DOI: https://doi.org/10.52131/pjhss.2021.0902.0127

Pakistan Journal of Humanities and Social Sciences

Volume 9, Number 2, 2021, Pages 241–249
Journal Homepage:
https://journals.internationalrasd.org/index.php/pjhss

Analyzing the Impact of Real Effective Exchange Rate and Investment on Trade Deficit in the United Kingdom

Allah Ditta[1], Ruqayya Ibraheem[2], Muhammad Ayub[3]

[1] Assistant Professor of Economics, Govt. College Township, Lahore, Higher Education Department, Govt. of the Punjab, Pakistan. Email: ad.tahir77@gmail.com
[2] Ph.D. Scholar, Department of Economics, The Islamia University of Bahawalpur, Pakistan. Email: ruqayyaibraheem13@gmail.com
[3] Assistant Professor, School of Economics, Bahauddin Zakariya University, Multan, Pakistan. Email: mayub@bzu.edu.pk

ARTICLE INFO

Article History:
Received: August 14, 2021
Revised: September 22, 2021
Accepted: September 28, 2021
Available Online: September 30, 2021

Keywords:
Trade Deficit
Real Effective Exchange rate
Gross Fixed Capital Formation
United Kingdom

JEL Classification Codes:
B17, B27, F31, R42, R53

ABSTRACT

The major purpose of this study is to determine the long-run and short-run determinants of the trade deficit in the United Kingdom (UK). The autoregressive distributive lagged (ARDL) approach has been employed for estimation purposes in this study. The study finds that there is negative and significant relationship exists between the real effective exchange rate (REER) and the export to import ratio in the long run. The empirical results reveal that a one percent increase in REER causes a decrease in the export to import ratio by 0.37%, while a positive relationship is observed between REER and the export to import ratio in the short run. The impact of gross fixed capital formation on the export to import ratio is statistically significant and negative in the long run as well as in the short run. The value is negative and statistically significant which validates convergence towards the equilibrium both in the case of UK exports to high-income and low-income trading partners (LITPs). The study suggests that real exchange rate and investment are major determinants for trade balance in the case of the United Kingdom and need proper attention.

Corresponding Author's Email: mayub@bzu.edu.pk

1. Introduction

As a result of globalization, international trade has increased among countries around the world (Salvatore, 2016). Without a doubt, international trade has the potential to improve people's lives (Deyshappria, 2018; Qadir & Majeed, 2018). The trade deficit of UK economy stands at 3.34%, which is below than the average of OECD economies. Key imports of UK include machinery (computers), vehicles, mineral fuels, electric machinery, and pharmaceuticals. The key manufacturing exports of UK are chemicals and its variants, machinery and equipment and motor vehicles. The major exports of UK are largely dependent on imported raw material across industries, which reflect the strong complementarily of imports and exports. Similarly, complementarities may exist between exports and imports. In case of UK, this relationship is weak. According to theory of international trade, either relationship between trade deficit and capital formation-substitutability or complementarily-might hold.

The disparity in trade balance is amazing; with imports exceeding exports (Kyambalesa, 2019). The UK's exports of goods and services were whole £618 billion as well as imports remained £641 billion in 2017-2018. Generally, the UK imports were more than exports means that there was skill discrepancy. The overall UK trade deficit was £24 billion in 2017 because income has a direct impact on trade. Yet, an increase in income can usually lead

eISSN: 2415-007X

to a worsening of the trade balance (Yakubu, Aboagye, Mensah, & Bokpin, 2018). It occurs when a country is in the process of developing. They require imported raw materials, fuel, and capital goods. Furthermore, due to the trade balances shift to a deficit, because an initial increase in income resulted in an increase in purchasing power. This tendency does not apply to all developing countries, but some are experiencing a rise in revenue as a result of improved trade balances (Mutana, Winrose, & Saina, 2018).

The key indices and causes of the trade imbalance are short-run competitiveness and the real effective exchange rate (REER). Naturally the exports of any country flows to those markets where those have indicative demand and their price falls below the purchasing power of the potential buyers. Theoretically, the REER by incorporating the impact of real exchange rate adjusted with the inflation rate found in trade partners. It is essentially the rate at which the outputs of trading partners can be transacted. REER presents the SWOT analysis of the external sector of any country in simplest way.

Gross fixed capital formation and international are integrated through global value chains (GVCs). The United Kingdom remained at sixth position in the World in terms of attracting FDI inflows which stood at USD 64.5 billion in 2018, which is one of the crucial components of gross fixed capital formation. The major investing partners of UK are US, the Netherlands, Japan and Jersey. The sectors which attracted most investment are energy, trade and repair, machinery and metal products and financial services (UNCTAD World Investment Report, 2019). Foreign companies put a great challenge to domestic companies on competitiveness front. One of the main issues in international economics pertains to the extent of the fiscal policy impacts on trade balance (Zhuang et al., 2021). In some cases, if fiscal policy gives tax exemptions to the export sector, it may cause increase in exports. On the other side, if government expenditures are more prone towards domestic industries producing for domestic consumption, then it may have negative impact on exports as well as trade balance.

A lot of work has already been done on this topic but there is sufficient space to conduct further research on it. We do hope that this research study will be helpful for policy makers to manage trade deficit and increase exports. This study will also useful for researchers. First section of this study provides a thorough introduction to trade balance, its explanations and implications, and its relationship to other factors. Later on, several literature reviews relating to the issue are discussed. The data and methods, as well as the estimated results, are then given. Conclusions and policy implications based on the estimated outcomes are explored in the last section.

2. Literature Review

Sachs, Warner, Åslund, and Fischer (1995) state that according to the theory of classical economists all countries gain from trade when countries specialize according to the principles of comparative advantage, while the neo-classical economists point out that the countries tend to specialize in those products that use abundant resources intensively in the production process. The study suggests that trade encourage the economic growth through saving linkages, consumption and production in the case of developed nations.

Manzano and Rigobon (2001) discover the impact of economic growth on trade in the case of developed countries during the time period 1990 to 1991. The study explains that natural resource abundant countries effectively used expected future export revenues as guarantee to finance trade deficits in the 1970. Falk, Fehr, and Fischbacher (2008) analyzed the factors of trade using panel data of 32 emerging economies over the period 1990-2007. The fixed effect and mixed model's technique were used to achieve the objectives of the study. He concluded that trade surplus is positively related with both the GDP per capita of foreign countries and real effective exchange rate and negatively related with foreign direct investment, similar results found by Yang and Shafiq (2020) and Fazal, Bhatti, and Ahmad (2019). Rodrik (2008) points out that for measuring the macroeconomics policy real exchange rate is key factors in case of developing as well as developed nations and it indirectly affects the allocation of resources in the economy like traded and non-traded goods. The study suggests that overvalued exchange rate leads to reduce the price in competitiveness markets while an undervalued exchange rate leads to increase the economic growth in case of both

developing as well as developed nations. Cruz (2008) reveals that free trade increases the improvement in the living standards of the population, technological progress, specialization, increasing competition and promote industrialization in case of developed nations.

Hobza and Zeugner (2014) examine the link between capitals stream in requisites of foreign direct investment (FDI) through current account deficits and exchange rate in the developed nations. These links are supported by some others research studies like Abell (1990); Azam, Nawaz, and Riaz (2019) and Cecen and Xiao (2014). The study suggests that increasing capital inflows causes the admiration of the household money, which formulates the imports low-priced and exports expensive (Ahmad, Bashir, & Hussain, 2018). The empirical outcomes of the study explore that in this way import of the respective country increase and exports of goods and services, decreases which deteriorate the current account balance of payment of the concerned economy.

Keho (2017) points out the relationship between foreign trade and economic growth. The study uses foreign trade dependent and economic growth as independent variables. The study concluded that there is positive relationship between foreign trade and economic growth in case of UK. Bakari, Hunjra, and Niazi (2017) finds that imports and exports are realized such as the source of economic growth in Germany. Kyambalesa (2019) examine the long-term and short-term association among imports, exports, as well as economic growth in the case of UK. The positive effects of exports, but negative effects of imports, were bring into being in the country, indicating the importance of exports to provide encouraging economic growth.

Bahmani-Oskooee and Saha (2019) investigate the impact of exchange rate fluctuations on bilateral trade balances using ARDL technique in the case of Korea and its 14 trading partner economies. Kumar (2020) explains that the association between exchange rate, trade and economic growth in case of India, Bangladesh, Sri Lanka, Nepal, and Bhutan by using panel data. The study reveals that the impact of trade on economic growth is positive and statistical significant while exchange rate is negative in case of India, Bangladesh, Sri Lanka, Nepal, and Bhutan.

Fathima Thahara, Fathima Rinosha, and Fathima Shifaniya (2021) investigate the association among the exchange rate, inflation and Trade Balance using ARDL technique during the time period 1977 to 2019 in case of Sri Lanka. The results of the study find that the exchange rate has a negative and statistically significant role on Trade Balance in the case of Sri Lanka in short run and long run. Furthermore, the study finds that the association between inflation and trade deficit is positive.

It is necessary to find out the key factors which influence the trade balance and to identify if there is variation in the trade balance across countries according to time. Some studies focus on bilateral trade balance while some studies tell about total trade stabilities. However, we were unable to locate any study on the determinants of trade balance using appropriate econometric techniques for a developed country like the United Kingdom. As a result, the purpose of this research article is to use time series analysis to investigate the determinants of the trade balance in the United Kingdom. The main investigation of this study is to determine the long run and short run factors of trade deficit of UK.

3. Data, Model and Methodology

3.1 Data and Method

The purpose of current study is to examine the major determinants of trade deficit of UK by employing ARDL method. This study has considered the following determinants of trade deficit as these crucial variables have a significant influence on the trade deficit of the concerned economy. Further, the data has been taken from World Development Indicators (WDI, 2020) ranging from 1980 to 2018.

3.2 Model

To develop a model for analyzing the factors that influence UK trade balance the functional form of the empirical model is as follows:

$$(TDD_{\mathrm{t}}) = \mathrm{f}(\mathrm{REER}_{\mathrm{t}}, \mathrm{A}_{\mathrm{t}}, \mathrm{GDP}_{\mathrm{t}}, \mathrm{UY}_{\mathrm{t}}, \mathrm{GFC}_{\mathrm{t}})$$

The collected data comprised such variables as merchandize exports and imports of UK, gross fixed capital formation, unemployment as well as REER. T.

$$TDD = \beta_0 + \beta_1 REER + \beta_2 A + \beta_3 GDP + \beta_4 UY + \beta_5 GFC + \varepsilon_t$$

't' denoting the time period and table 1 shows the composition and descriptions of all the variables.

Table 1: Description of Variables

SR#	Variables	Symbols	Type	Data Source
	Dependent			
1	(Ratio of Merchandize Exports to imports)	TDD	Trade Sector	WDI
	Independent Variables			
3	$A(\frac{\text{exports}}{\text{GDP deflator}} - \frac{\text{exports}}{\text{Import deflator}})$	A	short run competitiveness across countries based on inflation difference across countries	WDI
4	Real Effective Exchange Rate	REER	Monetary Policy Variable	WDI
5	Unemployment rate	UY	Indicator of employment generation	WDI
6	GDP of Trading Partners of UK	GDP	Development of UK Export Partners	WDI
7	Gross Fixed Capital Formation % of GDP	GFC	Fiscal Policy Variable	WDI

The study has adopted a three steps process to find the empirical results. At first step, the issue of stationarity was examined by employing unit root test in which Ng and Perron (2001) methodology was used. In the second stage, study has explained short- run as well as long run association between the dependent variable and independent variables, as illustrated in equation (3), and to determine the adjustment speed for long-term stable equilibrium. ARDL technique suggested by Narayan, Chambers, Shah, and Petesch (2000) has been used for estimation purposes, because this approach is used with mixed order of integration and provides robust results in small sample size.

$$\Delta TDD_t = \alpha_0 + \alpha_1 REER_{t-1} + \alpha_2 A_{t-1} + \alpha_3 GDP_{t-1} + \alpha_4 UY_{t-1} + \alpha_5 GFC_{t-1} + \alpha_6 \sum_{i=1}^{p} \Delta REER_{t-i} + \alpha_7 \sum_{i=1}^{p} \Delta A_{t-i} + \alpha_8 \sum_{i=1}^{p} \Delta GDP_{t-i} + \alpha_9 \sum_{i=1}^{p} \Delta UY_{t-i} + \alpha_{10} \sum_{i=1}^{p} \Delta GFC_{t-i} + \eta_{11}$$

And the short run coefficients have been estimated by using the following ARDL equation;

$$\Delta TDD_t = \varphi_0 + \varphi_6 \sum_{i=1}^{p} \Delta REER_{t-i} + \varphi_7 \sum_{i=1}^{p} \Delta A_{t-i} + \varphi_8 \sum_{i=1}^{p} \Delta GDP_{t-i} + \varphi_9 \sum_{i=1}^{p} \Delta UY_{t-i} + \varphi_{10} \sum_{i=1}^{p} \Delta GFC_{t-i} + \psi_{11} ECM_{t-1} + \varepsilon_{11}$$

In third step, the study uses CUSUM and CUSUM Square tests to check the stability.

4. Results of Model and Discussion

Descriptive statistics of the variables have been estimated firstly and presented in the table 2. Values of Jarque-Bera of this study explain that data is normally distributed of all the variables.

Table 2: Descriptive Statistics

	TDD	REER	UY	A	GDP	GFC
Mean	0.04	4.76	2.71	0.07	31.12	2.84
Median	0.02	4.78	2.70	0.07	31.09	2.85
Maximum	0.24	4.97	3.11	0.15	32.06	2.94
Minimum	-0.09	4.58	2.33	-0.01	30.03	2.68

Std. Dev.	0.08	0.11	0.24	0.04	0.66	0.06
Skewness	0.66	-0.15	0.04	0.02	-0.20	-0.64
Kurtosis	2.42	2.00	1.77	2.02	1.88	2.59
Jarque-Bera	3.66	1.77	2.46	1.58	2.30	2.90
Probability	0.19	0.41	0.29	0.45	0.32	0.23

Table 3 and 4 present the values of coefficient of correlation as well as (VIF). Values of variance inflation factor are less than 10 describe that there is no issue of Multicollinearity in the model.

Table 3: Coefficient of Correlation

	REER	**UY**	**LNA**	**GDP**	**GFC**
REER	1				
UY	-0.111798	1			
A	0.4041627	0.321737	1		
GDP	-0.648324	-0.226403	-0.8728	1	
GFC	0.0187384	-0.831201	-0.19337	0.2145099	1

Table 4: VIF

	REER	**UY**	**A**	**GDP**	**GFC**
REER	-				
UY	1.012657	-			
A	1.1952394	1.115467	-		
GDP	1.7251021	1.054028	4.197713	-	
GFC	1.0003513	3.235141	1.038844	1.048234	-

The unit root test employing Ng and Perron (2001) methodology was estimated and shown in table 5. The values of MZa and MZt show the mixed order of integration. It is, therefore, the estimations for the long run relationship among the selected variables can be pointed out by using ARDL Bound Testing Methodology. The calculated F- statistics and W-statistics are higher than their respective critical values at 5%, which clarifies the presence of long run relationship among UK trade deficit and its factors. In table 6 diagnostic tests have been presented, accepting null hypotheses reveals that the model is free from econometric problems.

Table 5: Ng-Perron Test Statistics - Unit Root Test

Variable	***I(0)***				**Variable**	***I(1)***			
	MZa	**MZt**	**MSB**	**MPT**		**MZa**	**MZt**	**MSB**	**MPT**
TDD_t	-0.98	-0.48	0.49	15.52	ΔTDD_t	-17.19	-2.92	0.17	1.47
$REER_t$	-2.38	-0.81	0.34	8.75	$\Delta REER_t$	-17.02	-2.92	0.17	1.45
A_t	-0.40	-0.19	0.48	16.71	ΔA_t	-18.26	-3.01	0.17	1.37
UY_t	-10.98	-2.22	0.20	2.70	ΔUY_t	-14.26	-2.66	0.19	1.74
GFC_t	-4.74	-1.53	0.32	5.18	ΔGFC_t	-6.98	-1.86	0.27	3.54
GDP_t	0.52	0.35	0.67	31.99	ΔGDP_t	-15.78	-2.80	0.18	1.57
Critical Values*									
1%	-13.8		-2.58			0.174		1.78	
5%	-8.1		-1.98			0.233		3.17	
10%	-5.7		-1.62			0.275		4.45	

The short run and the long run coefficients were estimated by using ARDL Bound testing approach shown in table 7. This approach shows a negative and significant relationship between REER and Export to Import Ratio in the long run. Further, it can be explained that one percent increase in REER causes decrease in Export to Import Ratio by 0.37 percent. On the contrary, there is a positive relationship between REER and export to import Ratio by 0.10 percent in short run thereby increase in trade deficit. These results are supported by Falk et al. (2008). The impact of gross fixed capital formation on export to import ratio is statistical significant and negative both in long run and short run. It explains that investments lead to decrease trade deficit in the long run as well as in the short run. These results are supported by Cruz (2008). The impact of unemployment on trade deficit is statistically significant and positive both in the short run and the long run. This explains that the trained labour force may

migrate from import to export sector for higher income, and hence it will not only enhance the productivity of export sector but decrease the trade deficit also. The impact of GDP of trading partners on export to import ratio of UK is significant and negative both in long-run and short run. The study finds that both long run and short run competitiveness cause lead to increase in trade deficit in case of UK. The value of ECM_{t-1} was found negative and highly significant which validates the convergence to long run equilibrium both in case of UK exports to high income and LITPs.

Table 6: ARDL Bound Testing Approach

Estimated Model	$(TDD_t) = f(REER_t, LnA_t, UY_t, GFC_t, GDP_t)$			
Optimal Lags	(1,2,2,0, 1, 3)			
F − Statistics	6.57^{***}			
W − Statistics	39.45			
Significancelevel	**Critical bounds for F − statistics**		**Critical bounds for W − statistics**	
	Lower Critical Bound	**Upper Critical Bound**	**Lower Critical Bound**	**Upper Critical Bound**
5 percent	3.01	4.38	18.06	26.27
10 percent	2.50	3.73	15.03	22.39
DiagnosticTests				
R^2	0.97	$Serial\ Correlation$		1.01 [0.314]
$Adjusted\ R^2$	0.95	$Functional\ Form$		0.322 [0.57]
$F - Statistics$	15.57	$Normality$		0.99 [0.61]
$P - Value$ $(FStatistics)$	0.000	$Heteroscedasticity$		0.01 [0.91]
$DW - Statistics$	2.15	$Durbin\ H - Statistics$		−0.612 [0.504]

Table 7: Long term and Short term Dynamics

Estimated Long Term Coefficients using ARDL Approach		**Error Correction Representation for the Selected ARDL Model**	
DependentVariable : TDD_t		**DependentVariable : ΔTDD_t**	
Variables	**Coefficient [P − Value]**	**Variables**	**Coefficient [P − Value]**
A_t	-0.51 [0.15]	ΔA_t	0.50 [0.072]
$REER_t$	-0.37 [0.000]	$\Delta REER_t$	0.10 [0.079]
UY_t	0.17 [0.002]	ΔUY_t	0.11 [0.001]
GFC_t	-0.45 [0.038]	ΔGFC_t	-0.28 [0.026]
GDP_t	- 0.15 [0.000]	ΔGDP_t	-1.62 [0.117]
C	4.82 [0.001]	ECM_{t-1}	-0.67 [0.000]
Diagnostics for ECM Model			
R^2	0.89	$MeanDependentVariable$	-0.006
$AdjustedR^2$	0.82	$S.D.DependentVariable$	0.03
$S.E.ofRegression$	0.01	$AkaikeInformationCriterion$	93.69
$SumSquaredResidual$	0.004	$SchwarzInformationCriterion$	82.33
$LogLikelihood$	108.69	$DW - Stat$	2.15
$F - Statistics$	16.98	$Prob.Value\ [F - Statistics]$	0.000

Figure 1: Plot of Cumulative Sum of Recursive Residuals

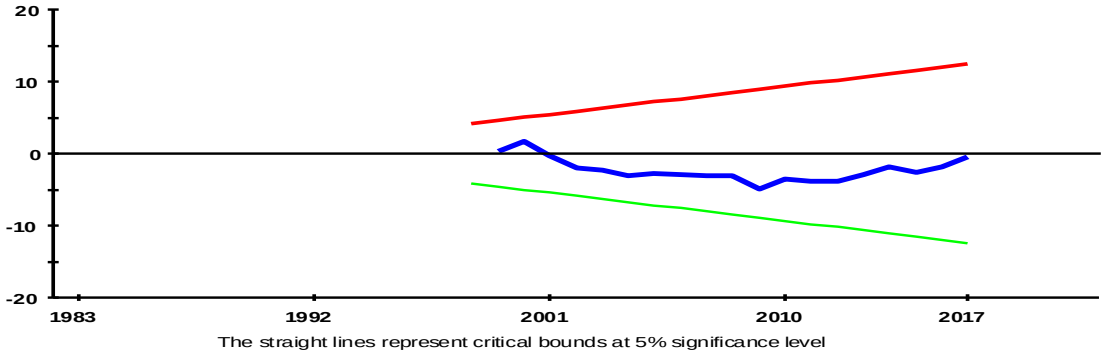
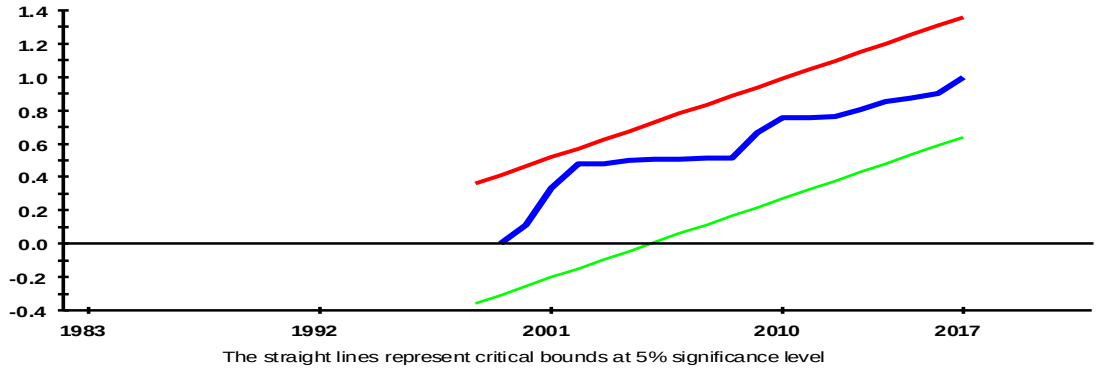


Figure 2: Plot of Cumulative Sum of Squares of Recursive Residuals



The present study utilizes CUSUM and CUSUM Square tests to check the stability of the model. These tests as shown below indicate the stability of the required and confirm the correct specification of the model.

5. Conclusion and Policy Implications

The main investigation of this study is to determine the long run and short run factors of trade deficit of UK. The long run and short run coefficients were estimated by using ARDL Bound testing approach from 1980-2018. The study finds negative and significant relationship between REER and Export to Import Ratio in the long run which explains that one percent increase in REER cause decrease in export to import ratio by 0.37 percent. In short run there is positive relationship between REER and export to import ratio which explains that the impact of exchange rate policy is positive and statistically significant in short. The impact of gross fixed capital formation on export to import ratio is negative and statistically significant both in long run and short run. The impact of unemployment on export to import ratio is statistically significant and positive both in the short run and long run. This explains that the trained labour force may migrate from import sector to export sector for higher income and increase the productivity of export sector which decrease the trade deficit. The impact of GDP of trading partners on export to import ratio of UK is significantly negative in long-run, which describe that higher incomes of trading partners cause shift in their presence set in which the UK products are proportionally less in value terms. It is found that the short run competitiveness cause increase in the export to import ratio. The value of ECM_{t-1} is negative and highly significant which validate the convergence to long run equilibrium. The policy implication is that trade deficit can be reduced through enhance the investment and skilled labour in UK. The outcomes of this study are helpful to form the strategies for reduction the trade deficit in case of United Kingdom (UK). The policy implications suggest that through stable exchange rate and increasing investment trade balance can be improved in United Kingdom (UK).

References

Abell, J. D. (1990). Twin deficits during the 1980s: An empirical investigation. *Journal of macroeconomics, 12*(1), 81-96. doi:https://doi.org/10.1016/0164-0704(90)90057-H

Ahmad, R., Bashir, F., & Hussain, A. (2018). Human capital, governance and poverty reduction: A panel data analysis. *Review of Economics and Development Studies, 4*(1), 103-113. doi:https://doi.org/10.26710/reads.v4i1.285

Azam, M., Nawaz, M. A., & Riaz, M. (2019). Does corruption and terrorism affect foreign direct investment inflows into Pakistan. *Journal of Managerial Sciences, 13*(2), 85-97.
Bahmani-Oskooee, M., & Saha, S. (2019). On the effects of policy uncertainty on stock prices: an asymmetric analysis. *Quant Financ Econ, 3*, 412-424.
Bakari, H., Hunjra, A. I., & Niazi, G. S. K. (2017). How does authentic leadership influence planned organizational change? The role of employees' perceptions: Integration of theory of planned behavior and Lewin's three step model. *Journal of Change Management, 17*(2), 155-187. doi:https://doi.org/10.1080/14697017.2017.1299370
Cecen, A., & Xiao, L. (2014). Capital flows and current account dynamics in Turkey: A nonlinear time series analysis. *Economic Modelling, 39*, 240-246. doi:https://doi.org/10.1016/j.econmod.2014.03.010
Cruz, M. (2008). *Can free trade guarantee gains from trade?* : WIDER Research Paper.
Deyshappria, R. (2018). Globalization-poverty nexuses: Evidences from cross-country analysis. *Empirical Economic Review, 1*(1), 24-48.
Falk, A., Fehr, E., & Fischbacher, U. (2008). Testing theories of fairness—Intentions matter. *Games and Economic Behavior, 62*(1), 287-303. doi:https://doi.org/10.1016/j.geb.2007.06.001
Fathima Thahara, A., Fathima Rinosha, K., & Fathima Shifaniya, A. J. (2021). The relationship between exchange rate and trade balance: empirical evidence from Sri Lanka. *The Journal of Asian Finance, Economics and Business, 8*(5), 37-41. doi:https://doi.org/10.13106/jafeb.2021.vol8.no5.0037
Fazal, S., Bhatti, M. A., & Ahmad, T. I. (2019). Sectorial growth, Exchange rate and Fiscal policy in Developing Economies: The Interlinkages. *iRASD Journal of Economics, 1*(2), 68-81. doi:https://doi.org/10.52131/joe.2019.0101.0006
Hobza, A., & Zeugner, S. (2014). *The" imbalanced balance" and its unravelling: current accounts and bilateral financial flows in the euro area*. Retrieved from
Keho, Y. (2017). The impact of trade openness on economic growth: The case of Cote d'Ivoire. *Cogent Economics & Finance, 5*(1), 1332820. doi:https://doi.org/10.1080/23322039.2017.1332820
Kumar, R. (2020). India & South Asia: Geopolitics, regional trade and economic growth spillovers. *The Journal of International Trade & Economic Development, 29*(1), 69-88. doi:https://doi.org/10.1080/09638199.2019.1636121
Kyambalesa, H. (2019). Trade Deficits: Causes, Effects and Remedies. *Effects and Remedies (October 17, 2019).* Retrieved from https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3471015
Manzano, O., & Rigobon, R. (2001). Resource curse or debt overhang? In: National bureau of economic research Cambridge, Mass., USA.
Mutana, J. W., Winrose, C., & Saina, E. (2018). Macroeconomic Determinants of Kenya's Trade Balance. *International Journal of Research and Innovation in Social Science (IJRISS), 2*(10), 49-55.
Narayan, D., Chambers, R., Shah, M. K., & Petesch, P. (2000). *Voices of the Poor: Crying out for Change*: New York: Oxford University Press for the World Bank.
Ng, S., & Perron, P. (2001). Lag length selection and the construction of unit root tests with good size and power. *Econometrica, 69*(6), 1519-1554. doi:https://doi.org/10.1111/1468-0262.00256
Qadir, N., & Majeed, M. T. (2018). The impact of trade liberalization on health: Evidence from Pakistan. *Empirical Economic Review, 1*(1), 71-108.
Rodrik, D. (2008). The real exchange rate and economic growth. *Brookings papers on economic activity, 2008*(2), 365-412.
Sachs, J. D., Warner, A., Åslund, A., & Fischer, S. (1995). Economic reform and the process of global integration. *Brookings papers on economic activity, 1995*(1), 1-118. doi:https://doi.org/10.2307/2534573
Salvatore, D. (2016). *International Economics, Binder Ready Version*: New York: Wiley and Sons, Ltd.
UNCTAD World Investment Report. (2019). *United Nations Conference on Trade and Development (UNCTAD) World Investment Report (WIR)*.
WDI, W. B. (2020). World Development Indicators. Retrieved from https://databank.worldbank.org/source/world-development-indicators
Yakubu, A. S., Aboagye, A. Q., Mensah, L., & Bokpin, G. A. (2018). Effect of financial development on international trade in Africa: Does measure of finance matter? *The*

Journal of International Trade & Economic Development, 27(8), 917-936. doi:https://doi.org/10.1080/09638199.2018.1474246

Yang, X., & Shafiq, M. N. (2020). The Impact of Foreign Direct Investment, Capital Formation, Inflation, Money Supply and Trade Openness on Economic Growth of Asian Countries. *iRASD Journal of Economics, 2*(1), 25-34. doi:https://doi.org/10.52131/joe.2020.0101.0013

Zhuang, Y., Yang, S., Chupradit, S., Nawaz, M. A., Xiong, R., & Koksal, C. (2021). A nexus between macroeconomic dynamics and trade openness: moderating role of institutional quality. *Business Process Management Journal, 27*(6), 1703-1719. doi:https://doi.org/10.1108/BPMJ-12-2020-0594