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Corporate Tax Rates and its effect on Foreign Direct Investment in India

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Abstract:

FDI is one of the major investments made by some other country in developing country to enhance the opportunities and earn mutual benefits from inflow and outflow of investments. The present study has been conducted with the aim of finding out the impact of corporate taxes on foreign direct investment in the absence and presence of control variable, trade openness. The analysis has been done by performing regression analysis taking the data of 20 years (1996-2015). The study gives the conclusion that higher corporate taxes exercise negative influence on foreign direct investment in India but in the presence of control variable i.e. trade openness, it does not leave any significant impact on FDI. Hence it can be said that the effect of higher corporate tax on FDI in India is being controlled by larger extent of trade openness and even in the presence of higher tax rate, India has been able to grab significant extent of foreign direct Investment.

Introduction

FDI is major strategic component of investments which is indispensable to the economic reforms and for future growth of economic development of India (Vasanthi & Aarthi,2013).It allows recipient businesses to enhance their management and operational practices, financial tools and upgrade technology and hence raise the living standards of its employees. There are various factors which influence the extent of FDI in a country some of which are tax policies of the country, security and political stability, exchange rates, market size and expected returns, level of trade openness, rate of inflation, resource location etc.(Harish, 2012,Pettinger 2016, Money Matters ,2017). According to Pradhan 2010, a place with greater extent of international trade attracts enough FDI, and India being a region of greater extent of international trade attracts attention of foreign investors in its industries.According to Jordaan, 2004, Nations with growing and healthier markets attract greater FDI so that the organizations may receive better return on capital and earn profits by making investments (Jordaan, 2004). Banga, 2003, however focused on the importance of foreign exchange rate stating that greater volatility in exchange rate of the currency of a nation leads to more uncertainity of the future prospects of the host country and hence reduces the possibility of FDI from investors (Banga, 2003).

Apart from these, studies have also shown considerable impact of political stability and labor cost on FDI. Foreign organizations favor stable policies to make sure that their investment is safe (Sharma, 2010). Factors such as corruption, bureaucracy, wars, negative attitude of government towards FDI etc. increases political risk.Considering the importance of tax incentives, various theories on FDI have revealed that countries with favorable tax policies attract more Foreign Direct Investment.A thesis conducted to investigate the influence of corporate tax on FDI on all members of OECD has presented that corporate tax implemented by a government has prominent and significant role in attracting inflows of FDI (Klaesson & Larsson, 2010). According the study of OECD (2008), 1% increment in the tax rate results into the 3.7% fall in the FDI which can vary between 1 to 5% based on the type of industry, country and time period. Lower corporate taxes are always favorable in terms of receiving higher foreign direct investment in India (Kaur, 2014).

In the wake of mentionedfacts given by the literature, the present study has tried to examine the impact of corporate taxes on FDI by taking the time period of 20 years.

Objectives of The Study

The objectives of this research are as follows:

1. To identify the independent effect of Corporate Tax rate structure on FDI in India.
2. To identify the effect of corporate tax rate structure on FDI in India in the presence of control variable, Trade openness.

Reasearch Methodology

In order to derive the results inferential statistical analysis has been performed. Under inferential statistical analysis time series analysis has been performed in by using correlation and regression analysis technique using the Stata software.The data, related to tax rate, trade openness and FDI inflow has been collected from secondary sources such as Trading Economics 2017c; Trading Economics 2017b; Department Of Industrial Policy and Promotion (DIPP) 2017; Trading Economies 2017; Trading Economics 2017(a) for period of 1996-2015.

Data Analysis And Interpretation

There are numerous determinants or factors which influence FDI in India. A particular action of investors or of the government of a country may be responsible for increment or decrement of foreign investment for any given period (Pettinger 2016; Money Matters 2017). There cannot be a single variable which effect investment to rise or fall, but in reality it is comprised of several set of variables. In order to study FDI contribution to India it is valuable to look upon the key determinants of foreign direct investment based on international investment theories. As per the studies of Harish 2012,Pettinger 2016, Money Matters (2017),the factors on which FDI depends are- Market size, portfolio diversification, resource location, difference in rate of return, foreign exchange reserves and rates, government regulation, political stability and security level of the county, tax policies, openness, inflation rate, industrial organization, level of external indebtedness, scope of further expansion and further other.

India possesses substantial market where customers put some certain demands asking for some certain types of goods which exceed the available supplies. This demand draws the attention and interest of foreign investors for making big investments in India. Trade openness at a bigger level of a country demonstrates the quality of its government, and a better market place for investment (HIMACHALAPATHY n.d.)

Figure 1Growth rate of FDI in India against growth rate of Trade openness

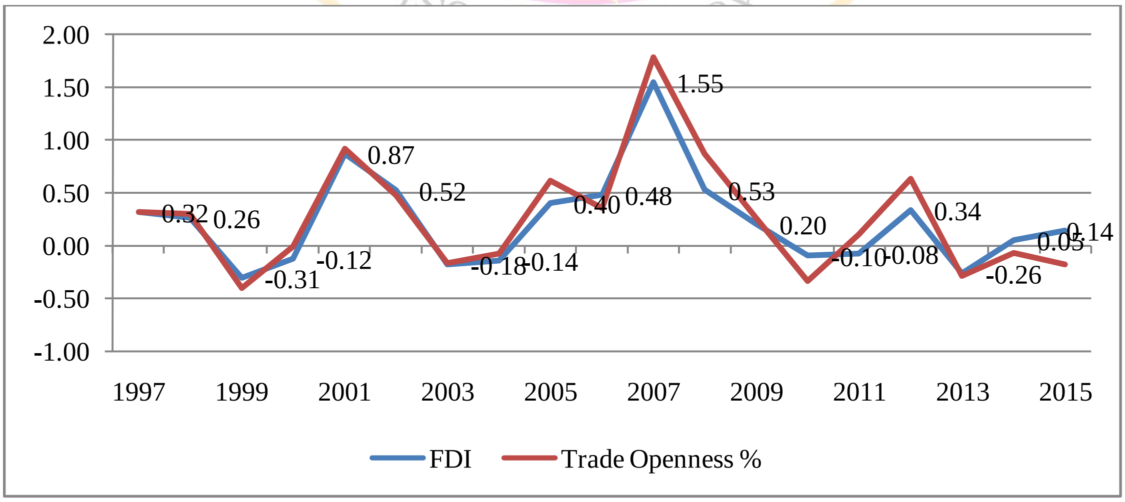
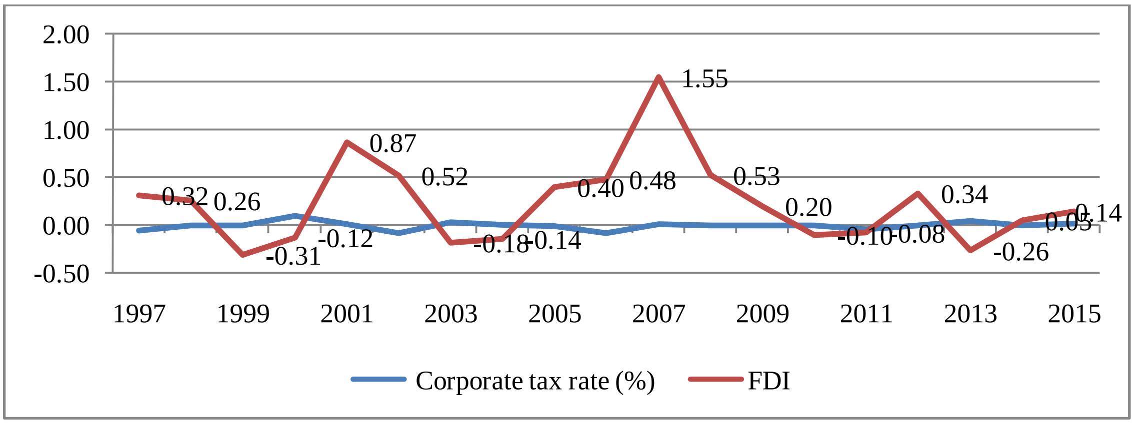


Figure 2Growth rate of FDI in India against growth rate of Corporate Tax



Source: *(Trading Economics 2017c; DIPP 2017; Trading Economies 2017; Trading Economics 2017a)*

As can be seen from the figure 1 and 2, growth in corporate tax rate structure hardly matches the growth in FDI, whereas Trade openness is the variable growing as similar to FDI. Seeking such trends in recent part of India, an understanding about the secondary role of corporate tax rate structure is clear.

For finding the impact of corporate tax on FDI, Time series analysis has been performed including control variable trade openness (Control variable refers to the variable which remains constant in the study, but if left isolated, it may give invalid results,Shuttleworth 2017). Under time series analysis regression analysis has been performed two times- first in absence of control variable and second in presence of control variable.

Correlation Analysis

Correlation Analysis is the statistical technique used to estimate the degree of association between two or more than two independent variables (Kendall 2016). In the present study, it has been used to find the relation between Foreign Direct Investment, Corporate Tax and Trade Openness. The results of Correlation Analysis are as follows.

Table 1 Correlation Analysis Foreign Direct Investment,Corporate Tax and Trade openness

Correlation Analysis	Foreign Direct Investment	Corporate Tax	Trade Openness
Corporate Tax	-0.6992	1.0000	
Trade Openness	0.8944	-0.6405	1.0000

As it can be seen from the table 1 above, the correlation analysis of FDI with Corporate Tax is negative 0.6992, which implies a significantly strong negative association of the two. That means the variables experience a contradicting trends in the period ranging 1996 to 2015.Correlation coefficient between FDI and Trade Openness also turned out to be 0.8944, which is strong and positive, suggesting 89% of association between the trends of the two.

Regression Analysis

While correlation analysis was conducted to extract the possible association among variables of the present study, the regression analysis aims to construct a statistical relationship between these variables. In the present study, the dependent variable is foreign direct investment and independent variable is Corporate Tax structure. It is to be noted that the present study has also included control variableTrade openness.

Table 1 List of Dependent, Independent Variables and control variables

Independent Variable	Dependent Variable
Corporate Tax Rate	Foreign Direct Investment
Control Variables	
Trade Openness	

Table 2 List of Null Hypothesis for Corporate Tax Impact on FDI

S. No	Null Hypothesis
H_0:1	Corporate Tax Rate has no significant impact on FDI
H_0:2	Corporate Tax Rate has no significant impact on FDI with the presence of Trade Openness

Regression Analysis of FDI with Corporate Tax

Regression Analysis of FDI with corporate tax has been presented in table 4 and 5.

Table 4 Model Summary of Regression I, Corporate Tax Impact on FDI

Model Summary					
Source	SS	df	MS	**Number of observation**	= 20
Model	13.1873	1	13.1873	**Probability > F**	= 0.0006
Residual	13.7494	18	0.76386	**R-squared**	= 0.4896
Total	26.9367	19	1.41772	**Adjusted R-squared**	= 0.4612

Table 4 presents the model summary of the results of analysis. As per the table 4, the Prob (F) is the probability that the null hypothesis for the full model is true. As can be seen in the table the value for Prob (F) is 0.0006, which is low enough to indicate that at least one of regression coefficient is non-zero, hence null hypothesis can be rejected. Further, the value R square and Adjusted R square is 0.4896 and 0.4612, suggesting that the model fitness is significant and represents around 48% of the variation in dependent variable is answerable with chosen independent variable. It shows that corporate tax rate in this regression model is responsible for 48% of variation in FDI. Therefore, it can be said that impact of corporate tax on FDI is significant.

Further, the coefficient summary of regression model I is represented in table 4.5

Table 5 Coefficient Table of Regression I, Corporate Tax Impact on FDI

Log FDI	Coefficient	Standard Error	T	P>|t|	[95% Conf. Interval]	
Corporate Tax	-0.4728298	0.1137976	-4.16	0.001	-.7119096	-.23375
Constant	25.83794	3.991684	6.47	0.000	17.45173	34.22416

As per the table, the corporate tax rate attains a negative coefficient of 0.4728, suggesting a negative impact on FDI. The coefficient 0.4728 suggests that 47% of the variation in FDI is responsible for changes in corporate tax structure for the period 1996 to 2015. Moreover, the coefficient of constant is a large value of 25.837, suggesting the value of Log FDI in the absence of corporate tax rate structure. The measure of precision, standard error of the coefficient is also minimal at 0.1137 with significant t value of 4.16. Lastly, the p values of the coefficients are 0.001 for corporate tax and 0.000 for constant, indicating significance of both the coefficients.

Therefore, in the regression model I, corporate tax rate suggest a significant impact on FDI in India. Hence the Hypothesis 1 professing, no significant impact of the same on FDI can be **rejected**.

Regression Analysis of FDI with Corporate Tax and Trade Openness

Regression Analysis of FDI with corporate tax and Trade Openness have been presented in table 6 and 7. Trade Openness is recognized as one of major determinant of FDI in India. Trade Openness has been treated in this regression as the control variable.

Table 6Model Summary of Regression II, Corporate Tax and Trade Openness Impact on FDI

Model Summary					
Source	**SS**	**df**	**MS**	**Number of observation**	= 20
Model	21.6844827	2	10.8422413	**Prob > F**	= 0.000
Residual	5.25218114	17	0.308951832	**R-squared**	= 0.8050
Total	26.9366638	19	1.41771915	**Adjusted R-squared**	= 0.7821

Table 6 represents the model summary of the results of analysis. As per the table, the Prob (F) is the probability that the null hypothesisfor the full model is true. It can be seen in the table the value of Prob (F) is 0.000, which is low enough to indicate that at least one of regression coefficient is non-zero, hence null hypothesis can be rejected. Further, the value R square and Adjusted R square is 0.8050 and 0.7821, suggesting the model fitness is significant and represents that around 78-80% of the variation in dependent variable is answerable with chosen independent variable. Therefore, corporate tax rate taken with Trade openness in this regression model is shown to have responsible for 80% of variation in FDI. Therefore, it can be said that overall impact of corporate tax and trade openness on FDI is significant.

Table 7 Coefficient Table of Regression II, Corporate Tax and Trade Openness Impact on FDI

Log FDI	Coefficient	Standard Error	t	P>|t|	[95% Conf. Interval]	
Trade Openness	0.0095476	0.0018205	5.24	0.000	.0057066	.0133886
Corporate Tax	-0.1562542	0.0942427	-1.66	0.116	-.3550889	.0425805
Constant	12.28831	3.622129	3.39	0.003	4.646288	19.93034

The coefficient summary of regression model II is represented in table 7. As per the table, the corporate tax rate attains a negative coefficient of 0.1562, suggesting a negative impact on FDI. The coefficient 0.1562 suggests that 15% of the variation in FDI is responsible for changes in corporate tax structure for the period 1996 to 2015. However, it should be noted that the measure of precision, standard error of the coefficient has increased from previous model to 0.09 with t value of 1.66. Further, the p values of the coefficients are 0.116 for corporate tax, which is insignificant. Therefore, in the present case of regression, the impact of corporate tax rate is insignificant with the presence of Trade Openness. Looking towards the situation of Trade Openness, it can be seen that the variable is absolutely significant with positive coefficient of 0.009, representing 0.9% impact on FDI, which is small. Although, the impact is least, the same value if significant with p value of 0.000. Lastly, the coefficient of constant is a large but smaller than previous regression model 12.837, suggesting the value of Log FDI in the absence of corporate tax rate structure.

Therefore, in regression model II, corporate tax rate suggest a significant impact on FDI of India. Hence, the Hypothesis 2 professing, no significant impact of the same on FDI in presence of Trade Openness can be **accepted**.

Table 8 Results of Analysis as per Null Hypothesis

S. No	Null Hypothesis	Answer
H_0:1	Corporate Tax Rate has no significant impact on FDI	*Rejected with Negative effect*
H_0:2	Corporate Tax Rate has no significant impact on FDI with the presence of Trade Openness	*Accepted*

Hence, the study has postulated the role of trade openness having significant effects on FDI through its major role in portraying the potential demand in country.

Conclusion

The overall conclusion has been based on the two designed research questions where, in the first research question impact of corporate tax structure on FDI in India is measured, and the second research question brings forth the effect of corporate tax structure on FDI in India but in the presence of control variable, Trade Openness,

Impact of Corporate Tax Structure on FDI in India

While examining the effect of corporate tax on FDI in current study, primary analysis reflect that corporate tax has negative effect on FDI in India signifying that the higher the corporate tax is imposed on the corporate sector of India, the lower FDI is received by India. On the other hand, the lower the corporate tax, the higher the rate of FDI in India. This shows lower corporate tax imposed by Government of India attracts plenty of FDI in the country. Kaur (2014) has shown the consistency with the results obtained in the current study, where it has been shown that corporate tax has adverse effect on the FDI in India and also explained that to disallow the higher FDI in India Indian government increase the corporate tax. Another study conducted by Vyas (2015) has also represented similar results explaining that Indian Government follow a complex structure of corporate tax and it is comparatively around 15% higher than the corporate tax imposed by government of other countries. Thus based on the findings it can be concluded that rate of corporate tax play major role in effecting decision making of investing of foreign investors as increasing rate of corporate tax leaves negative effect on the business of Foreign Investors.

Impact of Corporate Tax Structure on FDI with Trade Openness

While measuring the impact of corporate tax on FDI in the presence of trade openness or considering trade openness as a control variable, it has been concluded that corporate tax do not have any significant impact on FDI in the presence of trade openness. This signifies that due to the higher degree of trade openness in India, a high corporate tax does not at all affect the foreign direct investment in India. Moreover, it has also been ascertained that Trade openness itself have significant impact on FDI.Corporate tax in India is all time higher than other countries, and in the presence of higher corporate tax, a country generally receive lower FDI. On the contrary, India has succeeded in attracting higher FDI on a second position after China. This shows that trade openness controls the effect of higher corporate tax on FDI in India and therefore also in the presence of higher tax rate, India got succeed to attract significant level of foreign direct Investment. By analyzing the effect of trade liberalization on FDI in India, Goldar & Banga, 2007, 2010; Pradhan (2010) have shown consistency with the findings of current study, where it has been derived that trade openness has significant impact on foreign direct investment in India. Based on the findings it has been concluded that due to the larger extent of controlling variable trade openness higher corporate tax do not leave any significant impact on FDI in India. Also higher trade liberalization lead to the higher FDI in India.

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