A STUDY ON IMPACT OF COMMERCIAL TREATIES ON FDI

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Abstract

Commercial treaties are among the influential factors on FDI. Every treaty signed will have a knock-on countries economy. Countries economic situation can be estimated by using various variables such as Imports and Exports, Gross Domestic Product, Foreign Direct Investments and Foreign Institutional Investments. The aim of the study is to analyse the "Impact of Commercial treaties on FDI" mainly focuses on the impact of treaties that have been measured with Ordinary Least Square method and observed to have adverse effects. The research reveals that FDI is expected to move up in the near future based on the treaties.

The no. of parties involved in treaties are two parties hence in the research we can also study the relationship between bilateral parties whose content is only related to commercial activity. Hence, we can know the relation between bilateral treaties and FDI flows using different tools like Auto-Regressive Distributed Lag method and Vector Auto Regression Model. The Vector Auto Regression Model gives us a clear idea about the growth of FDI inflows in the near future based upon treaties.

Keywords: GDP, Treaties, Regression

Introduction

A Treaty is typically consulted between diplomats furnished by their separate governments with "full power" to finish a treaty within a given degree of direction. A nation's mark is regularly adequate, to show its goal to-be bound by the treaty, particularly on account of respective treaties. In multilateral (general) treaties, in any case, a nation's mark is typically subject to formal confirmation by the legislature except if it has expressly deferred this right. Aside from such an express arrangement, the instrument does not turn out to be formally official until approval has been traded. Multilateral treaties tie just those states that are gatherings to them and become effective after a predefined number of sanctions have been achieved. After the time indicated for states to sign the treaty has passed, states may progress toward becoming gatherings to the treaty through a procedure known as promotion.

Scope of the Study

The study emphasizes to interpret the impact of commercial treaties on FDI by considering the internal growth factors and external factors. The study undergoes for a period of 20 years i.e. from 2000 to 2019. The variable considered in this study for treaty data is the number of commercial treaties signed between India and other countries in areas such as Aid & Cooperation, Business & Trade, Defence & Security, Environment and resources, Health, Science & Technology, Transportation and Diplomatic Relations, Education.

Economic variables considered for the study are Gross Domestic Product (GDP), Net Exports, Foreign Direct Investments (FDI), Foreign Institutional Investments (FII) related to India. To understand the impact of commercial treaties on the FDI flows into India.

Objectives of the Study

1. To study the long run and short-run association of Indian commercial treaties with FDI Investments.
2. To study the impact of Indian commercial treaties on Indian FDI Investments flows.
3. To predict the growth of FDI investment flows based on commercial treaties of India.

Review of literature

1. **William R. White (1996)** deals with Treaties in the region of Banking and fund, the free trade of household budgetary markets, in relationship with mechanical advancement, has prompted a blast of cross-outskirt money which is related to exchanges and the cross-fringe foundation of premises. Thusly, this has prompted the requirement for global concessions to how the matter of universal money and banking ought to be directed.
2. **Vincy Fon and Francesco Parisi (2007)** built up an adapted model about worldwide treaty development and breaks down the distinctive techniques with which states can turn out to be a piece of a global treaty as per the system set up by Vienna Convention on the Law of Treaties. We consider the tenets overseeing increase to universal treaties, recognizing three circumstances.
3. **Bhanu Murthy K.V. and Niti Bhasin (2013)** examined the effect of tax treaties on Foreign Direct Investments (FDI). The inflows of Foreign Direct Investments are driven by both the home nation and host nation conditions. It is for the host nation to give a helpful domain to FDI. This paper inspects the inflows of FDI to India from 14

nations that are significant accomplices. The model evaluations demonstrate that FDI inflows into India have been flattering because of full-scale financial factors and arrangement factors including tax treaties.

4. **Gordon, K. also, J. Pohl (2015)** took a shot at Investment treaties Practice and Interpretation in a Dynamic World. Treaty law mirrors a long-lasting strain among dependability and adaptability. Stability supports consistency, while adaptability enables legitimate frameworks to remain in arrangement with changing conditions and advancing needs. They examined the drivers of progress in investment treaty law and examinations treaty arrangements on, and state utilization of, adaptability in investment treaty law. They finish up finds that most treaties accommodate almost no system for nations to impact the utilization and elucidation of investment treaty law.
5. **Clint Peinhardt and Rachel L. Wellhausen (2016)** A reaction against Investor-State Dispute Settlement (ISDS), in which worldwide partnerships can sue governments, has driven a few states to singularly pull back from a portion of the great many investment treaties that encourage ISDS. In this article, we clarify the wellspring of redundancies, archive the gathering of states that have exploited one-sided withdrawal, and show that states can recalibrate their global legitimate responsibilities without shunning contemporary universal investment law.
6. **Sunghoon Hong (2017)** built a tax rate grid to speak about a true system of tax treaties between 70 nations and creates organize calculations to think about the structure of tax-limiting (direct or indirect) investment courses in the tax treaty arrange. Furthermore, it analyses the connection between FDI and the structure of tax limiting courses. Observational outcomes demonstrate that the accessibility of a tax-limiting direct course is decidedly and altogether identified with FDI**.**
7. **Prabhash Ranjan, Harsha Vardhana Singh, Kevin James and Ramandeep Singh(2018)** analyze some key provisions of Bilateral Investment Treaties and also examine to what extent the treaties reconcile the investment protection with the host nations. And in some instances, the researchers find the text remains open to ‘arbitrary’ determinations under ISDS.
8. **Prabhash Ranjan(2019)** examines India’s approach to Bilateral Investment Treaties and policy towards Foreign investments in particular periods of economic nationalism (1947–1990) and economic liberalism (1991–2010). However, from the post-2010 Foreign investment policy continues to be liberal and approach towards Bilateral Investment Treaties become protectionist.

Hypothesis:

H0: There is no long-run association between Indian commercial treaties with Indian FDI Flows

H1: There is a long-run association between Indian commercial treaties with Indian FDI Flows

H0: There is no impact of Indian commercial treaties on Indian FDI fund Flows

H1: There is impact of Indian commercial treaties on Indian FDI fund Flows

Research Methodology: The data used for the study was collected from secondary source. The data related to macroeconomic factors that consider the country Gross Domestic Product, Foreign Direct Investments, Foreign Institutional Investments, and Net Exports. Number of Treaties signed by the Indian government with other countries in various fields such as Aid & Cooperation, Business & Trade, Defence & Security, Education, Environment & resources, Health, Science & Technology, Transportation and Diplomatic Relations.

The period of the study in order to analyse the Impact of commercial treaties on FDI was 19 years i.e., 2000 to 2019. The statistical tool adopted for this study was Autoregressive distributed lag Method, Ordinary least square method, Vector Auto Regression Model.

Data Analysis:

I. **AUTO REGRESSIVE DISTRIBUTED LAG METHOD**:

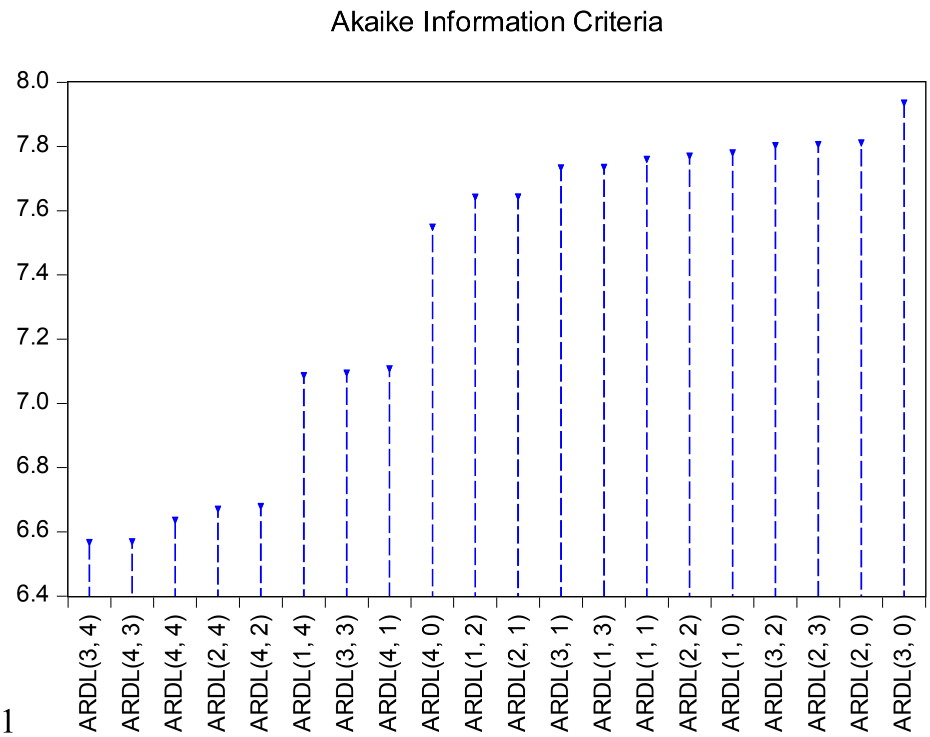


Table:1

Interpretation:
The above graph represents the lag order selection criteria for ARDL of impact of commercial treaties on FDI. Here ARDL of (3,0) are observed to be fit and represents the optimal mode to evaluate ARDL of Impact of commercial treaties. To consider the optimal mode in ARDL model we should consider only the highest peak interval i.e., ARDL of (3,0) and we should not consider the lowest peak intervals.

Table:2

Variable	Coefficient	Std. Error	t-Statistic	Prob.*
DFDI (-1)	0.932630	0.467331	1.995654	0.0739
DFDI (-2)	0.002766	0.005042	0.548589	0.5953
DFDI (-3)	-0.002265	0.003295	-0.687303	0.5075
DTREATYINDEX	0.987002	0.003183	310.1300	0.0000
DTREATYINDEX (-1)	-0.914110	0.458998	-1.991533	0.0744
C	-2.922733	3.296980	-0.886488	0.3962
R-squared	0.999971	Mean dependent var		137.6988

Adjusted R-squared	0.999957	S.D. dependent var	1449.388
S.E. of regression	9.502509	Akaike info criterion	7.620985
Sum squared resid	902.9768	Schwarz criterion	7.910706
Log likelihood	-54.96788	Hannan-Quinn criter.	7.635821
F-statistic	69791.31	Durbin-Watson stat	0.901930
Prob(F-statistic)	0.000000		

*Note: p-values and any subsequent tests do not account for model selection

Interpretation:
Above table represents the Commercial treaties on FDI. Here DFDI is considered as dependent variable and D Treaty index is independent variable. Coefficient value of DFDI (-1), DFDI (-2) are positively influenced and DFDI (-3) is negatively influenced by commercial treaties on FDI and D Treaty index has positive influence and D Treaty index (-1) as negative influence by commercial treaties on FDI. Further R-square of the model is 0.999 which implies the strength of the model is strong and probability of the model is less than 0.05.

Table:3

Test Statistic	Value	Signif.	I (0)	I (1)
			Asymptotic: n=1000	
F-statistic	0.299126	10%	3.02	3.51
K	1	5%	3.62	4.16
		2.5%	4.18	4.79
		1%	4.94	5.58
			Finite Sample: n=35	
Actual Sample Size	16			
		10%	3.223	3.757
		5%	3.957	4.53
		1%	5.763	6.48
			Finite Sample: n=30	
		10%	3.303	3.797
		5%	4.09	4.663
		1%	6.027	6.76

Interpretation:
In ARDL model this test signifies that F-STATISTICS calculate value are found be above the upper bond (0.299<16) which indicates accept of H0 and reject of H1 i.e., there is no long run association between Commercial treaties with FDI. And the actual sample size we considered for calculating F-Statistics is 16.

II. ORDINARY LEAST SQUARE MODEL:

Table:1

Dependent Variable: DFDI

Method: Least Squares

Sample (adjusted): 2001 2019

Included observations: 19 after adjustments

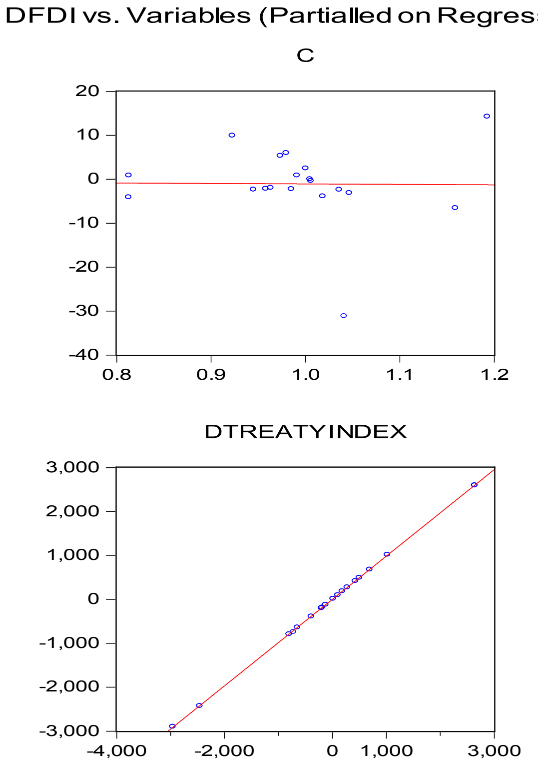
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-1.056168	2.111940	-0.500094	0.6234
DTREATYINDEX	0.983915	0.001605	613.0154	0.0000

F

R-squared	0.999955	Mean dependent var	114.6023
Adjusted R-squared	0.999952	S.D. dependent var	1324.840
S.E. of regression	9.168924	Akaike info criterion	7.368818
Sum squared resid	1429.176	Schwarz criterion	7.468232
Log likelihood	-68.00377	Hannan-Quinn criter.	7.385642
F-statistic	375787.8	Durbin-Watson stat	0.928526
Prob(F-statistic)	0.000000		

Interpretation:

Ordinary least square method is used to study the impact of Indian commercial treaties on Indian FDI Investments flows. In this DFDI is dependent variable and D Treaty Index is independent variable. The coefficient of D Treaty Index is 0.9839. Further R-square of the model is 0.999 which implies the strength of the model is strong and probability of the model is less than 0.05. Thereby rejecting the null hypothesis and accept alternative hypothesis i.e., there is significant impact of commercial treaties on FDI.



Interpretation:

The Ordinary Least Square Method in this Partialled on Regressors graph consider only DFDI and D Treaty Index to study the impact of Commercial treaties on FDI flows. Therefore, in above graph the trend line represents the dependent variable i.e., DFDI and dots represents the independent variable i.e., D Treaty index. The trend line is moving from left to right with the influence of independent variable.

III. VECTOR AUTO REGRESSION MODEL:

Table:1

Vector Autoregression Estimates:
Sample (adjusted): 2003 2019
Included observations: 17 after adjustments
Standard errors in ( ) & t-statistics in [ ]

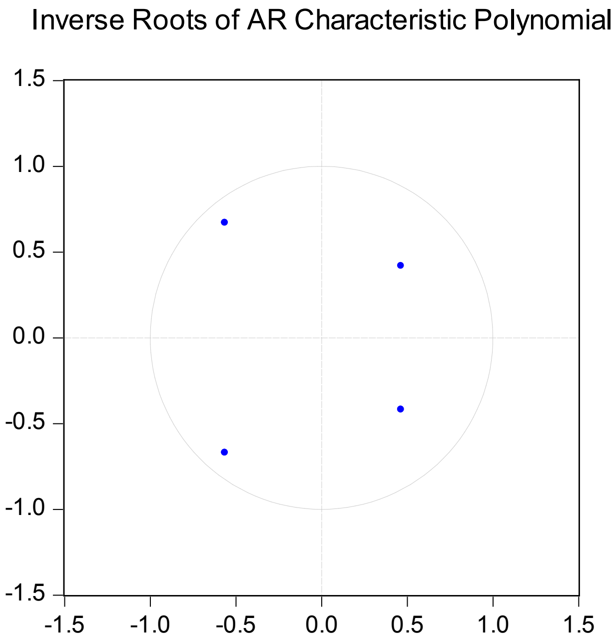
	DFDI	DTREATYINDEX
DFDI (-1)	-15.10700	-16.24115
	(46.5616)	(47.1670)
	[-0.32445]	[-0.34433]
DFDI (-2)	-39.37884	-39.75619
	(46.4570)	(47.0610)
	[-0.84764]	[-0.84478]
DTREATYINDEX (-1)	13.81140	14.90837

	(45.7672)	(46.3622)
	[0.30178]	[0.32156]
DTREATYINDEX		
(-2)	38.00309	38.35967
	(45.6858)	(46.2798)
	[0.83184]	[0.82886]
C	429.4559	438.6404
	(219.842)	(222.701)
	[1.95347]	[1.96964]

R-squared	0.715444	0.717299
Adj. R-squared	0.620592	0.623065
Sum sq. resids	8978177.	9213161.
S.E. equation	864.9748	876.2211
F-statistic	7.542743	7.611921
Log likelihood	-136.1273	-136.3469
Akaike AIC	16.60321	16.62904
Schwarz SC	16.84827	16.87411
Mean dependent	125.4713	128.7558
S.D. dependent	1404.269	1427.187

Determinant resid covariance (dof adj.)	61236434
Determinant resid covariance	30512272
Log likelihood	-194.7298
Akaike information criterion	24.08586
Schwarz criterion	24.57599
Number of coefficients	10

Interpretation:
Vector Auto Regression Model is used to predict growth of FDI investment flows based on commercial treaties of India. In this DFDI is dependent variable and D Treaty Index is independent variable. The estimate value of D Treaty index on DFDI is observed to have negative influence that means D Treaty index is having negative impact on DFDI. Further R-square value which is 0.715 is seem to be strong and Akaike information criterion and Schwarz criterion are strong in all economic factors.



Interpretation:
The above graph indicates the inverse roots of Auto Regressive Characteristic Polynomial. It states that all the AR roots have fallen inside the circle, which indicates that the data is normally distributed and it can proceed for Vector Auto Regressive Model. Here, the dots are found to lie between -0.5 to 0.5 i.e., falling inside the circle which implies that in future Commercial Treaties were found to have significant influence on FDI.

Findings & Suggestions:

1. The study estimated from ARDL, that the Foreign Direct Investment was significantly associated with the Treaty index, but observed to be having no long-run association between them.
2. It is estimated that the Treaty index had shown a significant positive influence on the FDI, which means that the increase in treaties will raise in the investment of FDI with 0.9839 units.
3. The study found from the leverage plot is that the Treaty index is pushing the investment of FDI towards uptrend.
4. The study from Vector Auto Regression forecasts that in future treaty index has a positive effect on the Investment of FDI.
5. The study observed that the treaty Index has a short run association with FDI investments. Hence the study suggests that the investors should take the short-run investment decision by considering the commercial treaties of Indian with other countries.

6. The study observed that the pharmaceutical and media sectors able to attract high Foreign Direct Investments. Hence the study suggests that the investors of the equity market should monitor the FDI flows with the commercial treaties in the pharmaceutical and media sectors so that investors can take the growth advantage.
7. The study observed that the Commercial Treaties index is having a significant impact on the Real Estate sector in FDI. Hence the study suggests that the investors of the realty sector are advised to invest in this sector.
8. The study observed that the majority of the commercial treaties were found in 8 to 10 sectors. Hence the study suggests the Indian government takes initiative steps by giving a high level of importance on bilateral treaties with the foreign countries in multiple sectors so that the Indian economy will improve significantly.

Conclusion:

The present study has been focused on the Impact of Commercial Treaties on the FDI. The study has designed the treaties index with the help of selected economic factors, which will significantly influence the treaties. The study has considered only Commercial Treaties from the period of 2000-01 to 2018-19. The study applied the ARDL for the association and the result stated that the treaties are having the short-run association. The OLS has been applied and the result stated that the treaties are having a positive impact on the FDI movement. The VAR model stated that the FDI is expected to go up shortly based on the growth of the treaties index. Hence, there is a need to do further research in this area by considering the impact of treaties on the select sectoral growth.

References

https://www.ntanet.org/wp-content/uploads/proceedings/2016/012-hong-tax-treaties-foreign-paper.pdf

https://www.researchgate.net/publication/316342843_The_UK's_tax_treaties_with_developing_countries_during_the_1970s

https://www.bis.org/publ/work38.pdf

http://www.newworld.org/entry/Treaty

https://www.brookings.edu/wp-content/uploads/2018/08/India%E2%80%99s-Model-Bilateral-Investment-Treaty-2018.pdf

https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3417082

https://dbie.rbi.org.in/DBIE/dbie.rbi?site=home

https://www.mea.gov.in/TreatyList.htm?1