

## ABSTRACT

Tourism plays a vital role in driving economic growth and creating employment opportunities, particularly in Southeast Asia. However, there is a lack of comprehensive studies on long-term tourist mobility patterns in the region. This research fills the gap by comparing tourist mobility patterns in Indonesia, Thailand, and Vietnam using online reviews from a leading global travel platform over the span of 20 years. The study uses network analysis to understand evolving patterns of tourist movement and association rule to explore destination preferences. We processed a total of 527,960 reviews data that were collected from the top 25 tourist destinations in each of the three countries: Indonesia, Thailand, and Vietnam. Our finding shows tourism mobility in Indonesia is primarily concentrated on the islands of Java and Bali, while both Thailand and Vietnam have three distinct districts distribution (Southern, Central, and Northern) but with a more evenly distributed pattern of tourist mobility in Vietnam. Additionally, association rule mining reveals unique patterns in tourist preferences across the three countries, emphasizing a strong inclination towards cultural and historical attractions such as Sacred Monkey Forest Sanctuary in Indonesia, The Grand Palace in Thailand, and landmarks like Hoi An Ancient Town and Central Post Office in Vietnam. The findings provide insights for tourism stakeholders and policymakers, aiding strategic planning and decision-making in the region's tourism industry.

**Keywords:** Network Analysis, Association Rule Mining, Tourist Mobility, Tourist Preference, Tourism Destination