

Relationship between FDI, Foreign Exchange Earnings through Inbound Tourism and Growth of Indian Economy



Piyali Roy Chowdhury, Anuradha. A

Abstract: Foreign Direct Investment (FDI) has been playing a crucial role in the development of Indian economy ever since liberalization. The role of FDI, hence, can be discussed from the point of one of much deliberated sectors, tourism, in this case. The current study, thus, is based on investigating an association between FDI, Foreign Exchange Earnings from tourism and per capita growth with respect to Indian economy for a period of 1996-2018. The analysis proves a cointegrating relationship between them through Auto Regressive Distributed Lag (ARDL) Modelling Approach. It proves FDI to be an influential factor in enhancing foreign exchange earnings from tourism for inbound tourism industry and per capita economic growth. Through Error Correction Model, it is proved that the models can correct seventy-seven- and eighty-three percent imbalances in short run. Applying Granger Causality approach, the study proves per capita economic growth granger causes FDI. Subsequently, is playing a major role in attracting foreign exchange earnings from inbound tourism in India. Finally, the study suggests certain policy measures for enhancing per capita growth that will ultimately promote FDI to augment conditions of tourism industry in Indian economy.

Keywords: ARDL Model, Granger Causality Approach, Foreign Direct Investment, Tourism Industry, Per Capita Economic Growth

I. INTRODUCTION

Developing economies have different sources of growth which are required for overall development of a country. Although agriculture and manufacturing sectors are highly prioritized, tourism industry also are gradually being considered as one of the important sources. The inbound and outbound tourism industry, thus, comprise an important sector in economic development of a developing nation. The possible causes are it increases revenue (both in domestic currency as well as foreign currency), it creates possible employment opportunities and it helps to generate economic diversification focusing on service industry and rural sectors of a developing economy more.

Tourism industry needs support of infrastructure, technology and upgraded knowledge base which can only be possible if the said economy is equipped with enough funds. For a growing economy, it is very difficult to manage funds to build the standard in tourism with respect to infrastructure and quality. Thus, developing nations, by and large, depend on foreign funds to channelize it to different sectors of an economy. One of the most important sectors, tourism, has now gained its significance in receiving foreign funds. The nature of foreign capitals useful for promoting and augmenting growth in tourism industry is characterized as Foreign Direct Investment (FDI). Although there are different possible sources of foreign funds, such as, Foreign Portfolio Investment (FPI), Foreign Institutional Investment (FII) and Foreign Direct Investment (FDI). FPI include equity and debt capital investment. As tourism requires establishment of hotels, restaurants, car rentals, tour operators, travel agencies and airlines at its largest setup, FDI plays a crucial role in determining and establishing the ultimate growth in tourism industry.

Also, growth in any economy is necessary as it is a factor of overall economic development. Growth with respect to Gross Domestic Product is the ultimate measure of prosperity in any economy. According to World Bank, growth can be analyzed by taking value of GDP annual percentage or per capita GDP. The significance of per capita GDP is more as it calculates extensive growth and intensive growth of any country distinctively. Population change is related to extensive growth and increment in GDP value is a measure of intensive growth. The association between economic growth and foreign investment has already gained importance in the area of economic development of an economy.

In this aspect, the current analysis investigates a relationship between FDI, foreign exchange earnings from inbound tourism and economic growth in one of the fastest growing economy, i.e., India. The data considered for the study ranges from 1996-2018. The analysis chooses Auto Regressive Distributed Lag (ARDL) Modelling Approach to find out long run cointegration between the variables. Also, the direction of causality is established to extract the nature and extent of dependency of the variables. Next, the study leads to check speediness of adjustment of short run disequilibrium to long run stability through Error Correction Model. Finally, the direction of causality in short run has also been formulated through Granger Causality approach.

Manuscript published on November 30, 2019.

* Correspondence Author

Piyali Roy Chowdhury*, VITBS, Vellore Institute of Technology, Chennai, India, email: piyaliroy.chowdhury2016@vitstudent.ac.in

Anuradha. A., VITBS, Vellore Institute of Technology, Chennai, India, email: anuradha.a@vit.ac.in

© The Authors. Published by Blue Eyes Intelligence Engineering and Sciences Publication (BEIESP). This is an [open access](https://creativecommons.org/licenses/by-nc-nd/4.0/) article under the CC-BY-NC-ND license <http://creativecommons.org/licenses/by-nc-nd/4.0/>

Relationship between FDI, Foreign Exchange Earnings through Inbound Tourism and Growth of Indian Economy

The sections of the analysis are divided as follows: Section two elaborates reviews of literature. Section three explains methodology used for the study. Section four analyses the result. Section five discusses the outcomes and significances of the current results. Section six provides the conclusion.

II. REVIEW OF LITERATURE

According to the theory articulated by United Nations Conference on Trade and Development (UNCTAD), a firm can launch an affiliate only when three conditions are met. (Dunning,1991).If foreign firms exist with some specific technological advances, or location wise the host country is suitable for tourism (prioritized with sand, sun and sky), or internalization factors such as outweighing profits from company-affiliate rather than company-firm in host country combination.

The study also encompasses the advantages of FDI if countries focus on internalization contributors which are mentioned before. The possible advantages occur because hotel industries are capital intensive production. Second, there will be an assurance of better control of management as ultimately it would be driven by home country company management. Third, bringing into support facilities, local sales office, and terminals will eventually lead to requirement of huge funds which are generated from foreign investors.

Considering the theories and advantages of FDI proposed by Dunning (1991) and UNCTAD, the current study focusses on following literatures investigating the relationship of FDI and tourism industry in certain developed and developing countries.

Tomohara (2016) explained interrelation between FDI and tourism observing total FDI as an important factor than tourism sector specific foreign investment. Sokhanvar (2019) analyzed the impact of FDI and international tourism earnings on economic growth for Europe. The result is ambiguous because of its mixed responses among the countries in Europe. Alam & Paramati (2016) explored the inverse relationship between tourism receipt and income inequality. Double the amount of tourism receipt, lesser is the extent of income inequality in developing economies. Subbarao (2008),Kaul and Gupta (2009) analyzed the opportunity in tourism industry is related with employment generation, higher investments in tourism by both domestic and foreign investors and investment in infrastructure in tourism industry.Selvanathan, et al (2012) analyzed cointegration between FDI and tourism industry in India. The study took VAR based approach to find the direction of the variables working as dependent and independent. Jalil, et al (2013) found a causal relationship between tourism industry and economic growth in Pakistan. Tourism industry has positive impact on enhancing economic growth in that study. Bethapudi (2013) explored significant impact of information communications technologies on travel and tourism sectors. Singh (1997) investigated the human resource contribution to service Industry, like tourism, in India. Gupta (2015) explained the contribution of FDI towards Indian tourism sectors in a more descriptive manner. The study analyzed data and forecasted FDI led improvement in tourism sector in India. The study also revealed the ultimate economic growth assurance after development of tourism industry. Tomohara

(2017) explained requirement of FDI increases for imports which subsequently enhances number of foreign tourist visits in Japan. Samimi, et al. (2017) investigated a long run cointegration between FDI orientation towards tourism and growth in tourism. Results concluded that although short run causality is absent, there exists a long run relation between all the three parameters. The causality is bidirectional in nature. Samimi, et.al (2017) identified long run cointegration between FDI and tourism in developing economies. The study failed to find any short run causality in the analysis. Gao & Su (2019) explained world heritage does not influence tourism and number of tourist visits in developed countries. Liu & Wu (2019) explored demand for inbound tourism spikes, rather than domestic market tourism, with the rise in economic growth. It was also proved that when tourism sector productivity increases, consumption in domestic tourism rises than inbound tourism.

Fahimi, A, et al. (2018) proved tourism over the years augments economic growth of micro countries. Also, it plays an important role in contributing the development of human capital. The nature of human capital will finally cause growth of the economy.Li, S, et al (2019) analyzed the existence of a spillover effect of tourism sector on the other sectors of an economy to promote overall growth of a nation.Pérez-Rodríguez, J, et al (2015)explained a relation of dependence between GDP and tourism receipt in any economy.Santamaria, Dand Filis, G (2019)explain tourism and economic growth are related with respect to time variation in every economy.Martins, L. F(2017) proved a depreciation and a relative price reduction in domestic economy will attract more foreign nationals to boost demand for tourism in these economies. Besana, A., and Bagnasco, A. M (2014) explained the measure of Gross Domestic Product (GDP) as the crucial driver for enhancing economic growth.[Dogru, T., , Bulut, U. (2018)] and [Aratuo, D. N., and Etienne, X. L(2019)] analyzed the relationship between tourism receipts and economic growth. The study proved higher earnings from tourism sectors aggravates economic growth of a country.Habibi, F, et al., Li, K. X, et al. (2018)showed the impact of tourism industry on economic growth is positive in Iran. Ohlan, R. (2017)proved long run cointegration between tourism, economic growth and financial development in different economies. For short run analysis, the study proved tourism led economic growth in countries.

The above stated literatures are confined either towards FDI related tourism and tourism growth, or, tourism growth led economic growth via inward FDI in developed countries. Very few studies are conferred over developing economies, especially India. In this respect, our study finds the gap in the existing literature specifying:

a. the analysis considers Foreign Direct Investment (FDI) in total and not in sector specific contribution. It gives broad coverage and flexibility in the current study.

b. the study is articulated considering Indian economy as India is featured as one of the fastest growing economies in world. c. the study takes a different approach of measurement. At first, it chooses Johansen cointegration to establish a long run cointegrated equation.

In the second step, it selects ARDL model to find the direction of dependency of the variables. Finally, the study aims for finding out short run causality through Granger causality process.

After analyzing the gap, the analysis emphasizes the objectives of the study.

These are as follows:

- i. To prove the cointegration between FDI and Foreign Exchange Earnings from tourism industry and ascertain nature of dependency by Auto Regressive Distributed Lag (ARDL) Modelling Approach.
- ii. To prove the cointegration between FDI and per capita growth of India by ARDL approach.
- iii. To explore a short run error correction model for checking the speed of short run disequilibrium adjustment of the three variables.
- iv. To analyze short run Granger causality between the above explained variables.

To be specific, the Null hypotheses specified in the analysis are as follows:

H₀₁: There exists no cointegration between FDI and Foreign Exchange Earnings from inbound tourism industry by ARDL model.

H₀₂: There exists no cointegration between FDI and per capita growth in India by ARDL model.

H₀₃: There is no short run disequilibrium adjustment of external fluctuations caused by FDI and Foreign Exchange Earnings from inbound tourism industry.

H₀₄: There is no short run disequilibrium adjustment of external fluctuations caused by FDI and per capita growth of India.

H₀₅: There exists no short run granger causality between FDI and Foreign Exchange Earnings from tourism industry.

H₀₆: There exists no short run granger causality between FDI and Per capita growth in India.

III. METHODOLOGY

The study covers a period of 1996-2018 for Indian economy. Data on FDI is measured annually as net inflow of FDI in US dollars. Net inflow of foreign funds stands for total inflow minus total outflow.

The data have been chosen from two different sources. First, data on FDI have been considered from world bank database. Secondly, data on foreign exchange earnings from tourism industry in India have been selected from the database of Ministry of Tourism, Government of India. Per Capita Growth (PCG) of India is calculated as total valuation of goods and services added to taxes and subtracted from subsidies paid by individuals, divided by mid-year population.

The formula used for finding PCG and followed World Bank definition is described mathematically as:

$$PCG = \frac{(GDP + Tax - Subsidy)}{\text{Midyear population}}$$

The data are measured in terms of different currencies. Thus, logarithmic values of the two variables have been considered for subsequent analysis. The notations used are as follows: FDI as ln(FDI), foreign exchange earnings from tourism as ln(EAR) and per capita growth as ln(PCG).

The methodologies used for this study are as follows:

At first, data have been checked for cointegration by Auto

Regressive Distributed Lag (ARDL) model to ascertain the dependent and independent variables involved in the cointegration procedure.

Once the long run equation is established, the data are put through short run model of adjustment. The error correction model of short run proves the speed of adjustment from disequilibrium to long run stable equilibrium. After examining the rapidity of the short run phenomena, the variables are analyzed through Granger Causality Test to check the direction of causality.

Before running cointegration, the variables are checked through order of integration in time series. Johansen Cointegration test is possible only if data are integrated to order one, I(1). Also, ARDL process can be formulated if the underlying variables are integrated to order zero, I(0), or order one, I(1), or order two I(2). These tests have been performed accordingly to run subsequent processes. The tests of order of integration has been made using Augmented Dicky Fuller (ADF) and Phillips Perron (PP).

IV. RESULTS

The results of Unit Root Test are presented below in Table (I) and Table (II).

Table (I): Outcomes of ADF and PP at I(0):

Variable Name	Test of ADF (t test with probability)	Test of PP (t test with probability)
ln (FDI)	-1.133668 (0.68)	-1.133668(0.68)
ln (EAR)	-2.671730(0.10)	-1.949031(0.31)
ln (PCG)	-4.181754*(0.01)	-4.191132*(0.00)

Source: Author's own calculation

*indicates significance at 10 percent

Table (II): Outcomes of ADF and PP at I(1):

Variable Name	Test of ADF (t test with probability)	Test of PP (t test with probability)
ln (FDI)	-4.227062*(0.0038)	-4.227062*(0.0038)
ln (EAR)	-2.860836*(0.07)	-10.09174*(0.00)

Source: Author's own calculation

*indicates significance at 10 percent

The above tables (Table I and II) explain the status of unit root of the three variables. From Table (I), it is clear that at I(0), both ln (FDI) and ln (EAR) are not providing significant results, but ln (PCG) is significant at 10 percent level. Table (II), rather, portrays the results as satisfactory and significant at 5 percent level. Hence, both the data are integrated to I(1).

A. Results of ARDL test:

The long run association between FDI, foreign exchange earnings from inbound tourism and per capita growth of the economy has at first been analyzed by ARDL approach.

The study has taken the next step to check the direction of causality in cointegration. For this, ARDL model has been adopted. The following equation (1) explains the model of cointegration as:

$$\Delta \ln X_{it} = \phi + \sum_{j=1}^n \mu_{1j} \Delta \ln X_{i(t-j)} + \sum_{k=0}^p \mu_{2k} \Delta \ln FDI_{i(t-k)} + \beta_{i1} \ln [X_{i(t-1)}] + \beta_{i2} \ln [FDI_{i(t-1)}] + \epsilon_{t1} \quad (1)$$



Relationship between FDI, Foreign Exchange Earnings through Inbound Tourism and Growth of Indian Economy

Specification in equation (1):

- a. $\ln X_{i(t-j)}$ = logarithmic values of foreign exchange earnings and per capital economic growth that are lagged in nature. where $i=1,2$ and $j=1,2,\dots,n$.
- b. $\ln(FDI)_{t-k}$ = logarithmic value of FDI which is lagged in nature. where $k=1,2,\dots,p$
- c. ϕ = Constant in the time series data.
- d. μ_{1j} and μ_{2k} = Coefficients of the lagged independent variables.
- e. β_1 and β_2 = Coefficients of the variables embedded in the long run equation of the model.
- f. ϵ_{t1} = Error term in the model at time t.

The Null hypotheses (H_{01}) and (H_{02}) are specified as $\beta_{11} = \beta_{12} = 0$

Against alternative hypotheses (H_{11}) and (H_{12}) $\beta_{11} \neq \beta_{12} \neq 0$. The decision of the acceptance and rejection is depicted in Table (III).

Table (III): Result of ARDL test:

Variables		F-Statistic		Decision
		Critical Values at I (0) and I (1)		
Independent Variable: ln (FDI)	Dependent Variable: ln (EAR)	5.491197**		Existence of Cointegration
	Dependent Variable: ln (PCG)	I (0):3.6	I (1):4.2	

Source: Author's own calculation

**indicates significant at 5 percent level

Note: Lower and upper band values are considered from Pesaran table (Table CI (ii) Case II), Pesaran, et al. (2001). Table (III) proves the existence of cointegration and rejection of Null hypothesis (H_{01}) and (H_{02}) of no cointegration in it. The cointegration is generally proved in ARDL model by two critical values specified by Pesaran, et al. (2001). The process of decision making for proving cointegration lies in the two upper and lower bound values here. From Table CI (ii) Case II, it is observed that, at 5 percent level of significance, the upper extreme value is 4.2 and lower extreme value is 3.6. If the calculated F statistic falls beyond the upper band value, existence of cointegration is proved. Else, if the value is lesser than lower bound, there will not be any cointegration between the variables. Finally, if the calculated value falls in between lower and upper band, the result is inconclusive. Here, the values of F statistic are 5.491197 and 4.339491 that are more than the upper band. Thus, a presence of cointegration is proved with independent variable as ln (FDI) and dependent variables ln (EAR) and ln (PCG) embedded in it.

After rejecting Null hypothesis and establishing long run cointegrating equation, the next phase is to find out the values of coefficients of independent variables and the significance of them. The long run equation of the model is specified in equation (2).

$$\ln X_{it} = \alpha + \sum_{j=1}^n \tau_{1j} \ln X_{i(t-j)} + \sum_{k=0}^p \tau_{2k} \ln FDI_{(t-k)} + \epsilon_{t2} \quad (2)$$

The values of the coefficient of variables expressed in equation (2) in long run equation are detailed in Table (IV).

Table (IV): Results of coefficient of variables in long run cointegrating equation:

Independent Variable	Values of coefficient		t-statistic (Prob.)	
	Effect measured on EAR-	Effect measured on PCG-		
ln (FDI)	0.69	0.13	4.84**(0.00)	1.21 (0.24)
C	1.87	0.17	3.17**(0.01)	0.36(0.72)

Source: Author's own calculation

**indicates significance at 5 percent

The long run equation of the model explains there exists a significant positive influence of FDI on foreign exchange earnings from tourism in India.

After checking long run causation, the model drives to check the duration and possibility of correction of short run disequilibrium for the period underlying in it. The short run error correction equation is detailed in equation (3).

$$\Delta \ln X_{it} = \Phi + \sum_{j=1}^n \theta_{1j} \Delta \ln X_{i(t-j)} + \sum_{k=0}^p \theta_{2k} \Delta \ln FDI_{(t-k)} + \phi_l ECT_{t-1} + \epsilon_{t3} \quad (3)$$

Where,

- a. θ_{1j} = short run coefficients of lagged values of ln (EAR) and ln (PCG)
- b. θ_{2k} = short run coefficient of lagged values of ln (FDI)
- c. ϕ_l = coefficients of error correction term, where $l = 1, 2$.

Null hypotheses (H_{03}) and (H_{04}) are tested as $\phi_l = 0$ against alternative hypotheses (H_{13}) and (H_{14}), $\lambda \neq 0$.

The result of short run Error Correction Model is expressed in Table (V).

Table (V): Results of coefficient of variables in short run with Error Correction Model:

Variable	Value of coefficient	t-statistic (Prob.)
ECT _{t-1}		
FDI and EAR	-0.78	-4.27**(0.0)
FDI and PCG	-0.83	-3.80**(0.0)
R-square		
FDI and EAR- 0.45		FDI and PCG- 0.59
Durbin- Watson (DW) Statistic		
FDI and EAR- 1.3		FDI and PCG- 1.8

Source: Author's own calculation

**indicates significance at 5 percent

The short run model of ARDL explains there is seventy-eight- and eighty-three percent chance to correct short run disequilibrium and move towards long run stable equilibrium in both the cases. Thus, Null hypotheses (H_{03}) and (H_{04}) of no possibility of adjustment of short run disequilibrium is rejected here. The capability of the model explaining the actual scenario in short run is forty-five and fifty nine percent which is measured by R-square. DW (Durbin -Watson) statistics checks for autocorrelation in the dataset. The values of DW Statistics are- 1.3 and 1.8. After checking short run causality, the direction of short run causality has been analyzed. The method chosen for direction of short run association is Granger Causality.

B. Test of short run Granger Causality

To check the direction of causality among the variables in short run, the analysis has articulated the measure of Granger causality. To know the direction of causality and to suggest policy recommendations if any, the study performs Granger Causality analysis between FDI and foreign exchange earnings from tourism industry. The result of Granger causality is detailed in Table (VI). Null hypotheses – H_{05} and H_{06} are stated as absence of causality in short run between the variables. The results of granger causality are explained in table (VI).

Table (VI): Result of Granger Causality between FDI and Foreign Exchange Earnings from tourism industry

Null Hypothesis(H_{03})	Alternative Hypothesis(H_{13})	F-statistic (Prob.)
ln (FDI) does not Granger Cause ln (EAR)	ln (FDI) Granger Causes ln (EAR)	7.57**(0.00)
ln (EAR) does not Granger Cause ln (FDI)	ln (EAR) Granger Causes ln (FDI)	0.05(0.95)
ln (FDI) does not Granger Cause ln (PCG)	ln (FDI) Granger Causes ln (PCG)	1.03(0.38)
ln (PCG) does not Granger Cause ln (FDI)	ln (PCG) Granger Causes ln (FDI)	6.11**(0.01)

Source: Author’s own calculation

**indicates significance at 5 percent

Result in Table (VI) fails to accept Null hypotheses and proves the short run causality from FDI to foreign exchange earnings in tourism industry. It enhances the fact that if FDI is promoted overall in India, foreign exchange income from inbound tourism industry will increase. More number of foreigners’ visit India better will be the platform for India in international Tourism markets. Also, it is established that in short run, per capita growth of the economy granger causes FDI.

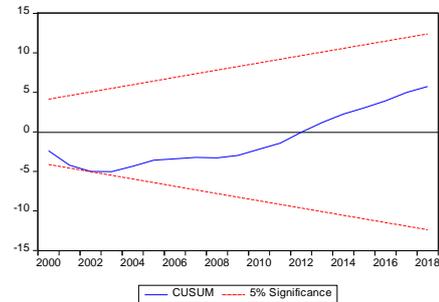
Hence, from the test of causality, it is proved that, in short run, at first positive per capita growth of India granger causes FDI flow to penetrate. This, in turn, enhances foreign exchange earnings from inbound tourism of India.

The model subsequently leads to prove the stability of the model which is depicted in Figure (a), Figure (b), Figure (c)

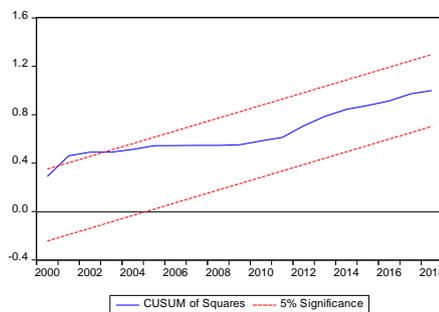
and Figure (d).

C. Checking stability of the model

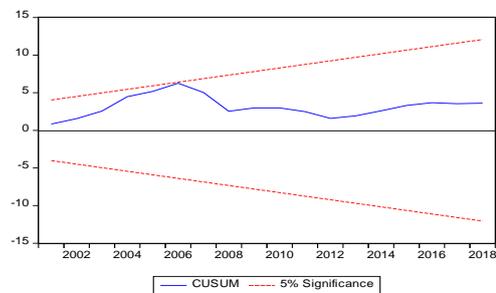
To check the stability condition in ARDL model, the final step of the current study has been formulated to analyze CUSUM and CUSUMQ test. The outcomes of the two tests are illustrated in Figure (a), Figure (b) Figure (c) and Figure (d).



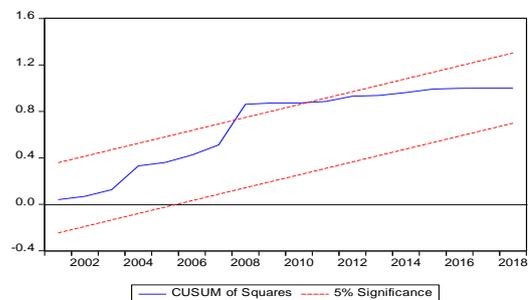
a. Outcome of CUSUM test of the proposed model (FDI and EAR)



b. Outcome of CUSUMQ test of the proposed model (FDI and EAR)



c. Outcome of CUSUM test of the proposed model (FDI and PCG)



d. Outcome of CUSUMQ test of the proposed model (FDI and PCG)

Figures (a, b, c and d) exemplify the nature of stability in the model. The position of the line between the upper and lower boundaries proves the model to be steady in the process.

Relationship between FDI, Foreign Exchange Earnings through Inbound Tourism and Growth of Indian Economy

V. DISCUSSION

The above statistical analyses reveal that FDI, foreign exchange earnings from inbound tourism and per capita growth of India are cointegrated with each other. The cointegration focusses on extracting the effect of FDI on the other two variables. Hence, the current study takes Error Correction Model in short run and examines how external shocks are adjusted for achieving long run stable equilibrium. Long run cointegration ultimately proves a relation of dependence on FDI from the variables-foreign earnings from inbound tourism and per capita growth. The higher the net inflow of foreign investment in Indian market, the healthier is the foreign earnings from tourism industry. The condition and growth of tourism is improved irrespective of the specific sectoral flow of FDI. As the nature of dependency lies on FDI to foreign earnings from tourism, the ultimate policies emphasizing FDI flow into current scenario of India ought to be formulated. As already hundred percent of FDI is allowed in tourism industry through automatic route, it is to be looked at the other sectors of FDI channels and reframed policies to help Indian economy grow to the next higher level. The long run cointegration seeks to look through short run movement of the two variables.

Apart from the long run view, the short run model has shown seventy-seven and eighty-three percent chance to move towards long run stability and overcome the disturbances of short run. This also, proves the importance of FDI in short run. Even if currently monthly data on FDI is not available, it indirectly proves its significance towards the accomplishment of short run goals through it. The current data fairly explains the actual economic scenario as the R-squared value is 0.45 and 0.59. The autocorrelation is also corrected as per Durbin-Watson (DW) values in it. At the next level short run causality is tested against H₀₅ and H₀₆ as absence of granger causality between FDI- Foreign Exchange Earnings from tourism industry and FDI- per capita economic growth. The result rejects H₀₅ and H₀₆ to prove the existence of granger causality from per capita growth of India to FDI and FDI to foreign earnings from tourism industry. Thus, although FDI plays a crucial role in uplifting the overall wellbeing of an economy, the necessity at first should have to be provided to enhance economic growth of India through increasing per capita economic growth. Also, it gives specific importance in enriching Indian tourism industry. FDI net inflow first creates the base of improvement and its effect subsequently flows down to tourism industry. Now, the major concern shown here is to find the specific areas in which it gives enhancement and improvement in tourism sector. The components of tourism industry must also be considered while measuring the impacts.

VI. CONCLUSION

Analyzing the long run relation and short run impact of FDI on per capita economic growth and Indian tourism industry inbound earnings, it is evident that improvement in the process of incoming FDI needs to be considered. Also, channels of FDI where full allowance is not permitted need to be reviewed thoroughly. Also, policies need to be formulated enhancing the inflow of FDI specifically in tourism sector. The factors associated with tourism refers to catering,

hotels, tour guiding, collection of information, identification of new areas of travel, the existing attractive places, travel agents, tour aggregators, etc. Also, despite distinct impact of FDI on foreign earnings from Indian inbound tourism industry, there exists very little researches that have analyzed these effects on per capita growth and tourism industry of India. Thus, in view of the above factors related to tourism, further analysis can be formulated in the next phase.

REFERENCES

1. Alam, M. S., & Paramati, S. R. (2016). The impact of tourism on income inequality in developing economies: Does Kuznets curve hypothesis exist? *Annals of Tourism Research*, 61, 111-126.
2. Aratuo, D. N., & Etienne, X. L. (2019). Industry level analysis of tourism-economic growth in the United States. *Tourism Management*, 70, 333-340.
3. Besana, A., & Bagnasco, A. M. (2014). Rethinking tourism in macroeconomics. *Procedia Economics and Finance*, 14, 58-67.
4. Bethapudi, A. (2013). The role of ICT in tourism industry. *Journal of Applied Economics and Business*, 1(4), 67-79.
5. Dogru, T., & Bulut, U. (2018). Is tourism an engine for economic recovery? Theory and empirical evidence. *Tourism Management*, 67, 425-434.
6. Dunning, J. H. (1991). The eclectic paradigm of international production: a personal perspective. *The nature of the transnational firm*, 117-136.
7. Fahimi, A., Saint Akadiri, S., Seraj, M., & Akadiri, A. C. (2018). Testing the role of tourism and human capital development in economic growth. A panel causality study of micro states. *Tourism management perspectives*, 28, 62-70.
8. Gao, Y., & Su, W. (2019). Is the World Heritage just a title for tourism? *Annals of Tourism Research*, 78, 102748.
9. Gupta, R. (2015). Tourism, FDI and inclusive growth in India. *Pacific Business Review International*, 7(12), 108-114.
10. Habibi, F., Rahmati, M., & Karimi, A. (2018). Contribution of tourism to economic growth in Iran's Provinces: GDM approach. *Future Business Journal*, 4(2), 261-271.
11. Jalil, A., Mahmood, T., & Idrees, M. (2013). Tourism-growth nexus in Pakistan: Evidence from ARDL bounds tests. *Economic Modelling*, 35, 185-191.
12. Kaul, H., & Gupta, S. (2009). Sustainable tourism in India. *Worldwide Hospitality and Tourism Themes*, 1(1), 12-18.
13. Li, K. X., Jin, M., & Shi, W. (2018). Tourism as an important impetus to promoting economic growth: A critical review. *Tourism management perspectives*, 26, 135-142.
14. Li, S., Liu, A., & Song, H. (2019). Does tourism support supply-side structural reform in China? *Tourism Management*, 71, 305-314.
15. Liu, A., & Wu, D. C. (2019). Tourism productivity and economic growth. *Annals of Tourism Research*, 76, 253-265.
16. Martins, L. F., Gan, Y., & Ferreira-Lopes, A. (2017). An empirical analysis of the influence of macroeconomic determinants on World tourism demand. *Tourism Management*, 61, 248-260.
17. Ohlan, R. (2017). The relationship between tourism, financial development and economic growth in India. *Future Business Journal*, 3(1), 9-22.
18. Pérez-Rodríguez, J. V., Ledesma-Rodríguez, F., & Santana-Gallego, M. (2015). Testing dependence between GDP and tourism's growth rates. *Tourism Management*, 48, 268-282.
19. Pesaran, M. H., Shin, Y., & Smith, R. J. (2001). Bounds testing approaches to the analysis of level relationships. *Journal of applied econometrics*, 16(3), 289-326.
20. Samimi, A. J., Sadeghi, S., & Sadeghi, S. (2017). The relationship between foreign direct investment and tourism development: evidence from developing countries. *Institutions and Economics*, 59-68.
21. Santamaria, D., & Filis, G. (2019). Tourism demand and economic growth in Spain: New insights based on the yield curve. *Tourism Management*, 75, 447-459.
22. Selvanathan, S., Selvanathan, E. A., & Viswanathan, B. (2012). Causality between foreign direct investment and tourism: Empirical evidence from India. *Tourism Analysis*, 17(1), 91-98.
23. Singh, S. (1997). Developing human resources for the tourism industry with reference to India. *Tourism Management*, 18(5), 299-306.

24. Sokhanvar, A. (2019). Does foreign direct investment accelerate tourism and economic growth within Europe? *Tourism Management Perspectives*, 29, 86-96.
25. Subbarao, P. S. (2008). A Study on Foreign Direct Investment (FDI) in Indian Tourism.
26. Tomohara, A. (2016). Japan's tourism-led foreign direct investment inflows: An empirical study. *Economic Modelling*, 52, 435-441.
27. Tomohara, A. (2017). Relationships between international tourism and modes of foreign market access. *International Economics*, 152, 21-25.

AUTHORS PROFILE



Piyali Roy Chowdhury is pursuing Ph.D from Vellore Institute of Technology, Chennai, India. She has completed her BSc in Economics as Honors, and then MBA in Finance specialization from West Bengal University of Technology, Kolkata, India. She has three years of work experience and seven years of teaching experience. Her area of research is Macroeconomics, Foreign Direct Investment (FDI), Foreign Portfolio Investment (FPI), Stock market and Econometric modelling.



Anuradha A* is an Assistant Professor (Senior) in VIT Business School, VIT, Chennai Campus, Tamil Nadu, India. She has received her Doctoral degree from Bharathiar University, Coimbatore. She has done her MBA in Marketing and Finance, M.Sc., in Economics from Avinashilingam University for Women, Coimbatore, India. She has three years of industry experience and around 12 years of teaching experience in the fields of Marketing and Economics. Her research interests include retail management, Macroeconomics and supply-side economics using quantitative techniques. She has actively contributed research works in various national and international journals and conferences.