- Iloie, R.E., 2015. Connections between FDI, corruption index and country risk assessments in Central and Eastern Europe. Procedia Economics and Finance 32(1), 626-633.
- Khan, S.A.R., Yu, Z., Sharif, A., Golpîra, H., 2020. Determinants of economic growth and environmental sustainability in South Asian Association for Regional Cooperation: evidence from panel ARDL. Environmental Science and Pollution Research.
- Levin, A., Lin, C.-F., Chu, C.-S.J., 2002. Unit root tests in panel data: asymptotic and finite-sample properties. Journal of econometrics 108(1), 1-24.
- Logun, A., 2020. Foreign direct investments, exports and economic growth: Panel ardl and causality analysis for e7 countries. Journal of Academic Research in Economics 12(1).
- Makun, K.K., 2018. Imports, remittances, direct foreign investment and economic growth in Republic of the Fiji Islands: An empirical analysis using ARDL approach. Kasetsart Journal of Social Sciences 39(3), 439-447.
- Mensah, I.A., Sun, M., Gao, C., Omari-Sasu, A.Y., Zhu, D., Ampimah, B.C., Quarcoo, A., 2019. Analysis on the nexus of economic growth, fossil fuel energy consumption, CO2 emissions and oil price in Africa based on a PMG panel ARDL approach. Journal of Cleaner Production 228, 161-174.
- Pesaran, H., 2004. General diagnostic tests for cross-sectional dependence in panels. University of Cambridge, Cambridge Working Papers in Economics 435.
- Pesaran, M.H., Shin, Y., Smith, R.P., 1999. Pooled mean group estimation of dynamic heterogeneous panels. Journal of the American statistical Association 94(446), 621-634.
- Pesaran, M.H., Yamagata, T., 2008. Testing slope homogeneity in large panels. Journal of econometrics 142(1), 50-93.
- Podobnik, B., Shao, J., Njavro, D., Ivanov, P.C., Stanley, H.E., 2008. Influence of corruption on economic growth rate and foreign investment. The European Physical Journal B 63(4), 547-550.
- Raza, S.A., Jawaid, S.T., 2014. Foreign capital inflows, economic growth and stock market capitalization in Asian countries: an ARDL bound testing approach. Quality & Quantity 48(1), 375-385.

cointegrated and hold long-run relationship. Finally, the pooled mean group (PMG) estimator developed by Pesaran et al. (1999) employed to estimate the long-term and short-term coefficients in addition to causalities among the variables, by using ARDL model. According to the panel ARDL estimation, the error-correction model coefficient (ECM) negative and statistically significant for all examined countries. The value coefficient of error term, indicate that the most of deviation of long-term equilibrium is corrected in the first year. The panel causality analysis results confirm, the bidirectional causality between GDPr and FDI; GDPr and DB; CPI and DB. In addition, the unilateral causality relationship found between CPI and GDPr, DB and FDI. The practical findings from the current research provide more information, for the purpose of recognizing the relationship among the examined variables, and would be useful for policymakers to set policies based on the investigated variables.

References:-

- Appiah, M., Li, F., Korankye, B., 2019. Foreign investment & growth in emerging economies: panel ARDL analysis. Journal of Economics, Business, Accountancy Ventura 22(2).
- Asif, M., Majid, A., Yasir, M., Ali, A., 2018. Fluctuations in political risk indicators and their impact on FDI inflow in Pakistan. Asian Journal of Technology Innovation 26(3), 269-289.
- Aswata, M.B., Nnyanzi, J.B., Bbale, J.M., 2018. Debt, Corruption and Investment in East Africa: A Panel ARDL Analysis. Modern Economy 9(12), 2012-2038.
- Baum, C., 2016. An introduction to Stata programming, vol. 2. Stata Press College Station.
- Duarte, L., Kedong, Y., Xuemei, L., 2017. The relationship between FDI, economic growth and financial development in Cabo Verde. International Journal of Economics and Finance 9(5), 132-142.
- Dumitrescu, E.-I., Hurlin, C., 2012. Testing for Granger non-causality in heterogeneous panels. Economic Modelling 29(4), 1450-1460.
- Estevão, J., Lopes, J.D., Penela, D., Soares, J.M., 2020. The Doing Business ranking and the GDP. A qualitative study. Journal of Business Research 115, 435-442.
- Fazli, P., Abbasi, E., 2018. Analysis of the validity of Kuznets curve of energy intensity among D-8 countries: panel-ARDL approach. International Letters of Social and Humanistic Sciences 81.

Egypt	-0.328***
Bangladesh	-0.087***
Indonesia	-1.086***
Iran	-0.852***
Malaysia	-0.811***
Nigeria	-0.288***
Pakistan	-0.025***
Turkey	-1.121***

*** indicates the statistical significance at 1% level.

The panel causality Dumitrescu and Hurlin (2012) test results are given in Table 9. The results indicate the bidirectional causality between GDPr and FDI, GDPr and DB, CPI and DB. In addition, the unilateral causality relationship found between CPI and GDPr, DB and FDI.

Table 9. Granger causality analysis results

Dependent variables	Independent variables				Direction of causality
	GDPr	lnCPI	lnFDI	lnDB	
GDPr	---	-0.165**	2.447**	2.121**	GDPr → FDI; GDPr → DB
lnCPI	2.21	---	1.566	-0.203**	CPI → GDPr; CPI → DB
lnFDI	7.230***	1.829	---	9.580***	FDI → GDPr; DB → GDPr
lnDB	2.121**	-1.482***	1.149	---	DB → CPI; DB → FDI

***, ** indicates the statistical significance at 1% and 5% level, respectively.

Conclusion

In the current study, the causal link investigated among Gross Domestic Product (GDP) annual growth rate (GDPr), Corruption perceptions index (CIP), foreign direct investment (FDI), and Ease of doing business index (DB) for D8 group Countries in the period 2000 – 2019. The D8 group Countries used in the study were explored as a whole panel. Based on the obtained results, the heterogeneity and cross-sectional correlations detected by applying the Pesaran-Yamagata homogeneity test and the Pesaran CD's tests. In the second stage of analysis, the CIPS proposed by Pesaran (2007), and ADF Fisher Chi-square (ADF Fisher) panel unit root tests performed for variables stationary status and integration levels. then, the Kao panel cointegration test show that, the considered variables

The Table 8 shows the results of PMG estimation for panel ARDL containing the sample of D8 group Countries. Results display the negative and significant influence of Corruption perceptions index (CIP) on Gross Domestic Product (GDP) annual growth rate (GDPr) of the D8 group Countries. The coefficient of CIP represents that in long run 1 % increase in CIP, causes the decrease in the (GDPr) of the aforementioned countries by 2.94 %. On the other hand, two variable FDI, and DB have positive significant impact on GDPr of the D8 group Countries. The coefficient of foreign direct investment (FDI), and Ease of doing business index (DB) indicate that in long run 1 % increase in each variable, cause the increase in the (GDPr) of the previously mentioned Countries by 0.603%, and 0.032%, respectively.

Furthermore, the results of table 5 represent the short run relationship between dependent variable (GDPr) and independent variables (CPI, FDI, and DB). Based on these results, the error-correction model coefficient (ECM) negative and statistically significant. This confirms an effective cointegration amongst all studied variables. The coefficient of error term is -0.568, propose that about 56 % of inconsistency is corrected in the first year. The error term coefficients achieved by each country are negative and statistically significant at 1% significance level of all. When the error correction coefficients of each country are examined, it is accomplished that Turkey is the fastest in equilibrium in the long term, while Pakistan is the slowest in the long term.

Table 8. Pool mean group (PMG) estimation results of panel ARDL for D8 Countries

Dependent Variable	Long- Run	Short-Run
	Coefficient	
lnCPI	-2.944***	---
lnFDI	0.603***	---
lnDB	0.032***	---
ECM	---	-0.568***
lnCPIΔ	---	-0.967
lnFDIΔ	---	1.619
lnDBΔ	---	-0.029
Constant	---	5.347***
Error Correction Coefficient for each Country		

Table 5. The multicolinearity Test

	Collinearity statistics	
	Tolerance	VIF
lnCPI	0.49	2.01
lnFDI	0.61	1.64
DB	0.77	1.30

The unit root test results of the series are given in Table 6. According to the both tests

results, the null hypothesis of non-stationarity of the GDPr, lnCPI, and lnFDI variables at levels for all panels of country groups can be rejected, this gives a strong evidence that, at levels the aforementioned variables have no unit root. However, the null hypothesis of non-stationarity of the lnDB variable at levels for all panels of country groups can not be rejected but rejected when the abovementioned variable is in their first difference. Therefore, the lnDB variable series has unit root at its corresponding level but stationary at its first difference.

Table 6. Panel unit root results

Variables	CIPS	ADF-Fisher	CIPS	ADF-Fisher	Order
	Level		First Difference		
GDPr	-2.274***	1.189	-5.855***	12.218***	I(0)
lnCPI	-3.293***	4.321***	-4.457***	8.975***	I(0)
lnFDI	-3.825***	5.049***	-8.275***	14.473***	I(0)
lnDB	2.511	1.028	-6.208***	2.426***	I(1)

*** indicates the statistical significance at 1%.

The Kao panel cointegration test results, reported in Table 7. The results with economic growth (Gross Domestic Product (GDP) annual growth rate (GDPr)) as the dependent variable exposes that, all the variables according to probability values for the various panels are cointegrated, because the null hypothesis of no cointegration is rejected at 1% level of significance. Consequently, the robust p-values gives a strong evidence of cointegration midst the examined variables. Therefore, the examined variables possess a long-term relationship.

Table 7. Results of Kao panel cointegration test

Statistics	t- value	p- value
Modified Dickey- Fuller	-1.835	0.033**
Dickey- Fuller	-3.380	0.000***
Augmented Dickey- Fuller	-3.221	0.000***

H0: No cointegration

***, ** indicate the statistical significance at 1% and 5% level, respectively.

The Entire analyses of the present study performed by using the STATA software (Baum, 2016).

Results and Discussion

The homogeneity CD test results, presented in Table 3. Based on the probability values in Table 3, can be verified that all variables statistically are significant at 1% level, and consequently was rejected the null hypothesis of cross-sectional independence . As a result, there is sufficient cross-sectional dependency amidst variables across all countries in diverse panels.

Table 3. Results of cross-section independence analysis

Variables	CD- test value	P- value
GDPr	2.36	0.018
lnCPI	6.75	0.000
lnFDI	3.97	0.000
DB	14.67	0.000

Table 4 showed the outcomes of the homogeneity test. According to results that as represented in Table4, the null hypothesis of the slope coefficients being homogeneous statistically rejected at a level of significance of 1%. Accordingly, for all the studied variables the heterogeneity exist in the different country groups, thus heterogeneous panel methods in which parameters vary across specific cross-sections within the panels must be implemented.

Table 4. Results from the Pesaran-Yamagata's heterogeneity test

Statistic		P-value
Delta	2.77***	0.000
Adjusted Delta	3.35***	0.000

H0: slop coefficient are homogenous

*** indicates statistical significance at % level.

Table 5 represents the results multicolinearity test based on Tolerance and VIF. The considered results of Table 5 indicate that, there is no presence of multicolinearity among the explanatory variables, as the Tolerance values are not less than 0.2 and VIF values are far less than 5. As a result, the variables as mentioned in the Table 5, are independent of each other and therefore can be considered as independent variables, expected to have effect on economic growth rate.

containing the coefficients of the independent variables, λ_{ij} it is a scalar vector, $\varepsilon_{i,t}$ denotes the error terms, $i = 1, 2, \ldots, N$ represents the specific countries and, $t = 1, 2, \ldots, T$ is the periods in years.

The representation of equation (1) in the form of error correction model at equilibrium is established as in Equation;

$$\Delta y_{i,t} = \emptyset_i y_{i,t} + \alpha'_{ij} x_{it} + \sum_{j=0}^{p-1} \lambda^*_{ij} \Delta y_{i,t-j} + \sum_{j=1}^{q} \delta^{*\prime}_{ij} x_{i,t-j} + \varepsilon_{i,t} \qquad (2)$$

Where

$\emptyset_i = -1 + \sum_{j=1}^{p} \lambda^*_{ij}$; $\alpha_i = \sum_{j-0}^{n} \delta_{ij}$; $\lambda^*_{ij} = \sum_{k=j+1}^{p} \lambda_{ik}, j = 1, 2, \ldots, p-1$

And $\delta^*_{ij} = \sum_{k=j+1}^{q} \delta_{ik}$

By rearranging, equation (2) can be summarized as;

$$\Delta y_{i,t} = \emptyset_i (y_{i,t-1} - \theta'_{ij} x_{it}) + \sum_{j=0}^{p-1} \lambda_{ij} \Delta y_{i,t-j} \sum_{j=0}^{q} \delta^{*\prime}_{ij} x_{i,t-j} + \varepsilon_{i,t} \qquad (3)$$

θ_i is described as the long-term relationship amongst the independent ($y_{i,t}$) and independent variables ($x_{i,t}$) whereas, δ^*_{ij} are the short-term parameters. The short-term parameters illustrate the causalities in the short-term from the explanatory variables to the dependent variables. On the other hand, the δ_{ij}'s are the long-term coefficients which denote to the long-term causalities midst the dependent variables and their corresponding explanatory variables. The error correction terms are the $\emptyset_i$'s, which are expected to be negative and significant so as to show evidence of long-term relationship among the variables. The speed of modification is calculated based on the inverse ratio of the Error Correction Terms (ECTs) absolute values.

significance for the choice of more econometric tests used in the examination such as unit roots and cointegration tests. Consequently, the cross-sectional independency, and homogeneity with adjusted delta tilde among the series, examined with Pesaran CD test, and Pesaran-Yamagata test, respectively (Pesaran, 2004; Pesaran and Yamagata, 2008). Furthermore, the integration levels of the variables were examined with the CIPS (Pesaran et al., 1999), and ADF Fisher Chi-square (ADF Fisher) (Levin et al., 2002) panel unit root tests. Then due to the possible being of heterogeneity and cross-sectional dependence in the panel data, the long-run relationship among considered variables, investigated with Kao panel cointegration test. The pooled mean group (PMG) estimator employed to estimate the long-term and short-term coefficients in addition to causalities among the variables, by using ARDL model (Pesaran et al., 1999).

The PMG estimator allows short-run coefficients, containing the intercepts, the speed of adjustment to the long-run equilibrium values, and error variances to be heterogeneous country by country, while the long-run slope coefficients are restricted to be homogeneous across countries. The ARDL model has been broadly used because of the fact that, it can be engaged regardless of whether the series is I(1) or I(0) and can besides be used to create both long-term and short-term assessments simultaneously (Pesaran et al., 1999). Alongside the PMG panel ARDL method, the Granger non-causality test Dumitrescu and Hurlin (2012) was also applied to examine the robustness of the PMG outcomes. Considering the ARDL (p,q) model where p is the lag order on the dependent variable and q is the lag order on the independent variables, the model can be formulated as (Levin et al., 2002; Mensah et al., 2019; Pesaran, 2004; Pesaran et al., 1999; Pesaran and Yamagata, 2008);

$$y_{it} = \sum_{j=1}^{p} \lambda_{ij} y_{i,t-j} + \sum_{j=1}^{q} \delta'_{ij} x_{i,t-j} + \varepsilon_{i,t} \qquad (1)$$

where $x_{i,t-j}$ is a $k \times 1$ vector of independent variables, y_{it} denotes the dependent variable, δ'_{ij} represent a $k \times 1$ vector

The D-8 Group comprise of 8 country include Bangladesh, Egypt, Indonesia, Iran, Malaysia, Nigeria, Pakistan, and Turkey, which is the regional agreement planned to create strong economic relationships amid the developing countries of the Islamic world and to strengthen the impact of these countries on worldwide markets and to form a negotiation with manufacturing countries.

In the present study, the annual time series data, which cover a period of 20 years from 2000 to 2019, was employed. The aforementioned data have been obtained from World development indicators (WDI), United Nations Conference on Trade and Development (UNCTAD), The United Nations Convention against Corruption, World Bank Group (WBG), and Transparency International organizations.

The studied variables include Gross Domestic Product (GDP) annual growth rate as dependent variable, and Corruption perceptions index (CPI), foreign direct investments (FDI), and ease of doing business index (DB) as independent variables.

The summary of used data set and variables in the analysis along with their descriptive statistics are represented in Table 1-2.

Table 1. Summary of data set

Variable	Explanation
GDPr	Gross Domestic Product (GDP) annual growth rate
CPI	Corruption perceptions index
FDI	Foreign direct investment (USD in millions)
DB	Ease of doing business index

The variables data summarized and considered in Table 2 based on mean, maximum, minimum, and standard deviation.

Table 2. Summary statistics of variables

Statistic	GDPr	CPI	FDI	DB
Mean	4.868	31.812	6817.74	72.394
Maximum	11.113	53	23429.03	89.31
Minimum	-6.61	15	460.4	34.71
Standard deviation	2.622	9.346	5663.368	11.839

Analytical Methods

For achieving the current research objective, the investigating framework and procedure is proposed as follow. The Cross-sectional dependency and homogeneity among the variables display

Estevão et al. (2020), in their survey compared the majority of African countries over two years, 2008 and 2017 by applying fsQCA procedure. In this research determined that the influences affecting the ability for doing business change over time. In 2008, only one set of Doing Business indicators was associated to high wealth, but by 2017 there were four. Furthermore, inferred that credit is not only the influential feature for the ease of doing business and paperwork, as troubles in treatment with the authorities are extremely significant.

Podobnik et al. (2008), investigated whether government legislations versus corruption can affect the economic growth of a country. The dependence between Gross Domestic Product (GDP) per capita growth rates and changes in the Corruption Perceptions Index (CPI) was analyzed. According to the results on average for all countries in the world during the period 1999-2004, an rise of CPI by one unit causes an rise of the annual GDP per capita by 1.7 %. Furthermore, the results revealed the statistically significant existence of power-law functional dependence amid foreign direct investment per capita and the country corruption level measured by the CPI.

Based on the above content, the core objective of the current study is to investigate the relationship between gross domestic product (GDP) annual growth rate (GDPr), corruption perceptions index (CPI), foreign direct investments (FDI) and ease of doing business index (DB) for D-8 Group countries comprise of 8 country include Bangladesh, Egypt, Indonesia, Iran, Malaysia, Nigeria, Pakistan, and Turkey. A panel autoregressive distributed lag (ARDL) method was applied to achieving the objectives of the study. Finally, obtained results in line with the purpose of the study discussed.

Data and Methodology

In the current research, the D-8 group countries are considered. For aforementioned countries, the relationship between gross domestic product (GDP) annual growth rate (GDPr), corruption perceptions index (CPI), foreign direct investments (FDI) and ease of doing business index (DB) is investigated by using autoregressive distributed lag (ARDL) method, which is a co-integration technique (Pesaran, 2004; Pesaran et al., 1999; Pesaran and Yamagata, 2008).

Makun (2018) examined the influence of external influences on economic growth, namely imports, remittances, and FDI in the Republic of the Fiji Islands (the Fiji Islands) by ARDL method for annual data from 1980 to 2015. The research consequences showed that the external influences certainly matter for long term economic growth in the Fiji Islands economy. Imports were found to have a significant negative dynamism on economic growth.

Duarte et al. (2017) examined the long-run and the short-run link amid the series of variables such as economic growth, foreign direct investment, domestic credit to private sector, money supply and inflation rate for the period of 1987 to 2014. The bound test method to cointegration engaged to distinguish the presence of long-run link amid the variables in the research. The outcomes specified the presence of cointegration when GDP and FDI are the dependent variables. The outcomes also showed that FDI, money supply have a positive influence on the economic growth of the country.

Appiah et al. (2019), in their study investigated the factors of trade openness, foreign direct investment, inflation, and labor on economic growth in five emerging African countries. The panel ARDL method with yearly data in the period 1995 to 2015 for all the involved countries. The results represented that the trade openness and inflation have a positive link and influence on economic growth in the long run as well as in the short run.

Fazli and Abbasi (2018), in their research studied, Kuznets' theory of energy severity and influences affecting energy severity amid D-8 countries during 1990-2014. For this target, static and dynamic mean group estimators with heterogeneous slope coefficients were applied. Based on the the results, the turned U-shape design was accepted for the link amid the real per capita income and the energy severity of D-8 countries, and the per capita income sill was appraised at 3931.25 USD. In the light of the results, both industrialization and urbanization rates have a positive and significant influence on energy severity of D-8 countries in the long term and increase the energy consumption in these countries. The urbanization rate and the grade of industrialization have a positive and significant influence on the GDP of consuming energy of D-8 countries in the long term.

Mensah et al. (2019) studied the causative connection amid economic growth (real GDP), consumption of energy (fossil fuel), carbon emissions and oil price for 22 African countries between 1990 and 2015, by using the PMG panel ARDL and panel econometric methods. The countries were examined as a complete panel and segmented into sub-panels namely; Oil exporting and Non-oil exporting African economies.

Logun (2020) investigated the link amid foreign direct investment, export, and economic growth for E7 countries in the period 1992 – 2018. Based on his result of panel ARDL estimation, error correction term was found to be negative and significant. The error correction coefficients acquired for all countries except India are negative and significant. According to the panel causality analysis, unilateral causality results are reached from economic growth to exports. In addition, there is causality from exports to foreign direct investments.

Raza and Jawaid (2014) explored the influence of foreign capital inflows and economic growth on stock market capitalization in 18 Asian countries by using the panel data from the period of 2000–2010. The ARDL bound testing cointegration method confirms the effective long run link amid considered variables. Outcomes indicated that foreign direct investment has significant negative and economic growth has significant positive link with the stock market capitalization, while, the outcomes of workers' remittances is found insignificant in long run. The error correction term confirms the significant positive link of economic growth and workers' remittances whereas, FDI has negative and significant influence on stock market capitalization in short run.

Khan et al. (2020) analyzed the determinants of economic growth and environmental sustainability in South Asian association for regional cooperation by using panel ARDL. In this study applied the data of the south Asian association for regional cooperation (SAARC) member countries for a period from 2005 to 2017. The outcomes displayed that environmental sustainability is powerfully and positively related with national scale-level green performs, containing renewable energy, regulatory pressure, and eco-friendly policies, and sustainable usage of natural resources. On the other hand, in their model, the "regulatory pressure" has an insignificant effect on economic growth.

Introduction

Providing new jobs, increase household incomes, promote exports and transfer of advanced knowledge and technology important to ensure economic growth and competitiveness in various economic sectors. The foreign direct investment (FDI) is an essential factor of capital flows and is considered to be one of the most important channels through which financial globalization benefits the economies (Asif et al., 2018). Foreign direct investment is a form of financing in the area of equity participation (Iloie, 2015). It commonly includes the transfer of resources, containing capital, technology and managerial expertise. Such resources typically spread out the production capabilities of the beneficiary country (Appiah et al., 2019; Iloie, 2015).

The Corruption Perception Index (CPI) is used to order countries by their level of exploitation of power for private achievement among Governmental Institutions and the integrity of people in a position of authority. Based on the recent studies the Corruption Perception Index (CPI) has an impact on the flows of FDI. It can assist the size of foreign direct investments by “greasing” the wheels of trade in the existence of weak regulatory framework, or, as in most cases, delay the inflow of FDI because of operation costs uncertainty (Appiah et al., 2019; Aswata et al., 2018; Duarte et al., 2017; Iloie, 2015).

The problem of the easiness of doing business (DB) and the influences that decrease or increase the facility to do so is one of the most significant topics associated with economic development. This concept has encouraged many educational, governmental, and other institutions to improve research projects or plans not only to support a better legislative structure but also to simplify it. These legislative expansion programs have been called “Better Regulation”, and typically contain the basis for strengthening the business environment. Private enterprise is one tactic of detecting a country’s grade of development. In less developed countries, private enterprise has an important influence on GDP (Appiah et al., 2019; Aswata et al., 2018; Duarte et al., 2017; Estevão et al., 2020; Iloie, 2015).

In the following, some selected literature has been reviewed regarding to current research topic.

الملخص:-

في الدراسة الحالية، تم اختبار العلاقة السببية بين معدل النمو السنوي للناتج المحلي الإجمالي (GDPr)، ومؤشر تصورات الفساد (CPI)، والاستثمارات الأجنبية المباشرة (FDI) ومؤشر سهولة ممارسة الأعمال التجارية (DB) تجريبيًا من عام ٢٠٠٠ إلى ٢٠١٩ باستخدام بيانات لوحة لمجموعة D-8 تتألف من ٨ دول تشمل بنغلاديش ومصر وإندونيسيا وإيران وماليزيا ونيجيريا وباكستان وتركيا. تستخدم لوحة PMG ARDL، وعدم التجانس، والاعتماد المقطعي، للتحقيق في العلاقات الديناميكية طويلة وقصيرة المدى. النتائج المستخلصة من اختبار تجانس Pesaran-Yamagata، واختبار Pesaran CD، واختبارات جذر وحدة لوحة CIPS و ADF Fisher Chi-square (ADF Fisher)) واختبار الاندماج المشترك للوحة Kao، أشارت إلى أن بيانات السلاسل الزمنية للوحة لها عدم تجانس واعتماد مقطعي، ومتغيرات تم تحليلها ثابتة ومتكاملة على التوالي. وفقًا لتقدير لوحة ARDL، فإن معامل نموذج تصحيح الخطأ (ECM) سلبي وذو دلالة إحصائية لجميع البلدان التي تم فحصها. تشير معامل القيمة لمصطلح الخطأ إلى أن معظم انحراف التوازن طويل الأجل، تم تصحيحه في السنة الأولى. تؤكد نتائج تحليل السببية، العلاقة السببية ثنائية الاتجاه بين GDPr و FDI ؛ GDPr و DB ؛ CPI و DB. بالإضافة إلى ذلك، وجدت علاقة السببية أحادية الجانب بين CPI و GDPr و DB و FDI.

الكلمات المفتاحية: لوحة ARDL - تقدير المجموعة المتوسطة المجمعة - العلاقة السببية - النمو الاقتصادي - دول المجموعة D8

Abstract:-

In current the study, the causative link among gross domestic product (GDP) annual growth rate (GDPr), corruption perceptions index (CPI), foreign direct investments (FDI) and ease of doing business index (DB) was empirically tested from 2000 to 2019 by using a panel data of D-8 Group comprise of 8 country include Bangladesh, Egypt, Indonesia, Iran, Malaysia, Nigeria, Pakistan, and Turkey. The PMG panel ARDL, heterogeneity, and cross-sectional dependence, used to investigate the long and short-term dynamic relationships. Findings from the Pesaran-Yamagata homogeneity test, Pesaran CD test, CIPS and ADF Fisher Chi-square (ADF Fisher) panel unit root tests and Kao panel cointegration test, indicated the panel time series data has heterogeneity and cross-sectional dependence, analyzed variables are stationary and cointegrated respectively. According to the panel ARDL estimation, the error-correction model coefficient (ECM) negative and statistically significant for all examined countries. The value coefficient of error term, indicate that the most of deviation of long-term equilibrium, corrected in the first year. The panel causality analysis results confirm, the bidirectional causality between GDPr and FDI; GDPr and DB; CPI and DB. In addition, the unilateral causality relationship found between CPI and GDPr, DB and FDI.

Keywords: Panel ARDL, Pooled mean group estimation, Causal relationship, Economic growth, D8 Group countries

Investigating the relationship between foreign direct investments, business index, corruption and economic growth in D8 group countries

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دراسة العلاقة بين الاستثمارات الأجنبية المباشرة ومؤشر الأعمال والفساد والنمو الاقتصادي في دول مجموعة D8

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