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Institutional Performance and Trade-Led Growth Hypothesis: Evidence from Pakistan

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ABSTRACT

Economic growth is a researchable debate in the context of trade openness relation in testing trade-led growth hypothesis. This study explores the relation of economic growth with trade openness to test the trade-led growth hypothesis by using a recently developed nonlinear ARDL model over the period 1984-2017 in Pakistan. The results reveal that trade openness affects economic growth differently when it decomposes into positive and negative components, and trade openness decrease has a more impact on economic growth in the presence of labor, capital, FDI and institutional performance as control variables. The mixed relationship of openness-growth in the long-run does not completely verify the trade-led growth and shows non-linear impacts of trade openness on economic growth in Pakistan. The study suggests the policies for government officials and policymakers after unearthing the asymmetric association between trade openness and economic growth that would help to make trade policies for Pakistan.

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1. Introduction

The role of trade to promote economic growth has been stimulated in many empirical studies since the works of Romer (1990), Grossman and Helpman (1990) and Young (1991). As the trade-led growth hypothesis says that trade works as driver for economic growth, it has been observed that trade openness can boost economic growth by achieving the resource allocation efficiency, giving access to products and services and increasing total factor productivity through information and technology (Freund & Bolaky, 2008; Valeriani and Paluso, 2011). Countries with increased trade openness are therefore projected to significantly outperform those with decreased trade openness. From this point of view, underdeveloped countries have a lot to benefit from trade with developed countries. Despite these

anticipated benefits, it is primarily in order to open up and incorporate them into the global market that international organizations and donor governments regularly promote trade openness policies in underdeveloped countries. The failure of the strategy to industrialize import substitution and the findings from empirical studies have also led to these policies, which show that more open economies record higher rates of economic growth (Masoud and Khalid, 2017).

Developing economies have remarkable success in part because of their early policies about trade openness (World Bank, 1993; Stiglitz, 1996). Many underdeveloped economies have enacted trade openness reforms in the late 1970s, including reducing non-tariff barriers and other tariffs of imports and exports. However, few economists claim that increasing openness will be harmful to growth as inflation increases and exchange rate decline (for instance, see Samimi et al. 2012). The openness of trade may hurt growth for the economies specializing in the production of low-quality commodities (Hausman et al., 2007). Countries that export primary goods, for example, are susceptible to trade shocks. Given these opposing opinions, the general consensus is that openness to foreign trade, especially for developing countries, is of benefit to economic growth.

The trade-led growth hypothesis can be separated into two primary hypotheses: export-led growth hypothesis and import-led growth hypothesis. The theory of the export-led growth hypothesis predicts that the expansion of exports is the main component of growth. The growth of the countries may be generated through the expansion of exports along with labor and capital. This form of advocacy is created due to several reasons: first, the growth of exports encourages the use of economies of scale even for developing countries by growing domestic production demand. Secondly, expansion in exports will ease a foreign exchange constraint that encourages importing input to meet domestic requirements, thereby allowing production expansion. Thirdly, export expansion may help the production specialization of products related to exports, which in turn may enhance the productivity level and trigger a general increase in skills in the export sector. Then, capital can be re-allocated to the more efficient export sector from the (relatively) weak non-trade sector.

Changes in productivity can lead to growth in production. Finally, outward-looking trade politics can also provide access to advanced technology, learning from experiences and better management practices that can yield more improvements in efficiency. International trade and development theory, therefore, implies that growth in exports by export-led policy makes a positive contribution to economic growth (Eusuf and Ahmed 2007). The hypothesis of import-led growth indicates that economic growth may be driven basically by the growth of imported goods. Endogenous growth theory suggests that imports of a country can be a path for economic growth in the long-run by providing domestic companies with the accessibility of intermediate and international development factors (Awokuse, 2007).

According to the economic literature, an efficient institutional and legal system will enhance the importance of economic growth (Valeriani and Paluso, 2011). Low productivity can result in inefficient transmission mechanisms and institutions. Better institutional performance supports quality and increases the investment rate, which improves the procedure of capital creation and boosts the growth process (Kirkpatrick et al., 2006; Ali and Nazar, 2017). Romer (1986) and Lucas (1988) and their supporters have a simplified endogenous growth theory, showing "conditional" convergence, in which convergence relies on factors linked to institutional performance. According to the assumption of new growth theory, a technology spillover will allow the industrial sector in underdeveloped countries to catch up with their technological frontier as an innovation. The innovations refer to technical

adaptation, which depends on the institutional arrangements.

North and Thomas (1973) conclude that technological advancements treated as exogenous variables are mainly dependent only on the dominant institutions through their effect on transaction costs and incentives. Institutions promote growth by decreasing the cost of doing business, thereby avoiding the diversion of capital and rent-seeking practices from trying to redirect capital into innovation. A diversion-free society and productive units are completely compensated for production, and all the individual units of the economy do not spend money for the prevention of that diversion.

After approving the first IMF Structural Adjustment Plan in 1988 and joining the World Trade Organization in 1995, Pakistan slowly liberalized its economy. However, in terms of growth and balance of trade, the fruits of openness were not realized in Pakistan (Chaudhary and Ahmed, 2004; Mudassar et al., 2013). It may be because of low institutional performance. The average value of trade openness in Pakistan for 1990-2000 was 32.02 percent, reflecting a minimum of 19.93% in 1991 and a maximum of 38.91% in 2000. The new 2018 rating is 28.54%. Institutional performance is the latest engine of economic growth (Chandio et al. 2017). Strong political institutions in Pakistan have a major impact on other social and economic institutions, and reinforcing the political institutions are essential for social and economic growth. Economic growth calculated by real per capita GDP has seen steady growth over the years. However, in the period 2000-2010, comparatively higher growth was observed. During 2010-16, real income rates were relatively stable and later declined sharply from 2017 due to high inflation. The SPDC (2018) makes a similar assessment, showing that while governments that are subject to authoritarian rule is good for economic growth in Pakistan, but it is not generally as effective in improving institutional performance in a country.

The remaining part of this research is as follows: Section 2 expresses the review of previous literature, and section 3 is reserved for model and methods. Section 4 and section five gives results and conclusion.

2. Literature Review

A lot of studies have validated the trade-led growth hypothesis and pointed out the positive linkage between an openness-growth relationship (Freund & Bolaky, 2008; Shahbaz 2012; Nteegah et al. 2017). On the contrary, few economists disagree the existence of a direct linkage between trade openness and economic growth (e.g. Vlastou, 2010; Polat et al. .2015). The mixed outcomes of previous literature may be accredited to different econometric methodologies, countries and the trade openness proxies. Institutional performance is also a strong indicator of economic growth, and it strengthens the effects of trade openness. So far, very few studies have explored the impact of trade openness and institutional performance on economic growth in Pakistan.

First of all, we present the review of those studies which have examined the hypothesis of trade-led growth in different economies. Awokuse (2008) analyzed the trade-growth nexus in Colombia, Argentina and Peru concerning both imports and exports. After Granger tests and impulse response functions, the causal association between imports and real growth was indicated to be stronger than the relationship between exports and real growth. Shahbaz (2012) validated the trade-led growth hypothesis in Pakistan. Cobb-Douglas function was used, and four proxies of trade transparency have been implemented. The empirical findings have confirmed the existence of growth-driven trade, growth-driven exports and growth-driven imports in Pakistan.

Gries et al. (2011) have validated the finance-openness-growth nexus for 13 countries of the Caribbean and Latin America region. The findings proposed that trade and financial openness were no pre-conditions for economic development. It was suggested that a balanced policy of financial and trade openness, which considered other important growth factors were more appropriate for these economies. Empirical results from Kim et al. (2012) indicated that opening up trade boosted growth in countries having a low rate of inflation, high-income and services sector-based society. Hossain and Mitra (2013) evaluated the impact of trade openness and FDI on growth in 33 African countries for the year 1974 to 2009. It was found that a rise in trade openness had caused long-term growth. Menyah et al. (2014) validated the trade-led growth hypothesis for 21 countries of Sub-Sahara Africa and pointed out that openness had a negative association with real economic growth.

Nteegah et al. (2017) analyzed a time-series study to evaluate the impact of trade openness policies on the GDP of Nigeria. The outcomes of the ARDL model showed that trade openness policies had a positive effect on GDP in the long-run. Hlalefang and Kolisi (2017) also investigated how trade openness policy affects Ghana and Nigeria's growth by using data from the period 1980 to 2016. The results discovered that open trade policies had a direct effect on Ghana's growth rate, while there was a negative association between trade openness and growth in the case of Nigeria. In addition, Iheanacho (2017) analyzed the validation of the trade-led growth hypothesis for the emerging economy of Nigeria using the data from 1981 to 2014. The research employed two trade liberalization initiatives to build up the openness index, while initiatives of financial growth were utilized to create a financial development index. The findings demonstrated that trade openness had a negative and substantial long-term effect on growth, and hence trade-led growth was not validated for Nigeria. The outcome of the other variable, such as employed labor force, financial development, and gross capital formation, showed that none of them had a major effect on Nigeria's growth.

Over the period 1960 to 2015, Masoud and Khalid (2017) evaluated the openness-growth nexus in China. The results of the analysis indicated that the association of openness and growth was positive in the long-run. Similarly, Ahmad et al. (2017) addressed the association between trade openness and GDP growth in Pakistan. Aggregate demand and supply models and their estimates were based on a simple ordinary least square (OLS) technique. Trade openness had been observed to have a reversed impact on GDP growth. Mishaelight and Khobai (2018) have integrated FDI and rate of employment as an additional variable to form a multivariate system to examine the trade-growth relationship in Switzerland and validated the trade-led growth hypothesis.

North (1990) argued that institutions were characterized as the rule of the game in the economic system of the human constraints that make the interaction between the people. It was defined that rules of the game could be established by formal institutions like legislation, rules and regulations or informal institutions that were equated to social capital (Putnam et al. 1993) and culture (Tabellini, 2005). Many institutions had minimized processing costs and thereby generate creativity and efficiency, while other institutional characteristics impeded knowledge flow, increased information costs and eroded information benefits, and restricted business activity, e.g., government, police and/or court corruption, the rule of law, democracy, the tax system, etc., were institutions which stunt economic growth (Sachs & Warner, 1995; Barro, 1997, 2000; Meon&seckat, 2004; Kaufmann et al., 2005).

Jalilian et al. (2007) highlighted the function of institutional ability to regulate the compensation of cross-country changes in the growth of a country. He found evidence that institutional factors were closely linked to the overall productivity factor. Countries having stronger institutions and governance

efficiency had higher productivity growth. Regarding the causal effect of institutional quality and economic efficiency, the empirical studies by Acemoglu et al. (2000), Rodrik et al. (2004) and Kauffman et al. (2005) showed that good institutional performance leads to the high level of GDP. It was proposed by Kauffman et al. (2005) that one standard deviation increase in good governance caused 2 to 3 times increase in income rates in the long-run.

Many studies have attempted to study institutions in both Pakistan and South Asia. Ul Haq (2000) and Ahmed (2001) had shown that institutions in South Asia seemed to be a big issue. Hussain (1999) said that institutional collapse had contributed to weak governance, leading to ad-hoc policymaking in Pakistan. Instability and volatility had discouraged the investment in the long-run and fostered lobbying, misuse of power, corruption and leading to dissatisfaction and dysfunctional behaviour. According to Sarwar et al. (2013) and Kacho and Dahmardeh (2017), the two main factors for economic growth were financial development and institutional performance. A solid institutional framework fostered economic growth. To explore the connection between institutional performance and innovation, Tebaldi and Elmslie (2013) employed cross-country data and instrumental variable methodology. It was shown that the institutional structure explained production significantly, and human capital was necessary to form long-term institutions.

For the period 1990-2013, Asghar et al. (2015) used panel data for 13 emerging Asian economies to identify the impact of institutional performance on economic growth. It was indicated that the efficiency of the institutions had a direct effect on economic growth. Siyakiya (2017), using data of 28 countries of Europe, checked the impact of institutions and its sub-indicators (effectiveness of governance, political stability, control of corruption, the rule of law, accountability and regulation quality) on economic performance measured by per capita gross value added. System GMM was applied, and the results indicated a positive relationship between institutions and economic performance. A ten-unit improvement in institutional quality was predicted to enhance per capita gross value added by 1.33 units.

3. Methodology

Data for this study is obtained from different sources. Data for real GDP, FDI and trade openness is obtained from World Development Indicators (WDI). The data for physical capital stock and the employed labor force is collected from Penn's World Table 9.0. The index for institutional performance is collected from International Country Risk Guide (ICRG) which is made up from 7 indicators of institutional performance i.e. (stability of government, socio-economic conditions, control of corruption, law and order, democratic accountability, bureaucracy quality and investment profile). We have applied principal component analysis (PCA) on STATA to construct institutional performance index (INP). The study covers the data over the period 1984-2017 for Pakistan.

Different econometric methodologies have been used in the previous literature to show the association between trade openness and economic growth in a single country or group of countries analysis. The existing literature uses different econometric methodologies to show the connection of various macroeconomic variables (Faheem et al., 2014; Aftab et al., 2015; Anwar et al., 2016). This study applied a unique methodology recently developed in the extension of ARDL by Shin, Yu, and Greenwood-Nimmo (2014). This methodology helps to understand the asymmetric effect of one variable to the others due to its novel properties and advantages over traditional estimation techniques. The first and foremost advantage of this method is free from same order restriction and valid in case of mixed order of cointegration like $I(1)$ or mixture $I(0)$ and $I(1)$ order of integration. Secondly, it is not helpful in the case of $I(2)$ order of integration. Thirdly, this method provides short-run and long-run

components at a time that covers the endogeneity and serial correlation problems (Pesaran and Shin, 1999). This method may be applied even in the case of a small sample size (Pesaran et al. 2001).

Based on the theoretical framework, economic growth express as follows:

$$GDP = f(TO, L, K, FDI, INP) \quad (1)$$

To achieve study objective firstly following specification can be used under this methodology:

$$GDP_t = \alpha_0 + \alpha_1 TO_t + \alpha_2 L_t + \alpha_3 K_t + \alpha_4 FDI_t + \alpha_5 INP_t + \mu_t \quad (2)$$

Where GDP, TO, L, K, FDI and INP show real GDP, trade openness, employed labor force, physical capital stock, foreign direct investment and institutional performance, respectively. Each variable is expressed in log form except INP. Additionally, to estimate the long-run parameter, $\alpha = (\alpha_0, \alpha_1, \alpha_2, \alpha_3, \alpha_4 \text{ and } \alpha_5)$ indicates a vector.

The above equation (2) can be written in formulation of ARDL bounds by following specification:

$$\begin{aligned} \Delta GDP_t = & \alpha_0 + \sum_{i=1}^{n1} \alpha_{1i} \Delta GDP_{t-i} + \sum_{i=0}^{n2} \alpha_{2i} \Delta TO_{t-i} + \sum_{i=0}^{n3} \alpha_{3i} \Delta L_{t-i} + \sum_{i=0}^{n4} \alpha_{4i} \Delta K_{t-i} + \sum_{i=0}^{n5} \alpha_{5i} \Delta FDI_{t-i} + \sum_{i=0}^{n6} \alpha_{6i} \Delta INP_{t-i} \\ & + \beta_1 GDP + \beta_2 TO_{t-1} + \beta_3 L_{t-1} + \beta_4 K_{t-1} + \beta_5 FDI_{t-1} + \beta_6 INP_{t-1} + \mu_t \end{aligned} \quad (3)$$

Where the concerned variable first difference operator and deterministic drift parameter denoted by Δ and α_0

The estimation of unrestricted error correction model from above equation as follows:

$$\begin{aligned} \Delta GDP_t = & \alpha_0 + \sum_{i=1}^{n1} \alpha_{1i} \Delta GDP_{t-i} + \sum_{i=0}^{n2} \alpha_{2i} \Delta TO_{t-i} + \sum_{i=0}^{n3} \alpha_{3i} \Delta L_{t-i} + \sum_{i=0}^{n4} \alpha_{4i} \Delta K_{t-i} + \sum_{i=0}^{n5} \alpha_{5i} \Delta FDI_{t-i} + \sum_{i=0}^{n6} \alpha_{6i} \Delta INP_{t-i} \\ & + \lambda ECT - 1 + \nu_t \end{aligned} \quad (4)$$

Where, λ denotes a parameter for the speed of adjustment and estimated model's residuals expresses by ECT. Moreover, to show the asymmetric behavior of trade on economic growth that expresses by nonlinear ARDL model in which trade is decomposed into positive and negative parts as follows:

$$GDP_t = \beta_1 + \beta_2^+ TO_t^+ + \beta_2^- TO_t^- + \beta_3 X_t + \mu_t \quad (5)$$

On the basis of nonlinear model (equation (5)), increase in trade openness effect on economic growth expresses by β_2^+ in equation (6) and expected to be positive while in the equation (7) β_2^- denotes negative trade openness effect on economic growth in long run.

$$\begin{aligned} \beta_2^+ TO_t^+ &= \sum_{j=1}^t \Delta TO_j^+ = \sum_{j=1}^t \max(\Delta TO_j, 0) \\ \beta_2^- TO_t^- &= \sum_{j=1}^t \Delta TO_j^- = \sum_{j=1}^t \max(\Delta TO_j, 0) \end{aligned} \quad (6)$$

(7)

In an extension of ARDL Shin, Yu, and Greenwood-Nimmo (2014) developed NARDL setting as:

$$\Delta GDP_t = \alpha_0 + \sum_{i=1}^{n1} a_{1i} \Delta GDP_{t-i} + \sum_{i=0}^{n2} \alpha_2^+ \Delta TO_{t-i}^+ + \sum_{i=0}^{n2} \alpha_2^- \Delta TO_{t-i}^- + \sum_{i=0}^{n3} \alpha_{3i} \Delta L_{t-i} + \sum_{i=0}^{n4} \alpha_{4i} \Delta K_{t-i} + \sum_{i=0}^{n5} \alpha_{5i} \Delta FDI_{t-i} + \sum_{i=0}^{n6} \alpha_{6i} \Delta INP_{t-i} + \beta_1 GDP_{t-1} + \beta_2^+ TO_{t-1}^+ + \beta_2^- TO_{t-1}^- + \beta_3 L_{t-1} + \beta_4 K_{t-1} + \beta_5 FDI_{t-1} + \beta_6 INP_{t-1} + \mu_t \quad (8)$$

For the measurement of asymmetry, the following hypothesis is used as β_2^+ and β_2^- , α_2^+ and α_2^- , respectively:

$$H_0: \beta_2^+ = \beta_2^- = 0$$

$$H_0: \sum_{i=0}^{n2} \alpha_2^+ = \sum_{i=0}^{n2} \alpha_2^-$$

for all $i=0, \dots, n$

4. Results and Discussion

The following table expresses the outcome of the ADF, and the Phillips Perron test confirms that GDP, trade openness (TO), labor (L), capital (K), FDI and institutional performance are non-stationary at the level and stationary after converted to the first difference.

Table 1: ADF and PP Unit Root tests

LevelFirst Difference				
Variable	ADFPP		ADFPP	
GDP	2.07	2.10	-3.10**	-3.23**
TO	-2.23	-2.21	-6.22***	-6.22***
L	2.58	3.82	-5.32***	-5.33***
K	2.62	3.11	5.89**	5.97**
FDI	-2.78	-1.91	-3.80***	-3.78***
INP	-2.27	-4.51	-7.64***	-7.41***

Note: ***, ** express significant at 1% and 5%.

The following table shows the cointegration F-statistics results for linear and nonlinear model and the express absence of cointegration in the linear model. The results of the nonlinear model show cointegration as calculated F-statistics exceed upper bound.

Table 2 ARDL Bound Test for Cointegration

	F-Statistic	Lower Bound 95%	Upper Bound 95%	Decision
Linear ARDL	1.36	2.61	3.35	No-Cointegration
Asymmetric ARDL	4.35	2.45	3.61	Cointegration

The below table 3 expresses the long run results and diagnostic test. The findings of the diagnostic test express that model is free from heteroskedasticity, stability and autocorrelation problems. Moreover, to test stability study shows the CUSUM and CUSUM of squares test results that express the stability of the model. The overall picture of the data and the variable correlation matrix is

given in the table (see appendix).

In the long run, the findings show trade openness has different effects on economic growth when we decompose it into positive and negative components. In other words, results explain that a one percent increment in trade openness is associated with 0.771 percent enhancement in economic growth, while a one percent decrease in trade openness is associated to a 1.423 percent increase in economic growth, but the impact is higher when trade openness increase. The rest of the variables, FDI, capital, and institutional performance, are significant while labor is insignificant. These mixed results do not completely validate the trade-led growth hypothesis in Pakistan. It shows the non-linear effects of trade openness on economic growth. This behaviour of trade openness and growth is may be due to the influence of other variables, i.e. labor force, gross capital formation and institutional performance. The findings are similar to the following studies in various regions, i.e. Freund & Bolaky (2008), Vlastou (2010), Shahbaz (2012), Ali et al. (2012), Menyah et al. (2014), Polat et al. (2015) and Nteegah et al. (2017).

Table 3 ARDL Long-Run Estimation and Diagnostic Checks

Regressors	Coefficients	Standard error	t-ratio (Prob.)
TO ⁺	0.771	0.389	1.982 ^{**} (0.048)
TO ⁻	-1.423	0.417	-3.411 ^{***} (0.002)
L	0.943	0.652	1.448(0.160)
K	-0.895	0.416	-2.149 ^{**} (0.041)
FDI	0.072	0.027	2.660 ^{**} (0.013)
INP	0.177	0.069	2.563 ^{**} (0.017)
Intercept	33.646	4.419	7.568 ^{***} (0.000)
R Square	0.999	Serial Correlation	2.552(0.092)
DW Stat	1.986	Functional Form	1.560(0.224)
Normality	0.165 (0.920)	Heteroscedasticity	2.024(0.112)
W _{LR}	4.708 (0.039)	W _{SR}	5.445(0.028)

Note: ^{***}, ^{**}, ^{*} shows significance level at 1%, 5% and 10% . the values in () are p-values.

The findings in short-run are quite impressive that is trade openness negative changes are more efficient as positive changes in trade balance that showing one percent decrease in trade openness with a 0.255 percent increment in economic growth, while one percent raise in trade openness associated with 0.138 percent increase in economic growth in the short-run. The other variables FDI, capital and institutional performance, are significant. The value of the ECT term is negative and significant that shows the long-run convergence.

Table 4: ARDL Short -Run Coefficients

Regressors	Coefficients	Standard error	t-ratio [prob.]
D(TO ⁺)	0.138	0.062	2.230**(0.035)
D(TO ⁻)	-0.255	0.064	-3.970*** (0.000)
D(L)	0.169	0.103	1.643(0.113)
D(K)	-0.161	0.047	-3.443*** (0.002)
D(FDI)	0.013	0.005	2.423**(0.023)
D(INP)	0.032	0.007	4.718*** (0.000)
ECT	-0.179	0.053	-3.411(0.002)

Note: *, **, *** shows significance level at 10%, 5% and 1% respectively.

Figure 1. CUSUM Test. **Figure 2. CUSUM of Square Test.**

To check the asymmetry of trade openness effect on economic growth, the study employed Wald test, and results are reported in the above table 3, which are in favour of asymmetry in the long run and short run. Additionally, asymmetry is presented through the graphical by following a cumulative dynamic multiplier graph.

Figure 3 Dynamic Multiplier Graph.

5. Conclusion

This study expresses the effect of trade openness on economic growth in Pakistan for the year 1984-2017. The recently developed methodology NARDL model is used to test the trade-led growth hypothesis. The findings show that trade openness affects economic growth differently when it decomposes into positive and negative changes, and trade openness decrease has a more impact on growth in Pakistan. The mixed impact of trade openness on economic growth in the long-run does not completely validate the trade-led growth hypothesis in Pakistan. It shows the non-linear effects of trade openness on economic growth. The other variables, FDI, capital and institutional performance, have a significant effect on economic growth. On behalf of results, the study recommends the policies for government officials and policymakers after unearthing the asymmetric relationship between trade openness with an economic growth that would help make trade policies for Pakistan.

APPENDIX

Descriptive Statistics and Correlation

	GDP	TO	L	K	FDI	INP
Mean	1.31E+11	0.325381	38.97084	788377.9	1.009743	1.964461
Median	1.19E+11	0.325741	35.72381	552514.9	0.728144	2.000000
Maximum	2.40E+11	0.391865	60.87498	1945860.	3.668323	3.000000
Minimum	5.59E+10	0.255820	24.66994	186379.0	0.178192	1.000000
Std. Dev.	5.24E+10	0.035564	11.14301	573518.2	0.825550	0.361227
Skewness	0.420062	-0.100286	0.504803	0.693713	2.025531	0.476523
Kurtosis	2.054943	1.973736	1.951204	2.008950	6.393319	5.780254
Jarque-Bera	2.265166	1.549049	3.002308	4.118437	39.56145	12.23732
Probability	0.322200	0.460923	0.222873	0.127554	0.000000	0.002201
Sum	4.45E+12	11.06297	1325.008	26804847	34.33125	66.79167
Sum Sq. Dev.	9.06E+22	0.041738	4097.497	1.09E+13	22.49056	4.306015

Observations	34	34	34	34	34	34
GDP	1	-0.5790	0.9947	0.9835	0.3136	-0.0051
TO		1	-0.5897	-0.5760	0.3011	-0.2034
L			1	0.9929	0.2648	0.0085
K				1	0.2258	-0.0161
FDI					1	-0.0905
INP						1

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