An Econometric Time-Series analysis of the Dynamic Relationship among Trade, Financial Development and Economic Growth in India

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Abstract

The present research study is conducted to examine the relationship among Financial Development, international trade and economic growth evolution in India. This study has focused on important considerable variables are real GDP, a substitution for economic growth, export services, import services, international trade, gross capital formation and exchange rate as independent variables. Commonly, the nations which trade is more have been seen to have a great progress pathway and great positive impact will be there on economic and financial development. Further the study is to examine if there is any exists a long run affiliation among various financial development, trade growth and other macroeconomic variables development in India for the period 2000 to 2018. In this connection of above para the paper adopted the Johansen co-integration method, KPSS, ADF and PP to establish the survival of a long run affiliation among financial development, economic growth and trade variables and is used to check the sequence of integration of the variables and Johansen co-integration approach is to examine the long run association among selected variables. The way of causality between variable is tested by Granger causality test. It is established that all of the variables are non-stationary and the examination confirm for a long run affiliation among international trade, financial development and economic growth. The outcomes of the research paper signpost that financial development, trade and economic development are co-integrated, but the affiliation is supported by the constancy of the macroeconomic policy subsequently undesirable macroeconomic variables such as escalating inflation can constrain economic growth.

Keywords: Financial, Economic, Trade, co-integration, ADF, KPSS and PP

Introduction and background

Gross domestic product (GDP) growth is one of the furthermost significant criteria to assess the performance of an Indian economy. To recognize the important drivers of Indian economic growth and the prospective sources of development a huge number of research have been piloted. These research papers specify the dissimilar drivers of economic development including FDI, financial development, home country investment, and export goods and services. This research paper’s main objective is to
investigate the relationship among financial development, economy growth and international trade, by using the Johansen co-integration method, ADF, PP and time series analysis. The affiliation between good and services export and economic growth which is a significant factor of financial development and international trade has taken the consideration of many researchers. Majority of the research papers outcomes that the goods and services export has constructive impact on economic growth of nation.

Even though good and services export directed the growth of one country and the empirically has been examined intensively, the indication of causality is still under discussion. In a progressing economy, some of manufacturing companies may go through substantial variations as outcomes of knowledge process, technical transformations, involvements and technology provision via FDI. Underneath these environments; even if there is no public policy and procedures that effort to accomplish growth by positive free trade policies, it is potential to improve output growth of financial development and economic growth in India. If domestic product and services demand does not upsurge as much as the output development in these booming manufacturing sectors; manufacturers can product and services export the surplus. Henceforth, product export growth can be encouraged by economic growth, financial growth and built the international trade strongly in a country. Though, if domestic product demand progression is more than manufacturing production growth, this may be major impact to a decrease in export the goods and services. As an outcome, the internal product demand induces an increase in internal nation output which is go together with by a reduction in export; so, efficiency in growth of finance, economy and international trade can depreciate the export performance to the India.

The research study have collected and studied an enormous literature work concerning with the relationship among the international trade, economic growth and financial development. There is compromise in the literature review that financial development and international trade contributions to the economic development of India with help of the different channels, including goods and services export enlargement. An effective functioning of financial services in India and it can also have positive impact on export services in accumulation to its influence on results of growth. So to have a better goods and services export segments in international trade it’s significant to have a positive growth financial and economic development system.

With connection of the above discuss the research paper has highlighted present position of Indian economy statues, financial development and relationship with financial trade, from view of Indian government of finance ministry, expert of finance analyst and economic scientist the discussion of specialization to the arguments about import versus export changes, the study has found that the managed the growth of financial development and economy of India, economists who examined the factors of standards of living have also been fascinated in the effects of international business
The paper focused on the relationship among finance, trade and economic growth has employed the development of different sectors with the debate for a prolonged period. However, in spite of that strength, there is substantiation to connection with the effects of international trade on income of Indian economy growth. The strength and developing the interest in economics growth examinations correlated to the affiliation between international trade and growth of economy and financial sector imitate the significance and intangibility positioned upon settling the argumentative issues both from a hypothetical viewpoint and a pragmatic viewpoint.

The international Trade can be affect returns through specialization for the reason that of a comparative benefit, manipulation of revenues from economies of measurement of scale, statistics exchange arising from developed announcement channels and transportable and technological spillovers through investments and exposure to new goods and services. According to Yuan (2014) explored that the influence of financial development and international trade on economic growth has become a significant investigation of the study. With reference of the economic traditional theoretical the factor donation, initiative of enterprises can improve their capability to overcome liquidity deficiencies with the help of financial growth by boosting to the product and services exports with great requirement on external financing source and progressing the measurement scale and construction of trade production. Rajan and Zingales (1998) has discussed about a comparative beneficiary theory of financial growth and claim that financial development supports to the enterprises to avoid ethical vulnerability and antagonistic selection difficulties and to enrich export development endorsed by the external financing services. Financial growth signifies positive degree of proportional advantage for those industries which have sophisticated dependence on external financing. Even though there is a huge review of literature that examines the affiliation among economic development, GDP growth, export and financial development; the review of literature on Indian context. This research paper main objective is to examine the survival of the long run relationship among the financial development, economic growth and international trade, and, the course of action of fundamental relationship between the selected variables.

A theoretical analysis of International trade, financial development and Economic growth

A number research studies have been piloted to examine the impact of export on economic development and positive influence of export on economic and GDP development has been long-established by numerous scholars are like Ullah (2009), Jordaan and Eita, (2007). Though, Pazim (2009) the study examined the legitimacy of export-led development theory for Indonesia, Malaysia and Philippines by using panel data analysis and finds no significant association between export and import growth. The survival of export-led development activity is also investigated for Pakistan by
Shahbaz (2009) who authenticate export-led development hypothesis. Shahbaz and Rahman (2014) his studied explore the association among GDP, exports, and financial development in Pakistan by Using the Restrictions testing method to co-integration and the vector error correction model (VECM) Granger causality test. Co-integration examination confirms the long run association. The collected works on the association between export and economic development is far from consent. The conclusions depend on the individualities of the country. This kind of variables that are adopted in the research paper. According Yanikkaya (2002) discovered that there is an affirmative and important relationship between international trade and GDP growth. As a nation opens up its economy development and contributes more in international trade development, it becomes combined into the world economy and can appreciate the static and energetic welfares mount up from international trade. According to other researcher point of view Gries and Redlin (2012) explain the adopted the trade measure activities, export and import services as a percentage of GDP growth as an openness the trade measure, establish a important association between trade openness and GDP development. The same dimension is also the one used to measure to the trade business related activity.

According to Zeren and Ari, (2013) illustrated that the G7 nations trade development and economic improvement causality association from 1970 to 2011. They long-established that the rise of trade activity increases the G7 nation’s development which in opportunity upsurges trades openness. Other hand the Brueckner and Lederman (2015), discovery dissimilar experiential outcome. By adopting influential variables, they projected the causal connection between trade degree and economic development in Sub-Saharan African countries. The research paper outcome shows that economic development negatively and significantly impact on trade openness. However, trade beginnings showed a statistically significant and positive outcome on economic development. According to Asfaw (2015) adopted for this study the panel data by employing Generalized Least Square Estimator (GLS) for 47 dissimilar Sub-Saharan Africa countries for the periods 2000 – 2008. The study found positive relations between trade openness and economic growth. According to Hye and Boubaker (2011) research paper investigated the hypotheses of import, export growth and internal debt balance sustainability by bring up to yearly time-series data between 1960 and 2008 for the sample country: Tunisia. The statistical ARDL method was used to perceive the long-term correlation between exports, import, GDP and to determine its course of action. The outcome of the paper put advancing a unidirectional causality relation with following terms a trend from export to economic development in addition a bidirectional causality relation between import and economic development. According to Zang and Baimbridge (2012) in his research paper determine the association between export, import, and economic development for South Korea and Japan by using vector auto regress model. In the view of the above discussion to the outcome, three variables are co-integrated for selected nations and there is a bi-directional causality between import
and economic development for both countries. According to Al-Khulaifi (2013) this paper examined a long-term relation between export services and import services for Qatar using JJ co-integration and Granger’s causality test. Outcome designate that there is co-integration between export services and import services. The Granger causality outcome also shows that import prime to export service in the long run.

According to Ang (2008) and Murinde, (2012) explain about the economic development can elucidate the financial segment development or growth of financial segment that drives economic development. The paper hypothesis, usually known as ‘demand-resulting’ struggles that finance development is led by moderately than indications economic development and also finance plays a minor role in economic development. In this paper of perceptive, finance is purely a by-product or consequence of inclusive development in the real side of the economy. According to Robinson, (1952). It is discussed that when an economy develops, increases the financial products, financial institutions, and financial services materialize in the financial market in reaction to advanced demand for financial services production. Therefore, the real segment of the economy development, the financial structure progresses thereby cumulative the openings for acquiring liquidity for funding venture and for dropping risk. According to King and Levine, (1993) express his view on economic development can be prompt by the amount and the structure of financial growth variables through growing savings which contain of financial assets, thereby depositing capital creation. According to Hsu and Wu, (2009) express in his debate that cross-country indication cannot sustenance the development effect of FDI through financial growth. It may be incidental that economies with improved developed financial markets are not indispensable to attain benefit more from FDI to fast-track their economic development. According Ljunwal and Li, (2007) examine the relation between FDI and economic development with role of financial segment in China. Time series analysis set preliminary from 1986 up to 2003 has been used over 28 Chinese. Their experiential discoveries seem sustenance the opinion by Hermes and Lensink, (2003) and Alfaro (2004). Ang, (2009) examines role of financial growth on FDI and economic development for the case of Thailand. The pragmatic outcomes reveal that financial expansion encourages economic development but FDI have undesirable impact on output growth. It is also contingent that an improved level of financial expansion enables Thailand’s economy to obtain more from FDI. Correspondingly Shahbaz and Rahman, (2012) maintain that the impact of FDI on output development can be better-quality through growth of financial markets.

According to Yucel (2009) studied the causality associations among the financial growth, trade and economic development (GDP) for the Turkish economy for the period 1989 to 2007. The econometric approach used was the Johansen and Juselius co-integration and Granger causality to test for causality test among the selected variables. The conclusions of the research paper showed that although trade openness has a constructive effect, financial development has a negative outcome on growth.
Hassan and Islam (2005) surveyed whether financial growth and trade openness to international trade can performance any positive role in decreasing poverty in Bangladesh through their development attractive effect for the period 1974-2003. Standard Granger-causality test is used to determine whether financial growth and trade openness cause growth. Variables are establishing first modification stationary without having any co-integrating association as reported by Johansen co-integration test. According to Soukhakian (2007) experimentally examined the causal affiliation among the financial development, trade openness and economic development in Japan covering the period 1960-2003. Outcome recommends that a long run equilibrium association exists between financial development, trade and economic development in Japan except between domestic credit, trade and growth.

According to Katiricioglu, Kahyalar and Benar (2007) intended at examining the conceivable co-integration and the course of causality among the financial development, international trade and economic development in India. Yearly data covering the 1965-2004 period have been employed to examine co-integration and Granger causality tests among the financial development, international trade, and development after used unit root tests to see if the variables under thought are stationary. Outcome discloses that there is a long-run symmetry association among the financial growth, international trade development and real income improvement in the case of India.

According to Maizels (1968) in his paper established the association between the rate of change in exports service and the rate of change in the nation GDP for emerging countries for the during time period from 1951 to 1962. In his study experiential an important association between export service and development rate and GDP development rate. Though, the paper did not shed light on the issue of causality. According Mathews (1973) explain about the investigated into the association among Britain’s economic development, foreign trade service and her/his expenditures problematic. His paper adopted time series analysis covered the 100 year research studied. The study would have predictable the researcher to have probably alienated the historical information covered by the study into two or more periods in order to effectively analyse the changes occurring over time. According to Papanek (1973) in his paper explain about the 85 emerging economy countries assessed the influence of fixed and foreign capital, FDI and home nation savings on economic development. The paper explains about the long-established the survival of a constructive association among economic growth, GDP and home nation savings. Additional, in his paper the explored that the external assistance and external investment certainly influenced economic growth. According to Yang (2008) studied the association between exports service and economic development over the period 1958 to 2004 grounded on 44 countries. The outcome from most of the nations adopted in the paper gave credibility to the export service development hypothesis, while an insufficient of them demonstrated variables otherwise. The researcher also experiential that, due to the problematic of data obtain...
ability in the emerging economy countries, the real exchange currency rate can help as a significant tool for characteristic between circumstances of exports productive service improvement and import service circumstances. According to Kehinde (2012) in his paper explored the influence of global trade on economic development in Nigeria from 1970 to 2010. The research paper prepared to practice of multiple regression models, co-integration and error correction procedures. Based on the model the paper exposed that 3 selected variables, called export service, FDI and exchange rate service are statistically important at 5%. According to Arodoye and Iyoha (2014) explain about the econometrically measured the association between FDI and economic development in Nigeria by utilizing three month time-series analysis based on the annually data set for the time duration from 1981 to 2010. A VAM was adopted; the outcome of the paper authorizes a stable, long run construction between Trade openness and economic development. The paper drawn the conclusion based on the above analysis of his paper considers the acceptance of trade as a strong economic policy mechanism for catalysing the procedure of economic development in Nigeria.

**Methodology**

The research methodology approach of the study mostly depends on different methods which used various methods. In this research study, the methods of time series econometrics such as unit root test, Augmented Dickey-Fuller (ADF), Granger causality test and Johansen co-integration test under the wider background of Vector Autoregressive (VAR) method and Vector Error Correction (VEC) method are employed in order to investigate the dynamic relationship among the financial development, international trade and economic development in both long term and short term with outcome out the causality and its direction among them. In the sequence of the research study, the structure transformation in import and export of the India is investigated by adopting some descriptive statistics tools in direction to observe how international trade pattern of the nation changed. This research has consider 18years’ time period for collect the data from different sources and how it would have likely impact on the economic and GDP growth on nation. Secondary Data used in this paper are the annual report of the government of Indian during period of 2000-2018 covering selected variables, Export, import, GDP and national credit to private sector financial institutions, Money and quasi money contains demand deposits excluding government of India how it has impact on the development of economy, financial and international trade relationship with other countries,

**Data Sources of the paper**

The research paper has collected and utilized the secondary data information for this paper. Moreover the study elaborately, the paper adopted macro-economic time-series yearly data for the time period of 2000 – 2018. For this study the researcher has used the explorative variables are real GDP, a substitution for economic growth, export
services, import services, international trade, gross capital formation and exchange rate serves as the dependent variable. Further the paper also used the macro-economic dataset used as the sources from the RBI, NITI Aayog, SEBI, NSE, BSE and Indian Statistical Agency.

Data analysis and discussion

Table-1: The summary of the descriptive statistics

| Statistics tools | 1     | 2     | 3     | 4     | 5     | 6     | 7     |
|------------------|-------|-------|-------|-------|-------|-------|-------|
| Mean             | 5.236 | 4.256 | 2.457 | 1.475 | 5.421 | 3.867 | 2.537 |
| Median           | 4.236 | 5.147 | 4.457 | 5.577 | 3.578 | 4.589 | 6.589 |
| Minimum          | 3.256 | 2.457 | 4.869 | 5.425 | 5.854 | 4.758 | 6.589 |
| Maximum          | 4.235 | 3.256 | 6.589 | 7.568 | 9.568 | 5.528 | 9.568 |
| Sum              | 98.235| 91.536| 68.530| 75.865| 69.528| 49.523| 53.568|
| Std. Dev.        | 1.536 | 1.857 | 2.869 | 2.754 | 3.568 | 2.380 | 1.458 |
| Probability      | 0.4256| 0.5487| 0.4578| 0.0685| 0.4587| 0.6589| 0.4568|
| Sum Sq. Dev.     | 28.568| 29.568| 54.256| 51.365| 45.856| 47.568| 28.365|
| Skewness         | -0.235| -0.258| -0.168| -0.568| -0.478| -0.935| -0.614|
| Kurtosis         | 1.568 | 1.457 | 1.369 | 1.745 | 1.857 | 1.187 | 0.579 |
| Observations     | 38    | 38    | 38    | 38    | 38    | 38    | 38    |

1-Gross domestic product, 2-Export services, 3-Import services, 4-Trade value, 5-Ex-change rate, 6-Fixed capital formation, 7-FDI

From the table 1 has shown the results of the data used in the modeling the relationship among international trade, economic growth and financial development in India for the period of 2000-2018 are signified in the above table no 1. The results explain about the Indian economic, financial development and international trade development status, the average growth rate values of the selected variables GDP (5.236), export services (4.256), import services (2.457), trade value (1.4750), exchange value rate (5.421), fixed capital form (3.867) and FDI (2.537). The average values of the selected variable showing the insignificant impact on the development of Indian economy, financial development as well as international trade relationship. In the same sequence of the table 1 results shown about The Jarque-Bera measurements shows that not a single variables has shown a significant values from normality, thus, the selected variables are taking into measure the their significant level to have a normal distribution. The paper outcome shown the variability in the distributions is apprehended by the standard deviation in the table one. The outcome of the paper are as shown in the table as a standard deviation values are GDP (1.536), export services (1.857), import services (2.869), trade value (2.754), ex-change value rate (3.568), fixed capital form (2.380) and FDI (1.458). These selected variables values are insignificantly isolated towards economic, financial and international trade development activity and mean value and other statistical tools also not indicated there are wide variations among selected variables.
Econometric time series analysis results

The results of Unit Root Test to establish the order of integration of the variables. (Augmented Dickey Fuller and Phillip-Perron Test)

| Variables                | Augmented Dickey Fuller (ADF) and Phillip-Perron (PP) |
|--------------------------|--------------------------------------------------------|
|                          | Order | Test | Constant | Constant and Trend |
| GDP                      | I (0) | ADF  | -0.0045873 | -1.5689456         |
| Economic Growth          | I (0) | PP   | -0.1265897 | -2.3569754         |
| Export services          | I (0) | ADF  | -0.0045967 | -3.4589675         |
| Import Services          | I (0) | PP   | -1.0568975 | -0.4578964         |
| Trade                    | I (0) | ADF  | -0.0869758 | -4.5689736         |
| Gross Capital formation  | I (0) | PP   | -2.0568978 | -1.4587963         |
| Exchange Rate            | I (0) | ADF  | -0.4589673 | -2.4879645         |
| FDI                      | I (0) | PP   | -2.5689156 | -0.4587968         |
| GDP                      | I (1) | ADF  | -2.5687350**| -4.5368902**       |
| Economic Growth          | I (1) | PP   | -4.6758246**| -5.2356878**       |
| Export services          | I (1) | ADF  | -1.2569875**| -2.5689815**       |
| Import Services          | I (1) | PP   | -3.8569725**| -1.5678429**       |
| Trade                    | I (1) | ADF  | -1.8567690**| -2.4876902**       |
| Gross Capital formation  | I (1) | PP   | -5.7391826**| -4.5368920*        |
| Exchange Rate            | I (1) | ADF  | -0.4578964**| -3.4378412**       |
| FDI                      | I (1) | PP   | -1.5689754**| -4.4578964*        |

From the table no 2, the study draw the interpretation based on the outcomes from table no-2 at present improvement in time series modeling has been to establish the relationship in order of integration of the variables adopted the in the model with diverse unit root test. The Econometric time series value disclosed the results to be integrated of order directed by order of integration, if the Econometric time series becomes stationary after being differenced order of integration times. This research paper used the two most common econometric tools but significant tests (Augmented Dickey Fuller and Phillip-Perron) of stationarity of time-series figures. The present table studies the stationarity tests among the seven variables (GDP, Economic Growth, Export service, Import services Trade, Exchange Rate and formation of Fixed Capital) all this variables are consideration for the both at order level I(0) and at first Order level I(1) variance. In order of the above table value the paper having measured the test of stationarity of all the seven variables, based on the above table outcome the research has observed and analyzed that all the seven variables are non-mean regressive at the both level. However, upon variance among the selected variables, the paper becomes stationary. This results shows that the variables (GDP, Economic Growth, Export service, Import services Trade, Exchange Rate and formation of Fixed Capital) there would have a continuous mean and variance at integrated order 1 level. This improvement further imposes a co-integration test. Finally the paper conclude that all seven variables it should be co-integrate relationship among the all seven variables and the table value shown majority of variable values has shown insignificance.
Structural vector auto regression (SVAR) model to investigate the impact of import and FDI

From the table no 3, the research paper used the structural vector auto regression (SVAR) model to investigate the impact of import and FDI recognized and distinguished according to their demand and supply bases and their relation to the Indian stock market return, export, interest rate, ex-change rate, volatility, Trade and covariance, correspondingly. International trade and FDI can affect GDP, stock price return, Economic development and volatility by impact on expected cash inflow and on the discount rate practical to future earnings. The paper determines simultaneous correlations between Export, import, and volatility covariance are unimportant and statistically insignificant within a selected variables. The stationarity of the selected variables in the model is examined by piloting Kwiatkowski–Phillips–Schmidt–Shin (KPSS), Augmented Dicky–Fuller (ADF) and Phillips–Perron (PP), tests for every of the time series analysis, the leading variance of the natural logarithm of export and import services production, aggregate supply side, demand, exchange rate, trade openness and volatility covariance. From the table results show that the researcher can reject the insignificant variables based on the table results. The study relationship can establish on the KPSS, PP and ADF tests, that FDI. Trade, exchange rate, export, import and covariance a unit root at the 5% level majority of variables revealed the outcomes insignificant. Based on that the study also finds that the three tests recommend that exchange rate and trade openness comprehends a unit root. The nonstationarity of exchange rate and trade openness may prime to a cost of an asymptotic effectiveness as reproduced in broader error groups in the approximation from the table value. Though, considering the first variance value may outcome in elimination of the sluggish moving component in the time series order.

Table-3: Stationarity Test Results

| Variable      | KPSS test          | ADF test           | PP test          |
|---------------|--------------------|--------------------|-----------------|
|               | No trend | Linear trend | No trend | Linear trend | No trend | Linear trend | No trend | Linear trend | No trend | Linear trend |
| Δ prod        | -9.125** | -7.586*** | -14.576*** | -19.376*** | 0.004 | 0.005 |
| GDP           | -6.532** | -6.357*** | -10.468*** | -9.276*** | 0.047 | 0.105** |
| Capital       | -2.475   | -4.159**  | -2.356   | -4.678**   | 0.457** | 0.008 |
| Exports       | -4.536** | -4.458**  | -8.369*** | -2.487     | 1.457*** | 0.059 |
| Imports       | -7.376** | -5.586**  | -3.258**  | -1.473     | 0.875**  | 1.056*** |
| Trade         | -4.890** | -1.819    | -1.586   | -4.687**   | 0.007    | 1.856*** |
| ER            | -3.105** | -2.361    | -5.835**  | -2.348     | 0.009    | 0.605*** |
| IR            | -1.421   | -5.865**  | -6.492**  | -7.864***  | 1.087*** | 0.004 |
| COV realized  | -6.670** | -4.173**  | -2.654   | -11.716*** | 1.406*** | 0.081 |
| COV implied   | -8.563** | -8.937*** | 14.568*** | -17.457*** | 0.614**  | 0.896** |
| COV conditional | -5.503** | -7.509*** | -11.429*** | -9.670***  | 1.008*** | 1.853*** |
Granger-Causality Test Results

Table-4: Granger-Causality Test

| Regression | Dependent Variable in Regression |
|------------|----------------------------------|
|            | 1      | 2      | 3      | 4      | 5      | 6      | 7      | 8      |
| 1          | 0.145  | 0.586  | 0.473  | 0.568  | 0.689  | 0.273  | 0.196  | 0.698  |
| 2          | 0.457  | 0.864  | 0.618  | 0.573  | 0.816  | 0.006* | 0.173  | 0.261  |
| 3          | 0.007**| 0.552  | 0.371  | 0.162  | 0.010**| 0.005* | 0.420  | 0.069  |
| 4          | 0.458  | 0.017  | 0.001**| 0.608  | 0.420  | 0.0503 | 0.123  | 0.321  |
| 5          | 0.051* | 0.471  | 0.582  | 0.685  | 0.869  | 0.256  | 0.196  | 0.004* |
| 6          | 0.004**| 0.914  | 0.101  | 0.509  | 0.586  | 0.003* | 0.510  | 0.325  |
| 7          | 0.506  | 0.685  | 0.527  | 0.672  | 0.561  | 0.859  | 0.683  | 0.000* |
| 8          | 0.063  | 0.951  | 0.357  | 0.578  | 0.693  | 0.583  | 0.681  | 0.863  |

Notes: (a) ** means the rejection of the variables at 5%.
1- Gross domestic product, 2- Export services, 3- Import services, 4- Trade value, 5- Ex-change rate, 6- Fixed capital formation, 7- FDI and 8- economic growth

From the table no 4, the results shown the subsequently the assessments apprehensions international trade, Indian economic growth relationship, and are lead out within a dynamic alignment, it is of ultimate significant to build the relationship among the variables or whether these selected variables can forecast a different other hand side using the Granger causality test. In specific, the Granger causality indicators are investigate to control whether lagged values of one variable do assistance to forecast another variable. From the Table no, has represented the outcome of the Granger-causality tests for the eight-variable VAR. It would be noted that the p-values has significantly connected with the F-statistics supports to determine whether the significant sets of coefficients equals to zero. The table showed the outcome that exports services, import service, trade value and ex-change rate indeed, help in predicting output values. This research paper drew the recommendation Granger-causality running from exports to economic and GDP growth. In other hand side, Indian government, through revised policy implementation, would need to improve its export services activity in order to understanding economic and GDP growth.

VEC model (Granger causality results based on VECM)

Vector Error Correction model important objective is to determine the differentiation between long run and short run granger causalities. A Vector Error Correction model is a form of VAR, appropriate where the variables in the model are individually integrated of order 1, but demonstration co-integration method. Vector Error Correction model approximation contains and approximation of the error correction, their number be contingent on the rank of the co-integration matrix value. These error correction terms relate to the long-run association among the observed
variables. The F-test of the descriptive variables communicates to the short-run effect; the importance of ECT communicates to the long-run relationship.

Table-5: Granger causality results based on Vector Error Correction model

| dependent variable | F-statistics | t-statistics |
|--------------------|-------------|-------------|
|                    | 1           | 2           | 3           | 4           | 5           | 6           | 7           | 1           | 2           | 3           |
| 1                  | 2.74 (0.009) | 0.12 (0.003) | 0.52 (0.008) | 1.38 (0.005) | 2.13 (0.002) | 0.52 (0.008) | 0.51 (0.013) | -2.530 (0.035) | -1.634 (0.230) | 3.567 (0.008) |
| 2                  | 1.85 (0.724) | 0.56 (0.086) | -0.14 (0.048) | 0.63 (0.573) | 0.47 (0.951) | 1.68 (0.378) | 0.91 (0.052) | 0.73 (0.147) | -1.51 (0.023) | 0.37 (0.001) |
| 3                  | 0.85 (0.253) | 0.36 (0.002) | -1.12 (0.570) | 0.08 (0.007) | 0.18 (0.071) | -1.87 (0.015) | -0.29 (0.183) | 0.68 (0.005) | -0.86 (0.198) | 0.18 (0.085) |
| 4                  | 0.86 (0.065) | 0.17 (0.037) | -1.53 (0.008) | -0.29 (0.086) | 0.08 (0.081) | 0.86 (0.532) | -0.80 (0.158) | 0.90 (0.601) | 0.13 (0.839) | 0.20 (0.825) |
| 5                  | 0.19 (0.258) | 0.83 (0.003) | 0.73 (0.753) | -0.29 (0.357) | 0.61 (0.159) | -1.58 (0.863) | -0.13 (0.008) | 0.37 (0.741) | -0.15 (0.951) | 0.73 (0.792) |
| 6                  | -0.86 (0.39) | -1.16 (0.749) | 0.28 (0.298) | 0.36 (0.376) | 0.17 (0.470) | 1.88 (0.916) | -0.64 (0.087) | 0.83 (0.107) | -1.27 (0.863) | -0.58 (0.731) |
| 7                  | -0.83 (0.753) | 0.61 (0.357) | -1.43 (0.951) | 1.47 (0.159) | 0.89 (0.963) | 1.18 (0.258) | -1.74 (0.741) | 0.80 (0.456) | -0.29 (0.321) | 0.67 (0.483) |

1- Log (GDP), 2- Log (FDI), 3- Log (Export Service), 4- Log (Import service), 5- Log (Trade values), 6- Log (Exchange rate), 7- Log (Fixed Capital Formation) and 1- ECT, 2-ECT, 3-ECT

The research output has shown the results from table no 5 of Vector error correction model for the Czech information was assessed for the lag length of Vector Error Correction model equal to 1seven variable and a co-integration association of rank determines the significance of order rank among the variables. The important lags in the fixed capital formation, Trade, export and import comparisons are not appropriate significance, other side influence of GDP comparison contains quite constant standards of significant lags (for all the seven selected variables). As the outcome of table no illustrations, improvement of FDI cannot be enlightened with influence of lagged standards value of among any variables. Improvement of exchange is only dependent on the trade value development for the significance stage of 7%. Export development can be elucidated by its preceding growth of above mention variable, as well as by the improvement of FDI and Fixed capital formation, all for the stage of insignificance equivalent to 3% in the short run, in addition to in the long run in the perspective to the impact of the error correction coefficients. The outcome of the assessment support determines the projected value that FDI, export and import development Granger-causes economic development in India. Therefore the Indian economy’s development can be measured as FDI and Export. The contradictory course of action the causality among the economic development, FDI, in exports was not distinguished (p-value is 0, 09). It can be only construed that improved trade value with neighbor countries, GDP and economic activity performance is reasonably insistent. Approximately all the error correction model terms are statistically shown that the insignificant, which symbolizes
the being of an adjustment procedure of the selected variables to reach a short-runs table stated but in long run majority of variable it shown that not stable shown the adjustment procedure. The effects of selected number of variables was verified, the economic, financial and trade development in India was establish in a strong negative relation with all the model variables. The research study majorly focused on the relationship between Indian Rupee and US Dollar exchange rate had insignificant effects on FDI, Import and Export services comparison. The overall vector error correction model for the Indian statically data was estimated for the lag length 7 and co-integration of ranking order 7. The outcome of the causality examinations are accessible in the table (ECT1, ECT2 and ECT3) it has not shown the positive relationship among the variables and the other side individualities of the model are not strong relationship. As in the Indian Economy, the GDP growth comprehends moderately significant lags (for all the seven variables).

**Conclusion**

The research paper drawn the conclusion of this paper, the main intended to that the study founded if there exists a co-integrating affiliation among the Trade, Economic growth and financial development as the external variable, and international trade variables and macroeconomic variables values as external variables. The outcome of the paper directed that VAR model exists presented that there is a long run association between GDP and its export service. The table no 3 also established that a constant economic growth environment is also essential to boost to development of international trade relationship with neighbor nations and eventually economic development. the effect of trade attractive guidelines to function more efficiently in a more open trade business management which authorizations initiatives to take benefit of global openings to trade and investment and the conclusion based on the data analysis to assess the long run symmetry affiliation and the trend of causality among the financial development, economic growth and international trade. To this paper important objective, unit root tests has used to test the determine to the significant value among selected variables but the majority of variables not shown the significant impact on the development of economy, Trade and Financial activity in India. However, first difference of the econometric time series analysis has found to be stationary; out of seven variables five variables at their level forms have no one unit root. Subsequently that level of co-integration association is examined by using Johansen Test and found that there is a negative long run symmetry association among the trade, economic and financial development. The course of causal affiliation is assessed by Granger Causality method. Granger causality test investigated the outcome show that a variation in financial development and economic development.

The research study has given recommend that trade policies meant at re-establishing global competitiveness for enlargement and diversification of exports
service have the prospective of stimulating and nourishing economic development for the India economy in long run period. Further the study has given suggestion that the experiential outcomes specify that the Government of India would try to sustenance the financial growth in order to speed up the economic development and to have an enhanced monetary structure will be helpful to have stable economic development. To this paper objective a developed infrastructure, noble macroeconomic situation and eradication of all categories of trade obstacles is needed. The Indian Government must also boost the private sector by providing dissimilar encouragements so that they can take more energetic part in the improvement determinations of the nation.

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