

CODE INTERNATIONAL 2024

**THE POTENTIAL OF ENHANCED TOURISM WITH AI IN THE
ECONOMIC GROWTH OF A COUNTRY**



**Sub-Theme
Social Culture**

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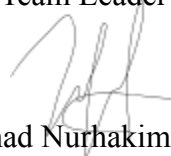
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With full awareness, I, as the team leader of (Team Name), declare that the work titled above is my original creation and has never been published or won a similar competition elsewhere. I hereby confirm my participation in the CODE INTERNATIONAL 2024 competition and agree to all terms and conditions set by the committee. If a violation is proven, I accept disqualification from the competition as my responsibility.

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THE POTENTIAL OF ENHANCED TOURISM WITH AI IN THE ECONOMIC GROWTH OF A COUNTRY

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ABSTRACT

Tourism nowadays has the potential to improve the economical aspect of an area or even the country itself but somehow it may not reach enough to achieve its most optimal condition. Once we can optimise the outcome we could sow from the enhanced tourism, many people will be gifted with many benefits no matter if they are the locals or the tourists. This research is meant to find out how tourism is significant to give economical benefit and jobs opportunity, and how sustainable technology could help in better aspects of tourism and achieve the targeted SDG 8 : Decent Works and Economic Growth. We used the mixed-methods approach to relate the qualitative and quantitative approach such as from the 2024 Annual Research Report from the World Travel and Tourism Council to acknowledge the contribution of tourism to the local economy and survey gathering to know better about the problems encountered during travels. Following as we have assumed, the rise in economics is actually influenced by sustainable tourism and technology really helps in optimising the tourism experience for the tourists and for locals' benefits. We also reached the conclusion that innovation in travel-related technology tools, side driven with AI could bring more sustainable and economically-positive impact to those involved.

Keyword: (AI, Local economy, SDG 8, Tourism)

INTRODUCTION

The study addresses the issue of achieving a less optimal outcome from the tourism aspect due to barriers and hardship faced by the tourists; difference in social culture and other factors. We also are trying to find out the impact of how sustainable technology, especially driven with the help of AI, could boost the tourism aspect and give benefit to both locals and tourists. The research itself is following the little amount of previous research on how significant sustainable technology tools could help in increasing the two-sided benefits from tourism itself. The primary purpose of the research is to call out for better and advanced ways to improve tourism by creation of new sustainable technology tools or enhancing the existing one. We also targeted to achieve SDG 8

(Decent Work and Economic Growth) while working on our own research right here. The objectives here include to find out the significance of better and enhanced tourism in developing the local economy and job offers, and how sustainable technologies will help in a better aspect of tourism.

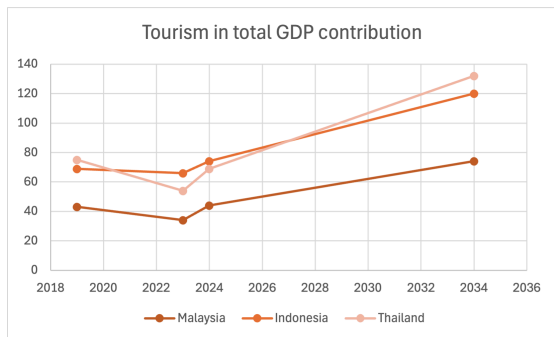
RESEARCH METHODS

Data collection employed a mixed-methods approach, incorporating both qualitative and quantitative data from a variety of sources, including peer-reviewed research papers and the 2024 Annual Research Report from the World Travel and Tourism Council. A convenience sampling strategy was used, drawing on readily available data to capture a diverse range of tourist behaviours and local perspectives across different regions. For

analysis, quantitative data was processed using statistical methods with tools such as Excel. These methods were carefully chosen to ensure a robust and comprehensive understanding of the research questions, while maintaining the reliability and validity of the findings across different cultural and geographical contexts.

RESEARCH RESULTS

The research compared the growth in total GDP contribution from tourism among three major tourist destinations namely Malaysia, Indonesia and Thailand. The analysis reveals a consistent upward trend in GDP contribution from tourism in Malaysia and Indonesia showcasing the sector's significant economic impact in recent years. While the tourism industry experienced a sharp decline during the COVID-19 pandemic, the data demonstrates a steady recovery post-pandemic, with both countries showing promising signs of revitalization. Thailand, while still benefiting from tourism, exhibited a more gradual recovery compared to its counterparts, highlighting regional differences in the pace of economic rebound within the tourism sector. These findings illustrate the resilience of tourism as a key driver of economic growth, even in the face of global disruptions.



Picture 1. Tourism in total GDP contribution

Country	Year	Changes (vs 2019)
Malaysia	2023	-19.8%

	2024	+1.6%
Indonesia	2023	- 4.1%
	2024	+7.7%
Thailand	2023	-28.6%
	2024	-7.6%

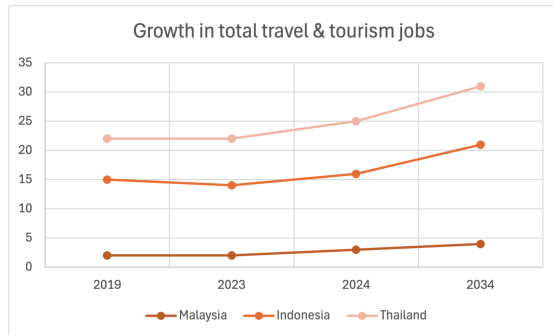
Table 1. Changes (vs 2019) in total GDP contribution of Tourism

The research highlights distinct patterns in job creation across the tourism sectors of Malaysia, Indonesia and Thailand. In Thailand and Indonesia, the growth in tourism-related jobs has been gradual, aligning with the incremental recovery and expansion of their tourism industries. This gradual increase may be attributed to the continued development of tourism infrastructure, rising tourist numbers, and growing demand for services in hospitality, transportation, and cultural attractions. These factors suggest that as these countries attract more tourists, job opportunities in the sector are steadily expanding, supporting local economies.

In contrast, Malaysia has shown a more stable and consistent rate of job creation in the tourism industry, with an almost straight-line growth trajectory over the period studied. This suggests that Malaysia’s tourism employment market may have reached a level of maturity, supported by well-established tourism infrastructure and policies that ensure steady employment levels. The country's ability to maintain such stability, even during periods of global economic fluctuation, could indicate a more resilient and sustainable approach to job creation within its tourism sector.

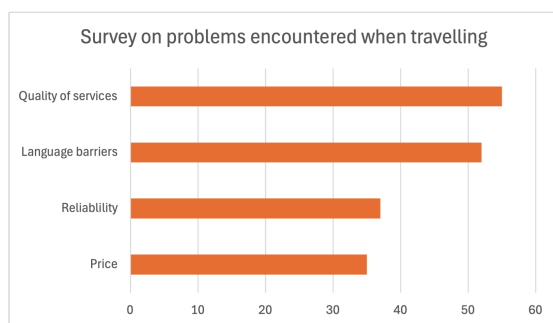
These variations in job growth patterns emphasise the importance of tailored policies that can address the specific needs and opportunities within each country’s tourism industry. For Thailand and Indonesia, further investment in skills training and infrastructure development could accelerate job creation, while Malaysia might focus on maintaining

job stability while expanding high-value employment opportunities in tourism.



Picture 2. Growth in total travel & tourism jobs

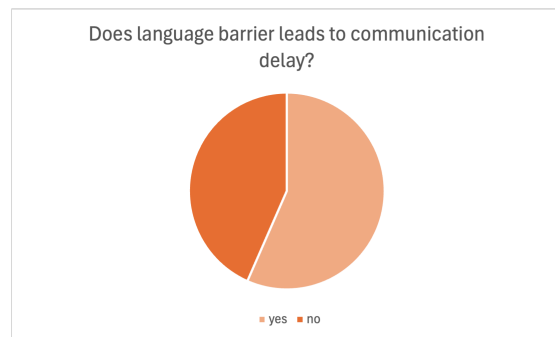
A survey on common issues encountered by tourists during travel revealed that language barriers are a significant challenge, with 52% of respondents identifying it as a major problem. While other factors such as the quality of services (55%), reliability (37%), and price (35%) also affect the travel experience, the inability to communicate effectively can lead to misunderstandings, frustration, and missed opportunities for deeper cultural engagement. The prevalence of language barriers highlights the need for solutions that bridge communication gaps between tourists and locals, emphasising the critical role that smart translation tools or multilingual services could play in enhancing overall travel satisfaction.



Picture 3. Problems encountered when travelling

The survey findings on communication barriers were drawn from the study on communication barriers faced by tourist guides in guiding foreign tourists. This research

specifically examined the challenges faced by tourist guides when interacting with foreign tourists in Gayo Lues, focusing on the impact of language barriers. The survey conducted in this study revealed that over 57% of tourist guides strongly agree that language barriers cause significant communication delays, impeding their ability to effectively guide and provide timely information. This investigation highlights the critical role of communication in the tourism industry and the need for practical solutions to overcome these challenges.



Picture 4. Language barrier leads to communication delay

DISCUSSION

The findings indicate that the recovery trends in GDP contribution and job creation within the tourism sectors of Malaysia, Indonesia, and Thailand have significant implications for our research questions regarding the impact of sustainable technology on tourism outcomes. The consistent upward trajectory in Malaysia's tourism GDP and job stability suggests that established infrastructure and effective policies are crucial in fostering resilience within the sector. This aligns with existing literature emphasising the importance of robust systems in sustaining tourism growth, thereby reinforcing the hypothesis that stable tourism frameworks can lead to enhanced economic outcomes.

In contrast, the gradual recovery observed in Thailand and Indonesia diverges from expectations based on prior studies that suggest quicker rebounds in tourism-dependent economies. This

discrepancy highlights the need for tailored interventions that consider regional challenges, suggesting that while general theories about tourism recovery may hold, they must be adapted to specific contexts for practical application. The implications of these results contribute to a deeper understanding of how different countries can leverage sustainable technology to boost tourism while supporting local economies.

The broader theoretical implications include a reconsideration of the role of sustainable technologies in tourism recovery. The findings suggest that integrating AI and other sustainable practices could optimize resource management and enhance visitor experiences, thereby aligning with the goals of Sustainable Development Goal 8 (Decent Work and Economic Growth). This positions sustainable technology as a pivotal factor in the future of tourism, highlighting its potential to create economic and social benefits.

However, limitations of the study include the reliance on convenience sampling and secondary data sources, which may affect the validity and generalizability of the findings. This reliance on readily available data could introduce biases, limiting the ability to draw definitive conclusions across diverse cultural contexts. Future research should aim to conduct longitudinal studies that incorporate primary data collection methods, allowing for a more comprehensive analysis of the impact of sustainable technology on tourism outcomes. Additionally, exploring the role of local stakeholder engagement in implementing sustainable technologies could provide valuable insights into enhancing tourism practices.

CONCLUSION

The key findings of the research show that Malaysia is experiencing a stable recovery in tourism GDP and job creation, while Indonesia and Thailand are recovering more slowly. This highlights the importance of strong infrastructure and effective policies in supporting tourism growth. These results

advance our understanding of sustainable tourism by demonstrating that tailored strategies are needed for different countries.

The broader implications for future research and practical applications include the potential to use sustainable technologies, especially AI, to improve tourism management and benefit local economies. Future studies should explore how these technologies can enhance tourist experiences and contribute to job creation, aligning with Sustainable Development Goal 8 (Decent Work and Economic Growth).

Based on these findings, it is recommended that policymakers develop strategies that utilize sustainable technologies to support tourism recovery. Additionally, future research should focus on gathering more data and examining how local communities can engage in promoting sustainable tourism practices.

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BIODATA ATTACHMENT
COMPETITION OF OUTSTANDING CREATIVITY AND EXPLORATION
2024

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2			
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October 2024, Kuala Lumpur

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3			

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3			

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