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ISSN : 2348 - 5612 | Volume : 10 , Issue : 02 | April - June 2023

Trade Liberalization and Economic Growth Process in India

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ABSTRACT

This paper studies the relationship between the trade liberalization and economic growth process in Indiafor the period 1971-2018. The econometric methodology employed was the Cointegration and Granger Causality test. The stationarity properties of the data and the order of integration of the data were tested using both the Augmented Dickey-Fuller (ADF) test and the Phillip-Perron (PP) test. ADF and PP tests are used to check the order of integration of the variables and at this level all the variables were non-stationary, which means that null hypothesis cannot be rejected. However, the stationarity found at their first difference of the series is significant. We apply Johansen co-integration method found 1 cointerating vector, that there exists a long run relationship between international trade openness and growth. Our Granger causality results show that causality follows from GDP to Trade Openness and support trade-led hypothesis. Results also support the idea that country may experience faster per-capita growth with a growing degree of international trade through gains in country productivity associated with availability of finance in the market. Finally, the direction of the causality results followed trade led growth.

Keywords: Trade liberalization, economic growth, co-integration, India.

1. INTRODUCTION

Trade (both imports and exports) plays a vital role for any successful modem economy and is crucial for thecompetitiveness of the Indian economy in the long run also. Referring to large body of evidences, exposed firmscan exercise significant competition and comparative advantages when they have international competition.The structure of Indian economy has undergone significant changes since 1991 with globalization polices which majorly includeschanges in International trade. After the structural reforms in India, the exports and imports have considerablyincreased which has positively impacted the Gross Domestic Product in order to focus on $5 Trillion economy. India is one of the G20 Nations and herGCI rank has been estimated to be 71 among the rest of the world (G20 IndiaSecretariat,2015).In terms of Economic literature the word 'Openness' has been under common usage since 1980s. Most of thetimes openness itself signifies Trade Openness is an indicator, which will be influenced by trade policiesadopted by India and also the result of multilateral trade negotiations, and by the wider macroeconomic stateof the world economy. Restrictive trade policy will inhibit other countries from sending exports and acceptingimports from the country, which practices it. According to dominating economic theory, this restrictiveness,this absence of openness, will result into of slowing the economic development or growth. Inversely, tradeopenness will have an economic effect of increasing economic development and growth.In distinguishing budding impact of trade openness in the Indian Economy, it had been crucial to focus onaltering trade policy regimes. After liberalization of Indian Trade services have provided new opportunitiessince 2003-2004 after advent of new avenues (trades of software and IT related services).The study I have tried to study the trade openness of Indian Economy during different pre and post reform periods. The analytical content andempirical analysis mainly focuses on the period of 1970 to 1991 (Pre liberalization) and 1992 to 2018 (Postliberalization)

in India. The research question concentrated in my study is "whether there is a significantdifference between trade openness Pre - Post liberalization era".

The portion of exports of goods and services to Gross Domestic Product has increased from 6% in 1971 to8.5% in 1991,whereas after liberalization in 1991 the share has considerably increased to 13.2% in 2001 and19.74% in 2018 (World Bank database,2019). The share of imports of goods and services to GDP hasdecreased from 8.7% in 1981 to 8.5% in1991, whereas after liberalization in 1991 the share considerablyincreased to 13.6%in2001 and23.64%in2018 (World Bank database, 2019).

2. INDIAN FOREIGN TRADE OVERVIEW

The export trade during 1950-1960 was noticeable by two main trends. First, among commodities which were directly based on agricultural production such as tea, cotton textiles, jute manufactures, hides and skins, spices and tobacco exports did not increase on the whole, and secondly, there was a significant boost in the exports of raw manufactures such as iron ore. In the period of 1950 to 1951, main products dominated the Indian export sector. These included cashew kernels, black pepper, tea, coal, mica, manganese ore, raw and tanned hides and skins, vegetable oils, raw cotton, and raw wool. These products comprised of 34 per cent of the total exports. In the period of 1950s there were balance of payments crunch. The export proceeds were not enough to fulfil the emerging import demand. The turn down in agriculture production and growing pace of development activity added pressure. The external factors such as the closure of Suez Canal created tension on the domestic financial system. The critical problem at that moment was that of foreign exchange scarcity. One of the most important phenomena in post war economic history has been the enormous expansion of world trade. India trade grew poorly from 1950 to 1980 as compared with world trade. India entered into planned development era in 1950's and at that time Import Substitution was a major element of India's trade and industrial policy. In 1950 India's share in the total world trade was1.78%which reducedto 0.6% in 1995. In 1993,India rank 33rd in top exporting countries and 32nd in top importing countries. Natural Resources of the country are not evenly divided amongst public and private sector business enterprises. During 2003-04 India's share in the global trade was 0.8%, in 2005 it was 1.0%. The PC Alexander Committee (1978) was the first committee to review and recommend on Import –Export Policies and Procedures. This committee recommended the simplification of the Import Licensing procedure and provided a framework involving a shift in the emphasis from ―control to development‖. In 1980 Tandon Committee gave recommendations on export strategies in eighties. In the Export Import policy of 1978-79, for the first time in India's History decentralization of some licensing functions took place and the powers of regional licensing authorities was enhanced. Export Oriented Units were set up under the EOU scheme introduced in early 1981. The export and Import Bank of India (website) was set up in 1982 to take over the operations of international finance wing of the IDBI.

Other major objectives were to provide financial assistance to exporters and importers. In the Trade Policy of 1985-88 some measures were taken based upon the recommendation of Abid Husain Committee 1984. This committee envisaged ―Growth Led Exports, rather than Export Led Growth‖. The recommendation of this committee stressed upon the need for harmonizing the foreign trade policies with other domestic policies. This committee recommended announcement of foreign trade policies for longer terms. The export import pass book scheme was introduced in 1985 as per recommendation of AbidHussain Committee. In 1985 Visvanathanpratap Singh Government developed a 3 year Exim policy. Tax Reform Committee chaired by Raja J Chelliah suggested minimizing the role of quantitative restrictions and reducing the tariff rates substantially. Export Processing Zones were set up to push up export In order to liberalize imports and boost exports, the Government of India for the first time introduced the Indian EXIM Policy on AprilI, 1992. In the light of the reform policy objectives successive governments have been taking various trade reforms. However, the Central government

reserves the right in public interest to make any amendments to the trade Policy in exercise of the powers conferred by Section-5 of the Act. Such amendment shall be made by means of a Notification published in the Gazette of India. Prior to 2004, the Foreign Trade Policy was called EXIM Policy. The Foreign Trade Policy, 2015-2020 (FTP) was finally announced by the Hon'ble Minister of Commerce and Industry, Smt. Nirmala Sitharaman on April 1, 2015. The FTP has been announced in the backdrop of several measures initiated by the Government of India such as "Make in India", "Digital India" and "Skills India" among others.

3. TRADE POLICY REFORM IN 1991

In 1991, India's foreign exchange reserves had plummeted to levels which would finance only afortnight's imports, the debt service burden was one-fifth of current account receipts, fiscal deficitwas above 8 per cent, leading to pressure on balance of payments, and the consumer price index had increased by 13.6 per cent with implications for changing the foreign exchange rate. Those were dire times which required major policy changes.

The 1991 trade policy reform was an exercise that balanced several objectives. For instance,loss of revenue was a major concern, and this was mentioned as a reason for not reducing theimport duty more than was being announced. In a number of instances, import tariffs were kepthigh to encourage infant industry. The need for protecting Indian industry against foreigncompetition, and to save foreign exchange, were explicitly recognised. This was balanced with a reduction in tariffs to lower input costs and to encourage export activities.Interestingly, while a major part of the budget was oriented towards reform, much of it wasconventionally focusing on certain ongoing objectives emphasised by the government andpromoted through the budget, such as promoting technological up-gradation, facilitating capital goods imports, keeping prices low for products such as essential drugs and certain machineryand equipment, improving the environment, promoting tourism by facilitating products thatcontribute to the value chain, and promoting software exports. Three interesting features emerge from the 1991 Union Budget. One, though the tariff levelswere reduced, they were still kept at significantly high levels. Two, the trade policy reform in 1991was an initial step, which would be continued over time. Three, the nature and pace of reformwould depend on the underlying economic factors which were a matter of concern for theGovernment. The trade policy reforms were notified by the Five-Year Expert-Import (EXIM)Policy in 1992, which provided stability to the content and direction of change brought in by the1991 reform.Another important feature of the 1991 reform was that it began opening up the regime for FDI.While FDI was not linked at that time with trade policy, it created a base for increasing economiclinkages with global markets. We consider below how this objective of greater links with worldmarkets was implemented through changes in tariffs and non-tariff measures.

4. INDIA'S CURRENT SCENARIO

The integration of the domestic economy through the twin channels of trade and capital flows has accelerated in the past two decades which in turn led to the India's GDP reaching Rs 167.73 trillion (US$ 2.30 trillion) in 2017-18. Simultaneously, the per capita income also nearly trebled during these years. India's trade and external sector had a significant impact on the GDP growth as well as expansion in per capita income. Provisional estimates of India's GDP during the 2018-19 stood at Rs 190.10 trillion (US$ 2.72 trillion). As per the estimates of Gross Domestic Product (GDP) for the first quarter (Q1) of 2019-20, the growth of real GDP for Q1 of 2019-20 is estimated at 5 percent.Total exports from India (Merchandise and Services) registered a growth of 1.60 per cent year-on-year during April-November 2019 to US$ 353.96 billion, while total imports estimated to be US$ 408.02 billion,

exhibiting a negative growth of 5.30 per cent according to data from the Ministry of Commerce & Industry.Total exports from India (Merchandise and Services) registered a growth of 1.60 per cent year-on-year during April-November 2019 to US$ 353.96 billion, while total imports estimated to be US$ 408.02 billion, exhibiting a negative growth of 5.30 per cent according to data from the Ministry of Commerce & Industry.The merchandise export stood at Rs 14,89,793.87crore (US$ 211.93 billion) during April-November 2019 and imports reaching Rs 22,39,900.18 crore (US$ 318.78 billion) for the same period.The estimated value of services export for April-October 2019 stood at US$ 142.02 billion and import is US$ 89.24 billion.

Thus, the overall trade deficit for April-November 2019 is estimated at US$ 54.06 billion. According to Mr Piyush Goyal, Minister for Commerce and Industry, the Government of India is keen to grow exports and provide more jobs for the young, talented, well-educated and even semi-skilled and unskilled workforce of India.India's foreign exchange reserves were Rs 32.19 lakh crore (US$ 460.65 billion) in the week up to November 22, 2019 according to data from the RBI.

5. ABRIEF SURVEY OF LITERATURE

There are various reasons for countries to engage themselves in international trade and motives to expandtheir exports and imports are unassumingly gains from trade. The nations look forward to benefit from theircomplement relativity in production and thus the theory of Economist David Ricardo applies impeccablyeventually corroborating that nations import and exports have extraordinary correlation with the methods ofproducing in a relatively better way. Economies of scale in production might be another reason for countriesto try to determine for openness in the world global market. Both of these intentions majorly mirror the realworld pattern of International commerce and flourishing trade openness (Krugman and Obsfield, 2006).Mentioning earlier theories of trade, a special reference of Haberler (1936), Viner (1937), Mundell (1960),Bhagwati (1963), and Schumpeter (1954) is crucial to determine the survey based study on International tradecarried out by the Neo-classical Economists.The classical Economists have very distinctly provided theories on Trade and Adam Smith (1776), J.S Mills(1917) have stipulated literatures on the basis of which the International trade theories have evolved.Eventually the Neo-classical Economists have rested their observations and findings on opportunity costs and indifference curve, A.P Lemer (1953), Meade (1955) and Haberler (1955), whereas the modem concepts restsupon factor endowment concepts reviewed and surveyed by Heckscher (1919) and Ohlin (1933), Hammouda, Jallab (2011), Marelli et al. (2011), Chuhdhary et al (2010), Mitra, Pradeep K, (2009), Dash (2009), Vedpal et al. (2007), Chen and Gupta (2006), Wacziarg (2001), Srinivansan (1999) etc tested empirical data for Indian economy.

6. OVERVIEW OF THE VARIABLES (DATA) USED

The sum of export and import as a percentage of GDP is used as a measure of trade liberalization (hereafter TO), while the Growth rate of real per capita GDP is used as the indicator of economic growth (hereafter GR) for the period 1971-2018. Data used in this study are published and unpublished. Published data are available from various RBI publications (Currency and Finance), Economic Survey, World Development Indicators (World Bank), IFS (IMF); Handbook of Statistics, OECD data base different issues, Government of India.

7. MODEL SPECIFICATION

In our empirical study log-linear specifications of the variables are used and to the following estimation equation as:

$\ln GR = \beta 0 + \beta 1 \ln TO + \varepsilon t$

where:
GR and TO represents economic growth and trade openness respectively. β1 contribute for the elasticity of the explanatory variables.

8. RESEARCH METHODOLOGY

This study investigates the relationship among the internationaltrade and economic growth by using time series econometric methodology. To this aimfirst Augmented Dickey Fuller tests (ADF) Phillips-Perron (PP) unit root tests to confirm the stationarity of the variables. Then Johnsen and Juselius (1990) co-integration is employed to investigate the cointegration association between financial development, international trade openness and economicgrowth with the variables as GDP and the explanatory variables. Furthermore, todetermine the direction of causality between the variables, the research study hasemployed the granger causality test.

A) Test for order of integration

1. Stationarity Tests

Before the testing for a causal relationship between the time series, the first step is to check the stationarity of the variables used in the model to be estimated. The aim is to verify whether a series stationary or non-stationary and to identify the order of integration of the variables used in the model.

(a) Unit Root Test

Augmented Dickey-Fuller (ADF) test is based on independently and identically distributed (iid) errors. Suppose we are given an AR(1) process, as specified in equation.

$$Y_t = \phi Y_{t-1} + u_t \quad -1 \leq \phi \leq 1 \qquad (1)$$

Subtracting Y_{t-1} from both the sides of equation (1), we obtain equation (2) or (2a) as follows.

$$Y_t - Y_{t-1} = \phi Y_{t-1} - Y_{t-1} + u_t \qquad (2)$$

$$= (\phi - 1) Yt-1 + ut \qquad (2a)$$

Secondly we used the **Phillips-Perron (PP)** unit root test for empirical analysis. The order ofintegration of the selected variables has to be investigated to check whether series arestationary.
The estimation equation can be written as follows;

$$\Delta Yt - 1 = \alpha 0 + \boldsymbol{\lambda yt - 1 + a2t} + \sum_{i=2}^{p} \boldsymbol{\beta j}\, \Delta \boldsymbol{Yt - 1} + \mathbf{1} + \boldsymbol{\varepsilon t}$$

Where:
Y, t, a, εt, and P are variables used which is refers to the dependent variable, trend,intercept, Gaussian white noise and the lag level respectively.

B) Johansen's Co-integration Test

To analyse the long-run link between two variables such as tradeopenness and economic growth and confirm they are stationary at first difference, the results in the Table 1 and 2 indicates that according to the ADF and PP procedures variables have the sameorder of integration I(1).
The Johansen methodology can be written equation as follows;

$$Xt = \pi 1 X\, t - 1 + \cdots + \pi k\, Xt - k + \mu + et \text{ (for } t = 1, \ldots, T)$$

C) Granger Causality Test

In third step, after determining existence of co-integration relationship (Katircioglu et al.,2007) then causality must exist either unidirectionally or bidirectionally.

Granger (1988) suggests the following equation of causality model;

$$Zt = \sum_{j=1}^{m} aj\ Zt - 1 + \sum_{j=1}^{m} bj\ Yt - j\ +\ \varepsilon t$$

$$Tt = \sum_{j=1}^{m} cj\ Zt - 1 + \sum_{j=1}^{m} dj\ Yt - j\ +\ nt$$

where:

bj is statistically significant; Yt Granger causes Zt. However if Cj is different than zero; Zt Granger causes Yt respectively.

9. EMPIRICAL ANALYSIS

Table No.1 Unit root test results for Log Gross Domestic Product

LGDP				
Values	**ADF Test**	**Conclusion**	**PP Test**	**Conclusion**
t-statistic	-6.90109	I(1)	-6.90109	I(1)
Test critical values				
1% level	-3.59246		-3.59246	
5% level	-2.93140		-2.93140	
10% level	-2.60394		-2.60394	
Durbin-Watson statistic	1.938672		1.938672	

Source: Calculated with the help of Eview 7

**MacKinnon's (MacKinnon, 1991) tabulated value has been used to test the level of significance. I (1): Integrated of order one*

Table No.2 Unit root test results for Log Trade Openness

LTRADEOPEN				
Values	**ADF Test**	**Conclusion**	**PP Test**	**Conclusion**
t-statistic	-4.35632	I(1)	-4.31072	I(1)
Test critical values				
1% level	-3.58115		-3.58115	
5% level	-2.92662		-2.92662	
10% level	-2.60142		-2.60142	

Durbin-Watson statistic	1.43210		1.43210	

Source: Calculated with the help of Eview 7

**MacKinnon's (MacKinnon, 1991) tabulated value has been used to test the level of significance. I (1): Integrated of order one*

While testing for ADF and PP we then determine the stationary nature of the variables. Table 1 and 2 present the results for ADF and PP unit root test. Both test indicates that all variables are found non-stationary at their level, null hypothesis is rejected and stationarity found at first difference which confirms that all variables are integrated order of first difference or I (1) level alternative hypothesis is accepted.

Table- 3 Co-integration results

Date: 01/29/20 Time: 22:32
Sample (adjusted): 1975 2018
Included observations: 41 after adjustments
Trend assumption: Linear deterministic trend
Series: LGDP LTRADEOPEN
Lags interval (in first differences): 1 to 1
Unrestricted Cointegration Rank Test (Trace)

Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical Value	Prob.**
None *	0.447164	24.30044	15.49471	0.0018
At most 1 *	3.59E-07	1.47E-05	3.841466	0.9991

Trace test indicates 1cointegratingeqn(s) at the 0.05 level
* denotes rejection of the hypothesis at the 0.05 level
**MacKinnon-Haug-Michelis (1999) p-values

Unrestricted Cointegration Rank Test (Maximum Eigenvalue)

Hypothesized No. of CE(s)	Eigenvalue	Max-Eigen Statistic	0.05 Critical Value	Prob.**
None *	0.447164	24.30043	14.26460	0.0010
At most 1	3.59E-07	1.47E-05	3.841466	0.9991

Max-eigenvalue test indicates 1 cointegratingeqn(s) at the 0.05 level
* denotes rejection of the hypothesis at the 0.05 level
**MacKinnon-Haug-Michelis (1999) p-values

Source: Calculated with the help of Eview 7

Above table reports the long-run relationship from the Johansen cointegration estimation in order to evaluate the long-run association among the variables which are GDP per capita and trade openness indicators. Furthermore, in our proposed model of economic growth (Y) is a dependent variable while other is explanatory variable which is trade openness indicator. The evidence from Johansen cointegration estimated results shows that the trace statistic values is greater than (24.30044) their

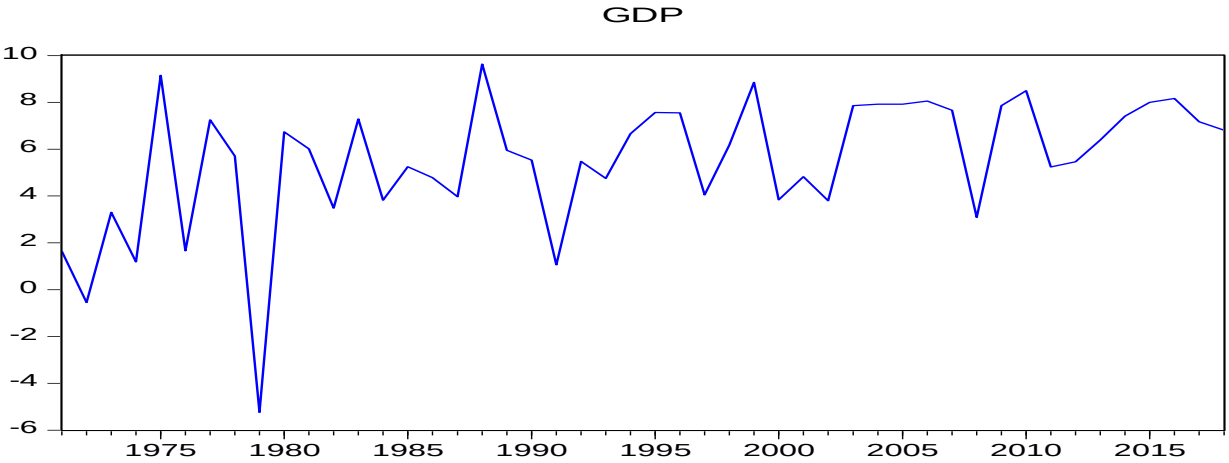
(15.49471) critical values at 0.05 level. And the value of Max-Eigen Statistic value (24.30043) is greater than Critical value (14.26460). Our proposed model indicates that if null hypothesis rejected then there is no co-integration between the variables, while accepted alternative hypothesis confirms that there is cointegration between the variables. Results show that there is a long-run equilibrium association between economic growth and trade liberalization in India.

Table- 4 Granger casualty results

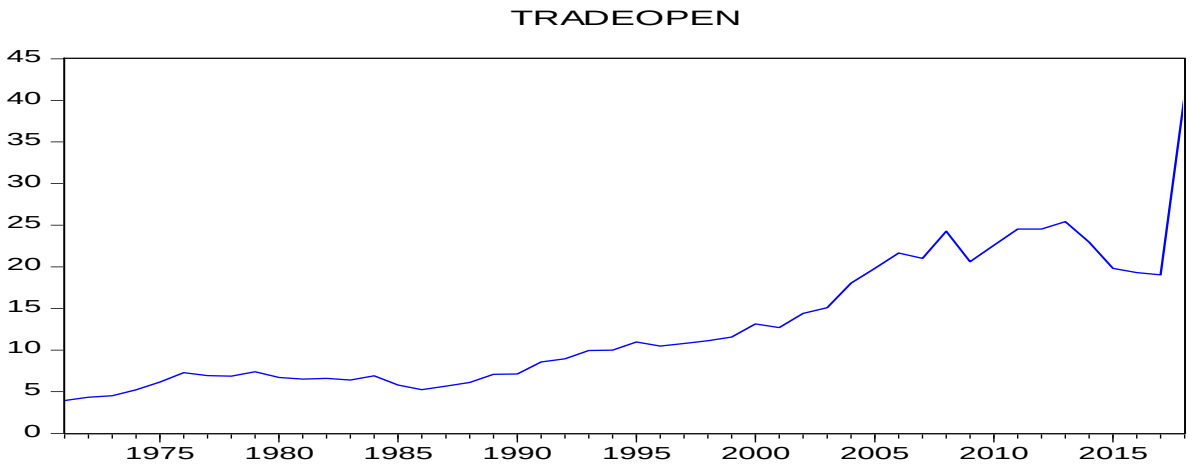
Pairwise Granger Causality Tests Date: 01/29/20 Time: 22:33 Sample: 1971 2018 Lags: 4			
Null Hypothesis:	Obs	F-Statistic	Prob.
LTRADEOPEN does not Granger Cause LGDP	37	3.88098	0.0125
LGDP does not Granger Cause LTRADEOPEN		0.50626	0.7315

Source: Source: Calculated with the help of Eview 7

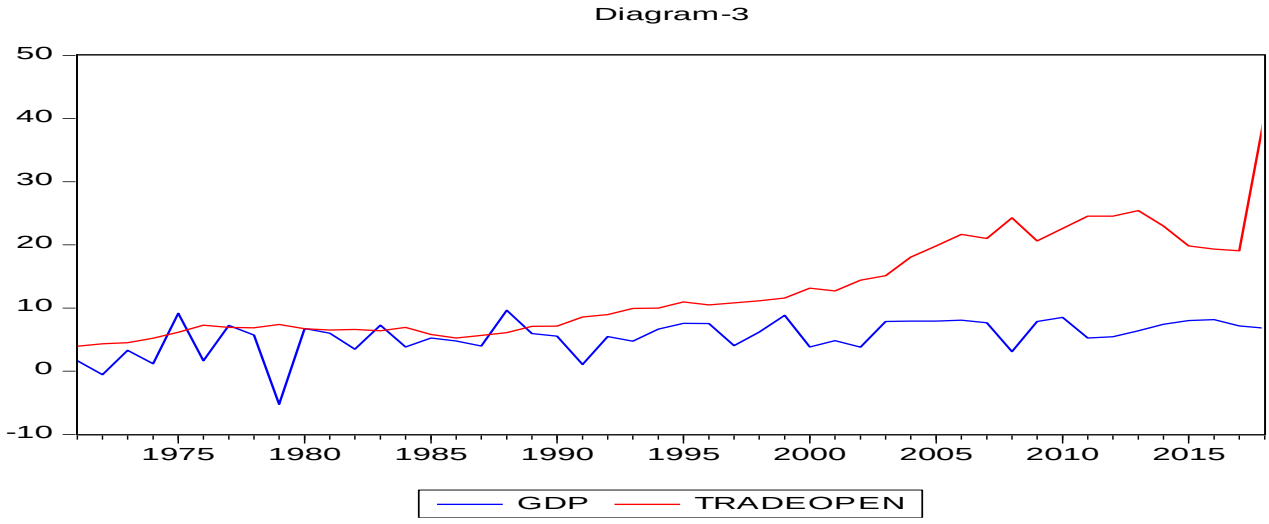
Table 4 provides results of Granger causality test after determining existence of long runlink. To ensure that the empirical estimated valuesare in order as vertical values are independent variables and horizontal values aredependent variables, which is the lagged differenced coefficients of F statistical valueswhich is determined as direction of short run Granger Causality runs from GDP to Trade Openness. In our proposed model,the null hypothesis indicates that there is non-causality between variables. If nullhypothesis rejected then the model confirms that independent variables cause thedependent variables.



From the above diagram-1 of GDP we can see that from 1971 to 1991 our growth rate changes very drastically from 9 to 2 per cent in 1975 to 1976 and even went negative also in 1979 year but after liberalization process started from 1991 onwards its always shows positive growth rate. We can say that Liberalization, Privatisation andGlobalization (LPG) are good for Indian economy.



When we talk about trade openness policy of Indian economy and plot data in a graph form and see the trade liberalization from 1971 to 1991 is positive but contribution is not significant as a per cent of GDP. After LPG year 1991 its share in GDP is started getting pace and also reached even 40% in 2018. Though the per cent of import is much more than per cent of export but it's a good sing for the healthy economy and we must focus on the same in order to get 5 per cent targeted share global trade as per new FTP.



From the above diagram 3it is clear that the relationship between trade openness and GDP is very much relevant and beneficial for the development and both moving in the positive direction after 1991 onwards.

11. CONCLUSION AND POLICY IMPLICATIONS

The objective of the study is to explore the long run relationship and direction of causality between international trade openness and growth in Indian context. To this aim, first Phillips-Perron (PP) unit root tests were applied and at this level all the variables were non-stationary, which means that null hypothesis cannot be rejected. However, the stationarity found at their first difference of the series is significant. Next step was to analyse the cointegration relationship between the both variables by employing Johansen Test and found 1 cointerating vector, that there exists a long run relationship between international trade openness and growth. Furthermore, the direction of the causality was evaluated by Granger Causality method. Our Granger causality results show that causality follows from

GDP to Trade Openness and support trade-led hypothesis. Trade liberalization has been extremely prominentcomponent of policy advice to an amazingly developing country like India during the last five decades. It may be asserted from the possibility that Economic Growth is perhaps the most imperative advantage originated from it. There can be another implication drawn from the study which prominently states that there has been improvement in exports and imports of our mighty nation after the series of structural reforms taken place during 1991.During 1971-1990 India was following export and import policies in a limited and controlled manner and its contrition in development was not upto the mark. Thus providing with a beneficial insight that globalization has improved after the trade liberalization which has in turn indorsed competition in home and global market and also stimulated proficient allotment of resources in the Economy.

Based on empirical analysis the study suggest following points for the economy, first, inIndia should focus more on export rather than imports and try to push corporates to make substitute products for imported goods at the reasonable prices. Secondly, for achieving good economic growth government needs to provide adequate money in the system for increasing aggregate demand and funds to the firms. Thirdly, to encourage the private sector by providing incentives for production, the totalproduction of the economy will be increased which will promote international trade andwhich can take more active role in the development of the economy. Broadly study concludes that Indian Trade Liberalization policies have a positiveimpact on the economy and we should continually focus on the same. For achieving dream mark of $5 Trillion economy, India has to take several decisions as a process of trade reforms and follow FTP objective of getting 5 per cent share in global trade. Focus should be more on export rather than import and keeping exchange rate around 70 as per dollar.

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