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Evaluating the Impact of Hazara Motorway on Tourism Growth Under the China-Pakistan Economic Corridor in Hazara Region, Khyber Pakhtunkhwa, Pakistan

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Abstract

The objective of this research is to evaluate the outcome of Hazara Motorway on Tourism Expansion because of China-Pakistan Economic Corridor (CPEC) in Hazara region. This research used primary data collected through a questionnaire from the 120 tourists regarding their response on factors associated with future expectations of tourism industry growth in Hazara region under CPEC due to Hazara motorway using a purposive simple random sampling technique. The study used logistic regression for analysis. The regression results show that tourists' expectation of tourism growth under CPEC is positively and significantly associated with the occupation of the respondent, availability of rooms, tourist will come due to Hazara CPEC motorway, increase in tourism under CPEC, tourism growth, and tourism and hospitality infrastructure is enough to meet the tourist demand. The study concludes that in the future, the demand of tourism will progress under the CPEC, the specially Hazara motorway will play its part in lifting local tourism.

Key Words: Binary Logistic Model, CPEC, Hazara Motorway, Tourism Growth

Introduction

In a global economy, tourism has evolved as a resource for generating revenue. Considering the importance of corridors, CPEC will bring economic ways for not only Pakistan and China in many ways such as tourism growth, roads development, railways, trade, etc., but also strengthen regional, cross-regional economic development at large. Nowadays, most countries in Europe are linked by highways, railways, and simple visa schemes for exchange, research, and tourism, among other things. Similar agreements, such as NAFTA, are in

place amongst American states, but South Asia as well as the Arabian Peninsula lack access, which allows countries to advance more quickly and expand their tourism sector. Therefore, in respect, China has made improvements in connecting with various countries through the Silk Route (Ali et al., 2017). China's most recent achievement is the China-Pakistan Economic Corridor (CPEC) which connects China with Gawadar as well as the Middle East. CPEC will bring economic ways for not only Pakistan and China but also strengthen regional,

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economic, and trade convergence across borders among different parts of Asia ([Hussain et al., 2016](#)). The understandings of the managing director of Pakistan Tourism Development Corporation are that "The CPEC will improve the quality of tourism services between the two countries with lasting impact on socio-economic development" ([The Express Tribune, 2018](#)). The construction of Highways has a great impact on the socio-economic uplift and is intended to enhance the connectivity with the regions ([Khan & Ali, 2018](#)).

Tourism growth is a focused area of the present government. Endowed with a rich heritage, geopolitical and ecological variety, and culture, Pakistan has a lot of tourism potential. Because this sector not only enhances foreign investment, public infrastructure, opportunities for trade, private investment, local development but also contributes to employment and the economy, in the light of the Travel and Tourism Competitiveness Index report (2017) that around 1,429,580 people are employed in this sector in Pakistan. This sector contributes 2.4% of the total employment and 2.8% to the GDP ([Khan et al., 2018](#)). Tourism has become a significant source of revenue for many nations, especially Ireland, accounting for nearly 6% of global GDP ([Binkhorst & Den, 2009](#)).

Nowadays, the tourism sector of Pakistan is growing faster. [Ann Abel \(2018\)](#), documented in Forbes, which is one of the most popular business magazines in America, listed Pakistan in the top 10 countries to visit in 2019 via the renowned Karakorum Highway that will hopefully boost tourism in Pakistan. One of the leading global tourism guidance organizations, "British Backpacker Society," ranks Pakistan as the top-ranked country among twenty countries of the back-packer tourists in 2018 ([Sana Jamal, 2017](#)). [Palhares \(2003\)](#) stated that a significant key element that contributes in the development of tourism is transportation that has a major contribution to the promotion of tourism ([Palhares, 2003](#)).

The previous piece of researches found an important connection of economic activities with tourism ([Gunduz & Hatemi, 2005](#); [Brida & Pulina, 2010](#); [Jalil et al., 2013](#)). Some researches establish the results that the existence of long- and short-term association of economic gains with tourism is

present ([Adnan et al., 20013](#); [Ohlen, 2017](#); [Faiza Manzoor, 2019](#)). In a global economy, tourism has evolved as a resource for generating revenue. Considering the importance of the corridor, CPEC will not only impact the regional development in multiple sectors, but it also serves for a significant position in uplifting the industry of tourism through infrastructure development. It is a fact that the Hazara region is a gateway for tourism in the Northern areas of Pakistan, it can play a vital role in hospitality sector employment and GDP contribution to Pakistan. The key motif of the current research is to explore the impact of Hazara Hazara Motorway in the Hazara region on Tourism Growth under the China-Pakistan Economic Corridor.

Specifications of Data, Model, and Methodology

This study discusses the Hazara region for research by covering two districts Abbottabad and Mansehra. According to a study conducted by the Tourism Corporation of Khyber Pakhtunkhwa (TCKP) along with Galiyat Development Authority (GDA), these districts have been observed as the most visited places for tourists, and the E-35 motorway (a CPEC route) is passing from this region.

Sample Allocation and Data Collection

This study used primary data; the information was obtained through a structured questionnaire for gathering the responses from tourists regarding their future expectations on tourism industry growth in the Hazara region under CPEC due to Hazara motorway using a purposive simple random sampling technique. The sample of 120 tourists was allocated from the three most visited tourist places of both districts, 60 from Abbottabad and 60 from Mansehra. The data was collected during two months in the study area from July 2018 to August 2018. The oral consent form was taken from tourists before conducting the survey. Limited tourists agreed to voluntarily participate in the study. Some tourists refused to respond because they were enjoying their short trips and due to limited time. The explanation of all the study details was given to the tourists for their support before taking

their consent. The data collection details from tourists in different most visiting spots in two districts are given below: District Abbottabad (Nathia Gali –

20; Ayubia – 20; Abbottabad city – 20); District Mansehra (Naran Kaghan – 20; Balakot – 20; Mansehra – 20).

Conceptual Model

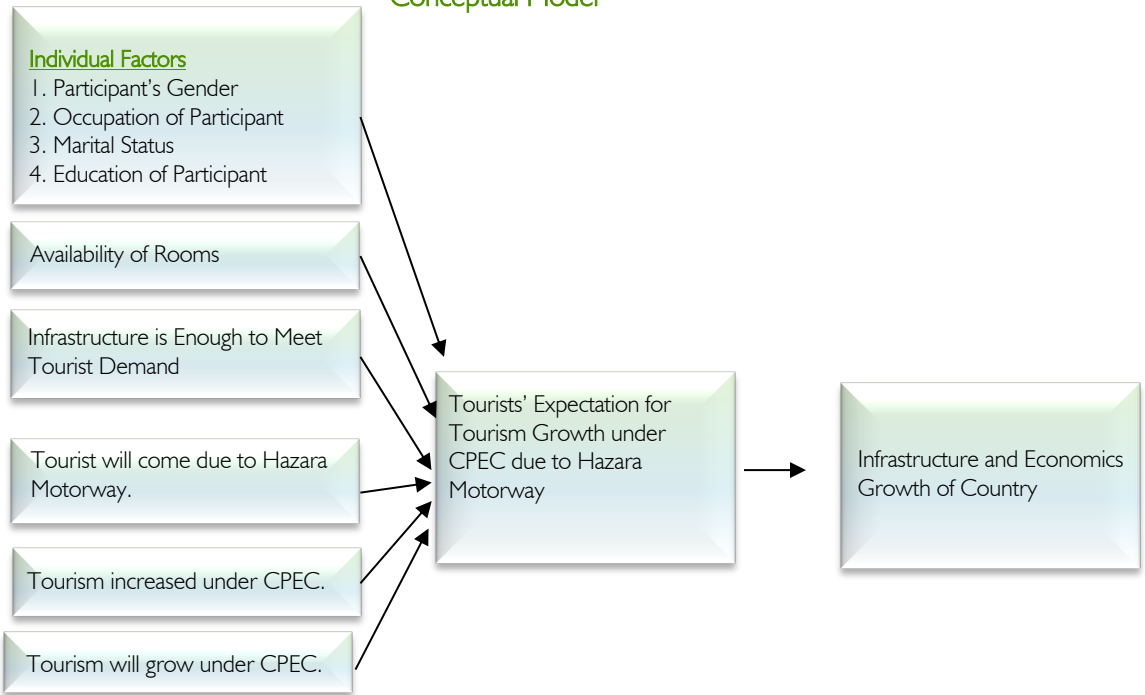


Figure 1: Constructs of Tourists' Expectation on Tourism Growth under CPEC

Source: Own Construction

Specification of Model

In the current study, the dependent variable is TEH (Tourist expectation for tourism growth under CPEC due to Hazara motorway) which is in binary form. The econometric equation of the model is as under:

$$TEH_{ij} = \beta_0 + \beta_1 GOR_{ij} + \beta_2 MS_{ij} + \beta_3 OCCUPOR_{ij} + \beta_4 EDUOR_{ij} + \beta_5 AOR_{ij} + \beta_6 TCDTH_{ij} + \beta_7 ITUCPEC_{ij} + \beta_8 THG_{ij} + \beta_9 HSEFD_{ij} + \beta_{10} EOH_{ij} + \epsilon_{ij} \text{----- (1)}$$

1 = tourist expects that under CPEC in the future, tourism will grow due to Hazara motorway (response is Yes).

0 = Otherwise (response is No)

In the equation-1, coefficients are β 's, which explains the degree of association with the dependent variable TEH while the error term is ϵ . Definition and the description of the variables used in the model is given below in Table 1:

Table 1. Variables' operational definitions in the econometric model

Name of variable	Operational Definitions
Dependent Variable	
Tourist expectation on tourism growth under	1 if yes, 0 if no

CPEC due to Hazara Motorway (TEH)	
Explanatory Variables	
Gender of respondent	1 for male, 0 for female
Occupation of respondent	1 for not working, 2 for own business, 3 for services
Marital status of the respondent	1 for married, 0 for unmarried
Education of respondent	1 for educated, 0 for Illiterate
Satisfaction on hospitality and Infrastructure	1 for satisfied, 0 for not satisfied
Availability of room	1 for Easily available, 0 for Not easily available
Tourism and hospitality infrastructure is enough to meet tourist demand	1 for Enough, 0 Need improvement
Tourist will come due to Hazara motorway	1 for Yes-Tourist come, 0 for No-Tourist not come
Tourism increased under CPEC	1 for Yes-Increase, 0 for No-Not increase
Tourism growth	1 for Grow, 0 for not Grow

Method of Analysis

For bivariate analysis, cross-tabulations were used while logistic regression technique was used for multivariate analysis.

Results and Discussion

The study analysis focuses on descriptive analysis for showing the inter-relationship and econometric analysis. It is analyzed with the help of both the dependent and independent variables. Table-3

below explains the frequency and percentages of tourists' expectation occurrence according to different characteristics in those tourists whose response is that Hazara motorway under CPEC project has impact on tourism growth.

Moreover, the econometric model is estimated the effect of various influencing factors on the tourist expectation for tourism growth due to the Hazara motorway under China-Pakistan Economic Corridor has been presented in Table-3.

Descriptive Statistics

Table 3. Estimation of tourists' expectation regarding tourism growth due to Hazara motorway under CPEC by the percentage of each variable.

Tourist expectation on tourism growth under CPEC due to Hazara Motorway (TEH)	Frequency of TEH in tourists who responded (Yes)	Percentage TEH in Tourists (%)
Gender of the Respondent		
Female	48	40
Male	52	43.33
Occupation of Respondent		
Not Working	18	15
Own Business	54	45
Services	28	23.33
Marital Status of Respondent		
Married	5	4.16
Unmarried	95	79.17
Education of Respondent		
Educated	76	63.33
Illiterate	24	20

Tourist expectation on tourism growth under CPEC due to Hazara Motorway (TEH)	Frequency of TEH in tourists who responded (Yes)	Percentage TEH in Tourists (%)
The efficiency of Hotel/ Satisfaction on Hospitality and Tourism Infrastructure		
Not Satisfied	35	29.17
Satisfied	65	54.16
Availability of Room		
Easily Available	36	30
Not Easily Available	64	53.33
Tourism and hospitality Infrastructure is Enough to Meet the Demand of Tourists		
Enough	55	45.83
Need Improvement	45	37.50
Tourists will come due to Hazara CPEC Motorway		
Tourist Not come	57	47.50
Tourist Come	43	35.83
Increase of Tourism under CPEC		
Not increase	8	6.67
Increase	92	76.67
Tourism Growth		
Grow	66	55
Not Grow	34	28.33

Source: Authors' estimation

Occupation of Respondent

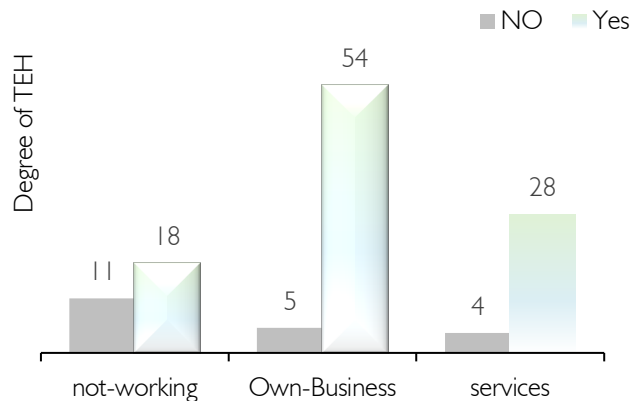


Figure 1

Figure. 1 explains that 29 (24.16%) tourists are not working, 59 (49.17%) tourists having own businesses, and 32 (26.66%) tourists are employed in the service sector. The tourists who responded

that tourism would grow due to Hazara motorway under CPEC are 100 (83.33%). While 20 tourists responded No against the asked question.

Availability of Room

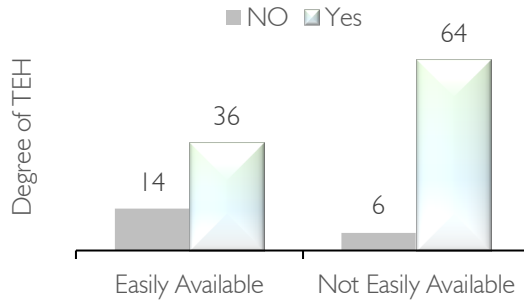


Figure 2

The descriptive results show that 50 (41.67%) tourists say that rooms are easily available, and 70 (58.33%) tourists responded that rooms are not easily available in the visited place. The number of

tourists who responded tourism would grow due to Hazara motorway under the CPEC project are 100 (83.33%). While 20 tourists responded negatively against the asked question.

Satisfaction on Hospitality and Tourism Infrastructure

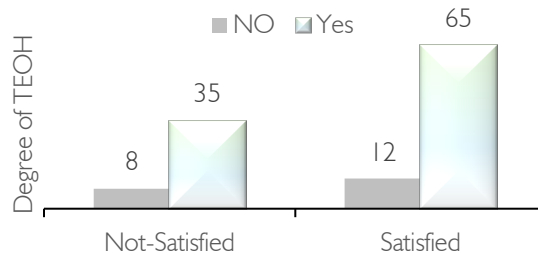


Figure 3

Results stated that 43 (35.83%) respondents of the study were not satisfied with hotels efficiency, while 77 (64.17%) tourists were satisfied. The number of

tourists who responded that tourism will grow due to the Hazara motorway under the CPEC project is 100 (83.33%). While 16.67% tourists reply no to the question.

Tourism and Hospitality Infrastructure is enough to meet the Tourists' Demand

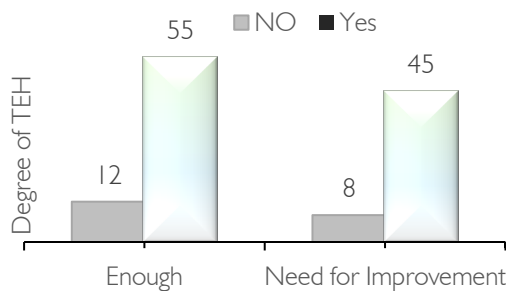


Figure 4

Situation of the result is that 67 (55.83%) tourists replied that hoteling infrastructure is enough, while 53 (44.17%) tourists said that there is a need for improvement in the infrastructure. The tourists

who answered that tourism will grow due to the Hazara motorway under the CPEC project are 100 (83.33%). While 16.67% tourists reacted no to the question.

Tourist will come due to Hazara CPEC Motorway

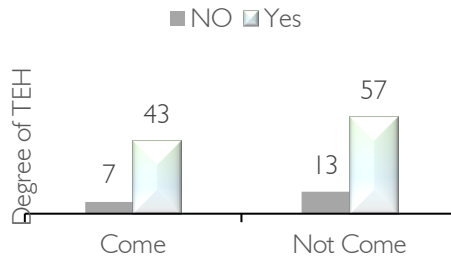


Figure 5

Statistics show that 70 (58.33%) tourists responded that tourists will not come due to E-35 motorway, while 50 (41.67%) replied that tourists will increase due to the Hazara motorway. The tourists who

answered that tourism would grow due to Hazara motorway under the CPEC project are 100 (83.33%). While 16.67% tourists reacted no to the question.

Tourism Increased under CPEC

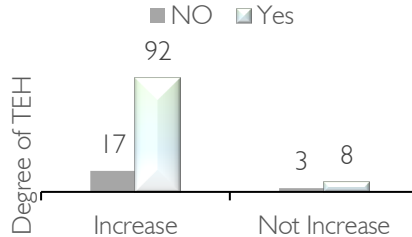


Figure 6

Figure.6 illustrates that 11 tourists responded that tourism will not increase due to CPEC, while 109 (90.83%) tourists responded that tourism will

increase due to CPEC. The 100 (83.33%) tourists answered that tourism will grow due to Hazara motorway under the CPEC project.

Tourism Growth

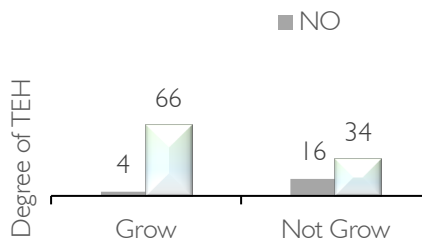


Figure 7

The descriptive results express that 50 (41.67%) tourists responded that tourism would not grow, while 70 (58.33%) tourists replied that tourism will grow. Same as 68 (67.85%) tourists responded that there would be growth in tourism under CPEC. The 100 (83.33%) tourists answered that tourism would grow due to the Hazara motorway under the CPEC project.

Source: Authors' estimation

Logistic Regression Analysis

The regression results in Table-4 shows that

tourists' expectation of tourism growth due to Hazara motorway under CPEC is positively and significantly associated with the occupation of respondent, availability of rooms, tourist will come due to Hazara CPEC motorway, tourism increased under CPEC, tourism growth, and tourism and hospitality infrastructure is enough to meet the tourist demand. While there is a negative and significant effect of satisfaction on hospitality and tourism infrastructure on tourist's expectation of hoteling industry growth under CPEC. The detailed discussion on each variable is given below in individual variable headings.

Table 4. Binary Logit regression results for Tourists Expectations for Tourism Growth

List of Variable	Coefficients	Standard Error	Z- value	P-value
Gender of Respondent (GOR)				
Male	.0886043	.8560815	0.10	0.918
Marital Status of Respondent (MS)				
Married	3.192968	2.262525	1.41	0.158
Occupation of Respondent (OCCUPOR)				
Own Business	5.234786	1.478141	3.54	0.000***
Services	3.614106	1.228157	2.94	0.003***
Education of Respondent (EDUOR)				
Educated	.9982637	1.012299	0.99	0.324
Availability of Rooms (AOR)				
Easily available	4.905531	1.417136	3.46	0.001***
Tourists will come due to Hazara CPEC motorway (TCDTH)				
Tourist come	4.00462	1.324799	3.02	0.003***
Tourism Increased under CPEC (ITUCPEC)				
Increase	2.90668	1.266644	2.29	0.022**
Tourism Growth (THG)				
Grow	2.12504	.9610256	2.21	0.027**
Tourism and Hospitality infrastructure is enough to meet the tourists demand (HSEFD)				
Need improvement	1.867002	.975147	1.91	0.056*
Satisfaction on hospitality and tourism infrastructure (EOH)				
Not satisfied	-2.003874	1.114164	-1.80	0.072*
No. of observations=	120		Prob>Chi ² = 0.0000	
Likelihood ratio test χ^2 (11) =	57.01		Pseudo R ² = 0.5272	
Level of Significance: ***p < 0.01, **p < 0.05, *p < 0.1				
Category of Reference: GOR: Female, MS: Unmarried, OCCUPOR: Not working, EDUOR: Illiterate, AOR: Not Easily Available, TCDTH: Tourist not come, ITUCPEC: Not increase, THG: Not grow, HSEFD: Enough, EOH: Satisfied				

Source: Authors' estimation.

Availability of Rooms

The result demonstrates that the availability of rooms has an important and progressive effect on

the tourists' expectation of tourism growth under CPEC due to the Hazara motorway. The results are consistent with (Chu & Choi, 2000), which says

that the availability of rooms has a developmental and positive effect on tourism and hoteling growth. The result shows that Not-easily available of rooms category is positively related to the tourists' expectation of tourism growth under CPEC as compared to the easily available category. The tourism growth of a specific area is based on facilities available in that area, more specifically in terms of residence or room availability. Availability of rooms is the main factor that can affect tourism potential. A study depicts that a number of hotel rooms can largely increase tourism competitiveness levels in southeast European countries ([Jovanović & Ivana, 2016](#)). The results of a study indicate that financial resources of tourists, market price levels, and room availability have a significant and better impact on tourism related budget, expenditures, and investment ([Muryani et al., 2021](#)). A study by Heng and Low (n.d.) highlighted that tourism growth in Singapore is constrained by hotel rooms and other facilities.

Occupation of Respondent

The kind of occupation and source of income of a tourist has an influential and significant effect on the expectations of tourist and tourism growth under CPEC due to Hazara motorway, both categories of tourists' occupation are significant as compared to the not-working category, which shows that as tourists' occupation in terms of income increase this will increase the chances to make visits and in results tourism will increase. So, occupation of the tourist is the main factor for tourism growth because having occupation means having an income, and it means people will also make some visits. Significant differences were noted in tourism perceptions based on household income, ethnicity, and occupation in Australia ([Sharma & Dyer, 2009](#)).

Tourist will come due to Hazara CPEC Motorway.

The result indicates that tourists will come due to Hazara motorway have an influential and developmental effect on the tourists' expectation and tourism growth under CPEC the Hazara motorway. The results are consistent with ([Ferri, 2004](#)), that highway has a positive impact on hoteling and tourism industry growth. The result of

a study Joglosemar, Indonesia depicts that tourist services and infrastructure influence the tourists to visit this region ([Ineke & Winda, 2018](#)). The infrastructure of the tourism industry is a significant contributor in increasing tourism in 28 countries ([Khadaroo & Seetana, 2008](#)). With the start of the CPEC project in this region, the Hazara highway was the part of this project which is almost completed. Roads are the main factor to access development in any area. So, it is expected that due to this, road tourism in Pakistan will grow in the future.

Tourism Increased under CPEC

The result illustrates that tourism increased under CPEC have an influential and developmental effect on the tourists' expectation and tourism growth under CPEC due to Hazara motorway. The results are similar to the ([Ferri, 2004](#)), which observed a growing effect of the corridor on the increase of tourism. The development of a study Joglosemar, Indonesia depicts that tourist services and infrastructure influence the tourists to visit this region ([Ineke & Winda, 2018](#)). Infrastructure of the tourism industry is a significant contributor in increasing tourism in 28 countries ([Khadaroo & Seetana, 2008](#)). The government has given much importance to tourism, and they are taking many steps to encourage tourism in this region through construction of roads and providing infrastructure. Due to these steps, tourism has already increased according to TCKP. So, in the light of results tourism will grow in this region under CPEC due to Hazara motorway in future.

Tourism Growth under CPEC

Roads, hotels, restaurants, and entertaining services are the main infrastructure which boost tourism in any region. The result demonstrates that in future there will be a high chance of tourism and hoteling industry growth in Pakistan, results also indicates that there is a positive and significant impact of tourism industry growth in this region due Hazara motorway under China-Pakistan Economic Corridor. The results are matching with ([Ferri, 2004](#)) which shows that the corridor has a positive impact on Tourism and Hoteling growth. Infrastructure of the tourism industry is a significant

contributor in increasing tourism in 28 countries (Khadaroo & Seetana, 2008). A study by Jovanović and Ivana (2016) depicts that investment on to modernize infrastructure can prove a significant factor of tourism development in southeast European countries.

Tourism and Hospitality Infrastructure is Enough to Meet the Tourists' Demand

The result shows that tourism infrastructure is enough to meet tourist demand is positively and significantly related with tourists' expectation of tourism growth under CPEC due to Hazara motorway. The results are consistent with (Jovanovic & Ivana, 2016) that hospitality infrastructure has a positive impact on tourism growth. Khadaroo & Seetana (2008) reported that tourism infrastructure is an important factor to increase tourism in 28 countries. A study by Jovanović and Ivana (2016) depicts that investment on to modernize infrastructure can prove a significant factor of tourism development in southeast European countries. The result shows that the Need for Improvement category is positively related with the tourists' expectation of tourism growth as compared to Enough-category.

Satisfaction on Hospitality and Tourism Infrastructure

The result shows that the tourists' satisfaction on hospitality and tourism infrastructure is negatively and significantly related to the tourists' expectation of tourism growth under CPEC due to Hazara motorway. The result shows that not-satisfied category of satisfaction on hospitality and tourism infrastructure is negatively related with the tourists' expectation of tourism growth as compared to the satisfied category. The results are consistent with (Ghasemi and Gholamalazadeh, 2015). Result of a study Joglosemar, Indonesia depicts that tourist services and infrastructure influence the tourists to visit this region (Ineke & Winda, 2018). A study by Jovanović and Ivana (2016) depicts that investment

on to modernize infrastructure can prove a significant factor of tourism development in southeast European countries.

Conclusion

The results of the study conclude that some factors such as occupation of respondent, availability of rooms, tourist will come due to Hazara CPEC motorway, tourism will increase under CPEC, tourism will grow under CPEC, and tourism and hospitality infrastructure is enough to meet the tourist demand are contributing in the tourism growth under the CPEC due to Hazara motorway in Hazara region. Descriptive results highlighted that most of tourists needs improvement in hospitality and tourism infrastructure because due to the ignorance on infrastructure, the rooms are not easily available in the tourist destination places. Northern areas of Pakistan are having some of the highest peaks of the world, lacks, civilizations, mountains, hacking tracks, and historic forts with untapped tourism beauty. However, owing to a lack of government attention, poor tourism promotion, and no prior development in the tourist industry, Pakistan is facing a decrease in the tourism industry as compared to other nations across the world. In the start of 2018, the successive government investing on priority basis in tourism infrastructure. CPEC has contributed in providing significant and potential growth paths by regional contribution through roads like Hazara motorway, trade and tourism industry will increase for both China and Pakistan. Most of the tourists were happy with the construction of Hazara motorway, according to them, travel to tourist destination is become more accessible now. Hazara motorway contributes to trade and progress of rural regions of Pakistan and China, but most of the tourists were hoped that CPEC motorways would also reflects tourism directly or indirectly in the future. So, there is a need to enhance the hospitality and tourism infrastructure and tourism boosting campaigns with road maps through media or government authorities.

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