Econometric Analysis of Key Factors Affecting Domestic Tourism Development in Kazakhstan

Zarina Toleubayeva[1]   Kamshat Mussina[1]*

[1] L.N. Gumilyov Eurasian National University, Astana, Kazakhstan

Corresponding author:
*Kamshat Mussina – Cand. Sc. (Econ.), L.N. Gumilyov Eurasian National University, Astana, Kazakhstan. Email: mussina_kp@enu.kz

EJEBS

ABSTRACT

Today, tourism plays a crucial role in Kazakhstan's economic diversification and regional development, especially in the post-pandemic era. This study aims to identify and quantify the key economic and infrastructural factors influencing tourism development in Kazakhstan. The research employs multiple regression analysis based on econometric modeling of macroeconomic indicators from 2013 to 2024. Based on the study of time series and correlation dependencies of indicators, a close relationship was found between the number of tourists and such variables as gross domestic product, the share of tourism in GDP, the number of organizations in the tourism sector, and income from accommodation facilities. The results indicate a strong positive relationship between domestic tourism growth and GDP per capita ($\beta = 0.0508$, $p < 0.01$) as well as the share of tourism in GDP ($\beta = 447,484$, $p < 0.05$). The number of tourism-related organizations also demonstrates a positive, though weaker, effect ($\beta = 637.8$, $p<0.1$). However, accommodation revenue and hotel occupancy were found to be statistically insignificant. Using methods and SWOT analysis, the strengths and weaknesses of the industry were identified, and opportunities and threats influencing its sustainable development were determined. The article proposes strategic measures to improve the competitiveness of the tourism industry, including the development of regional tourism, diversification of tourism products, the introduction of digital technologies, and environmentally responsible practices. These findings offer valuable insights for policymakers and industry stakeholders to support long-term tourism growth in Kazakhstan.

1. INTRODUCTION

In the context of global turbulence caused by the pandemic and external economic changes, focusing on domestic tourism has become a strategic priority for many countries, including Kazakhstan. The development of domestic tourism in Kazakhstan is a pressing issue in the context of global changes caused by the COVID-19 pandemic, restrictions on international travel, and changes in tourist preferences. Despite the presence of unique natural and cultural resources, Kazakhstan remains an undervalued destination in both the global and domestic tourism markets. At the same time, the lack of a systematic approach to infrastructure development and promotion of local routes leads to a decrease in the industry's competitiveness.

Several studies examining issues of tourism infrastructure and their economic analysis, such as Song and Li, highlighted that tourism demand is driven by macroeconomic conditions, including GDP, income levels, and employment rate (Song & Li, 2008). The study of Poghosyan and Tovmasyan also demonstrated that economic factors play a crucial role in shaping trends in domestic tourism development in the context of transition economies (Poghosyan & Tovmasyan, 2021). Other studies further emphasized the role of government support and investments in infrastructural and regional development for fostering domestic tourism (Murima & Shereni, 2023; Tovmasyan, 2023).

While these studies provide valuable insights, the specific relationship between regional characteristics, economic factors, and tourist flows remains insufficiently explored. This gap in the literature necessitates a comprehensive econometric analysis to identify the key determinants and constraints of domestic tourism growth in Kazakhstan. Although extensive research has been conducted on international tourism trends, the dynamics of domestic tourism remain underexplored. This study seeks to address this gap by conducting an econometric analysis of macroeconomic and infrastructural factors influencing the development of domestic tourism in Kazakhstan.

The study employs a mixed-methods approach, integrating both quantitative techniques (correlation and regression analysis) to quantify relationships between key variables and qualitative methods (SWOT analysis) to assess the strengths and weaknesses of the tourism industry. Unlike previous studies that rely predominantly on descriptive statistics or conceptual analysis, this research adopts a rigorous econometric approach, allowing for a more precise estimation of macroeconomic and infrastructural determinants of domestic tourism.

Another key contribution of this study is its focus on post-pandemic tourism trends in Kazakhstan. The COVID-19 pandemic has significantly reshaped travel patterns, leading to a marked shift from outbound to domestic tourism. However, empirical research on this transformation remains limited. The findings of this study will provide valuable insights for policymakers and industry stakeholders, facilitating the development of strategic initiatives aimed at improving infrastructure, diversifying tourism products, and promoting regional destinations.

This study aims to identify and assess the impact of key economic and infrastructural factors on domestic tourism development in Kazakhstan using an econometric analysis of data from 2013 to 2024. To guide this study, the following research questions are formulated:

RQ1. What are the key economic and infrastructural factors influence domestic tourism development in Kazakhstan?

RQ2. What is the impact of GDP growth on the number of domestic tourists?

RQ3. What is the role of accommodation revenue and hotel occupancy in shaping domestic tourism?

Based on these research questions, the study tests the following hypotheses:

H1: GDP growth positively influences domestic tourism.

H2: The number of tourism-related organizations significantly affects the number of domestic tourists.

2. LITERATURE REVIEW

There has been a noticeable increase in interest in domestic tourism in recent years, but there is still no consensus on its definition. Scholars have examined various factors, including economic, infrastructural, psychological as determinants of tourism demand. This section provides a comprehensive discussion of the extant literature on key theoretical models and the role of infrastructure in shaping domestic tourism trends.

2.1 Definition and key determinants of domestic tourism

Research on domestic tourism presents numerous definitions of the term. Llorca-Rodríguez et al. (2020) describe domestic tourism as a subjective concept that can be interpreted and applied differently depending on the circumstances and approaches of the researchers. Kabote et al. (2019), highlighted that the lack of generally accepted definitions makes it difficult to track the movement of domestic tourists, making this form of tourism, to some extent, an "invisible" part of overall tourism activity.

Over the years, researchers have proposed various definitions of domestic tourism, which often contradict each other. According to Bakari (2021), the concepts of "usual environment" and "second home" may overlap, making it difficult to include activities such as visiting relatives and friends as tourism activities. However, all definitions agree on one thing: domestic tourism refers to the movement of people within their country. some definitions focus on the distance traveled from one's usual place of residence, including same-day visitors, or exclude them (Ngondo et al., 2024). Other definitions limit domestic tourism to movements outside the "usual habitat" (Aggarwal et al., 2024), excluding visits to relatives and friends (VFR). Some researchers include all movements within the country (Apriyanti et al., 2024).

According to Song and Li, tourism demand can define as the quantity of tourism products consumed over a given period under different conditions (Song & Li, 2008). Echoing this the study of Stabler et al. (2010) also note the economic nature of tourism demand, whereby tourism demand depends on income, preferences, and prices. Moreover, psychological and social factors also play a role in shaping demand.

Quantitative methods dominate in conducting analysis and forecasting tourism demand. (Song et al., 2010) divide analysis and forecasting methods into the following groups: time series models and econometric models. Time series models analyze historical data and are cost-effective but lack causal relationships, while econometric models are excellent at examining interdependencies and providing policy recommendations. Several studies (Sarwoko et al., 2020; Taupikurrahman, 2022) confirm that econometric models are practical tools for understanding tourism demand.

The literature identifies various factors that influence tourism demand, which are broadly grouped into economic, social, psychological, and environmental factors. According to the literature, socio-economic determinants include income levels, demographic trends, urbanization and vacation timing (Song et al., 2010; Tovmasyan, 2023). Further, economic variables such as income, prices, and transport costs are key to shaping demand. For example, income elasticity of demand has been shown to significantly impact tourist arrivals and tourism receipts.

2.2 The role of infrastructure in domestic tourism

Tourism infrastructure is a fundamental determinant of domestic tourism development. According to the findings of Apriyanti et al. (2024), a well-developed tourism infrastructure, including transportation networks, lodging establishments, and tourist attractions, is critical in attracting domestic tourists. Bakari (2021) emphasizes that the

quality of the infrastructure directly affects tourist satisfaction and the competitiveness of a tourism destination. At the same time, Kabote et al. (2019) indicate that seasonality and uneven tourism distribution limit tourism development in many regions. These disparities often lead to overcrowding in popular destinations and underutilization of resources in less developed regions, further exacerbating regional imbalances.

Later studies by Poghosyan and Tovmasyan (2021) found that a lack of investment in tourism infrastructure remains a significant constraint to domestic tourism expansion in developing countries. Similarly, Murima and Shereni (2023) emphasized that insufficient infrastructure funding hinders sustainable tourism growth and limits the industry's potential. They argue that infrastructure investments should be regionally balanced to promote sustainable tourism growth.

2.3 Economic factors and tourism growth

Several studies have researched the relationship between macroeconomic factors and tourism demand. Song et al. (2010) categorize forecasting methods into time series models and econometric models. Time series models are intended to analyze historical data and trends, but they often lack exploring causal relationships. Econometric models are called to examine interdependencies between tourism and economic indicators, which makes them suitable for formulating policy recommendations (Sarwoko et al., 2020; Taupikurrahman, 2022).

The existing body of literature has consistently indicated that economic growth, measured by GDP, significantly impacts domestic tourism. Oladele et al. (2018) found that growth in GDP per capita increases disposable income, enabling higher spending on tourism activities. However, affordability remains a challenge. Murima and Shereni (2023) highlight that the high costs of tourism services often restrict residents from participating in domestic tourism. Similarly, Bakari (2021) emphasizes that accommodation expenses present a significant barrier, particularly in developing countries.

3. RESEARCH METHODS

This paper uses a quantitative approach using econometric modeling based on assessing the key determinants (factors) affecting the development of domestic tourism in Kazakhstan. In addition, for the reliability of the analysis, other methods were used, including SWOT analysis, to assess the strengths and weaknesses, opportunities and threats shaping the tourism industry.

The scientific work is generally based on panel data obtained from official sources of the Bureau of National Statistics of the Republic of Kazakhstan. In particular, annual statistical reports on tourism, economic indicators and industry specifics of the tourism industry were also used. The panel data set covers the period from 2013 to 2024, which allows for a long-term assessment of domestic tourism trends over the past twelve years.

Data processing and analysis are performed using Excel for data structuring and visualization. Additionally, the Gretl tool was used for correlation and regression modeling and trend analysis. It is noteworthy that the paper uses a structured econometric approach that begins with identifying key economic and infrastructural variables that affect tourist flows, followed by the formulation of hypotheses that suggest the impact of macroeconomic indicators such as GDP, the share of tourism in GDP, the number of tourism-related organizations, and the profitability of accommodation on tourist flows. development of the tourism sector.

This methodological framework combines quantitative and qualitative methods to comprehensively assess the factors determining domestic tourism. It offers empirical evidence that contributes to developing effective tourism development policies and strategies.
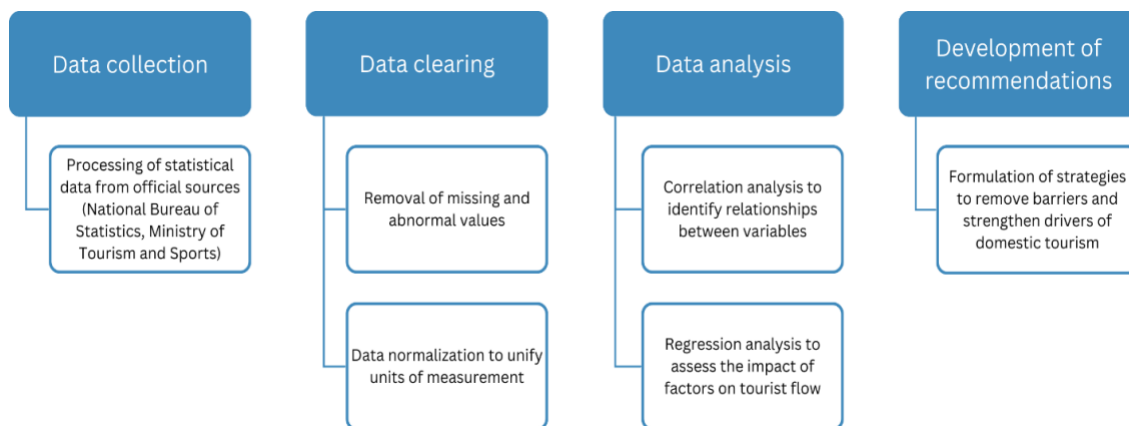
So, the steps of the study are shown in Figure 1.

FIGURE 1. Research stages

Note: compiled by authors

The quantitative research methods used include correlation analysis, which identifies the degree of connection between independent variables (such as the number of accommodation facilities) and the dependent variable (tourist flow), and regression analysis, which constructs a model of the dependence of tourist flow on infrastructure factors, seasonality, and employment.

The multiple regression model formulated in the study has the following appearance by formula (1):

$$Tourists = \beta0 + \beta1 \times GDP + \beta2 * \\ Share\_of\_Tourism\_GDP + \beta3 \times \\ Organizations + \beta4 \times Accom\_Revenue + \\ \beta5 \times Hotel\_Occup + \epsilon \qquad (1)$$

where:

Tourists – the dependent variable that reflects the number of domestic tourists (in thousands of people);

β0 – the constant or free term of the regression that describes the level of the number of tourists at zero values of all explanatory variables;

β1, β2, β3, β4, β5 – coefficients for explanatory variables showing the strength and direction of the influence of each variable on the number of tourists;

ϵ – random error of the model, which includes factors not considered in the model.

The study combines quantitative and qualitative methods to provide a comprehensive analysis of domestic tourism. The chosen methodology ensures the representativeness and reliability of the findings, which allows the offer of practically applicable recommendations for the sustainable development of domestic tourism in Kazakhstan.

4. RESULTS AND DISCUSSION

The study involved constructing an econometric model to identify and quantify the key factors influencing the number of domestic tourists. The model was estimated using the ordinary least squares (OLS) method based on data from 2013–2024. The econometric analysis included an estimate of the regression coefficients (Table 1), an analysis of their statistical significance, and a test of the model for autocorrelation (Table 2). Additionally, graphs were constructed to demonstrate the trends of the variables under study (Figure 2) and time series (Figure 3).

In Table 1, there are results for least squares model.

TABLE 1. Least squares model, observations from 2013-2024

Predictors	Coefficient	St. error	-statistics	p-value
const	-4.98584e+06	1.96140e+06	-2.542	0.0440
GDP	0.0508075	0.0117957	4.307	0.0051
Share_of_tourism_GDP	447484	170463	2.625	0.0393
Organizations	637.838	277.987	2.294	0.0616
Accommodation_Revenue	-0.00481190	0.00592297	-0.8124	0.4476
Hotel_Occupancy	115301	69385.9	1.662	0.1476

Note: compiled by authors

The model estimates the influence of various factors on the dependent variable. Significant predictors ($p < 0.05$) include GDP ($\beta = 0.0508$, $p = 0.0051$) and the share of tourism in GDP ($\beta = 447484$, $p = 0.0393$), which indicates a statistically significant influence of these factors. The number of organizations also has an impact ($p = 0.0616$), but it is borderline significant. Revenue from accommodation ($p = 0.4476$) and hotel occupancy ($p = 0.1476$) had a considerable effect.

In Table 2, there are results for multiple linear regression model.

TABLE 2. Results of the analysis of the multiple linear regression model

Category	Metric	Value
Model Fit	R-squared	0.978973
	Adjusted R-squared	0.961450
	F-statistic (5,6)	55.86861
	P-value (F-statistic)	0.000060
Error Statistics	Sum of squared residuals	4.78e+11
	Standard error of the model	282,306.1
	Standard error of weighted variable	1,437,830
Model Selection Criteria	Log-likelihood	-163.4773
	Akaike Information Criterion (AIC)	338.9547
	Schwarz Criterion (BIC)	341.8641
	Hannan-Quinn Criterion	337.8775
	Durbin-Watson statistic	2.554366

Note: compiled by authors

The average value of the dependent variable is 4,560,958 (thousand tourists), while the standard deviation of the dependent variable is 1,437,830. R-square: 0.978973, which indicates that the selected independent variables explain 97.9% of the variability in the number of tourists. The corrected R-squared is 0.961450, which confirms the high explanatory power of the model, even considering the number of factors included. F-statistic: 55.86861 with a p-value of 0.000060 indicates the significance of the overall model. Checking the model problems - Durbin -Watson statistics (DW = 2.554366): a value close to 2 indicates the absence of autocorrelation of the residuals, confirming the model's reliability.

In Table 3, there are presented results for coefficient analysis.

TABLE 3. Interpretation of coefficients

Variable	Coefficient	Interpretation	P-value	Significance
Const (constant)	-4,985,840	Base value of the number of tourists (in thousands) if all independent variables are 0.	-	-
GDP	0.0508075	A 1 million tenge increase in GDP per capita is associated with an increase in tourists by ~50,808 people.	0.0051	Significant at 1% (very strong)

Share_of_tourism_GDP	447,484	A 1% increase in the share of tourism in GDP is associated with an increase of 447,484 tourists.	0.0393	Significant at 5% (strong)
Organization	637.838	Each additional tourism service organization is associated with ~638 more tourists.	0.0616	Significant at 10% (weak)
Accom_Revenue	0.00481190	A 1,000 tenge increase in accommodation revenue is linked to a decrease of 4.81 tourists (not statistically significant).	0.4476	Not significant
Hotel_Occupancy	115,301	A 1% increase in hotel occupancy is associated with 115,301 more tourists (not statistically significant).	0.1476	Not significant

Note: authors' elaboration

Thus, the key factors influencing the number of tourists are GDP per capita and the share of tourism in GDP. Less significant are the number of organizations and the indicators of income of accommodation facilities and hotel occupancy, which are statistically insignificant. Next, the paper analyzed the relationships between the number of tourists (Tourists) and key economic and tourism indicators (Figure 2).
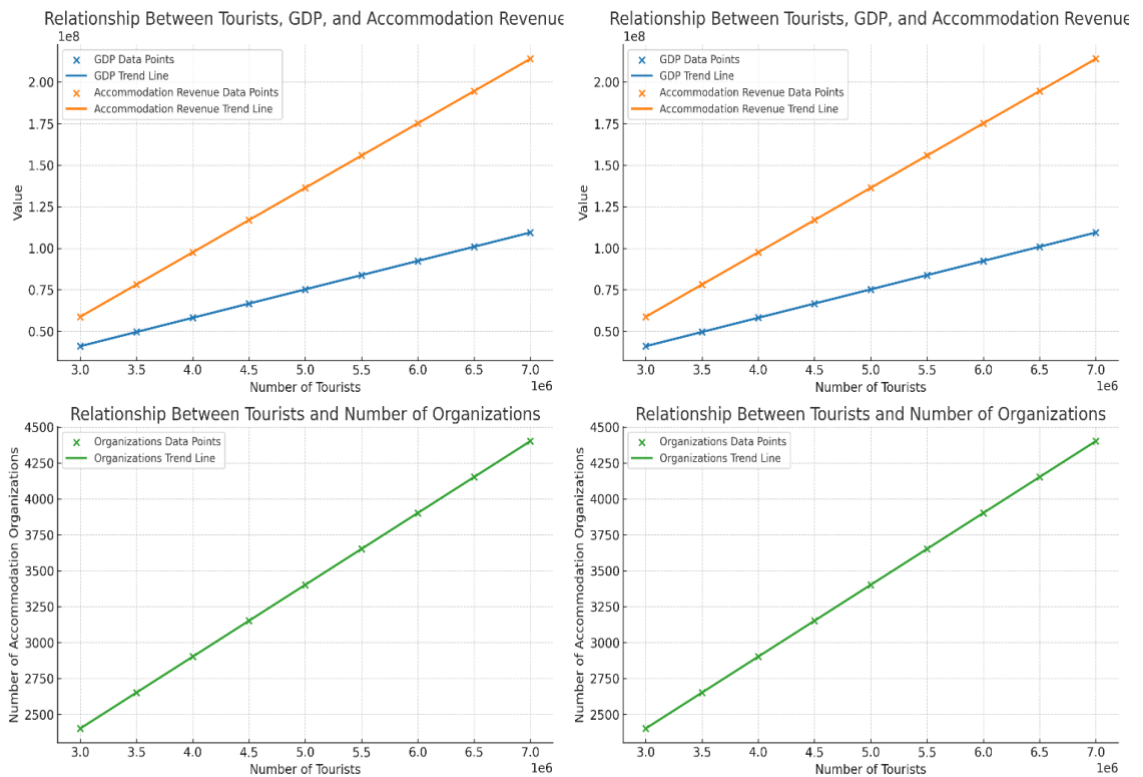

FIGURE 2. Tourism and economic growth: analysis of key factors

Note: authors' elaboration

1. *Number of tourists and GDP (GDP)* – this graph demonstrates a clear positive correlation between the number of tourists and the gross domestic product (GDP). The higher the GDP,

the more tourists. This indicates that the country's economic development stimulates the growth of tourist activity. Thus, GDP growth reflects an improvement in the economic situation, an increase in the population's income and investment in tourism infrastructure. In addition, GDP is an indicator of business activity that affects inbound tourism (for example, business tourism). Thus, GDP is an important factor in the growth of tourist numbers. Sustainable economic growth contributes to the increase of both domestic and inbound tourism.

2. *Number of tourists and the share of tourism in GDP (Share_of_Tourism_GDP)* - the graph shows a weak positive correlation between the number of tourists and the share of tourism in GDP. Although there are observations on the chart that deviate greatly from the general trend (probably periods of crisis or extreme growth), the overall relationship remains positive. The share of tourism in GDP increases, the growth in the number of tourists slows down. This may indicate a saturation effect: if the tourism sector becomes a significant part of the economy, its growth may be limited by internal factors (e.g., infrastructure limitations). At the same time, a decrease in the share of tourism during crises may not mean a drop in the number of tourists, but rather a relative decrease in the contribution of tourism against the background of growth in other sectors. Even though tourism and its share in GDP are closely related, sustainable growth requires measures to improve infrastructure and increase the share of high-income tourism (e.g., luxury or business).

3. *The number of tourists and the number of accommodation organizations (Organization)* – demonstrate a strong positive relationship when, with an increase in the number of accommodation organizations, the number of tourists also increases. This is logical since a more significant number of hotels and accommodation facilities allows for more tourists to be served. That is, an increase in the number of accommodation organizations indicates the development of tourism infrastructure. At the same time, a direct

relationship confirms that the growth of the hotel industry stimulates tourism, providing tourists with a more significant number and variety of accommodation options. However, the concentration of organizations in certain regions can limit tourist flows to less developed areas. Consequently, for further growth of tourism, it is necessary to increase the number of accommodation organizations and evenly distribute facilities across regions.

4. *Number of tourists and accommodation revenue (Accom_Revenue)* – in this case, the graph shows a moderate positive correlation: as accommodation revenue increases, the number of tourists increases. However, certain deviations may be due to the influence of seasonality and the level of accommodation prices. The income of accommodation facilities depends on the number of tourists and the average accommodation cost. This explains the imperfect correlation: high revenues can be observed with a smaller number of tourists due to an increase in the cost of accommodation. Significant deviations from the general trend may also indicate periods when revenue growth occurred due to higher prices rather than increased tourists. It is necessary to increase the tourist flow and ensure the availability of quality offers on the mass market to achieve sustainable growth in the income of accommodation facilities.

5. *Number of tourists and hotel occupancy (Hotel_Occupancy)* – the correlation between the number of tourists and hotel occupancy is observed but not very strong. An increase in the number of tourists does not always lead to an increase in hotel occupancy, as tourists may choose alternative accommodation options. It is necessary to consider seasonal fluctuations and develop strategies to attract tourists during the low season and increase hotel occupancy.

The key factors for tourism growth include economic development (GDP), which plays a significant role in increasing tourist flow; the development of tourism infrastructure and the increase in the number of hotels also stimulate tourism. Constraining factors include seasonality and uneven distribution of tourism infrastructure. Individual indicators, such as

the share of tourism in GDP or hotel occupancy, require an integrated approach to improve efficiency. To ensure stable growth, developing tourism in less-developed regions and supporting market segments associated with high incomes (e.g., business or elite tourism) is important.

Next, Table 3 presents a time series analysis for key tourism indicators.
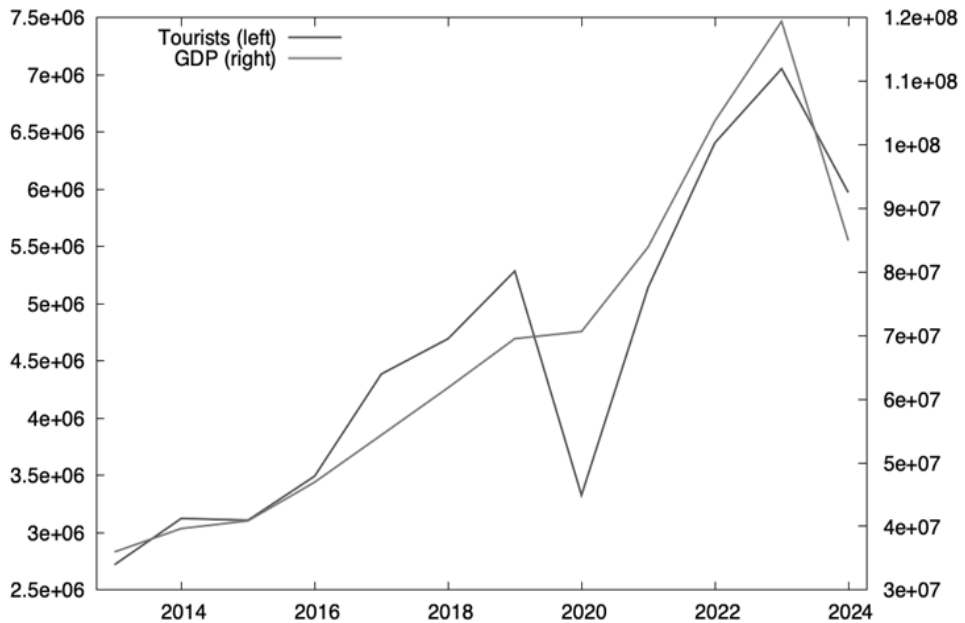
Note: authors' elaboration

These graphs allow for an in-depth analysis of each trend, a more accurate assessment of the situation, and identifying key aspects influencing tourism development.

1. *The number of tourists (Tourists)* has had a clear positive trend since 2013, and key trends have been identified. Between 2013 and 2019, there was gradual and stable growth in the number of tourists, which is associated with developing tourism infrastructure and improving the economic situation. 2020, a sharp decline can be attributed to the COVID-19 pandemic and the introduction of travel restrictions between 2021–2024: post-crisis recovery. Since 2022, tourist numbers have exceeded pre-crisis levels, with a significant recovery in the tourism industry driven by increased domestic tourism and the lifting of restrictions.

2. *Gross domestic product (GDP)* has shown steady growth throughout the analyzed period, wherein the period from 2013 to 2019

there was steady growth, which reflects the stable development of the economy, then 2020 with a slowdown in growth rates during the pandemic, and finally in 2021 to 2024 there is accelerated GDP growth, which is associated with the recovery of the economy after the crisis, the implementation of anti-crisis measures and an increase in business activity. GDP growth creates opportunities for increasing public and private investment in tourism. The positive trend of GDP indicates favourable conditions for tourism development. Economic growth can become a platform for large-scale investment projects in the tourism industry.

3. *The share of tourism in GDP* fluctuated from 2013 to 2018. Then, from 2019 to 2021, there was a decline associated with the pandemic and a reduction in the volume of tourism activities. From 2022 to 2024, a gradual recovery in the share of tourism was noted, but not yet to the level of 2018. The

decline in the share of tourism in GDP, especially in 2020, was affected by the reduction in tourist flows despite the overall growth of GDP. Recovery is possible only if conditions are created for domestic and inbound tourism growth.

4. *Number of accommodation organizations (Organization)* - the dynamics show a stable growth in the number of accommodation organizations during 2013–2024. The increase in growth rates after 2020 is likely due to investments in the development of domestic tourism. A steady increase in hotels and other accommodation facilities improves the infrastructure for receiving tourists. However, growth in 2021–2024 may be uneven, with new accommodation facilities concentrated only in the most popular regions. The increase in the number of accommodation establishments creates a solid basis for tourism growth but requires support in the form of an even distribution of investment across regions.

5. *Accommodation revenue (Accom_ Revenue)* is growing but fluctuating sharply, with steady growth from 2013 to 2019 due to increased tourists and improved infrastructure. Then, in 2020, there was a sharp decline in revenue due to the pandemic, with a recovery period from 2021–2024. Seasonality of demand and external factors such as the

pandemic significantly affect the sector's profitability. Insufficient attention to the development of off-peak tourism may limit further growth. Against such fluctuations attention must be paid to the diversification of tourism products to smooth out seasonal fluctuations and minimize the risks from external shocks.

6. Signficant fluctuations also characterize *Hotel occupancy (Hotel_Occupancy)*. Before the pandemic, there was a slight increase (2013-2019), indicating the development of the sector; then a sharp decline due to the pandemic (2020) and a gradual recovery (2021-2024), but the occupancy level remains unstable. The identified fluctuations indicate problems in demand management: the tourist infrastructure is used unevenly. Seasonal factors have a strong influence and thus, it is necessary to develop measures to stimulate tourism during the low season, such as special promotions and new tourist services.

To develop strategic measures for the tourism industry's sustainable development, we should assess its strengths, weaknesses, threats, and opportunities.

In Table 4, there is presented SWOT matrix and justify the proposals.

TABLE 4. SWOT analysis of the tourism industry of the Republic of Kazakhstan

Strengths	Weaknesses
GDP growth and positive correlation with tourism: − economic development promotes growth of tourism activity; − high GDP stimulates investments in tourism infrastructure and improves purchasing power of the domestic population. Increase in the number of accommodation organizations: − the growing number of hotels and other accommodation facilities makes it possible to serve a larger number of tourists, improving the offer and quality of services; − stable income from accommodation revenue; − accommodation revenues show steady growth, indicating active development of the tourism sector and increased demand for accommodation. Development of tourism infrastructure: the number of accommodation facilities and investment	Uneven distribution of tourism infrastructure: − tourism infrastructure is concentrated in certain regions, which limits the development of tourism in peripheral and rural areas. Seasonality of tourist demand: − hotel occupancy and accommodation revenues are highly dependent on seasonal fluctuations, which reduces the stability of the industry. Restrictions in the high-margin tourism segment: − the prevalence of mass tourism may reduce the profitability of the industry. the luxury, business and cultural tourism segments remain underdeveloped. Weak adaptation to external crises: unpredictable external factors (pandemics,

Possibilities	Threats
in infrastructure indicate progress, especially in developed regions.	economic crises) can have a strong impact on tourism, as recent events have shown.
Development of domestic tourism: – growing interest in domestic tourism creates opportunities to improve regional infrastructure and promote national cultural attractions. Innovation and digitalization: – the introduction of digital technologies (online booking, virtual tours, demand management systems) can increase the convenience and attractiveness of tourism services. Diversification of tourism products: – the development of ecotourism, agrotourism, cultural and event tourism will attract new categories of tourists. Government support: – subsidies, tax incentives and tourism development programs can increase the attractiveness of the industry to investors and stimulate its development.	External economic and political factors: – economic sanctions, currency fluctuations, inflation and political instability can negatively impact the tourism industry. Competition from international tourism: – lower prices for overseas travel could divert domestic demand, especially among high-income tourists. Environmental issues: – mass tourism can have negative impacts on the environment, especially in popular tourist destinations. Shortage of qualified personnel: – the growth of the sector requires more skilled workers, and a lack of professional training may limit development; – strategic measures for sustainable development.

Note: compiled by authors

Based on the SWOT analysis, the following measures are proposed:

1. Development of regional tourism, with a focus on tourism infrastructure in peripheral regions, including improving transport accessibility, developing hotels, promoting local attractions. The implementation of this measure will reduce the burden on popular destinations, increase the influx of tourists to remote areas and ensure more uniform development of the industry.

2. Diversification of the tourism product by creating and promoting new tourism products, such as agrotourism, ecotourism, cultural and historical tourism, event tourism (festivals, conferences). This activity will help attract different categories of tourists, reduce dependence on seasonality and increase the competitiveness of domestic tourism.

3. Development of elite and business tourism, creation of conditions for attracting high-income tourists through investments in elite hotels, conference halls, premium resorts. These measures will increase the profitability of the industry, raise the international status of tourist destinations and strengthen the economy.

4. The introduction of digital technologies based on the creation of digital platforms for tourism management, including booking systems, mobile applications for tourists, and the promotion of virtual tours, will increase the convenience of trip planning, improve the tourist experience, and attract more youth audiences.

5. State support and sustainable development will contribute to tourism development (e.g. through tax incentives for hotels, subsidies for infrastructure development, and personnel training programs). Measures for environmentally responsible tourism are also needed through the introduction of eco-certificates, development, and application of sustainable practices. Government support will encourage investment, while sustainable tourism will reduce environmental threats and improve the country's image.

6. Anti-crisis strategies, including the creation of reserve programs to support the tourism industry in the event of economic or external crises. This measure will help mitigate the impact of unpredictable factors and maintain the sustainability of the industry. Sustainable development of the tourism

industry requires a diversified approach, including strengthening regional tourism, creating new tourism products, digitalization and introducing environmentally responsible practices. Support from the state and business initiatives will ensure not only an increase in the number of tourists, but also an increase in the industry's profitability, its resilience to external threats and contribution to the country's economic development.

Thus, based on the obtained results, the following conclusions can be made: firstly, an increase in GDP per capita and the share of tourism in GDP are the main drivers of growth in the number of tourists; secondly, an increase in the number of organizations providing tourist services also has a positive effect, but weaker. At the same time, the income of accommodation places (Accommodation_ Revenue) and hotel occupancy (Hotel_ Occupancy) do not have a statistically significant effect on the number of tourists in this model. As a recommendation for increasing the number of tourists, emphasis should be placed on economic growth and an increase in the contribution of tourism to GDP. Hotel accommodation revenue and occupancy rates may be better considered in separate models that focus on the economic performance of the hotel business.

Economic factors have a significant impact on tourism development - GDP growth has a direct and significant impact on attracting tourists. This suggests that improving the overall economic situation in the country stimulates tourism. Improving the income level of the population also increases domestic travel. Share of Tourism in GDP is an indicator of the importance of the industry for the economy. An increase in this share has a positive effect on the number of tourists.

The role of tourism infrastructure:

Number of organizations (Organizations) in the tourism sector, including hotels, recreation centers, and other facilities, has a positive effect on the influx of tourists. An increase in the number of such organizations stimulates the development of tourism by improving the availability of services.

Despite weak statistical significance, variables such as Accommodation Revenue and Hotel Occupancy rates still reflect the state of the infrastructure and can be important for improving the overall level of comfort and quality of services.

1. Potential of domestic tourism. Hotel occupancy rates in recent years (23-27 % on average) and growth in accommodation revenues indicate that domestic tourism already plays an important role in the economy. However, low rates during periods of crisis (e.g. 2020) show the vulnerability of the industry to external economic shocks and pandemics.

2. Weaknesses of the current model: Weak statistical significance of the indicators Accommodation Revenue and Hotel Occupancy may indicate insufficient development of infrastructure or that domestic tourism is not yet sufficiently supported at the state level.

As a result of the conducted research, the following recommendations for the development of domestic tourism can be formulated:

1. Priority areas in the development of tourism infrastructure:

- Expansion and improvement of accessibility of tourist sites at the expense of increasing the number of tourism organizations such as hotels, hostels, recreation centers, campsites, and other infrastructure facilities ; and investing in the construction of modern middle- and economy-class hotels to attract broad sections of the population, as well as the development of unique tourism products (for example, ethno-tourism, eco-tourism, cultural and historical routes), which will increase interest in domestic tourism.

- Modernization of transport infrastructure, improvement of accessibility of tourist areas through construction and repair of roads, railways and airports, development of the network of domestic air and rail communications to reduce the time and cost of travel.

- Digitalization of tourism infrastructure by way with the creation and promotion of online

platforms and applications that will allow tourists to book accommodation services, buy tickets and find information about tourist routes, as well as the implementation of digital solutions for assessing tourist feedback (for example, tourist ratings, reviews of accommodation and holiday destinations).

2. Economic policy to support domestic tourism:

- State subsidies and tax incentives - provision of tax preferences for the hotel business and tour operators working with domestic tourists, with subsidies for the development of new tourist infrastructure facilities in remote regions.

- Stimulating domestic tourism by means of from creating cashback programs for domestic tourists (for example, returning part of the cost of accommodation or transportation), to organizing marketing campaigns to popularize domestic tourist destinations.

- Support for small and medium-sized businesses in the tourism sector at the expense of preferential lending for small hotels, campsites, cafes and restaurants operating in tourist areas, and the introduction of a training and certification program for local staff in the hospitality industry.

3. Improving the quality of services provided:

- Personnel training and certification – development programs for advanced training for workers in the tourism sector to ensure high quality service and hospitality, the creation of public or private training centers for training guides, hotel managers, and restaurant workers.

- Improving service standards by implementing national quality standards in the tourism sector (for example, standards for hotels, restaurants, tourist routes), conducting regular audits and monitoring the quality of service to tourists.

4. Development of new tourist destinations - inclusion in domestic tourism programs of regions with unique nature, historical or cultural heritage (for example, Altai, the Caspian Sea, Tien Shan), promotion of ecological and active tourism (for example,

trekking, mountaineering, trips to nature reserves), creation of complex tourist routes with an emphasis on cultural and historical heritage.

5. CONCLUSIONS

The tourism industry is one of the key sectors of the economy that contributes to strengthening regional development, increasing employment, and stimulating social integration. The study examined key economic indicators that influence the development of domestic tourism and the dynamics of their changes based on time series and correlation analysis.

As a result of the study, the following factors significantly impact the development of domestic tourism: economic factors, such as the growth of GDP per capita and an increase in the share of tourism in the economy, stimulate the growth of tourist flows; and infrastructure factors, such as an increase in the number of tourism organizations, expand the availability of tourism services. At the same time, certain aspects were identified that require further attention. For example, variables such as accommodation revenues and hotel occupancy showed weak statistical significance.

The following proposals for changing scientific knowledge and practice are formulated based on the analysis: The need for a systemic approach to developing tourism infrastructure is substantiated. The growth in the number of tourism organizations and the improvement in services provided are directly related to the increase in tourist flows. This conclusion confirms the importance of long-term investment in infrastructure.

The impact of economic policy on the development of domestic tourism has been established. The tourism industry is susceptible to economic shocks and supportive measures from the state, emphasizing the importance of fiscal and administrative initiatives such as tax incentives and subsidies. The development of domestic tourism should take into account regional characteristics and potential, such as

historical and cultural heritage, natural attractions, and the economic activity of the population. The results contribute to the scientific understanding of the factors influencing tourism development in transition economies such as Kazakhstan. A comprehensive combination of economic incentives, infrastructure investments, and government support programs can increase the importance of domestic tourism in the national economy.

The study identified several promising areas for future research: an analysis of the impact of the quality of transport infrastructure and accessibility on the development of domestic tourism and a study of the behavioural factors and preferences of domestic tourists for a more accurate assessment of demand, and the development and testing of sustainable tourism

models taking into account the environmental and cultural characteristics of the regions of Kazakhstan. Thus, this study's results provide a basis for further empirical and applied research and for the development of effective public policy strategies in the field of tourism.

Kazakhstan must balance infrastructure investment and economic support to develop domestic tourism effectively. Demand stimulation programs such as cashback, marketing, and preferential lending will complement long-term infrastructure and personnel training investments. Only a comprehensive approach will increase tourist flow, enhance the industry's economic importance, and stimulate the country's economic growth. The research confirms that domestic tourism development is a significant factor in the growth of the national economy.

AUTHOR CONTRIBUTION

Writing – original draft: Zarina Toleubayeva.
Conceptualization: Kamshat Mussina.
Formal analysis and investigation: Zarina Toleubayeva.
Funding acquisition and research administration: Zarina Toleubayeva, Kamshat Mussina.
Development of research methodology: Zarina Toleubayeva, Kamshat Mussina.
Resources: Zarina Toleubayeva.
Software and supervisions: Kamshat Mussina.
Data collection, analysis and interpretation: Kamshat Mussina.
Visualization: Zarina Toleubayeva.
Writing review and editing research: Kamshat Mussina.

REFERENCES

Aggarwal, A., Lim, W. M., Dandotiya, R., & Kukreja, V. (2024). Dark tourism through the lens of attachment theory and domestic tourists. *International Journal of Tourism Research*, *26*(1). https://doi.org/10.1002/jtr.2609

Apriyanti, M. E., Sumaryoto, & Meirinaldi. (2024). The Importance of Tourism Infrastructure in Increasing Domestic and International Tourism. *International Journal of Research in Vocational Studies (IJRVOCAS)*, *3*(4). https://doi.org/10.53893/ijrvocas.v3i4.46

Bakari, S. (2021). Challenges Facing Domestic Tourism Promotion-A case of Serengeti National Park-Tanzania. https://doi.org/10.13140/RG.2.2.17101.15848

Kabote, F., Mamimine, P. W., & Muranda, Z. (2019). A situational analysis of Zimbabwe's domestic tourists' travel trends. *Cogent Social Sciences*, *5*(1). https://doi.org/10.1080/23311886.2019.1658350

Llorca-Rodríguez, C. M., García-Fernández, R. M., & Casas-Jurado, A. C. (2020). Domestic versus inbound tourism in poverty reduction: evidence from panel data. *Current Issues in Tourism*, *23*(2). https://doi.org/10.1080/13683500.2018.1494701

Murima, S., & Shereni, N. C. (2023). Stakeholders' Perspectives of Domestic Tourism Revival in Namibia Amidst the Covid-19 Pandemic. *African Journal of Hospitality, Tourism and Leisure*, *12*(3). https://doi.org/10.46222/ajhtl.19770720.403

Ngondo, E., Hermann, U., & Venter, D. (2024). Factors influencing the development of domestic tourism in the Erongo region, Namibia. *Journal of Environmental Management and Tourism, 15*(2), 400–415. https://doi.org/10.14505/jemt.v15.2(74).13

Oladele, A. H., Digun-Aweto, O., & Van Der Merwe, P. (2018). The contribution of small-scale fishers to local economic development in coastal communities: A South African perspective. Tourism in Marine Environments, 13(2–3), 165–173. https://doi.org/10.3727/154427318X15276699095952

Poghosyan, K., & Tovmasyan, G. (2021). Modelling and Forecasting Domestic Tourism. Case Study from Armenia. *SocioEconomic Challenges*, *5*(2). https://doi.org/10.21272/sec.5(2).96-110.2021

Sarwoko, S., Raharti, R., Ridwan, R., & Agustina, D. (2020). Pendekatan model gravitasi untuk mengestimasi permintaan pariwisata di Indonesia. *Jurnal Perspektif Ekonomi Darussalam, 6*(2), 163–189. https://doi.org/10.24815/jped.v6i2.17850

Song, H., & Li, G. (2008). Tourism demand modelling and forecasting-A review of recent research. *Tourism Management*, *29*(2). https://doi.org/10.1016/j.tourman.2007.07.016

Song, H., Li, G., Witt, S., & Fei, B. (2010). Tourism Demand Modelling and Forecasting: How Should Demand Be Measured? *Tourism Economics*, *16*. https://doi.org/10.5367/000000010790872213

Stabler, M., Papatheodorou, A., & Sinclair, M. (2010). *The Economics of Tourism*. https://doi.org/10.4324/9780203864272

Tarassow, A. (2019). Practical Empirical Research Using gretl and hansl. *Australian Economic Review*, *52*(2). https://doi.org/10.1111/1467-8462.12324

Taupikurrahman, T. (2022). Determinan permintaan pariwisata internasional di Indonesia: Panel FMOLS. *Forum Ekonomi, 24*(2), 57–72. https://doi.org/10.30872/jfor.v24i2.10915

Tovmasyan, G. (2023). Factors that influence domestic tourism demand: Evidence from Armenia. *Economics and Sociology, 16*(2), 69–84. https://doi.org/10.14254/2071-789X.2023/16-2/5

AUTHOR BIOGRAPHIES

Zarina Toleubayeva – PhD student, L.N. Gumilyov Eurasian National University, Astana, Kazakhstan. Email: toleubayeva_zye_1@enu.kz, ORCID ID: https://orcid.org/0000-0002-7560-4920

*Kamshat Mussina – Cand. Sc. (Econ.), L.N. Gumilyov Eurasian National University, Astana, Kazakhstan. Email: mussina_kp@enu.kz, ORCID ID: https://orcid.org/0000-0002-6772-6338