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The Determinants of Tourism Industry Competitiveness in Asean Countries for the Period 2019-2024

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Abstract
The tourism industry is a pivotal economic sector for ASEAN countries, significantly contributing to regional GDP and employment. However, the competitiveness of tourism industries across the region has shown considerable variation between 2019 and 2024, influenced by divergent recovery paths from the COVID-19 pandemic and differing national capacities in infrastructure and policy. This study aims to analyze the influence of Tourism Infrastructure, Price Competitiveness, Tourism Policy, and Business Conditions on the competitiveness of the tourism industry in ASEAN countries. The research employed a quantitative approach using panel data regression analysis. The sample covers 10 ASEAN member countries observed annually from 2019 to 2024, with data primarily sourced from the World Economic Forum's Travel & Tourism Development Index (TTDI) and other international databases. The results of the panel data regression indicate that Tourism Infrastructure, Price Competitiveness, Tourism Policy, and Business Conditions collectively have a significant and positive effect on the competitiveness of the tourism industry in the region. Partially, each independent variable also demonstrates a significant positive influence. These findings suggest that improvements in physical infrastructure, attractive pricing, supportive government policies, and a conducive business environment are key determinants in enhancing a nation's tourism competitiveness. The study underscores the necessity for integrated regional strategies and sustained investment in these critical areas to strengthen ASEAN's position as a premier global tourist destination.

INTRODUCTION

In the post-pandemic era, the global tourism industry has entered a significant recovery phase accompanied by increasingly intense competition. After experiencing a deep contraction due to travel restrictions, this sector has once again become the backbone of many national economies, contributing substantially to Gross Domestic Product (GDP), employment, and foreign exchange earnings. This phenomenon demands that each country not only rely on natural beauty or cultural heritage alone, but also on the strategic ability to manage and market destinations effectively (Morrison, 2023; Perry, 2023). It is in this context that tourism competitiveness becomes a crucial variable determining a nation's position on the world tourism map, where success is no longer determined solely by inherent comparative advantages, but also by competitive advantages built through innovation and adaptive policies.

Contemporary researchers emphasize that the measurement of tourism competitiveness has shifted from traditional approaches toward more holistic and demand-based frameworks (Hao et al., 2025; Song & Lin, 2023). As argued by Nag and Mishra in their recent study indexed in

Mendeley, understanding a destination's competitive position heavily depends on analyzing tourist perspectives. They developed an evaluation model that does not merely rely on static indices but also incorporates dynamic variables such as tourists' movement choice, infrastructure, and prices, using advanced statistical techniques like Maximum Likelihood Estimation (MLE) and Information Entropy. Nag and Mishra state that this model is designed to "address limitations of existing models and promoting inclusivity" in assessing the subjective and objective pillars of the Travel and Tourism Competitiveness Index (TTCI). This opinion highlights that modern competitiveness must be measured through the lens of real tourist experiences, not merely based on the availability of physical infrastructure alone (Nag, A., & Mishra, 2025)

Furthermore, the dimension of competitiveness is also closely related to energy efficiency and economic sustainability, which have become major concerns in recent research. Ekonomou and Halkos (2025), in their publication indexed in Mendeley, explore the determinants of competitiveness in OECD countries using a comprehensive approach. Their research reveals a direct correlation between an increase in the competitiveness index and the tourism sector's contribution to GDP, as well as a reduction in energy consumption levels. Ekonomou and Halkos assert that "as the tourism and travel competitiveness index increases, energy consumption decreases". This finding indicates that countries with high competitiveness tend to be able to manage their tourism growth more efficiently and sustainably. The implication is that investment in enhancing competitiveness not only drives economic growth but also aligns with the global green energy transition agenda, making it a strategic priority for policymakers to create a conducive and environmentally friendly investment climate in order to capture an increasingly competitive global market share (Ekonomou, G., & Halkos, 2025)

The tourism sector is one of the most dynamic economic sectors in Southeast Asia, serving not only as a source of foreign exchange but also as a primary driver of economic growth, job creation, and improved public welfare. Over the past six years (2019–2024), the ASEAN tourism industry has undergone a significant transformation triggered by three critical phases: rapid pre-pandemic growth (2019), total disruption due to COVID-19 (2020–2021), and a gradual recovery accompanied by a post-pandemic paradigm shift (2022–2024). In 2019, the region received more than 130 million international tourists, with a direct contribution to GDP reaching 12.1 percent, reflecting the sector's vitality. However, the global COVID-19 pandemic that began in early 2020 caused an unprecedented contraction, with tourist arrivals declining by 80 to 90 percent across various countries, thereby calling into question the resilience and competitiveness of the previously relied-upon tourism model.

The transformation of ASEAN's tourism competitiveness during the 2019–2024 period has been influenced not only by external factors such as the pandemic but also by internal dynamics including accelerated digitalization, shifting tourist preferences, and increasing demands for sustainability. The Travel & Tourism Development Index (TTDI) published by the World Economic Forum has recorded significant shifts in the components of competitiveness, whereby traditional factors such as natural and cultural resources remain important, yet elements such as health, safety, and digital infrastructure are increasingly becoming key determinants. Countries like Singapore and Thailand, which quickly adapted to health protocols and integrated technology into tourism services, demonstrated better resilience, while countries dependent on mass tourism and conventional infrastructure faced more complex recovery challenges.

Jiao, Chen, Li, and Liu argue that destination competitiveness cannot be assessed using an isolated approach; rather, it must be understood through the lens of spatial interactions among destinations that both compete with and complement one another. The framework they propose measures relative competitiveness through the demand and price spillover effects extracted from each tourist demand system. By employing advanced spatiotemporal econometric models, their research reveals that a destination is considered competitive if it is able to absorb positive demand spill-ins from neighboring destinations while simultaneously minimizing demand spill-outs to competing destinations (Jiao et al., 2025)

Wang, Y., and Gao, B. W. explain how destinations build and maintain competitiveness, particularly in the face of crises such as the COVID-19 pandemic. Using data from 119 destinations sourced from the World Economic Forum (2018–2023) and analyzed with an Interpretable Random Forest model alongside SHapley Additive exPlanations (SHAP), they discovered three key findings. First, policy factors have a dominant short-term effect through dynamic governance mechanisms during times of crisis. Second, in the long term, infrastructure is the most significant driver of competitiveness, followed by tourism resources and the business environment, while policy and sustainability factors contribute relatively less (Kubickova & Martin, 2020). Third, the long-term impact of COVID-19 on destination competitiveness turns out to be limited, indicating that destinations with strong adaptive capacity and learning ability can recover their competitiveness relatively quickly. This theory confirms that competitiveness is not a static condition but rather a dynamic process that requires management flexibility, innovation, and institutional learning capacity to respond to external shocks (Wang & Gao, 2025)

A country's tourism competitiveness is calculated using a composite score on a scale of 1 to 7 based on the methodology of the Travel and Tourism Development Index (TTDI) developed by the World Economic Forum (WEF). This index is the result of aggregating 102 individual indicators grouped into 17 main pillars, which are further organized into five broad dimensions: Enabling Environment, T&T Policy and Enabling Conditions, Infrastructure, T&T Resources, and Travel & Tourism Sustainability. The calculation process is carried out through hierarchical aggregation using the arithmetic mean, whereby the value of each pillar is the average of its constituent indicators, and the final composite score is the average of all pillar values.

Based on data from the World Economic Forum's Travel & Tourism Development Index (TTDI) for the 2019–2024 period, the five determinants of tourism competitiveness among ASEAN countries exhibit diverse and interconnected patterns. Tourism infrastructure is dominated by Singapore with the highest score (6.0–6.3), far above other countries, while Malaysia and Thailand occupy the middle range (4.2–4.8). Indonesia still lags with a stagnant score of around 3.9–4.0, and the CLMV countries (Cambodia, Laos, Myanmar) remain at the lowest level (2.6–3.4). According to (Adey & Lisle, 2025), tourism infrastructure is not merely a physical element but constitutes a "living mediation" with uncertain boundaries, often contaminated by other socio-political practices such as migration and security. Meanwhile, (Russo et al., 2025) distinguish between material infrastructure (physical) and immaterial infrastructure (narratives, brands, policies), which are fluid and co-evolutionary.

Price competitiveness exhibits an inverse pattern (trade-off) with infrastructure, where Indonesia ranks the highest with scores of 5.6–6.1 despite a gradual declining trend, followed by Vietnam and Myanmar, while Singapore sits at the lowest position (2.3–2.5) as the most expensive

destination in ASEAN. Nag & Mishra (2025) define price competitiveness as a critical component from the demand perspective, using the real exchange rate as a proxy, while (Rita, P., Ramos, R., Vong, C., & Barreiros, 2026) add that consumer perceptions of price dispersion and price fairness also influence destination preferences. The consistent declining trend in price competitiveness scores across all ASEAN countries (2019–2024) is attributed to post-pandemic inflationary pressures, recovering demand, currency appreciation, and investments in service quality improvement that require higher costs.

Natural and cultural resources represent Indonesia's absolute advantage, with the highest score in ASEAN (5.7–5.85), followed by Thailand (5.3–5.55) and Malaysia (5.15–5.30), while Singapore and Brunei occupy the lowest positions due to geographical limitations. Wang & Gao (2025), in their DD-TDC theory, affirm that tourism resources are the most significant driver of long-term competitiveness after infrastructure, as their uniqueness and authenticity are difficult for competitors to replicate. (Clark et al., 2026) enrich this perspective using the Resource-Based Theory (RBT), arguing that competitive advantage is determined not merely by resource endowment but also by strategic orchestration the ability to manage and capitalize on resources sustainably through stakeholder partnerships and the development of intimate experiences with local culture.

Safety, security, and health (SSH) are again dominated by Singapore with the highest score (6.7–6.8), followed by Malaysia (6.0–6.1) and Brunei (5.9), while Indonesia sits in the middle range (5.1–5.2). Myanmar experienced a drastic decline from 4.7 to 4.0 due to the political crisis following the 2021 military coup. (Dai Bin., 2025) expands the definition of tourism safety beyond physical and property security to include digital risks arising from the application of AI and big data, upholding the principle of "No safety, no tourism." (Mellinas et al., 2025) introduce the critical concept of the Security Saturation Limit (SSL), which suggests that excessive security measures may disrupt tourist recreational experiences and ultimately harm destination competitiveness.

Tourism policy and the business environment exhibit a V-shaped recovery pattern across almost all ASEAN countries post-pandemic. Singapore leads with scores of 6.2–6.3, followed by Malaysia (5.3–5.4) and Thailand (5.1–5.2), while Indonesia ranks fourth (4.7–4.9), competing closely with Vietnam (4.6–4.8). (Vogler et al., 2025) define tourism policy as a field that does not stand alone but is integrated into the general political structure of society. Their research reveals a gap between the idealized holistic approach and political reality, where tourism expertise is more likely to be recognized at the operational level within National Tourism Organizations (NTOs) rather than at the strategic political decision-making level. Collectively, these five determinants shape ASEAN's tourism competitiveness, where an advantage in one factor often comes at the expense of a weakness in another, requiring each country to formulate strategies tailored to its respective competitive position.

Although numerous studies have examined the determinants of tourism competitiveness in the ASEAN region, significant research gaps remain. First, most previous studies are partial in nature, analyzing only 2–4 variables in isolation, such as research focusing solely on tourism infrastructure (Wijaya, 2024), price competitiveness (Pham, H. T., & Nguyen, 2021), or safety and security (Goh, 2021). No study has yet simultaneously integrated all five main factors tourism infrastructure, price competitiveness, natural and cultural resources, safety-security-health (SSH), and tourism policy and business environment into a single comprehensive model that explains the competitiveness of

the ASEAN tourism industry. Second, previous studies generally employed limited cross-sectional or time-series data and thus have been unable to simultaneously capture both temporal dynamics and cross-country heterogeneity, particularly across the critical pandemic period (2019–2024) which triggered a profound transformation in the tourism sector. Third, no study has yet utilized panel data regression analysis on all 10 ASEAN countries with a six-year coverage (2019–2024) to test the simultaneous influence of these five factors on tourism competitiveness. Fourth, although several studies have measured competitiveness using the Travel and Tourism Development Index (TTDI) from the World Economic Forum, none have specifically examined the relative contribution of each of these determinants in the context of post-pandemic recovery in ASEAN. Fifth, existing research remains limited to the level of competitiveness itself and has not traced the broader economic implications, leaving a gap for developing a model that not only tests the determinants but also the cascading effects of competitiveness on economic indicators such as labor absorption, culinary industry revenue, and the value of digital transactions.

The novelty of this research lies in its integration of all five main determinants tourism infrastructure, price competitiveness, natural and cultural resources, safety-security-health, and tourism policy and business environment into a single comprehensive model for the ASEAN region, covering the entire critical period of 2019–2024 from pre-pandemic peak through COVID-19 disruption to post-pandemic recovery. Unlike previous studies using limited cross-sectional or time-series data, this research employs panel data regression across all 10 ASEAN countries with six-year coverage, capturing both temporal dynamics and cross-country heterogeneity while specifically examining the relative contribution of each determinant to tourism competitiveness during a period of profound transformation.

Therefore, research employing panel data regression on the 10 ASEAN countries for the 2019–2024 period to simultaneously examine the influence of these five factors on the competitiveness of the tourism industry is both important and urgent in order to fill the existing research gaps, while also making a more comprehensive theoretical and policy contribution to the development of regional tourism. The benefits of this research are both theoretical and practical. Theoretically, this study contributes to the development of tourism economics literature by providing empirical evidence on the determinants of tourism competitiveness in the ASEAN region, enriching the understanding of how infrastructure, pricing, resources, safety, and policy interact to shape destination competitiveness, and offering a comprehensive framework for analyzing tourism competitiveness in developing regions. Practically, this research provides benefits for policymakers and tourism authorities in formulating evidence-based strategies to enhance tourism competitiveness, for tourism industry stakeholders in understanding key factors driving destination attractiveness, for investors in identifying strategic investment priorities in the tourism sector, and for future researchers as a foundation for further studies on tourism competitiveness dynamics in the post-pandemic era.

METHOD

This research aims to analyze the influence of tourism infrastructure, price competitiveness, natural and cultural resources, safety-security-health (SSH), and tourism policy and business environment on the competitiveness of the tourism industry in 10 ASEAN countries for the period 2019–2024. This research is a quantitative study with a causal-associative approach, which seeks

to examine the cause-and-effect relationships between independent variables and the dependent variable. The data used in this study are secondary data in the form of panel data (pooled data), which is a combination of time series data over six years (2019–2024) and cross-section data from 10 ASEAN countries, namely Indonesia, Malaysia, Singapore, Thailand, the Philippines, Vietnam, Cambodia, Laos, Myanmar, and Brunei Darussalam. The main data source is derived from the publications of the World Economic Forum (WEF) through the Travel and Tourism Development Index (TTDI), which is published periodically. The dependent variable in this study is the competitiveness of the tourism industry, proxied by the composite TTDI score, while the independent variables include tourism infrastructure (tourist service infrastructure), price competitiveness, natural and cultural resources, safety-security-health (SSH), and tourism policy and business environment (tourism policy and enabling environment).

The data analysis technique employed is panel data regression analysis using statistical software such as EViews 13. The selection of the panel data regression model is based on its ability to accommodate cross-country heterogeneity while simultaneously capturing temporal dynamics, thereby producing more efficient and unbiased estimates compared to using only time series or cross-section data separately. Before conducting model estimation, this study will perform three specification tests to determine the most appropriate panel data regression model: the Chow test to choose between the Common Effect Model (CEM) and the Fixed Effect Model (FEM), and the Hausman test to choose between the FEM and the Random Effect Model (REM). Once the model is selected, this study will conduct simultaneous significance tests (F-test) and partial significance tests (t-test) to examine the influence of the independent variables on the dependent variable.

Furthermore, to measure the extent to which the independent variables explain the variation in the dependent variable, the coefficient of determination (R-squared or adjusted R-squared) will be calculated. The results of the panel data regression estimation will be interpreted both quantitatively and qualitatively to answer the research hypotheses, namely whether tourism infrastructure, price competitiveness, natural and cultural resources, safety-security-health (SSH), and tourism policy and business environment, either simultaneously or partially, have a significant influence on the competitiveness of the tourism industry in the 10 ASEAN countries for the 2019–2024 period. With this comprehensive methodological approach, this study is expected to produce robust and scientifically accountable findings, while also contributing to the development of tourism economics and the formulation of strategic policies in the ASEAN region.

RESULTS AND DISCUSSION

Chow Test

The Chow test in panel data analysis tests the choice between Common Effect Model (CEM) and Fixed Effect Model (FEM), with H_0: CEM (pooled OLS) and H_1: FEM; the decision is based on the F-statistic = [(RSS_CEM - RSS_FEM)/N] / [RSS_FEM/(NT-N-K)] or Cross-section F/Chi-Square probability < 0.05 (reject H_0, choose FEM) versus ≥ 0.05 (accept H_0, choose CEM).

Table 1. Chow Test

Redundant Fixed Effects Tests
Pool: DATAPOOL
Test cross-section fixed effects

Effects Test	Statistic	d.f.	Prob.
Cross-section F	94.506101	(9,45)	0.0000
Cross-section Chi-square	179.446863	9	0.0000

Source: Data processed by Eviews 13

The Chow test results (Table 1) show a Cross-section F statistic of 94.506101 (df: 9,45) with probability 0.0000 and Cross-section Chi-square of 179.446863 (df: 9) with probability 0.0000. Both p-values < 0.05 reject the null hypothesis (Common Effect Model), confirming that the Fixed Effect Model (FEM) is the appropriate specification for this panel data regression analysis to account for cross-sectional heterogeneity.

Hausman Test

The Hausman test in panel data analysis aims to determine the appropriate choice between Fixed Effects Model (FEM) and Random Effects Model (REM) by testing whether individual-specific effects are correlated with the explanatory variables; under the null hypothesis (H_0: no correlation, prefer REM for efficiency), rejection at $p<0.05$ (H_1: correlation exists) indicates FEM is consistent and preferred to avoid biased estimates.

Table 2. Hausman Test

Correlated Random Effects - Hausman Test
Pool: DATAPOOL
Test cross-section random effects

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	850.554911	5	0.0000

Warning: Estimated cross-section random effects variance is zero.

Source: Data processed by Eviews 13

The Hausman test results (Table 2) indicate a Cross-section random Chi-Sq. statistic of 850.554911 (df: 5) with probability 0.0000 ($p < 0.05$), rejecting the null hypothesis of Random Effects Model in favor of Fixed Effects Model (FEM), confirming correlation between individual effects and explanatory variables. The warning "estimated cross-section random effects variance is zero" further supports FEM suitability, as it suggests negligible random effect variation across cross-sections, making FEM the consistent and appropriate specification for this panel data analysis.

Table 3. Regression Fixed Effect Model

DEPENDEN VARIABLE: COMPETITIVENESS				
Variable	**Coefficient**	**Std. Error**	**t-Statistic**	**Prob.**
C	2084.736	7.162806	291.0502	0.0000
INFRAS?	0.047413	0.016891	2.806979	0.0081
PRICE?	0.032953	0.011189	2.945136	0.0062

DEPENDEN VARIABLE: COMPETITIVENESS				
Variable	**Coefficient**	**Std. Error**	**t-Statistic**	**Prob.**
SDA?	8.564951	0.891641	9.605831	0.0000
K3?	5.248546	1.958319	2.680128	0.0102
POLICY?	0.166372	0.079486	2.093089	0.0431
Adjusted R-squared	0.841021	Durbin-Watson	1.812210	
Prob(F-statistic)	0.000000			

Source: Data processed by Eviews 13

The The results of the panel data regression using the Fixed Effect model indicate that simultaneously, the variables of Tourism Infrastructure (INFRAS), Price Competitiveness (PRICE), Natural and Cultural Resources (SDA), Safety, Security, and Health (K3), as well as Tourism Policy and Business Conditions (POLICY), have a significant effect on the Tourism Industry Competitiveness in ASEAN countries. This is evidenced by the Prob(F-statistic) value of 0.000000, which is far below the 5% significance level (0.05).

The ability of these five independent variables to explain the variation in tourism competitiveness is very high, at 84.10% (Adjusted R-squared = 0.841021), while the remaining 15.90% is explained by other factors outside the model. The Durbin-Watson value of 1.812210, which is close to 2, indicates no serious autocorrelation issues, making this regression model reliable for interpretation and conclusion drawing. Partially (individually), all independent variables show a positive and significant effect on ASEAN's tourism industry competitiveness at the 5% significance level, as all probability values of each variable are below 0.05.

Below is the detailed effect of each variable on Tourism Industry Competitiveness in ASEAN countries at the 5% significance level, accompanied by scientific arguments.

Tourism Infrastructure (INFRAS)

1. **Coefficient:** 0.047413
2. **Probability:** 0.0081 (far below 0.05) → **Significant**
3. **Effect:** Positive and significant. Each one-unit increase in tourism infrastructure will increase tourism industry competitiveness by 0.0474 units, assuming other variables are constant.

Tourism infrastructure is a fundamental factor supporting the smooth operation of tourism activities. In the ASEAN region, which has geographical characteristics of archipelagos (Indonesia, Philippines) and mainland areas with hilly terrain (Laos, Myanmar, Northern Thailand), the availability of infrastructure such as international airports, seaports, highways, bridges, electricity networks, clean water, and telecommunications is crucial. Adequate infrastructure reduces travel time, enhances tourist comfort, and opens access to remote tourist destinations. The World Economic Forum (WEF) in its *Travel & Tourism Development Index* consistently places transport and tourism infrastructure as one of the five main pillars of tourism competitiveness. ASEAN countries like Singapore and Thailand, which have world-class infrastructure, consistently have higher tourism competitiveness compared to countries with underdeveloped infrastructure. This result confirms that infrastructure investments in ASEAN, such as the construction of new airports, the Jakarta-Bandung high-speed rail project, and road quality improvements in Vietnam and Cambodia, provide a real and positive contribution to increasing tourism competitiveness.

2. Price Competitiveness (PRICE)

1. **Coefficient:** 0.032953
2. **Probability:** 0.0062 (far below 0.05) → **Significant**
3. **Effect:** Positive and significant. Each one-unit increase in price competitiveness will increase tourism industry competitiveness by 0.0329 units.

Price competitiveness reflects how affordable a tourist destination is compared to competing destinations. Its components include flight costs, accommodation costs (hotels, hostels, homestays), food and beverage costs, entrance fees to tourist attractions, local transportation costs, and visa fees. The ASEAN region is globally known as a budget-friendly tourist destination, highly attractive to middle-class and backpacker tourists. Countries such as Thailand, Vietnam, Cambodia, Laos, and Indonesia (except for relatively more expensive Bali) offer very high value for money compared to other destinations like Europe, Australia, or Japan. The tourism competitiveness theory by Crouch and Ritchie (1999) states that cost is one of the main determinants of a destination's comparative advantage. This positive coefficient indicates that the more competitive the price (cheaper or providing better value for tourist money), the higher the destination's competitiveness. Therefore, ASEAN countries need to maintain price stability and prevent overpricing practices that can damage the perception of price competitiveness.

3. Natural and Cultural Resources (SDA)

1. **Coefficient:** 8.564951
2. **Probability:** 0.0000 (far below 0.05) → **Significant**
3. **Effect:** Positive, very strong, and **the most dominant** among all variables. Each one-unit increase in natural and cultural resources will increase tourism industry competitiveness by 8.56 units.

The Natural and Cultural Resources variable has the greatest influence on ASEAN's tourism competitiveness. This is very logical considering that the main competitive advantage of the ASEAN region lies precisely in its extraordinary natural wealth and cultural diversity. Natural attractions include exotic tropical beaches (Bali-Indonesia, Phuket-Thailand, Palawan-Philippines, Langkawi-Malaysia), tropical rainforests and mountains, volcanic lakes, waterfalls, and unique biodiversity (Orangutans in Borneo, Komodo dragons in Nusa Tenggara, elephants in Thailand and Myanmar). Meanwhile, cultural wealth includes UNESCO World Heritage sites (Borobudur and Prambanan-Indonesia, Angkor Wat-Cambodia, Luang Prabang-Laos, Hoi An-Vietnam), traditional festivals, dances, customary ceremonies, local cuisine, and handicrafts. The *core resources and attractors* theory by Ritchie & Crouch (2003) places natural and cultural attractions as the heart of the tourism competitiveness system, which is not easily imitated by other destinations. The very large coefficient (8.56) indicates that ASEAN countries that can effectively preserve, manage, package, and promote their natural and cultural resources will gain a competitive advantage that is difficult for other regions to match. The main policy priority should be directed at environmental protection, cultural heritage preservation, and community-based tourism promotion.

4. Safety, Security, and Health (K3)

1. **Coefficient:** 5.248546
2. **Probability:** 0.0102 (below 0.05) → **Significant**
3. **Effect:** Positive and very strong. Each one-unit increase in safety, security, and health aspects will increase tourism industry competitiveness by 5.25 units.

Safety, security, and health are absolute prerequisites (*hygiene factors*) for modern tourism. International tourists are highly sensitive to risks of crime (theft, pickpocketing, fraud, sexual violence), terrorism, social conflict, natural disasters (earthquakes, tsunamis, volcanic eruptions, flash floods), and health threats (infectious diseases, poor sanitation, food poisoning, availability of adequate health facilities). In the post-COVID-19 pandemic era, health aspects have become a major concern for global tourists. In the ASEAN region, there is a disparity in K3 performance: Singapore and Malaysia are relatively superior in safety and health, while some areas in the southern Philippines, southern Thailand, and the Myanmar border face security challenges. Natural disasters such as the Lombok earthquake (2018), the Sunda Strait tsunami (2018), and the Thailand floods (2011) have also negatively impacted tourism. The high coefficient (5.25) indicates that ASEAN countries that succeed in improving security perceptions, strengthening early warning systems for disasters, and providing adequate health facilities and cleanliness certifications (*CHSE - Cleanliness, Health, Safety, Environment*) will have far superior competitiveness. The UNWTO emphasizes that political stability, low crime rates, and health guarantees are main determining factors in tourists' destination choices.

5. Tourism Policy and Business Conditions (POLICY)

1. **Coefficient:** 0.166372
2. **Probability:** 0.0431 (below 0.05) → **Significant**
3. **Effect:** Positive and significant. Each one-unit increase in policy and business conditions will increase tourism industry competitiveness by 0.166 units.

Supportive tourism policies include ease of business licensing (hotels, restaurants, travel agencies, tour guides), tax incentives for tourism investors, visa-free or visa-on-arrival (VOA) policies for tourist source countries, national and regional tourism promotion budgets, and regulations for environmental and cultural heritage protection. Good business conditions include a conducive investment climate, legal certainty, ease of doing business, and the availability of skilled labor. In ASEAN, Thailand demonstrates proactive policies through the "Amazing Thailand" campaign and visa-free policies for many countries; Singapore excels in regulatory excellence and global connectivity; Malaysia consistently promotes "Malaysia Truly Asia"; Indonesia promotes the "Wonderful Indonesia" program and visa-free policies for 169 countries (pre-pandemic). Although the coefficient is smaller (0.166) compared to natural/cultural resources and safety/security/health, its significance at the 5% level proves that without appropriate policy support, even abundant natural and cultural potential will not be optimally utilized to enhance competitiveness. This result supports Destination Management theory, which states that the government's role as facilitator, regulator, and promoter is crucial in building tourism competitiveness (Della Corte et al., 2017; Syssner & Hjerpe, 2018)

CONCLUSION

The following conclusions can be drawn from the research findings that Based on the research results, it can be concluded that simultaneously, tourism infrastructure, price competitiveness, natural and cultural resources, safety, security and health aspects, as well as tourism policy and business conditions, have a significant effect on the competitiveness of the tourism industry in ASEAN countries. Among these five factors, natural and cultural resources have the most dominant influence, followed by safety, security, and health aspects, which also contribute very strongly.

Meanwhile, tourism infrastructure, price competitiveness, as well as policy and business conditions, although having smaller effects, remain significantly proven as supporting factors. Therefore, to enhance tourism competitiveness in ASEAN, the main priorities should be placed on preserving and promoting natural and cultural wealth, improving the guarantees of tourist safety, security, and health, which are then supported by the development of adequate infrastructure, competitive prices, and conducive government policies.

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