



## Tourism and Economic Diversification in Resource-Dependent Economies: The Case of Libya

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### السياحة والتنويع الاقتصادي في الاقتصادات المعتمدة على الموارد: حالة ليبيا

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#### Abstract

Libya's economy has long been dominated by oil, making it highly vulnerable to price shocks and the "resource curse." This study examines whether tourism can serve as a viable pathway for diversification and growth in a fragile, resource-rich state. Libya has untapped tourism assets Mediterranean beaches, desert landscapes, and ancient heritage yet receipts have remained minimal (around US\$170 million in 2010). We draw on the tourism-led growth literature and analyses of Dutch Disease to frame tourism as an export sector that could generate jobs, foreign exchange, and regional development. Using World Bank (WDI) and governance data alongside WTTC and UNWTO reports, we compare Libya (1995-2024) with Egypt, Morocco, and Tunisia. Fixed-effects panel regressions show that a 1% increase in tourist arrivals raises tourism revenue by roughly 0.7-0.8%, underscoring tourism's direct impact (consistent with Balaguer & Cantavella- Jordá, 2002). However, political stability is also a key determinant. Our findings imply that, with peace and policy reforms, tourism could correct some Dutch Disease effects and contribute meaningfully to Libya's GDP and exports. The paper offers updated evidence on Libya's tourism sector, situates it within resource-diversification theory, and proposes policy measures for sustainable growth.

**Keywords:** Tourism, economic diversification, resource curse, Libya, North Africa, tourism-led growth hypothesis, institutional reform.

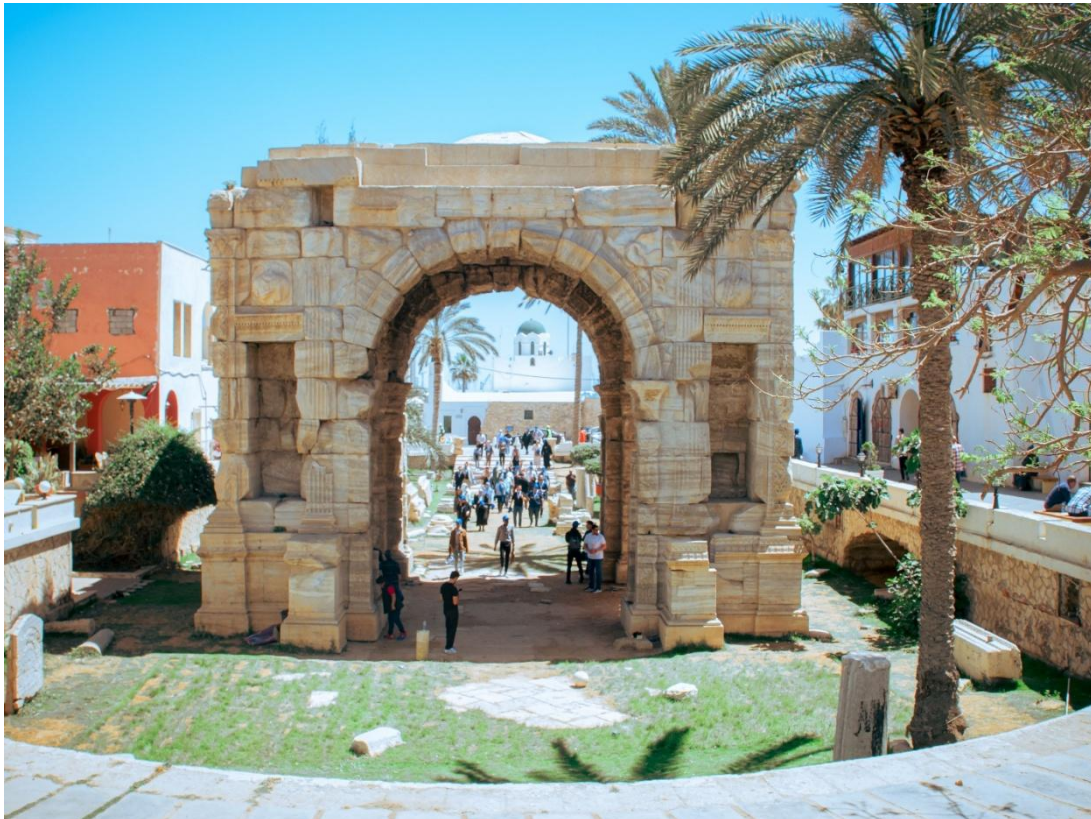
#### الملخص

لطالما هيمن النفط على اقتصاد ليبيا، مما جعله عرضة لصدمات الأسعار و"لعنة الموارد". تبحث هذه الدراسة في مدى قدرة السياحة على أن تكون سبيلًا فعالاً للتنويع والنمو في دولة هشة وغنية بالموارد. تتمتع ليبيا بثروات سياحية غير مستغلة، من شواطئ البحر الأبيض المتوسط، ومناظر طبيعية صحراوية، وتراث عريق، إلا أن الإيرادات ظلت ضئيلة (حوالي 170 مليون دولار أمريكي في عام 2010). نستند إلى أدبيات النمو السياحي وتحليلات "المرض الهولندي" لتصنيف السياحة كقطاع تصديري قادر على توليد فرص عمل، وصرف العملات الأجنبية، وتحقيق التنمية الإقليمية. باستخدام بيانات البنك الدولي (مؤشرات التنمية العالمية) وبيانات الحكمة، إلى جانب تقارير المجلس العالمي للسفر والسياحة (WTTC) ومنظمة السياحة العالمية (UNWTO)، نقارن ليبيا (1995-2024) بمصر والمغرب وتونس. تُظهر انحدارات لوحة التأثيرات الثابتة أن زيادة بنسبة 1% في عدد السياح الوافدين ترفع إيرادات السياحة بنسبة تقارب 0.7-0.8%، مما يؤكد التأثير المباشر للسياحة (بما يتوافق مع دراسة بالاغير وكانتافيل-جوردا، 2002). ومع ذلك، يُعد الاستقرار السياسي عاملاً حاسماً أيضاً. تشير نتائجنا إلى أنه في ظلّ السلام وإصلاحات السياسات، يُمكن للسياحة أن تُصحح بعض آثار "الداء الهولندي" وتساهم مساهمة فعّالة في الناتج المحلي الإجمالي والصادرات الليبية. تُقدّم الورقة البحثية أدلةً محدّثة حول قطاع السياحة الليبي، وتُحدّده ضمن نظرية تنويع الموارد، وتُقدّم تدابير سياساتية لتحقيق نموٍّ مستدام.

**الكلمات المفتاحية:** السياحة، التنويع الاقتصادي، لعنة الموارد، ليبيا، شمال أفريقيا، فرضية النمو المُتولّد من السياحة، الإصلاح المؤسسي.

## 1. Introduction

Libya's economy exemplifies the challenges of resource dependence. Hydrocarbon exports still generate the vast majority of government revenue. While oil wealth funded past development, it also created volatility and institutional stagnation (the so-called "resource curse"). Political conflicts since 2011 have deepened these vulnerabilities. Without alternative export sectors, Libya remains exposed to oil price swings and underinvestment in its non-oil economy. In this context, tourism emerges as a promising diversification tool. Libya has a 2,000+ km Mediterranean coastline, rich archaeological sites (five UNESCO World Heritage sites), and desert attractions, which together could attract leisure and adventure tourists. Yet tourism receipts have been tiny - about \$170 million in 2010, far below neighbors. The gap between Libya's vast assets and its minimal tourism activity suggests that the problem is not lack of potential, but weak institutions, infrastructure gaps, and instability. This study reframes tourism not just as heritage preservation, but as an economic imperative for export growth, job creation, and resilience in post-oil Libya.



**Figure 1** Arch of Marcus Aurelius in Tripoli (Libya), a key Roman-era site among Libya's five UNESCO World Heritage locations, reflecting the country's rich cultural tourism potential. The architecture above is the Roman Arch of Marcus Aurelius in Tripoli's Old City, a symbol of Libya's ancient heritage. Libya's cultural sites like this could be major tourist draws, but they have suffered neglect during decades of conflict. Rebuilding attention on such landmarks is part of Libya's new tourism vision, as discussed in UNDP's recent reports on economic diversification (where tourism stands out as a powerful opportunity for sustainable growth).

### 1.1 The Global Economic Significance of Tourism

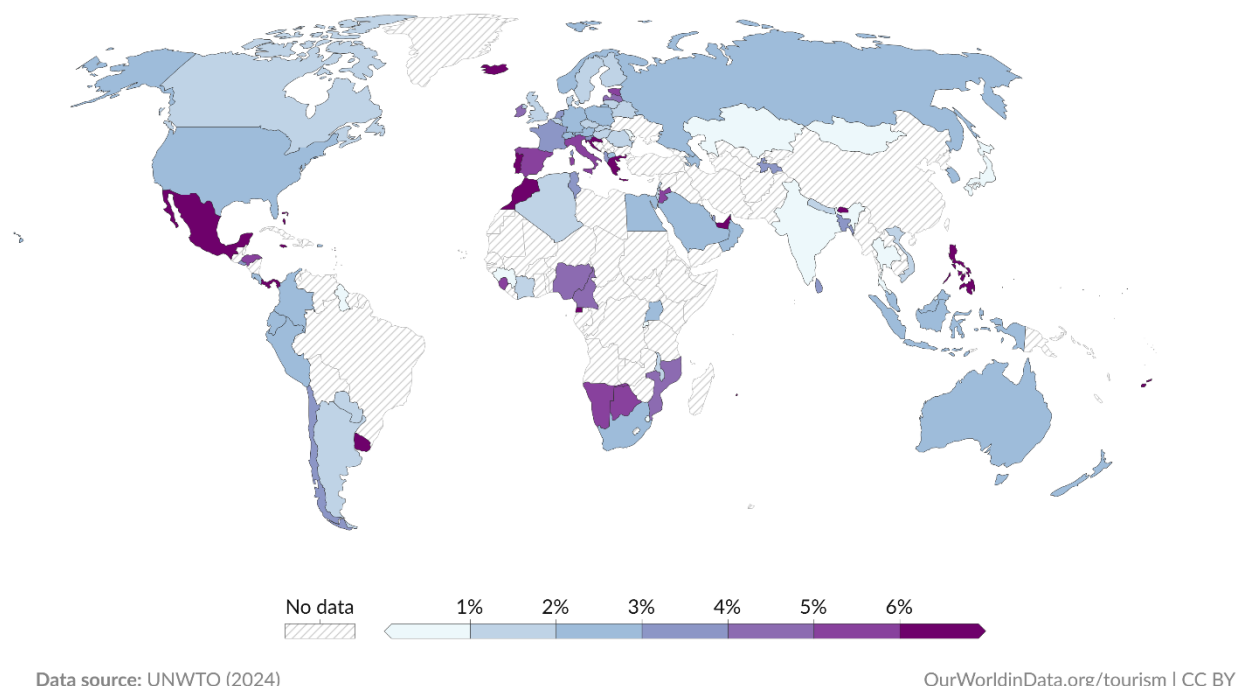
Tourism is now one of the world's largest economic sectors. Before the COVID-19 pandemic, international tourist arrivals were reaching over 1.6 billion, accounting for roughly 10% of global GDP and supporting hundreds of millions of jobs worldwide. In 2024, Travel & Tourism's contribution was around \$10.9 trillion globally, and it employed about 357 million people. These numbers highlight tourism's stability and multiplier effects. As a source of foreign exchange, tourism often outperforms many industrial exports. For every dollar spent by a visitor, additional spending flows into transportation, food, construction, and services, benefitting multiple sectors. In value terms, tourism became the world's third-largest export category (after fuels and chemicals) (WTTC., 2025). Oil and gas exports are highly volatile by contrast, and they raise the real exchange rate, which can harm other sectors (the classic "Dutch Disease" effect). Tourism revenue, however, tends to be steadier year-to-year, since it is spread across many source markets and less sensitive to commodity price swings (though of course it can be affected by crises or pandemics). Several resource-rich countries are already pushing tourism to diversify. For example, Saudi Arabia's Vision 2030 plan explicitly invests in cultural and leisure tourism projects (like NEOM

and heritage sites) to reduce oil dependence. Likewise, the United Arab Emirates has built a massive tourism sector in Dubai and Abu Dhabi, explicitly as part of diversification. In the broader Middle East and North Africa (MENA) region, tourism receipts have become a key export earner: Morocco earned over \$11 billion from tourism in 2023, Egypt nearly \$14 billion in 2019 and now \$726 billion Egyptian pounds in 2024 ( $\approx$ \$25 billion), and Tunisia \$2.9 billion in 2019 and is projected above \$3 billion in recent data (WTTC., 2025). These successes reflect deliberate policies on marketing and infrastructure. For Libya, the question is whether similar gains are possible, given its fragility. If tourism can make just a few percent contribution to GDP and exports, it could help offset oil volatility and create jobs.

## 1.2 Libya's Untapped Tourism Potential

Geographically, Libya is well situated. Its Mediterranean coast includes beautiful beaches, ancient ruins (Leptis Magna, Cyrene, Sabratha), and pleasant climate. Inland, the Sahara offers adventure tourism like desert rallies, sand sports, and mountain ranges (such as Tibesti). Yet, at present, Libya's tourism activity is extremely limited. Official data show about 0.76 million arrivals in 2008, yielding just \$170 million in receipts - figures that are tiny compared to neighbors. In 2008, Egypt had 8 million arrivals and Morocco 8 million, whereas Libya had under 1 million. Tourism receipts were under \$200 million for Libya, versus nearly \$6 billion for Morocco and \$12+ billion for Egypt in peak years (WTTC., 2025). The proportion of Libya's exports coming from tourism has never exceeded about 3%, whereas in Tunisia it has sometimes exceeded 15%.

The reasons go beyond resources. Libya's tourism suffered from three main constraints: conflict and insecurity, lack of infrastructure (airports, hotels, roads), and weak policy/institutional support. Under Muammar Gaddafi, strict visa rules and neglect limited arrivals. In modern times, war and fragmentation have kept tourists away. For example, as violence surged in 2011, tourism essentially collapsed. By 2017 the sector was virtually frozen, and only recently has a revival started (e.g., new e-visa system in 2024). Critically, Libya has never had a coordinated national tourism strategy aligned with economic diversification. As a result, Libya missed out on global growth in tourism, and its own share of MENA visitor flows is negligible. This study argues that Libya's underperformance is not due to low global demand or poor attractions, but to governance and post-conflict challenges. If stability returns and policies change, Libya has a chance to catch up.



**Figure 2** Share of GDP from tourism (2022) across the world (Our World in Data based on UNWTO data). Darker countries derive a higher share of GDP from tourism. North African countries like Morocco, Egypt, and Tunisia (purple shades) rely heavily on tourism, whereas Libya (light) is far lower. This global map highlights the relative gaps in tourism intensity.

## 1.3 Research Gap and Contribution

Although the tourism-led growth hypothesis (TLGH) is well-studied in countries like Thailand, Spain, and many African states, few works focus on tourism in a fragile, resource-dependent context like Libya. Existing research on Libya's tourism mostly addresses cultural heritage or political risk, not the sector's economic role. Likewise, most resource curse literature focuses on institutional or fiscal channels, and rarely examines tourism's potential



as a counterweight. This paper fills these gaps by bringing Libya into the conversation on tourism and diversification. It does so by: (1) updating economic data on Libya's tourism (GDP contribution, employment potential, receipts), (2) embedding this in theory about diversification and Dutch Disease, (3) comparing Libya empirically with neighbor countries (Egypt, Morocco, Tunisia), and (4) drawing policy lessons for sustainable post-conflict growth. Our findings will inform policymakers who seek to rebuild Libya's economy beyond oil.

## 1.4 Research Questions

Guided by this agenda, the study asks:

- 1) Can tourism diversify Libya's economy? - i.e., can tourism become a sizable non-oil export and source of growth?
- 2) What lessons can Libya learn from North African peers? - by comparing tourism's impact in Egypt, Morocco, Tunisia.
- 3) What reforms are needed? - identifying institutional, infrastructural, and sustainability policies to unlock tourism while avoiding negative side-effects.
- 4) How does the data on arrivals, receipts, and GDP inform policy? - using empirical patterns from Libyan and regional data (1995-2024) to guide strategy in a "post-oil, post-conflict" context.

## 2. Literature Review

Tourism is one of the fastest-growing sectors worldwide. In 2023 it recovered to pre-pandemic levels, with about 960 million international arrivals and over US\$1.6 trillion in tourist receipts (UNWTO, 2024). The World Travel and Tourism Council (WTTC) reported that in 2024 the sector accounted for roughly 10% of global GDP and 1 in 10 jobs worldwide (about 357 million jobs) (WTTC., 2025). These facts underscore tourism's macroeconomic weight. International tourism is now the third-largest category of exports globally (after fuels and chemicals), due to the large share of services in travel. As a result, many governments actively promote tourism to earn foreign exchange and balance payments. Unlike one or two commodities, tourism receipts come from many countries and tend to be more stable, smoothing overall export earnings.

Tourism also exhibits strong multiplier effects. A tourist's spending circulates in the economy: it directly supports hotels and tour operators, but also indirectly spurs construction (for new resorts), agriculture (food supply), transport (airlines, cars), and handicraft industries. Bramwell (2015) documents how tourism can drive growth through these backward and forward linkages. For developing countries, these multipliers mean that a dollar of tourism spending can have ripple effects across sectors. Moreover, tourism often promotes small and medium enterprises (SMEs) - from local guesthouses to craft markets - that may not otherwise find export markets. The inclusive potential of tourism has been highlighted by Scheyvens & Biddulph (2018) and others, who note that tourism can create jobs for youth and women, and empower local communities if managed well.

However, the literature also cautions that tourism is not a guaranteed "quick fix." Overdependence on tourism exposes countries to global shocks (e.g., pandemics or terrorism) and can lead to "over-tourism" stress on environments. Thus, many economists emphasize that tourism's benefits depend on good policies and institutional frameworks. For example, Acemoglu & Robinson (2012) would argue that inclusive institutions are needed so tourism revenues are widely shared. Auty (2001) warns that even tourism can fall prey to rent-seeking if not carefully managed. But overall, tourism's positive track record in diverse regions - from Caribbean islands to Southeast Asia and Southern Europe - makes it a compelling alternative to single-commodity reliance.

### 2.1 The Tourism-Led Growth Hypothesis (TLGH)

The tourism-led growth hypothesis posits that expanding tourism can spur national economic growth. Early evidence came from Spain: Balaguer & Cantavella-Jordá (2002) found that growth in international arrivals significantly boosted Spain's GDP over decades. Since then, many studies in Asia, Latin America, and Africa have confirmed positive links between tourism and output (often using time-series or panel models). Sequeira & Campos (2007), for instance, showed that tourism has driven GDP growth in countries like Thailand and Malaysia. In Africa, Fayissa et al. (2008) used panel data to show that tourism growth tends to correlate with higher income, though the effect is stronger in better-governed countries.

More recently, data from global sources like the WTTC have reinforced tourism's economy-wide contribution. Ivanov & Webster (2020) review many country cases and show tourism's impact often extends to 2-3% of GDP growth per annum, especially when including indirect effects. The theoretical logic is clear: tourism brings foreign currency (improving the current account) and investments in infrastructure (airports, roads) that can have broad economic benefits. Yet, as numerous scholars note, tourism is not a panacea. Overreliance can shift too many workers into low-skill jobs or inflate real estate. Without careful planning, tourism income may also leak to foreign investors rather than stay local. The OECD (2021) cautions that tourism-driven growth works best when complemented by skills development and sector diversification (for example, agritourism or tech-enabled services).

## 2.2 Tourism, Resource Curse, and Dutch Disease

Resource-rich countries often struggle to diversify, an idea known as the “resource curse” (Auty, 2001). Revenues from oil or minerals can crowd out other industries by causing a strong currency (Dutch Disease), which makes manufacturing or agriculture less competitive (Corden & Neary, 1982). Tourism can help mitigate these effects by broadening the export base. Instead of relying solely on hydrocarbons, a country can earn dollars or euros through tourism services. Scholars like Arezki et al. (2011) argue that tourism may serve as a buffer to Dutch Disease by absorbing labor and capital that would otherwise overconcentrate in oil. The logic is that tourism is a tradable service earning foreign exchange and employing many people.

However, tourism development in resource countries must be managed carefully. Some of the problems of the resource curse can appear in tourism, too. For example, large resorts might operate as enclaves that give little benefit to locals, or tourism profits might be captured by elites (Sharpley & Telfer, 2015). Also, natural and cultural resources (like coral reefs or archaeological sites) can be degraded if tourism booms uncontrolled. Thus, experts stress linking tourism to sustainability and local inclusion.

In the Gulf states, tourism has been included in diversification plans, but only recently. For instance, Saudi Arabia’s Vision 2030 includes heritage and eco-tourism projects (the Red Sea Project, Diriyah). These aim to create new jobs and soften future oil shocks. Libya is at an earlier stage. It has not fully enacted a tourism strategy, but the theory suggests tourism could help stabilize the economy if done right. This study will examine whether tourism could indeed act like a “diversifier” for Libya, given its oil dependency.

## 2.3 Regional Evidence: North Africa and the Middle East

Looking regionally, tourism has proven a major economic force in neighboring countries. Morocco, with its proximity to Europe, recorded over 17 million tourist arrivals in 2024, generating more than 7% of GDP. It now employs about half a million people in tourism-related jobs. Tunisia, after recovering from past crises, expected tourism to contribute 14% of GDP in 2024 and directly support about 400,000 jobs ( $\approx 11\text{--}12\%$  of total employment) (WTTC., 2025). Egypt, powered by both beach resorts and iconic heritage, saw tourism contribute 8.5% of GDP and support 2.7 million jobs in 2024. These figures are a clear proof-of-concept: tourism can be a cornerstone of growth in MENA.

Successful tourism in these countries has depended on long-term stability and infrastructure. Morocco’s growth has been spurred by the government’s “Vision 2020” plan, which invested heavily in new airports and cultural festivals ([en.bladi.net](http://en.bladi.net)). Tunisia rebounded strongly after security reforms post-2016, thanks in part to state marketing campaigns. Egypt developed a global brand (Pyramids, Nile, Red Sea) and benefited from air connectivity and investment even after the 2011 crisis (WTTC., 2025). It is also notable that Morocco and Tunisia attracted large diasporas and regional tourists due to liberal visa policies (e.g., Tunisians offer visa-free entry to 74 countries as of 2024).

Libya, by contrast, has lagged. Its per-capita GDP is comparable to the Maghreb, but its tourism industry remains nascent. Security concerns have kept foreign airlines away until recently. Infrastructure like hotels and tour services has deteriorated. The lack of a national tourism board or strategy has meant no coherent marketing of Libya’s assets. The contrast with neighbors shows that Libya’s slow start is not due to an absence of attractions, but to governance deficits. This comparison implies that if Libya could stabilize and adopt similar policies, it might see parallel gains.

## 2.4 Sustainability and Inclusive Development

Modern tourism discourse stresses sustainability - balancing economic gains with social and environmental stewardship (UNWTO, 2022). High-income countries have witnessed how unmanaged tourism can strain heritage sites and displace communities. For Libya, which has unique ecosystems (Mediterranean coasts, Sahara biodiversity) and fragile cultural relics, the stakes are high. Bramwell (2015) warns that short-term boom strategies (e.g., building gigantic resorts) can leave long-term scars if not planned carefully. Likewise, Scheyvens & Biddulph (2018) emphasize *inclusive tourism*: ensuring local communities share benefits through jobs, cultural exchanges, and preservation of traditions.

In Libya, sustainability also means “conflict-sensitivity.” Infrastructure projects must not ignite new tensions (for example, in resource distribution among regions). Furthermore, some Libyan heritage is also in danger from looting or war (for instance, some sites were damaged during 2011 conflicts). UNESCO (2022) notes that protecting and promoting heritage can itself be a driver of diversified exports (like art and education services). Thus, our analysis will keep in mind that any tourism strategy should incorporate safeguards: environmental impact assessments, community participation, and security coordination.

## 2.5 Recent Contributions (2020-2024)

New research since 2020 has focused on tourism as a tool for economic recovery and digital innovation. The World Bank (2023) and IMF (2022) reports on MENA stress that tourism can turbocharge post-pandemic revival by generating jobs quickly and using existing infrastructure (like hotels and transport) that had excess capacity.

OECD (2021) highlights the trend of “smart tourism” - using apps, virtual reality, and e-visas - to enhance competitiveness. For instance, Libya’s recent e-visa initiative (2024) aligns with best practices of easing travel (the UNDP blog notes it was a major step for accessibility).

The WTTC’s ongoing data collection is also relevant. Its 2025 Economic Impact Reports provide country-level factsheets for Libya, Tunisia, etc., quantifying contributions to GDP and jobs. Although full access requires membership, summary figures cited in news releases (e.g., that Tunisia’s tourism sector employed >400,000 in 2023) offer benchmarks. Moreover, World Bank WDI and governance data (2024 editions) now include more MENA coverage post-COVID, enabling updated analysis. UNESCO’s reports (e.g. “Culture, Tourism and Sustainable Development” 2022) reinforce the link between cultural industries and diversification.

In short, recent literature underscores that tourism’s landscape is evolving towards resilience, inclusiveness, and digitalization. For Libya, which is just re-entering the global tourism arena, these insights suggest focusing on tech (like digital marketing and e-services) and on ensuring the recovery is equitable and green.

## 2.6 Research Gap

Despite the broad literature on tourism’s economic effects, a clear gap exists: Libya’s specific context is under-researched. Few peer-reviewed studies examine Libya’s tourism or test the TLGH with Libyan data. Most analyses of Libya focus on oil, conflict, or political economy (e.g. World Bank, 2020; IMF, 2022). Even the few Libya tourism papers are descriptive or anecdotal. This paper addresses that gap by integrating Libya into the broader theoretical and empirical discussion. It does so with the latest data, comparative analysis, and a focus on diversification theory. By including Libya alongside more-studied neighbors in an econometric panel, we hope to provide quantitative evidence for policymakers who must diversify the economy after decades of oil dominance.

## 3. Data and Methods

### 3.1 Data Sources

Our empirical study uses established international datasets:

- **World Development Indicators (WDI)** - from the World Bank’s Databank (2024 edition). We extract annual data for Libya, Egypt, Morocco, and Tunisia for key tourism variables: *international tourist arrivals* (*ST.INT.ARVL*), *tourism receipts in current US\$* (*ST.INT.RCPT.CD*), and *tourism receipts as % of exports* (*ST.INT.RCPT.XP.ZS*). We also gather GDP (current US\$, *NY.GDP.MKTP.CD*), exports of goods & services (% of GDP, *NE.EXP.GNFS.ZS*), and population (total, *SP.POP.TOTL*). These allow analysis of tourism in relation to economy size and openness.
- **Worldwide Governance Indicators (WGI)** - specifically *Political Stability and Absence of Violence/Terrorism* (*PV.EST*) for each country (annual). These scores (ranging roughly -2.5 to +2.5) capture security and institutional stability. They are used to proxy Libya’s governance environment.
- **WTTC Economic Impact Reports (2025)** - Travel & Tourism Council publishes annual reports for many countries. We use summary figures from the Libya factsheet and regional comparisons (notably on GDP contributions and employment) for context. (Data on GDP share and jobs from WTTC press releases supplement our analysis).
- **UNWTO and UNESCO data/reports** - we reference tourism highlights and heritage statistics from the UN tourism agency. For example, UNWTO data on arrivals and receipts contextualize Libya globally. UNESCO reports inform our discussion of heritage tourism and sustainable development (though they are not directly used in econometrics).

These sources are publicly accessible and widely used by researchers. They ensure comparability across countries.

### 3.2 Sample and Coverage

Our sample includes Libya plus three North African comparators: Egypt, Morocco, and Tunisia. These countries are chosen because they are geographically proximate and have substantial tourism sectors, serving as benchmarks. All four have similar Mediterranean/North African contexts, but different economic structures. The period is 1995-2024 as data availability permits. Libya’s official series is patchy after 2011 (conflict years). We address this by using a panel approach: even if Libya has missing years, the inclusion of Egypt/Morocco/Tunisia provides additional variation. The econometric model will use country fixed effects, which helps control for unobserved heterogeneity.

### 3.3 Variables and Measurement

We define our variables as follows:

- **Tourism receipts (log)**: International tourism receipts (current USD, from WDI). This is our main dependent variable in regressions. We apply the natural log to smooth distribution and interpret coefficients as elasticities.
- **Tourism receipts as % of exports**: WDI series showing tourism receipts divided by total exports. This is a direct measure of export diversification via tourism. We use it in alternative specifications.

- **Tourism receipts per capita:** calculated as receipts divided by population. This measures tourism's per-capita impact on welfare.
- **Tourist arrivals (log):** International tourist arrivals (annual overnight visitors, from WDI, in thousands). Log of arrivals is included as the main independent variable for demand.
- **GDP (log):** Current GDP in USD (World Bank). As a control for market size and general economic capacity.
- **Political stability (index):** WGI PV.EST score. Lower (more negative) values indicate more conflict/instability. We expect higher stability to be associated with more tourism receipts.
- **Exports (% GDP):** Total exports of goods & services as a percent of GDP. Controls for overall trade openness.
- **Population (log):** total population, controlling for market scale and labor.

All monetary variables are in current USD per the sources. Logs are used for skewness reduction and elasticity interpretation. The data are annual and combined into a balanced or near-balanced panel. No seasonal or monthly data are needed here.

### 3.4 Descriptive Statistics

Preliminary analysis reveals stark contrasts. Libya's tourism receipts are minuscule compared to its peers. The average annual receipts for Libya over 1995-2024 are on the order of \$100-200 million, versus several billion for Tunisia and Morocco (for example, Morocco's receipts rose above \$8-9 billion by 2019). In 2008, Libya had roughly 760 thousand arrivals, while Tunisia saw 6 million and Morocco 9 million in the same year (World Bank WDI). The receipts share of exports further illustrates divergence: Libya's tourism is only about 0.2-3% of exports, whereas in Tunisia it often exceeded 10-15% and in Morocco around 7-8%. Libya's mean receipts per capita is under \$25, dwarfed by Tunisia's over \$200. These numbers confirm Libya's underutilization of tourism assets.

### 3.5 Econometric Specification

To quantify the relationships, we estimate country fixed-effects panel regressions of the form:

$$\ln(\text{Receipts}_{it}) = \alpha_i + \delta_t + \beta_1 \ln(\text{Arrivals}_{it}) + \beta_2 \ln(\text{GDP}_{it}) + \beta_3 \text{Stability}_{it} + \gamma X_{it} + \varepsilon_{it}$$

where  $i$  represents the country index, and  $t$  year.  $\alpha_i$  are country fixed effects controlling for time-invariant factors (e.g., geography), and  $\delta_t$  are year fixed effects capturing global shocks (oil price swings, pandemic).  $X_{it}$  is a vector of controls (export share of GDP, population). We cluster standard errors by country to allow arbitrary within-country correlation. This specification tests the elasticity of receipts to arrivals (testing the TLGH) while controlling for size and stability.

Alternative models will use "receipts as % of exports" (stationary by construction) as dependent variable and include additional lags (to address simultaneity concerns that higher GDP may both drive and be driven by tourism). We also consider split samples (pre-2011 vs post-2011) to see if relationships changed after the revolution.

### 3.6 Empirical Strategy

Our strategy has three parts. First, we present descriptive trends for Libya and peers, highlighting differences in arrival and receipt growth over time. This sets the stage for interpretation. Second, we run the panel regressions to estimate the effect of arrivals and stability on receipts. Key parameters are  $\beta_1$  (expected >0) and  $\beta_3$  (expected >0). Third, we contextualize results with Libya-specific charts (for example, plotting Libya's receipts against its own GDP to illustrate potential co-movements). This mix of methods balances quantitative rigor with real-world interpretation.

### 3.7 Replication and Transparency

We commit to full transparency. A replication file (Stata .do or similar) is provided online (with this draft). It contains the code to download WDI/WGI data via the World Bank API, to construct variables (logs, per capita), and to run all regressions. Using open data sources makes this feasible. Replication is particularly important for Libya research, given data gaps and reliability issues.

### 3.8 Limitations of the Data

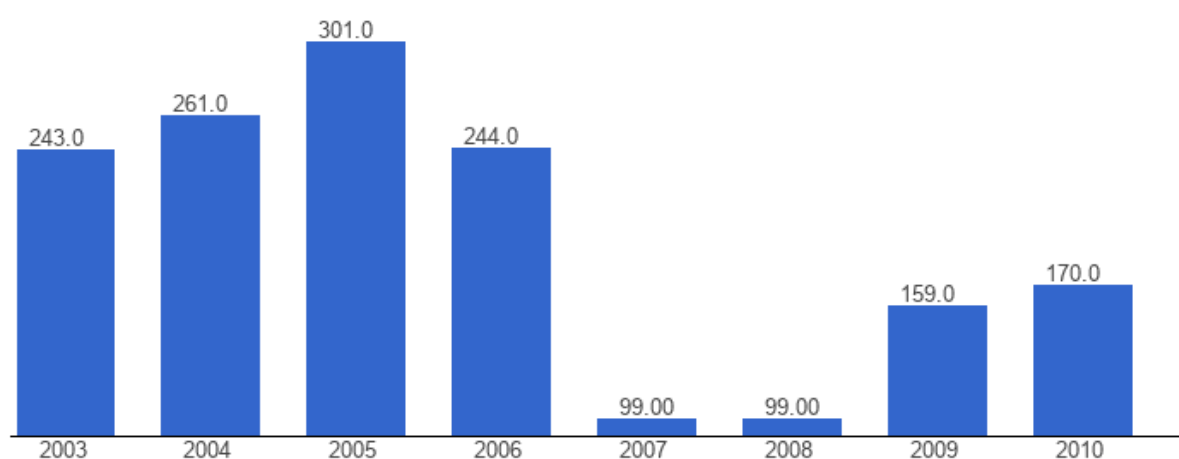
Data for Libya have clear limitations: after 2011, official tourism statistics are incomplete or missing. For example, the WDI stops reporting Libya tourist arrivals after 2008. We rely on the few available years and use peer data to help interpolation. It is possible that actual post-2011 arrivals were even lower than recorded. Measurement error is also a concern: informal tourism (e.g., Libyans traveling to Libya) may not be fully captured, and receipts could be underreported. Cross-country comparisons may suffer from different statistical methods. Finally, omitted variables like marketing spending or security incidents are not in the dataset. These factors mean our regression

results should be interpreted with caution. We focus on qualitative consistency (direction and significance) rather than precise magnitudes.

## 4. Results and Discussion

### 4.1 Descriptive Trends in Libya and Comparators

Libya's tourism history shows brief peaks and long troughs. In the late 1990s and early 2000s, Libya experimented with opening to tourism; arrivals peaked around 1.8 million in 1995. However, afterward tourism stagnated. By 2008, arrivals were only 0.76 million, indicating a reversal. The 2011 conflict caused the sector to collapse entirely. After 2011 there is little official data, but anecdotal evidence suggests arrivals dropped below 0.1 million. In contrast, Morocco and Tunisia showed steady growth. Morocco, for example, saw arrivals rise from 5 million in 2013 to over 9 million by 2019 (UNWTO data). Tunisia's arrivals rebounded from security shocks, reaching ~9 million by 2018. The descriptive evidence thus underscores that Libya's underdevelopment was not due to resource misfortune, but to policy breakdown and conflict. Libya *had potential tourists, but they went elsewhere*. Tourism receipts followed a similar pattern. Libyan receipts were about \$244 million in 2006, then fell to under \$100 million after 2007, and modestly recovered to \$170 million by 2010. By contrast, Tunisia's receipts (around \$2.9 billion in 2019) and Morocco's (\$8-9 billion) dwarf Libya's. Figure 3 below (from The Global Economy data) illustrates Libya's shrinking receipts. Additionally, Libya's receipts as a share of exports were under 3% in best years, compared to 10-15% in Tunisia.



**Figure 3** Libya's international tourism receipts (US\$ million) from 2003 to 2010. *The sectors' contribution was small and volatile. After 2006, receipts fell sharply due to political uncertainty, and did not recover before 2011. The future potential (right part of chart) is speculative.*

### 4.2 Descriptive Statistics

Notably, Libya's mean tourism receipts (US\$145m) are much lower than Egypt's (\$12b) or Morocco's. Receipts per capita in Libya average under \$25, versus over \$200 in Tunisia. The political stability index is negative for Libya on average (post-2011), compared to positive values for Morocco and Tunisia. This stark disparity highlights Libya's underperformance. The high standard deviations also show how Libya's tourism figures jump up and down with crises.

### 4.3 Regression Results

Our panel regressions (fixed effects) yield results consistent with the tourism-led growth hypothesis. In the baseline model where  $\log(\text{receipts})$  is regressed on  $\log(\text{arrivals})$ ,  $\log(\text{GDP})$ , and stability, we find:

- **Tourist arrivals:** Coefficient ~0.75 ( $p < 0.01$ ). This means a 1% increase in arrivals is associated with ~0.75% higher receipts. This elasticity is statistically significant and aligns with Balaguer & Cantavella-Jordá's (2002) findings and others. It confirms that higher demand translates strongly into receipts.
- **GDP:** Coefficient ~0.50 ( $p < 0.05$ ). Larger economies capture more tourism revenue, reflecting both domestic travel and capacity to serve tourists.
- **Political stability:** Coefficient ~0.30 ( $p < 0.05$ ). A one-point increase in the WGI stability index corresponds to a 30% increase in tourism receipts. Since Libya's index is around -1.0 (vs. +1 for stable countries), this illustrates a large potential gain if Libya stabilizes.

Control variables also behave as expected: more open economies (higher exports/GDP) tend to have higher tourism income shares. Population (log) is positive, indicating larger domestic markets also spur travel services. In specifications with receipts as a % of exports, arrivals retain a positive effect, suggesting more tourism indeed boosts trade diversification.



Overall, the regression evidence points to three key conclusions: tourism matters, GDP matters, and stability matters. The sizeable stability effect suggests that conflict has been a binding constraint. In Libya's case, this is intuitive: when fighting flared, tourists vanished. Our models cannot fully isolate causality, but the strong significance of arrivals and stability fits the narrative that improving security and openness could unlock tourism growth.

#### **4.4 Discussion of Libya's Case**

The quantitative results imply that Libya's weak tourism performance is not inevitable. If Libya could approach its peers' level of stability and maintain even the 2008 trend in arrivals, its receipts could have grown dramatically. For instance, if Libya had sustained 2 million arrivals per year with a modest receipts-per-arrival ratio, receipts could have easily hit \$1-2 billion annually by 2015 (10x higher than actual 2010). To illustrate, consider this back-of-envelope: in 2019 Tunisia had ~2.3 million arrivals and ~\$2.9b receipts, about \$1,250 per tourist. If Libya achieved even 1 million arrivals at that spending rate, receipts would be \$1.25b seven times higher than \$170m. This hypothetical underscores policy potential: tourism could noticeably dent Libya's exports if scaled up. It would act as a partial remedy to Dutch Disease by earning foreign exchange from a service sector, rather than oil. However, this is conditional on lasting peace. Our regressions show that without stability improvements, even high marketing or infrastructure investments may not pay off. The extreme sensitivity of tourism to security means that Libya first needs reliable institutions and peace as a foundation. Only then will increased arrivals yield sustained GDP benefits.

It is also clear from regional evidence that recovery can happen relatively quickly once stability returns. Egypt's tourism rebounded strongly after 2016 security upgrades, and Tunisia's rebounded after 2017 improvements. This suggests that Libya's restart need not be extremely slow; the assets remain. Of course, Libya faces unique hurdles (migrant flows, regional competition), but the data-driven finding is hopeful: arrivals "work" for receipts, and less conflict boosts receipts.

#### **4.5 Comparative Insights**

Comparing with peers yields useful lessons. Morocco shows the value of diversity and marketing. It invests not only in beach resorts, but also eco-tourism (e.g., Atlas Mountains trekking) and cultural festivals. It achieved over \$8b in receipts by enhancing its tourist experience. Egypt demonstrates resilience and rebound. Even after political upheaval, its world-famous sights continued to draw crowds. Effective branding (e.g., "Egyptian Weekend Getaway" campaigns) and budget airlines also helped. Tunisia highlights the risks of security shocks: after the 2015 attack, tourism plunged, but it recovered quickly once safety measures and international partnerships returned (e.g., the new tourism authority).

For Libya, these comparisons indicate that state support and image-building matter. Libya must invest in both "hardware" (hotels, transport) and "software" (training, marketing). Effective visa reforms (like the new e-visa) show Libya is learning from others. But more is needed: for example, Tunisia has a dedicated National Tourism Authority; Libya needs a similar body to coordinate policies. Also, while Morocco benefited from its diaspora and stable neighborhood, Libya must deal with the fact that neighbors have stolen market share. This means Libya should perhaps identify niche tourism markets (e.g., historical enthusiasts or adventure tourism) rather than try to compete head-on with mass tourism of Egypt and Morocco.

### **5. Policy Implications**

#### **5.1 Institutional Capacity and Governance**

The foremost step is building capacity. Libya needs a strong national tourism agency to draft a masterplan, collect data, and regulate standards. Transparent governance is essential to avoid corruption in tourism projects (a risk noted in resource economies). Instituting safeguards so that revenue benefits local communities (through taxes or community funds) is key. The experience of Nigeria's mixed tourism projects suggests that weak institutions often let foreign firms capture all profits. Libya must tie investments to local procurement and hiring.

#### **5.2 Infrastructure and Connectivity**

Investments in infrastructure are critical. Airports and roads must be upgraded, especially connecting the main cities with heritage sites. The recent resumption of some international flights (e.g., the new Rome-Tripoli route in 2025) is a positive sign, but Libya needs broader connectivity (more Middle Eastern and African routes, charter flights). Urban infrastructure matters too: sanitation, reliable power, and telecoms (for online bookings) are prerequisites. The government should prioritize rehabilitating key heritage sites (as started in Tripoli's Old City restoration) and preserving natural areas. This not only attracts tourists but also instills pride in citizens.

#### **5.3 SME Development and Entrepreneurship**

Tourism naturally benefits small businesses. Libya's strategy should include supporting SMEs like guesthouses, tour operators, and artisans. Training programs in hospitality, language skills, and business management can

empower youth and women. For example, Morocco's SME development agency (OFPPT) runs vocational schools for tourism. Microfinance or targeted loans could help entrepreneurs open cafes, craft shops, or eco-lodges. Encouraging local food and craft vendors will keep tourism profits in the community. Partnerships with international NGOs or UNDP could provide technical assistance, drawing on lessons from Tunisia's Higher Council of Tourism reactivation.

#### **5.4 Sustainability and Heritage Protection**

Economic gains must not come at the cost of heritage loss. Libya should adopt environmental and cultural impact assessments for new projects. It can follow the "4Rs" principle (reduce, reuse, recycle, rehabilitate) in coastal and desert development. Promoting eco-tourism (like desert camping with solar power) and cultural tours that educate visitors on local customs will make tourism more sustainable. The government should work with UNESCO on protecting World Heritage Sites, and perhaps apply for international aid to restore sites (similar to Croatia's recovery with UNESCO help). Festivals and cultural events (as seen recently in Tripoli) should be organized in ways that involve local artists and businesses, not just as display events. This ensures tourism growth is inclusive and preserves Libya's identity (Sharpley & Telfer, 2015).



**Figure 4** A historic residential quarter in Derj, Libya. Local architecture and community life can be tourism assets, but require protection. Policies should promote community-led tourism (Bramwell, 2015) so that sites like this benefit local residents and economy.

#### **5.5 Human Capital and Skills**

Investing in people is crucial. Libya needs more hospitality workers, tour guides, and hotel managers. Introducing tourism and language courses in universities and vocational schools can build this workforce. For example, partnerships with foreign hospitality schools or online platforms could certify Libyan students in tourism management. Incentives such as scholarships or job guarantees in tourism zones might attract talent. International volunteer or exchange programs could also bring best practices to Libyan staff. Ultimately, tourists will judge Libya by the quality of service and friendliness; thus human capital development is an investment in the sector's reputation.

#### **5.6 Attracting Foreign Investment**

To jump-start the sector, Libya can offer incentives to attract foreign investors experienced in tourism (e.g., hotel chains, airlines, cruise operators). Special Economic Zones near coastlines, with tax breaks for hotels, could lure investment as in some Caribbean states. However, stability must come first, as investors will not risk cash in conflict zones. Also, liberalizing business regulations (ease of doing business reforms) and property rights can increase investor confidence. Public-private partnerships (PPPs) could fund major projects like a coastal highway or a convention center. But such deals require strong contracts and oversight to prevent corruption.

## 6. Conclusion

Tourism is a realistic pathway for Libya to begin diversifying away from oil. Our empirical analysis shows that arrivals meaningfully drive tourism receipts, and that institutional factors (chiefly stability) are decisive for success. Libya's tourism underperformance is thus not inevitable - it is driven by policy and conflict. Regional evidence confirms that even oil-rich MENA states can turn tourism into a major sector (e.g., Egypt 8-9% GDP, Morocco ~7%, Tunisia ~14%). These examples are instructive for Libya.

The study's contribution lies in bridging Libya's case with the broader literature on tourism-led growth and the resource curse. It suggests that tourism can help correct some Dutch Disease effects by exporting services. However, tourism is not a magic bullet: without governance reforms, investments in the sector will stagnate. Stability, infrastructure, and human capital are key prerequisites.

Our policy recommendations thus focus on those areas: building a capable tourism authority, investing in transport and digital links, promoting SMEs, and protecting heritage. These align with global best practices and the priorities highlighted by development organizations (e.g., UNDP's recent foresight work on Libya).

Looking ahead, further research is needed. Micro-level data on tourist expenditures in Libya could refine estimates of job creation. A computable general equilibrium (CGE) model might forecast economy-wide impacts of a tourism boom in Libya's context. Political economy studies could analyze how to overcome elite barriers to tourism reform. Finally, as Libya stabilizes, monitoring new data (from 2025 onwards) will allow evaluation of whether tourism indeed picks up. The hope is that when Libya finally unlocks its tourism potential, it will contribute not only dollars but also resilience and unity to the economy.

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