



Tourism and economic growth of Azerbaijan: linkages and impacts

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Abstract

The article deals with the relationship between tourism and economic growth in Azerbaijan. The theoretical bases of economic growth of the country and tourism are considered, and the question of dependence of GDP of the country on development of the tourism sector is studied. The issue of tourism potential of Azerbaijan and the degree of tourism development in the country was also looked at. The impact of economic growth indicators such as gross domestic product and gross national income on international tourism revenues was analyzed. The analysis of the relationship and impact of indicators were based on the correlation and regression method. Statistically significant pair models of interrelation, suitable for forecasting, were obtained.

Keywords: Azerbaijan, tourism, economic growth, econometric analysis, correlation, regression.

Introduction

In the non-oil sector of Azerbaijan, tourism is considered to be one of the most promising areas. Azerbaijan has a strong potential to develop tourism with rich natural and historical-cultural recreation resources. After gaining independence in 1991, a new tourism strategy was developed in the country and an independent tourism policy was started (Bayramli, 2019:332). The problem of the study is that there is a need to identify the factors of dependence of the economic growth of Azerbaijan on tourism in the country, as the tourism industry is promising in most other developing countries. The most important economic feature of the activity connected with the sector of tourism is that it promotes achievement of three priority purposes of the developing and developed countries: an income generation, an employment of the population and a currency receipts. In this regard the sector of tourism can play an important role as the driving force of the economic development. The impact that this industry can have at different stages of economic development depends on the specific characteristics of each country. Considering the complexity of tourist consumption, its economic influence is widely felt in other sectors of production, promoting in each case the achievement of the goals of the accelerated development. For this reason the researches of interrelation of the country's economic growth and tourism in this article were especially relevant.

The disadvantage of the study is the fact that due to the interdependence of the sector with other sectors of the economy, it is difficult to analyze and plan tourism. The lack of reliable statistics makes it difficult to identify the mechanisms by which tourism generates the economic growth. However, where the analysis has been carried out and research has preceded planning, priority has been set, and long-term tourism development programmes are effective. The study of the role of tourism in the economies of different countries is of great relevance in the modern world.

The main objective of this research is studying of the theory of economic growth's interrelation and tourism on the example of the concrete country – Azerbaijan.



Review of literature

In the course of writing of the article for studying of a theoretical part the law of the Azerbaijan Republic on tourism, the masters' theses on problems of the influence of tourism on the regional economy, scientific peer-reviewed articles of domestic and foreign economic magazines and journals were used. In the process of describing the empirical results, textbooks on statistics and econometrics were used by Eliseeva (2016), Kostyunina (2017) and Novikova (2013), as well as statistical data of The World Bank and the United Nations Statistics Division. The Law of the Republic of Azerbaijan on tourism describes the basic concepts of the tourist industry, as well as all the features of tourism in Azerbaijan: the regulation of the industry by the state, the rights and obligations of tourists, the resource potential of Azerbaijan and so on. Aliyeva (2017) analyzes tourism as a perspective kind of economic activity and cultural policy of the country. Gurbatov (2010) considers the sector of tourism in the system of the development of economy on the example of Azerbaijan – he analyzes how strongly the development of tourism is interconnected with the development of economy in the country.

Kum, Aslan and Gungor (2015) analyzed the relationship between tourism activity and economic growth for the Next-11 (N-11) countries. They concluded that the arrival of tourists had a positive impact on GDP growth in N-11 countries. Antonakakis, Draguni and Phillis (2014) investigated the dynamic interrelation between the growth of tourism and the economic growth, and revealed the following empirical regularities: the 1st the relations between tourism and economic growth are unstable as in size eventually. The 2nd, the above-mentioned relations also strongly depend on an economic event as have an impact on it.

Salihova and Akbulaev (2015) examined the tourist sector of Kazakhstan in the period between 1990 and 2014. Time series of gross domestic product (GDP) with variables and the income from tourism were studied by using the VAR model. The obtained empirical results showed that in tourism in Kazakhstan the economic growth does not impact the country's economic growth as it could. Salihova and Akbulaev (2016) also analysed relations between the economic growth and the income from tourism in Azerbaijan on the basis of data relating to the 1990-2014 period. Based on the result of the test, it was established that there is a one-sided relation between tourism revenues and GDP. Such a result indicates that economic growth has a positive effect on tourism. According to the findings, it was determined that a 1% increase in GDP led to an increase of almost 4.2% in tourism revenues during the period under review.

Theoretical bases of the country's and tourism's economic growth

International tourism occupies a special place in the system of international relations and universal values, contributes to the strengthening of positive trends in the economic, political and socio-cultural life of society. Now international tourism remains one of the most dynamic sectors of the world economy, which is developing intensively. This market accounts for 9% of world GDP, 6% of exports, every 11th job (Akbulaev & Mirzayeva, 2020:4).

An economic growth is an increase in production of goods and services for a certain period. The economic growth creates more profit for business. As a result the stock prices grow. It gives to the company the capital for investment and hiring of a bigger number of employees. In the process of the new jobs' creation of the income grows. Consumers have more money for purchase of additional goods and services. Purchases stimulate a higher economic growth. For this reason all countries want a positive economic growth. It presents the economic growth as the most observed economic indicator.



The gross domestic product is the best way to measure economic growth. It takes into account all the economic products of the country. It includes all the goods and services that enterprises in the country produced for sale. It does not matter whether they are sold domestically or abroad (Kazymov, 2018). For many developing countries, tourism is already a major part of their economies and a significant source of income and employment (Gurbatov 2010:102-120).

Economic importance of tourism. Relationship to GDP: Travel and tourism refers to the activities of travelers who travel outside their usual environment for less than one year. Travel and tourism are important economic activities in most countries of the world. In Europe, for example, GDP in tourism and travel is twice that of motor vehicles industry which is an important industry in itself. In addition to the direct economic impact, the industry has a significant indirect impact:

1. The impact is on GDP generated by industries that are directly related to tourists, including hotels, travel agents, airlines and other passenger transport services, as well as the activities of restaurants and entertainment industries that are directly related to tourists. This is equivalent to the country's total domestic travel and tourism expenditure less purchases made by those industries (including imports).
2. A direct contribution to the employment: the number of jobs in the travel and tourism industry increases with the development of the tourism industry.
3. A total contribution to GDP: GDP, generated directly by the travel and tourism sector, plus its indirect impacts.
4. A direct impact on domestic spending, namely, domestic spending by foreign tourists on business and leisure travel, including transport costs but excluding international spending on education.
5. Domestic travel and tourism expenses. Expenses of the country's residents for business and tourist trips.
6. Public individual expenditures: Expenses of the government on services in the sphere of travel and tourism, directly related to visitors, such, as cultural (for example, the museums) or recreational (for example, national parks). Also it concerns expenses on tourism advance, information services for visitors, administrative services and other public services (Stukalo et.al., 2018:27-37).

Tourism also stimulates foreign trade. Considering the cultural, language and temporary distinctions existing between the countries personal meetings are an integral part of development of the international business relations and the key driving force of the world trade. Though the video conferencing and other technologies of remote communication became much more popular in recent years, they supplement business trips rather, than replace them. A rapid growth of business trips is directly connected with a more rapid growth of trade. Business trips are vital for economy of the majority of the countries as developed, and developing. Tourism develops the infrastructure and the industry of services. A demand for travel and tourism - both international and internal - stimulates investments. Travels and tourism also promote an improvement of the infrastructure that in total brings benefit to tourists, local generally developing communities and the economy in general (Nicolaidis, 2015). Growth in the sphere of travels and tourism usually leads to the development of the sphere of restaurant business – restaurants, bars, cafe, shopping centers and other tourist places. It, certainly, helps to improve the quality of locals' life, expanding the opportunities that are available to them in their local community.

Travels and tourism stimulate an injection of the investments into the municipal and transport infrastructure, including roads, the airports, ports, the electric power, the sewerage, drinking water and a communications infrastructure. These investments are a necessary component for travels and tourism and they also give broad advantages to other industries and to directly



locals. The strengthening of city and rural infrastructure due to improvement of the transport infrastructure (air, water, railway and automobile) increases the mobility of people (both tourists, and locals), provides a continuous stream of goods (both to any area, and from it), increases a competitiveness of the area and strengthens the public safety (Stukalo et.all, 2018:27-37). Modern, effective, reliable telecommunications, including broadband access, are crucial for economic wellbeing of many owners of business, including operators of tourism.

Travels and tourism are closely linked to many other sectors of the national economy. Tourism-based businesses create jobs, bring new money to the region, and help diversify the local economic base. Economic diversity is critical to the success of the most rural areas in both developed and developing countries. Travels provide residents with the opportunity to take advantage of the cultural heritage of their local communities and develop goods and services, crafts, local food. These activities provide households with additional livelihoods, thereby helping to reduce poverty. Travels and tourism help in promoting the cultural heritage of local communities. For many countries, cultural tourism has become a key component of their tourism platform, prompting countries to invest heavily in the preservation of cultural heritage along with stakeholders who can add value (Nicolaidis, 2015).

To achieve the desired results, it is necessary to analyze the current state of the economy and identify development trends, conduct modeling and forecasting of socio-economic development, including tourism because it is viewed as one of the most dynamically developing sectors of the world economy is currently international tourism (Aliyeva, 2017:34-38). But tourism can also pose a threat to the country's economy, according to some experts. Thus, the tourism industry can be a threat to sustainable development for the following reasons:

1. Exploitation of local labour by foreign transnational tourism companies. Many tourism workers are migrant workers suffering from poor working conditions.
2. The outflow of income from foreign-owned tourist resorts, many resorts have few local hotels. "All inclusive" tours bring almost no funds to the local economy.
3. External effects are negative in some tourist areas - for example, the effects of construction projects, congestion, waste, pressure on the natural environment.
4. An increase in prices for the real estate makes housing less available to local population (Kazymov, 2018).

Tourism of Azerbaijan

The President of Azerbaijan has entrusted the government with the task of increasing GDP by 200 percent in the next 10 years (Aliyeva, 2017: 34-38). Tourism development will play an important role in this regard. The current law is the Law of the Azerbaijan Republic of June 4, 1999 No. 674-IQ (Law of the Republic of Azerbaijan of 4 June 1999). The law defines the principles of the public policy directed to establishment of legal bases of the uniform tourist market in the Azerbaijan Republic (<http://os.x-pdf.ru/20politologiya/649083-1-nastoyaschiy-zakon-opredelyaet-principi-gosudarstvennoy-politiki-nap.php>, 04/10/2019). Azerbaijan is a wonderful country with rich natural resources, ancient culture, history and people whose way of life represents a unique and harmonious combination of traditions and ceremonies of various cultures and civilizations. The country thus has a huge tourist potential (Gurbatov, 2010: 102-120).

In the territory of Azerbaijan there are more than 6 thousand historical architectural monuments. Climatic conditions of Azerbaijan are also unique. It is known that in Azerbaijan there are 9 climatic zones from 11 existing in the world. In Azerbaijan, there are additionally a number of sanatoriums and resorts that create an opportunity for the treatment of many diseases that are inferior to natural methods of treatment. Nicolaidis and Zigiriadis (2011) argue that countries



are marketing medical tourism destinations and the choices of consumers in this regard are important aspects for the tourism market to consider. Most resorts with mineral spas also function as tourist centers. Nakhchivan is particularly rich in mineral springs; the well-known therapeutic oil field in the world - Naftalan-is absolutely unique.

Some experts believe that one of the best ways to promote tourism as an industry are international tourism exhibitions, which are a segment of business tourism. In 2010, the country's leadership made a serious step for the development of business tourism - a large Expocentre meeting modern requirements was built in Baku. Currently, the number of exhibitions is growing; the areas of already promoted exhibition brands such as Baku Build, COG, AITF and others are increasing. Baku exhibitions are already known far beyond the borders of our country. The Minister of Culture and Tourism Abulfaz Garayev stated that the influx of tourists in Azerbaijan will reach 3-4 million per year (Aliyeva,2017:34-38). As a rule, the growth of tourists has been observed during international competitions and championships held in Azerbaijan.

Methodology and materials

Methods used included a comparative analysis, generalization and analysis of literature which have become theoretical methods of studying of the relationship between the economic growth of Azerbaijan and tourism. The unit of the observation in this study was the dependence of Azerbaijan's GDP on the main results in the tourism industry. To do this, a matrix of paired correlation coefficients was constructed, to which the analysis was applied.

Results

The correlation and regression analysis is used to assess the relationship between tourism and economic growth. The dependent variable (Y) is the effective indicator of tourism – the income from international tourism (International tourism receipts), \$.

The independent variables are considered:

- X1 - number of tourists (International tourism number of arrivals), people;*
- X2 – Gross domestic product (GDP), \$;*
- X3 - Gross national income (GNI), \$.*

The baseline statistics are collected from the international database of the World Bank (DataBank/The World Bank Group, <https://databank.worldbank.org/home.aspx>. 22.09.2019) and the United Nations (DataBank/The World Bank Group, <http://data.un.org/DocumentData.aspx?id=401>. 22.09.2019) for 1995-2017. On basic data the matrix of pair coefficients of correlation by means of the Correlation tool in Excel (table 1) is constructed.

	Y	X ₁	X ₂	X ₃
Y	1			
X ₁	0,839	1		
X ₂	0,783	0,822	1	
X ₃	0,797	0,823	0,999	1

Table 1. Matrix of pair coefficients of correlation

The data of table 1 show that there is a strong direct correlation between the effective indicator and the factor indicators, that is, with the increase in the number of tourists, gross domestic



product and gross national income, the income from international tourism in Azerbaijan is also growing. Also, table 1 shows that there is multicollinearity between all factors (correlation coefficient for factors modulo above 0.7), (Eliseeva, 2016:565) which leads to unreliable estimates of regressions. Therefore, it does not make sense to consider a multiple regression model.

Having constructed pair models of regression by means of the Analysis of Data package of the Regression tool in Excel, the following results – analysis models, are received:

$$\begin{aligned}(1) Y &= - 601354236,148 + 1150,902 \cdot X1, \\(2) Y &= - 105264667,684 + 0,035 \cdot X2, \\(3) Y &= - 109979909,642 + 0,037 \cdot X3.\end{aligned}$$

The multiple coefficient of correlation of each of the received pair models of regression lies ranging from 0.7 up to 0.9 that indicates high communication between dependent and independent variables. The multiple determination coefficient shows that 70.4% of the variation in Azerbaijan's international tourism revenues is due to the variation in the number of tourists, 61.4% to the variation in gross domestic product, and 63.5% to the variation in gross national income. Each of the models (1), (2), and (3) are statistically significant by Fisher's criterion at a significance level of $\alpha=0.05$, and the regression coefficients are statistically significant and reliable at a significance level of $\alpha=0.05$ by Student's criterion (Kostyunin, 2017:285). The economic meaning of the coefficient of the model (1) is that with an increase in the number of tourists per 1 person, the income of international tourism of Azerbaijan grows by an average of \$1,151.

The economic meaning of the coefficient of the model (2) is that with an increase in the gross domestic product of Azerbaijan by \$ 1, the revenues of international tourism of Azerbaijan grow by an average of \$0.04. The economic meaning of the coefficient of the model (3) is that with an increase in the gross national income of Azerbaijan by \$ 1, the income of international tourism of Azerbaijan grows by an average of \$0.04. The average relative approximation errors for each model (1), (2), and (3) were $A1=280\%$, $A2=100\%$, and $A3=93\%$. The values of approximation errors are not included in their optimal values (5-7%) (Novikov, 2013. p.224), which indicates the inadequacy of theoretical data obtained from regression models to real data. The elasticity coefficients were $E1=1.65$, $E2=1.11$ and $E3=1.12$. They show how much the value of income from international tourism of Azerbaijan changes with the factor changing by 1%. Thus, the number of tourists has the strongest impact on Azerbaijan's international tourism revenues.

Discussion

The theoretical significance of the article consists of:

- a comprehensive coverage of the essence of the problem-the relationship of economic growth of the country from the development of tourism;
- identifying specific advantages and disadvantages of tourism for the development of the economy of any country, including Azerbaijan;
- the fact, that its results will serve as an incentive to increase the level of GDP from the development of the tourism industry in Azerbaijan;
- the presentation of a new look at the question of statistical data confirming the dependence, which will expand the approach to its study.

The practical significance of the work is to summarize the experience of creating a matrix of paired correlation coefficients, which characterizes the dependence of the economic growth of Azerbaijan on the results of activities in the tourism industry.



The practical significance of the work also lies specifically in:

- replenishment of the academic and pragmatism base of the industry with the new data, completion of gaps in the theory;
- a proof of prospects of the scientific direction;
- the confirmation of the development's efficiency of tourism in Azerbaijan.

Conclusion

As a result, it can be concluded that tourism is becoming one of the priority areas in the world economy, causing both the development of individual industries and the socio-economic development of entire countries. In some countries, the tourism industry forms a large part of the national wealth of the state. In addition, international tourism has a significant impact on world GDP18.

- Paired regression models characterizing the relationship between international tourism revenues and tourism and economic growth in Azerbaijan are statistically significant, but inadequate to the real data, therefore, the models are not suitable for forecasting, since there is a high probability of an erroneous forecast.
- The results of the construction of paired regression models allow us to conclude about the strong impact of tourism and economic growth of the country. The growth of tourism results in Azerbaijan depends on the growth of the number of tourists, gross domestic product and gross national income of the country, and Vice versa.
- It can be stated that tourism and economic growth have a mutual impact, and, accordingly, to increase the economic growth of Azerbaijan, it is advisable to increase the inflow of international tourists through the development of tourist infrastructure.

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