

Tourism GDP Share and Economic Growth in Indonesia: A Structural Analysis (2019–2023)

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Abstract: *Tourism has been positioned as a strategic sector in Indonesia's development agenda because of its capacity to generate employment, foreign exchange, and regionally dispersed economic activity. However, the COVID-19 pandemic exposed the sector's vulnerability to systemic shocks and raised questions about the alignment between tourism performance and aggregate economic recovery. This study examines the relationship between Indonesia's annual GDP growth and tourism's direct contribution to GDP from 2019 to 2023, focusing on structural rather than causal analysis. Using secondary data from the Tourism Satellite Account compiled by Statistics Indonesia and annual GDP growth data from the World Bank's World Development Indicators, the study applies a descriptive quantitative design combined with a macro-financial structural interpretation. The results show that tourism's GDP share was close to 5 percent in 2019 but fell to about half that level in 2020, while aggregate GDP contracted by slightly more than 2%. GDP growth returned to positive territory in 2021 and exceeded 5% in 2022 and 2023, yet tourism's share of GDP, although recovering, remained marginally below its pre-pandemic level by 2023. This pattern indicates an asymmetric shock with a deeper collapse and slower recovery in tourism compared to the broader economy, generating a structural lag between macroeconomic and sectoral recovery. The study argues that relying solely on aggregate GDP growth as an indicator of tourism recovery risks overstating sectoral resilience and underestimating hysteresis effects in tourism-dependent activities. Policy evaluation and tourism-led development strategies should therefore incorporate structural indicators such as tourism's GDP share, sectoral volatility, and institutional constraints that influence the translation of policy initiatives into realized value added.*

Keywords: *Tourism GDP, Economic Growth, Structural Change, Sectoral Volatility*

Introduction

Tourism plays a distinctive and highly visible role in Indonesia's development strategy, reflecting the nation's abundance of natural landscapes, cultural diversity, and historical heritage. Before the COVID-19 pandemic, tourism had been identified as a priority sector capable of diversifying exports away from primary commodities, generating foreign exchange and sustaining employment in both urban and rural areas. Tourism activities in Indonesia span accommodation, transport services, food and beverages, entertainment, and various creative and cultural products linked to visitor demand. These interlinked activities form a wide ecosystem in which small and medium-sized enterprises operate alongside larger corporations, thereby positioning tourism as a potential driver of inclusive growth.

Tourism has been continually positioned as an engine of economic expansion and as one of the pillars for long-term sustainable economic transformation in policy documents and national development plans. These documents expect tourism to help support

development in regions by focusing new investments in areas of infrastructure, accommodations, and support services for the tourism industry outside of established industrial areas. It was anticipated that the multiplier effects from increased household incomes, expanded linkages between tourists and local suppliers, and additional demand for non-tourism products and services would be significant ways in which tourism would help Indonesia achieve many of its broader development objectives.

Most of the academic research in tourism and economic development supports the idea that tourism may contribute positively to a country's overall macroeconomic performance, particularly in developing nations with existing natural and/or cultural resources. Research studies have identified relationships between tourism receipts and various indicators of a nation's macroeconomic performance, including Gross Domestic Product (GDP) growth, employment opportunities created, and foreign currency earned through tourism. However, the magnitude and longevity of such relationships are highly variable depending upon a nation's specific characteristics and time. Tourism is often described as being labor-intensive and less capital-intensive than other sectors of the economy, thereby enhancing the sector's appeal as a vehicle for achieving inclusive economic development and dispersal of economic activity throughout a nation's regions.

Although numerous research projects have studied the effects of tourism upon a country's economy through short-run lens (i.e., the effect that tourism has on the number of tourists arriving at a particular location, the flow of revenue that results from these tourists visiting the area, and the employment levels associated with the presence of these tourists), few studies have analyzed tourism's long-term influence on the structure of the overall national economy. Although there are studies that utilize growth regression models, demand elasticity studies, and destination-specific case study methods to analyze how tourism influences macroeconomic variables, little attention has been given to how tourism's contribution to a nation's Gross Domestic Product (GDP) changes over time in comparison to the general rate of change of the nation's total GDP. The lack of analysis of this nature is especially notable during periods of significant economic disruption (e.g., the COVID-19 pandemic) in which the impact of various sectors of the economy can be significantly different from the overall performance of the economy.

Gross Domestic Product (GDP) growth remains the headline indicator for assessing macroeconomic performance and recovery. Positive GDP growth is commonly interpreted as evidence of resilience, successful policy intervention, or a return to normal economic activity. Yet GDP growth is a flow concept that summarizes the rate of change in aggregate output; it does not reveal how that output is distributed across sectors, nor how the structure of the economy evolves as shocks and policy responses interact. An economy can exhibit a strong rebound in aggregate GDP while some sectors remain structurally weakened, with reduced shares of value added, lower profitability, and fragile employment conditions.

Tourism is particularly sensitive to such dynamics. The sector depends on physical mobility, discretionary spending, and confidence in health and safety conditions, making it highly vulnerable to travel restrictions, income shocks, and uncertainty. During the COVID-19 pandemic, international borders closed, domestic mobility was restricted, and many tourism-related businesses faced prolonged periods of minimal demand. Unlike some manufacturing or service activities that could adapt by shifting to remote work or

digital platforms, most tourism activities require face-to-face interaction and the physical presence of visitors. As a result, tourism often experiences deeper contractions during crises and slower recoveries afterward compared with more diversified or less contact-intensive sectors.

Indonesia provides a compelling context for examining these issues. In 2020, the country experienced its first economic contraction in decades, with real GDP declining by slightly more than 2% because of the COVID-19 shock. At the same time, the tourism sector experienced a dramatic collapse, reflected in a sharp decline in tourism's contribution to GDP and in the near-disappearance of international arrivals. Subsequent years saw a recovery in aggregate GDP growth, supported by improvements in global and domestic demand, commodity prices, and policy support measures. Yet tourism's structural contribution, measured as its share of GDP, recovered more slowly and did not fully reach its pre-pandemic level by 2023.

From a macro-financial structural perspective, this divergence between aggregate GDP growth and tourism GDP share raises important questions about sectoral resilience and the interpretation of recovery indicators. Tourism GDP share reflects the relative weight of tourism in the overall economy and provides information about sectoral reallocation, investment patterns, and the persistence of shocks. A persistent shortfall of tourism's GDP share compared with its pre-crisis level suggests that the sector has not yet regained its previous structural position, even if overall output has recovered or surpassed earlier levels.

The objective of this study is to analyze the relationship between Indonesia's total GDP growth and tourism's direct contribution to GDP during the period 2019–2023 using a descriptive structural approach. The analysis does not attempt to establish causality between tourism and aggregate growth; instead, it focuses on documenting and interpreting the pattern of tourism's GDP share and total GDP growth over time and drawing implications for tourism-led development strategies. The study aims to answer two main questions: How did tourism's GDP share evolve relative to total GDP growth in Indonesia between 2019 and 2023? And what do the observed patterns reveal about structural lag, volatility, and hysteresis in tourism's recovery?

By grounding the analysis in sectoral GDP shares and macro-financial structural concepts, the study contributes to the literature in three ways. First, it highlights how aggregate recovery can conceal persistent sectoral weakness, particularly in tourism. Second, it underscores the importance of distinguishing between growth rates and economic structure when evaluating policy outcomes. Third, it provides evidence from Indonesia's recent experience that can inform debates on the design of tourism-led growth strategies and their resilience to systemic shocks.

Method

This study employs a descriptive quantitative design using secondary macroeconomic data for Indonesia covering the years 2019 to 2023. The methodological approach emphasizes the structural relationship between tourism's contribution to GDP and total GDP growth, rather than estimating causal models or forecasting equations. This emphasis is motivated by both conceptual and practical considerations, including the limited number of annual observations and the compositional nature of GDP share variables.

Research design

The core of the analysis is a comparative examination of two indicators: tourism's direct contribution to GDP, expressed as a share of total GDP, and the annual growth rate of real GDP. Tourism's GDP share is treated as a structural indicator that reflects the relative economic importance and resilience of the tourism sector, while GDP growth is treated as a flow indicator summarizing the rate of change in aggregate output. By juxtaposing these indicators across the pre-pandemic, crisis, and recovery years, the study identifies patterns of symmetric or asymmetric adjustment between the tourism sector and the overall economy.

The choice of a descriptive structural approach implies that the study does not estimate regression models or conduct hypothesis testing about the causal impact of tourism on GDP growth or vice versa. Instead, it interprets observed trends using macro-financial structural concepts such as sectoral volatility, reallocation, and hysteresis. This approach is appropriate for the modest number of time points (five annual observations) and for the objective of understanding structural patterns rather than isolating causal effects.

Data sources and variables

GDP share of tourism data come from the Tourism Satellite Account (TSA) for Indonesia that was compiled by Statistics Indonesia (BPS). The TSA enables a common structure to be applied to the measurement of tourism's direct impact on GDP, and thus it can combine the value added created through tourism-related sectors including accommodation, transportation, travel agencies, restaurants & pubs, recreational activities etc. The use of TSA data will ensure that there is consistency in the measurement of tourism GDP across years and compliance with International Statistical Standards.

Key statistics collected from the TSA include the proportion of GDP attributable to tourism expressed as a percentage for each year between 2019-2023. Data from the TSA indicate that in 2019, tourism accounted for approximately 5% of GDP. In contrast, in 2020, tourism accounted for approximately 3.8% of GDP, before slowly increasing throughout the remainder of the study period yet remained below the 2019 levels by 2023.

Annual GDP growth rates for Indonesia have been collected from the World Bank's World Development Indicators database. Annual percentage growth in real GDP, or the annual rate of change in total output in constant prices has been calculated to determine the rate at which total output in constant prices changed between one year and another. As per the data, Indonesia experienced economic growth in 2019, an economic contraction of approximately 2.1% in 2020, and resumed positive economic growth of more than 3% in 2021, and more than 5% in both 2022 and 2023.

The selected study time frame of 2019-2023 allows for the examination of three different periods: the pre-pandemic benchmark in 2019, the acute shock caused by the COVID-19 pandemic in 2020, and the recovery and transition phase from 2021-2023. By dividing the time series in this way, it enables the study to assess how tourism's structural role changed relative to overall GDP during the shock and subsequent recovery

Data handling and analysis

A table of tourism's GDP share, and total GDP growth is prepared for each year in the 2019-2023 period to form the foundation for the descriptive analysis. While the exact figures depend on the official TSA and World Bank releases, the general pattern is clear: a relatively high pre-pandemic tourism share, a deep contraction in 2020, partial recovery in 2021, and continued improvement in 2022 and 2023, combined with a sharp rebound of aggregate GDP growth from 2021 onward.

The analysis proceeds in three steps. First, it describes the trajectory of tourism's GDP share across the five years, highlighting the depth of the contraction and the pace of recovery. Second, it describes the evolution of total GDP growth over the same period, emphasizing the timing and magnitude of the rebound. Third, it compares the two trajectories to identify asymmetries between sectoral and aggregate adjustment.

Result

Table 1: Indonesia GDP growth (annual %) and Tourism GDP share (%) from 2019 to 2023.

Year	Indonesia GDP growth (annual %)	Tourism GDP share (%)
2019	5.02	4.97
2020	-2.07	2.23
2021	3.70	2.30
2022	5.31	3.72
2023	5.05	4.67

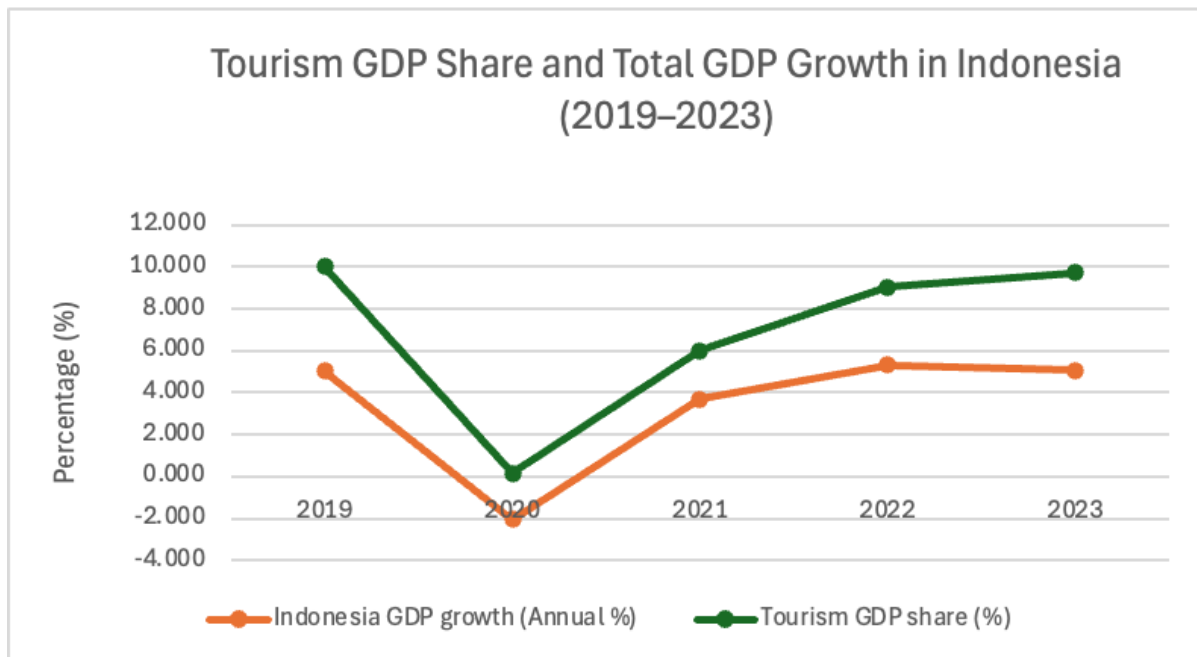


Image 1: Tourism GDP share and Total GDP growth in Indonesia (2019-2023)

The results are presented by examining tourism’s GDP share and total GDP growth for each year from 2019 to 2023 and then comparing their trajectories.

Tourism GDP share (2019–2023)

In 2019, tourism’s direct contribution to GDP in Indonesia was just under 5 percent, according to the Tourism Satellite Account. This figure reflects a relatively strong pre-pandemic position for tourism within the national economy, supported by robust international arrivals and domestic travel activity. The sector had benefited from prior investments in infrastructure and from policy initiatives aimed at developing priority destinations, contributing meaningfully to output and employment.

In 2020, tourism’s GDP share fell sharply, dropping to approximately half its 2019 level as the COVID-19 pandemic triggered border closures, flight cancellations, and restrictions on domestic mobility. The collapse in tourism activity was much more pronounced than the aggregate economic contraction, reflecting the sector’s dependence on physical mobility, discretionary spending, and confidence in health and safety conditions. Many tourism-related businesses either suspended operations or scaled down significantly, and the volume of international visitors declined to a fraction of its pre-pandemic level.

In 2021, tourism’s GDP share increased only marginally from its 2020 trough, despite the return of positive GDP growth at the national level. While domestic tourism began to recover with the easing of some mobility restrictions and the rollout of vaccination programs, international tourism remained subdued, and capacity constraints, financial stress, and lingering uncertainty limited the speed of recovery in tourism value added. As a result, tourism’s contribution to GDP remained well below its 2019 level.

Comparative pattern and asymmetry

The juxtaposition of tourism's GDP share with total GDP growth reveals a pronounced asymmetry between sectoral and aggregate adjustment. While total GDP returned to growth in 2021 and surpassed pre-pandemic growth rates in 2022 and 2023, tourism's GDP share remained substantially below its 2019 level until at least 2022 and only approached but did not exceed its pre-pandemic position in 2023.

This pattern indicates that tourism experienced a deeper collapse and a slower recovery than the economy, consistent with the characterization of tourism as a high-volatility sector. The fact that tourism's GDP share remained below its 2019 level even when aggregate GDP growth had already rebounded suggests the presence of structural lag and possible hysteresis in the sector's recovery. Rather than bounce back in parallel with the rest of the economy, tourism required more time to rebuild capacity, restore confidence, and re-establish its structural role in the economy.

Discussion

Asymmetric collapse and recovery

The results clearly show that tourism's collapse in 2020 was disproportionately severe compared with the aggregate contraction and that its subsequent recovery lagged the rebound in total GDP growth. This asymmetry is consistent with both theoretical expectations and empirical observations from other tourism-dependent economies during the COVID-19 crisis. Tourism demand is highly income-elastic and sensitive to perceived health risks, travel restrictions, and changes in consumer confidence, which implies that shocks such as pandemics can trigger abrupt and large declines in tourism activity.

In Indonesia, mobility restrictions, international border closures, and cautious consumer behavior severely curtailed both inbound and domestic tourism in 2020. While some sectors of the economy, such as manufacturing, agriculture, and essential services, continued to operate albeit under constraints, tourism activities that depend on face-to-face interaction and physical presence were heavily disrupted. This difference in exposure explains why tourism's GDP share fell more dramatically than total GDP during the crisis year.

The slower recovery of tourism's GDP share from 2021 onward also reflects the time required to rebuild capacity, re-hire workers, and restore market connections in a sector dominated by small and medium-sized enterprises. Even as overall economic conditions improved and GDP returned to strong growth, tourism businesses faced financial scars, uncertainty about future demand, and the need to comply with new health and safety protocols. These factors limited the speed at which tourism could regain its former structural position.

Structural lag and sectoral hysteresis

The persistence of a gap between tourism's GDP share in 2019 and its still slightly lower level in 2023 suggests that the shock produced not only temporary disruptions but also lasting structural effects. In macro-structural terms, this can be interpreted as a form of sectoral hysteresis, where the effects of a shock persist even after the underlying cause has receded. Hysteresis in tourism can arise through several channels, including firm exit,

loss of experienced workers, reduced investment, and changes in consumer behavior.

Firm exit during the crisis can permanently reduce capacity in the tourism sector, particularly when financially constrained small and medium-sized enterprises are unable to survive prolonged periods of low demand. Once businesses close, rebuilding capacity requires new investment, regulatory approvals, and the re-establishment of supply chains and marketing networks, all of which take time. If this process is incomplete by the time aggregate GDP has already recovered, the sector's share of GDP will remain below its former level.

Labor market dynamics also contribute to hysteresis. Workers displaced from tourism may transition to other sectors or leave the labor force altogether, especially if they perceive tourism as less secure in the medium term. Attracting these workers back may require improved wage and working conditions or a more stable outlook, which again may not materialize immediately after the macroeconomy recovers.

Changes in demand patterns can further reinforce structural lag. The pandemic accelerated the adoption of digital substitutes for some in-person activities, and while tourism cannot be fully digitized, consumers may permanently adjust their preferences regarding travel frequency, destination choices, or spending patterns. If these changes lead to a more cautious approach to travel or a shift toward shorter or less frequent trips, the long-run growth trajectory of tourism demand may differ from pre-pandemic expectations.

Institutional context and structural constraints

Prior political- economic work on Indonesia's tourism sector points to institutional fragmentation, coordination challenges, and multi-level governance complexities as factors that can hinder the effective implementation of tourism development policies. While the present study does not adopt a political-economy framework, such insights help contextualize why tourism's structural recovery might lag aggregate GDP even when policy initiatives emphasize tourism as a priority sector. Structural indicators such as tourism's GDP share capture realized value added rather than policy ambition, and institutional frictions can delay or dilute the impact of recovery measures on the sector's actual contribution to GDP.

Implications for tourism-led growth strategies

The observed divergence between aggregate GDP growth and tourism's GDP share has important implications for the design and evaluation of tourism-led growth strategies in Indonesia. First, it underscores the need to complement growth-based indicators with structural metrics when assessing recovery and sectoral performance. High GDP growth in the years following a crisis does not guarantee that tourism has regained its pre-shock role, nor that tourism-dependent regions or workers have experienced a proportionate improvement.

Second, the results highlight the importance of building structural resilience in the tourism sector. Reducing vulnerability to shocks requires more than promoting arrivals or expanding capacity; it also entails strengthening financial resilience, diversifying markets, enhancing health and safety preparedness, and improving access to social

protection for tourism workers. Measures that reduce fixed cost burdens, facilitate access to credit, and support digitalization can help tourism enterprises weather downturns and recover more quickly.

Third, the experience of 2019–2023 suggests that tourism-led growth strategies should be integrated into a broader macro-structural framework that recognizes tourism as one component of a diversified economic structure. Overreliance on tourism as a growth engine exposes the economy to sector-specific shocks, while neglecting tourism's structural role may lead to underinvestment in resilience and adaptation. Balancing tourism development with investments in other sectors can help mitigate risk while preserving the benefits of tourism for employment, foreign exchange, and regional development.

Conclusion

This study examined the relationship between tourism's direct contribution to GDP and Indonesia's total GDP growth during the period 2019–2023, using descriptive analysis of official statistics and a macro-financial structural lens. The evidence shows that tourism's GDP share fell sharply in 2020, experiencing a much deeper contraction than aggregate GDP, and then recovered only gradually, remaining slightly below its pre-pandemic level by 2023. In contrast, total GDP growth returned to positive territory in 2021 and exceeded 5 percent in 2022 and 2023, indicating a relatively rapid macroeconomic rebound.

This divergence reveals an asymmetric adjustment process in which tourism, as a high-volatility and contact-intensive sector, suffered a more severe and persistent shock than the broader economy. The persistence of a gap between tourism's GDP share in 2019 and 2023 suggests the presence of structural lag and hysteresis effects, with firm exit, labor reallocation, financial constraints, and shifts in demand contributing to a slower sectoral recovery.

The findings underscore the importance of distinguishing between growth rates and economic structure when evaluating economic performance and recovery strategies. Aggregate GDP growth provides an essential but incomplete picture of post-crisis adjustment, particularly for sectors such as tourism that are highly sensitive to shocks. Structural indicators like tourism's GDP share, along with measures of sectoral volatility and institutional capacity, offer a more nuanced understanding of resilience and vulnerability.

For Indonesia to harness tourism as a sustainable component of its long-term development, policy evaluation must move beyond aggregate growth and focus on strengthening tourism's structural resilience, productivity, and realized contribution to GDP. This includes investments in institutional coordination, financial resilience, health and safety preparedness, and human capital, as well as balanced support for diversification within and beyond the tourism sector.

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