Contribution of Tourism to GDP and Employment in Rural vs. Urban Areas: A Comparative and Econometric Study Between Nepal and Switzerland

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Abstract

Tourism is a globally significant sector fostering economic growth, job creation, and cultural exchange, contributing 10.4% of global GDP and supporting approximately 319 million jobs worldwide in 2019 (World Travel & Tourism Council, 2020). This study compares Nepal's tourism-driven economy, characterized by adventure and cultural tourism, with Switzerland's high-value, sustainable tourism model. By employing econometric analysis, it examines tourism's contributions to GDP and employment, explores economic linkages, and evaluates policy measures for optimizing benefits in each context.

1. Introduction

Tourism is one of the fastest-growing industries globally, fostering economic growth, job creation, and cultural exchange. The sector's ability to drive inclusive development makes it particularly vital for both developing nations like Nepal and developed countries like Switzerland. These nations, though differing significantly in their economic structures and tourism ecosystems, provide valuable case studies for understanding the economic impact of tourism in diverse contexts.

Nepal, with its natural beauty and rich cultural heritage, relies heavily on tourism as a critical source of foreign exchange and rural development. Adventure tourism in the Himalayas and cultural attractions such as Lumbini, the birthplace of Buddha, is central to its appeal. However, challenges such as limited infrastructure, high economic leakage, and political instability hinder the sector’s full potential.

Conversely, Switzerland represents a high-value, mature tourism industry. The Alpine region attracts international tourists for skiing and hiking, while urban centers like Zurich and Geneva cater to luxury travelers and business tourism. Switzerland's investment in infrastructure, sustainable practices, and a focus on high-spending tourists have made it a leader in leveraging tourism for economic stability and growth.

This study uses econometric analysis to quantify tourism’s contribution to GDP in Nepal and Switzerland, examine the relationship between tourism receipts and economic growth, and provide insights into how each country can enhance its tourism strategy. By contrasting these two models, the research offers actionable recommendations for Nepal to emulate Switzerland's success while addressing its unique challenges.

2. Literature Review

2.1 Tourism’s Contribution to GDP and Employment

Tourism’s economic importance stems from its direct contributions to GDP and employment, as well as its ability to stimulate related sectors. According to Gautam (2021), Nepal’s tourism accounted for 6.7% of GDP in 2019, providing $2 billion in revenue and employing 8% of the workforce. However, infrastructural gaps and economic leakages limit the sector’s potential.

In Switzerland, tourism contributed 2.9% to GDP in 2019, generating $21.26 billion in receipts and supporting 4.2% of total employment (OECD, 2022). Switzerland's high-value tourism model emphasizes luxury and sustainability, reflecting a well-established ecosystem.

2.2 Tourism's Contribution to Employment

Tourism plays a critical role in employment generation, supporting direct jobs in hotels, travel agencies, and transportation, as well as indirect jobs in sectors like agriculture, retail, and construction. The employment impact of tourism varies significantly between developing nations like Nepal and developed countries like Switzerland due to differences in infrastructure, market strategies, and workforce capabilities.

Tourism-Driven Employment in Nepal

A. Current Employment Trends

Tourism plays a significant role in Nepal's labor market, accounting for approximately 8% of total employment (Gautam, 2019). The sector's impact is particularly pronounced in rural areas where trekking and cultural tourism dominate the economy. Direct employment includes roles such as trekking guides, porters, hotel staff, and transport operators, especially in popular regions like the Annapurna and Everest circuits. These jobs provide crucial livelihoods for local populations, sustaining entire communities. Additionally, indirect employment is significant, with agricultural workers supplying fresh produce to tourism-based businesses, artisans producing traditional handicrafts and souvenirs, and laborers working on the construction of hotels, lodges, and other tourism-related infrastructure. This indirect employment fosters economic interdependencies that amplify tourism's broader impact on rural and semi-urban economies.

B. Challenges in Employment

Despite its contribution to employment, Nepal's tourism sector faces systemic challenges that hinder its potential to improve livelihoods sustainably. One major issue is the dominance of the informal sector, where a significant portion of jobs lack registration, leading to low wages, job insecurity, and the absence of essential worker benefits like healthcare and pensions. Skill gaps further heighten the problem, as many workers lack specialized training required for higher-paying roles in hospitality, tourism management, or customer service.

Without structured training programs, upward mobility remains limited for workers in this sector. Another key challenge is the seasonal nature of tourism, with heavy reliance on adventure activities like trekking. Employment opportunities decline significantly during the off-season, leaving workers without stable income throughout the year.

Furthermore, Nepal's unstable political environment significantly impacts the tourism sector. Frequent government changes, inconsistent policies, and political unrest have discouraged both domestic and foreign investments in tourism infrastructure and training programs. Policy uncertainty delays the implementation of long-term strategies required to formalize employment, improve worker protections, and diversify tourism offerings. Additionally, political instability can deter international tourists due to safety concerns, directly reducing demand for tourism-related services and jobs. This lack of stability creates a cycle where underfunded tourism initiatives fail to achieve their goals, further hindering employment growth and economic development.

C. Opportunities for Improvement

Nepal has considerable scope to enhance the employment benefits derived from tourism by implementing targeted policies and strategic investments. Skill development programs can bridge existing gaps by establishing vocational training centers focused on hospitality, foreign language proficiency, and sustainable tourism management. Equipping workers with such skills can improve job quality, raise wages, and open pathways for career advancement. Formalizing employment through government incentives, such as tax benefits for businesses that register workers and provide social protections, would ensure job security and access to benefits. Lastly, diversifying tourism offerings beyond trekking is critical. Promoting year-round activities like wellness retreats, cultural festivals, and eco-tourism can stabilize employment opportunities and reduce the reliance on seasonal influxes of tourists. A multi-faceted approach can position Nepal's tourism sector as a sustainable and robust source of employment for both urban and rural populations.

Tourism-Driven Employment in Switzerland

A. Current Employment Trends

In Switzerland, tourism is a key driver of employment, contributing to approximately 4.2% of the total workforce (OECD, 2022). Unlike Nepal, Swiss tourism focuses heavily on

high-value, service-oriented industries, generating both direct and indirect employment across urban centers and alpine regions. Direct employment opportunities are concentrated in sectors such as luxury hotels, fine dining facilities, and high-end ski resorts, which cater to wealthy international tourists. Meanwhile, the tourism ecosystem supports indirect employment in skilled fields like architecture, digital marketing, and environmental conservation. These sectors reflect Switzerland's advanced tourism infrastructure, which demands expertise and sophistication, ensuring the sector's workforce remains dynamic and well-compensated.

B. Advantages of Switzerland's Tourism Employment Model

Switzerland's tourism employment model is characterized by its ability to deliver high job quality, security, and year-round opportunities. The sector's high skill requirements, such as multilingual capabilities and advanced customer service proficiency, result in better-paying jobs with substantial benefits. Most tourism roles in Switzerland are formalized, ensuring workers have access to health insurance, pensions, paid leave, and strong labor protections. Furthermore, Switzerland's diversified tourism offerings, including winter sports, summer hiking, and business travel, provide consistent employment opportunities throughout the year. This minimizes the seasonal vulnerabilities seen in less diversified markets, such as Nepal, and sustains workforce stability across regions.

C. Challenges in Employment

Despite its strengths, Switzerland's tourism sector is not without challenges. Labor shortages remain a significant issue, particularly in rural and alpine regions during peak seasons (2024 Swiss). The demand for skilled labor in hospitality, ski operations, and resort management often exceeds supply, creating operational bottlenecks during high-traffic periods. Additionally, Switzerland's high cost of living and elevated business expenses impose constraints on employment growth within the sector. Small businesses and mid-tier tourism enterprises struggle to compete with larger players, limiting their ability to hire and retain skilled workers. Addressing these challenges is essential to maintaining Switzerland's competitive edge as a premier global tourism destination.

2.3 Comparative Analysis

The comparative analysis between Nepal and Switzerland's tourism-driven employment highlights significant disparities in the quality, quantity, and distribution of jobs.

These differences are shaped by the countries' economic structures, infrastructure, market strategies, and policy environments. This section explores these contrasts in greater depth, emphasizing the implications for each country's tourism sector and workforce development.

A. Employment Quality vs. Quantity

- **Nepal:**
  Nepal's tourism sector supports a larger share of total employment (8% of the workforce) compared to Switzerland. However, the dominance of informal jobs undermines the stability and benefits of tourism-driven employment. Many jobs, such as trekking guides, porters, and hospitality workers, are seasonal, with no access to social security, pensions, or health insurance. Moreover, the lack of training opportunities limits workers' upward mobility, keeping wages low and preventing career advancement.

  - **Implication:** While tourism provides critical livelihood opportunities, particularly in rural areas, Nepal's reliance on low-wage, informal jobs restricts long-term economic stability for its workforce.
- **Switzerland:**
  Although tourism accounts for a smaller proportion of total employment (4.2%), the sector emphasizes high-value, formalized jobs. Positions in luxury hotels, ski resorts, and business tourism typically offer competitive wages, robust benefits, and career progression. The Swiss tourism workforce also benefits from high levels of education and training, with multilingualism and customer service expertise being common requirements.
  - **Implication:** Switzerland's focus on quality over quantity in tourism employment ensures long-term job security and economic resilience for its workforce.

B. Rural vs. Urban Employment Distribution

- **Nepal:**
  In Nepal, the majority of tourism-related jobs are concentrated in rural areas, driven by adventure tourism in regions like Everest, Annapurna, and Langtang. While this creates opportunities in underdeveloped areas, the lack of diversified activities and

infrastructure limits job creation in urban centers like Kathmandu and Pokhara. Urban areas often focus on administrative and logistical roles tied to rural tourism, creating an imbalance in job distribution.

  - **Strengths:** Rural tourism drives economic activity in remote regions, reducing poverty and empowering local communities.
  - **Weaknesses:** Overdependence on rural trekking tourism makes employment highly seasonal, with workers facing prolonged income gaps during off-seasons.

- **Switzerland:**

  Tourism employment is more evenly distributed between urban and rural regions. Alpine destinations like Zermatt and Interlaken provide year-round opportunities in hospitality, outdoor sports, and retail. Urban centers like Zurich and Geneva offer high-value jobs in business and luxury tourism, creating a balanced ecosystem that reduces regional disparities.

  - **Strengths:** Diversification ensures consistent employment across regions and seasons.
  - **Weaknesses:** Rural areas occasionally face labor shortages during peak seasons, particularly in hospitality and ski resort management.

C. Skill Levels and Workforce Development

- **Nepal:**

  Nepal's tourism workforce is characterized by low skill levels, particularly in rural areas. Many workers lack formal training in hospitality, language proficiency, or customer service, which limits their ability to transition into higher-paying roles. The absence of vocational training centers exacerbates this issue, leaving workers dependent on low-wage, labor-intensive jobs such as portering and guiding.

  - **Example:** Middlemen take up the bigger portion of the wage cut while connecting porters to the climbers in different basecamps. Hence, porters on the Everest Base Camp trail earn daily wages that are significantly lower than those of trained guides or hospitality staff in urban hotels.

- **Switzerland:**

  In Switzerland, tourism jobs often require specialized skills, such as culinary expertise, multilingualism, and advanced customer service techniques. The country's robust

vocational training system ensures that workers are equipped to meet these demands, enhancing job quality and productivity. Swiss universities and training centers offer programs in hospitality management, sustainable tourism, and event planning, creating a pipeline of skilled workers.

- **Example:** Graduates from Swiss hospitality schools are sought after worldwide for their expertise, further elevating the global reputation of Switzerland's tourism industry.

D. Impact of Seasonality

- **Nepal:**
  Nepal's tourism employment is highly seasonal, driven by trekking and mountaineering activities during spring and autumn. Workers in rural areas often face unemployment during monsoon and winter months, leading to income instability. Seasonal fluctuations also reduce the incentives for businesses to formalize jobs, perpetuating informal employment practices.
  - **Implication:** Addressing seasonality by diversifying tourism activities (e.g., promoting winter festivals, wellness retreats, or off-season trekking) could stabilize employment and income.
- **Switzerland:**
  Switzerland has successfully mitigated seasonality by diversifying its tourism offerings. While winter months are dominated by skiing and snow sports, summer attracts hikers, bikers, and wellness tourists. Urban areas maintain year-round employment through business tourism and cultural events. This diversification ensures a steady income for workers and minimizes seasonal unemployment.
  - **Implication:** Nepal could learn from Switzerland by developing off-season tourism products to ensure consistent job opportunities.

2.4 Economic Multiplier Effect

The economic multiplier effect refers to the phenomenon where an initial injection of money into an economy leads to a more significant overall increase in economic activity than the original investment (Hayes, 2024). In tourism, this effect occurs as spending by tourists stimulates businesses directly involved, such as hotels, restaurants, and tour operators, while simultaneously triggering a ripple effect that benefits other sectors like agriculture,

manufacturing, construction, and local services. The broader implications of this multiplier effect are profound; it facilitates job creation, boosts income levels, and fosters economic diversification, contributing to the development of both urban centers and rural areas.

Switzerland's Multiplier Effect

Switzerland provides a clear and compelling example of how a strong tourism sector can generate a strong multiplier effect. The tourism multiplier in Switzerland is estimated to range between 1.8 and 2.5 CHF, meaning that for every franc spent by tourists, an additional 0.8 to 1.5 CHF is generated within the economy. This high multiplier is the result of a well-integrated tourism system and efficient economic linkages that ensure revenues circulate within local markets.

Tourist spending in Switzerland extends far beyond direct expenditures on services like accommodation, transportation, dining, and recreational activities. For instance, a tourist visiting the Swiss Alps spends money at a luxury hotel, which uses that revenue to purchase locally sourced food from Swiss farmers, hire local staff, and contract local construction companies for facility improvements. The employees in these businesses then use their wages for housing, education, and daily consumption, further stimulating the economy. This repeated cycle of spending boosts the economic impact of the initial tourist expenditure.

Several factors support Switzerland's strong multiplier effect.

1. **Local Supply Chains**: A significant portion of goods and services consumed by tourists are locally produced or sourced. This ensures that the revenues generated remain within the national economy rather than flowing abroad.
2. **Efficient Infrastructure**: Switzerland's advanced transportation networks, including its world-renowned railway systems and seamless air connectivity, facilitate access for tourists while reducing operational costs for businesses. This connectivity strengthens economic linkages between sectors.
3. **High-Value Tourism:** Switzerland attracts affluent tourists who spend significantly more per visit. The availability of premium outdoor activities, luxury accommodations, and fine dining establishments encourages high-value spending, boosting GDP and generating employment.
4. **Stable Government:** Switzerland's political stability fosters an environment of trust, encouraging both domestic and foreign investments in the tourism sector. A reliable

governance system ensures consistent policies, long-term planning, and efficient allocation of resources to enhance tourism infrastructure and services. This stability attracts high-value tourists and enables businesses to thrive without disruptions caused by political uncertainty.

Switzerland's ability to maximize its multiplier effect serves as a model for other countries seeking to leverage tourism for economic growth.

Nepal's Multiplier Effect

Nepal's tourism sector also experiences a multiplier effect, though it is comparatively weaker than that of Switzerland, with an estimated range of 1.5 to 2 NPR. Tourism remains a critical source of income for Nepal, especially in rural regions heavily dependent on adventure tourism, such as trekking in the Himalayas, cultural heritage tours, and wildlife excursions in national parks. However, several challenges hinder the full realization of the multiplier effect, limiting its broader economic benefits.

One of the most significant barriers is economic leakage, where a considerable portion of tourism revenue flows out of the country instead of circulating within the local economy (Gautam, 2021). This occurs primarily due to reliance on imported goods and foreign ownership of major tourism businesses, such as hotels and tour operators. For example, high-end hotels often import supplies, food, and amenities from abroad rather than sourcing locally, reducing the economic benefits for domestic producers.

Nepal's limited infrastructure further restricts the multiplier effect. Poor road networks and inadequate air connectivity to remote tourist destinations make it challenging to attract high-spending tourists. Regions with significant tourism potential remain underdeveloped, missing opportunities for sustained revenue generation. Additionally, Nepal's tourism industry suffers from seasonality, as trekking and adventure activities are highly dependent on specific weather conditions. This seasonal nature creates fluctuating revenues, leaving workers and businesses with reduced incomes during the off-peak months.

An often-overlooked challenge is political instability, which has historically discouraged long-term investments in Nepal's tourism sector. Unstable governments create uncertainty in policy implementation and deter private and international investments that could otherwise strengthen infrastructure, support local businesses, and enhance tourism offerings.

To enhance Nepal's multiplier effect, strategic reforms and investments are necessary. Reducing economic leakages should be prioritized by promoting local entrepreneurship and encouraging businesses to source goods and services domestically. The development of robust infrastructure, including improved roads and airports, would make remote areas more accessible, attracting tourists year-round and generating greater economic benefits for rural communities. Diversifying tourism offerings to include cultural festivals, agro-tourism, and eco-tourism can also help reduce reliance on seasonal trekking. These initiatives, combined with policies aimed at improving political stability and fostering a conducive business environment, can amplify the economic impact of tourism in Nepal.

In summary, while both Switzerland and Nepal benefit from the multiplier effect of tourism, Switzerland's well-established infrastructure, local supply chains, and high-value offerings enable a much stronger impact. In contrast, Nepal must address systemic issues like economic leakages, infrastructure deficits, and seasonal dependency to fully harness tourism's economic potential. By adopting targeted reforms, Nepal can significantly boost its tourism sector's contribution to economic development and employment across the country.

2.5 Comparative Framework

The comparative analysis of Switzerland and Nepal's tourism sectors highlights significant contrasts in their approaches, strategies, and outcomes. Using *Porter's Competitive Advantage Theory* (Competitive Advantage 2024), which emphasizes innovation, quality, and strategic investments, this section delves into Switzerland's tourism success as a benchmark and identifies actionable strategies for Nepal to unlock its potential.

Switzerland as a Benchmark

Switzerland exemplifies how a country can leverage its natural resources, infrastructure, and strategic policies to develop a high-value, sustainable tourism industry. The country's success stems from its early investments, effective branding, and continuous innovation. Some key elements of Switzerland's benchmark include:

A. First-Mover Advantage

Switzerland was one of the earliest adopters of organized tourism in Europe. Its development of ski resorts, wellness retreats, and luxury hotels in the 19th century established its reputation as a premier destination for leisure and health tourism.

- *Example:* Zermatt, a famous Alpine destination, has been a hub for international skiing since the early 20th century. The long-standing infrastructure investments in cable cars, resorts, and railways have made it accessible year-round, attracting both winter and summer tourists.

B. Infrastructure Excellence

Switzerland's transportation and accommodation infrastructure is unparalleled, allowing seamless connectivity between urban centers and remote Alpine regions.

- *Integrated Transport Network:* The Swiss Travel System connects trains, buses, and ferries, enabling tourists to reach even the most isolated villages with ease. High-speed rail links between major cities ensure efficient movement for business and leisure travelers alike.
- *Accommodation Standards:* Swiss hotels consistently rank among the best in the world, offering high-quality service, sustainable practices, and modern amenities.

C. High-Value Tourism

Switzerland focuses on attracting affluent tourists who spend more per visit, contributing disproportionately to the economy.

- *Luxury Experiences:* Cities like Zurich and Geneva cater to high-net-worth individuals with luxury shopping, fine dining, and exclusive cultural events.
- *Niche Markets:* Beyond skiing, Switzerland has diversified into wellness tourism, agri-tourism, and eco-tourism, capturing specialized market segments.

D. Sustainability as a Core Value

Sustainability is central to Switzerland's tourism strategy, ensuring environmental preservation while maintaining high economic returns.

- *Sustainable Initiative:* This program promotes eco-friendly practices, such as renewable energy in hotels and waste management systems in resorts.

- *Protected Areas:* National parks and biospheres are managed to balance tourism with conservation, ensuring the natural beauty that attracts tourists remains intact.

E. Branding and Digital Innovation

Switzerland's global branding as a premium tourism destination is reinforced by targeted marketing and digital innovation.

- *Brand Switzerland:* The iconic Swiss Alps, alongside the reputation for quality and precision, position the country as a must-visit destination.
- *Digital Tools:* Apps like Swiss Travel Guide and personalized digital itineraries enhance the tourist experience, making trip planning intuitive and engaging.

Switzerland's approach demonstrates how aligning infrastructure, sustainability, and high-value offerings creates a resilient tourism model that benefits both urban and rural areas.

Nepal's Potential

Nepal, endowed with breathtaking landscapes and rich cultural heritage, has enormous potential to become a global leader in adventure and cultural tourism. However, its tourism sector remains underdeveloped due to infrastructural deficits, policy inefficiencies, and reliance on foreign operators. Unlocking Nepal's potential requires strategic investments, community involvement, and sustainable practices.

A. Untapped Adventure Tourism

Nepal is home to eight of the world's ten highest peaks, including Mount Everest, making it an unrivaled destination for mountaineering, trekking, and adventure sports.

- *Current State:* Popular trekking routes like the Annapurna Circuit and Everest Base Camp attract thousands of international tourists annually, but overcrowding and lack of infrastructure reduce their economic impact.
- *Opportunity:* By diversifying offerings to include lesser-known trails and activities like mountain biking, paragliding, and canyoning, Nepal can distribute tourist traffic and boost local economies.

B. Rich Cultural and Religious Heritage

Nepal is a melting pot of cultures, traditions, and religions, offering unique experiences to international travelers.

- *Cultural Tourism:* Historical sites like Bhaktapur, Patan, and Kathmandu Durbar Squares showcase exquisite architecture and centuries-old heritage.
- *Spiritual Tourism:* Lumbini, the birthplace of Buddha, attracts pilgrims and spiritual seekers worldwide. Developing meditation retreats and wellness centers in these areas could significantly enhance their appeal.

C. Community-Based Tourism

Empowering local communities through tourism can address economic leakages and foster sustainable development.

- *Current Challenges:* A significant portion of Nepal's tourism revenue flows to foreign-owned enterprises, leaving local communities with minimal benefits.
- *Proposed Solution:* Community-based tourism models, such as homestays and locally owned lodges, can ensure that tourism revenue remains within the community. These models also offer authentic cultural experiences, appealing to eco-conscious travelers.

D. Infrastructure Development

Nepal's weak infrastructure is a critical barrier to realizing its tourism potential.

- *Transportation:* Poor road networks and limited air connectivity to remote regions increase travel costs and deter high-spending tourists. Investments in airports (e.g., Gautam Buddha International Airport) and highways can significantly improve accessibility.
- *Digital Infrastructure:* Enhancing internet connectivity in rural areas would allow tourism operators to market their services globally and enable tourists to navigate remote regions seamlessly.

E. Sustainability Practices

Nepal's natural beauty is one of its greatest assets, but it faces threats from over-tourism and environmental degradation.

- *Eco-Tourism Initiatives:* Promoting eco-friendly accommodations, renewable energy, and waste management systems in tourist hotspots can help preserve Nepal's natural and cultural heritage.
- *Protected Areas:* Effective management of national parks and conservation areas, such as Chitwan and Sagarmatha, is essential to balance ecological preservation with tourism development.

F. Targeted Marketing and Branding

Nepal's global visibility as a tourism destination is limited compared to other South Asian countries like India and Bhutan.

- *Digital Campaigns:* Launching campaigns showcasing Nepal's adventure and cultural tourism potential can attract high-spending markets in Europe, North America, and East Asia.
- *Collaborations:* Partnering with international influencers and travel agencies to promote Nepal as a premium destination can enhance its global image.

Nepal's Strategic Path Forward

Nepal's strategic path forward requires a comprehensive approach that builds on its unique strengths while addressing systemic challenges. By drawing lessons from Switzerland's tourism success, Nepal can implement targeted initiatives to foster sustainable and inclusive growth in its tourism sector.

Prioritizing infrastructure is the foundational step for Nepal to unlock the economic potential of tourism. Investments in accessible roads, airports, and digital connectivity are critical to improving accessibility, particularly in remote rural areas that house Nepal's iconic trekking routes and cultural landmarks. Enhanced infrastructure would reduce travel time, improve tourist satisfaction, and enable local businesses to cater more effectively to visitors. Airports with better facilities and connectivity can attract international tourists, while improved digital infrastructure ensures seamless communication, promoting Nepal's tourism offerings globally.

Promoting local entrepreneurship can maximize economic benefits for communities by reducing economic leakage and increasing local participation. Encouraging local ownership of

hotels, restaurants, and tour services would ensure that a larger share of tourism revenue remains within Nepal's economy. Government policies, such as low-interest loans, training programs, and incentives for local businesses, can foster entrepreneurship. Additionally, locally-owned businesses not only generate employment but also promote authentic cultural experiences that attract discerning travelers seeking immersive tourism opportunities.

Furthermore, to ensure long-term viability, adopting sustainability models is critical. Nepal must implement policies that protect its natural and cultural heritage, which serve as the backbone of its tourism appeal. Regulations on waste management, eco-friendly accommodations, and responsible trekking practices can minimize environmental degradation in sensitive areas like the Himalayas. Promoting sustainable tourism ensures that economic growth does not come at the cost of environmental damage or cultural erosion, allowing future generations to benefit from tourism.

In addition to that developing branding strategies like Visit Nepal 2020 (Visit Nepal 2020, 2023) is another critical step in elevating Nepal's global tourism profile. Nepal has a unique value proposition as a destination for adventure tourism, spiritual journeys, and rich cultural experiences. Through targeted international marketing campaigns, Nepal can position itself as a premier destination for trekking, eco-tourism, and cultural exploration. Collaborations with influencers, digital media, and global tourism fairs can strengthen Nepal's brand and attract a diverse range of visitors.

Nepal's potential lies in integrating these strategies into a cohesive tourism policy that balances rapid growth with sustainability and inclusivity. By learning from Switzerland's success and addressing its own challenges, Nepal can create a tourism sector that drives economic development, empowers local communities, and preserves its natural and cultural treasures for the future.

3. Methodology

3.1 Research Design

This study uses a fixed-effects panel regression model to analyze tourism's GDP contribution in Nepal and Switzerland from 2000 to 2019. The fixed effects approach controls for unobservable, time-invariant factors unique to each country (e.g., cultural or geographic characteristics).

Data sources include national tourism reports and OECD statistics. The model evaluates the relationship between tourism receipts, employment, and infrastructure investment on GDP contribution.

3.2 Data Collection

Nepal:

- **Tourism Receipts:** Extracted from Table 7.2 (Foreign Exchange Earnings) in the Nepal Tourism Statistics Report 2022.
- **GDP Contribution:** Derived from annual percentages of GDP contributed by tourism.

Switzerland:

- **Tourism Receipts:** Based on international receipts provided in the Switzerland OECD Tourism Trends and Policies report (2022).
- **GDP Contribution:** Percentages of GNP attributed to tourism from the same report.

3.3 Econometric Model

Dependent Variable ($GDP\ Contribution_{it}$) = Percentage of GDP contributed by tourists
Independent Variable ($Tourism\ Receipts_{it}$) = Total International Receipts from Tourism
Data Range = 2000 - 2019, i,e., 20 years

Regression Model 1: **Baseline Model**

$$GDP\ Contribution_{it} = \alpha + \beta\ (Tourism\ Receipts_{it}) + \mu_i + \epsilon_{it}$$

Where, $GDP\ Contribution_{it}$ = Share or GDP (or GNP) from tourism in country *i* at time *t*, $Tourism\ Receipts_{it}$ = Total receipts from international tourism in USD, β = Coefficient indicating the marginal effect of tourism receipts on GDP contribution, μ_i = Country-specific fixed effect, and ϵ_{it} = Error term.

Regression Model 2: Tourism Receipts with Employment Contribution

Regression model 2 incorporates employment in tourism as a variable, emphasizing the role of job creation in GDP contributions.

$$GDP\ Contribution_{it} = \alpha + \beta_1\,(Tourism\ Receipts_{it}) + \beta_2\,(Employment_{it}) + \mu_i + \epsilon_{it}$$

Where, $Employment_{it}$ = Percentage of total national employment attributed to tourism.

4. Results

This section analyzes the results of the regression models, providing detailed insights into the relationship between tourism receipts, employment contribution, and GDP contribution in Nepal and Switzerland. It also examines country-specific fixed effects, model fit, and implications for Nepal and Switzerland. The findings are contextualized in terms of their implications for tourism policy and economic development, focusing on differences between the two countries.

Model 1: Baseline Regression (GDP Contribution vs. Tourism Receipts) '*Check results from **Table 1** in Appendix'*

The baseline model assesses the direct economic impact of tourism receipts on GDP contribution, effectively isolating the influence of tourism receipts/revenue. The results indicate a significant and positive relationship between these two variables. Specifically, the coefficient for tourism receipts (β = 0.6425, p-value = 1.945e-06) demonstrates that a 1-unit increase in tourism receipts (measured in billions of USD) leads to an average increase of 0.6425 percentage points in GDP contribution. The R-squared value of 0.4621 suggests that approximately 46.2% of the variation in GDP contribution can be explained by tourism receipts alone. While this is substantial, the model indicates that other factors such as infrastructure quality, political stability, and diversification within tourism services may also influence GDP contribution.

An analysis of the residuals reveals unexplained variations, pointing to the presence of omitted variables such as tourist spending patterns, economic leakages, or varying levels of infrastructure development. Fixed-effect analysis provides further insights into country-specific dynamics. Nepal's fixed effect (-0.2023) highlights inefficiencies in translating tourism revenue into GDP growth, which could be attributed to challenges like economic

leakages and low per capita tourist spending. In contrast, Switzerland's fixed effect (5.7325) reflects its superior ability to generate economic value from tourism. This advantage stems from Switzerland's high-value tourism industry, efficient infrastructure, and strong intersectoral economic linkages, which amplify the multiplier effect of tourism revenues.

Model 2: Extended Regression (GDP Contribution vs. Tourism Receipts and Employment Contribution) '*Check results from **Table 2** in Appendix'*

The extended model introduces employment contribution as an additional independent variable to evaluate its role alongside tourism receipts in influencing GDP contribution. The results show that the coefficient for tourism receipts ($\beta_1 = 0.6422$, p-value = 3.94e-06) remains consistent with the baseline model, confirming that tourism receipts are a robust and significant predictor of GDP contribution. However, the coefficient for employment contribution ($\beta_2 = -0.0121$, p-value = 0.9902) is statistically insignificant, indicating that employment contribution does not independently affect GDP contribution.

The R-squared value remains unchanged at 0.4621, suggesting that adding employment contribution does not improve the model's explanatory power. This could imply that employment effects are already embedded within the tourism receipts variable or that workforce inefficiencies limit the economic benefits of employment growth in the tourism sector. The residual analysis mirrors the patterns observed in Model 1, indicating that employment contribution does not address the unexplained variance in GDP contribution.

Country-level fixed effects remain consistent across models. Nepal's fixed effect improves slightly to 0.2323, but inefficiencies persist, highlighting structural challenges in converting tourism activity into substantial economic gains. Switzerland's fixed effect increases to 6.5205, reinforcing its comparative advantage in leveraging tourism for economic growth.

Model Comparison and pF-Test '*Check results from **Table 3** in Appendix'*

A pF-test was conducted to determine whether adding employment contribution significantly improves the fit of the baseline model. The results (F = 0.000153, p-value = 0.9902) confirm that the extended model does not provide a statistically significant

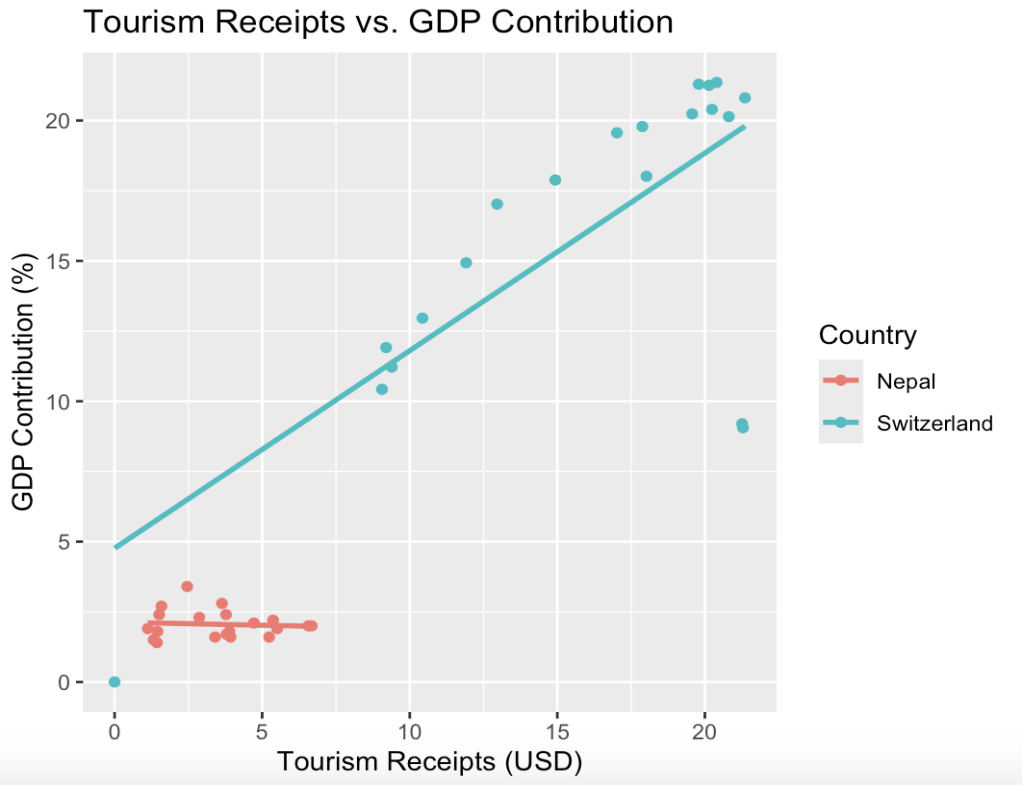
improvement over the baseline model. This outcome reinforces the dominance of tourism receipts as the primary driver of GDP contribution and underscores the limited role of employment contribution in explaining variations in economic outcomes.

In summary, while tourism receipts are a key determinant of GDP contribution, inefficiencies and structural limitations particularly in Nepal hamper the sector's full economic potential. Conversely, Switzerland's success highlights the importance of high-value tourism, efficient infrastructure, and strong economic linkages in maximizing tourism's GDP impact.

5. Visualization and Trends

Scatterplot: Tourism Receipts vs. GDP Contribution

Table 4



The scatterplot with regression lines for Nepal and Switzerland illustrates:

- **Switzerland:** A steep positive slope, reflecting a strong relationship between tourism receipts and GDP contribution. High spending per tourist and a well-developed tourism ecosystem amplify the impact of receipts.

- **Nepal:** A flatter slope, indicating that while tourism receipts contribute to GDP, the effect is weaker due to inefficiencies, lower spending per tourist, and limited linkages to other sectors.

Fixed Effects Visualization

Table 5

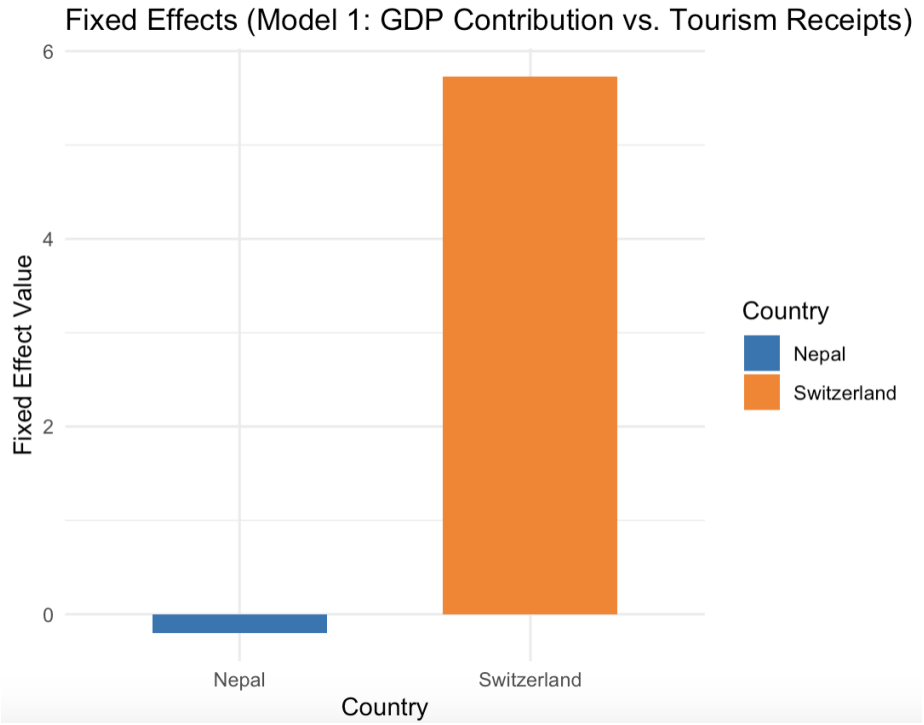
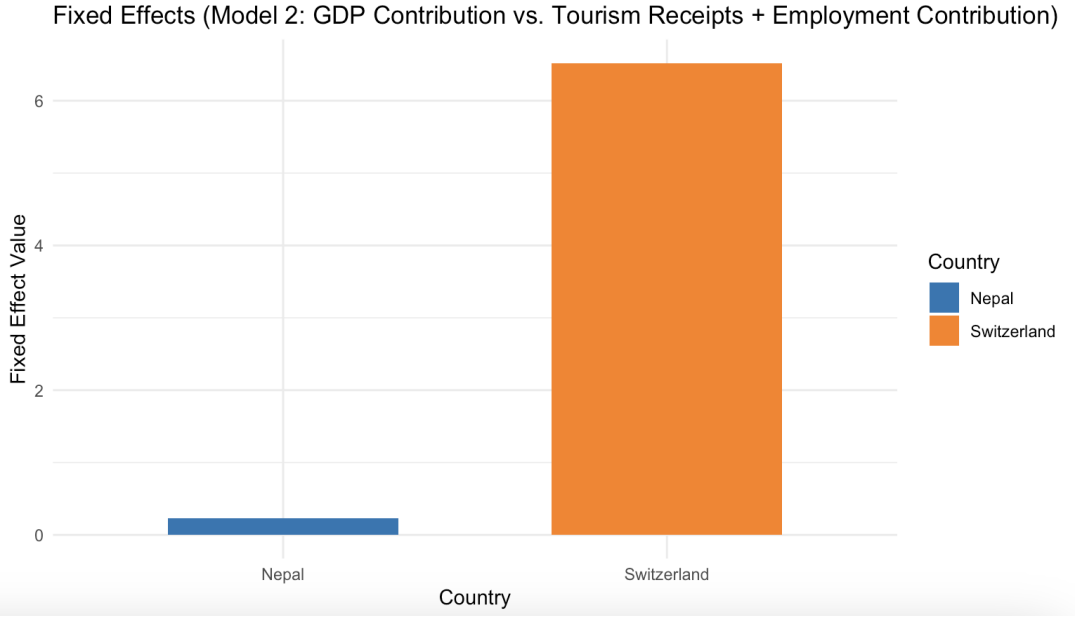


Table 6



Bar charts of fixed effects reveal:

- **Switzerland:** A consistently high baseline contribution to GDP, reflecting structural advantages like luxury tourism and sustainability policies.
- **Nepal:** A significantly lower baseline contribution, underscoring the need for systemic improvements in infrastructure and value retention.

6. Detailed Interpretation of Findings

6.1. Role of Tourism Receipts

Tourism receipts emerge as the primary driver of GDP contribution across both models, highlighting their critical importance for economic growth. This emphasizes that increasing tourism revenue should remain a central policy objective for countries aiming to maximize economic benefits from the tourism sector. However, significant differences exist in how effectively countries translate tourism receipts into GDP gains.

In Switzerland, higher GDP contributions per unit of tourism receipts can be attributed to its high-value offerings, efficient management, and minimal economic leakages. Switzerland capitalizes on luxury tourism, eco-tourism, and adventure tourism to attract high-spending tourists. Additionally, well-developed infrastructure and streamlined management practices enhance the economic multiplier effect, ensuring that most of the tourism revenue contributes directly to the domestic economy.

By contrast, Nepal faces several challenges that limit the impact of tourism receipts on GDP. Factors such as low tourist spending per capita, dependence on foreign tour operators, and underdeveloped infrastructure significantly reduce Nepal's ability to retain and amplify the economic benefits of tourism. Economic leakages occur when tourism revenue flows out of the country, particularly due to reliance on imported goods and foreign-owned businesses that dominate the tourism sector. Addressing these challenges requires policies aimed at increasing domestic ownership, improving infrastructure, and encouraging higher-value tourism activities.

6.2. Role of Employment Contribution

Employment contribution, in its current form, exhibits a limited direct impact on GDP contribution within the analyzed models. This finding suggests that tourism-driven employment may not independently drive economic growth, with possible reasons differing by country.

In Nepal, a significant portion of tourism-related employment is informal and seasonal, which dilutes its overall economic impact. Informal jobs often involve low wages and limited productivity, reducing their contribution to GDP. Furthermore, the seasonality of tourism in Nepal creates employment instability, preventing consistent economic gains from tourism-related jobs. To address this, Nepal could focus on formalizing employment structures, improving workforce skills, and promoting year-round tourism opportunities.

In Switzerland, while tourism employment is significant, the economic impact of these jobs may already be optimized. The sector benefits from high productivity, well-trained personnel, and competitive wages, which limit the scope for additional GDP contributions. Switzerland's strong economic linkages and diversified job opportunities mean that the marginal gains from further employment growth in tourism are relatively small.

6.3. Fixed Effects Analysis

The fixed effects analysis sheds light on the structural differences between Switzerland and Nepal, revealing both strengths and challenges that influence the tourism sector's economic impact.

Switzerland's strengths lie in its ability to provide diversified tourism offerings across multiple segments, including luxury tourism, adventure tourism, and eco-tourism. Coupled with advanced infrastructure and seamless connectivity, Switzerland attracts high-spending tourists who contribute significantly to GDP. The country's strong domestic value chain minimizes economic leakages, ensuring that most of the tourism revenue supports local businesses and the broader economy. These factors collectively create stronger GDP linkages and enhance Switzerland's comparative advantage in tourism.

Conversely, Nepal's tourism sector faces systemic challenges that constrain its economic impact. The country remains heavily dependent on low-value adventure tourism, which limits opportunities for higher revenue generation. Furthermore, underdeveloped infrastructure, such as inadequate road networks and airports, hampers accessibility to tourist destinations. Nepal also struggles with economic leakages, driven by reliance on imported goods, foreign operators, and limited domestic production of tourism-related services. To address these challenges, Nepal must focus on developing high-end tourism offerings, enhancing infrastructure, and promoting local ownership to retain more economic benefits within the country.

7. Discussion

Implications for Nepal:

A. Infrastructure Investments:

Nepal's tourism potential is often hindered by inadequate infrastructure, particularly in transportation and accommodation. By prioritizing investments in these areas, Nepal can enhance the accessibility and overall appeal of its tourist destinations. Improved infrastructure can also reduce travel times and costs for tourists, making it a more attractive destination. For example, upgrading airports, roads, and sustainable accommodation options can directly contribute to higher tourist satisfaction and repeat visits.

B. Policy Stability and Governance:

Nepal's unstable political environment poses a significant challenge to the consistent growth of the tourism sector. Frequent policy changes and shifts in government priorities create uncertainty, making it difficult to implement long-term strategies and investments. For instance, inconsistencies in tax policies, tourism regulations, and infrastructure development plans can deter both domestic and foreign investors. Ensuring policy stability, irrespective of political changes, and fostering a collaborative approach between government and private stakeholders are essential for realizing the full potential of Nepal's tourism industry.

C. Local Value Retention:

A significant challenge in Nepal's tourism sector is the leakage of revenue to foreign operators and suppliers. Encouraging local entrepreneurship—such as locally-owned hotels, tour operators, and restaurants—can ensure that a greater share of tourism revenue remains within the local economy. Additionally, supporting community-based tourism initiatives can create employment opportunities, preserve cultural heritage, and empower local communities to directly benefit from tourism's growth..

D. High-Value Tourism:

Nepal's natural beauty and cultural heritage offer immense opportunities to diversify its tourism offerings. Shifting focus from traditional budget tourism to high-value segments, such as eco-tourism and wellness tourism, could significantly increase spending per tourist. These segments not only attract a more affluent audience but also align with global trends emphasizing sustainability and experiential travel. Nepal could leverage its rich biodiversity, spiritual landmarks, and pristine landscapes to build a brand that appeals to these markets.

Theoretical Contributions:

This study contributes to the broader literature on tourism economics by reaffirming the significant role of tourism receipts in driving economic growth. However, it challenges the assumption that tourism's employment contributions directly translate to GDP growth. Instead, the findings highlight that the quality of employment and local retention of economic benefits may play a more critical role than sheer employment numbers. These insights emphasize the importance of considering structural and contextual factors in assessing tourism's impact on economic development.

8. Limitations and Future Research:

A. Data Limitations:

The current study is restricted to a comparative analysis of Nepal and Switzerland, which represent two vastly different contexts. While this contrast yields valuable insights, future research could expand the scope to include a broader set of countries or regions. A multi-country analysis could help identify global patterns and contextual nuances in tourism's contribution to GDP and employment.

B. Omitted Variables:

While this study focused on tourism receipts and employment as key drivers, other critical factors—such as infrastructure quality, policy effectiveness, and the extent of community involvement in tourism—may also influence GDP contributions. Future studies could incorporate these variables to provide a more holistic understanding of tourism's economic impact. Additionally, longitudinal studies tracking changes over

time would be valuable in assessing the dynamic relationship between tourism and economic growth.

9. Policy Recommendations for Nepal

A. Infrastructure Development:

- Prioritize road and airport upgrades to improve access to remote destinations.
- Invest in sustainable energy solutions for tourism facilities to enhance eco-tourism appeal.

B. Local Empowerment:

- Provide training programs for local entrepreneurs to develop tourism-related businesses and support cooperatives in rural areas to manage community-based tourism projects.
- Promote community-based tourism to retain revenue locally. For example, the Ghalegaun homestay initiative in Nepal has successfully involved local communities in tourism activities, providing direct economic benefits while preserving cultural heritage.

C. Digital Promotion and Innovation:

- Launch a digital marketing campaign targeting high-income markets in Europe and North America.
- Develop mobile apps and websites to simplify trip planning and highlight unique cultural experiences.

10. Conclusion

This paper explored the critical role of tourism in driving economic growth, with a particular focus on the comparison between Nepal and Switzerland. Through regression analysis, it was found that tourism receipts are the primary driver of GDP contribution, significantly influencing the economic landscape of both nations. While Switzerland benefits from high-value tourism, sophisticated infrastructure, and efficient economic linkages, Nepal faces several challenges, including low tourist spending, underdeveloped infrastructure, and economic leakages due to foreign ownership and reliance on imported goods.

Additionally, while employment contribution did not show a significant independent impact on GDP, it remains an important aspect of the broader tourism ecosystem, particularly in countries like Nepal, where informal and seasonal employment limit the economic benefits of tourism-driven jobs. The fixed effects analysis further highlighted structural differences

between the two countries, with Switzerland's diversified tourism offerings and Nepal's dependence on low-value adventure tourism affecting their respective abilities to translate tourism revenue into GDP growth.

In conclusion, Nepal has significant potential to unlock the full economic benefits of its tourism sector by addressing its infrastructure challenges, promoting higher-value tourism, and reducing economic leakages. Drawing on Switzerland's success, Nepal can adopt a more integrated approach to tourism development, focusing on sustainability, local entrepreneurship, and the creation of high-value offerings. By implementing these strategies, Nepal can enhance the economic contributions of tourism, ensuring long-term, sustainable growth in the sector and broader national economy.

11. Appendix

Table 1 : Baseline Regression Model

```
> summary(model1)
Oneway (individual) effect Within Model

Call:
plm(formula = GDP_Contribution ~ Tourism_Receipts, data = pdata,
    model = "within")

Balanced Panel: n = 2, T = 20, N = 40

Residuals:
     Min.   1st Qu.    Median   3rd Qu.      Max.
-10.35424  -0.72337   0.67248   1.71671   2.96315

Coefficients:
                 Estimate Std. Error t-value  Pr(>|t|)
Tourism_Receipts  0.64254    0.11398  5.6374 1.945e-06 ***
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Total Sum of Squares:    633.54
Residual Sum of Squares: 340.81
R-Squared:      0.46206
Adj. R-Squared: 0.43298
F-statistic: 31.7807 on 1 and 37 DF, p-value: 1.9453e-06
```

Table 2: Extended Regression Model

```
> summary(model2)
Oneway (individual) effect Within Model

Call:
plm(formula = GDP_Contribution ~ Tourism_Receipts + Employment_Contribution,
    data = pdata, model = "within")

Balanced Panel: n = 2, T = 20, N = 40

Residuals:
     Min.   1st Qu.    Median   3rd Qu.      Max.
-10.34915  -0.72946   0.67366   1.71382   2.95857

Coefficients:
                         Estimate Std. Error t-value Pr(>|t|)
Tourism_Receipts         0.642240   0.118139  5.4363 3.94e-06 ***
Employment_Contribution -0.012055   0.973815 -0.0124   0.9902
---
Signif. codes:  0 ‘***’ 0.001 ‘**’ 0.01 ‘*’ 0.05 ‘.’ 0.1 ‘ ’ 1

Total Sum of Squares:    633.54
Residual Sum of Squares: 340.81
R-Squared:      0.46206
Adj. R-Squared: 0.41723
F-statistic: 15.461 on 2 and 36 DF, p-value: 1.423e-05
```

Table 3 : Model Comparison and pFtest

```
> fixef(model1)
      Nepal Switzerland
   -0.20229     5.73247
> fixef(model2)
      Nepal Switzerland
    0.23229     6.52048
> pFtest(model2, model1)

        F test for individual effects

data:  GDP_Contribution ~ Tourism_Receipts + Employment_Contribution
F = 0.00015324, df1 = 1, df2 = 36, p-value = 0.9902
alternative hypothesis: significant effects
```

References

Cárdenas-García, P. J., Brida, J. G., & Segarra, V. (2024, February 24). *Modeling the link between tourism and economic development: Evidence from homogeneous panels of countries*. Humanities and Social Science Communications. https://www.nature.com/articles/s41599-024-02826-8

Davis, E. P. (1968, December 1). *Potentials for Tourism in Developing Countries*. IMF eLibrary. https://www.elibrary.imf.org/view/journals/022/0005/004/article-A007-en.xml

Development and Importance of Tourism for Switzerland. Worlddata.info. (2024). https://www.worlddata.info/europe/switzerland/tourism.php

Gautam, B. P. (2019). *Tourism and Economic Growth in Nepal*. Economic Review. https://www.nrb.org.np/contents/uploads/2019/12/NRB_Economic_Review-Vol_23-2_October_20112_Tourism_and_Economic_Growth_in_NepalBishnu-Prasad-Gautam-Ph.D..pdf

Gautam, B. P. (2021). *Economic Impact of Tourism Finance in Nepal*. Economic Review. https://www.nrb.org.np/contents/uploads/2021/09/vol20_art5.pdf

GlobalData. (2024a, March 22). *Sustainable Tourism in Switzerland*. Market Research. https://www.marketresearch.com/GlobalData-v3648/Sustainable-Tourism-Switzerland-37086480/

Hayes, A. (2024). *Multiplier: What it means in finance and Economics*. Investopedia. https://www.investopedia.com/terms/m/multiplier.asp#:~:text=In%20macroeconomics%2C%20the%20multiplier%20effect,the%20marginal%20propensity%20to%20consume.

K.C., A. (n.d.). *Ecotourism in Nepal*. The GAZE Journal of Tourism and Hospitality. https://www.researchgate.net/publication/317289872_Ecotourism_in_Nepal

Leimgruber, W. (2021, December 3). *Tourism in Switzerland – how can the future be?*. Research in Globalization. https://pmc.ncbi.nlm.nih.gov/articles/PMC8724519/

Manzoor, F., Wei, L., Asif, M., Haq, M. Z. ul, & Rehman, H. ur. (2019, October 8). *The Contribution of Sustainable Tourism to Economic Growth and Employment in Pakistan*. International

journal of environmental research and public health. https://pmc.ncbi.nlm.nih.gov/articles/PMC6801594/

Mordor Intelligence Inc. (2024b, February 17). *Hospitality Industry In Switzerland - Market Share Analysis, Industry Trends & Statistics, Growth Forecasts 2020 - 2029*. Market Research. https://www.marketresearch.com/Mordor-Intelligence-LLP-v4018/Hospitality-Switzerland-Share-Trends-Statistics-36212522/

Nepal Everest Base Camp Trekking Company. (2023, July 24). *Visit nepal 2020: Nepal tourism year 2020: What to expect from visit Nepal 2020*. https://www.nepaleverestbasecamp.com/blog/visit-nepal-2020-nepal-tourism-year-2020-what-to-expect-from-visit-nepal-2020

Nepal Tourism Statistic 2022. Government of Nepal Ministry of Culture, Tourism & Civil Aviation. (2023, May). https://www.tourism.gov.np/files/NOTICE%20MANAGER_FILES/Setting_Nepal%20Tourism%20Statistic_2022.pdf

OECD Economic Outlook, volume 2022 Issue 2, No. 112. OECD Publishing. (2022, November). https://www.oecd.org/en/publications/oecd-economic-outlook/volume-2022/issue-2_f6da2159-en.html

Overview Nepal. World Bank Group. (2024). https://www.worldbank.org/en/country/nepal/overview

Research report 2024 - Switzerland. FSO/Hotel Statistics. (2024). https://www.ticino.ch/dam/jcr:ba60deb8-94a7-4d2c-92c9-4b11554544eb/Research-Report-2024-Switzerland.pdf

Rijal, S. P. (2018, July). *Contribution of Tourism on Nepalese Economy, Volume 7 Issue 7*. International Journal of Science and Research (IJSR). https://www.ijsr.net/archive/v10i7/SR21705153908.pdf

Sharma, L. K., & Paudel, V. (2024, January). *Analyzing the Evolution of Nepal's Tourism in 2022: Insights and Future Perspectives*. ResearchGate. https://www.researchgate.net/publication/379675729_Analyzing_the_Evolution_of_Nepal's_Tourism_in_2022_Insights_and_Future_Perspectives

Switzerland travel and Tourism Market Report: [2032]. Report | [2032]. (2024). https://www.imarcgroup.com/switzerland-travel-tourism-market

Wikimedia Foundation. (2024a, October 22). *Ghalegaun*. Wikipedia. https://en.wikipedia.org/wiki/Ghalegaun

Wikimedia Foundation. (2024b, December 6). *Competitive Advantage*. Wikipedia. https://en.wikipedia.org/wiki/Competitive_advantage

Yergeau, M. E. (2019, November 15). *Tourism and Local Welfare: A Multilevel Analysis in Nepal's Protected Areas*. Science Direct | World Development. https://www.sciencedirect.com/science/article/abs/pii/S0305750X19303936