WEF, 2023). Türkiye welcomed 49.2 million foreign tourists in 2023, hiking 10.4% from the previous year, and above its pre-pandemic period level of 45 million in 2019, according to the Culture and Tourism Ministry.[3] Recovering fully from the pandemic by the end of 2023, Türkiye now targets 90 million tourists and $100 billion tourism income in 2028. The government plans introduce a total of 20 new branded products more intensively around the world by including nine more main promotional brands into the system.

According to WEF (2023), tourism sector in Türkiye faces sustainability challenges such as environmental degradation, the need to further promote inclusive tourism development and demand pressures caused by factors such as high seasonality and the overconcentration of tourism in a few regions. Tourism authorities aim to tackle these challenges with new national tourism plans and initiatives that integrate the concept of sustainability. In 2022, Türkiye Tourism Promotion and Development Agency (TGA) has set a global precedent by signing a collaboration agreement with the Global Sustainable Tourism Council (GSTC), which establishes and manages global standards for sustainable travel and tourism. This historic agreement positions Türkiye as the first government globally to develop a mandatory national program in partnership with the GSTC, focusing on sustainable tourism practices. The 3-year collaboration will restructure the Turkish tourism industry according to the GSTC Criteria, establishing national program criteria and providing training for inspection firms. The staged implementation is set to begin in 2023, with full compliance targeted by 2030. This initiative aligns with Türkiye's commitment to the Paris Agreement and bolsters its position as a formidable contender in international tourism, capturing the essence of current global trends. Building on its earlier Safe Tourism Certification Program, Türkiye aims to integrate both safe and sustainable standards across the tourism sector, further enhancing its appeal in the international arena (GSTC, 2022).

Big data emerges as a powerful tool for addressing sustainability challenges in Türkiye's tourism sector, offering enhanced competitiveness and resilience. By aggregating data from diverse sources like online travel agencies, sharing-economy platforms, digital payments, and mobile devices, big data enables real-time monitoring of social, economic, and environmental impacts. This facilitates precise management of tourism flows, targeted market strategies, and the development of smart destinations. Additionally, big data aids in tracking visitor behaviour, managing load capacity, and monitoring long-term environmental trends. To unlock its potential, Türkiye needs to invest in ICT infrastructure, skills development, multistakeholder collaboration, sustainability criteria management, and data privacy frameworks. Policymakers can further boost big data's role by aligning policies with opportunities, establishing governance frameworks, investing in human capital, promoting digitalization, and ensuring data privacy and security (WEF, 2023).

Virtual reality (VR) and augmented reality (AR) has the transformative impact on the tourism sector. These technologies offer tourists the opportunity to explore destinations beforehand, enhance travel experiences, and reminisce post-travel. Türkiye benefits from these technologies in

historical places and museums across the country. The AR application of the site enables visitors to gain an insight into what the excavations have revealed might have looked like. This measure is a digital innovation that pushes accessibility of knowledge using modern technology. One of the best examples for technology use in historical places of Türkiye is the VR application in the ancient city of Bergama located in Izmir. This project with the theme "History Comes to Life in 3D" has led to a three-dimensional trip of the Bergama ancient city with the use of appropriate modelling software and mobile technology. Moreover, AR of Zeugma Ancient City in Gaziantep was included among the best practices in digitalization and smart tourism in Europe (EC, 2023). The ancient city of Sagalassos and Ephesus, Tekno Mersin Project in Mersin, Geographic Information System (GIS) based mobile application system in Safranbolu are some of other examples that are developed in historical places in Türkiye (Akdu & Akdu, 2022).

Digital technology or devices including kiosks, interactive surface system, three-dimensional holograms, transparent projection films, virtual objects, virtual assistant, e-catalogue, planetariums, interactive examination system, archaeological excavation and matching games, land information system are also used in museums across Türkiye, but the number of museums that were made smart by using digital technology is very limited (Akdu & Akdu, 2022). Apart from virtual museums, the digitalized museums, which refer to an animation of museums and their artefacts by digital applications such as AR and VR, continue to develop also in Türkiye like in many other countries, as the relevant technologies develop and become available. Specifically focusing on digital recreation in smart cities in Türkiye, Baran and Karaca (2023) explores the virtual recreation applications in Turkish smart cities. They found that the current smart city applications in Türkiye are found to lack sufficient support for such activities, demonstrating a gap in fully harnessing VR and AR for tourism purposes. The study emphasizes the potential of existing smart city applications to accelerate digitalization in the tourism sector, calling for effective utilization of VR and AR technologies and their integration into the tourism industry's digital transformation process.

4.2.4 United Arab Emirates

In the United Arab Emirates (UAE), the contribution of travel and tourism sector to the GDP was nearly AED 167 billion in 2022, which was equivalent to 9% of the total GDP. In the same year, international tourists spent AED 117.6 billion in the UAE. The number of hotels in the UAE increased to 1,189 and hotel capacity reached 203,000 rooms. The travel and tourism sector directly supported 317,500 jobs in the UAE which is 5.4% of total employment. This is expected to rise by 2.4 per annum to 410,000 jobs which would be 5.9% of total employment in 2027. Investment in the travel and tourism sector amounted to 7% of the total investments made and expected to reach 11% of the total investments in 2027 (UAE Government Portal, 2024).

In 2018, Dubai's Department of Tourism and Commerce Marketing (DTCM) has launched Tourism 2.0, a blockchain enabled marketplace that connects potential buyers directly to hotels and tour operators, and eliminate the need for intermediaries through the use of disruptive technologies. Tourism 2.0 revolutionizes the tourism sector by leveraging blockchain technology. The blockchain network operates on a private network, providing users with a secure and transparent environment. With the creation of electronic currency linked to the dirham value,

users can seamlessly conduct transactions, exchanging real money for electronic currency (DTI, 2024). The initiative, which is DTCM's contribution to Dubai 10X, is expected to further the department's mission to establish Dubai as the leading destination for global travel, business and events. The Dubai 10X Initiative seeks to place Dubai Government entities 10 years ahead of the rest of the world in all sectors, propelling the Emirates into the future by implementing today what other cities around the world will be implementing 10 years from now.

Moreover, Dubai's Department of Economy and Tourism (DET) has unveiled the Carbon Calculator tool as part of the Dubai Sustainable Tourism (DST) initiative. This tool, within the Tourism Dirham Platform, now tracks real-time data for nine carbon emission sources in the hospitality sector, empowering hotels to efficiently manage energy consumption. The initiative aligns with the UAE Net Zero by 2050 Strategy, UN SDGs, and Dubai's Economic Agenda D33. Since its launch in 2017, the Carbon Calculator has measured and analysed hotels' collective carbon footprint, fostering sustainability practices and supporting Dubai's position as a leading sustainable tourism destination. The tool aids hotels in implementing initiatives aligned with the 19 Sustainability Requirements, promoting efficient resource management and cost savings (Dubai Tourism, 2023).

Similarly, Abu Dhabi enhances itself as a digitally smart tourism destination with PayBy, an innovative financial technology platform. In partnership with PayBy, the Department of Culture and Tourism of Abu Dhabi endeavours to advance a cashless, contactless payment system in the hospitality, retail, and tourism sectors. Aligned with the UAE government's vision for a secure financial ecosystem, PayBy's platform will be implemented in hotels, malls, and other tourism establishments in Abu Dhabi. The move aims to enhance the digital experience for tourists and residents, promote hygiene and safety amid global concerns, and contribute to Abu Dhabi's reputation as a leading 'smart' tourism destination with robust digital infrastructure. Transactions on PayBy are secured with advanced technologies, including AI-based fraud management, complying with international standards (DCT, 2022).

Dubai360 was launched in 2015
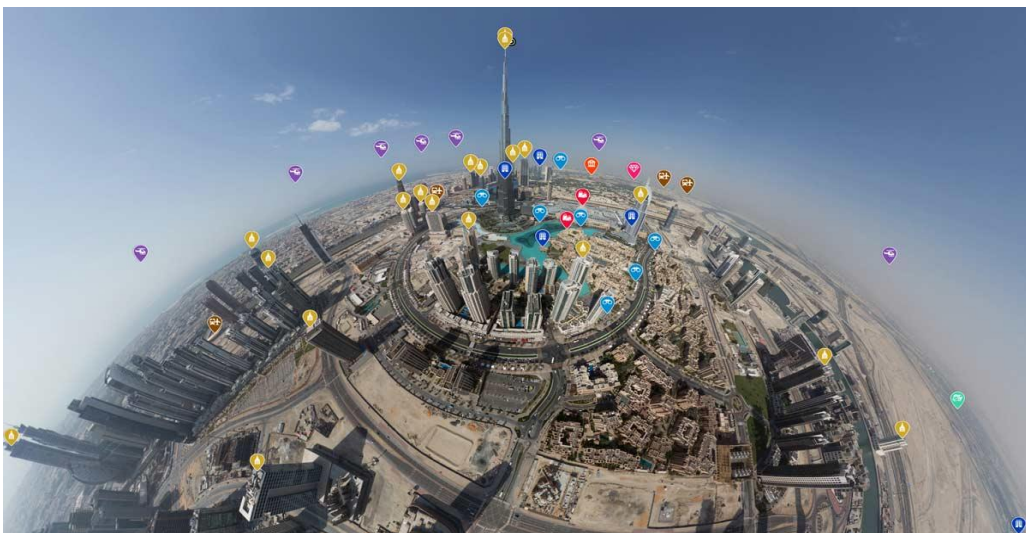
As presented in section 2.5, the Abu Dhabi 360º Tour is considered as an innovative initiative led by the Department of Culture and Tourism, offering a virtual exploration of key tourist attractions through immersive 360º 3D panoramic videos. Utilizing cutting-edge technology such as drones and virtual reality, the project provides a first-person perspective with customized audio, ensuring a fully immersive experience accessible across various devices. Beyond its technological prowess, the initiative serves a dual purpose. Firstly, it functions as a dynamic marketing campaign, strategically showcasing Abu Dhabi's natural and cultural heritage to attract tourists. Secondly, it seeks to redefine the destination's brand perception, moving beyond a mere stopover and establishing Abu Dhabi as a unique and compelling travel experience, aligning with the broader goal of becoming a prominent global destination. Similarly, Dubai360 showcases Dubai's famous cultural and tourist attractions through 360-degree panoramic images.

Finally, the recognition of Dubai as the World's Best Smart Tourism Destination in 2023 and Emirates Airlines winning the title of the World's Best Airline App in the same year by the World Travel Tech Awards underscore significant achievements in fostering smart tourism development in the UAE. Dubai's strategic implementation of innovative solutions, including smart infrastructure, data analytics, and digital services, contributes to an enhanced visit for tourists. On the other hand, Emirates' recognition for having the world's best airline app highlights the significance of seamless digital experiences in the travel industry. The app's success underscores the critical role of technology in providing travellers with convenient and efficient tools for booking, managing, and enhancing their air travel experiences. Together, these successes showcase the pivotal role of smart technology in shaping and advancing the global tourism and aviation sectors.

4.3 Integrating Technology within Tourism Services and Practices

[This subsection is prepared by UN Tourism for this report]

Spanning Africa, Asia, Europe, and South America, the Organization of Islamic Cooperation (OIC) comprises 57 member states, among which 54 are UN Tourism Member States, underscoring the significance of tourism within these nations. These nations collectively boast a wealth of rich and diverse natural, geographic, historical, and cultural heritage assets. This abundance presents vast opportunities for the cultivation of a sustainable and inclusive international tourism sector playing a pivotal role in the socio-economic development of OIC countries, serving as a catalyst for job creation, infrastructure development, and cultural exchange. Although the OIC region's current presence in the global tourism market may seem modest, concentrated primarily in a select few member states, the prospect for growth is undeniable. With the aid of transformative technologies and changing demographics, this potential is being unlocked at an accelerated pace, paving the way for robust economic growth and abundant employment opportunities throughout the OIC region.

UN Tourism, at the forefront of driving positive change in the tourism sector, advocates for the pivotal role of tourism in fostering economic growth, promoting inclusive development, and ensuring environmental sustainability. The main pillar of UN Tourism's work is focused on facilitating the implementation of innovative policies, practices and new technologies that support the advancement of these goals. By nurturing innovation ecosystems and fostering collaboration among stakeholders, UN Tourism plays a pivotal role in shaping the future of the tourism

industry, contributing to the development of destinations and their inhabitants while paving the way for a more sustainable and inclusive tourism landscape.

In this new era, the tourism landscape is marked by innovation, sustainability, collaboration, resilience, and an unwavering commitment to enhancing the travel experience. Through collaborative efforts with governments, local communities, and stakeholders, UN Tourism actively fosters innovation and implements effective solutions to address the evolving needs of the tourism sector. In this line, UN Tourism leads various innovative practices to support its member states in addressing the current and future challenges of the sector.

At UN Tourism, we leverage technology to drive innovation globally and in OIC countries by supporting scalable solutions alongside social entrepreneurship initiatives that make a tangible impact; meeting the demand for personalized and distinctive travel experiences by offering specialized solutions tailored to specific interests while preserving and promoting their local cultural heritage and traditions. Moreover, we empower entrepreneurs to address social and environmental challenges while creating economic opportunity, offer mentorship and capacity building in sustainable tourism and innovation management, provide access to resources and funding, and give opportunity for networking and gaining global visibility. By facilitating their growth and scalability, the organization contributes to the overall tourism development and resilience. Notably, UN Tourism has launched numerous Startup Competitions and challenges sourcing over 20,000 participants from 150 countries, resulting in a pool of over 300 top innovators being selected to receive tailored benefits.

In this line, building upon this commitment to fostering innovation, we are actively engaged in initiatives centred around sourcing disruptive technologies, particularly AI which can be integrated across the tourism value chain by providing opportunities for startups that are either primarily involved in AI or utilize AI in their solutions. Among the top global startups, 60 from 35 countries, including those within the Organization of Islamic Cooperation, are actively involved in new and emerging technologies and solutions that are directly relevant or adjacent to AI. The organization enables these startups by providing them with opportunities to network, connections to investors, and training and development support. By doing so, we enable the digitalization of the tourism sector and facilitate broader adoption of new and emerging technologies and solutions. According to a study conducted in 2021, the integration of AI in the tourism industry can enable growth by 7% to 11.6% of the total revenues in the tourism sector.

UN Tourism also engages in thought leadership to enhance the standardization of emerging technologies in the tourism sector like the Metaverse. The organization holds a position as vice-chair of the International Telecommunication Union's (ITU) Focus Group on Metaverse and leads the Task Group on Metaverse Tourism which produces white papers and reports on the applications of technology in the tourism sector. The estimated contribution of Metaverse to the tourism sector is estimated to be $20 billion by 2030 according to McKinsey. The Metaverse provides great economic benefits that are expected across different regions, in Asia, the contribution is expected to be $0.8-1.4 trillion to the regional GDP by 2035, for OIC countries such as Saudi Arabia in particular the expected contribution is between $20-35 billion to its national GDP by 2035 as well.

In OIC countries, UN Tourism has launched a diverse array of opportunities and activities aimed at fostering innovation and growth within the tourism ecosystem. UN Tourism Tech Adventures, a series of fora for top entrepreneurs to showcase solutions to key stakeholders and investors have been held in Bahrain, United Arab Emirates, Morocco, Qatar, Egypt, Nigeria, Uzbekistan, and Saudi Arabia. UN Tourism also tailors' competitions and challenges to meet the specific demands of member states. These challenges have been carried out regionally in the Middle East through the UN Tourism TTA Challenge Middle East, the WIT Challenge and nationally in Morocco and Nigeria. Also, various acceleration and training opportunities have been provided regionally and locally in OIC countries. Some recent notable examples can be found below which provide insight into the array of activities offered:

UNWTO Global SDG Start-up Competition (Global): This flagship competition, supported by 21 corporate and institutional partners to identify the most innovative startups which attracted more than 10,000 participants globally, whose projects help accelerate the achievement of the SDGs. This competition called for a cross-sector approach to boost sustainable development all over the world. Among them, two winners were from OIC countries: Malaysia and Egypt.

National UNWTO Start-up Competition (Morocco): Conducted in collaboration with the Tourism Development Société Marocaine d'Ingénierie Touristique (SMIT), aimed to spur the development of Moroccan tourism by providing a platform for local startups and entrepreneurs to showcase innovative ideas. With the overarching goal of transforming the tourism sector into a more sustainable, inclusive, and resilient industry, the competition sought to bolster the country's economic recovery post-pandemic, recognizing the vital role of Moroccan tourism, which contributed to 565,000 jobs in 2019 and accounted for 7% of the GDP.

Regional Start-up Competition (Middle East) - *Women in Tech Start-up Competition*: Aligned with UN Tourism objectives of gender equality and inclusivity, this competition addressed disparities in the regional tourism workforce. Targeting innovative tech-driven startups led by women in the Middle East, it focused on addressing societal, cultural, and environmental challenges within the tourism sector. Winners gained access to various benefits, including opportunities to pitch at high-level events, mentorship, potential funding, and scholarships, providing crucial support for start-up success.

National Hackathon (Nigeria) - *The Tourism Hackathon Nigeria*: Held in November 2022, this event brought together developers, product designers, entrepreneurs, and other individuals to advance Nigeria's tourism sector through digital innovation. The collaborative effort aimed to address challenges across the tourism value chain, fostering the development of unique digital solutions showcased at the Symposium on the Digital Futures for SMEs.

Acceleration Program (Middle East) - *Google Host Tourism Acceleration Program in the Middle East*: This collaboration between UN Tourism and Google aimed to foster innovation and digital transformation within the tourism sector in the UAE, Saudi Arabia, and Egypt. The program empowered tourism stakeholders to develop effective strategies for sustainable recovery and growth through the utilization of data and digital tools, driving towards a more inclusive, responsible, and digitally enabled future for tourism in the Middle East.

Overall, the landscape of international tourism within the OIC countries in 2024 underscores the crucial importance of supporting innovation and integrating new technologies to foster a better,

more inclusive sector. UN Tourism continues to drive positive change, empower stakeholders, and pave the way for a more resilient, responsible, and digitally enabled future for tourism globally.[4]

As the world navigates through evolving landscapes and challenges, the role of UN Tourism remains pivotal in steering the tourism sector towards sustainable growth, innovation, and inclusivity, ensuring that the benefits of tourism are realized by all and contributing to the overall well-being and prosperity of OIC countries and beyond.

4.4   Recommendations for Technology Adoption in Tourism

The success of a destination as an innovative and sustainable leader is heavily influenced by its digital ecosystem. Utilizing technology and digital platforms, a destination can forge a robust connection with its heritage, community, and natural surroundings. The overarching objective goes beyond merely attracting visitors; it aims to establish a comprehensive ecosystem fostering operational efficiency, elevating visitor experiences, and championing sustainability. This entails integrating data-driven insights, digital engagement platforms, and smart infrastructure to craft an interconnected and enriching experience for travellers. By doing so, destinations not only enhance their appeal to visitors but also contribute to a sustainable and technologically advanced future.

Figure 4.5: Four Pillars of Technology Adoption for Developing Smart Tourism
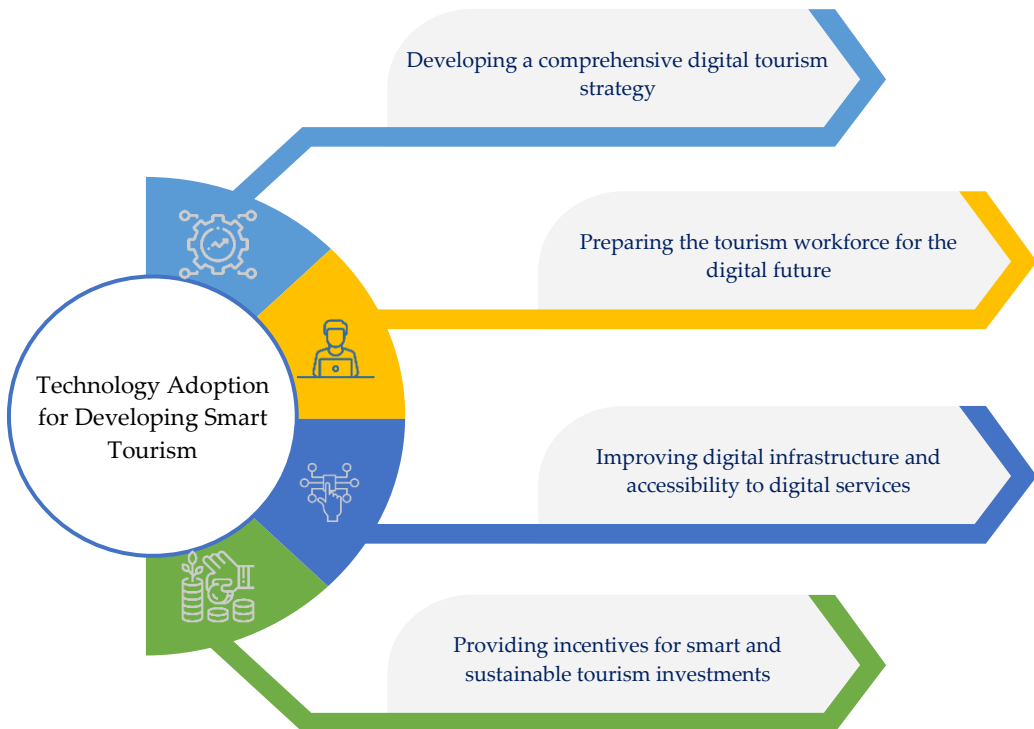
Technology Adoption for Developing Smart Tourism

- Developing a comprehensive digital tourism strategy
- Preparing the tourism workforce for the digital future
- Improving digital infrastructure and accessibility to digital services
- Providing incentives for smart and sustainable tourism investments

In order to accelerate the technology adoption in tourism to enhance competitiveness and improve efficiency, four major actions are recommended (*Figure 4.5*). First one is development of a comprehensive digital tourism strategy. Second one is preparing the tourism workforce for the digital future. Third one is improving digital infrastructure and accessibility to digital services and the fourth one is providing incentives for smart and sustainable tourism investments.

4.4.1   Developing a Digital Tourism Strategy

The development of a comprehensive digital tourism strategy is imperative as it aligns with the evolving landscape of the global tourism industry. In an era of rapid technological advancements, leveraging digital tools and innovations is essential for enhancing competitiveness, improving efficiency, and meeting the evolving preferences of modern travellers. A well-crafted digital tourism strategy provides countries with the framework to capitalize on technology for marketing, visitor engagement, infrastructure optimization, and sustainable practices. It not only boosts economic growth by attracting a tech-savvy tourist demographic but also fosters inclusivity, ensuring that the benefits of tourism are distributed across various regions and communities. Additionally, such a strategy positions nations to navigate challenges like the impact of the COVID-19 pandemic, enabling them to adapt swiftly to changing circumstances and ensuring resilience in the face of disruptions.

Developing a robust digital tourism strategy involves a systematic approach that integrates key components to harness the full potential of technology for sustainable tourism growth. The initial step entails a comprehensive assessment of the current state of the tourism sector, including its digital readiness, existing infrastructure, and the technological landscape. This analysis serves as the foundation for setting clear objectives and defining the desired outcomes of the strategy. Subsequently, stakeholder engagement becomes paramount, involving collaboration with government agencies, private sector entities, local communities, and technology experts. These collective insights contribute to the formulation of targeted policies and initiatives that address specific challenges and capitalize on opportunities.

Some of the key issues and challenges that needs to be incorporated in the strategy are as follows:

Digital Divide: Disparities in digital infrastructure and internet access can hinder the implementation of digital tourism initiatives, especially in rural or less-developed areas. To address this, it is necessary to invest in expanding and improving digital infrastructure, ensuring widespread access to high-speed internet. There is also a need for implementing targeted programs to bridge the digital divide, with a focus on underserved regions.

Capacity Building: Insufficient digital skills among tourism stakeholders, including businesses, government officials, and local communities, can impede the effective implementation of digital strategies. To address this, governments can establish training programs to enhance digital literacy and skills. They can also offer workshops, online courses, and certifications to empower individuals in the tourism ecosystem to leverage digital tools effectively.

Data Privacy and Security: Concerns related to data privacy and security can hinder the adoption of digital technologies in tourism, as tourists and businesses may be hesitant to share sensitive information. In this connections, it is vital to develop and enforce robust data protection

regulations, and implement cybersecurity measures to safeguard tourist data and build trust in digital services. Privacy measures should be communicated clearly to alleviate concerns.

Regulatory Frameworks: Outdated or unclear regulations may pose obstacles to the swift adoption of emerging technologies in the tourism sector. This requires updating regulations to create an enabling environment for digital innovation, and establishing agile regulatory frameworks that can adapt to the fast-paced nature of technological advancements.

Public-Private Partnerships: Limited collaboration between the public and private sectors, as well as between different stakeholders, may hinder the holistic development of digital tourism initiatives. Therefore, it is necessary to encourage public-private partnerships to leverage expertise and resources. Collaboration between government agencies, businesses, technology providers, and local communities should be facilitated to create a unified and comprehensive approach.

Sustainability Integration: Ensuring that digital tourism strategies align with sustainability goals can be challenging, as technology adoption may inadvertently contribute to environmental or social issues. It is essential to integrate sustainability principles into digital tourism strategies, and promote the use of eco-friendly technologies and practices.

Adaptability and Innovation: A critical aspect of the strategy is the integration of emerging technologies such as artificial intelligence, big data, and the Internet of Things, tailored to enhance visitor experiences, destination management, and marketing efforts. Rapid technological advancements require a strategy that is flexible and adaptable to change. This requires fostering a culture of innovation and continuous improvement. Therefore, it is necessary to regularly review and update the digital tourism strategy to incorporate emerging technologies and address evolving challenges.

It is also critical to balance the integration of digital technologies with preserving the authentic and personal aspects of the tourist experience. It is imperative to design digital initiatives that enhance, rather than replace, the human touch in tourism. Approach should be to use technology to complement the unique experiences offered by each destination. Moreover, inclusivity and sustainability should be embedded in the strategy, incorporating measures to minimize the environmental impact of tourism and promote the participation of diverse communities. Additionally, the implementation plan should account for ongoing monitoring and evaluation, allowing for agility in adapting to technological advancements and changing market dynamics.

4.4.2 *Improving Digital Infrastructure and Accessibility to Digital Services*

A robust digital infrastructure is needed for tourists and tourism-related businesses to leverage technological solutions effectively. Improved digital accessibility promotes inclusivity, allowing a broader range of tourists to engage with tourism services, contributing to economic growth and fostering a more connected and digitally literate society. As tourism increasingly becomes intertwined with digital platforms, investing in infrastructure and accessibility becomes imperative for staying competitive and meeting the expectations of the contemporary traveller.

Considering the limited connectivity and accessibility to digital services in some OIC countries, a number of aspects are considered important in policy design. Governments and relevant stakeholders should prioritize significant investments in digital infrastructure, including high-speed broadband networks and widespread Wi-Fi availability. This is fundamental for ensuring

smooth connectivity and accessibility for both tourists and local businesses. Such investments should prioritize initiatives to bridge the digital divide, ensuring that all communities, including those in rural or remote areas, have access to digital technologies. This may involve subsidies, incentives, or public-private partnerships to extend connectivity to underserved regions. Governments can engage with telecommunication companies, technology providers, and other relevant private entities to develop joint initiatives that enhance digital infrastructure and services.

To enhance accessibility to digital services, OIC countries should pursue a multifaceted approach. Fostering collaboration with telecom providers is crucial to offering affordable data plans and subsidizing the cost of digital devices, especially for low-income populations. Concurrently, comprehensive digital literacy programs, integrated into formal education curricula, are essential for equipping individuals of all ages with basic and advanced digital skills. Additionally, promoting online government services, supporting SMEs in digital adoption, and encouraging competition among internet service providers contribute to a robust digital ecosystem. Establishing public Wi-Fi hotspots, community internet access centres, and providing digital inclusion vouchers further foster internet accessibility, with a focus on underserved populations.

In addition to these, policymakers should consider introducing incentives for innovation, such as tax breaks and subsidies for businesses embracing digital technologies in order to promote technology adoption in tourism. Open data initiatives should be encouraged to foster collaboration and stimulate innovation across different entities in the tourism sector. Prioritizing robust cybersecurity measures is essential to safeguard digital infrastructure and tourist data, ensuring a secure environment for technology adoption. Policymakers should also focus on developing user-friendly digital platforms that cater to diverse tourist needs, offering valuable information and enhancing the overall travel experience. Establishing feedback mechanisms to continuously assess digital services and infrastructure effectiveness is crucial, involving regular input from tourists, businesses, and local communities to identify areas for improvement and innovation.

4.4.3   *Preparing the Tourism Workforce for the Digital Future*

A skilled workforce capable of leveraging digital tools and understanding emerging technologies is essential for tourism businesses to stay relevant and thrive in a rapidly changing landscape. By investing in the digital preparedness of the workforce, the industry ensures adaptability, innovation, and the ability to meet evolving customer expectations, ultimately contributing to the sustainable growth of the tourism sector.

Preparing the tourism workforce for the digital future requires a comprehensive strategy focused on skill development and knowledge acquisition. This involves the implementation of comprehensive digital skills training programs accessible to all levels of the workforce. Collaborative efforts with educational institutions ensure that academic curricula align with the digital needs of the sector, fostering a continuous learning culture. Leadership training programs, partnerships with tech companies, and mentorship initiatives connect professionals with emerging technologies. Industry networking events and conferences play a crucial role in keeping the workforce informed about digital trends and innovations.

Additionally, preparing the workforce involves incorporating emerging technologies like AI and virtual reality into training modules. Soft skills development is recognized as essential alongside technical proficiency, emphasizing effective communication and adaptability. Regular skills

assessments help identify gaps, enabling tailored training programs for a workforce that remains agile and responsive. A holistic approach would ensure that tourism professionals are equipped with the skills and knowledge needed to adapt to new conditions in a constantly changing digital landscape.

BOX 4.2: *Strengthening the Capacities of African Tourism Boards through Sustainable Human Resource Management Practices*

In response to the 11th Call for Project Proposals of the COMCEC Project Funding (CPF), SESRIC has submitted a project titled "*Strengthening the Capacities of African Tourism Boards through Sustainable Human Resource Management (HRM) Practices*". This project, which has secured funding for the implementation period of 2024, adopts a holistic approach aimed at enhancing tourism boards. It seeks to achieve this by embedding sustainable HRM practices, encouraging private sector engagement, promoting community-based tourism, improving regulatory frameworks, and formulating strong marketing strategies.

At the heart of this initiative is the fundamental recognition of human resources as the foundation of effective tourism management. Within the framework of this project, an online training course and a workshop will be organised. The Online Training Course on "*Enhancing Tourism Competitiveness through Sustainable Human Resource Management Practices in OIC African Member States*" will equip participants with both theoretical insights and practical skills essential for implementing sustainable HRM practices. Concurrently, the Workshop entitled "*Sustainable Human Resource Management Practices: Building Resilience in African Tourism Boards*" will facilitate knowledge exchange and expertise transfer among stakeholders.

The anticipated outcomes of these efforts are significant. This includes the development of a strategic roadmap tailored to the unique context of African tourism boards, outlining the implementation of sustainable HRM practices. Additionally, the recommendations resulting from the workshop will serve as a guide for future initiatives aimed at enhancing the resilience and competitiveness of the tourism sector.

Aligned with the resolutions of the 11th Session of the Conference of Islamic Tourism Ministers (ICTM), this project exemplifies a collaborative effort involving key partners such as Malaysia, Türkiye, Benin, Burkina Faso, and several other countries. Unified in purpose, these partners are empowering African tourism boards, thereby enhancing their capacity to lead tourism development initiatives in their respective countries.

4.4.4 *Providing Incentives for Smart and Sustainable Tourism Investments*

Tourism sector development relies heavily on the performance of private sector, requiring governments to implement proper mechanisms for firms to embrace smart and sustainable tourism solutions. One of the most critical form of incentives is financial incentives. They can introduce tax breaks, subsidies, or grants for businesses that invest in sustainable practices and technologies. Financial incentives can offset the initial costs of adopting technological intensive and eco-friendly measures, making them more attractive to tourism enterprises.

Additionally, governments should direct investments toward the development of smart infrastructure, including digital connectivity, IoT-enabled systems, and renewable energy solutions. This lays the foundation for a technologically advanced and environmentally sustainable tourism sector. To this end, governments can offer grants specifically for private

enterprises engaged in research and development activities related to smart tourism. These grants encourage businesses to innovate and develop new technologies that contribute to the sector's sustainability. Moreover, providing access to low-interest loans or favourable financing terms can encourage businesses to invest in smart infrastructure and technologies.

Establishing certification programs for businesses that meet certain sustainability and technology adoption criteria can act as an incentive. Certified businesses may receive preferential treatment, such as priority access to promotional campaigns or inclusion in official tourism recommendations. Certifications, such as eco-labels or green certifications, not only provide recognition but also serve as a marketing tool, attracting environmentally conscious tourists. Similarly, governments can institute awards or recognition programs for businesses that demonstrate outstanding commitment to smart and sustainable practices. Positive acknowledgment can enhance a company's reputation and attract environmentally conscious customers. Such firms can also benefit from preferential treatment in marketing platforms, trade shows, or promotional campaigns that highlight eco-friendly and tech-savvy tourism offerings.

Annex: Country Classifications

A. Major Country Groups used in the Report

OIC Countries (57)*

Code	Name	Code	Name	Code	Name
AFG	Afghanistan	GUY	Guyana	PAK	Pakistan
ALB	Albania	IDN	Indonesia	PSE	Palestine
DZA	Algeria	IRN	Iran	QAT	Qatar
AZE	Azerbaijan	IRQ	Iraq	SAU	Saudi Arabia
BHR	Bahrain	JOR	Jordan	SEN	Senegal
BGD	Bangladesh	KAZ	Kazakhstan	SLE	Sierra Leone
BEN	Benin	KWT	Kuwait	SOM	Somalia
BRN	Brunei Darussalam	KGZ	Kyrgyz Republic	SDN	Sudan
BFA	Burkina Faso	LBN	Lebanon	SUR	Suriname
CMR	Cameroon	LBY	Libya	SYR	Syria*
TCD	Chad	MYS	Malaysia	TJK	Tajikistan
COM	Comoros	MDV	Maldives	TGO	Togo
CIV	Cote d'Ivoire	MLI	Mali	TUN	Tunisia
DJI	Djibouti	MRT	Mauritania	TUR	Türkiye
EGY	Egypt	MAR	Morocco	TKM	Turkmenistan
GAB	Gabon	MOZ	Mozambique	UGA	Uganda
GMB	Gambia	NER	Niger	ARE	United Arab Emirates
GIN	Guinea	NGA	Nigeria	UZB	Uzbekistan
GNB	Guinea-Bissau	OMN	Oman	YEM	Yemen

 * Membership of Syria to the OIC is currently suspended.

Developed Countries* (41)

Andorra	France	Lithuania	Slovak Republic
Australia	Germany	Luxembourg	Slovenia
Austria	Greece	Macao SAR	Spain
Belgium	Hong Kong SAR	Malta	Sweden
Canada	Iceland	Netherlands	Switzerland
Croatia	Ireland	New Zealand	Taiwan Province of China
Cyprus	Israel	Norway	United Kingdom
Czech Republic	Italy	Portugal	United States
Denmark	Japan	Puerto Rico	
Estonia	Korea	San Marino	
Finland	Latvia	Singapore	

 * Refers to "advanced economies" as classified by the IMF. Last update April 2023.

Non-OIC Developing Countries

Includes all countries other than those classified as OIC and developed countries.

B. Geographical Classification of OIC Countries

High Income* (8)

Bahrain	Guyana	Oman	Saudi Arabia
Brunei Darussalam	Kuwait	Qatar	United Arab Emirates

Upper Middle Income* (13)

Albania	Iraq	Maldives	Palestine
Azerbaijan	Kazakhstan	Suriname	
Gabon	Libya	Türkiye	
Indonesia	Malaysia	Turkmenistan	

Lower Middle Income* (21)

Algeria	Djibouti	Lebanon	Tajikistan
Bangladesh	Egypt	Mauritania	Tunisia
Benin	Guinea	Morocco	Uzbekistan
Cameroon	Iran	Nigeria	
Comoros	Jordan	Pakistan	
Côte d'Ivoire	Kyrgyz Republic	Senegal	

Low Income* (15)**

Afghanistan	Guinea-Bissau	Sierra Leone	Togo
Burkina Faso	Mali	Somalia	Uganda
Chad	Mozambique	Sudan	Yemen
Gambia	Niger	Syria**	

* Country grouping by income level is based on World Bank classification by GNI per capita in 2022. Accordingly;

- Low-income countries: with a GNI per capita of $1,135 or less,
- Lower middle-income countries: with a GNI per capita between $1,136 and $4,465,
- Upper middle-income countries: with a GNI per capita between $4,466 and $13,845, and
- High-income countries: with a GNI per capita of $13,846 or more.

** Membership of Syria to the OIC is currently suspended.

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- UNWTO Women in Tech Startup Competition: Middle East, (https://www.unwto.org/startup-competition/unwto-women-in-tech-middle-east)

- UNWTO and Google Host Tourism Acceleration Program in Middle East, (https://www.unwto.org/news/unwto-and-google-host-tourism-acceleration-program-in-middle-east)