Role of Tourism in Income Generation of Gilgit-Baltistan

Atta Ullah Khan,
Assistant Professor, Department of Economics, Allama Iqbal Open University, Islamabad.

Nuzhat Batool,
M.Phil Scholar, Department of Economics, Preston University, Islamabad.

Muhammad Asif Chuadhry,
Head of Department, Management Sciences, Shifa Tameer-e-Millat, University, Islamabad. Email: asif.epm@gmail.com, hod.dms@stmu.edu.pk

Abstract:-
The tourism is an emerging sector across the developing world and contributing considerably in the income generation; thereby perpetuating the stagnant household economies. The present research examines the role of tourism in income generation of households in Gilgit-Baltistan. Non-probability sampling method has been employed to collect the primary data from the families, which are basically dependent upon tourism in the study area. The data collection technique based upon closed-ended and open-ended questions to gather response from 200 tourists. The methodological formation contains the Descriptive statistics, T-test and Regression analysis. The results of T-test show that the contribution of family tourists and international tourists is higher as compare to non-family tourist and national tourist. It reveals through the results that people who come with the motive of business in Gilgit-Baltistan (GB) are less responsive to income generation in GB as a compared to person how come from sightseeing purpose. On the other hand, the results of FRGN (foreign tourists) expose significant and positive contribution in income generation in GB than those persons who belong to the home country and visit GB.

Keywords: Tourism; Expenditures; Income generation; Gilgit-Baltistan
1. Introduction
Tourism is the world largest industry and universally acknowledged as an important sector for promoting the economy. In many countries, tourism is the main instrument to develop economic growth and stimulate new economic activities (Banskota, 2012). Tourism increases demand goods and services and creates employment opportunities within the economy and helps to develop the infrastructure of a country; thereby generating economic benefits to host communities. In addition to this, it also raises awareness of the local community and directly & indirectly supports economically to the indigenous region (Khalil, 2007). Through the promotion of tourism, the less develop countries increase revenue and earnings, which consequently reduces poverty and enhance earning avenues. Fauzel (2016) examine that tourism supported labour market and provides employment opportunities in small scale. Moreover, tourism increases communication network and infrastructure. Several policies for tourism development have been found to be effective in creating employment. In many developing countries, tourism helps to develop their technology, economic growth and it also promotes quality of life, education and labour skills. The developments of tourism provide good opportunities to help reduce poverty because it is often a new source of revenue in rural areas. It raises awareness and supports economically direct and indirect of the local region. In context of touristic sense, culture refers people and their social characteristics, traditions, and behavior which make them out as a different and representations of creative endeavor. The growth of tourism industry increases the demand for product and services of tourism. In the world one of the productive businesses is tourism. In literature, there are various definitions of tourism but some important definitions as under: For example; Ahmad (2016) defines tourism, the total sum of operations, mainly of economic nature, which directly relates to the entry, stay and movement of foreigners inside and outside a country, city or region. According to Malik et al. (2010), a person who travels and stays outside his environment for a period of less than one year for the purpose of office work, leisure and other purpose is called tourism.

1.1.1 Tourism Industry
Most of developing countries like Pakistan have a low economic growth. Pakistan faces the problems of poverty, high inflation, and low-income generation. Tourism also improves the country’s balance of payments accounts by reducing current account deficit, creates jobs opportunities and introduces new technology systems. Aynalem, et al., (2016) investigated tourism is a labour intensive and a significant source of employment in developing countries. It is flourishes skills and allows for the quick entry into the workforce. Tourism also helps to promote gender equality by employing a high proportion of women. Pakistan has a great prospective for the tourism due to its different geographical tradition and background. In the context of tourism, Northern Areas are the most important part of Pakistan. Northern Areas became a separate governmental unit in 1970. Pakistan Government gave self-governing status to northern areas on August 29, 2009, under the title of Gilgit-Baltistan. Khan (2012) explained that Gilgit-Baltistan (GB) covers the total area of 72,971 km² (28,174 sq mi). Its estimated population is 1,800,000. This region is full of natural resources like gemstones, mineral resources and trout fish which attract many national and international tourists every year. Bansal (2008) explored that Gilgit-Baltistan region is important because it connects Pakistan with China. Moreover, it also provides the route of...
Central Asia for transportation. This region covers the very important natural resources e.g. fresh water, fresh fruits, mountains, forests, rivers, and glaciers.

### 1.1.2 Geographical and Mountainous view of Gilgit-Baltistan
Gilgit-Baltistan borders Pakistan's Khyber Pukhtunkhwa province to the west, a small portion of the Wakhan Corridor of Afghanistan to the north, China's Xinjiang Uyghur Autonomous Region to the northeast, the Indian-administered Jammu and Kashmir to the southeast, and the Pakistani-administered state of Azad Jammu and Kashmir to the south. Gilgit-Baltistan is home to five of the "eight-thousanders" and to more than fifty peaks above 7,000 meters (23,000 ft). Gilgit-Baltistan encompasses three world’s greatest mountains range name as Himalaya mountain range, Karakoram mountain range, and Hindu Kush mountain range. In the past, European travelers used the term “Muztagh” which means "Ice Mountain". The name Karakoram was first introduced by local traders in the beginning of 20th century. Karakoram mountain range is the greatest range in Asia, which covers the border of three countries, Pakistan, India, and China. Himalaya bounds five countries i.e. Pakistan, India, China, Nepal, and Bhutan. Himalaya includes the largest volume of ice outside Polar Regions, their glacial history is poorly known.

The world second highest mountain peak-K2- is located in Karakoram Range. K2 is also known as “Savage Mountain”. It is located between Baltistan and Xinjiang border of China. The range of K2 is about 500 km (311 mi) in length. Nanga Parbat is located in western Himalaya range. Nanga Parbat means naked mountain. The height of the peak is 8,126m. Nanga Parbat was discovered by Europeans in the nineteenth century. Nanga Parbat is the ninth highest mountain and one of the most dangerous mountains in the world.

### Table 1.2. Highest peaks of the Gilgit-Baltistan

<table>
<thead>
<tr>
<th>s.no</th>
<th>Peak</th>
<th>Altitude(m)</th>
<th>Range</th>
<th>World Ranking</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>K2</td>
<td>8,611</td>
<td>Karakoram</td>
<td>2</td>
</tr>
<tr>
<td>2</td>
<td>Nanga Parbat</td>
<td>8,512</td>
<td>Himalaya</td>
<td>9</td>
</tr>
<tr>
<td>3</td>
<td>Gasherbrum I</td>
<td>8,068</td>
<td>Karakoram</td>
<td>11</td>
</tr>
<tr>
<td>4</td>
<td>Broad Peak</td>
<td>8,047</td>
<td>Karakoram</td>
<td>12</td>
</tr>
<tr>
<td>5</td>
<td>Gasherbrum II</td>
<td>8,035</td>
<td>Karakoram</td>
<td>14</td>
</tr>
<tr>
<td>6</td>
<td>Gasherbrum III</td>
<td>7,952</td>
<td>Karakoram</td>
<td>15</td>
</tr>
<tr>
<td>7</td>
<td>Gasherbrum IV</td>
<td>7,925</td>
<td>Karakoram</td>
<td>17</td>
</tr>
<tr>
<td>8</td>
<td>Distaghil Sar</td>
<td>7,885</td>
<td>Karakoram</td>
<td>20</td>
</tr>
<tr>
<td>9</td>
<td>KunyangChish</td>
<td>7,852</td>
<td>Karakoram</td>
<td>22</td>
</tr>
<tr>
<td>10</td>
<td>Mashebrum NE</td>
<td>7,821</td>
<td>Karakoram</td>
<td>24</td>
</tr>
<tr>
<td>11</td>
<td>Rakaposhi</td>
<td>7,788</td>
<td>Karakoram</td>
<td>27</td>
</tr>
<tr>
<td>12</td>
<td>Batura</td>
<td>7,785</td>
<td>Karakoram</td>
<td>28</td>
</tr>
</tbody>
</table>

Source: Baig (2007)
1.1.3 Historical Background: Tourism in Gilgit-Baltistan
The Gilgit-Baltistan is one of the most magnificent regions of Pakistan. It is like a paradise for climbers, trekkers, hikers and mountaineers. Gilgit-Baltistan receives more than 100,000 foreign tourists annually but now this number has gone down to just a few thousands only because of terrorism and pressure of sectarian divergences. In 1988 to 2000 tourism is decreasing in Gilgit-Baltistan due to sectarian conflict. The number of tourism decreased fivefold in 2002 following the 9/11 event. In 2003 tourism situation improved and international tourist is inflow increased. In 2005 tourists increase mainly due to October 2005 earthquake. It seems that activists of a non-government organization, rescue workers, and other groups working for rehabilitation the earthquake region also visited the study. In 2006 the number of tourists decreased again. However, in 2007 the tourism activities improved considerably.

1.1.4 Role of Local Food and Handicraft in Tourism in Gilgit-Baltistan
Gilgit-Baltistan is the main tourist destination in Pakistan for both foreign and domestic tourists. Natural beauty, local food, and handicrafts are the main tourism assets of the area. Every tourist wishes to stay in that hotel which provides high-quality food and residence. Israr et al., (2010) investigated that in Gilgit-Baltistan (GB) local food play a key role to increase tourists and handicraft also important instrument to attract tourists in the particular area. Tourism is an important sector of the economy which provides employment, income generation and improve living standard of people in Gilgit-Baltistan. Most of the tourism in GB is based on natural assets like forests, mountains, fresh water, and rivers. Several of mountaineers visits the GB every year.

1.2 Objectives
The objective of this study is:
- To estimate the magnitude of income generation through tourism in Gilgit-Baltistan

1.3 Significance of the study
Gilgit-Baltistan is a far-flung, mountainous area of Pakistan, where the people are less developed and under privileged. There is no industrial sector in this area. Most of the people are associated with agriculture. Gilgit-Baltistan has many potential sectors like tourism, industry, minerals, agriculture etc. through which the income and employment can be generated and the lives of people can be improved. The tourism sector has a very high potential for this area because GB has very beautiful natural and historical places. This sector can be a major source of income generation and employment for the local people. However, no attention has been given to this area, neither by the government nor by non-government organizations. No systematic study has been conducted on the scope of the tourism sector in income generation of Gilgit-Baltistan. This sector has been considered the only tool of foreign exchange. Although Pakistan, particularly GB, is enriched in tourism attractions, especially in mountain tourism resources, unfortunately, this tourism has not got a very long history. This study will attempt to highlight the scope and potential of tourism in this area.

There are only a few studies which investigate the tourism and income generation in the developing countries like Pakistan. Yet, there is no any empirical study about tourism and
income generation in Gilgit-Baltistan. As per the researcher’s knowledge, the study in hand is a pioneering effort to diagnose the impact of tourism in income generation in the area of Gilgit-Baltistan.

1.4 Research Question
It is a well-known fact that tourism sector has been a fast growing economic activity in many countries. To access the contribution of tourism in income generation or economic growth lots of studies have been conducted in the present era in Gilgit-Baltistan; but still number of questions to be answered, like as: What is the impact of tourism on economic growth? How is tourism ideal to increase economic development? Hence the study in hand is limited to materialize the following two core questions? What is the magnitude of income generation through tourism in Gilgit-Baltistan?

2. Literature Review
2.1 National studies
Israr et al., (2010) examined the role of local food and handicrafts in the promotion of Eco-tourism in the Northern area of Pakistan. In this study primary data was used to collect information about role of food and handicrafts in Eco-tourism. Through interview they collected data stakeholders, tour operators and tour guides with the sample size of 10, 20 and 48 in three villages of upper Hunza. The results of study show that food and handicrafts played major role to increase Eco-tourism. The study recommended that promote the local food and handicraft in Northern areas.
Malik et al., (2010) analyzed the interaction of tourism, current account deficit and economic growth in Pakistan. They applied Johansen co-integration and error correction model on time series data for the period of 1972-2007. Their results show the unidirectional relationship between GDP and current account deficit. Their findings implied that tourism can be one of the tools to reduce current account deficit.
Kakar and Khalil (2011) explored the contribution of tourism development to economic growth in Pakistan used time series data for the period 1960-2006. In this study total tourism receipts are related to the transportation cost, world income and relative prices. To check short and long run elasticity of income, transport cost and prices they used cointegration test and also implemented CUSUM and CUSUMSQ tests on the aggregate tourism demand function. There results indicated that most significant variable is income to explain the aggregate tourism receipts and there exists a stable tourism demand function in Pakistan.
Adnan and Ali (2013) investigated the long-run relationship between income from tourism and the economic growth of Pakistan. They used annual data for the time period 1980–2010 to apply Johansen co-integration. The study used autoregressive distributed lag model. Their results explained that there are long run relationship between income from tourism and economic growth in Pakistan.

2.2 International studies
Zortuk (2009) investigated the impact of tourism on Turkey’s economy. In this study used cointegration technique during the time period 1990 to 2008. In this paper, the long run equilibrium relationship between GDP and tourism is positive. Results show unidirectional causality between variables.

P-ISSN-2415-5284 e-ISSN-2522-3291 © 2021 Shah Abdul Latif University Khairpur- All rights reserved.
Eekkels et al., (2012) examined tourism income and economic growth in Greece. The study used vector auto-regression model for the period of 1976-2004. Their findings support the hypothesis of tourism led economic development. However, the analysis showed that GDP cycle will be volatile in case of tourism income is not stable.

Ekanayake and long (2012) used heterogeneous panel cointegration to investigate the relationship between tourism and economic development in developing countries. They used annual data of 1995-2009. To examine causal relationship they used causality test. Study finds that revenue from tourism has a positive impact on economic development.

Incerca and Fernandez (2015) investigated tourism and income distribution using data on earnings of households and government revenues of Galicia, Spain, in a social accounting matrix model. The study found a significantly positive impact of tourism on all income groups. However, they found that high-income households enjoy more benefits as compared to low-income households. In this way, an unequal distribution of utility is associated with tourism.

Fauzel (2016) used time series data to explore the tourism and employment spillovers in a small island developing state for the period 1988-2014. Use vector error model, and catering for dynamism and endogeneity. The results show tourism increases employment in the long run and short run. The findings also explore that investment in the tourism sector has a positive effect on employment. Furthermore, results show the uni-direction relationship between tourism and employment.

Ohlan (2017) explored the relationship between tourism, financial development and economic growth in India for the period of 1960-2014. The results of Bayer and Hanck (newly developed) test show that economic growth, tourism and financial development are co-integrated it means long-run and short-run positive relationship between these variables in India. Granger causality shows that tourism cause economic growth. The author suggested that India government should be promoted their culture, hotel facilities to attract tourists.

Biagi et al., (2016) analyzed the relationship between human development and tourism. Their results indicate that tourism contributes to improving human development through making a positive impact on literacy rate. In this way, it is clear that the impact of tourism on the host community is multidimensional.

3. Methodology
3.1 Selection of area & Sample size
Because of the fact that the Gilgit-Baltistan is the most popular area for the purpose of tourism and naturally enriched by various like as mountains, snow fall etc. Secondly, the area under consideration has been selected due to the convenient approach of the researcher.

A sample is a subset of any population. In this study two districts, Gilgit and Hunza-Nagar are selected for the sample. Selected area of the District Gilgit was further sub-grouped as Gilgit city and Naltar. While, the sample of Main Nagar Valley, Karimabad, Aliabad, and Hoper are selected from District Hunza-Nagar.

The non-probability sampling method is used for this study because in this study sample is unknown. It is the type of sampling. In this method, each sample has not equal chance to
select. The purpose of this method is to examine the population frame which is basically depending upon tourism. This study aims to collect response from 200 tourists.

3.2 Data collection
This study will analyze income generation through tourism the area based on primary data that will be collected using questionnaire. In order to keep the study practically feasible, data will be collected from 200 tourists in Gilgit City, Naltar Valley, Nagar Valley, Karimabad, Aliabad and Hoper areas of Gilgit division. In this case, non-probability sampling will be used. In this a sampling technique, though all the individuals in the population do not have equal chances of being selected as the respondents will include the tourists which are accessible to the researcher (Cameron & Trivedi, 2013).

3.3 Reliability of data
Keeping in view the natures of the data which is collected for the first time and requires examining the reliability of the gathered information. However the study in hand impels the mean and variance method to examine the reliability of primary data. The verification of data can be carried out through the alternate statistical means like as Cronbach's alpha and so on. Because of simplest and depth understanding of the earlier method, the scholar used mean and variance techniques in the present study. Various studies identify that according to the mean and variance approach the variance of the attribute must be less than the mean vice versa.

3.4 Descriptive Statistics and Nonparametric
Furthermore, it will be analyzed whether tour expenditure varies across different traits of tourists, for instance, comparing the tour expenditures against family status and nationality. A paired t-test can be used for such comparisons provided normal distribution can be assumed.

3.5 Regression Analysis
The objective of this study is to assess the role of tourism in terms of income generation in Gilgit-Baltistan area. For this purpose, the current study uses the expenditure made by the tourists as a measure of income generation. We hypothesize that the expenditure of a tourist depends upon various traits of the tourists including tour motive, family status, and other variables. Accordingly, we specify the following model to analyze tour expenditures.

\[ EXPENDITURE_i = \beta_0 + \beta_1 MOTIVE_i + \beta_2 FAMILY_i + \beta_3 NATIONALITY_i + \beta_4 GROUPSIZE_i + \beta_5 STAY_i + \mu_i \]  

(1)

Where,
Subscript “i” denotes the respondent and “\( \mu \)” is error term. \( \beta_0 \), regression constant, as well as \( \beta_1 \) to \( \beta_5 \) are the parameters. Regressors are enlisted below with their units and short labels.

- \( EXPENDITURE \) = Total expenditure of a tourist (PKR).
- \( MOTIVE \) = Motive of visit (Hunting, Business or Sightseeing)
- \( FAMILY \) = Family status (with family, without family)
NATIONALITY = Nationality (foreigner, domestic)  
GROUPSIZE = Number of individual in touring group (Counts)  
STAY = Duration of stay (Days)  

In this study, the primary question is about income generation by tourism. Income generation is a mirror image of the expenditure made by tourist during the stay in the area. It is hypothesized that these total expenditures are dependent on various characteristics of the tourists. In this way, EXPENDITURES is the dependent variable as given in the equation above.

In the equation, there are two variables GROUPSIZE and STAY included to capture the scaling effect on expenditure. Clearly, larger the tour groups with longer stays will have higher expenditures, and vice versa. The study includes three more regressors namely NATIONALITY, FAMILY, and MOTIVE. It is hypothesized that foreign tourist makes more expenditure, ceteris paribus. Similarly, it can be expected that tourist with family may have higher expenditure. The theoretical reasoning behind this hypothesis is that if women and children are included, people generally opt for more comfortable transportation and lodging which can be relatively costlier. Furthermore, it is valuable to consider various motives of a tour including sightseeing, business, and hunting. In this way, the variable MOTIVE will offer insight into how different motives of tourism vary in terms of income generation.

4. Data Analysis and Discussion:

4.1 Descriptive Analysis

To check and summarize data used descriptive analysis. Following results describe the data and explain mean value, stander deviation and maximum value of all variables which is used in this study. Table 4.1.1 explains total expenditures of tourists, motive, nationality, family size and group size and stays duration in Gilgit-Baltistan.

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
<th>Min</th>
<th>Max</th>
</tr>
</thead>
<tbody>
<tr>
<td>EXP</td>
<td>200</td>
<td>45969.5</td>
<td>23834.12</td>
<td>17700</td>
<td>1.75E+05</td>
</tr>
<tr>
<td>MOTV</td>
<td>200</td>
<td>1.24</td>
<td>0.53</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>FMLY</td>
<td>200</td>
<td>0.29</td>
<td>0.46</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>FRGN</td>
<td>200</td>
<td>0.65</td>
<td>0.48</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>GSIZE</td>
<td>200</td>
<td>3.96</td>
<td>1.18</td>
<td>1</td>
<td>7</td>
</tr>
<tr>
<td>STAY</td>
<td>200</td>
<td>8.12</td>
<td>1.78</td>
<td>3</td>
<td>14</td>
</tr>
</tbody>
</table>

Descriptive statistics describe the basic features of the data. Represent quantitative descriptions and simplify a large data set in a sensible way. In table 4.1.1 EXP (total expenditure) results show that average income generated from tourism in Gilgit-Baltistan is rupees 46 thousand (45969.5) from all sources of income (P> 0.1) in 2017 with the SD (standard deviation) of amount rupees 23834. Mean value show the central tendency of the data and standard deviation measuring the amount of variation or dispersion. Minimum
income is recorded as rupees 17700 from sightseeing in 2017 and the maximum income is recorded as rupees 175000 (1.75E+05) from hunting. The mean value of MOTV (motive) is recorded as 1.24 and its standard deviation is 0.53. The minimum value of MOTV is 1 and maximum value is 3. The mean value of FMLY (family) is 0.29 and its standard deviation is 0.46. Minimum value of family is 0 and maximum value is 1. The tourists how comes in the international countries in GB the mean value recorded as 0.65. The standard deviation is recorded as 0.48. Minimum foreigner persons recorded as 0 and maximum foreigner persons recorded as 1 person. Tourists who come in the group in GB the average GSIZE (group size) is recorded as 4 (3.96) persons. The standard deviation is 1.18. Minimum GSIZ is 1 person and maximum GSIZ is recorded as 14 persons. The average derivation of STAY by the tourist is 8 (8.12) days. Minimum stay by tourists is recorded as 3 days and maximum stay is recorded as 14 days. The standard deviation is 1.78.

4.2 Nonparametric Analysis
4.2.1 T-test (Against Nationality)
Following results show the domestic tourist expenditure and foreigner tourist expenditure in Gilgit-Baltistan.

<table>
<thead>
<tr>
<th>Group</th>
<th>Obs</th>
<th>Mean</th>
<th>Std. Err.</th>
<th>Std. Dve.</th>
<th>(95% conf. interval)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Local</td>
<td>70</td>
<td>38331.43</td>
<td>1901.702</td>
<td>15910.78</td>
<td>34537.64</td>
</tr>
<tr>
<td>Foreign</td>
<td>130</td>
<td>50082.31</td>
<td>2307.523</td>
<td>26309.81</td>
<td>45516.82</td>
</tr>
<tr>
<td>Combined</td>
<td>200</td>
<td>45969.5</td>
<td>1685.326</td>
<td>2384.12</td>
<td>42646.11</td>
</tr>
</tbody>
</table>

$t = -3.4135$
Degree of freedom = 198
$P = 0.0008$

Table 4.2 explains about tour expenditure of local tourists and foreigner tourists. Local tourists driving the observation period are recorded 70 persons who contributed rupees 38331 in the income generate of Gilgit-Baltistan during 2017. Foreigner tourists driving the observation period are recorded 130 persons who contributed rupees 50082 in the income generation of Gilgit-Baltistan during 2017. This result shows that the contribution of foreigner tourists is more as compared to local tourists to generate income in GB (Gilgit-Baltistan). We also accept alternative hypothesis because p-value is less than 0.1.

4.2.2 T-test (Against Family and without Family)
These results explain expenditure of family tourists and without family tourists and income generation.
Table 4.3 T-test: Tour expenditure against family status

<table>
<thead>
<tr>
<th>Group</th>
<th>Obs</th>
<th>Mean</th>
<th>Std. Err.</th>
<th>Std. Dev.</th>
<th>(95% conf. interval)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-Family</td>
<td>141</td>
<td>38572.34</td>
<td>1459.74</td>
<td>17333.46</td>
<td>35686.36 - 41458.33</td>
</tr>
<tr>
<td>Family</td>
<td>59</td>
<td>63647.46</td>
<td>3619.416</td>
<td>27801.26</td>
<td>56402.41 - 70892.51</td>
</tr>
<tr>
<td>Combined</td>
<td>200</td>
<td>45969.5</td>
<td>1685.326</td>
<td>2384.12</td>
<td>42646.11 - 49292.89</td>
</tr>
</tbody>
</table>

\[ t = -7.7198 \]
Degree of freedom= 198
\[ P = 0.0000 \]

Table 4.3 shows the result of family tourists and non-family tourist. Non-family tourists driving the observation period are recorded 145 who contributed rupees 38572 in the income generate of Gilgit-Baltistan during 2017. The standard deviation is 17333. Family tourists driving the observation period are recorded 59 who contributed rupees 63647 in the income generation of Gilgit-Baltistan. The standard deviation is recorded as 27801. This result shows that the contribution of family tourists is more as compared to local tourists to generate income in GB (Gilgit-Baltistan). We also accept the alternative hypothesis because p-value is less than 0.1.

4.3 Regression Analysis

To estimate the relationship between tourists expenditure and income generation in Gilgit-Baltistan we apply regression analysis. The results of regression analysis are shown in table 4.4.

Table 4.4 Regression Analysis results

<table>
<thead>
<tr>
<th>VARIABLES</th>
<th>ln_EXP</th>
<th>OLS</th>
<th>0.912***</th>
<th>(0.035)</th>
</tr>
</thead>
<tbody>
<tr>
<td>MOTV_3</td>
<td></td>
<td>0.005</td>
<td>(0.022)</td>
<td></td>
</tr>
<tr>
<td>FRGN</td>
<td>0.593***</td>
<td>(0.026)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>FMLY</td>
<td>0.172***</td>
<td>(0.023)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>GSIZE</td>
<td>0.232***</td>
<td>(0.010)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>STAY</td>
<td>0.135***</td>
<td>(0.006)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Constant</td>
<td>9.980***</td>
<td>(0.051)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Observations 200
R-squared 0.939

Note: Standard errors in parentheses, *** p<0.01, ** p<0.05, * p<0.1
People who come with the motive of business and hunting purpose in Gilgit-Baltistan (GB) have less statistical relationship with income generation in GB as compare who comes for sightseeing which means that one extra person comes from sightseeing purpose is significantly increasing the income of GB by rupees 91.2 on average than those who come for hunting or business. The p-value of sightseeing is less than 0. The reason is that the tourist who comes from sightseeing destination is more spending on food, beverages and shopping during the trip but those tourists how come for business and hunting purpose in GB is not more spending on groceries, accommodation and shopping. Sightseeing tourists also higher guides. On the other hand, the results of FRGN show empirically impact on income generation of GB about 59.3 rupees than those persons who belong to the home country and visit GB. This specified that domestic visitors may have become expenditure on normal goods as compare to international tourists which spending on luxury goods. Foreigner tourists also prefer high standard of services e.g. transport, lodging and hospitality. These results prolong the study of Wang and Davidson, 2010.

The result of FMLY shows that family tourist more spending as compared to non-family or bachelors because family tourists prefer high standard or comfortable accommodation, high quality food, and contented transportation system. The contribution of FMLY is rupees 17.2 in income generation of GB during 2017. The results also support the study of Ajala (2008). People who come from a visit in G.B in the group form are also increase the income generation of G.B by rupees 23.2 than those who come individually visit G.B. The similar findings can be seen in presented literature. STAY (duration of stay in GB) results also show considerably increase income generation in GB. Long time stay tourist increase more income than those who come for one or two days for a visit. STAY increases 13.5 rupees income in GB for the period of 2017 because every 1% increase in duration of stay led to an increase in visitor spending. The similar results can be seen in Downward and Lumsdon (2004) study. The value of $R^2$ is 0.93. This shows that the data is better fit in modal.

4.5 Variable graphically represent

All variables are graphically explained as follow.

Figure 4.1 Foreigner tourists and Local tourists

Above fig shows 94 tourists are a foreigner and 61 tourists are local tourists.
Figure 4.2 Family tourists and Non-Family tourists

<table>
<thead>
<tr>
<th>Family</th>
<th>Non-Family</th>
</tr>
</thead>
<tbody>
<tr>
<td>33%</td>
<td>67%</td>
</tr>
</tbody>
</table>

Above graph shows the percentage of family tourists and non-family tourists. In Gilgit-Baltistan arrived 104 non-family tourists and 51 family tourists.

Figure 4.3 Motivate of tourists

<table>
<thead>
<tr>
<th>Sightseeing</th>
<th>Hunting</th>
<th>Business</th>
<th>Other Work</th>
</tr>
</thead>
<tbody>
<tr>
<td>86%</td>
<td>3%</td>
<td>10%</td>
<td>1%</td>
</tr>
</tbody>
</table>

Fig 4.3 shows that 134 tourists arrive for sightseeing in Gilgit-Baltistan, the purpose of 4 tourists is hunting, 15 tourists come for the purpose of business and only 2 tourists arrive for other work (research and office work).

5. Conclusion and Policy Implications

5.1 Conclusion
Many developing countries tourism is important pillar of their development process because it is the dominant activity in the economy. Tourism is also a sector where there is clearly an uneven distribution of benefits, which is overcast the social, environmental and economic sustainability of tourism in developing countries.

The objective of the study was to estimate the magnitude of income generation in Gilgit-Baltistan. The findings show that international tourists more expenditure in GB as compare to non-family tourists.
domestic tourists. The contribution of foreigner tourists is more significantly positive effect to increase income generation in Gilgit-Baltistan as compare to domestic tourists. Regression analysis results revealed that people who come with the motive of sightseeing are more contributes as compared to who come for business and hunting. This results support present literature. In income generation contribution of family tourists are more in GB. Group tourists also more increase income generation as compared to individual tourists. The results of this study show that in income generation contribution of family tourists, international tourists, group size and duration of stay are significantly positive effect. To conclude that in Gilgit-Baltistan to increase income generation tourism is an important tool.

5.2 Policy Implications
➢ Local food plays a dynamic role in tourist attraction. Traditional or local food need to be promoted at the international level.
➢ It reveals through the empirical results that tourism creates job opportunities in host country and revenue as well. Thus it is suggested to increase tourism the study area, which may improve the lodging system.
➢ The GB Hotel Association should motivate hotel owners to grant special discounts and offers to tourists on their products and services upon regular visits. This will be helpful in enhancing domestic and foreign tourism.
➢ The study in hand is quite evident that family tourist generates more income as compared to non-family or without families. Therefore, to increase Family tourists may be improved hotel systems and utilizes natural resources to attract tourists in Gilgit-Baltistan.
➢ Tourism also increases the inflow of currency. To maintain or increase this currency inflow Government of Gilgit-Baltistan maybe focus to improve local food and local handicraft which are the main sources to attract the tourists.

References
Atta Ullah Khan, et al., Role of Tourism in Income Generation of Gilgit-Baltistan (pp.1-18)


APPENDIX-A

Preston University Islamabad
Department of Economics

Role of Tourism in Income generation in Gilgit-Baltistan

**Questionnaire**

**Questionnaire #__________________**

**Date:**

**Personal Bio-data**

Name of respondent ___________________________________________

Age __________________

Residential address____________________________________________ village

---

1. **Hotel**

1.1. How many years you are engaged with this field?

   i) 

1.2. What services you provide to tourists?

   i) Residence  
   ii) Transport and Residence  
   iii) Residence and food  
   iv) Residence and guides  
   v) All  

1.3. Do you hire new employees in peak (tourism) season?

   i). Yes                        ii). No  

1.4. If Yes, then how many.

   i) 

1.5. In your hotel Family tourists stay longer or Bachelors tourists?

   i). Family  
   ii). Bachelors  

1.6. Who make more spending?

   i) Family  
   ii) Bachelors  

1.7. Per day single room charges are?

   i) 

1.8. Per day double room charges are?

   i) 

1.9. ________ long stay tourists usually in your hotel?

   i) 

---

3. **Transportation**

3.1. How many years you are engaged with this field?

   i) 

3.2. What services do you provide tourists?

P-ISSN-2415-5284 e-ISSN-2522-3291 © 2021 Shah Abdul Latif University Khairpur- All rights reserved.
Vol. 7 | 2021
i) Transport  
ii) Transport and Residence  
iii) Transport and Food

iv) Transport and guiders  
v) All of this

3.3. What kind of transport do you provide more for tourists?
   i) Car  
   ii) Bus  
   iii) jeep

3.4. Which transport is more expensive?
   i) Car  
   ii) Bus  
   iii) jeep

3.5. Which transport mostly prefers tourists?
   i) Car  
   ii) Bus  
   iii) jeep

3.6. How much Charges of car Gilgit to Hunza-nagar?

3.7. How much Charges of car Gilgit to Naltar?

3.8. Do you hire new workers in tourism session?
   i) Yes  
   ii) No

3.9. If yes How much?

3.10. Who make more spending in transportation family tourist or Bachelors?
   i) Family  
   ii) Bachelors

---

**Questionnaire #__________________**

**Date:** ____________________

---

**Personal Bio-data**

Name of respondent ___________________________________________

Age __________________________

Residential address____________________________________________

---

**4. Tour Guide**

4.1. How much your experience in this field?
   i) __________________________

4.2. How much you charge per day?
   i) __________________________

4.3. Do you increase charges in peak season of tourism?
   i) Yes  
   ii) No

4.4. How much then how much?
   i) __________________________  

4.5. Your charges are different for national tourists and foreign tourists?
   i) Yes  
   ii) No

4.6. If yes, then how much you charge for national tourists (per day)?
   i) __________________________

4.7. How much you charge for foreign tourists (per day)?
   i) __________________________
Questionnaire #__________________
Date:__________________

Personal Bio-data
Name of respondent __________________________________________
Nationality________________ Age________________ Residential address__________________________ village_____

5. Tourists
5.1. How many times have you visited Gilgit before now?  

5.2. What was the aim of your tour in Gilgit?  
i) Sightseeing ii) Hunting iii) Business iv) other  

5.3. Would you visit Gilgit again within the coming 5 years?  
i) Yes ii) No  

5.4. How long did you stay in Gilgit?  
i) ii) iii) iv)  

5.5. In what kind of accommodation did you stay? (More than one answer allowed)  
i) Hotel ii) Rental apartment iii) Own house iv) Other  

5.6. What means of transportation did you use to come to Gilgit?  
i) Flight ii) Rental car iii) public transport iv) Other  

5.7. What were your costs for the trip and accommodation in Gilgit per person?  
i) ii) iii) iv)  

5.8. How much did you spend in Gilgit per person per day for food and drinks?  
i) ii) iii) iv)  

5.9. With how many people did you come to Gilgit?  
i) Alone ii) With a friend iii) With my Family iv) With a group  

Questionnaire #__________________  Date:__________________

Personal Bio-data
Name of respondent __________________________________________
Age________________ Residential address__________________________ village_____

6. Sellers
6.1. What products do you provide to tourists?  
i) Handicrafts ii) Dry fruit iii) local dishes iv) all of them  

6.2. Which product is mostly preferred by tourists?  
i) Handicrafts ii) Dry fruit iii) local dishes iv) all of them  

6.3. Who make more expenditure family tourists or bachelors?  
i) Family ii) Bachelors  

6.4. Which products families mostly buy?  
i) Handicrafts ii) Dry fruit iii) local dishes iv) all of them  

6.5. Which products bachelors mostly buy?  
i) Handicrafts ii) Dry fruit iii) local dishes iv) all of them  

P-ISSN-2415-5284 e-ISSN-2522-3291 © 2021 Shah Abdul Latif University Khairpur- All rights reserved.
5.6. Do you hire new employees in peak (tourism) season?
   i). Yes [ ]        ii). No [ ]

5.7. If Yes, then how many.