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Beyond Tourist Arrivals: Tourism Expenditure, Employment, and GDP Contribution in a Cross-Country Panel

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ABSTRACT: This study examines the relationship between tourism activity and economic performance using a merged country-year panel that includes tourism arrivals, inbound tourism expenditure, tourism employment, accommodation indicators, GDP per capita, and air-passenger activity. The analysis is limited to available observations through 2022, allowing the study to compare long-term tourism patterns before and during the COVID period. The merged dataset shows that reported country-level inbound tourist arrivals increased steadily over time and reached their highest observed level in 2019, at about 1.28 billion arrivals. After that peak, arrivals declined sharply, falling to about 362 million in 2020 and partially recovering in the latest available reporting years. Average tourism GDP share across reporting countries reached its highest observed value in 2019, at 5.22 percent, before decreasing during the crisis period. The descriptive results show that large destination countries are not always the most tourism-dependent economies, because tourism dependence is better reflected by GDP share, employment, and expenditure indicators. Exploratory regression results indicate positive associations between tourism employment and tourism GDP share. In the country-and-year fixed-effects model, inbound tourism expenditure is also positively associated with tourism GDP share, while visitor arrivals are less explanatory. Overall, the findings suggest that tourism spending and employment are more meaningful economic channels than arrivals alone; however, the results are descriptive rather than causal because the panel is unbalanced and reporting coverage varies.

Keywords: Tourism Activity; Economic Performance; Inbound Tourism Expenditure; Tourism GDP Share.

I. INTRODUCTION

Tourism is one of the sectors most directly connected with economic activity because it brings visitors, spending, jobs, hotel demand, transport use, and service-sector income into the economy. For many countries, tourism is not only a cultural or recreational activity; it is also a source of foreign exchange, employment, and local business development. This makes tourism especially important for countries that depend on visitors for a large share of national income.

The importance of tourism became clearer during the COVID-period. Before the shock, reported inbound tourist arrivals in the merged panel reached about 1.28 billion in 2019, while inbound tourism expenditure reached about USD 1.276 trillion. In 2020, reported arrivals dropped to about 362.02 million and inbound tourism expenditure fell to about USD 506.66 billion. These numbers show that tourism is not a small side activity; when it declines, income, jobs, and related services can also be affected.

Previous studies generally support the tourism-led growth argument, but they also show that the relationship differs by country, region, level of development, and the tourism variable used [15], [19]. Some studies rely mainly on arrivals, while others show that receipts, expenditure, employment, and tourism specialization may explain economic performance more clearly. Therefore, this study does not treat tourism

as one single number. It compares arrivals, expenditure, employment, GDP share, GDP per capita, and air-passenger activity in a cross-country panel.

The main objective of this paper is to examine whether tourism activity is associated with economic performance across countries and years. The contribution of the study is that it uses a merged country-year dataset, limits the analysis to available observations up to 2022, and compares simple tourism volume measures with more economic measures such as tourism expenditure and tourism employment. The paper is written as an exploratory study, so the results should be understood as statistical associations rather than proof of direct causality.

II. LITERATURE REVIEW

The literature on tourism and economic performance between 2010 and 2021 is mainly built around the tourism-led growth hypothesis, which argues that tourism can support growth through foreign-exchange earnings, employment, investment, transport activity, and demand for local services. Early empirical studies used country-level or small-panel cointegration models and generally found that tourism receipts or tourism exports were positively related to GDP in Pacific Island countries, Tunisia, Spain/Italy, Jordan, island economies, Latin America, and India [1]-[7]. This supports the present study's use of inbound arrivals, inbound tourism expenditure, tourism employment, and tourism GDP share as the main economic-tourism indicators.

A second group of studies shows that the tourism-growth relationship is not identical across countries. Panel-threshold, panel-cointegration, and panel-causality studies found that the effect of tourism depends on country structure, development level, region, and the selected tourism variable [8]-[11]. This is important for the current manuscript because the merged dataset covers 250 countries/territories and the descriptive results show large differences between large visitor markets and smaller tourism-dependent economies.

A third group connects tourism with broader macroeconomic mechanisms. Studies of European Union and Mediterranean countries show that tourism interacts with foreign direct investment, oil price shocks, real exchange rates, domestic consumption, and transport activity [12]-[17]. These studies are useful for this manuscript because they show that tourism should not be treated only as a visitor-count variable; it also works through spending, employment, income level, and travel infrastructure. Environmental measures appear in some previous studies, but they are not treated as central variables in the present paper.

More recent studies use stronger causal, nonlinear, and bibliometric approaches. Research on Malaysia, Spain, top tourist destinations, Mediterranean recovery, bibliometric evidence, and BRICS countries indicates that tourism can support growth, but the effect is stronger when measured by receipts, expenditure, tourism specialization, or employment than by arrivals alone [18]-[25]. This directly matches the current results, where tourism expenditure and tourism employment explain tourism GDP share more clearly than visitor numbers alone in the fixed-effects regression.

Table L1. Comparison of selected tourism-economic studies from 2010 to 2021.

No.	Study and context	Method/data	Main finding and link to this study
[1]	Narayan et al. (2010) - Pacific Island countries; tourism exports and real GDP.	Panel cointegration and long-/short-run elasticity estimates.	Finding: A 1% increase in tourism exports was associated with GDP increases in both the long run and short run. Link: Supports using tourism expenditure/exports as an economic channel, not only visitor counts.
[2]	Belloumi (2010) - Tunisia; GDP, tourism receipts, and real effective exchange rate, 1970-2007.	Trivariate time-series model, cointegration, and causality testing.	Finding: Tourism receipts contributed positively to economic growth and supported tourism-led growth for Tunisia. Link: Justifies including inbound tourism expenditure as a core explanatory variable.

[3]	Cortes-Jimenez & Pulina (2010) - Spain and Italy; long-run tourism and economic growth paths.	Production-function and cointegration-based analysis.	Finding: Inbound tourism was related to long-run growth, but the strength varied across country experience. Link: Shows that destination structure matters when comparing countries.
[4]	Kreishan (2011) - Jordan; tourism earnings and GDP, 1970-2009.	Johansen cointegration and Granger causality tests.	Finding: Evidence supported tourism-led economic growth in Jordan. Link: Provides single-country evidence for tourism receipts as a growth driver.
[5]	Seetanah (2011) - Nineteen island economies, 1990-2007.	Dynamic panel model within an augmented Solow growth framework using GMM.	Finding: Tourism significantly contributed to economic growth in island economies. Link: Explains why small and island economies can show high tourism-GDP dependence.
[6]	Fayissa et al. (2011) - Eighteen Latin American countries, 1990-2005.	Panel growth model with tourism revenue and conventional growth controls.	Finding: Tourism revenues contributed positively to GDP per capita level and growth. Link: Supports cross-country panel analysis with tourism revenues and macro controls.
[7]	Mishra et al. (2011) - India; tourism and economic growth, 1978-2009.	Time-series cointegration and causality models.	Finding: Found long-run unidirectional causality from tourism activity to economic growth. Link: Supports examining tourism as a long-run economic development factor.
[8]	Chang et al. (2012) - 159 countries, 1989-2008.	Instrumental-variable panel threshold model.	Finding: Tourism specialization mattered for development, but effects differed by development level and thresholds. Link: Warns that the tourism effect may be nonlinear and dependent on country structure.
[9]	Dritsakis (2012) - Seven Mediterranean countries; tourism receipts, arrivals, exchange rate, and GDP.	Heterogeneous panel cointegration approach.	Finding: Found evidence of long-run relationships between tourism development and economic growth. Link: Supports using receipts, arrivals, and macro controls in regional panels.
[10]	Caglayan et al. (2012) - 135 countries grouped into 11 regions, 1995-2008.	Panel Granger causality analysis.	Finding: The direction of tourism-growth causality differed across regional groups. Link: Highlights heterogeneity across regions in a global country-year panel.
[11]	Chou (2013) - Ten transition countries, 1988-2011.	Panel causality analysis allowing dependence and heterogeneity.	Finding: Results were mixed, with neutrality in some countries and different causality directions in others. Link: Shows that tourism-led growth is not universal and must be tested empirically.
[12]	Lee & Brahmasrene (2013) - European Union countries; tourism, economic growth, emissions, and FDI.	Panel unit root, panel cointegration, and fixed-effects models.	Finding: Tourism, growth, emissions, and FDI were linked in a long-run framework. Link: Shows that tourism is often studied with wider macro indicators, while this paper keeps the core focus on economic performance.

[13]	Chatziantoniou et al. (2013) - Four European Mediterranean countries.	Structural VAR with oil price shocks, tourism income, and economic indicators.	Finding: Tourism income and economic performance were affected by different types of external oil shocks. Link: Shows that transport and external shocks can affect tourism-economic outcomes.
[14]	Surugiu & Surugiu (2013) - Romania, 1988-2009.	Long-run relationship and causality analysis.	Finding: Tourism expansion and economic growth were linked, with policy relevance for national tourism planning. Link: Supports country-specific interpretation of tourism GDP effects.
[15]	Pablo-Romero & Molina (2013) - Empirical literature on tourism and economic growth.	Structured review of time-series, panel, and cross-sectional studies.	Finding: The literature generally supports a tourism-growth relationship but depends strongly on method and sample. Link: Frames this study as exploratory rather than causal.
[16]	Aslan (2014) - Mediterranean countries.	Panel Granger causality tests.	Finding: Evidence supported tourism-led growth for the panel, though country-level directions differed. Link: Supports regional comparison and cautions against one-size-fits-all conclusions.
[17]	Tugcu (2014) - European, Asian, and African Mediterranean countries, 1998-2011.	Dumitrescu-Hurlin panel Granger causality with tourism receipts and expenditures.	Finding: Found mixed evidence and cases consistent with neutrality between tourism and growth. Link: Shows why both arrivals and expenditure indicators should be examined separately.
[18]	Tang & Tan (2015) - Malaysia, 1975-2011.	Solow-based multivariate model, cointegration, and Granger causality.	Finding: Tourism positively affected growth in the short and long run and Granger-caused economic growth. Link: Supports the study focus on both short-run shocks and long-run tourism development.
[19]	Brida et al. (2016) - Approximately 100 peer-reviewed tourism-led growth papers.	Exhaustive literature review of econometric evidence.	Finding: The tourism-led growth hypothesis is frequently supported, but methods and contexts affect results. Link: Provides theoretical and methodological justification for this manuscript.
[20]	Perles-Ribes et al. (2017) - Spain, 1957-2014, including the post-2008 crisis period.	Cointegration and causality analysis with crisis context.	Finding: Tourism-led growth can change after major financial and geopolitical shocks. Link: Supports interpreting the COVID-period drop as a structural shock context.
[21]	Shahzad et al. (2017) - Top ten tourist destinations.	Quantile-on-quantile approach and composite tourism activity index.	Finding: Tourism-growth effects differed across quantiles and destination conditions. Link: Supports interpreting large destinations separately from tourism-dependent economies.
[22]	Paramati et al. (2017) - Developed and developing economies; tourism, growth, and emissions.	Robust panel econometric techniques.	Finding: Tourism was positively related to economic growth and also raised sustainability questions. Link: Supports separating the economic tourism effect from wider environmental topics in this manuscript.

[23]	Dogru & Bulut (2018) - Seven European Mediterranean countries.	Dumitrescu-Hurlin panel causality test.	Finding: Tourism and economic growth relationships were relevant for recovery but varied across countries. Link: Supports using fixed effects and treating country heterogeneity seriously.
[24]	Comerio & Strozzi (2019) - Economic impact literature on tourism.	Systematic literature network analysis and bibliometric review.	Finding: Tourism-economic impact research is broad, with direct, indirect, and induced channels. Link: Supports linking expenditure, employment, GDP share, and transport indicators in one framework.
[25]	Rasool et al. (2021) - BRICS countries, 1995-2015.	Panel ARDL cointegration and Dumitrescu-Hurlin causality tests.	Finding: Inbound tourism and financial development were positively related to economic growth in BRICS countries. Link: Connects this study to recent emerging-economy panel evidence.

This table compares 25 tourism-economic studies published from 2010 to 2021, showing their contexts, methods, main findings, and relevance to the current country-year analysis.

Analysis: The comparison shows that most studies support a positive tourism-growth relationship, but the effect is not uniform. Studies using receipts, expenditure, employment, and tourism specialization often find stronger economic links than studies using arrivals only, which supports the current manuscript result that tourism spending and employment explain tourism GDP share more clearly than visitor numbers alone.

III. CONCEPTUAL FRAMEWORK

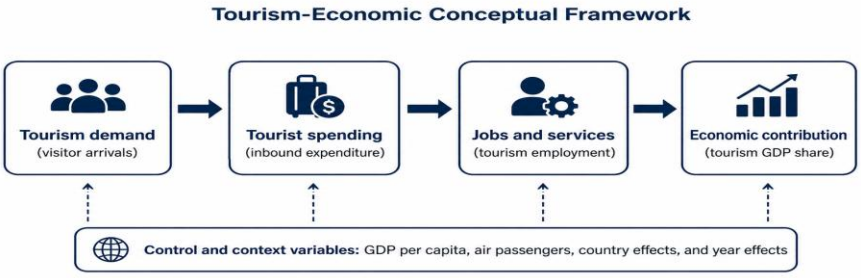

DIAGRAM 1. Tourism-economic conceptual framework.

The diagram links tourism demand, tourist expenditure, employment, and tourism GDP share, while treating GDP per capita, air passengers, country differences, and year shocks as control or context variables.

IV. HYPOTHESES / QUESTIONS

Based on the tourism-led growth literature and the variables available in the merged panel, this study is guided by the following hypotheses and research questions. These hypotheses are tested as exploratory associations rather than causal claims:

- H1: Countries and years with higher inbound tourist arrivals are expected to have a higher tourism GDP share.
- H2: Countries and years with higher inbound tourism expenditure are expected to have a higher tourism GDP share.
- H3: Countries and years with higher tourism employment per 1,000 people are expected to have a higher tourism GDP share.

- H4: After controlling for country and year differences, tourism expenditure and tourism employment are expected to explain tourism GDP share more clearly than visitor arrivals alone.
- RQ1: How did the main tourism-economic indicators change before and after the 2019 tourism peak?
- RQ2: Are the largest destination countries also the most tourism-dependent economies, or do tourism GDP share and expenditure show a different pattern?

V. PROPOSED METHOD

This study uses a quantitative country-year panel to examine the relationship between tourism activity and economic performance through 2022. The dataset combines tourism arrivals, tourism expenditure, employment, GDP per capita, accommodation, and air-passenger indicators, merged by country name, country code, and year.

Tourism GDP share is the main dependent variable. The key explanatory variables are inbound tourist arrivals, inbound tourism expenditure, tourism employment per 1,000 people, GDP per capita, and air passengers carried. The analysis applies descriptive statistics, trend analysis, country comparisons, correlations, and exploratory regression models with year and country fixed effects.

Variables were cleaned and harmonized before analysis, and highly skewed variables were log-transformed. Aviation emissions variables were excluded because the paper focuses on tourism and economic performance, not environmental impact. Since the dataset is unbalanced, the results are interpreted as exploratory associations rather than causal estimates.

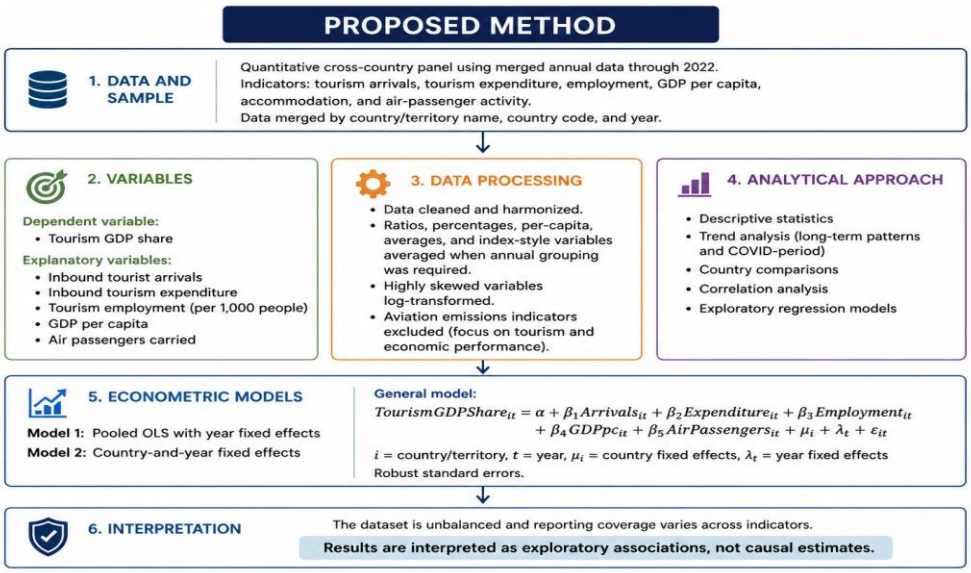

FIGURE 1. Proposed method and study workflow.

This figure shows the study workflow: data merging, variable selection, data processing, statistical analysis, model estimation, and interpretation of results as exploratory associations.

Table 1. Dataset structure and study scope

Item	Value
Study period	1942 to 2022 inclusive
Wide merged rows	10,693
Country analytical rows	9,553
Countries/territories	250
Merged data fields	38
Main keys	Entity, Code, Year

This table summarizes the time limit, panel size, country coverage, merge keys, and main output files used for the tourism-economic study.

The study has broad coverage because it combines 10,693 wide merged rows and 9,553 country analytical rows across 250 countries/territories. However, the long study period from 1942 to 2022 does not mean every variable is available for all years; therefore, the results should be read as a large unbalanced panel rather than a complete global census.

Table 2. Source data inventory after applying the 2022 study limit.

Source File	Rows Used	First Year Used	Last Year Used	Time Grain
international tourist arrivals by region of origin	189	1995	2021	annual
number of individuals employed in tourism related industries per 10…	1,393	1995	2021	annual
international tourist departures per 1000	2,227	1995	2021	annual
international tourist trips	4,940	1995	2021	annual
tourism gdp proportion of total gdp	1,093	2008	2021	annual
air passengers carried	8,142	1970	2020	annual
average length of stay	2,894	1995	2021	annual
number of people employed in food and beverage serving activities p…	1,045	1995	2021	annual
foreign guests in hotels and similar establishments	2,879	1995	2021	annual
international same day arrivals	2,848	1995	2021	annual
international same day visitors per 1000 people	2,848	1995	2021	annual
international tourist departures	2,227	1995	2021	annual
tourist departures per 1000 vs gdp	5,495	1995	2020	annual
average expenditures of tourists abroad	1,358	1995	2021	annual
average expenditures of international tourists domestically	1,260	1995	2021	annual
international tourist trips per 1000 people	4,933	1995	2021	annual
international trips for business and professional reasons	3,825	1995	2021	annual
international trips for personal reasons	3,925	1995	2021	annual
international arrivals for personal vs business and professional re…	4,053	1995	2021	annual
local guests in hotels and similar establishments	1,888	1995	2021	annual
domestic guests in tourism accommodation hotels and similar establi…	3,092	1995	2021	annual
ratio of business trips to trips for personal reasons	3,825	1995	2021	annual
ratio of inbound to outbound tourists	2,110	1995	2021	annual
ratio of same day to tourist trips	2,813	1995	2021	annual
domestic trips by tourists per 1000 people	870	1995	2021	annual

This table shows the main tourism, economic, accommodation, and air-passenger source indicators used after restricting all observations to 2022 or earlier.

The largest usable source is air passengers carried, with 8,142 rows from 1970 to 2020, while many core tourism indicators begin in 1995 and end in 2021. Tourism GDP share has only 1,093 rows from 2008 to 2021, so economic-dependence analysis is more limited than arrival, expenditure, or air-passenger trend analysis.

Table 3. Variable coverage in the country analytical panel.

Variable	Non Missing Country Rows	Countries With Data	First Year	Last Year Used	Missing Share %
continent	9,553	250	1970	2022	0.000
air_passengers_carried	7,470	185	1970	2020	21.80
inbound_arrivals	4,933	204	1995	2021	48.36
inbound_arrivals_per_1000	4,933	204	1995	2021	48.36
gdp_per_capita_ppp_2017	4,855	192	1995	2020	49.18
personal_trips	3,925	187	1995	2021	58.91
business_personal_trip_ratio	3,825	185	1995	2021	59.96
business_trips	3,825	185	1995	2021	59.96
avg_length_stay	2,887	167	1995	2021	69.78
foreign_hotel_guests	2,876	138	1995	2021	69.89
same_day_arrivals	2,848	148	1995	2021	70.19
same_day_arrivals_per_1000	2,848	148	1995	2021	70.19
same_day_overnight_ratio	2,813	147	1995	2021	70.55
outbound_departures_per_1000	2,227	121	1995	2021	76.69
outbound_departures	2,227	121	1995	2021	76.69
inbound_outbound_ratio	2,110	119	1995	2021	77.91
domestic_hotel_guests	1,885	94	1995	2021	80.27
tourism_employment_per_1000	1,393	110	1995	2021	85.42
outbound_tourism_expenditure_2021usd	1,358	51	1995	2021	85.78
inbound_tourism_expenditure_adj	1,260	47	1995	2021	86.81
food_bev_employment_per_1000	1,045	85	1995	2021	89.06
tourism_gdp_share	940	108	2008	2021	90.16
domestic_trips_per_1000	870	82	1995	2021	90.89

This table reports non-missing observations and country coverage by variable, highlighting that the panel is unbalanced across indicators and years.

Coverage differs strongly by variable: air passengers have 7,470 non-missing rows and 21.80% missingness, while tourism GDP share has only 940 rows and 90.16% missingness. This means descriptive tourism-flow results are more stable than models using GDP-share or expenditure variables, which rely on a smaller sample.

VI. RESULTS

This section presents descriptive tables, trend charts, country comparisons, correlation patterns, and exploratory regression evidence from the merged country-year tourism-economic panel.

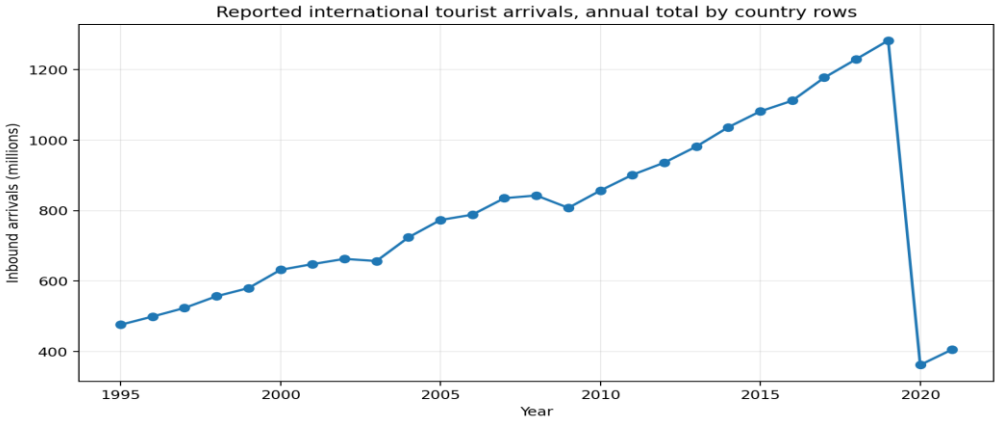

FIGURE 2. Reported inbound tourist arrivals over time.

The long-run trend grows until 2019 and then shows a sharp COVID-period contraction where data are available.

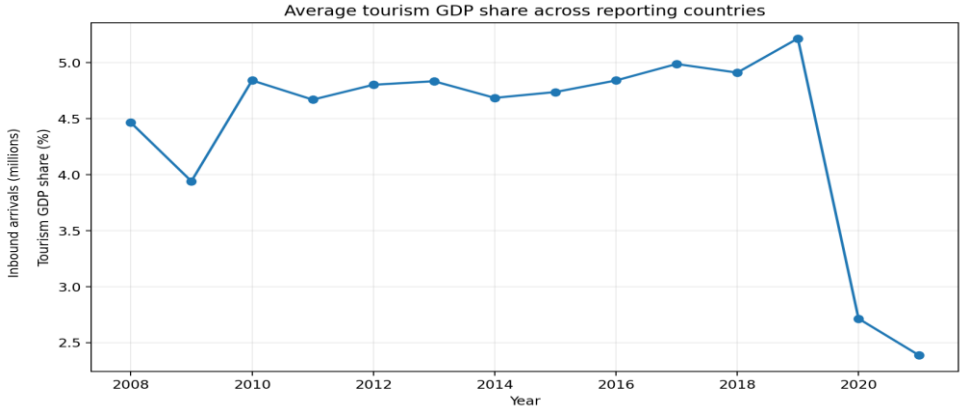

FIGURE 3. Average tourism GDP share across reporting countries.

Tourism GDP share varies with reporting coverage and country structure, so broad movement over time is more reliable than exact global totals.

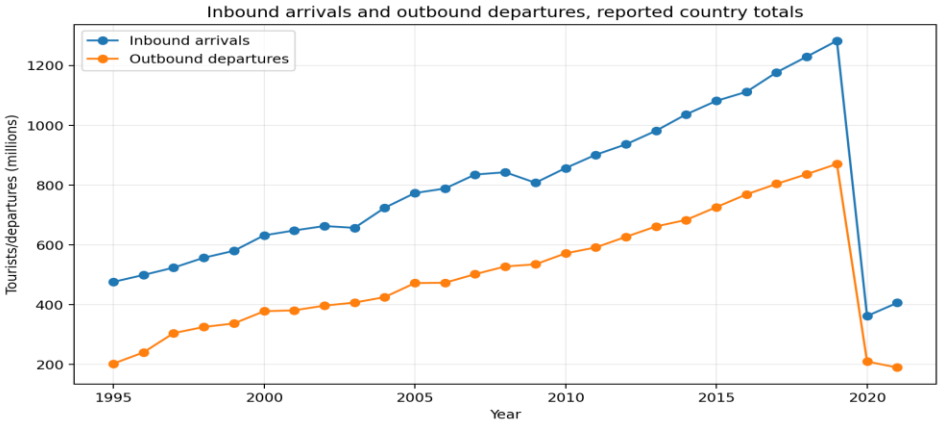

FIGURE 4. Inbound and outbound tourism trends.

The chart compares reported inbound arrivals and outbound departures, showing how tourism flows move over the available reporting years.

Table 4. Selected descriptive statistics for the country panel.

Variable	Count	Mean	Std	Min	50%	Max
inbound_arrivals	4,933	4,331,447	10,566,559	1.000	611,000.00	90,914,000
inbound_arrivals_per_1000	4,933	1,335.89	3,437.84	0.001	317.44	51,827.07
outbound_departures	2,227	6,037,743	14,282,482	500.00	1,498,000	154,632,000
outbound_departures_per_1000	2,227	403.15	524.00	0.209	182.63	4,465.04
tourism_gdp_share	940	4.586	5.881	0.042	3.123	58.58
tourism_employment_per_1000	1,393	24.53	30.19	0.435	19.43	240.34
food_bev_employment_per_1000	1,045	10.48	9.601	0.082	7.316	57.20
inbound_tourism_expenditure (USD billions)	1,260	17.84	26.60	0.07	9.47	220.19
outbound_tourism_expenditure (USD billions)	1,358	14.39	22.61	0.04	5.41	140.20
gdp_per_capita_ppp_2017	4,855	18,908.94	20,987.33	465.83	11,116.61	157,602.48
air_passengers_carried	7,470	10,799,449	51,502,774	0.000	862,500.00	926,737,000
avg_length_stay	2,887	4.460	3.276	0.600	3.068	23.00
foreign_hotel_guests	2,876	4,178,634	9,206,579	300.00	776,500.00	116,266,000
domestic_hotel_guests	1,885	11,229,600	29,872,500	180.00	1,321,000	342,883,000
business_trips	3,825	682,087.66	1,679,943	20.00	107,000.00	14,875,200
personal_trips	3,925	4,061,706	9,805,742	1.000	601,000.00	80,523,500
business_personal_trip_ratio	3,825	0.313	0.603	0.003	0.171	14.65
inbound_outbound_ratio	2,110	2.262	2.515	0.044	1.336	22.86
domestic_trips_per_1000	870	1,407.75	1,332.04	0.106	1,037.95	13,540.81

This table summarizes central tendency and dispersion for the main tourism, economic, aviation, and accommodation indicators used in the analysis. Tourism expenditure rows are reported in USD billions to improve readability.

The average inbound arrivals value is about 4.33 million, but the median is only 611,000, showing that a few large destinations raise the mean. Tourism GDP share averages 4.586%, while tourism employment averages 24.53 workers per 1,000 people, suggesting that tourism is economically important but very uneven across countries.

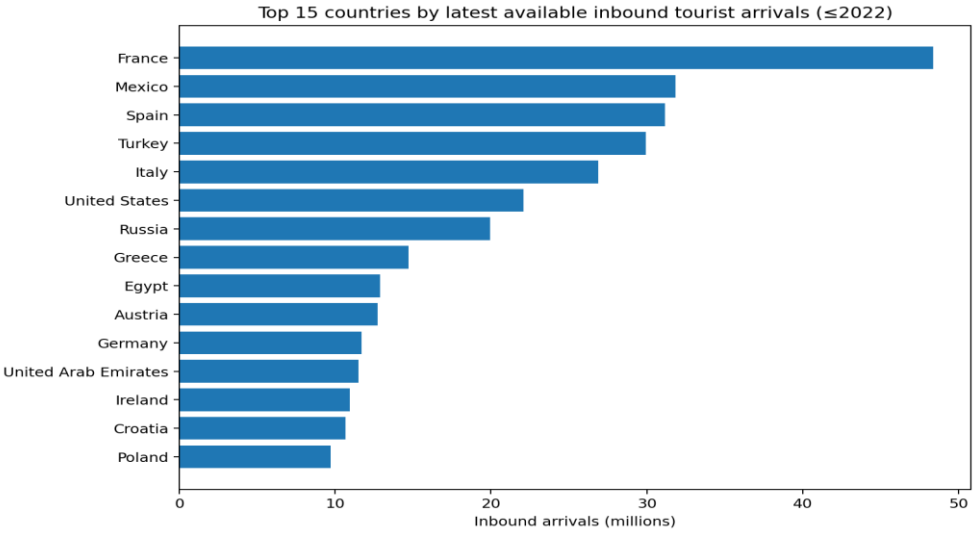

FIGURE 5. Top countries by latest available inbound arrivals.

Large destination markets dominate absolute tourist arrivals, but high arrivals do not necessarily mean high tourism dependence.

Table 5. Top 10 countries by latest available inbound arrivals.

Entity	Code	Latest Year	Inbound Arrivals	Tourism Gdp Share
France	FRA	2021	48,395,000	3.189
Mexico	MEX	2021	31,860,000	6.741
Spain	ESP	2021	31,181,000	5.500
Turkey	TUR	2021	29,925,000	
Italy	ITA	2021	26,888,000	5.713
United States	USA	2021	22,100,400	2.894
Russia	RUS	2005	19,940,000	3.900
Greece	GRC	2021	14,705,000	6.031
Egypt	EGY	2019	12,876,000	4.300
Austria	AUT	2021	12,728,000	3.030

This table identifies the largest destination markets in the latest available observation up to 2022 and compares them with available tourism GDP share values.

France records the highest latest arrivals, with 48.40 million in 2021, followed by Mexico at 31.86 million and Spain at 31.18 million. However, France has a tourism GDP share of 3.189%, lower than Mexico at 6.741% and Greece at 6.031%, showing that high visitor numbers do not always mean higher economic dependence on tourism.

Table 6. Top 10 latest tourism GDP share observations.

Entity	Code	Latest Year	Tourism Gdp Share	Inbound Arrivals
Saint Lucia	LCA	2008	30	199,000
Aruba	ABW	2017	21.20	807,000

Entity	Code	Latest Year	Tourism Gdp Share	Inbound Arrivals
Macao	MAC	2020	21.08	3,697,000
Bahamas	BHS	2012	15.20	891,000
Fiji	FJI	2019	12.60	32,000
Croatia	HRV	2019	11.82	10,641,000
Guam	GUM	2020	11	79,000
Montenegro	MNE	2009	10	1,554,000
Jamaica	JAM	2019	9.800	1,464,000
Bhutan	BTN	2019	9.521	1.000

This table highlights economies where tourism accounts for a relatively large share of GDP in the latest available observation.

Small island and destination-dependent economies dominate this table: Saint Lucia records 30.00%, Aruba 21.20%, and Macao 21.08% tourism GDP share. These values are far above the panel average of 4.586%, indicating that tourism dependence is strongest where the overall economy is smaller and more specialized.

Table 7. Top 10 countries by latest inbound tourism expenditure.

Entity	Code	Latest Year	Inbound Tourism Expenditure Adj	Inbound Arrivals
United States	USA	2021	70,215,000,000	22,100,400
Turkey	TUR	2021	58,546,106,000	29,925,000
France	FRA	2021	41,844,265,000	48,395,000
Spain	ESP	2021	40,526,510,000	31,181,000
Mexico	MEX	2021	33,831,305,000	31,860,000
United Kingdom	GBR	2021	31,188,376,000	6,287,000
Italy	ITA	2021	28,659,644,000	26,888,000
Germany	DEU	2021	23,704,234,000	11,688,000
Poland	POL	2021	17,496,658,000	9,722,000
Croatia	HRV	2021	17,407,734,000	10,641,000

This table shows countries with the highest latest available inbound tourism expenditure, which represents a direct economic channel from tourism demand.

The United States leads in inbound tourism expenditure with about USD 70.22 billion despite having fewer arrivals than France. This shows that expenditure can tell a different economic story than arrivals: fewer visitors can still generate larger economic value when spending per visitor is higher.

Table 8. Annual aggregate indicators for selected years.

Year	Inbound Arrivals	Tourism GDP Share	Tourism Employment per 1,000	Inbound Tourism Expenditure	Air Passengers Carried
1995	475,994,600	—	7.623	593,510,525,630	1,302,891,644
2000	631,746,800	—	23.80	761,071,182,070	1,674,064,697
2005	773,169,600	—	21.36	781,246,039,380	1,969,590,762
2010	856,652,600	4.841	22.68	811,094,172,940	2,609,427,305
2015	1,081,367,220	4.737	24.97	1,067,459,082,400	3,466,478,481
2019	1,282,369,700	5.215	28.07	1,276,028,647,800	4,557,605,834
2020	362,018,500	2.713	24.81	506,663,749,000	1,809,388,959
2021	405,924,446	2.385	24.19	567,553,876,570	—

This table summarizes selected reporting-country annual aggregates and averages to show long-run movements before and after the 2019 tourism peak.

Reported inbound arrivals increased from about 475.99 million in 1995 to 1.28 billion in 2019, then dropped to 362.02 million in 2020. Inbound tourism expenditure also fell from about USD 1.276 trillion in 2019 to USD 506.66 billion in 2020, confirming the severe COVID-period shock to both tourism flows and tourism income.

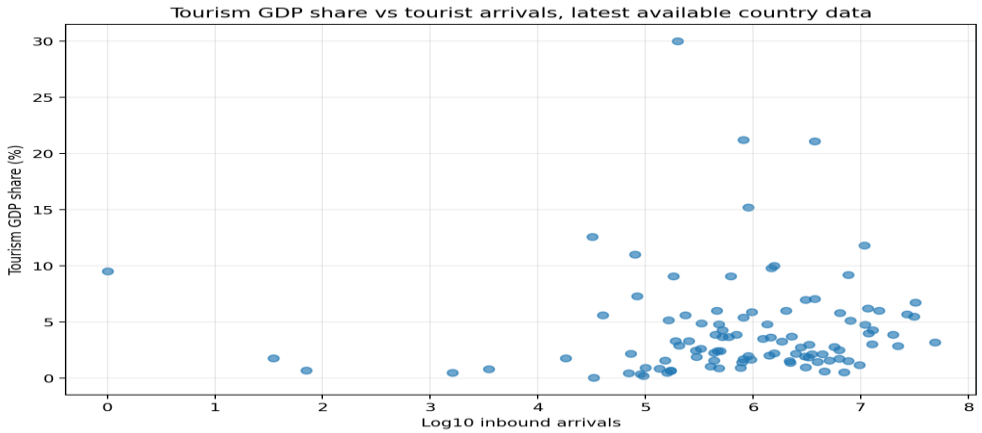

FIGURE 6. Tourism GDP share versus tourist arrivals.

The relationship is not linear in raw scale; the log arrivals axis helps compare countries with very different tourism market sizes.

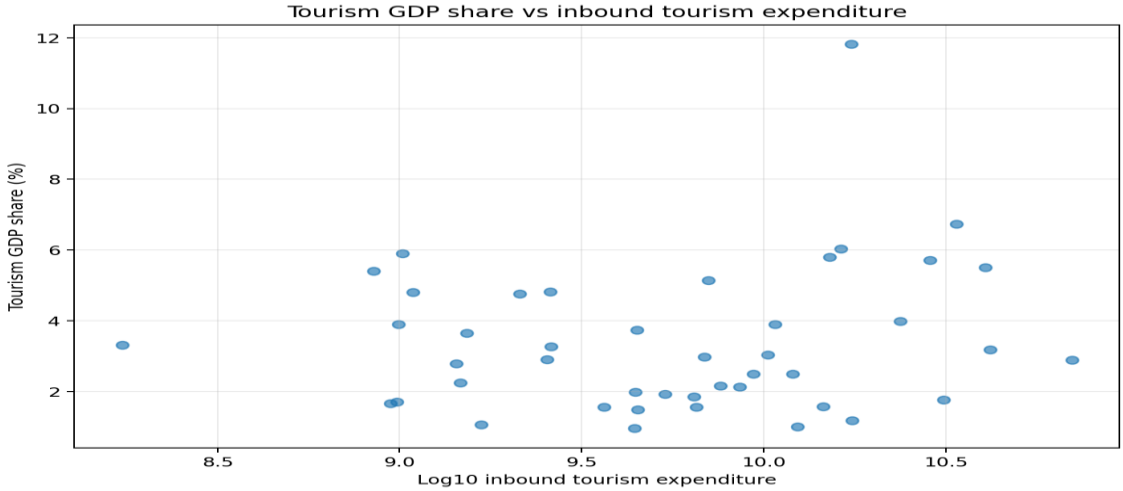

FIGURE 7. Tourism GDP share versus inbound tourism expenditure.

Tourism spending is a more direct economic channel than visitor counts alone, but the scatter remains exploratory rather than causal.

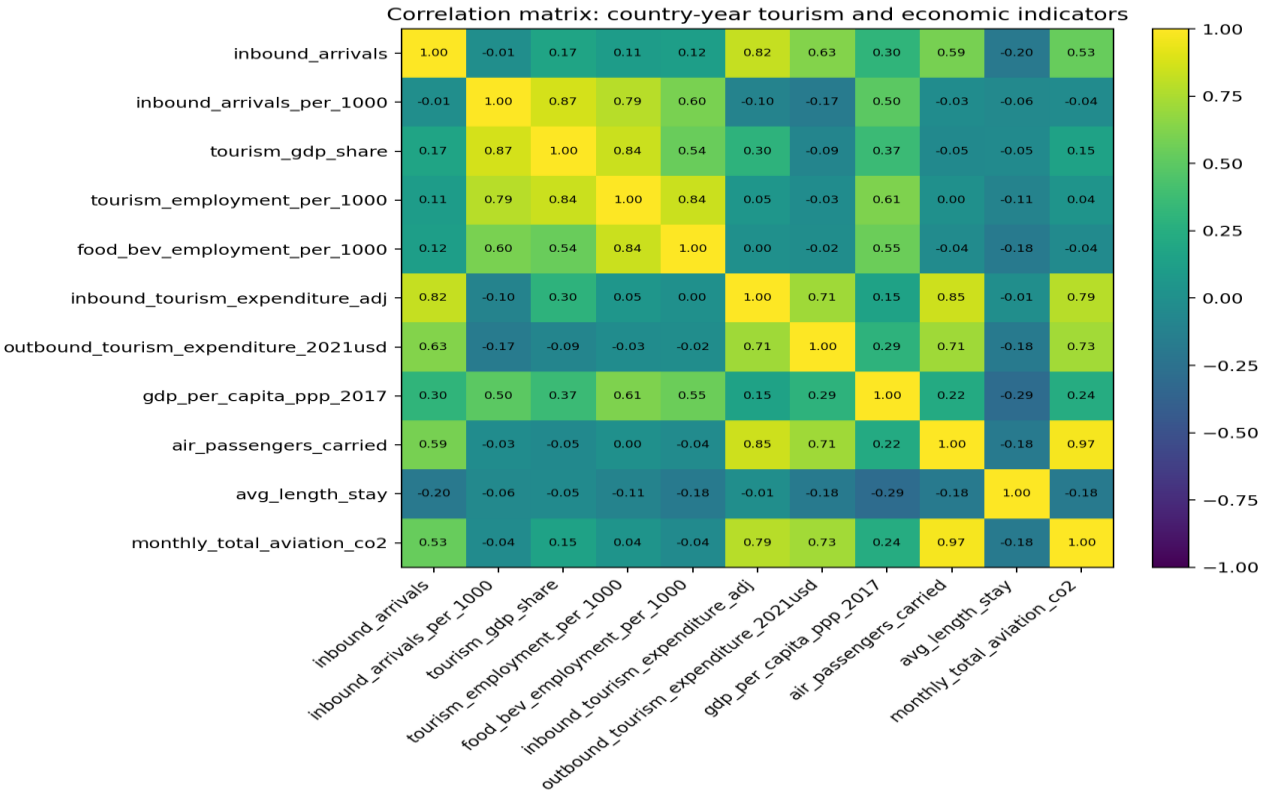

FIGURE 8. Correlation matrix of selected indicators.

The heatmap summarizes pairwise associations among tourism, economic, and aviation variables and should not be interpreted as causal evidence.

Table 9. Compact correlation matrix for key analytical variables

Variable	Inbound Arrivals	Tourism Gdp Share	Tourism Employment Per 1000	Inbound Tourism Expenditure Adj	Gdp Per Capita Ppp 2017	Air Passengers Carried
inbound_arrivals	1.000	0.166	0.107	0.825	0.305	0.591
tourism_gdp_share	0.166	1.000	0.843	0.296	0.366	-0.050
tourism_employment_per_1000	0.107	0.843	1.000	0.048	0.612	0.002
inbound_tourism_expenditure_adj	0.825	0.296	0.048	1.000	0.149	0.851
gdp_per_capita_ppp_2017	0.305	0.366	0.612	0.149	1.000	0.219
air_passengers_carried	0.591	-0.050	0.002	0.851	0.219	1.000

This table complements the correlation figure by reporting selected pairwise correlations among arrivals, tourism GDP share, employment, expenditure, income, and air passengers.

The strongest relationship is between inbound arrivals and inbound tourism expenditure, with a correlation of 0.825, meaning countries with more tourists usually receive more tourism spending. Tourism

GDP share is more strongly linked with tourism employment per 1,000 people (0.843) than with arrivals (0.166), suggesting that employment intensity is a better signal of tourism dependence than visitor count alone.

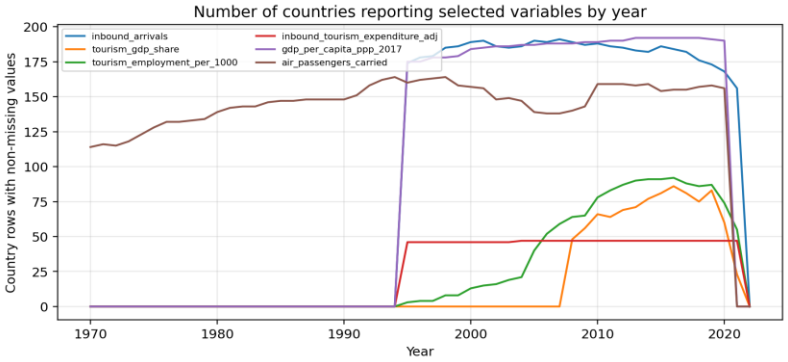

FIGURE 9. Data availability by year.

The diagram shows how reporting coverage changes over time, supporting the caution that the panel is unbalanced.

1. REGRESSION ANALYSIS

The dependent variable is tourism GDP share. Explanatory variables include logged inbound tourist arrivals, logged inbound tourism expenditure, tourism employment per 1,000 people, logged GDP per capita, and logged air passengers. Models include year fixed effects; the second model also includes country fixed effects. Robust HC3 standard errors are reported.

Table 10. Pooled OLS regression with year fixed effects.

Term	Coefficient	Std Error	P Value	N Obs	R Squared
ln_inbound_arrivals	1.093	0.248	0.000	257	0.567
ln_inbound_tourism_expenditure_adj	0.043	0.263	0.869	257	0.567
tourism_employment_per_1000	0.119	0.008	0.000	257	0.567
ln_gdp_per_capita_ppp_2017	-2.077	0.225	0.000	257	0.567
ln_air_passengers_carried	-0.256	0.116	0.027	257	0.567

This model estimates associations between tourism GDP share and tourism/economic covariates after controlling for year effects.

In the pooled model, logged inbound arrivals have a positive coefficient of 1.093 and tourism employment has a positive coefficient of 0.119, both statistically significant at p = 0.000. The model explains 56.7% of variation in tourism GDP share, suggesting that arrivals and employment are important cross-country predictors before controlling for country-specific differences.

Table 11. Country-and-year fixed-effects regression.

Term	Coefficient	Std Error	P Value	N Obs	R Squared
ln_inbound_arrivals	0.050	0.440	0.910	257	0.977
ln_inbound_tourism_expenditure_adj	1.664	0.597	0.005	257	0.977
tourism_employment_per_1000	0.055	0.012	0.000	257	0.977
ln_gdp_per_capita_ppp_2017	-1.262	0.717	0.078	257	0.977
ln_air_passengers_carried	-0.032	0.039	0.404	257	0.977

This model compares within-country changes over time while also controlling for common year effects, making it more conservative than the pooled model.

After controlling for both country and year effects, inbound tourism expenditure remains positive and statistically significant, with a coefficient of 1.664 and p = 0.005, while inbound arrivals become insignificant with p = 0.910. This suggests that within-country changes in tourism spending and employment explain tourism GDP share better than changes in visitor numbers alone.

VII. DISCUSSION

The findings show a clear difference between tourism volume and tourism dependence. Countries such as France, Mexico, Spain, Turkey, Italy, and the United States receive very large numbers of visitors, but they are not always the most dependent on tourism in GDP terms. For example, France records the highest latest arrivals in the table, with 48.40 million, but its tourism GDP share is 3.189%. By comparison, Mexico and Greece show higher tourism GDP shares, at 6.741% and 6.031%, even with fewer visitors than France. This means that the economic role of tourism depends not only on how many tourists arrive, but also on how important tourism is inside the national economy.

The results also show that spending is more informative than visitor numbers alone. The United States has fewer latest arrivals than France, but it records the highest inbound tourism expenditure, about USD 70.22 billion. This simple comparison helps explain the regression results: when country and year differences are controlled, inbound arrivals are no longer statistically significant, while inbound tourism expenditure remains positive and significant. In practical terms, a country can benefit more from attracting tourists who spend more, stay longer, and use local services than from only increasing the number of visitors.

Employment is another important channel. The correlation between tourism GDP share and tourism employment per 1,000 people is 0.843, which is much stronger than the correlation between tourism GDP share and inbound arrivals, at 0.166. This suggests that tourism becomes economically meaningful when it creates jobs and supports service activities, not only when border arrivals increase. The regression results support this interpretation because tourism employment is positive and statistically significant in both models.

The COVID-period drop gives the results a strong real-world meaning. Reported inbound arrivals increased from about 475.99 million in 1995 to 1.28 billion in 2019, then fell to about 362.02 million in 2020. Inbound tourism expenditure also dropped from about USD 1.276 trillion in 2019 to about USD 506.66 billion in 2020. This sharp decline shows that tourism-dependent economies can face serious risk when travel is disrupted. Therefore, tourism policy should focus on both growth and resilience.

Overall, the evidence supports the main argument of the paper: tourism activity is connected with economic performance, but the strongest economic signals come from expenditure and employment rather than arrivals alone.

1. LIMITATIONS

This study has four main limitations. First, the panel is unbalanced, meaning that not all countries report all variables in all years. Second, the tourism GDP share and expenditure variables have fewer observations than the arrivals and air-passenger variables, so regression results are based on a smaller sample. Third, the analysis is exploratory and cannot prove causality because it does not use a full identification strategy such as natural experiments or instrumental variables. Fourth, the latest available year differs across some variables, so comparisons should be interpreted as the latest available observations within the study limit rather than a perfectly synchronized global dataset.

VIII. RECOMMENDATIONS

Tourism policy should focus on increasing visitor spending, not only visitor numbers, because the results show that expenditure is a stronger economic signal than arrivals after controlling for country and year differences. Countries should also support tourism employment through training, hospitality skills, language skills, and small-business support, since tourism employment is strongly linked with tourism GDP

share in both the correlation and regression results. In addition, tourism-dependent economies need resilience plans for shocks such as pandemics, financial crises, and travel restrictions, as the fall from 1.28 billion reported arrivals in 2019 to 362.02 million in 2020 shows how quickly tourism income can decline. Governments should improve tourism data systems, especially for tourism GDP share, expenditure, and employment, so future researchers can estimate stronger and more reliable models. Finally, destination managers should balance large visitor markets with high-value tourism strategies, because the comparison between France and the United States shows that the number of tourists and the value of tourism are not always the same thing.

IX. CONCLUSION

This study examined the relationship between tourism activity and economic performance using a merged country-year panel limited to observations available up to 2022. The evidence shows that tourism expanded strongly before the COVID-period, reaching about 1.28 billion reported inbound arrivals in 2019, before falling sharply in 2020. This confirms that tourism is an economically important but shock-sensitive sector.

The main conclusion is simple: tourism matters for economic performance, but arrivals alone do not tell the whole story. Tourism expenditure and tourism employment provide a clearer explanation of tourism GDP share, especially after controlling for country and year differences. Therefore, countries should not measure tourism success only by the number of visitors; they should also measure how much visitors spend, how many jobs tourism creates, and how strongly tourism contributes to GDP.

The study contributes to the tourism-led growth literature by showing that a cross-country dataset can reveal important differences between large tourism markets and tourism-dependent economies. However, because the data are unbalanced and the regression results are exploratory, future research should use more complete country-level data, stronger causal methods, and separate analysis for small island economies, large developed destinations, and emerging tourism markets.

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