

COVID-19 AND TOURISM AN UPDATE

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Assessing the
economic consequences



**COVID-19
RESPONSE**

2021, United Nations Conference on Trade and Development.

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Abstract

Tourism is one of the sectors most affected by the COVID-19 pandemic. Indeed, the number of international tourist arrivals declined by 84 per cent between March and December 2020 compared with the previous year, according to data observed by UNWTO. Based on a range of tourist arrivals' projections, the report quantifies the potential economic effects of the contraction in tourism in 2021.

The indirect effects are significant.

Due to linkages with upstream sectors such as agriculture, a drop in tourist sales leads to a 2.5-fold loss in real GDP, on average, in the absence of any stimulus measures. Based on three scenarios, one optimistic, one pessimistic and one where the asymmetric speed of vaccinations is considered, the economic losses could range between \$1.7 trillion and \$2.4 trillion in 2021. The results highlight the importance of the vaccine rollout in getting global tourism restarted and other mitigating measures.

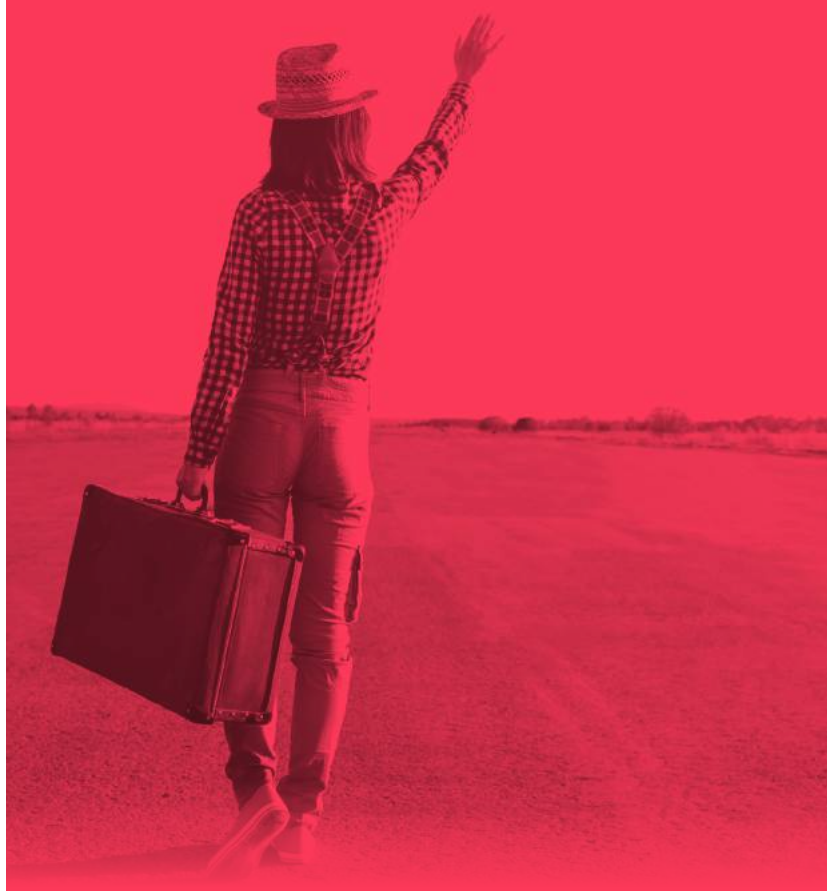


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 74%
Number of inbound
tourist arrivals in 2020

Introduction

The COVID-19 pandemic has been a health and economic crisis with devastating effects on developing countries, especially those dependent on tourism. As governments have attempted to protect their populations, lockdowns, quarantines, and major restrictions on national and international mobility were implemented. This, coupled with the decision of consumers to limit international travel resulted in a sharp contraction for the tourism sector with severe economic consequences, particularly on countries that rely on the sector. The number of international tourist arrivals declined by 74 per cent in 2020 compared with the previous year (UNWTO Tourism Dashboard). In many developing countries, arrivals were down by 80-90 per cent. The beginning of the year 2021 has been worse for most destinations, with an average global decline of 88 per cent as compared to pre-pandemic level, although the northern summer and autumn may see a significant improvement for some destinations, in particular for domestic and regional travel. The indirect effects of this decline are even more devastating, as labour and capital remain unused and the lack of demand for intermediate goods and services has a negative upstream effect into many sectors. This note attempts to quantify these effects and shows how the rollout of vaccines may affect these estimates.



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Vaccines and the uneven prospects for tourism

Diverse impacts

The COVID-19 virus has so far – by June 2021 – infected 179 million people globally and contributed to 3.9 million deaths (WHO, 2021). After abating somewhat in February and March, 2021 daily cases increased to almost one million a day and still amount to 400,000 per day. Vaccine doses administered are approaching 2.4 billion. Vaccinations appear to have slowed the spread in some countries, such as Israel, the United Kingdom, and the United States of America. In most developing countries, access to and distribution of vaccines is a limiting factor, and the virus continues to spread at an alarming rate in India, Brazil, and in many countries where tourism is important for people's livelihood such as Maldives and Seychelles. On the other hand, other countries where tourism is an important sector such as Thailand, Morocco, and Barbados, appear to have done well in controlling the spread.

A shot in the arm

Vaccines are a critical part of the solution, albeit with considerable uncertainty, even once access and distribution problems are overcome. While effective at limiting severe cases and deaths from the virus, so far it is not clear that current vaccination efforts completely halt the spread of infection. There are people who are reluctant to receive the vaccine, as they fear adverse short or long term effects. In addition, people who have had the vaccine may take less care with other preventative measures, and therefore expose themselves and others. Fears that vaccinations will be less effective against new variants of COVID-19 add another layer of concern. However, a major challenge currently is the uneven availability of vaccinations and the low number of vaccinated people in many countries.

Given these constraints, it is unlikely that tourism will bounce back to its pre-pandemic levels within a year or two.

By June 2021:

 **3.9 million deaths**

 **179 million people infected**

 **2.4 billion vaccine doses administered**

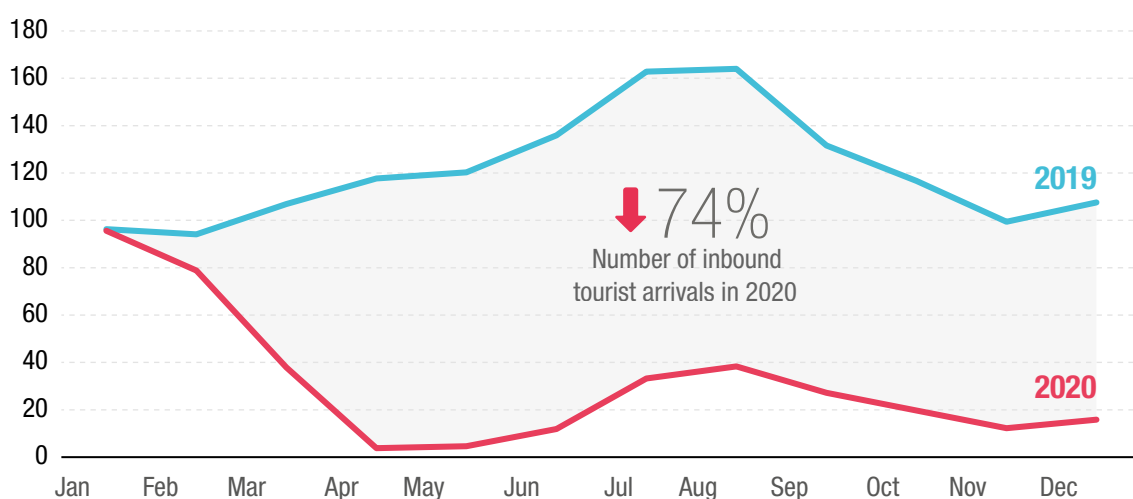


The massive contraction in tourist arrivals

Staying home

The United Nations World Tourism Organization (UNWTO) reports that almost all countries have implemented travel restrictions of one sort or another, such as travel bans, visa controls and quarantines (UNWTO 2020). As a result, international tourism was almost totally suspended in April and May of 2020. Inbound tourist arrivals declined 74 per cent between January and December 2020, about 1 billion trips. However, if the pre-COVID months of January and February 2020 are excluded, the fall in arrivals amounts to 84 per cent.¹

Figure 1 | International tourist arrivals (In thousands)



Source: UNCTAD based on UNWTO.

¹ According to UNWTO (2021c) the drop in international tourist arrivals in 2020 returned the number of travellers back to levels of 30 years ago, and the drop of over US\$ 900 billion in international tourism receipts accounts for almost the entire drop in services exports, 93 per cent, and cuts the overall exports value by over 4 per cent in 2020. An earlier assessment by UNWTO (2021d) estimates that the loss in direct tourism gross domestic product is US\$2 trillion.

The most affected regions are North-East Asia, South-East Asia, Oceania, North Africa and South Asia. Least affected regions are North America, Western Europe and the Caribbean. This shows that the greatest impact has fallen on developing countries. The reduction in tourist arrivals across developing nations is relatively consistent, mostly between 60 and 80 per cent (Figure 2).

Figure 2 | Reduction in tourist arrivals for selected developing countries in 2020 (Percentage)



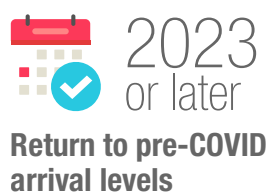
Source: UNCTAD based on UNWTO Tourism Dashboard.

Jobs at stake

Tourism is an important source of income for many developing countries, accounting for **50 % of total exports** for many small economies, particularly Small Islands Developing States such as Maldives and Saint Lucia (UNCTAD 2020b). Tourism has relatively low barriers to entry and employs a high share of young people and women. UNWTO (2021a) estimates that **100-120 million direct tourism jobs are at stake**.



A grim outlook for some



The UNWTO (2021b) reports that tourism experts do not expect a return to pre-COVID arrival levels until 2023 or later. In fact, nearly half of the experts interviewed see a return to 2019 levels in 2024 or later (UNWTO, 2021c). The main barriers are travel restrictions, slow containment of the virus, low traveler confidence and a poor economic environment.

Travel has adapted to the impact of COVID particularly in terms of travel restrictions. Domestic travel has increased, but this does little to help developing countries that are dependent on international travel. Retirees, who tend to spend more per trip, are more likely to stay at home. Younger travellers, such as backpackers, who seem more willing to travel during this pandemic tend to stay longer but spend less than older travelers. Cruise ships, involving extended confinement, are likely to be less popular. Developing countries dependent on cruise ship arrivals may need to diversify their industries.

The proportion of vaccinated people can be an indicator of tourists' wanderlust and their possibilities to travel. Although the proportion in the countries of origin as well as in the destination can be decisive, it is likely that tourists will nevertheless hesitate to travel long-distance, preferring closer destinations with high vaccination levels. The share of vaccinated people varies significantly across countries, from below 1 per cent to over 60 per cent (Reuters COVID-19 Vaccination Tracker). It is likely that tourism in countries with a high share of vaccinated people will rebound faster than in countries with a low share. Travel within Europe and North America, for example, is likely to pick up faster beginning this summer than many developing countries, who are still struggling to get sufficient vaccines and are thus expected to rebound slower.

Last summer and an update

In July 2020, UNCTAD, in its report COVID-19 and Tourism (UNCTAD 2020a), presented three scenarios on the potential economic impact of the pandemic on the tourism sector and sectors directly or indirectly linked to it. A 12-month lock-down was estimated to incur a cost of US\$3.3 trillion, including indirect costs. Unfortunately, even the worst-case scenario has turned out to be optimistic. Few observers expected that international travel would still be very low after 12 months.

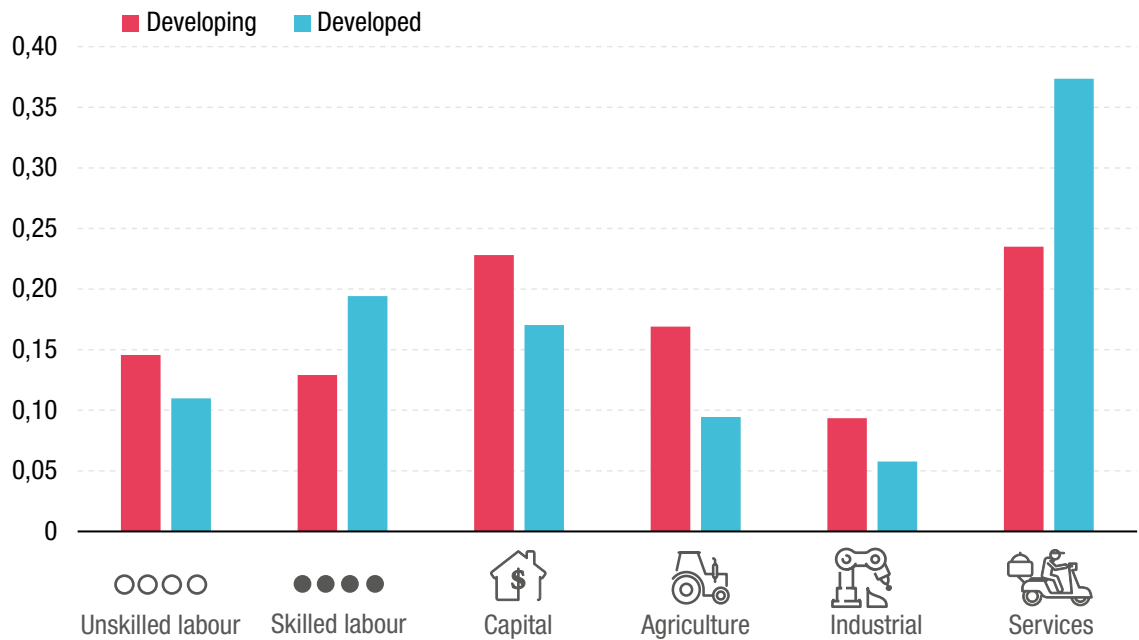
This note updates this report and estimates the economic effects going forward. As in the previous report, a general equilibrium model that captures the backward and forward linkages between sectors is used. Therefore, indirect losses to upstream industries that supply food, beverages, accommodation and transport to the tourism sector are estimated. It is also taken into account that labour and capital no longer needed in the tourism sector may be employed in other sectors. In the short run, however, labour and capital are likely to remain unemployed due to frictions in labour and capital markets. It is difficult to find alternative uses for empty planes, cruise ships and hotels, and in the short term for staff who work in these industries. In a prolonged downturn, the ability to re-employ labour and capital in other industries is crucial.

It is useful to examine inputs used in the tourism sector, as these determine the indirect effects of a tourism downturn. Globally, labour and capital account for half the inputs, with agricultural products (food and beverages) and services (accommodation and transport) contributing most of the rest. Figure 3 provides a general picture on the composition of inputs for the sector, although there is much variation between countries and between tourism sectors. It is worth noting that even in developed countries where labour is expensive, such as France or Norway, payments to labour account for a large proportion of inputs. This reflects the high wage rates rather than the number employed. In many developing countries, such as Turkey, wage rates are low but the number of employed is high. As a generalization, our data from the Global Trade Analysis Project (GTAP), which is based on national accounts, suggests that labour accounts for around 30 per cent of tourist services expenditure in both developed and developing economies.

Some other inputs into tourism services are also labour intensive. Food and beverage products are major inputs. These are labour intensive, but in this instance the labour tends to be more skilled in comparison to other sectors.

Some intermediate inputs are imported. France imports a fifth of the ingredients that go into food production (GTAP Database Version 10.1).² In a tourism downturn, these foreign suppliers share the burden. GTAP simulations take these factors into account in attempting to quantify the direct and indirect costs of the decrease in tourism caused by COVID-19.

Figure 3 | Inputs into tourism sector (Percentage)



Source: UNCTAD derived from GTAP data base.

² The GTAP database is documented in Aguiar et al. (2019). The GTAP model is described in Corong et al. (2017).



Possible scenarios for 2021

The three scenarios presented below are consistent with UNWTO (2021b) projections for 2021.

- 1 **The first scenario** is a reduction in tourist arrivals as observed in 2020. Reductions averaged 74 per cent with considerable variation between countries. This average reduction is close to the 75 per cent reduction in UNWTO's pessimistic scenario.
- 2 **The second scenario** is a reduction in arrivals averaging 63 per cent, which the UNWTO sees as an optimistic outcome in 2021.
- 3 **The third scenario** takes into account varying rates of vaccination and assumes a 75 per cent reduction in countries with low vaccination rates, and a 37 per cent reduction in countries with relatively high vaccination rates.³
The cut-off point is economies with 50 per cent of their population vaccinated at the end of May. There are 55 such economies, according to Our World in Data.⁴ This includes major destination countries such as the United States, Italy, France and Spain as well as many smaller economies.

Table 1 | Scenarios

Description	Average reduction compared to 2019 levels
1 Reduction in arrivals as in 2020	↓ 74%
2 Partial recovery	↓ 63%
3 Uneven vaccination	↓ 75% low ↔ ↓ 37% high vaccination share

³ A reduction of 75 per cent is the pessimistic scenario of the UNWTO (2021b). The rate of 37 per cent is based on local assessments such as for Switzerland (ETH Zürich KOF Economic Forecast, 2021).

⁴ The 55 economies are Anguilla, Antigua and Barbuda, Aruba, Bahrain, Belgium, Bermuda, Bhutan, British Virgin Islands, Canada, Cayman Islands, Chile, Curacao, Cyprus, Denmark, Dominica, Faeroe Islands, Falkland Islands, Finland, France, Germany, Gibraltar, Greece, Guernsey, Hungary, Iceland, Isle of Man, Israel, Italy, Jersey, Lithuania, Maldives, Malta, Monaco, Mongolia, Montserrat, Nauru, Netherlands, Pitcairn Islands, Portugal, Qatar, Saint Helena, San Marino, Serbia, Seychelles, Singapore, Sint Maarten (Dutch part), Spain, Sweden, Switzerland, Turks and Caicos Islands, United Arab Emirates, United Kingdom, United States, Uruguay, and Wallis and Futuna. Source: Ritchie et al. (2020).

The world is divided into 38 economies and regions, reflecting available data, and match these regions with UNWTO estimates of inbound tourist expenditure for 2018 and the estimated reductions in international arrivals (UNWTO Tourism Dashboard). The direct and indirect impacts on consumption, Gross Domestic Product (GDP) and employment in each of the 65 goods and services sectors in each region can be estimated.

The standard GTAP model is used and the 2014 database is projected forward to 2019, the last pre-COVID year. Our simulations assume each economy is the same size as in 2019, although it is acknowledged that some economies may not have returned to pre-COVID levels, while other may have grown by several per cent.

Importantly, the standard labour market assumption sector is modified to allow for unemployment in the tourism sector. Unskilled workers put out of work from the downturn in tourist arrivals will most likely not find employment elsewhere. The adjustment occurs in employment rather than wages. It is assumed that skilled workers and capital can be re-employed elsewhere, although this drives down wages and the return on capital. Details are described in UNCTAD (2020a).

The results presented here are based on simulations that capture the effects of tourism reduction only, not any other policies such as economic stimulus programmes that may have reduced the actual impact of the change in tourism. This allows to isolate the effects.⁵

⁵ Limitations stem from the data availability, specifically tourist arrivals for some countries, tourist data in GTAP, I-O tables and vaccination rates. Tourism services are not modeled as an export in GTAP which limits the possibility to substitute domestic and international tourists.

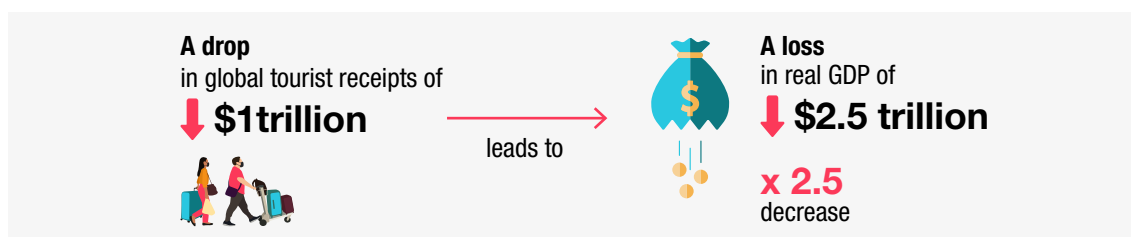


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Cascading effects

A feature of Computable General Equilibrium modelling is intersectoral effects. This means a reduction in output in one sector leads to a reduction in demand for inputs from other sectors, and so on down the supply chain. It also means that labour and capital no longer needed in one sector can be re-allocated into other sectors. If there is a fall in demand for labour and capital, wages and rates of return need to fall or employment falls. Idle factors of production lead to a fall in output, measured by GDP at the national level.

Our analysis shows that depending on employment effects, the indirect effects of a drop in tourism receipts increase the cost.

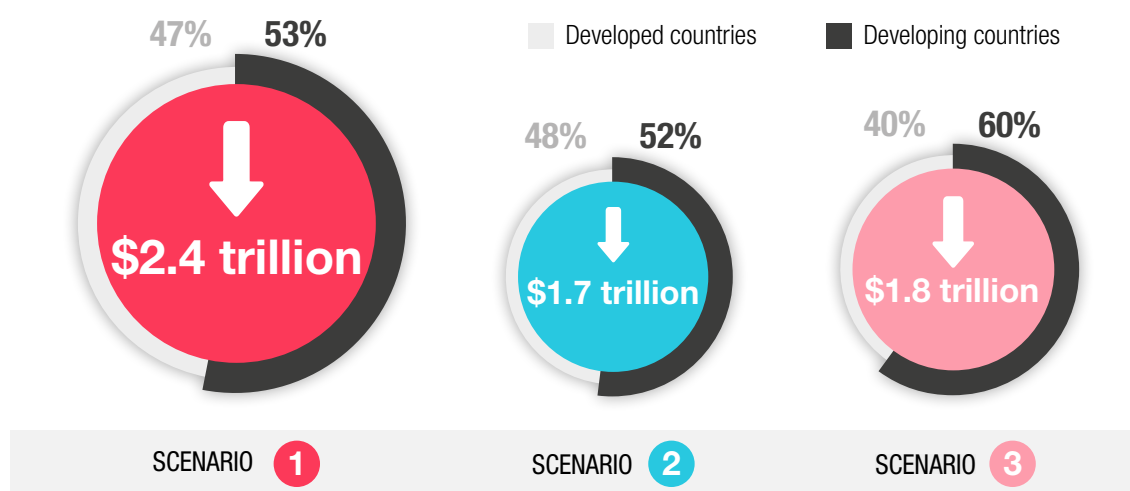


This ratio varies greatly across countries, from one to three or four-fold. This depends on the backward linkages in the tourism sector, including the unemployment of unskilled labour.

The effect is somewhat greater for developing countries, as seen in figure 4, as some developing countries are much more dependent on tourism.

A partial recovery, from a loss of 74 per cent to 63 per cent, reduces the loss in global GDP by 30 per cent to \$1,696 billion. With the benefit of vaccinations being more pronounced in some countries than others, losses are reduced in most developed countries but are worsened in developing countries where the absence of widespread vaccinations keeps tourists away. At a regional level, there are significant differences between scenarios 2 and 3, but the major beneficiaries in absolute terms are the United States, France, Germany, the United Kingdom and Switzerland. These countries have high levels of tourists and high vaccination rates. Developing countries will carry the greatest burden. Globally, the blow to international tourism given by COVID-19 has caused a loss in GDP of more than \$4 trillion only for the years 2020 and 2021, if indirect effects are taken into account as our estimates suggest.

Figure 4 | As tourism falls world GDP takes a hit in 2021, 3 alternative scenarios



Source: UNCTAD based on GTAP simulations.

Note: Drop in global tourist sales are \$934 billion in scenario 1, \$695 billion in scenario 2 and \$676 billion in scenario 3

The estimated GDP effects of the observed loss in tourism receipts are shown in figure 5 and in more detail in Appendix. For example, international tourism contributes about five per cent of the GDP in Turkey and the country suffered a 69 per cent fall in international tourists in 2020. The fall in tourism demand is estimated at \$33 billion and this leads to losses in sectors that supply tourism, such as food, beverages, retail trade, communications and transport. The total fall in output is \$93 billion, about three times the initial shock. The decline in tourism alone contributes to a real GDP loss of about 9 per cent. This decline was partly offset in reality by fiscal measures to stimulate the economy.

Figure 5 | Estimated losses in GDP by region from reduction in tourism (Percentage)

Country	Sim 1	Sim 2	Sim 3	Region	Sim 1	Sim 2	Sim 3
Turkey	-9,1	-6,3	-7,8	Central America	-11,9	-7,5	-9,9
Ecuador	-9,0	-5,5	-7,5	East Africa	-9,3	-6	-7,9
South Africa	-8,1	-5,5	-6,9	South East Asia	-8,4	-5,6	-7,1
Ireland	-5,9	-4,1	-5	North Africa	-7,5	-5	-6,4
Switzerland	-4,3	-3	-3,6	Rest of SACU	-6,3	-4,4	-5,3
Republic of Korea	-3,8	-2,7	-3,3	Rest of Asia	-5,8	-4,1	-3,1
Australia/New Zealand	-3,7	-2,7	-3,2	East European Union	-4,7	-3,3	-3,7
United Kingdom	-3,2	-2,3	-1,6	West Africa	-4,6	-3,1	-3,9
France	-3,2	-2,3	-2,7	Rest of the World	-3,9	-2,7	-3,2
Norway	-2,5	-1,8	-2,1	East and Central Europe	-3,5	-2,5	-3
Argentina	-2,4	-1,7	-2	Middle East	-3,1	-2,2	-2,5
Germany	-2,4	-1,7	-1,3	Rest of South Asia	-2,8	-2	-2,4
Colombia	-2,3	-1,7	-2	North European Union	-2,7	-1,9	-1,9
United States of America	-2,1	-1,5	-1,1	Caribbean	-2,5	-1,8	-2
China/Hong Kong SAR	-2,0	-1,4	-1,7	Mediterranean Europe	-2,3	-1,6	-1,4
India	-1,9	-1,4	-1,7	Rest of South America	-1,9	-1,4	-1,5
Canada	-1,9	-1,4	-1	World	-2,7	-1,9	-2
Mexico	-1,6	-1,2	-1,3				
Russian Federation	-1,5	-1,1	-1,3				
Japan	-1,0	-0,7	-0,8				
Brazil	-0,6	-0,5	-0,6				
Nigeria	-0,3	-0,2	-0,2				

Source: UNCTAD based on GTAP simulation. Scenario 1. Simulations capture effects of tourism reduction only, not other policies such as economic stimulus programmes.



Labour market effects

The estimated losses in employment of unskilled labour due to the fall in tourist arrivals is shown in figure 6. The losses vary according to the proportion of unskilled labour employed in the tourism industry and the extent to which the tourism sector is hit in a specific economy. There is a somewhat similar fall in wages and rates of return for skilled labour and capital.

Figure 6 | Estimated loss in employment of unskilled labour by economy and region from reduction in tourism (Percentage)

Country	Sim 1	Sim 2	Sim 3	Region	Sim 1	Sim 2	Sim 3
Ecuador	-14,8	-8,9	-12,3	Central America	-15,6	-9,8	-13,1
Ireland	-13,5	-9,4	-11,4	South East Asia	-11,6	-7,7	-9,7
South Africa	-11,8	-8,1	-10,1	North Africa	-10,4	-7	-9
Turkey	-9,8	-6,8	-8,6	Rest of SACU	-8,8	-6	-7,5
Republic of Korea	-6,4	-4,6	-5,5	East Africa	-8,6	-5,3	-7,2
Switzerland	-6,1	-4,4	-5,3	Rest of Asia	-8	-5,6	-3,9
Australia/New Zealand	-5,9	-4,3	-5,2	East European Union	-6,2	-4,4	-5
United Kingdom	-5	-3,6	-2,0	Middle East	-5,1	-3,5	-4,1
Norway	-4,7	-3,4	-4	West Africa	-5,1	-3,4	-4,4
France	-4,4	-3,2	-3,8	East and Central Europe	-4,5	-3,2	-4
Germany	-3,6	-2,6	-1,8	North European Union	-4,1	-3	-2,9
Colombia	-3,5	-2,5	-3,1	Caribbean	-2,9	-2,1	-2,5
Argentina	-3,4	-2,5	-2,9	Rest of South America	-2,3	-1,7	-1,8
Canada	-3	-2,2	-1,5	Mediterranean Europe	-1,6	-1,2	-0,7
United States of America	-3	-2,2	-1,4	Rest of South Asia	-0,8	-0,6	-0,7
China/Hong Kong SAR	-2,9	-2,1	-2,5				
Russian Federation	-2,5	-1,8	-2,2				
Mexico	-2,2	-1,6	-1,8				
India	-1,7	-1,2	-1,5				
Japan	-0,8	-0,6	-0,7				
Brazil	-0,3	-0,2	-0,3				
Nigeria	0,2	0,1	0,1				

Source: UNCTAD based on GTAP simulations.
Simulations capture effects of tourism reduction only, not other policies such as economic stimulus programmes.

If labour and capital could be readily re-employed in other industries, the overall impact of a fall in demand for international tourism would be somewhat less than its direct effects. The loss of tourism receipts would be partially offset by output in other sectors. Obviously, in tourist dependent developing countries this is difficult to do in the short run, but more achievable in the longer run. With tourism not expected to fully recover until perhaps 2023 the policy question is whether and how to support the sector until that time.



Policy implications

 **100-120 million jobs are at stake in 2021**

Tourism is a major economic sector and has a particular socio-economic importance, as it employs many women and young people and provides a livelihood to many informal workers in developing countries. The current pandemic has a devastating effect for the tourism sector. UNWTO (2021a) estimates that 100 - 120 million direct tourism jobs are at stake. Taking the impact on closely linked sectors into account, the drop in international arrivals has caused an estimated loss of about \$2.4 trillion in GDP in 2020 and it is possible that a similar loss occurs again this year. More positive scenarios for this year with a stronger rebound in tourism in the second half still show a loss of about \$1.7 to 1.8 trillion compared to 2019 levels. The recovery will depend to a large extent on the uptake of vaccines, the removal and coordination among countries of travel restrictions and the rebuilding of travelers' confidence.

Three policy dimensions are important.

 **First**, bringing tourism back on track including in developing countries. Much needs to be done to restore the confidence of travellers, who are concerned about health, and the risk of cancelled travel plans and becoming stranded overseas. Vaccinations seem the most important element.

So far, the vaccine rollout has varied greatly between countries, from almost complete to hardly started. Rolling out the vaccine globally as soon as possible is an economic priority. Vaccinating 40 per cent of the global population by year's end and 60 per cent by mid-2022 is an aspirational goal, but difficult to achieve and could cost \$50 billion, according to International Monetary Fund, World Health Organization, World Bank and World Trade Organization (IMF, 2021) estimates. Nonetheless, the estimated benefits far exceed the costs. While vaccination is incomplete and herd immunity not achieved, stepping up coordination and communication on travel requirements is critical. For example, the UNWTO and the airline industry body International Air Transport Association (IATA) collaborate on a destination tracker. The European Union digital COVID certificate is a major advance in this sense, and IATA is also promoting a travel pass to facilitate the inclusion of travel documents such as vaccination certificates and test results. Other measures to facilitate travel could include cheap, fast and reliable testing. Agreed protocols for testing on departure may remove the need for quarantine on arrival. Common standards are required so that destination countries accept testing in the source countries.



Second, it is important to mitigate the socio-economic impacts on livelihoods. Developed countries have used fiscal measures to support tourism businesses and workers. This is essentially borrowing from the future, and while helpful as a transitional measure, incurs a debt that will need to be repaid at some stage. Where the support is for otherwise healthy businesses, it is likely to pay off. This strategy is a challenge for most developing countries in particular where tourism is large. Social security nets do often not exist, and informality is high. Workers should be protected rather than specific jobs in declining sectors, for example through training.



Third, countries need to make strategic decisions regarding the future of tourism in their countries. Some tourism businesses will not survive even once travel restrictions are removed. Governments need to decide which to support and for how long. Long term implications of the pandemic need to be considered. Some structural adjustment is likely to be necessary. It seems likely that COVID-19 will be around for some time. A return to normal before 2023 seems optimistic. Furthermore, environmental considerations, for example, may become more important and could increase costs for long-distance flights or increase social pressure to avoid them. Other changes may be a reduction of confidence in cruise ships, more domestic tourism in the three largest source regions, United States, Europe and China. Developing countries dependent on tourism might consider how they can diversify resources away from tourism.

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Appendix

Table A1 | GDP impacts
Percentage

No.	Code	Reduction in inbound tourist expenditure	Sim 1 Observed	Sim 2 Partial recovery	Sim 3 Uneven vaccination
1	Australia/New Zealand	-81	-3.7	-2.70	-3.20
2	China/Hong Kong SAR	-88	-2.0	-1.40	-1.70
3	Japan	-87	-1.0	-0.70	-0.80
4	Republic of Korea	-86	-3.8	-2.70	-3.30
5	Rest of Asia	-84	-5.8	-4.10	-3.10
6	South East Asia	-82	-8.4	-5.60	-7.10
7	India	-54	-1.9	-1.40	-1.70
8	Rest of South Asia	-77	-2.8	-2.00	-2.40
9	Canada	-87	-1.9	-1.40	-1.00
10	United States of America	-76	-2.1	-1.50	-1.10
11	Mexico	-46	-1.6	-1.20	-1.30
12	Argentina	-72	-2.4	-1.70	-2.00
13	Brazil	-72	-0.6	-0.50	-0.60
14	Colombia	-70	-2.3	-1.70	-2.00
15	Ecuador	-76	-9.0	-5.50	-7.50
16	Rest of South America	-72	-1.9	-1.40	-1.50
17	Central America	-73	-11.9	-7.50	-9.90
18	Caribbean	-66	-2.5	-1.80	-2.00
19	North European Union	-75	-2.7	-1.90	-1.90
20	East European Union	-70	-4.7	-3.30	-3.70
21	France	-65	-3.2	-2.30	-2.70
22	Germany	-69	-2.4	-1.70	-1.30
23	Ireland	-75	-5.9	-4.10	-5.00
24	Mediterranean Europe	-70	-2.3	-1.60	-1.40
25	United Kingdom	-60	-3.2	-2.30	-1.60
26	Norway	-77	-2.5	-1.80	-2.10
27	Switzerland	-71	-4.3	-3.00	-3.60
28	East and Central Europe	-70	-3.5	-2.50	-3.00
29	Russian Federation	-70	-1.5	-1.10	-1.30
30	Middle East	-75	-3.1	-2.20	-2.50
31	Turkey	-69	-9.1	-6.30	-7.80
32	North Africa	-78	-7.5	-5.00	-6.40
33	Nigeria	-63	-0.3	-0.20	-0.20
34	Western Africa	-69	-4.6	-3.10	-3.90
35	Eastern Africa	-69	-9.3	-6.00	-7.90
36	South Africa	-69	-8.1	-5.50	-6.90
37	Rest of South African Customs Union	-69	-6.3	-4.40	-5.30
38	Rest of the World	-73	-3.9	-2.70	-3.20
	World	-74	-2.7	-1.93	-2.03

Source: GTAP simulations. Reduction in inbound tourist expenditure is derived from UNWTO. Multiplier is ratio of change in volume of output to change in volume of tourism consumption for Sim 1.

Table A2 | Labour and capital market impacts, Sim 1
Percentage

		Employment of unskilled labour	Real wages of skilled labour	Return on capital
1	Australia/New Zealand	-5.91	-4.93	-4.96
2	China/Hong Kong SAR	-2.91	-3.25	-3.15
3	Japan	-0.76	-1.16	-1.08
4	Republic of Korea	-6.38	-5.46	-5.17
5	Rest of Asia	-8.02	-7.80	-7.45
6	South East Asia	-11.56	-11.36	-11.17
7	India	-1.65	-2.08	-1.95
8	Rest of South Asia	-0.76	-2.78	-2.30
9	Canada	-3.02	-2.48	-2.70
10	United States of America	-3.02	-2.47	-2.62
11	Mexico	-2.20	-1.80	-1.80
12	Argentina	-3.37	-2.61	-2.31
13	Brazil	-0.26	-0.72	-0.98
14	Colombia	-3.50	-3.17	-3.38
15	Ecuador	-14.77	-18.03	-15.18
16	Rest of South America	-2.30	-2.43	-2.70
17	Central America	-15.68	-14.73	-15.35
18	Caribbean	-2.88	-2.24	-2.48
19	North European Union	-4.13	-3.29	-3.32
20	East European Union	-6.25	-5.72	-5.61
21	France	-4.37	-3.71	-3.92
22	Germany	-3.56	-3.08	-2.93
23	Ireland	-13.46	-10.35	-9.10
24	Mediterranean Europe	-1.57	-2.73	-2.48
25	United Kingdom	-5.01	-3.82	-3.90
26	Norway	-4.73	-3.79	-4.03
27	Switzerland	-6.10	-4.95	-5.38
28	East and Central Europe	-4.51	-4.33	-4.13
29	Russian Federation	-2.50	-2.55	-2.16
30	Middle East	-5.12	-5.32	-5.03
31	Turkey	-9.79	-10.29	-10.17
32	North Africa	-10.44	-8.87	-10.24
33	Nigeria	0.15	-0.53	-0.19
34	Western Africa	-5.11	-5.75	-5.74
35	Eastern Africa	-8.58	-11.82	-12.42
36	South Africa	-11.81	-10.27	-9.97
37	Rest of South African Customs Union	-8.78	-8.20	-8.28
38	Rest of the World	-5.04	-5.30	-5.30

Source: GTAP simulations.

