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Economic Impact of Tourism in Mongolia

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Abstract

The natural and cultural resources of Mongolia play a crucial role in attracting foreign tourists to the country. The impact that tourism expenditure has on the economy is dependent on the total number of domestic and foreign tourists, as well as the spending behavior of each tourist. The purpose of this study is to evaluate the economic impact of tourism at both macro and micro levels, as well as to diversify an economy that currently relies heavily on mining. Based on the main results of the questionnaire survey, it was found that 29.2% of foreign tourists visited Mongolia for leisure and spent between 3000 - 5000 US dollars. On the other hand, domestic travelers usually travel for 4 - 6 days and spend more than 1 million MNT. When assessing the economic impact of tourism through a survey of domestic and foreign tourists, over 70% of the respondents agreed that it would increase employment, create new investment opportunities, and support the local economy.

Keywords

1. Introduction

Tourism is a powerful economic force providing employment, foreign exchange, income, and tax revenue. The generators of economic impact for a city, a state, a province, a country, or a destination area are visitors, their expenditures, and the multiplier effect. The economic impact of tourism spending is a function of the numbers of domestic and international visitors and their expenditures (Charles & Brent, 2011). Tourism is one of the major sectors of foreign trade, occupying a significant place in the economy, depending on the country's characteristics. Regarding the reception of tourists, the impact is determined by indicators such

as income, employment rate, balance of payments in the region, and investment (Holloway, 2009). Typically, tourism can be thought of as a bundle of goods and services combined together with a fixed proportion. This is because tourists, for instance, cannot substitute transportation for food, hotels or other services (Fateme, 2011). Outbound tourism demanded by households is a function of disposable incomes. Inbound tourism demanded by foreigners is a function of tourism prices and exchange rates (Wattanakuljarus, 2006). Economic effect analysis identifies interrelationships between economic industries and estimates economic changes resulting from actions taken (Stynes, 1997). Economic impact is calculated from the supply side, demand side, and economic efficiency side, and is used for decision-making.

Mongolia's tourism sector is 40% of the economy, and service trade exports are essential for diversification. This share alone is made up of stakeholders from many sectors of the economy. It is a special branch of business that works closely together. Mongolia's natural and cultural resources are the main conditions for attracting foreign tourists. Mongolia currently ranks 93 out of 140 countries with 3.5 points in terms of tourism competitiveness (World Economic Forum, 2024).

Depending on the levels of demand and supply, tourism has both positive and negative effects on the economy; this is mentioned in detail in "Estimating the Environmental, social, and Economic Effect of Tourism" by Navchaa, Erdenetuul, and Gansukh (Navchaa et al., 2013). Several studies describe the impact of tourism on the country's economy at the macro level. Notwithstanding, studies that explain how it affects household income and participation are limited to questionnaires. Therefore, this study also includes details of herder households' investment costs and returns. The practical significance of this research is that the participation of herder families in tourism was calculated by order of the Sustainable Tourism Development Center in several scenarios: offering only one type of product and service, offering a package of tourism services, and providing tourism support services.

The purpose of this study is to examine the economic impact of tourism both at the macro and micro levels. The research has set the following objectives: forecasting the percentage of tourism's contribution to the GDP by the year 2035, identifying the extent of participation of herder households in the tourism industry, and evaluating the profitability of tourism businesses run by herder households.

The rest of the paper is organized as follows. The purpose of the study is explained in Section 2. The proposed methodology is explained in detail in Section 3. Section 4 discusses the results. Finally, the conclusions are given in Section 5.

2. Conceptual Approach

A variety of economic analyses is carried out to support tourism decisions. These different kinds of economic analysis are frequently confused, which are within the broader set of economic problems and techniques relevant to tourism.

Determining the economic effect of tourism establishes how the cash flow of spending or purchases by tourists is distributed across different industries of the economy and increases income along the supply chain. Therefore, the effects of tourism are classified as direct, indirect, and induced effects, the sum of which determines the cumulative impact on the economy. One direct effect is an output adjustment associated with a change in tourism spending. For example, an upturn in the number of tourists staying overnight in a hotel will directly increase the sales of the hotel industry. Accordingly, variations in hotel wages, taxes, supplies, and hotel fees fall into this category. Indirect effects are the changes in production resulting from re-spending the aforementioned hotel income at different stages. Induced effects are manifested by households and governments spending the revenue produced through employment and tax income generated by those mentioned above, as well as direct and indirect effects. Thus, it can be stated that the total demand is increased by the income generated by direct and indirect effects (IMPLAN, 1999).

The study used an input-output model to determine the economic impact at the macro level, which considers the linkages between economic industries from an equal point of view. Input-output tables were developed at national and regional levels, and impacts were calculated using cross-industry multipliers. The effects of tourism on the economy of Ulaanbaatar were determined by the Marketmetrics research company in 2015, and the same methodology was used to calculate them (Marketmetrics, 2015).

The macroeconomic analysis techniques developed from the most simplistic Keynesian-type multipliers, to more advanced Input-Output (I-O) models. It takes into account inter-sectoral linkages in the economy from an equilibrium perspective. Therefore, it provides policymakers with a comprehensive view of the economy. The framework is built on an I-O table on a national or regional level. It assumes a linear relationship between inputs and outputs in an economic system. A variety of multipliers relating to output, income, government revenue, employment, and imports can be derived from input-output analysis. The input-output analysis relies on the input-output table, which illustrates the money flow between sectors within a region's economy. Based on this table an input-output model can be drawn up. Input-output models' main purpose is to analyze the effect of change in demand in one particular sector on the economy. The output of particular sectors is sold to other industry sectors within the analyzed economy, which will record the purchasing as input for their production. This information is collected in the inter-industry transaction table which illustrates the trade network within the economy (Brian & John, 1996). When we use the above Input-Output model, the multipliers are needed to calculate. The multipliers explain how much the economy will increase or decrease because of a change in the final demand. Multipliers are a secondary economic effect of tourism activity that is simply the sum of direct effects, indirect effects, and induced

effects. The relationship between the initial spending and the total effects generated by the spending is known as the multiplier effect of the subsector, or more generally, as the impact of the subsector on the economy as a whole. Differences between direct, indirect, induced, and total multiplier effects are of economic significance (Siti Nadiah Ahmad Fuad, 2011).

The income multiplier is calculated as follows:

$$\text{Type I Income multiplier} = \frac{\text{direct income} + \text{indirect income}}{\text{direct icome}} \tag{1}$$

The Type II or III income multiplier

$$= \frac{\text{direct income} + \text{indirect income} + \text{induced income}}{\text{direct icome}} \tag{2}$$

Multiplying a Type I sales multiplier times the direct sales gives direct plus indirect sales. Multiplying a Type II or III sales multiplier times the direct sales gives total sales impacts including direct, indirect, and induced effects. The multipliers defined above are called ratio type multipliers as they measure the ratio of a total impact measure to the corresponding direct impact. Comparable income and employment ratio type multipliers may be defined by replacing sales with measures of income or employment in the above equations. Ratio multipliers should be used with caution.

In most cases the factory that produces the good bought by a tourist lies outside of the local region, creating an immediate "leakage" in the first round of spending and therefore no local impact from the production of the good. Before applying a multiplier to tourist spending, one must first deduct the producer prices of all imported goods that tourists buy (i.e. only include the local retail margins and possibly wholesale and transportation margins if these firms lie within the region). Generally, only 60% to 70% of tourist spending appears as final demand in a local region. While all tourist purchases of services will accrue to the local region as final demand, only the margins on goods purchased at retail stores should be counted as a local final demand. The ratio of local final demand to tourist spending is called the capture rate.

Capture rate = local final demand/tourism spending in the local area

Capture rates, like multipliers, will vary with the size and nature of the region as well as the kind of tourist spending included. One must therefore be cautious in taking a multiplier or capture rate cited in one study and using it in another. Another way of calculating a multiplier (generally the preferred approach among economists) is as a ratio of income or employment to sales. This kind of multiplier is sometimes called a Keynesian multiplier or response coefficient (Daniel, 2020).

$$\text{Type III Income multiplier} = \frac{\text{Total direct, indirect, and induced income}}{\text{direct sales}}$$

$$\text{Type III Employment multiplier} = \frac{\text{Total direct, indirect, and induced employment}}{\text{direct sales}}$$

3. Research Methodology

A cost-benefit analysis approach will be used to determine the economic benefits of participating in herder households' tourism businesses. Three different scenarios were calculated for the expenditures, depending on the products and services the herder household could supply. The income projections were also calculated using four scenarios: 25 percent, 50 percent, 75 percent, and 100 percent of capacity utilization. The E-VIEWS program was used for the quantitative analysis, a questionnaire was collected from the participants to determine the positive and negative effects of the economy using the SPSS 26.0 program. The research team collected questionnaires from local travelers and foreign tourists, and the sample size was calculated as follows.

The local participants of the survey were people above the age of 15 residing in Ulaanbaatar, Mongolia, who used to travel around the country. To design the statistical population, the following formula was used in this study:

(At the confidence level of 95%, 0.05 population variable)

$$n = \frac{N}{1 + Ne^2}$$

When n: Size of a sample group.

N: Size of the target population, which is the number of the population of Mongolia, according to the annual statistics report of the National Statistic Organization as of 2021, the population of Mongolia over the age of 15 is 2,287,463.

e: Inexactness from sampling at confidence level at 95%

$$n = \frac{2,287,463}{1 + 2,287,463(0.05)^2}$$

$$n = 119$$

Although the sample size was 119, this research was considered sufficient to include 130 people in the sample survey. Before this, a pre-test consisting of 15 surveys was carried out to detect any deviations or errors. Since all of the answers were clear to understand and, the respondents elaborated their concerns in the questionnaire, we used the same questions and formats for the survey. We received a total of 145 submitted surveys, out of which 130 were valid. Therefore, the response rate was 89.6%, as 130 individuals completed the questionnaire out of the 145 who submitted it.

Due to the Covid pandemic situation, there was no chance to visit the attraction and get a survey from foreign tourists, the questionnaire survey was conducted online. We defined the statistical population by choosing the population who had searched Mongolia on Google and the average number of tourists every year before the Pandemic. Then using the above-mentioned formula, the target sample size was calculated as 96. This study sent an online questionnaire survey to 130 tourists, the total number of valid surveys obtained was 97 with a response rate of 74.6%.

4. Results of the Research

A total of 130 domestic travelers and 97 foreign tourists participated in the questionnaire to determine tourism's economic impact. The standard error of the sample was calculated within 10 percent.

The participants are a representation of the foreign tourists females are a little bit higher than the male gender distribution: 44.3% males and 55.7% females. Most of its tourists belong to those in the working age of 26 - 45 years (70.3%) with a high proportion of respondents work in the business or private sector (46.4%).

The participants are a representation of the Mongolian tourists with almost equal gender distribution: 48% males and 52% females. Most of its tourists belong to those in the working age of 30 - 39 years (46.2%) with a high proportion of bachelor's and higher education level (89.2%). According to the research results, 97.7 percent of the respondents travel for leisure and spend an average of 1,355,000 MNT for 4 - 6 days. On average, domestic travelers spend 400,000 MNT on transportation, 250,000 MNT on accommodation, 400,000 MNT on food, and 100,000 MNT on other services from herders (Table 1).

Furthermore, Table 2 shows that most respondents, over 70 percent, agreed that tourism creates jobs and a favorable economic environment, as well as attracting new businesses and investments.

Based on the 2019 national accounting system and inter-industry balance, it was calculated that the income multiplier for 2022-2035. The I income multiplier is 1.50, the II income multiplier is 1.91, and the income multiplier is estimated to be 1.51. The direct and indirect effects of tourism are shown in Table 3.

Table 1. Expenditure structure of surveyed domestic travelers.

Type of expenditure	Transportation	Accommodation	Food	Service	Souvenirs	Others
Average	446000.0	387054.3	594192.3	95346.9	101230.8	349846.2
Median	400000.0	250000.0	400000.0	100000.0	80000.0	125000.0
Mode	500000.0	200000.0	500000.0	100000.0	100000.0	100000.0
Maximum value	3000000.0	5000000.0	10000000.0	500000.0	500000.0	10000000.0

a. Source: From the results of a questionnaire survey.

Table 2. Respondents' perception of economic effect.

Economic influence	Totally disagree	Disagree	Hesitant	Agree	Totally agree	Cronbach's alpha	average
1. Tourism increases employment in the local region.	2.3	8.5	16.9	32.3	40.0		3.99
2. When tourists come, it creates favorable conditions in all economic industries.	1.5	6.9	20.8	32.3	38.5		3.99
3. Tourism encourages new business and new investment in the region.	1.5	9.2	23.1	31.5	34.6	0.94	3.88
4. The number of self-employed people in the region increases.	0.8	6.2	19.2	35.4	38.5		4.05

If the above results are expressed as a percentage, it can be seen from **Figure 1** that tourism income is expected to reach 20 percent of GDP.

After the macro-level analysis, the calculation of the necessary expenditure for the pastoral family to participate in the tourism business, including house rental services, food and beverage services, horse riding, and other rental services, was estimated to be a minimum initial investment of 7113000 MNT. Assuming that prices are set at $20 - $60 depending on the type of tourism product, the revenue outlook is as follows (**Table 4**).

Based on the above income and expenditure calculations, the cost and benefit analysis shows that it is possible to cover all expenses with expected income within 47 days (**Figure 2**).

Table 3. Estimates of I and II multipliers and income multipliers/million $/.

	Multiplier		Expenditure		Income		
	Number of tourists	Direct and indirect effects	Induced effect	Total effect	Direct and indirect effects	Induced effect	Total effect
2022	572013.1	5014.62	6377.95	11392.57	5035.76	808.18	5843.94
2023	590312.2	5175.04	6581.99	11757.03	5196.85	834.04	6030.89
2024	608611.2	5335.46	6786.02	12121.48	5357.95	859.89	6217.84
2025	626910.2	5495.88	6990.06	12485.94	5519.05	885.74	6404.79
2026	645209.3	5656.30	7194.09	12850.40	5680.14	911.60	6591.74
2027	663508.3	5816.72	7398.13	13214.85	5841.24	937.45	6778.69
2028	681807.3	5977.14	7602.16	13579.30	6002.34	963.31	6965.64
2029	700106.3	6137.56	7806.19	13943.76	6163.43	989.16	7152.59
2030	718405.4	6297.99	8010.23	14308.22	6324.53	1015.01	7339.55
2031	736704.4	6458.41	8214.26	14672.67	6485.63	1040.87	7526.50
2032	755003.4	6618.83	8418.30	15037.12	6646.72	1066.72	7713.45
2033	773302.5	6779.25	8622.33	15401.58	6807.82	1092.58	7900.40
2034	791601.5	6939.67	8826.37	15766.03	6968.92	1118.43	8087.35
2035	809900.5	7100.09	9030.40	16130.49	7130.02	1144.29	8274.30

Table 4. Outlook of potential income/by thousand MNT/.

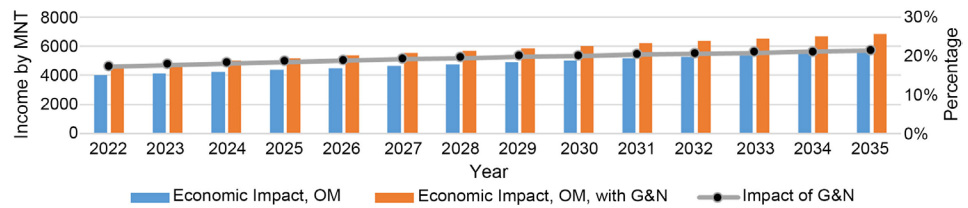|		Capacity utilization			
		25%	50%	75%	100%
Domestic tourists		600.0	1200.0	1800.0	2400.0
Foreign tourists	Product 1*	1712.0	4280.0	5992.0	7704.0
	Product 2*	1552.0	3880.0	5432.0	6984.0
	Product 3*	1244.0	1244.0	2488.0	3732.0
Total income		5108.0	10604.0	15712.0	20820.0
Average daily income		340.5	353.5	349.2	347.0

Figure 1. Economic effect outlook. Source: National Statistics Office of Mongolia.
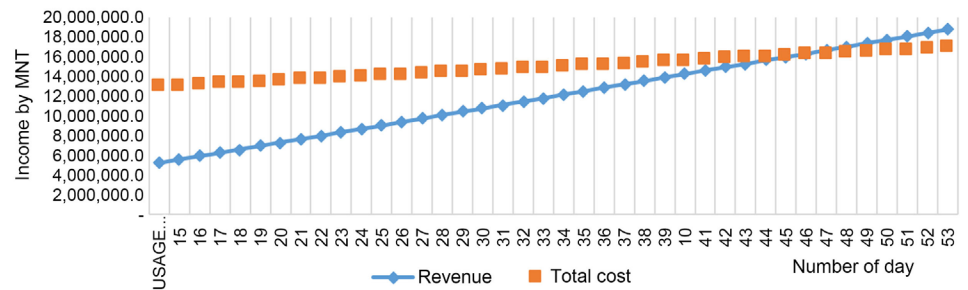

Figure 2. Cost-benefit analysis results. Source: National Statistics Office of Mongolia.

5. Conclusion

To determine the economic effect of tourism at the macro and micro level, this research work was carried out by combining the input-output model, cost-effectiveness analysis, and questionnaire research methods. At the macro level, the share of tourism in GDP is predicted until 2035 using the multiplier method, and the share of tourism income is expected to increase from 11 percent to 20 percent within this timeline.

When determining the positive and negative economic effects of tourism through a survey of domestic and foreign tourists, more than 70 percent of the respondents agreed that it would increase the employment rate, create new investments, and support the local economy. In addition, it was found that domestic travelers travel for an average of 4 - 6 days and spend more than 1 million MNT.

Assuming that the number of tourists visiting Mongolia is normal and reflects the effects of the scheme with average cost per tourist is USD 2048. In this case, the economic impact of this sector is likely to increase. The key is to properly identify ways to revitalize the sector after COVID-19 at the policy level.

Although tourism has been proven to support the local economy, the barrier to entry for herder households based on initial investment expenditure, and potential income estimates, for herder households wishing to engage in tourism is calculated by a cost-benefit analysis, and the analysis showed that it could provide a return on investment within the first year. The study determined the opportunity to recover the expenditure within 47 days. Therefore, tourism can potentially change economic diversity by attracting local people into the industry.

Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

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