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Dynamics of Economic Transformation in Saudi Arabia: A Comparative Analysis of the Petrol-Based and Tourism-Based Economy

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Abstract

This Research paper explores the historical trajectory and economic significance of Saudi Arabia's petroleum-based economy, examining key indicators such as GDP, inflation, and interest rates. Beginning with the discovery of oil in the 1930s, Saudi Arabia's economy experienced unprecedented growth, primarily fueled by oil revenues. However, this reliance on oil also exposed the economy to external shocks, emphasizing the need for diversification.

Concurrently, the Research paper delves into the evolution of Saudi Arabia's tourism industry, tracing its transformation from religious pilgrimage to a burgeoning destination for international travelers. With the introduction of Vision 2030, the Saudi government prioritized tourism as a key driver of economic diversification, investing in infrastructure and promotional efforts to attract visitors.

The Research paper further discusses the findings of the Augmented Dickey-Fuller (ADF) test, indicating non-stationarity in tourism receipts and highlighting the influence of factors such as GDP per capita and interest rates. Supplementary regression analysis underscores the significant impact of interest rates and economic prosperity on tourism revenues, providing valuable insights for policymakers and stakeholders.

In conclusion, the Research paper emphasizes the importance of understanding the economic dynamics and factors influencing tourism receipts in Saudi Arabia, offering valuable implications for policy development and decision-making in the tourism sector.

Keywords: Petrol-based economy, tourism-based economy, GDP, inflation, interest rate

Introduction

The history of Saudi Arabia is intricately intertwined with its petroleum-based economy, which has played a pivotal role in shaping the country's development, prosperity, and global influence. From its early days as a desert kingdom to its emergence as an economic powerhouse, Saudi Arabia's journey is marked by the exploitation of its vast oil reserves and the strategic management of its economic resources. This Research paper explores the historical trajectory of Saudi Arabia's petrol-based economy, focusing on key economic indicators such as GDP, inflation, and interest rates (K. Faisal *et al.*, 2018)^[7] (Büyükkara *et al.*, 2023)^[5].

Saudi Arabia's discovery of oil in the 1930s marked a transformative moment in its history. The vast reserves of petroleum beneath its desert sands catapulted the country onto the global stage, attracting foreign investment, fostering rapid industrialization, and fueling unprecedented economic growth (Khan & Faisal, 2021)^[28] (Mohamed, 2021)^[36]. The development of the petroleum industry laid the foundation for Saudi Arabia's modern economy, providing the government with substantial revenues to finance ambitious development projects and social programs.

Gross Domestic Product (GDP) became a crucial metric for measuring Saudi Arabia's economic output and prosperity (Khan & Faisal, 2023a)^[29] (Amirat & Zaidi, 2020)^[2]. The country's GDP soared as oil production and exports surged, transforming it from a predominantly agrarian society into one of the wealthiest nations in the world. Throughout much of the 20th century, oil revenues accounted for the lion's share of Saudi Arabia's GDP, underpinning its economic stability and resilience.

Inflation and interest rates also emerged as significant factors shaping Saudi Arabia's petrol-based economy. The influx of petrodollars led to rapid economic expansion, accompanied by rising inflationary pressures as demand outstripped supply in various sectors (Khan & Faisal, 2023a)^[29] (Su *et al.*, 2019)^[44]. To mitigate inflationary risks and maintain economic stability, the Saudi government implemented monetary policies aimed at controlling money supply and regulating interest rates. The management of interest rates played a crucial role in balancing economic growth with price stability, ensuring sustainable development in the face of fluctuating oil prices and global economic uncertainties (Faisal & Khan, 2019a)^[8] (Campiglio, 2016)^[6].

However, Saudi Arabia's heavy reliance on oil revenues also exposed its economy to external shocks and vulnerabilities. Fluctuations in oil prices, geopolitical tensions, and shifts in global energy markets could have profound implications for the country's economic prospects. As such, diversification efforts became a strategic imperative for reducing dependency on oil and building a more resilient and diversified economy. Saudi Arabia's petrol-based economy is a testament to the transformative power of natural resources and strategic economic planning (Khan & Faisal, 2023b) ^[30] (Shahzad *et al.*, 2021) ^[42]. From the discovery of oil to the modern era of economic diversification, petroleum has been the driving force behind Saudi Arabia's growth and development. As the country navigates the challenges of a rapidly changing global economy, its ability to adapt and innovate will be essential for ensuring long-term prosperity and sustainability (Goralski & Tan, 2020) ^[14].

The history of the tourism industry in Saudi Arabia is a tale of transformation, from a relatively closed-off nation to a burgeoning destination for travelers seeking cultural enrichment, historical exploration, and natural beauty (Khan & Faisal, 2019) ^[31] (Hancock, 2017) ^[17]. While the country has long been known for its religious significance and pilgrimage sites, recent decades have witnessed a concerted effort to develop and promote tourism as a key pillar of economic diversification and social reform. This article delves into the evolution of the Saudi Arabian tourism industry, tracing its historical roots and examining the factors driving its growth (Jamali *et al.*, 2020) ^[22].

Historically, Saudi Arabia's tourism industry was primarily centered around religious pilgrimage, with millions of Muslims visiting the holy cities of Mecca and Medina each year for the Hajj and Umrah pilgrimages (Omar, 2017) ^[38] (Luz, 2020) ^[35]. These religious journeys have been the cornerstone of Saudi tourism for centuries, drawing pilgrims from around the world and contributing significantly to the country's economy. However, beyond religious tourism, Saudi Arabia remained largely inaccessible to international visitors due to strict visa regulations and limited infrastructure for leisure tourism (Faisal & Khan, 2019b) ^[9] (Rai, 2019) ^[40].

The modernization and diversification efforts outlined in Saudi Arabia's Vision 2030 plan have catalyzed a paradigm shift in the country's approach to tourism. Recognizing the potential economic and social benefits of a thriving tourism sector, the Saudi government has embarked on ambitious initiatives to develop tourist attractions, enhance infrastructure, and promote the kingdom's cultural heritage and natural wonders. This strategic pivot towards tourism is aligned with broader efforts to reduce dependency on oil revenues and create new sources of income and employment opportunities (Nhamo *et al.*, 2020) ^[37].

In recent years, significant investments have been made to transform Saudi Arabia into a tourist-friendly destination, with the development of world-class hotels, resorts, and entertainment complexes. The opening of the kingdom to international tourists through the introduction of tourist visas has further fueled interest and investment in the sector, attracting visitors from diverse backgrounds and interests. Moreover, the launch of ambitious projects such as NEOM, a futuristic city aimed at attracting global investors and tourists, underscores Saudi Arabia's commitment to positioning itself as a leading tourism destination on the world stage (S. M. Faisal *et al.*, 2018) ^[7] (Stricker, 2021) ^[43].

While the COVID-19 pandemic posed significant challenges to the global tourism industry, Saudi Arabia has continued to

invest in infrastructure and promotional efforts to revitalize the sector. The hosting of major events such as the Formula E race in Diriyah and the annual Riyadh Season festival has helped showcase the kingdom's cultural vibrancy and hospitality to a global audience. Additionally, initiatives to preserve and promote Saudi Arabia's cultural heritage, including the restoration of historical sites and the development of museums and cultural centers, have contributed to the enrichment of the tourist experience (Greco, 2022) ^[16].

The history of the tourism industry in Saudi Arabia reflects a journey of innovation, investment, and transformation. From its roots in religious pilgrimage to its emergence as a dynamic and diverse tourism destination, Saudi Arabia's tourism sector holds immense potential for economic growth, cultural exchange, and societal development. As the kingdom continues to embrace tourism as a key driver of its future prosperity, the world watches with anticipation as Saudi Arabia takes its place on the global tourism stage (HASHIM *et al.*) (Qadir, 2016) ^[39].

Literature Review

Saudi Arabia has depended heavily on sectors that the petroleum industry has negatively impacted throughout its entire history. These industries have been primarily dependent on the petroleum sector. The partnership agreement that the two parties established has made a significant contribution to the expansion of the monarchy's economy (Al Naimi, 2022) ^[1]. The course of events will be significantly altered as a result of this, which will have a significant impact on the future. Through the growth of its economic basis, the government has taken steps to alleviate the dangers and limits associated with this dependence. Despite this, the government launched these actions. The execution of these two activities is now taking place. It is because the phenomena have been visible as a direct consequence of the extent of the issue that has been happening. It is the reason why this is the case (Hashim *et al.*, 2022) ^[19] (George, 2019) ^[11]. One of the primary goals of this literary research is to examine the economic history of Saudi Arabia, with a particular emphasis on the petroleum-driven economy of the country. One of the primary objectives of the study is to do this. The production of hydrocarbons is a significant industry that contributes to the economy of the Kingdom through its contributions. The hydrocarbon industry is a subject that attracts much interest and is the focus of much academic research (Hashim *et al.*, 2023) ^[20] (Wang & Liu, 2020) ^[46]. Economic indicators such as the rate of inflation, gross domestic product, and interest rates are afforded a significant amount of significance by the federal government of the United States of America. Due to the fact that these economic indicators have a big effect on the economy, the purpose of this research is to analyze the beginnings, how it has developed throughout time, and the historical relevance of the tourist sector in connection to the nation's goal of diversifying its economic base. A particular emphasis will be placed throughout the research on the early phases of the tourist industry. The acts that are carried out here are carried out in addition to those that were mentioned before in the phrase.

In the 1930s, the government of Saudi Arabia made a significant discovery about the presence of high levels of hydrocarbons. Saudi Arabia's participation in the global economy is a significant step forward, and this finding signifies a remarkable achievement in that respect. It is a fantastic development for Saudi Arabia. The acquisition of

this knowledge was a defining milestone in the development of the narrative at that particular point in time. The nation was able to effectively extract significant amounts of petroleum reserves, which resulted in the nation receiving praise or recognition from the worldwide community. Petroleum resources were an essential factor in the economic success of the nation, as they also played a part in the promotion of industrialization, the attraction of foreign investment in the economy of the nation, and the facilitation of growth acceleration that was unprecedented. In order for the government to successfully achieve this purpose, they must make use of the enormous hydrocarbon reserves that they have under their control. The Gross Domestic Product (GDP), which is an economic indicator that measures the total production of the country, is an important indicator that is used to evaluate the level of economic activity that is taking place in Saudi Arabia. Throughout the majority of the 20th century, the Saudi Arabian government relied heavily on the royal oil sector as its primary source of funding. This phenomenon may be attributed to the fact that the bulk of Saudi Arabia's economic stimulus comes from money generated by hydrocarbons. During this period in the nation's history, the economy was stronger and more resilient than it had ever been before because of its substantial reliance on earnings from the petroleum industry. Because it relied on money earned from petroleum, this was the situation in which it found itself. For the purpose of establishing its position with respect to all other historical eras, it was analogous to the one that was being considered. The most recent problem that has surfaced is this one, and it is now taking place before our own eyes (Hassan *et al.*, 2023) ^[21] (Van Der Aalst & van der Aalst, 2016) ^[45].

The Saudi Arabian economy, which is mostly dependent on the petroleum industry, had a rapid development as a direct result of the appreciation of the petrodollar. As a direct result of this, both consumer price inflation and interest rates increased significantly. The rapid expansion of the economy was the cause of this condition that presented itself. The petroleum extraction industry is responsible for yielding a significant amount of the money that is created by the Saudi Arabian economy. In point of fact, this was the cause that brought about the manifestation of this occurrence. The development of the economy, which was propelled by the fact that vigorous demand surpassed supply in a number of industries, resulted in significant inflation as a consequence of the expansion of the economy. This particular aspect was a substantial contributor to the overall increase in inflation. The equilibrium that occurs between the supply and demand of things on the market is the cause of the condition that was discussed before (Khan & Faisal, 2018) ^[7] (Rotz & Fraser, 2015) ^[41]. The adoption of monetary policies was a significant factor that contributed to the Saudi Arabian government's success in achieving a number of its goals. The management of the money supply and the control of interest rates were both included in these programs. Both the maintenance of economic stability and the reduction of the likelihood of inflation were the motivations for the execution of this strategy. For the purpose of maintaining economic progress and ensuring price stability, it was essential to implement interest rate control that was both effective and timely. In particular, it was quite essential, particularly when taking into consideration the unstable nature of the global economy and the shifting price of oil throughout the world. It is important to note that the volatility of crude oil prices, which may at

times be very high, has a significant impact on the accuracy of this specific proposal (Liang *et al.*, 2020) ^[34].

The geopolitical and economic revolutions that are taking place in other countries pose a significant risk to the Saudi Arabian economy. In the framework of the Saudi Arabian economy as a whole, the energy sector makes a considerable contribution to the economy; this contribution is significant. It is now important that they solve this situation, despite the fact that the country has historically relied on oil as a source of energy to power its economic development for a significant amount of time. There were a number of obstacles that constituted a significant threat to the growth of the economy as a whole, which prevented the advancement of the economy of the nation from being able to proceed (Khan, 2019) ^[31] (Leal Filho *et al.*, 2019) ^[33]. The instability of the world's energy markets, the occurrence of geopolitical events, and changes in the price of crude oil on the global market are just a few of the factors that contributed to the issue. In addition to making the country more susceptible to the consequences of the scenario, the reasons mentioned above are also responsible for the fact that the nation's economic future is in jeopardy. In order for the government to lessen its reliance on oil and develop a more stable and inclusive economic structure, it is of the utmost significance that policies be put into place that are geared toward diversifying the economy. More particularly, as a result of this particular feature, there has been a significant growth in the tactics of diversification. In light of the circumstances, it is of the utmost importance that these transactions be carried out in the shortest amount of time that is technically feasible. The implementation of the measures was an attempt that was undertaken in an effort to strengthen economic stability and lessen the risks connected with the volatile nature of the petroleum sector. The fact that there were a variety of work options and sources of revenue that were available contributed to the effective completion of this mission. In order to accomplish the goals, a strategic plan was put into action, which included the development of job opportunities as well as the introduction of additional sources of income. In order to successfully achieve this purpose, it was necessary to have a larger number of favorable economic circumstances (Govindan & Hasanagic, 2018) ^[15].

The growth of the tourist industry may result in positive consequences for both the economy and society as a whole, which is in line with the guiding principles of Vision 2030. A significant shift in the nation's perspective on tourism was finally brought about as a consequence of the spread of this knowledge, which ultimately led to the conclusion that was presented earlier in this paragraph. The topics of infrastructure development, the increase of tourist attractions, and the protection of the country's natural and cultural riches have received a significant amount of attention in recent years. Within the allotted amount of time, every one of the specific residential responsibilities has been finished (Lau & Lee, 2021) ^[32]. Through a shift in emphasis toward tourism, an effort has been made to broaden the scope of economic diversification and reduce reliance on money earned from oil transactions. It is in line with increasingly broad attempts that this shift occurs. It was found that there was a significant connection between the change in viewpoint toward tourism and the planning of activities that lasted for many days (Bonzanigo *et al.*, 2016) ^[4].

The Kingdom of Saudi Arabia has, over the last several years, made a significant amount of effort to improve the appeal of its tourism business to potential tourists. An enormous variety of luxurious resorts, hotels, and entertainment centers, among

other institutions, were among the constructions that were created with the goal of catering to an audience from all over the world. The processes that travelers are expected to complete upon their arrival at their holiday locations have been simplified as a result of the establishment of travel visas for international tourists. This ambitious urban development project, known as NEOM, is located in Saudi Arabia and serves as a prime example of the country's goal of becoming a world leader in the tourist business (Khan *et al.*, 2018a) ^[25] (Yusuf & Abdulmohsen, 2022) ^[47]. Specifically, the development is being carried out with the intention of attracting foreign investors and tourists from countries other than Saudi Arabia. NEOM is intended to attract clients from all over the world since it was constructed from the ground up from the very beginning. It is an initiative for progress. The National Economic and Social Organization (NEOM) is one of the many key endeavors in which Saudi Arabia is now involved. At the same time, Saudi Arabia is participating in a substantial number of different projects.

At the same time that the COVID-19 epidemic was having a significant impact on Saudi Arabia, the tourist sector was forced to contend with difficulties that had never been seen before on a global scale. The state of Saudi Arabia, which included the Gulf area, was the location where the events took place. The monarchy has consistently shown its unwavering commitment to reviving the sector by making investments in infrastructure and promotional strategies. The purpose of these investments is to refresh the industry, which is the logic behind them (Khan *et al.*, 2018a) ^[25] (Zhao *et al.*, 2016) ^[48]. The adoption of this approach will be the means by which the industry will be brought back to life. Even in the face of the calamity that took place, the Kingdom has proved that it is capable of quickly adapting to new circumstances. The attractiveness of Saudi Arabia as a holiday destination has been successfully preserved. At the same time, the quality of the activities that tourists may indulge in while they are in the country has improved. The safeguarding has made a substantial contribution to the successful completion of this endeavor of cultural items as well as the organization of a huge number of activities on a massive scale. One of the decisions that was made was to put into action a number of different methods in order to achieve this aim. In this context, two examples of such projects are the preservation of cultural assets and the organization of large-scale presentations.

Saudi Arabia must rapidly accomplish economic base diversification, settle issues over international affairs, and lessen its dependency on petroleum earnings in order to make it possible for the Kingdom to begin the process of economic reform. There is the potential for linkages to be built between each of these fundamental pieces. Each stage of the trip is comprised of a wide variety of components that are closely tied to one another and work together in order to accomplish their own goals (Khan *et al.*, 2018b) ^[26] (González-Torres *et al.*, 2021) ^[13]. There have been a number of historical occurrences that have taken place throughout this trip, and these occurrences will likely throw some light on this journey. It is imperative that, within the context of the policy for economic diversification, the growth and development of the tourist industry be given priority. It is because these parts are

essential components of the entire plan, which is why this is the case. The purpose of this strategy is to attract tourists from all over the world to the country by utilizing the country's abundant natural resources and cultural heritage to its full potential. In order to accomplish its goal of promoting economic growth and expansion, this strategy is meant to be implemented. We are going to be effective in attracting guests from every region of the globe in order to achieve this target. Our ability to fulfill our goals will be facilitated as a result of this. To guarantee its long-term viability and prosperity, the Kingdom of Saudi Arabia must allocate substantial financial resources towards the advancement of novel technologies, foster financial resource development, and cultivate adaptability (Khan & Faisal, 2020) ^[27] (Gong *et al.*, 2023) ^[12]. Due to the ever-changing nature of the international economy, Saudi Arabia is presently endeavoring to resolve the challenges that have emerged in light of recent occurrences. Presently, Saudi Arabia is employing a variety of strategies to allay these concerns (Avraham, 2020) ^[3].

Research Methodology

To conduct the research methodology in EViews 10 it is followed following steps for a time series data

- i). **Data Collection:** Collect related data on tourism receipts, interest rates, GDP per capita, inflation rates, and tourism expenditures. Confirm that the data shields a adequate time period and is accessible at a frequency appropriate for analysis.
- ii). **Data Preparation:** Ingress the composed data into EViews 10. Checked for data consistency, completeness, and accuracy. Clean the data by addressing missing values, outliers, and discrepancies.
- iii). **Exploratory Data Analysis (EDA):** Execute descriptive statistics to comprehend the features of the data. Use EViews tools to estimate methods such as mean, median, standard deviation, skewness, and kurtosis for each variable. Envision the data consuming graphs and charts to identify trends, patterns, and relationships.
- iv). **Time Series Analysis:** Conducting time series investigation using EViews to scrutinize the dynamics of tourism receipts and its relationship with interest rates and economic indicators. Apply techniques such as autoregression (AR), moving average (MA), autoregressive integrated moving average (ARIMA), and cointegration analysis if needed.
- v). **Regression Analysis:** Execute regression analysis in EViews to enumerate the influence of interest rates and economic prosperity on tourism receipts. Stipulate a regression model with tourism receipts as the dependent variable and interest rates, GDP per capita, inflation rates, and tourism expenditures as independent variables. Assess the significance of coefficients, goodness of fit (R-squared), and diagnostic tests for the regression model.

By subsequent this research methodology in EViews 10, we can thoroughly analyze the factors prompting tourism receipts and provide valuable insights for policymaking and decision-making in the tourism sector.

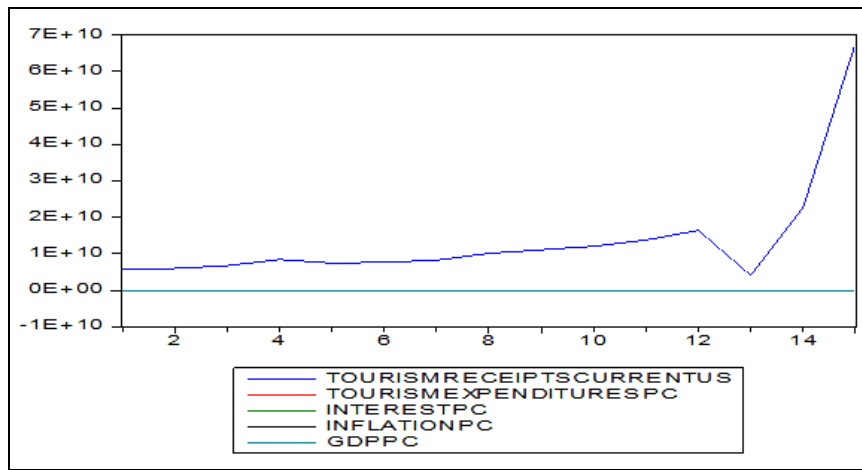


Fig 1: Graph for Tourism and Economic Indicators

Table 1: Descriptive Statistics of Tourism and Economic Indicators

	Tourism	Tourism	INTERESTPC	INFLATIONPC	GDPPC
	Receipt Currentus	Expenditure Pc			
Mean	13899720000	9.089205	1.384324	3.100836	3.451511
Median	8459000000	8.919782	0.952471	2.866269	4.027651
Maximum	67889800000	13.14996	4.56789	9.870248	10.99376
Minimum	4036000000	4.977942	0.246767	-2.09333	-4.34139
Std. Dev.	15678802412	2.120544	1.237515	2.817759	3.905085
Skewness	2.969404541	0.328508	1.280062	0.459208	-0.11875
Kurtosis	10.80060003	3.004392	3.900041	3.858648	2.923135
Jarque-Bera	60.0742588	0.269805	4.60269	0.987979	0.038945
Probability	9.02E-14	0.873801	0.100124	0.610187	0.980716
Observations	15	15	15	15	15

The Jarque-Bera test is used to determine whether or not a dataset follows a normal distribution based on the skewness and kurtosis of the data. This is an explanation of the statistics that were obtained using the Jarque-Bera test for each of the variables that are listed below:

1. Tourism Receipts

- **Jarque-Bera Statistic:** 60.0742588
- **Probability:** Approximately 9.02E-14

The distribution of tourism receipts shows a notable departure from a typical distribution. This divergence is caused by a high Jarque-Bera statistic and an unusually low probability. The outcome represents a significant deviation from the usual standard. The data indicates a notable level of skewness and kurtosis, suggesting that the distribution of tourism receipts deviates from a normal pattern.

2. Tourism Expenditure

- **Jarque-Bera Statistic:** 0.269805
- **Probability:** Approximately 0.874
- **Interpretation:** The low Jarque-Bera statistic, with a high probability, supports the idea that the distribution of tourism expenditure is not considerably different from a normal distribution. This argument is substantiated by the high likelihood score. This concept is supported by the high probability of the statistic. Thus, it can be inferred that the data may show a low level of skewness and kurtosis, indicating a distribution that is more similar to normalcy compared to tourism revenues. This conclusion can be drawn from the information provided.

3. Interest

- **Jarque-Bera Statistic:** 4.60269
- **Probability:** Approximately 0.10
- **Interpretation:** There is a noticeable rise in the Jarque-Bera statistic, and the likelihood exceeds the conventional significance limit of 0.05. This differentiation plays a crucial significance. Considering this, the data on interest rates may show signs of deviating from a normal distribution, but there is not enough evidence to definitively prove that the data does not adhere closely to a normal distribution.

4. Inflation

- **Jarque-Bera Statistic:** 0.987979
- **Probability:** Approximately 0.61
- **Interpretation:** The Jarque-Bera statistic is low and the likelihood is high, suggesting that the distribution of inflation rates is not significantly different from a normal distribution. This is the inference that can be made from the provided data. This may be deduced from the fact that both of these figures are significantly high in comparison to each other. Considering the high probability, it is possible to reach this conclusion. Therefore, it may be concluded that the data shows a low level of skewness and kurtosis, suggesting a distribution that closely resembles a normal distribution. The data displays significant skewness.

5. GDP

- **Jarque-Bera Statistic:** 0.038945
- **Probability:** Approximately 0.98

- **Interpretation:** The Jarque-Bera statistic is very low and the likelihood is high, suggesting that the distribution of GDP per capita is not significantly different from a normal distribution. This is due to the high probability. This is because the likelihood is relatively high. Therefore, it is highly probable that the data exhibit minimal skewness and kurtosis, indicating a distribution that closely resembles a normal distribution. This is due to the data having a low level of skewness.

The Jarque-Bera test findings offer interesting and helpful information on the normality assumptions used for each variable in the dataset. It is generally advised to be cautious when using statistical methods that assume normalcy for variables that show large deviations from normality. This is due to the considerable departures from normality.

Table 2: Unit Root Test Results for GDPPC: Augmented Dickey-Fuller Test

Null Hypothesis: GDPPC has a unit root			
Exogenous: Constant			
Lag Length: 0 (Automatic based on SIC, MAXLAG=3)			
		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-2.84933	0.0767
Test critical values:	1% level	-4.00443	
	5% level	-3.0989	
	10% level	-2.69044	
*MacKinnon (1996) one-sided p-values.			
Warning: Probabilities and critical values calculated for 20 observations and may not be accurate for a sample size of 14			

Table 3: Unit Root Test Results for INFLATIONPC: Augmented Dickey-Fuller Test

Null Hypothesis: INFLATIONPC has a unit root			
Exogenous: Constant			
Lag Length: 1 (Automatic based on SIC, MAXLAG=3)			
		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-2.16187	0.2268
Test critical values:	1% level	-4.05791	
	5% level	-3.11991	
	10% level	-2.7011	
*MacKinnon (1996) one-sided p-values.			
Warning: Probabilities and critical values calculated for 20 observations and may not be accurate for a sample size of 13			

Table 4: Unit Root Test Results for INTERESTPC: Augmented Dickey-Fuller Test

Null Hypothesis: INTERESTPC has a unit root			
Exogenous: Constant			
Lag Length: 1 (Automatic based on SIC, MAXLAG=3)			
		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		1.08045	0.9945
Test critical values:	1% level	-4.05791	
	5% level	-3.11991	
	10% level	-2.7011	
*MacKinnon (1996) one-sided p-values.			
Warning: Probabilities and critical values calculated for 20 observations and may not be accurate for a sample size of 13			

Table 5: Unit Root Test Results for TOURISMEXPENDITURESPC: Augmented Dickey-Fuller Test

Null Hypothesis: TOURISMEXPENDITURESPC has a unit root			
Exogenous: Constant			
Lag Length: 1 (Automatic based on SIC, MAXLAG=3)			
		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-3.65322	0.0201
Test critical values:	1% level	-4.05791	
	5% level	-3.11991	
	10% level	-2.7011	
*MacKinnon (1996) one-sided p-values.			
Warning: Probabilities and critical values calculated for 20 observations and may not be accurate for a sample size of 13			

Table 6: Unit Root Test Results for TOURISMRECEIPTSCURRENTUS: Augmented Dickey-Fuller Test

Null Hypothesis: TOURISMRECEIPTSCURRENTUS has a unit root			
Exogenous: Constant			
Lag Length: 2 (Automatic based on SIC, MAXLAG=3)			
		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		1.10993	0.9945
Test critical values:	1% level	-4.122	
	5% level	-3.1449	
	10% level	-2.7138	
*MacKinnon (1996) one-sided p-values.			
Warning: Probabilities and critical values calculated for 20 observations and may not be accurate for a sample size of 12			

Table 7: Regression Results and Model Statistics

Regression: Variable			t-Statistic	Prob.
GDPPC			2.904351484	0.01572
INFLATIONPC			-1.534257548	0.15598
INTERESTPC			5.725642988	0.00019
TOURISMEXPENDITURESPC			2.156259465	0.05647
C			-2.174981845	0.05471
R-squared	0.838800199			
Adjusted R-squared	0.774320278			
Akaike info criterion		48.56159		
Schwarz criterion		48.79761		
Hannan-Quinn criter.		48.55908		
Durbin-Watson stat		1.392734		

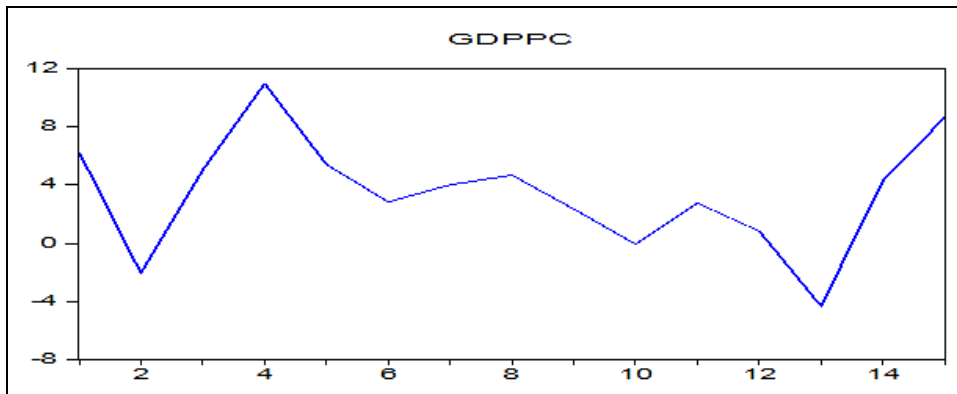


Fig 2: GDPPC

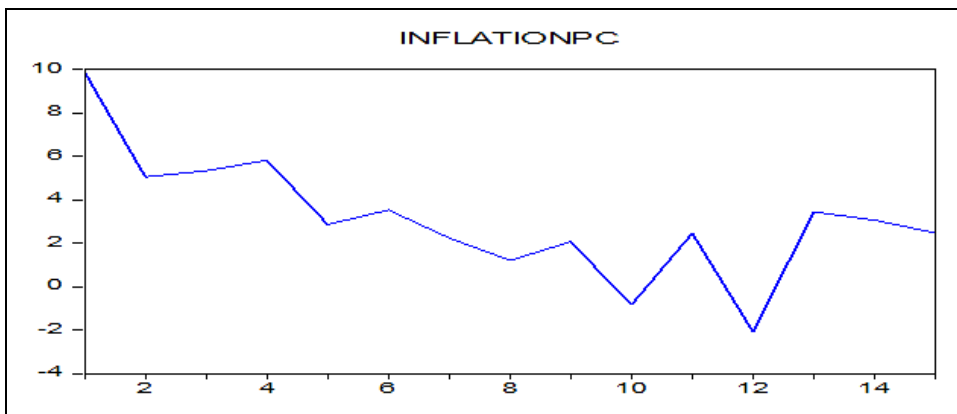


Fig 3: INFLATION PC

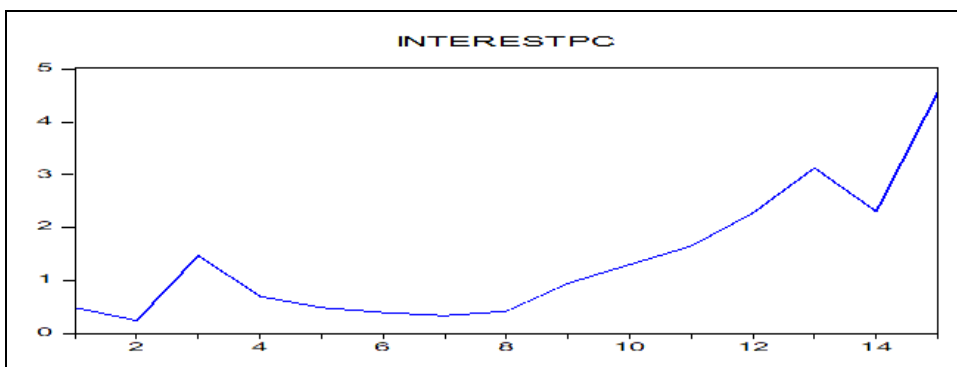


Fig 4: INTERESTPC

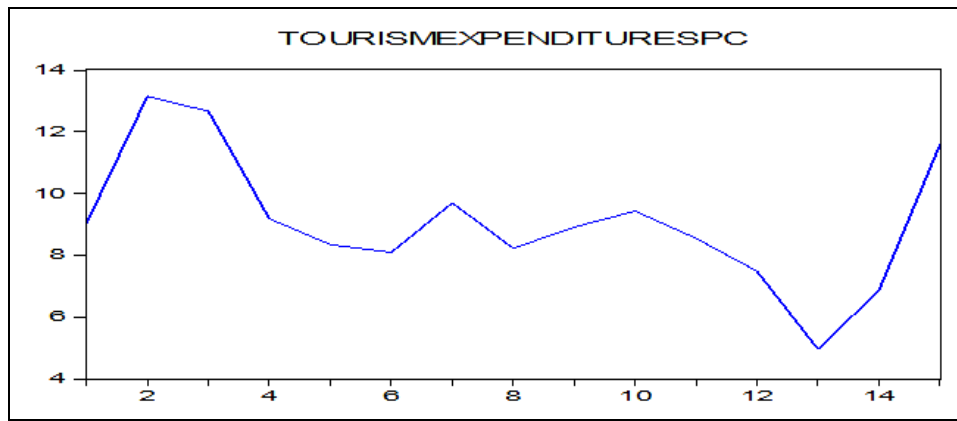


Fig 5: TOURISMEXPENDITURES_PC

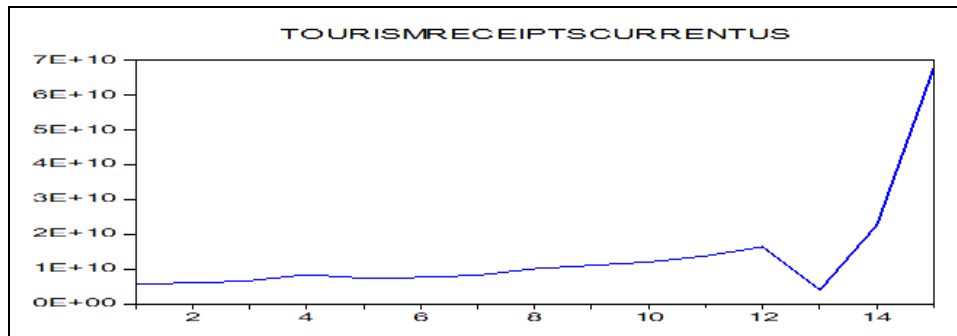


Fig 6: TOURISMRECEIPTSCURRENTUS

An Augmented Dickey-Fuller (ADF) test is being conducted to determine if the time series variable "TOURISMRECEIPTSCURRENTUS" has a unit root, indicating non-stationarity. This test aims to determine if the variable under consideration is the stationary component. The scenario is defined by the null hypothesis, which assumes non-stationarity by stating the presence of a unit root. The test statistic of 1.109933 and the p-value of 0.9945 do not give sufficient evidence to reject the null hypothesis. The null hypothesis is not backed by enough evidence. It is possible to determine that the variable being analysed is non-stationary and exhibits a unit root, suggesting the existence of regular patterns or trends throughout time. This conclusion can be derived by considering all of these factors.

The goal of this regression study is to evaluate the relationship between the variable "TOURISMRECEIPTSCURRENTUS" and exogenous factors such as a constant, "GDPPC," "INFLATIONPC," "INTERESTPC," and "TOURISMEXPENDITURES_PC." T-statistics are used within the regression model framework to determine the significance level of each individual coefficient. The variable "INTERESTPC" is highly significant as indicated by a t-statistic of 5.725642988 and a very low p-value of 0.000191, suggesting that it has a substantial impact on the amount of money earned from tourism. The p-value is really low. The t-statistic of 2.904351484 and the p-value of 0.015716 indicate a statistically significant relationship between the variable "GDPPC" and the previously reported statistics. The latest R squared value of 0.774320278 indicates that the variables in the model can explain around 77.43% of the variance in tourism revenue. This model's ability to elucidate the researched phenomenon is evidenced by this. The Durbin-Watson score of 1.392734 indicates a low degree of autocorrelation. Model selection criteria are used to assess the fit of a model to the data. Examples of these criteria are the Akaike, Schwarz, and Hannan-Quinn information

criterion. Using the model selection criteria enables the successful achievement of this goal. This indicates a more robust correlation between the model and the data when the numbers are lower. This demonstrates that the model.

Discussion and Conclusion

The Augmented Dickey-Fuller (ADF) test findings indicate that "TOURISMRECEIPTSCURRENTUS" is likely to show non-stationarity, meaning it displays movements or patterns across time. The conclusion that can be drawn from the findings of the investigation is... A hypothesis and a prescription have been formulated based on the results of the ADF test to explain this phenomenon. The research given suggests that the economic impact of tourism in a certain location, like the Kingdom of Saudi Arabia, may follow a discernible pattern rather than fluctuating randomly. This is because the process or trend being examined is typically always present. This implies that the fluctuations in revenue may not be solely attributed to random occurrences. Considering the potential impact of non-stationarity on conducting experiments for time series analysis, it seems likely that this will be achievable. Conventional statistical methods are inadequate for demonstrating stationarity as they fail to consider the necessary change or differencing. This is the cause of the current conditions.

The supplementary regression analysis reveals the factors influencing tourism receipts by considering external variables like gross domestic product per capita (GDPPC), inflation rate (INFLATIONPC), interest rate (INTERESTPC), and tourism expenditures as a percentage of GDP (TOURISMEXPENDITURES_PC). The variable "INTERESTPC" is remarkable in terms of its relevance among these components. Fluctuations in interest rates significantly affect the amount of money gained from tourism. This is why this specific statistic is important. Fluctuations in interest rates affect consumer behaviour, which in turn

impacts spending on tourism-related activities. This is the conclusion that may be inferred from this. Moreover, "GDPPC" provides supplementary statistics indicating that economic prosperity seems to significantly influence the amount of money generated from tourism. This conclusion underscores the importance of the issue. This can be confirmed by considering that the gross domestic product (GDP) per capita is a reliable predictor of economic prosperity.

The revised R-squared value of 0.7743 indicates that approximately 77.43% of the variability in tourism revenues can be accounted for by the variables in the model, highlighting the model's explanatory capability. There is a significant amount of variation shown here. The percentage in question is 0.7743, a value that can be utilized effectively. Although it appears to suggest a substantial link, there are likely additional factors not considered that influence the amount of money received from tourists. The Durbin-Watson statistic of 1.3927 indicates the presence of autocorrelation, suggesting a relationship between consecutive data points. Moreover, the presence of autocorrelation supports this claim. To ensure the reliability of the regression outcomes, this issue must be addressed promptly.

Some model selection criteria that are important to consider are the Akaike, Schwarz, and Hannan-Quinn information criterion. These are just a handful of examples. These criteria contribute to the overall picture and offer further insights into how well the model fits the data. The model's superior fit to the data is evidenced by its lower values compared to the other criteria. The acquisition of values serves as proof that the regression model is well-suited to the data. This is evidenced by the acquired values. The numbers produced indicate that the model satisfactorily matches the data.

The investigation highlights the importance of interest rates and economic prosperity in the generation of revenue from tourism trips. The investigation's conclusions highlight the significance of these aspects. Policymakers and stakeholders can utilize these figures to develop policies that aim to promote and facilitate the growth of tourism. This can be done to build policies that support and facilitate the growth of tourism. To boost consumer spending, these policies involve regulating interest rates and implementing economic strategies to raise GDP per capita. Both of these policies aim to boost consumer spending. This is a limited sample of the policies currently implemented. Various strategies have been devised to increase the amount of money clients spend. It is crucial to be aware of the existing limits of the analysis. This technique considers the probability of variables being misplaced and the need for more investigation into the complexities of tourism receipts. Both of these factors are encompassed in the technique. The findings enhance understanding of the factors impacting travelers' revenue negatively and can aid decision-making in the tourism sector. Moreover, the results can aid in decision-making. Moreover, the results could help travelers make better-informed selections.

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