SOCIAL SCIENCE REVIEW ARCHIVES
https://policyjournalofms.com
ISSN Online: 3006-4708
ISSN Print: 3006-4694

Impact of Tourism Sector on the GDP Growth of Developing and Developed Countries

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DOI: https://doi.org/10.70670/sra.v3i1.1095

Abstract

This research is basically focused to find the impact of tourism industry on the GDP or economic growth of developed countries and also on the economic growth of developing countries. We have selected four major factors or variables of tourism sector of both developing and developed countries and on the basis of these factors we are studying the tourism sector of these countries and trying to figure out what is their effect on GDP or economic growth of developing and developed countries. We have used panel data analysis to conduct our research. We have selected 10 developing and 10 developed countries in different models from the time period of 2010 to 2023. The results of the study of developing countries shows that tourism expenditures, tourism receipts and tourism expenditures % of total imports has significant impact on GDP and number of tourist arrivals has insignificant effect on GDP. While the results of the study of developed countries shows that tourism expenditures and tourism receipts has significant effect on GDP while tourism expenditures % of total imports and number of tourist arrivals has insignificant impact on GDP growth. Based on this research government of these countries can focus on these major variables or factors of tourism to enhance the performance of their tourism industry that can have positive impact on GDP growth of these countries.

Key Words: Gross Domestic Product (GDP), Tourism Expenditures, Tourism Receipts, Developing Countries, Developed Countries

Background to the Study:

Tourism sector has direct relationship with the GDP growth or economic growth. It has a positive relationship with the GDP of any country. As discussed above if the tourism sector improves or tourism industry grows and develops then the GDP growth will also increase. That is why increase in the foreign exchange because of tourism of any country is a positive sign for the GDP growth or economic growth of that country. This is because tourism highly effects and has a great impact on the GDP of any country as it is one of the big industries and also one of the big exports of the world. So we can say that the countries having developed tourism industry or have boosted their tourism sector must be having a very healthy GDP growth or they must be having a very good economic performance. Even though GDP growth is positively related to tourism and GDP growth should increase with the increase in the performance of tourism but still there are many countries in the world which are having good tourism ratio and well developed tourism industry but still there GDP is not growing and their GDP growth is less. Though many developed countries like European countries and United States attracts thousands of tourists every year and they are having well established tourism industry or high tourist ratio and they are also having high GDP or economic growth at the same time. But there are some countries especially among developing or third world countries which are having high tourist ratio and developed tourism industry, still these type of countries are unable to increase their GDP growth and are having low GDP. For example among these countries, India is a country which has a lot of tourist attractions in terms of both historical and cultural heritages as well as natural beauty spots and hill stations but still India is having a low GDP growth. Because India is a big country and considered as a big economy and that's why their GDP growth is low as compared to the size of their economy. Pakistan on the other hand is also having historical and cultural heritages and sites and natural beautiful places which are tourist attractions. But unfortunately the tourism industry of Pakistan got affected badly because of terrorism for very long time but now after the eradication of terrorism its tourism industry has developed a lot and boosted because of several measures taken by the Government of Pakistan. And now a large number of tourists have again started to visit Pakistan but on the other hand the GDP growth of Pakistan is very low and decreasing rapidly. Even though the tourism industry of Pakistan is improving and developing but their GDP is continuously decreasing. Even though only tourism industry does not affect the GDP growth but it should create some positive impact on it. Like India and Pakistan there are many other countries especially among the developing nations having the same problem which are having developed tourism industry but low GDP growth. This study basically provides the solution to the problems of these countries especially the developing ones. This is because they can work and improve those major and important factors or variables which we will focus for this study. So that these countries which are having the problem of low GDP with stable tourism industry can further strengthen their tourism sector so that they can have a positive impact on their GDP growth and in this way can increase their GDP or economic growth. Because maybe these types of countries are performing well in tourism but still they might are unable to generate foreign exchange which they can earn according to their strength but if the government of these countries focus on some variables which we will discuss in this study then maybe they can further improve and increase their foreign exchange of tourism sector which will ultimately result in the growth of their GDP or economy.

The sector of tourism plays a very important role for any country. It has a great impact on the social and economic growth and development. Basically tourism counts as the fourth largest export in the world after fuel, chemicals and food (Rehman, Ma, Irfan, Ahmad & Traore, 2020). In the year of 2015 nearly 11.86 million tourists travelled all over the world and on that basis an export income of about $1.5 trillion was generated by the international industry of tourism. This contributed in making tourism industry as the fifth largest industry in the world (United Nations World Tourism Organization, 2016). In this study we see the effect or impact of tourism sector or industry on the Gross Domestic Product (GDP) growth of different developing or developed countries of the world. So GDP growth or economic growth is our dependent variable in this research as it helps to determine how much any country or nation is financially and economically stable and strong. GDP or economic growth is very important for any country because it basically shows how any country is performing economically and it also identifies the size of economy which means whether the economy of any country is bigger or smaller. We are focusing on the development and economy of different countries and studying the economic performance of different countries of the world. Despite of that we are also focusing on the developing countries that how they are progressing and developing and improving their economy. And the way to find out economic performance or growth of any country is to look at the GDP of that country as it is the indicator of economic performance. And if the GDP of any country increases it is the positive sign which means that the economy of that particular country is performing and doing well. That's why we are studying GDP and have selected it as our dependent variable for this research. Independent variable for our study is tourism sector as we are studying its effect on the GDP growth of the countries. We have taken tourism industry as our independent variable because it has direct relationship and effect on the GDP growth as discussed above that tourism industry is the fifth largest industry and also the fourth largest export of the world. And if the tourism industry of any country is strong and performing well then definitely it will have a positive impact on the GDP and increase the GDP growth of that country. The different developed countries and those countries which are having beautiful tourist places, spots and hill stations and having different attractions for tourists are generating large amount of foreign exchange for them. It means that the tourism industry of these countries is playing a vital and a major role in the GDP growth of these countries. As discussed is some studies, the tourism sector makes an increasingly large contribution to the overall economy and foreign exchange earnings in the region (Klytchnikova & Dorosh, 2013). And also, Governments worldwide have recognized the important role of tourism in economic growth and social progress (Dritsakis, 2004). Moreover, an increase in the growth of tourism demand leads to an increase in economic growth (Pratt, 2015). Furthermore the relationship between tourism and GDP has been described in other studies such as, tourism is perceived as an important source of foreign exchange that is used for financing economic growth (Tugcu, 2013). Similarly in another study, tourism through the multiplier, can be seen as an exogenous component of aggregate demand which has a positive effect on income, and subsequently on employment (Seetanah, 2011). That is why the Government and ruling authorities in the whole world are trying their best to increase tourism and boost tourism industry of their country. Even the countries especially developed ones which are having high tourism ratio and having strong tourism industry are focusing to further improve their tourism sector to increase their revenues from this sector. We have basically selected four independent variables of tourism sector for our study. These variables are very significant and major factors of tourism. This is because majorly tourism sector or industry basically depends on these four factors and these variables act as pillars of this industry.

Theoretical Background:

Tourism Expenditures and Gross Domestic Product (GDP):

Tourism expenditures are basically those expenditures paid by the international outbound tourists or visitors in other countries. These expenses include the shopping by the tourists, the services they use in the country and also the payments which are made to the foreign carriers for international transport. That is why it is directly related to tourism and an important factor which plays a vital and major role in the increment of gross domestic product (GDP) growth of any country through tourism sector. This is because when any country's tourism industry grows and develops then the number of visitors and tourists visiting that particular country starts increasing and that's why the demand of the money of that country also increases. As when the tourist will come to any other country then definitely they need local or domestic money of that country in order to pay for their expenses during their visit. That is why they will purchase the money of that respective country in exchange of dollars. So the value of the money of that country will increase and their money will get stronger. In this way it will create a positive effect on the GDP of the country. There are many studies done in the past which also show the positive impact of tourism expenditures on the GDP. For example, Factors that determine the net economic benefit include the local share of goods and services purchased by the tourists (Pratt, 2015). In addition, the increase in tourism spending may lead to increase activity in related industries (Rehman et al., 2020). Furthermore, the rapid injection of tourist expenditures into developing countries has different and more significant impacts (Durbarry, 2004). Further in more studies, tourists purchase numerous goods and services all of which use inputs from other sectors of the economy (Narayan, 2004). And also, decline in visitor expenditures reduces output in typical tourist sectors such as hotels, transportation and restaurants and bars, with smaller reductions in output for other sectors (Narayan, 2004). Further, tourism expenditure yields the greatest economic returns (Archer & Fletcher, 1996). Similarly, rapid injection of tourist expenditures into developing countries maybe different and have more significant impacts (Seetanah, 2011). Also, tourist spending has served as an alternative form of exports (Dritsakis, 2012).

Tourism Expenditures Percentage (%) of Total Imports and Gross Domestic Product (GDP): This variable of tourism sector is also important as it has negative impact on the GDP. As these expenditures are those expenditures which are incurred and paid by the residents of a country who are travelling abroad as visitors or tourists to other countries. The share in the import of any country for all those tourists going to other countries is basically calculated as the ratio to the imports of goods and services which includes all the expenses and payments or transactions made by the residents of the country to the other countries in which they are travelling. Because in this case when local people or residents of any country travel to some other country then they will sell the money of their own country and buy the money of the country in which they are staying as tourists as they have to pay for their different expenses such as shopping and also for using different goods and services in thar country. In this way the value of their native country will decrease as the demand of the money will fall and the money will ultimately become weaker. That's is why it will negatively affect the GDP of that respective country form which more local residents are going abroad for tourism. So the growth of the GDP of that country will halt and start decreasing. In another way it also has negative affect because if a country is small and has limited resources and low production level that can only cater to the needs of local residents of that country, so if many tourists are visiting that country then the demand of goods and services will increase and it will create a shortage of goods and services, so that country will be forced to import more goods and services in order to meet their demand created because of the increase in the number of tourists, and in this way their imports will increase as they are unable to increase their production. So because of that when their imports will increase then ultimately it will affect their GDP and their GDP will decrease. As discussed in studies, the limited natural resources results in a high propensity to import goods and services particularly capital goods. As a result of these characteristics a lot what is consumed by the tourists cannot be produced locally in either sufficient quantity or quality (Pratt, 2015). Also, the high import content of the tourism sector leads to a worsening of the balance of trade (Narayan, 2004). Further, Apart from export earnings from overseas, the import content of servicing all tourists must be noted (Heng & Low, 1990). Also in other study, foreign exchange earnings from tourism can subsequently also be used to import capital goods to produce goods and services (Seetanah, 2011). Similarly, international tourism demand is measured in terms of balance of payments figures, with inbound tourism being regarded as an export and outbound tourism as an import (Smeral, Witt, & Witt, 1992). Likewise, Policies designed to alter the level of inbound and outbound flows through nonregulatory measures may become important where countries facing a balance of payments crisis decide to adopt policies designed to increase exports and reduce imports of tourism (Prideaux, 2005).

Tourism Receipts and Gross Domestic Product (GDP):
Tourism receipt is the total revenue or earning generated by the tourism sector of any country. It covers the total expenditures by the tourists in the country. It is a part of total exports of any country and that is why plays an important role in increasing exports of the countries which are having developed tourism industry. These receipts can also be made through receipts from same day visitors which means sending any good or product through a visitor. The share of these receipts in the overall exports of the country is basically as a ratio to goods and services which includes all the transactions made between the resident of the country and the residents of other countries of the world and also includes the change of ownership of the different goods from the residents of the country to the non-residents. The goods also includes general merchandize sent for the purpose of processing or repairing. These export receipts have a positive effect on the GDP growth because it is a part of export as when any good or merchandize is sold to the resident of any other country then in return foreign exchange will be earned. This is because the payment by the international inbound visitor will result in the exchange of foreign or international money with the local money and in this way

local money will get stronger which definitely has a positive effect on the GDP growth of that country. According to past studies these variables have been discussed as, exports take the form of international tourism: it is the consumer that moves rather than the product (Nowak, Sahli, & Jimenez, 2007). Further, tourism can be a viable export-oriented economic growth strategy for bringing jobs and development to the people and to help in the reduction of abject poverty (Fayissa, Nsiah, & Tadasse, 2008). And from the same study, The contribution of tourism to economic growth and development is reflected in the form of exports (Fayissa et al., 2008). Moreover, In the Caribbean where the industry is more important to growth than in most other regions of the world and receipts from tourism exceed any of the major sources of external finance (Cannonier & Burke, 2019). Similarly, expenditure by tourists can be viewed as the exports of goods and services of the host countries (Heng & Low, 1990). And, tourist spending, as an alternative form of exports is believed to contribute to the balance of payments through foreign exchange earnings (Seetanah, 2011).

Number of Tourist Arrivals and Gross Domestic Product (GDP):

The number of international visitors or tourists arriving in any country is very important to boost its tourism sector and the growth of its GDP. That is why it has a positive effect on the GDP of any country. This variable is very closely and directly related to the variable of tourism expenditures because increase in the number of tourists will definitely increase their expenditures. The more the international tourist will arrive in any country the more expenditures they will bear in the form of shopping of different local products and they will also use different services in that country like transportation, booking in hotels, eating in restaurants. And because of that country will earn foreign exchange which will result in the growth of economy. Despite of that, it will also result in the increase in the demand of goods and services of that country which will result in production of more goods and services by the producers. Also it will generate more employment opportunities for the local people. As GDP is basically the value of goods and services of a country, that is why because of increase in production of goods and services, the GDP of that country will increase rapidly. In this way this variable positively impacts the GDP growth. As shown in the previous studies, many countries are attempting to generate additional revenue by increasing tourist flows from abroad (Durbarry, 2004). Also, changes in tourist arrivals may not fully reflect the true impact on growth if changes in the composition of the types of tourist are not accounted (Cannonier & Burke, 2019). From the same study, an increase in the growth of tourism demand leads to transitional dynamics with gradually increasing economic growth (Cannonier & Burke, 2019). In addition, pattern of visitor arrivals is related principally to the main holiday periods of the principal generating countries in Europe (Archer & Fletcher, 1996). Further, foreigners visiting other countries for the purpose of recreation and leisure have provided a source of income for the host countries (Heng & Low, 1990) and International trade in tourism occurs in the form of the tourists or consumers crossing the boundaries rather than the goods and services going over to them (Heng & Low, 1990). Likewise, more tourists encourage more investment and probably in the tourism infrastructure and industry (Seetanah, 2011). Furthermore, foreign tourism is an integral part of the Indonesian economy. For the decade prior to the 1997 crisis, the industry experienced strong growth, with large increases in foreign arrivals (Sugiyarto, Blake, & Sinclair, 2003). And also, foreign tourists are treated as economic actors, who consume a range of exported commodities, particularly services (Sugiyarto et al., 2003).

Empirical Literature Review:

The relationship between tourism expenditures and GDP has been discussed in several past studies such as, (Pratt, 2015) conducted a study on the economic impact of tourism on 7 small island developing states for the year of 2010 and found that tourism expenditures has positive affect on

GDP growth. Also (Rehman et al., 2020) investigated the influence of tourism in Pakistan for the period of 1995 to 2015 and concluded that tourism expenditure has positive relationship with economic growth. Despite of that (Durbarry, 2004) studied the tourism and economic growth of Mauritius for the period of 1970 to 1999 and concluded that tourism expenditures has strong relationship with GDP. In addition, (Narayan, 2004) studied the impact of tourism on Fiji's economy by conducting a test of 10% increase in tourism expenditures and found that tourism expenditures has positive relation on GDP growth. Moreover, (Fayissa et al., 2008) conducted study on impact of tourism on economic growth in Africa by considering 42 African countries from the period of 1995 to 2004 and concluded that tourism expenditure has strong influence on GDP. Furthermore (Cannonier & Burke, 2019) studied the effect of tourism on economic growth of 15 Caribbean islands from the period of 1980 to 2015 and found that tourism spending is strongly related to GDP. In other studies such as, (Archer & Fletcher, 1996) studied economic impact of tourism in Seychelles for the year of 1991 and found that tourism expenditure has positive relation with GDP. Similarly, (Heng & Low, 1990) conducted a study on economic impact of Tourism in Singapore from the period of 1960 to 1986 and found that tourism expenditure has positive effect on GDP. Further, (Klytchnikova & Dorosh, 2013) conducted the study on tourism sector in Panama for the years of 2003, 2006 and 2007 and found that tourism expenditures are positively related to GDP growth. In addition to these studies, (Sugiyarto et al., 2003) studied tourism impact on social accounting matrix of Indonesia for the year of 1993 and found that tourism expenditure is positively related to GDP. Moreover, (Surugiu & Surugiu, 2013) studied the tourism sector of Romania from the period of 1988 to 2009 and found that tourism spending has positive effect on GDP. Despite of that, (Dritsakis, 2004) concluded a study on impact of tourism on economic growth of Greece from the period of 1960 to 2000 and found that tourism earning or expenditure has positive impact on GDP. Similarly, (Henry & Deane, 1997) studied contribution of tourism on Ireland for the years of 1990 and 1995 and concluded that tourism expenditures has positive relationship with GDP growth. Also, Zhou, Yanagida, Chakravorty, & Leung (1997) studied economic impact of tourism on Hawaii for the year of 1982 and found that tourism expenditure has positive relationship with GDP. Additionally, (Tugcu, 2013) conducted a study on tourism on economic growth of 21 Mediterranean countries from the period of 1998 to 2011 and found that tourism expenditure is directly related to GDP growth. Furthermore, (Proenca & Soukiazis, 2008) studied tourism of southern European countries from the period of 1990 to 2004) and found that tourism expenditures has positive impact on GDP. The empirical review of these two variables in the past studies has been described as, (Narayan, 2004) studied the impact of tourism on Fiji's economy by conducting a test of 10% increase in tourism expenditures and found that tourism expenditures of imports has negative impact on GDP growth. Likewise, (Heng & Low, 1990) conducted a study on economic impact of Tourism in Singapore from the period of 1960 to 1986 and found that tourism expenditures on imports have negative influence on GDP. Despite of that, (Smeral et al., 1992) studied the forecasts of tourism imports and exports of 18 countries from the period of 1991 to 2000 and found that tourism imports have negative impact on GDP growth. Furthermore, (Surugiu & Surugiu, 2013) studied the tourism sector of Romania from the period of 1988 to 2009 and found that tourism imports have negative effect on GDP. Moreover, (Prideaux, 2005) concluded a study on five broad factors affecting bilateral tourism flows and concluded that tourism imports have negative effect on GDP growth. Similarly, (Tugcu, 2013) conducted a study on tourism on economic growth of 21 Mediterranean countries from the period of 1998 to 2011 and found that tourism imports is indirectly related to GDP growth. In the previous studies the relationship between tourism receipts and GDP has been shown as, (Rehman et al, 2020) investigated the influence of tourism in Pakistan from the year 1995 to 2015 and concluded that tourism receipts has a positive influence on economic growth. Also (Narayan, 2004) studied the impact of tourism on Fiji's economy by conducting a test of 10% increase in tourism expenditures. After conducting the test he found that tourism receipts has positive impact on GDP. In addition, (Nowak et al., 2007) conducted the study on tourism and economic growth of Spain for the year 1960 to 2003 and found that tourism exports or receipts has positive impact on GDP growth.

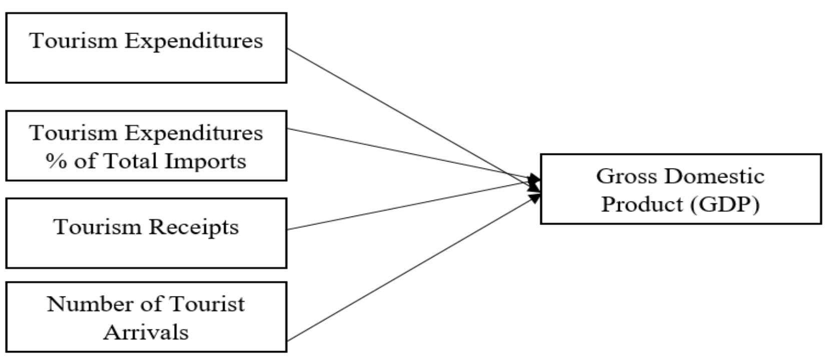
Further, (Fayissa et al., 2008) studied the impact of tourism on economic growth of 42 African countries from the period of 1995 to 2004 and concluded that tourism has a positive relation with the growth of a country. In different studies, (Cannonier & Burke, 2019) studied the effect of tourism on economic growth of 15 Caribbean islands from the period of 1980 to 2015 and found that tourism receipts is has positive impact on GDP. Similarly, (Heng & Low, 1990) conducted a study on economic impact of Tourism in Singapore from the period of 1960 to 1986 and found that tourism receipts or exports has positive impact on GDP. Also, (Smeral et al., 1992) studied the forecasts of tourism imports and exports of 18 countries from the period of 1991 to 2000 and found that tourism exports has positive influence on GDP growth. Similarly, (Sugiyarto et al., 2003) studied tourism impact on social accounting matrix of Indonesia for the year of 1993 and found that tourism receipt is positively related to GDP. Furthermore, (Dritsakis, 2012) concluded the study of impact of tourism on economic growth in seven Mediterranean countries from the period of 1980 to 2007 and concluded that tourism receipts has positive impact on GDP growth. Also, (Narayan, Narayan, Prasad, & Prasad, 2010) concluded a study on tourism and economic growth for Pacific island countries for the period of 1988 to 2004 and found that tourism exports has positive impact on GDP. Likewise, (Saleh, Assaf, Ihalanayake, & Lung, 2013) studied impact of tourism on Middle East region from the period of 1981 to 2008 and found that tourism receipts has positive impact on GDP growth. Also, (Henry & Deane, 1997) studied contribution of tourism on Ireland for the years of 1990 and 1995 and concluded that tourism receipts have positive relationship with GDP. Additionally in other studies like, (Schubert, Brida, & Risso, 2011) conducted the study of impact of tourism on the economy of Antigua and Barbuda from the period of 1970 to 2008 and concluded that tourism receipts has positive impact on GDP growth. Additionally, (Tugcu, 2013) conducted a study on tourism on economic growth of 21 Mediterranean countries from the period of 1998 to 2011 and found that tourism receipts is directly related to GDP growth. In addition, (Eeckels, Filis, & Leon, 2012) effect of tourism on Greece from the period of 1976 to 2004 and found that tourism receipts has positive impact on GDP. Also in addition to this, (Vanegas & Croes, 2003) conducted a study on tourism sector of Aruba from the period of 1975 to 2000 and concluded that tourism receipts has a positive effect on GDP). And also, (Jin, 2011) conducted the study on the effects of tourism on economic growth of in Honk Kong for the period of 1974 to 2004 and found that tourism receipts has positive impact on GDP growth. Number of tourist arrivals and GDP's relation in the empirical review of previous studies have provided the results as, (Cannonier & Burke, 2019) conducted a study on economic growth impact of tourism on small island developing countries. He used the data of 15 Caribbean small nations from the period of 1980 to 2015 and concluded that tourist arrivals or increase in tourism is positively related to the GDP growth. Moreover, (Archer & Fletcher, 1996) studied economic impact of tourism in Seychelles for the year of 1991 and found that number of tourist arrivals has positive relation with GDP. Also, (Heng & Low, 1990) conducted a study on economic impact of Tourism in Singapore from the period of 1960 to 1986 and found that tourist arrivals has positive effect on GDP. Furthermore, Klytchnikova & Dorosh (2013) conducted the study on tourism sector in Panama for the years of 2003, 2006 and 2007 and found that number of tourist arrivals is positively related to GDP growth. Also, (Seetanah, 2011) conducted the study on impact of tourism on 19 island economies from the period of 1995 to 2007 and found that number of tourists has positive relationship with the GDP. Moreover, (Sugiyarto et al., 2003) studied tourism impact on social accounting matrix of Indonesia for the year of 1993 and found that number of tourists is positively related to GDP. Moreover, Dritsakis (2012) concluded the study of impact of tourism on economic growth in seven Mediterranean countries from the period of 1980 to 2007 and concluded that number of tourist arrivals has positive impact on GDP growth. Also, (Srinivasa, Kumar, & Ganesh, 2013) conducted tourism and economic growth in Sri Lanka from the period of 1969 to 2009 and concluded that tourist arrivals has positive relationship with GDP growth. Despite of that in more studies like, Narayan, Narayan, Prasad, & Prasad (2010) concluded a study on tourism and economic growth for Pacific island countries for the period of 1988 to 2004 and found that number of tourist arrivals has positive impact on GDP. Likewise, (Katircioglu, 2010) studied tourism of North Cyprus from the period of 1977 to 2007 and found that number of tourist arrivals has positive relation with GDP. Similarly (Massidda & Mattana, 2013) studied the relationship between tourism and GDP in Italy from the period of 1987 to 2009 and found that international tourist arrivals has positive impact on GDP. Except these other studies such as, (Tugcu, 2013) conducted a study on tourism on economic growth of 21 Mediterranean countries from the period of 1998 to 2011 and found that tourist arrivals is directly related to GDP growth. Similarly (Vanegas & Croes, 2003) conducted a study on tourism sector of Aruba from the period of 1975 to 2000 and concluded that number of tourist arrivals has a positive effect on GDP). Furthermore, (Jin, 2011) conducted the study on the effects of tourism on economic growth of in Honk Kong for the period of 1974 to 2004 and found that number of tourist arrivals has positive impact on GDP growth.

Hypothesis Development:

Ho: Tourism expenditures has significantly negative effect on GDP.
Ha: Tourism expenditures has significantly positive effect on GDP.
Ho: Tourism expenditures on imports has significantly positive effect on GDP.
Ha: Tourism expenditures on imports has significantly negative effect on GDP.
Ho: Tourism receipts has significantly negative effect on GDP.
Ha: Tourism receipts has significantly positive effect on GDP.
Ho: Number of tourist arrivals has significantly negative effect on GDP.
Ha: Number of tourist arrivals has significantly positive effect on GDP.

Theoretical Framework:

The theoretical framework of this research study is represented below,



Data and Methodology:

Our research approach for this particular study is deductive research approach as we are conducting quantitative study in which we are testing an existing theory and not developing a new one. That's why the approach for our research is deductive approach. As our research is based on numeric or quantitative data in which we are not developing a new theory and testing an existing theory, that is why our research design for this study is quantitative research design. Further, this research study is based on explanatory research purpose because we are conducting quantitative research. And we are studying the effect of independent variable over dependent variable which is the effect of tourism on economic growth. So our research purpose for this research is explanatory research. In this research study we have used the data of developing and developed countries. The names of different developing and developed countries which we have taken for our research are as follows. This research study contains the data of developed and developing countries. For our research we have selected 10 developing countries and 10 developed countries. So total 20 countries are selected for this research studyThe data of developed and developing countries for this particular research study has been obtained from the web site of World Bank.

No.	Developing Countries
1	Pakistan
2	Malaysia
3	Sri Lanka
4	India
5	Philippines
6	Thailand
7	Singapore
8	Kuwait
9	Bahrain
10	Armenia

No.	Developed Countries
1	Germany
2	Switzerland
3	Portugal
4	Poland
5	Norway
6	Denmark
7	Finland
8	Ireland
9	France
10	Greece

Our data for this study is having the characteristics of panel data provided the data of i developing and developed countries at time t. The econometric equation for our research is as follows,

$$\mathrm{GDP}_{\mathrm{it}} = \alpha_{\mathrm{it}} + \beta_1(\mathrm{EXPND})_{\mathrm{it}} + \beta_2(\mathrm{RCPT})_{\mathrm{it}} + \beta_3(\mathrm{IMP})_{\mathrm{it}} + \beta_4(\mathrm{ARVL})_{\mathrm{it}} + \varepsilon_{it}$$

In the above mentioned econometric equation, GDP represents the gross domestic product or economic growth of developing and developed countries, EXPND represents tourism expenditures of developing and developed countries, RCPT represents tourism receipts of developing and developed countries, IMP represents tourism expenditures % of total imports of developing and developing countries and ARVL represents number of tourist arrivals in developing and developed countries.

Description of Variables:

Gross Domestic Product (GDP): GDP is basically a measure or tool to calculate the market or monetary value of all the finished products, goods and services of any country in a particular time period. It helps to identify economic growth or economic position of any country.

Tourism Expenditures: These are those expenditures or spending of international outbound tourists or visitors in any country. It includes all the expenses by the tourists like shopping and purchase of all the goods and services in any country.

Tourism expenditures Percentage (%) of Total Imports: These expenditures or spending are by the people of any country in other countries as visitors or tourists. These spending are considered as imports of any country and it is a part of imports. It is calculated as a ratio to imports of total goods and services which includes all the transactions between the residents of any country and the rest of the world.

Tourism Receipts: International tourism receipts includes all the expenditures and spending by the inbound visitors and tourists in the destination country. It includes all tourism receipts which cover all the expenses by the tourists from abroad in any country.

Number of Tourist Arrivals: It basically includes the number of all the international inbound tourists and visitors who travel to a particular country other than the country of their usual residence for the purpose of tourism.

Analysis and Results:

Descriptive Statistics of Developing Countries:

Variable	Observation	Mean	Standard Deviation	Minimum	Maximum
Gdp	240	10.94502	.6756403	9.1668	12.4335
Expnd	240	9.397127	.6325268	7.0792	10.4115
Rcpt	235	9.386598	.7099304	7.1461	10.788
Imp	187	13.9759	12.82795	1.394443	51.47694
Arvl	234	6.499733	.6515375	4.0792	7.5818

The descriptive statistics table for the developing countries shows that the mean value of gross domestic product is 10.945, standard deviation value is 0.675, minimum value is 9.166 and maximum value is 12.433. Tourism expenditures has the mean value of 9.397, its standard deviation value is 0.632, minimum value is 7.079 while its maximum value is 10.411. The mean value of tourism receipts is 9.386, standard deviation value is 0.709, minimum value is 7.146 and maximum value of tourism receipts is 10.788. Despite of that mean value of tourism expenditures % of total imports is 13.985, standard deviation value is 12.287, minimum value is 1.394 and maximum value is 51.476 and finally the mean value of number of tourist arrivals is 6.499, standard deviation is 0.651, minimum value is 4.079 and its maximum value is 7.581.

Descriptive Statistics of Developed Countries:

Variable	Observation	Mean	Standard Deviation	Minimum	Maximum
Gdp	240	11.59564	.4486756	10.8402	12.59811
Expnd	240	9.960364	.466125	9.1449	11.024
Rcpt	240	10.02061	.40525	9.3086	10.8636
Imp	190	8.769367	4.703706	2.761926	35.88065
Arvl	239	7.002203	.429307	6.2365	7.951

The above table of descriptive statistics for the developed countries includes the mean value of gross domestic product which is 11.595, standard deviation value is 0448, minimum value is 10.840 and maximum value is 12.598. The mean value of tourism expenditures is 9.960, standard deviation value is 0.466, minimum value is 9.144 and its maximum value is 11.024. While tourism receipts has the mean value of 10.020, its standard deviation value is 0.405, minimum value is 9.308 and its maximum value is 10.863. Tourism expenditures % of total imports has the mean value of 8.769, standard deviation value is 4.703, minimum value is 2.761 and maximum value is 35.880. And number of tourist arrivals has the mean value of 7.002, standard deviation value is 0.429, minimum value is 6.236 and its maximum value is 7.951.

Diagnostic Analysis:

Multicollinearity Test: Multicollinearity is a problem which occurs when an independent variable highly correlates with one or more independent variables in a multiple regression model. It is an issue because it basically diminishes the significance of any independent variable. Therefore after applying the multicollinearity test the collinearity values of all the independent variables should be less than 90%. Because if the collinearity value of any independent variable will be more than 90% then there will be an issue of multicollinearity in the model.

Multicollinearity Table of Developing Countries:

Variables	Expnd	Rcpt	Imp	Arvl
Expnd	1.0000			
Rcpt	0.7990	1.0000		
Imp	0.3920	0.4615	1.0000	
Arvl	0.8212	0.8647	0.3844	1.0000

Multicollinearity Table of Developed Countries:

Variables	Expnd	Rcpt	Imp	Arvl
Expnd	1.0000			
Rcpt	0.7810	1.0000		
Imp	-0.1353	-0.3262	1.0000	
Arvl	0.6138	0.8795	-0.2096	1.0000

The above mentioned both the tables of multicollinearity of developed and developing countries show the collinearity values of all the independent variables which are less than 90%. So this concludes that there is no issue of multicollinearity in our both models.

Heteroscedasticity Test: It is an issue in the regression model when the error term of the model is correlated with its variances or when the error term is not having a constant variance then we will say that there is the issue of heteroscedasticity in the model. The null hypothesis (Ho) of heteroscedasticity test is there is no issue of heteroscedasticity in the model while alternative hypothesis (Ha) is there is an issue of heteroscedasticity in the model. If the significance value of the test is greater than 0.05 then null hypothesis is accepted and if the significance value is less than 0.05 then alternative hypothesis will be accepted and null would be rejected. After performing heteroscedasticity test for both the models of developing and developed countries result shows that the significance or p value of both models of developing and developed countries is 0.0000, which is less than 0.05 so we will accept alternative hypothesis (Ha) which concludes that there is the issue of heteroscedasticity in both models.

Autocorrelation Test: This problem takes place when any variable's current value in the model correlates with its own past or previous values then there will be an issue of autocorrelation in the model. It basically measures the correlation between values of any variable across different observations of the data. The hypothesis of autocorrelation test is, if significance value is greater than 0.05 then we will accept null hypothesis (Ho) which says that the model has no issue of autocorrelation and if the significance value is less than 0.05 then alternative hypothesis (Ha) will be accepted and the model will have the issue of autocorrelation. According to the results the p value or significance value of both the models of developing and developed countries is 0.000 which is less than 0.05 that is why we will reject null hypothesis and accept alternative hypothesis (Ha) which concludes that there is an issue of heteroscedasticity in both models.

Robust Test: The results of heteroscedasticity and autocorrelation tests conclude that both the models of developing and developed countries have the issues of autocorrelation and heteroscedasticity. So if the model has the issues of both autocorrelation and heteroscedasticity or any one of them then we apply robust test on the model because it automatically removes the issues of autocorrelation and heteroscedasticity. (Reed & Ye, 2011) concludes that robust test or robust model is best to remove the issues of autocorrelation and heteroscedasticity from the model. As our models are having both issues that's why we have applied robust test which has removed issues of autocorrelation and heteroscedasticity from our models and now our both models are free from both the issues.

Regression Analysis:

Breusch Pagan Test: Breusch Pagan test is basically applied on the model to decide whether the Pooled OLS Model is suitable or Random Effect Model is suitable for the study. The null hypothesis (Ho) of this test is Pooled OLS model is suitable for the study while its alternative hypothesis (Ha) is Random Effect Model is suitable for the study. If the significance value is greater than 0.05 then null hypothesis is accepted and if the significance value is less than 0.05 then alternative hypothesis is accepted. The P value or significance value of BP test for our both studies of developing and developing countries is 0.0000. This p value is less than 0.05 which means we will accept alternative hypothesis (Ha) for our both studies which concludes that Random Effect Model is suitable for our studies.

Hausman Test: We have applied Hausman test in between Random Effect Model and Fixed Effect Model in order to decide which model is suitable for our both studies of developing and developed countries. The null hypothesis (No) of this test is Random Effect Model is suitable for the study. The alternative hypothesis (Ha) of the test is Fixed Effect Model is suitable for the study. If the significance value is greater than 0.05 than null hypothesis (No) is accepted and if the significance value is less than 0.05 than alternative hypothesis (Ha) is accepted. The Hausman test's p value of our both studies of developing and developed countries is 0.0000 which is less than 0.05 so that is why we will accept alternative hypothesis (Ha) for our both studies which means Fixed Effect Model is suitable for our studies.

Results of Fixed Effect Model:

Results for Developing Countries:

Variables	Fixed Effect Model			
	Coefficients	**Standard Error**	**Z**	**P>|z|**
Expnd	.2474369	.1058304	2.34	0.019
Rcpt	.3792022	.1596965	2.37	0.018
Imp	-.0035898	.0012999	-2.76	0.006
Arvl	.1645621	.2177554	0.76	0.450
_cons	4.045941	.3953436	10.23	0.000
Number of observations = 181				
Number of groups = 10				
R-sq: overall = 0.7017				
Prob > chi2 = 0.0000				

The above result shows that the tourism expenditures is having an effect of 24.743% on gross domestic product. Its p value or significance value is 0.019 which is less than 0.05, this shows that tourism expenditures has a positive significant impact on gross domestic product. The result of the study accepts our first hypothesis which says that tourism expenditures has significant positive impact on gross domestic product. This result is consistent with (Pratt, 2015) and also (Durbarry, 2004). Tourism receipts is affecting 37.92% on gross domestic product, the p value of tourism receipts is 0.018, which shows that tourism receipts has significant positive effect on gross domestic product. This result also supports our hypothesis according to which tourism receipts has significant positive effect on gross domestic product as the results of the study of (Rehman et al, 2020). Tourism expenditures % of total imports effect on gross domestic product is -0.358% and its significance value is 0.006 so this shows that tourism expenditures % of total imports is having negative significant effect on gross domestic product. It also accepts our hypothesis of tourism expenditures % of total imports has significantly negative effect on gross domestic product. This result is compatible with (Prideaux, 2005). And finally number of tourist arrivals is effecting 16.456% on gross domestic product and also the p value is 0.450 which is greater than 0.05 so it concludes that number of tourist arrivals is having positive insignificant influence on gross domestic product. On the basis of this result our hypothesis is rejected which is number of tourist arrivals has insignificant positive influence on gross domestic product. It is contrary to the study of (Archer & Fletcher, 1996).

Results for Developed Countries:

Variables	**Fixed Effect Model**			
	Coefficients	**Standard Error**	**Z**	**P>|z|**
Expnd	.4731629	.1476235	3.21	0.01
Rcpt	.5143451	.2374159	2.17	0.030
Imp	.0002135	.0020973	0.10	0.919
Arvl	-.139123	.1747113	-0.80	0.426
_cons	2.704042	.5761927	4.69	0.000
Number of observations = 190				
Number of groups = 10				
R-sq: overall = 0.9430				
Prob > chi2 = 0.0000				

The results of the developed countries show that tourism expenditures is affecting 47.316% on gross domestic product and with a p value of 0.01 which is less than 0.05 it shows that tourism expenditures is positively and significantly impacting gross domestic product. The result is accepting our hypothesis saying that tourism expenditures has significant positive effect on gross domestic product, as according to the study (Heng & Low, 1990). Tourism receipts is having effect of 51.434% on gross domestic product, its p value is 0.030 which concludes that tourism receipts is having positive significant influence on gross domestic product. This result also accepts our hypothesis according to which tourism receipts has significant positive impact on gross domestic product. Also the result is in accordance with the study (Narayan, 2004) and (Tugcu, 2013). Despite of that tourism expenditures % of total imports effect on gross domestic product is 0.002%. The p value of imports is 0.919 which is greater than 0.05 so it shows that tourism expenditures % of total imports is having insignificant positive effect on gross domestic product. It rejects our hypothesis which says that tourism expenditures % of total imports has significant negative influence on gross domestic product. This result is in contrast with the study of (Smeral et al., 1992). Number of tourist arrivals is affecting -13.912% on gross domestic product, its significance value is 0.426 which concludes that number of tourist arrivals is having negative insignificant influence on gross domestic product. This result also rejects our hypothesis which says that number of tourist arrivals has positive and significant impact on gross domestic product. It is in contrast with the results of the study of (Dritsakis, 2012) and (Seetanah, 2011).

Hypothesis Assessment Summary:

Hypothesis Assessment Summary of Developing Countries:

Hypothesis	Coefficient	Significant Value	Assessment
Tourism expenditures has significantly positive effect on GDP.	.2474369	0.019	Accepted
Tourism receipts has significantly positive effect on GDP	.3792022	0.018	Accepted
Tourism expenditure % of total imports has significantly negative effect on GDP	-.0035898	0.006	Accepted
Number of tourist arrivals has significantly positive impact on GDP	.1645621	0.450	Rejected

Hypothesis Assessment Summary of Developed Countries:

Hypothesis	Coefficient	Significant Value	Assessment
Tourism expenditures has significantly positive effect on GDP.	.4731629	0.01	Accepted
Tourism receipts has significantly positive effect on GDP	.5143451	0.030	Accepted
Tourism expenditure % of total imports has significantly negative effect on GDP	.0002135	0.919	Rejected
Number of tourist arrivals has significantly positive impact on GDP	-.139123	0.426	Rejected

Conclusion and Summary of the Findings:

This study is basically focused on different variables or factors that can play major role in boosting tourism sector of any country and how they can bring positive impact on their gross domestic product with the help of tourism industry. This research provides a solution to both the developing countries and developed countries by improving and working on those variables which we have considered for this study so that they can further strengthen their tourism sector which can have positive effect on their GDP. Our objective of this study was basically to find out the effect of tourism sector on the economic or GDP growth of developing and developed countries. The results for developing countries from our research study shows that tourism expenditure has significantly positive impact on GDP growth. Also tourism receipts has positive significant impact on GDP growth. Despite of that tourism expenditure % of total imports has significant negative influence on GDP and number of tourist arrivals has insignificant positive effect on GDP growth of developing countries. The results of the developed countries from our research shows that tourism expenditures has significant positive effect on GDP growth. Despite of that tourism receipts has significant positive impact on GDP. While the results show that the tourism expenditure % of total imports has insignificant positive effect on GDP and number of tourist arrivals has insignificant negative influence on GDP growth of developed countries. This research study can help the governments of different countries of the world including both developing and developed countries especially developing nations that are having low economic growth and weak tourism sector so that on the basis of this study they can focus on boosting their tourism sector by paying special attention on major factors related to tourism. For example number of tourist arrivals and tourism receipts are major factors and variables of tourism. So they should make policies and provide better facilities to attract more foreign tourists in their country. And when the influx of tourist will increase it will automatically enhance tourism receipts of any country. And in this way the tourism sector will strengthen and ultimately it will lead to economic or GDP growth of the country. Despite of that the government of both developing and developed nations can make policies on the basis of this research to reduce tourism imports of the country by providing better facilities and opportunities to local tourists so that local tourists can minimize their visits or trips for tourism purpose to different countries of the world. By attracting international tourists and by reducing tourism imports both developing and developed countries can further boost their tourism industry that can play a vital role in economic growth of any country. Our research study is basically based on 10 developing and 10 developed nations. So there is a scope for future researchers who are interested in research of tourism industries of different countries of the world. In future many researches can be done on the basis of this research for example the number of countries can be increased from 10 to 20 or more for both developing and developed countries. In this way the results will get improved by increasing the number of countries and we can get more accurate, improved or generalized results of the research study.

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