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A Nexus between Institutional Quality, Debt Burden, Exchange Rate Depreciation, Foreign Remittances and Distribution of Income. A Time Series Data Analysis for Pakistan

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Abstract- As a result of the economic crisis in Pakistan, debt has had a negative impact on life and is perhaps one of the biggest causes of rising deprivation over the decades. This study examines the impact of debt services on income distribution in Pakistan, analyzed with time-series data from 1984 to 2018.

This has shown that currency devaluation is a threat to income distribution in developing countries. The previous analysis shows that international remittances to developing countries have a positive effect.

The Autoregressive Distributed Lags (ARDL) was the method used to examine the impact of debt on income distribution. The findings illustrate the significant and positive relationship between debt service and Gini Coefficient Index, which shows that an increase in debt will result in an increase in income distribution.

Keywords: ARDL, Income distribution, Debt Services, Remittances, Exchange rate.

I. INTRODUCTION

Due to the disparity in real income, people are moving abroad from home. Migration will provide more opportunities for income and livelihoods in foreign countries compared to their own countries. In relation to the financial value and significance of the wage gap in domestic labor in both local and foreign countries. In relation to migrant expenses, according to neoclassical theorists, a large number of emigrants will have a positive impact on their part due to their large participation in the financial well-being of their home countries. Not only has the standard of living of individual migrants increased in history, but also throughout society in general.

The literature suggests that income distribution is essential for maintaining and satisfying life, increased productivity and per capita income, based on the role of institutional quality, exchange rate and per capita income in increasing income inequality. According to financial information, Pakistan's debt services increased to USD 729,878 million in 2016.

The devaluation of currency is twofold: firstly, because local money is deteriorating relative to foreign currency. On the other hand, when the import of goods compares, local currency or prices will be cheaper. In view of this outcome, exports are more relevant than imports. Because it would be more important to improve the exchange rate and adjacent goods on various foreign markets and increase demand for external currency.

In addition, if the foreign currency accepts the local currency, the local currency will be less expensive than the household cash to invest. That's why the exchange shortfall is increasing with compassion as foreign bills in local currency increase.

The actual use of money parity will be reduced as the cost of real tradable currency and non-tradable products is devalued. However, the flexibility of imports is an important idea for assessing the equalization of

exchanges. Pakistan imports include oil, capital equipment, distinctive compost, vegetables, colors, grains, tea, etc. When local currencies are devalued as a tool, progressive nations have a foreign exchange deficit. Foreign currency projections increase money, increase import costs and decrease the value of exports. (Mustafa and Ali in 2012)

Pakistan's macroeconomic governance has mixed up over the last 50 years. Excessive macroeconomic uncertainties, hyperinflation and extreme currency fluctuations have been avoided in the face of numerous domestic and foreign shocks. While the level of domestic and foreign public debt has risen to GDP, which is now at the right level, Pakistan is still looking for development, but does not rely on sovereign defaults that are long-standing shadows of a country's ability to access capital markets. Finally, Pakistan has also prevented major banking crises in many other developing countries.However, In addition to this beneficial feature, Pakistan has shown its almost unique inclusion in allowing fiscal and balanced recovery pressures to grow into near-crisis every few years, often with the help of the IMF, which then uses orthodox financial stability instruments. With regard to the impact of debt-service regulation had an impact on their development. , most economists were aware to it Adegbite&Ayadi(2008), Jayaraman and Lau (2009), Fonchamnyo (2009), Pattillo et al. (2012).After reviewing the above literature, many studies have shown that consumption is strongly linked to other economic factors, but very few research has been conducted on the impact of debt service on income distribution.

Many types of economic problems are leading the economy to crises. Such pressure has usually been controlled prior to a complete economic recession, but the cumulative effects of daily aversion services on the crisis have been slowed down, resulting in average and often weak comparative indices of current growth.The next crisis is now approaching. In the period 2013–2016 a significant drop in exchange-reserve rates and a sharp rise in external debt, some of them in short and expected, was triggered after the efficient management of the macroeconomic imbalances of the IMF-supported programs, unsustainable fiscal expansion, and an inaccurate efforts to keep the exchange rate continuously overvalued. Exchange rates are seen as a means to maintain their competitiveness in exchange for increasing resistance and financial independence by some of the most successful new and emerging economies.

Institutions play a key role in the efficient and sustainable functioning of the economy and in the survival of economic actors. As an example of a developing country, Pakistan, this work aims to show that public debt and administrative performance are associated with income disparities.

In reality, the widespread corruption in Pakistan is a symptom of our downward trend policy that makes governance successful. State institutions aimed at providing benefits and not effectively delivering government services. State institutions are aimed at giving benefits and not at successfully providing public service. At best, under present conditions, we could expect a few competitors to cash up, but every government's culture of patronage, elitism, and deep inequalities are not enough to stop.

II. LITERATURE REVIEW

A study of the relevant literature is important because it provide a direction for the study. This section reviews almost domestic and international accessible theoretical and empirical research. In the fields of transactions from abroad, exchange rates, institutional performance, growth, debt management including income distribution which is often significant for global study. This section has the rationale of discovering and finding past work in certain sectors which allow us to show if general imperfections and flaws exist in this research. This also offers answers to the problems that have been and are still to be solved in this particular area of research.

In this section, the literature review was based on the arguments developed in the support of the thesis techniques. This chapter has been divided into three major parts. In the main chapter, the study is focused on academic literature and the theoretical context for linking foreign remittances, debt and income distribution. The second chapter examines the literature on time series analyzes and results of empirical research. The third and final chapter offers explanations for the difference of current literature to these analysis holes. This chapter also emphasized the significance of defined arguments in the economic context of Pakistan.

Migration also ties neoclassic economics to a positive view. Migration is a strategy of distributing the production variables in a neoclassical dynamic growth model that similarly benefits the countries of origin and beneficiaries. They anticipated start-ups flourishing in the financial structure in particular since migrants were originally able to spend huge money on businesses in the countries (de has 2007).

Remittances also considered as key domestic currency assets and account for 10% of the over-excess GNP (Jongwanich&Juthathip, 2007). Adam &Page (2005) showed at the macroeconomic level the effect of reducing poverty from foreign remittances and proved that poverty decreased by 3.5% in this nation and increased by 10% in emerging economies. Such results can be used by policymakers to create more distribution flows for future policies.

The recovery of neo-classical economics in the 1980s once again places economic growth at the fore in the context of the debt crisis affecting Latin American countries in particular. This has become the ultimate goal of economic activities despite increasing inequality and worsening the poverty issue. In the neoclassical viewpoint, any redistribution, would lead to economic inefficiency at the cost of one of both competitive variables. The income distribution was the main concern, as in classical economics. The distribution of economic activity between incomes and revenues does not say the issue of how wealth is usually distributed between people.

Amjad (1986) used the data surveyed for Pakistan to measure the impact of migrants. The use of money transfers by the migrant family has proved to be linked to the overall development of the state. The researcher has studied the use of transfers in detail it has been noted that a large proportion of cumulative consumption, housing and other foreign remittances provide investment funds. He also noted the standards of growth, infrastructure, small-scale production, financial transactions and transport. He said that. Trade transactions in overseas countries also had a positive impact on producers and importers the analysis of these research results has been an important part of economic analysis in the other studies.

Kandi and Metwally (1990) examined the effects of migration and transfers abroad on the Egyptian economy. From 1970 to 1984, he used the three-stage Least Square (3SLS) which he estimated on the basis of Keynesian theory. This research related to the evaluation of transfers by multipliers to the Gross National Product. However, the results of the increase in remittances abroad varies across Gross National Product variables. They do have a positive impact on the Gross National Product. Foreign remittances have more favorable effects on consumers and relatively low impacts on personal investment.

Bilgrami& Nishat (1991) tried to determine the impact on Pakistan's economy. The authors used annual data from 1959-1960 to 1987-1988 and estimated the impact of foreign remittances on Pakistan's economy. They also applied key Keynesian theoretical frameworks to determine the multipliers of transactions in Pakistan. The functional equation was calculated using 3 SLS processes. The researchers used model results to estimate the magnitude of the marginal product, production and import preferences. The findings have shown strong positive effects on the GNP.

Stiglitz (2012) found that he rich and financial sectors have added to the economic inequality caused by the growing political impact of the crisis. Fitoussi and Saraceno (2010) suggest that the root cause of the recession has been the systemic change in income distribution over the past three hundred years.

There are several complex ways in which the relationship between public spending and income inequality exists. Second, it is possible that this will depend on the type of investment. State grants, subsidies and expenditure could directly reduce poverty by increasing the real household disposable income. It was also an indirect tool by enhancing the diet, health and education of poor families, resulting in higher (pre-fiscal) business turnover. Government expenditure on primary education and health, service growth through increased productivity and the capacity of poor families also tends to reduce poverty (McKay, (2004), Mosley et al, (2004).Such government expenditure is most likely to reduce income inequality.

However, government spending and subsidies in low-income countries are not being met through inadequate distribution of poor households. In Indonesia, for example, over 80 per cent of the subsidized fuel benefits were received in the top half of the income distribution (Rhee, Zhuang, Kanbur& Felipe (2014). Such benefits

also favor the Middle Class, particularly in the urban area, Castro-Leal I.e., Dayton, Demery, (2000). This will have a vital impact on how much transport and other' poor sectors, which can vary from country to country, spend on poor housing.The effect on wage inequality could be reduced by grants and benefits such as social relocation (e.g. Cox and Hansen, 1993; Cox, Hansen, and Jimenez, 2004; Sahn& Alderman, 1996). The overall effect on homelessness is therefore unclear, albeit well-directed, on distribution, grants and transfers.

III. DATA AND METHODOLOGY

Data is assumed to be static in time series in conventional econometrics. The fairly detestable econometric effects of non-stationary data may contribute to volatile low estimators, research results and diagnosis (Griffth et al. 2000). Over time, Econometrics has shown that time series results are usually not stationary and are not sufficient instruments for the OLS study when no time series model has been developed (Thomas, 1997). Most of these series produce time series biases and important relationships with high R2.Several researchers around the world have used generic statistical methods for stationary time series data, without fixed tests. A number of econometric researchers, such as Box and Jenkins (1970, 1973), who first presented data in series to avoid unwanted results, it has developed a regression method to address this issue. However, this technique had a challenge, as the details could vary in order to achieve reliability, some important and critical information might be lost.

The series must remain stationary if there is an imminent difference between the average or time interval and the covariate sequence is independent (Griffiths et al., 2001). If all values are valid, the time series would be set.

$$E\left(Y_t\right) = \mu \qquad \text{(Constant Mean)}$$

$$Var\left(Y_t\right) = E\ (Y_t - \mu)^2 = \sigma^2 \qquad \text{(Constant Variance)}$$

$$cov\left(Y_t,\ Y_{t+s}\right) = cov\left(Y_t,\ Y_{t-s}\right) = \gamma_s \qquad \text{(Covariance rely on s, not on t)}$$

A sequence considered stationary if it had an autonomous mean, a variance and a time covariance. The set series tended to move in the middle and fluctuate around the center in a continuous range and dispersion. Although the average non-stationary sequence was different at different times, differences in non-stationary series were adjusted by sample size. Non-stationary time series with or without the right pattern move up or down from the center (Griffiths et al., 2001).

The Strategy of the Model:

This part of the research included the main design methodology schedules. Incorporated by the ARDL method, an analysis of Pakistan's income. For two reasons, we used the ARDL approach in this chapter of the study.

1. Variables from various orders used for the evaluation of this study are combined. The Auto-Regressive Distributed Lag Test (ARDL) was therefore used to test the co-integration method.
2. The Ordinary Least Square (OLS), as it was found to be aspect of the analysis, calculated the long-run equilibrium and the interaction between variables. The short-run dynamics are captured by the Vector Error Correction model (VECM).The research study has established a single econometric model.

Short Run Income Distribution Model:

In order to measure the effect of debt services on income distribution, this study used a short-run income distribution model. The model variables were theoretical and based on previous experiments. As determined by the following econometric model:

$$ID = \alpha_0 + \sum_{i=1}^{m} \gamma_i ID_{t-i} + \sum_{i=1}^{m} \delta_i LnDEBT_{t-i} + \sum_{i=1}^{m} \eta_i LnPREMIT_{t-i} + \sum_{i=1}^{m} \phi_i LnGFCE_{t-i} +$$

$$\lambda_1 ID_{t-1} + \lambda_2 LnDEBT_{t-1} + \lambda_3 LnPREMIT_{t-1} + \lambda_{4t-1} LnGFCE_{t-i} + \zeta EC_{t-1} + \boldsymbol{u}_t \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots (3.9)$$

When the error correction coefficient is negative and significant, there is a long-run relationship between independent and dependent variables. Long-run coefficients indicate the long-run effect of the co-integration equation. The first differentiated coefficient of variables shows the short-run impact.

The error correction function ranges from-1 < p< 0 to strongly negative. With the time interval, when the focusing parameter approaches the long-run relationship with IV, the rate of change measured is to be reduced to a level in the array. It therefore creates an implicit co-integration check.

Long Run Income Distribution Model:

The income distribution model used in this study to analyze the influence of the exchange rate, debt, remittances and institutional quality on the distribution of income in Pakistan. The theoretical and earlier parameters of the model's research were determined by using the econometric model:

$$I.D = \beta_0 + \beta_1 LnDEBT + \beta_2 LnREER + \beta_3 LnPREMIT + \beta_4 LnGFCE + \beta_5 LnIQ + e_t$$

Where as

ID = Income Distribution

LNDEBT = Debt Services Total

LNREER = Real Exchange Rate

LNPREMIT = Personal Remittances

LNGFCE = Government Final Consumptions

LNIQ = Institutional Quality

IV. DATA AND VARIABLES:

This research explores the impact of foreign remittances, debt services, institutional quality, exchange rate and the distribution of income. This study shows how the change in any single variable tends to affect the distribution of income. The following variables have been used in this analysis as set out in Table 1 In this study, log method of all variables used to calculate the income distribution function of the Gini coefficient used as proxy and variable rule of law as proxy for institutional quality. This data is obtained from the World Governance Indicators (W.G.I) and the World Development Indicators (W.D.I) debt service. The test data chosen are between 1984 and 2018.

Variables for Analysis:

Table 1: Description of Variables

Dependent Variable	Explanation	Independent Variable	Explanation	Source
Distribution of Income	Gini Coefficient 1984-2018 (Source: W.D.I)	Remittances	Personal Remittances	W.D.I
		Debt Services	Total Debt Services	W.D.I
		Exchange Rate	Real Exchange Rate	W.D.I

		Consumption	Government Final Consumption	W.D.I
		Institutional Quality	Rule of Law	W.G.I

Model:

The following model has been estimated in this study.

$$Distribution.Of.Income = \beta_0 + \beta_1(Debt) + \beta_2(GFCE) + \beta_3(REER) + \beta_4(IQ) + \beta_5(REMIT) + e_i$$

Empirical Analysis:

This section discusses analytical observations on the analysis of the economic model. Generally speaking, the details of the time series are not set. Augmented Dickey-Fuller (ADF) analysis used for stationary data test. Only the Autoregressive Distributed Lag (ARDL) and Error Correction Mechanism (ECM) can achieve a short-to long-run relationship of parameters calculated based on stationary data. In this study, the packages Microfit and E-views are used for empirical results. Test findings are periodically reported.

Descriptive Statistics:

Table 2: Summary of Statistics

Variable_Name	Number of observations	Minimum Value	Maximum Value	Mean	Standard Deviation
LNGINI	35	3.506436	3.999112	3.654681	0.129462
LNLAW	35	0	1.365241	0.92529	0.3248
LNPREMIT	35	4.288064	6.745481	5.229157	0.842424
LNREER	35	4.556526	5.444213	4.806838	0.260257
LNTDS	35	-0.97571	1.934583	0.609762	0.785379
LNGFCE	35	1.994785	2.494776	2.247121	0.135868

Source: Author's Own Calculations

Unit Root Test:

The income distribution results examined, exchange rate, remittances, debt services, institutional quality and final consumption values mentioned here in table below.

Table 3: Unit Root Test

Variable_Name	**Augmented Dicky Fuller Test Value**	**Integration**
LNGINI	0.9940	I (1)
LNPREMIT	0.1810	I (1)
LNLAW	0.3347	I (0)
LNREER	0.9430	I (1)
LNGFCE	0.4331	I (1)
LNTDS	0.2520	I (1)

Note: Significance Level
* = 10%
* = 5% level and
* = 1%

The dicky fuller test found that LNGINI, LNREER, LNPREMIT, LNGFCE, LNTDS found I(1) integrated and LNLAW found I(0) integrated.

Cointegration Test:

There are two types of techniques which are used in ARDL to check the long run relationship between variables, this process is also known as testing of null hypothesis.

H0 : P1 = 0 *(No cointegration in Long run)*

H1 : P1 = 0 *(Long run Cointegration)*

F-Statistic measurements have access to critical values in the F-Statistics Check, Pesaran et al. (2001). The ARDL method used to co-integrate variables using the Ordinary Least Square (OLS) technique.

The bound test results are shown in table 4 below, with an F-Stat value greater than the critical value for the upper bound of 1%. The ARDL coefficients were measured in the second phase in the long run.

Table:4 Bound Test

Dependent Variable	SBC Lag	F-Stat	P-Value	Outcome	Upper Bound Value
Distribution of Income	1	5.11	0.00	Cointegration	4.4568

F-Statistics, based on the Bound test. The F-Stat estimation was greater than the Upper-bound critical value at a point of 1 percent level of significance (4.4568). Therefore, no co-integration has been identified, so the hypothesis is rejected.

Long Run Relationship by Using ARDL:

The ARDL approach used in the second step for the regulation of the model's coefficients in long run.

Table 5: Long Run Estimation Results

Variable Name	Coefficient	Std_Error	t-Stat	P.Value
LNPREMIT	.10057	.028765	3.4963	0.002
LNTDS	.20970	.040544	5.1722	0.000
LNREER	.40848	.076180	5.3621	0.000
LNGFCE	.38977	.10112	3.8544	0.001
LNLAW	-.12819	.042657	-3.0052	0.006
R2		.98620		
Adjusted R2		.98210		
Durbon Watson		1.8720		

According to the long-run findings of the table, the overall debt resources were statistically significant. We will explain that the debt multiplier symbol shows that there will be a 2% increase in income distribution if there is a one-unit increase in total debt services. Here are some of the previous findings of various authors in support of our observations: (Akram-2016; Asgher-2018; Bazillier-2016). The positive relationship between distribution of income and debt resources is illustrated. Individual transactions have shown a very important relationship to income distribution. The one percent increase in remittances contributes one percent increase in income distribution, in terms of the same results(Meyer-2017; Acharya-2012; siddique-2016). The sign of final consumption shows that the distribution of income and the final demand are important and optimistic. In addition, the magnitude of the GFCE means that if the final consumption increases in one unit, the income distribution increased by 3.8. The economists who are also linked to our results, i.e. the final consumption, have a positive impact on the distribution of income.(Dabla et al, 2015; Lahouij, 2017; Coskun et al, 2019). For every state, the real exchange rate is very important and plays a key role in the distribution of income. As an exchange rate, the distribution of income is strongly and favorably related. This can therefore be concluded from the above results that if the real exchange rate increases by 1%, the distribution of income will raise by 4%. Law and order also have a significant role to play in the country's economic environments, which have had negative effects on income inequality (Min; 2015; Chen–2012; Garcia–1999).As in the case of an equation or rule of law, there is negative sign. This is statistically significant and detrimental. There is also the same connection between the same authors: the negative effect of institutional quality on income inequality. If the rule of law increases by one point, then it will decreased income inequality by 1.2 percent The external debt ratio is statistically insignificant and constant (e.g. B1<0) and is consistent with theoretical expectations (Madni–2019; Zhuang–2010; Doan–2019). F-Statistics 241.0208 was statistically significant at 1% of the estimated probability value of 0.0000. This measures the combined denotation of the explanatory variables. The R2 (98.73 per cent) shows that the total variance in the regression equation.

At the same time, the high correlation fitness remained highly associated, and the independent variables are strongly correlated with the dependent variable after adjusting the degree of freedom as shown in the R2.998310 changes (98.31 per cent).

Error Correction Model (ECM Model)

The method provides an effective means to incorporate the long-term relationship between the factors and the short-term relationship between the original variance, and a diversified process in which the motion of factors equates the long-term equilibrium in all phases of the intervening period known as the error correction model. The model error correction (ECM) observed all variables endogenous in order to remove the endogenous problem from the model.

Therefore we have implemented a method of an error correction process for the short-term interaction of explanatory variables, income distribution and explanatory variables. For the improvements mentioned in the short term addiction factors.

Table 6: Short Run Estimation Results

Variables	Coefficients	Std. Error	t-Statistic
LNTDS	**.013018**	**.013878**	**.93800**
LNPREMIT	**.031296**	**.0078576**	**3.9829**
LNGFCE	**.12129**	**.041591**	**2.9163**
LNREER	**.035188**	**.074991**	**.46924**
LNLAW	**-.039892**	**.016278**	**-2.4507**
Ecm (-1)	**-.31119**	**.092456**	**-3.3658**

R^2	.72602
Adjusted R^2	.63834
Durbin-Watson	1.8620

The long term relationship between variables is verified by the substantial error rectification duration. The error correction rate also represents the speed of adaptation. It thus observed that about 30% of short-run balance changes can be made after one year. The inference that wealth inequality impacts is derived from the influence of macroeconomic policies. It implies, if a change in the trend of disparity of wealth unexpectedly happens during a century, in the next age it will return back to its previous position. In the short term, very few macroeconomic factors affect the GINI indicator, which suggests the shift in income inequality is largely related to long-term macroeconomic policy.

Short term results show the favorable correlation of the GINI coefficient for remittances and finish usage, which has very important distributive effects, such as remittances and the rise in final demand and income distribution, both in the short and long term. The diagram shows that the short-run coefficient is in critical limits, representing the consistency of the coefficients during the sampling period.

The short-term effects was similar with the long-term results. The proposed error correction coefficient (ECM t-1) is a valid and significant one-percent measure. It indicates that in the current year, nearly 70% of the shock unbalance converges to a long-term balance. However, the R2 value shows how close to the statistical data the line of regression is, indicating the most suitable match.

Diagnostic Test:

For a set of diagnostic tests and CUSUM assessments we have used the ARDL model

Table 6: Diagnostic Test Table

Test Statistics	LM Version	F Version
A:Serial Correlation	CHSQ(1) = .18482[.667]	F(1,24) = .13117[.720]
B:Functional Form	CHSQ(1) = .023385[.878]	F(1,24) = .016519[.899]
C:Normality	CHSQ(2) = 3.0609[.216]	Not applicable
D:Heteroscedasticity	CHSQ(1) = 2.6207[.105]	F(1,32) = 2.6725[.112]

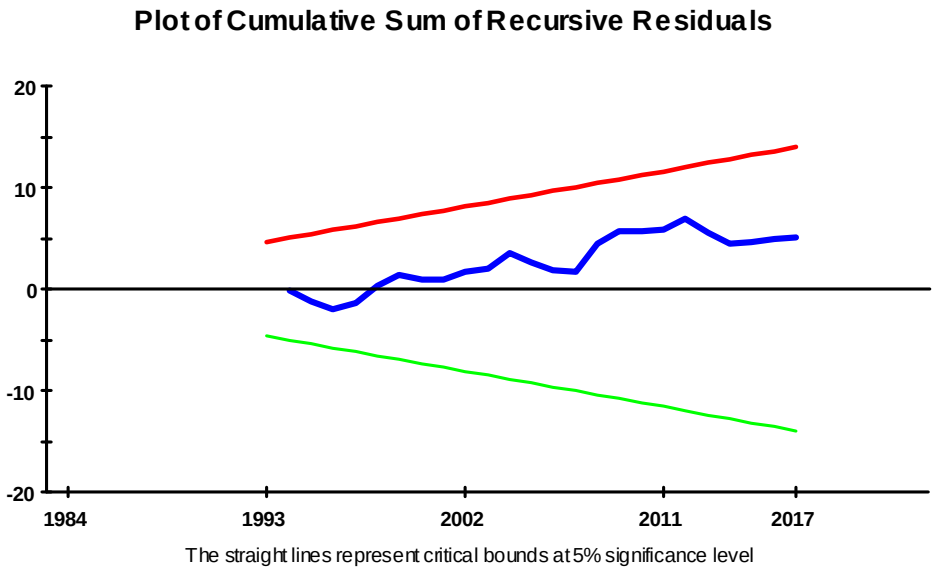
The results show that there is no autocorrelation, sequence associations or Heteroscedasticity. The chance of null being greater than 0.05 is accepted for the four statistical tables (Heteroscedasticity, Functional, Serial, and Normal).

The serial similarity method used for identifying the residual problems. In this test, the null hypothesis is accepted if the probability value is above 0.05. It indicates that in the auto-regressive model, the residuals are statistically insignificant. (Ivanova, 2006)

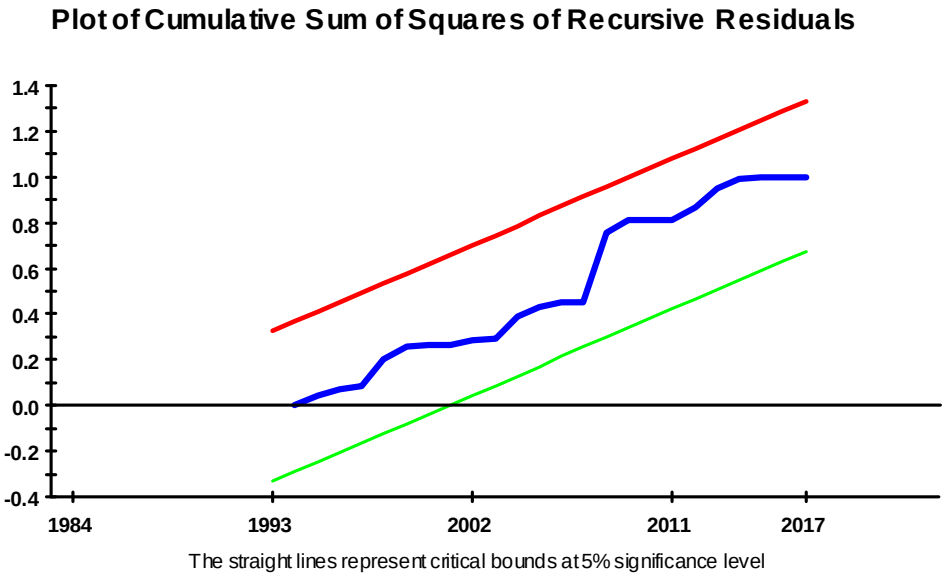
Applying the Ramsey-Reset test for the role of the model. This method was used to track the model's stability. Only if the probability is greater than 0.05 is the null hypothesis accepted. (Ivanova, 2006). Residuals must usually be allocated for supporting and rejecting the null hypothesis. The kurtosis and skewness coefficients must be standard for this reason. If P-value is greater than 0.05, the normality check indicates that the null hypothesis is accepted. After the detailed tests, which applied for the selected model, we can forecast according to the outcomes of the model.

The cumulative sum (CUSUM) and cumulative square sum (CUSUMsq) analyses are carried out to analyze short-run stability and long-run stability of parameters. Figures 1 and 2 show the CUSUM and the CUSUMsq test. The null hypothesis is not rejected as the equation is correctly defined the statistical plot dropped below 5 % critical limitations. The model appears to be stable and well defined

Graph 1: The income distribution model via CUSUM Approach:



Graph 2: Model Stability Test (CUSUM SQ)


Plot of Cumulative Sum of Squares of Recursive Residuals
1.4
1.2
1.0
0.8
0.6
0.4
0.2
0.0
-0.2
-0.4
1984
1993
2002
2011
2017
The straight lines represent critical bounds at 5% significance level

V. CONCLUSION & POLICY IMPLICATIONS:

This research applied an ARDL-co-integration study approach to the short-term and long-term relationship between income distribution, exchange rate andcurrency devaluation. The Pakistani government has used the devaluation method several times without much success in tackling the persistent trade balance crisis. The allocation of resources remains an important government policy issue as Pakistan keeps growing economically.

The confrontation has shown Pakistan's successes. The variables used in this study demonstrate how the model's variables are co-integrated. Nominal devaluation aggravates income inequality in Pakistan. The real currency has an impact on the distribution of income. Improper rule of law and currency devaluation worsen the distribution of income.

Thanks to the persistent balance of payments issues, the depreciation was used many times to boost exports. As the economy grew, supply demand increased to satisfy the export demand. Pakistan is a net importer of electricity. Consequently, the desired result was not reached, but a more tragic issue was the growth in deprivation. So much focus can be given to international balancing at the cost of internal problems, e.g. rising debt and the exchange rate to an increasing population.

The global crisis has also had a strong impact on transfer payments. In this respect, remittances used for spending as well as savings, employment, health, etc. are extremely important, resulting in a decline in income distribution. Migration is a major source of income for the labor-oriented developing countries. While remittances mostly used for consumption, it can lead to financial growth in these countries, if it focuses primarily on spending, saving or business.

The amount of real trade is significantly higher than the official statistics. International flows are an important source of financial aid to emerging countries as they raise family incomes and potentially lead to a reduction in vulnerability.

The results of this study will serve as the basis for further studies into the ties between income, transactions and other macroeconomic indicators. We can at the same time assist in developing countries adequate government policies to achieve sustainable economic growth through financial interpretations.

Policy Implications:

The study shows that there are certain strategies implemented to figure out how the policy works most efficiently.

The government will reflect on the debt & debt management profile and its spending products. They would best try to use the credit funds for effective and successful national programs of development. The creation, maintenance and management of a secure database by the government is critical.

Furthermore, a transparent lending mechanism should be created which includes identification, assessment and authorization of projects, credit and contract agreements, loan payments, monitoring, project execution evaluation, and repayment of loans. Finally, a policy structure should be established that establishes a sustainable investment climate in the region, both domestically and abroad.

As the government has the power or authority for currency devalue or valuation as the government will stabilize the economy under two different economic scenarios. According to the various economists no, even if the exports can be increased, and also has a huge effect on imports?? It therefore advises that the government do not lower the currency's value as that not only raises the twin account deficit, but also reduces the household's buying power an increase the foreign debt as well.

Because expensive and nonproductive commodities stress the current account or the balance of payments, the State should imposed strong duties on nonproductive products to deter the snobbery and to increase government revenues when the nonproductive commodity is imported. The aim of the heavy tax may also help local businesses, as the people buy.

In the economy, foreign funds play a key role. It not only helps to reduce the current account deficit, but also raises the regional GDP level. Thus the State needs to increase workers ' skills because they have paid more than the nonprofessional or less skilled. Consulates and cultural centers of the state can be used for teaching in this regard. This will favor the receiving country in terms of financial transactions and increase the demand for skilled jobs. Institutions should be fully equippedwith the latest technology and data access.

The government should concentrate on the welfare schemes for the financially poor people as their intake is higher than that the wealthy people. So they utilized, whatever benefits they receive from the provision of subsidies, taxation and income support.

REFERENCES:

1. Ali, R., & Mustafa, U. (2012). External debt accumulation and its impact on economic growth in Pakistan. *The Pakistan Development Review*, 79-95
2. Hameed, A., Ashraf, H., & Chaudhary, M. A. (2008). External debt and its impact on economic and business growth in Pakistan. *International Research Journal of Finance and Economics*, *20*(1), 132-140.
3. Jayaraman, T. K., & Lau, E. (2009). Does external debt lead to economic growth in Pacific island countries? *Journal of Policy Modeling*, *31*(2), 272-288.
4. Adegbite, E. O., Ayadi, F. S., & Felix Ayadi, O. (2008). The impact of Nigeria's external debt on economic development. *International Journal of Emerging Markets*, *3*(3), 285-301.
5. Fonchamnyo, D. C. (2009). Debt relief incentives in highly indebted poor countries (HIPC): An empirical assessment. *International Advances in Economic Research*, *15*(3), 322-335.
6. Frankel, J. A., & Romer, D. H. (1999). Does trade cause growth?.*American economic review*, *89*(3), 379-399.
7. Frankel, J. A., & Romer, D. H. (1999). Does trade cause growth?.*American economic review*, *89*(3), 379-399.
8. Lin, F., & Sim, N. C. (2013). Trade, income and the baltic dry index. *European Economic Review*, *59*, 1-18.
9. Feyrer, J. (2009). *Distance, trade, and income-the 1967 to 1975 closing of the suez canal as a natural experiment* (No. w15557). National Bureau of Economic Research.
10. Brückner, M., & Lederman, D. (2012). *Trade causes growth in sub-Saharan Africa*. The World Bank.
11. Frankel, J. A., & Romer, D. H. (1999). Does trade cause growth?.*American economic review*, *89*(3), 379-399.
12. Naveed, A., Wood, G., & Ghaus, M. U. (2016). Geography of Poverty in Pakistan–2008-09 to 2012-13: Distribution, Trends and Explanations.
13. Najam, A., & Bari, F. (2017). Pakistan National Human Development Report. Unleashing the Potential of a Young Pakistan.
14. Black, R. E., Victora, C. G., Walker, S. P., Bhutta, Z. A., Christian, P., De Onis, M., ... &Uauy, R. (2013). Maternal and child undernutrition and overweight in low-income and middle-income countries. *The lancet*, *382*(9890), 427-451.
15. Javid, M., & Sharif, F. (2016). Environmental Kuznets curve and financial development in Pakistan. *Renewable and Sustainable Energy Reviews*, *54*, 406-414.
16. Ahmed, S. A., Cho, Y., &Fasih, T. (2019). Pakistan at 100: Human Capital.
17. Khaliq, F., & Ahmad, W. (2018). State of health sector in Pakistan. *State Bank of Pakistan Staff Notes*, *1*, 18.
18. Amjad, R., & Kemal, A. R. (1997). Macroeconomic policies and their impact on poverty alleviation in Pakistan. *The Pakistan development review*, 39-68.
19. Haq, R., &Arif, G. M. (2004). Transition of Poverty in Pakistan: Evidence from the Longitudinal Data [with Comments]. *The Pakistan Development Review*, 895-909.
20. Arif, G. M. (2004). Child health and poverty in Pakistan. *The Pakistan Development Review*, 211-238.
21. De Haas, H. (2007). Remittances, migration and social development. *A conceptual review of the literature*.
22. De Haas, H. (2007). Remittances, migration and social development. *A conceptual review of the literature*.

23. Adenutsi, D. E. (2010). Do international remittances promote human development in poor countries? Empirical evidence from Sub-Saharan Africa.
24. Adenutsi, D. E. (2010). Do international remittances promote human development in poor countries? Empirical evidence from Sub-Saharan Africa.
25. Fullenkamp, C., Cosimano, M. T. F., Gapen, M. T., Chami, M. R., Montiel, M. P., & Barajas, M. A. (2008). *Macroeconomic consequences of remittances* (No. 259). International Monetary Fund.
26. De Haas, H. (2007). Remittances, migration and social development. *A conceptual review of the literature*.
27. Nishat, M., &Bilgrami, N. (1991). The impact of migrant worker's remittances on Pakistan economy. *Pakistan Economic and Social Review*, 21-41.
28. Ratha, D. (2005). Workers' remittances: an important and stable source of external development finance. *Remittances: development impact and future prospects*, 19-51.
29. Jongwanich, J. (2007). *Workers' remittances, economic growth and poverty in developing Asia and the Pacific countries*. United Nations Publications.
30. Adams, R. H. (1991). *The effects of international remittances on poverty, inequality, and development in rural Egypt* (Vol. 86). Intl Food Policy Res Inst.
31. Adams, R. H., & Mahmood, Z. (1992). The effects of migration and remittances on inequality in rural Pakistan [with comments]. *The Pakistan Development Review*, *31*(4), 1189-1206.
32. Adams Jr, R. H. (1998). Remittances, investment, and rural asset accumulation in Pakistan. *Economic Development and Cultural Change*, *47*(1), 155-173.
33. Richard, A. H. J., & Page, J. (2003). *International migration, remittances, and poverty in developing countries*. The World Bank.
34. Adams Jr, R. H., & Page, J. (2005). Do international migration and remittances reduce poverty in developing countries?.*World development*, *33*(10), 1645-1669.
35. Aydas, O. T., Metin-Ozcan, K., &Neyapti, B. (2005). Determinants of workers' remittances: the case of Turkey. *Emerging Markets Finance and Trade*, *41*(3), 53-69.
36. Orozco, M. (2002). Globalization and migration: The impact of family remittances in Latin America. *Latin American politics and society*, *44*(2), 41-66.
37. Catrinescu, N., Leon-Ledesma, M., Piracha, M., &Quillin, B. (2009). Remittances, institutions, and economic growth. *World Development*, *37*(1), 81-92.
38. Gilani, I., Khan, M. F., & Iqbal, M. (1981). Labour migration from Pakistan to the Middle East and its impact on the domestic economy: part I.
39. Amjad, R., & Ahmed, M. A. (1986). Impact of Workers' Remittances from the Middle East on Pakistan's Economy: Some Selected Issues [with Comments]. *The Pakistan Development Review*, *25*(4), 757-785.
40. Burney, N. A., & Ahmad, M. A. (1987). Workers' Remittances from the Middle East and their Effect on Pakistan's Economy [with Comments]. *The Pakistan Development Review*, *26*(4), 745-763.
41. Quibria, M. G. (1986). Migrant workers and remittances: Issues for Asian developing countries. *Asian Development Review*, *4*(1), 78-99.
42. Kandil, M., &Metwally, M. F. (1990). The impact of migrants' remittances on the Egyptian economy. *International migration (Geneva, Switzerland)*, *28*(2), 159-180.
43. Mohammad, I., Demery, L., Ghulam Mohammad, A., Farooqui, F. A., Tariq, J., Haq, R., & Khan, G. (1983). Migration Patterns in Pakistan: Preliminary Results from the PLM Survey, 1979.
44. Kandil, M. and M. F. Metwally 1990. The impact of migrant remittances on the Egyptian economy. International Migration, 26(2): 159-181.
45. Arif, G. M. (1999). *Remittances and investments at the household level in Pakistan* (Vol. 3, No. 166). Islamabad: Pakistan Institute of Development Economics.
46. Glytsos, N. P. (2002). *Dynamic effects of migrant remittances on growth: an econometric model with an application to Mediterranean countries* (No. 74). Centre of Planning and Economic Research.
47. Abdus, S., & Zafar, I. (2005). The Contribution of Workers' Remittances to Economic Growth in Pakistan. *PIDE-Working Papers*.
48. Bouhga-Hagbe, J. (2006). *Altruism and workers' remittances: Evidence from selected countries in the Middle East and Central Asia* (No. 2006-2130). International Monetary Fund.
49. Karagöz, K. (2009). WORKERS'REMITTANCES AND ECONOMIC GROWTH: EVIDENCE FROMTURKEY. *Journal of Yaşar University*, *4*(13), 1891-1908.

50. Jahjah, M. S., Chami, M. R., &Fullenkamp, C. (2003). *Are immigrant remittance flows a source of capital for development* (No. 3-189). International Monetary Fund.
51. Muhammad, M., & Ahmed, J. (2009). Dynamic impact of remittances on economic growth: A case study of Pakistan. *Forman Journal of Economic Studies*, *5*, 59-74.
52. Siddique, A., Selvanathan, E. A., &Selvanathan, S. (2012). Remittances and economic growth: empirical evidence from Bangladesh, India and Sri Lanka. *Journal of development studies*, *48*(8), 1045-1062.
53. Sami, J. (2013). Remmittances, banking sector development and economic growth in Fiji. *International Journal of Economics and Financial Issues*, *3*(2), 503-511.
54. Meyer, B. D., & Sullivan, J. X. (2011). Further results on measuring the well-being of the poor using income and consumption. *Canadian Journal of Economics/Revue canadienned'économique*, *44*(1), 52-87.
55. Meyer, B. D., & Sullivan, J. X. (2012). Identifying the disadvantaged: official poverty, consumption poverty, and the new supplemental poverty measure. *Journal of Economic Perspectives*, *26*(3), 111-36.60
56. Attanasio, O., Battistin, E., &Ichimura, H. (2004). *What really happened to consumption inequality in the US?* (No. w10338). National Bureau of Economic Research.
57. Johnson, D. S., Smeeding, T. M., & Torrey, B. B. (2005). Economic inequality through the prisms of income and consumption. *Monthly Lab. Rev.*, *128*, 11.
58. Rehman, H. U., Khan, S., & Ahmed, I. (2008). Income distribution, growth and financial development: A cross countries analysis. *Pakistan Economic and Social Review*, 1-16.
59. Stiglitz, J., Sen, A. K., & Fitoussi, J. P. (2009). The measurement of economic performance and social progress revisited: reflections and overview.
60. Heathcote, J., Perri, F., &Violante, G. L. (2010). Inequality in times of crisis: Lessons from the past and a first look at the current recession. *manuscript, University of Minnesota*.
61. Krueger, D., Mitman, K., & Perri, F. (2016). Macroeconomics and household heterogeneity. In *Handbook of Macroeconomics* (Vol. 2, pp. 843-921). Elsevier.
62. Ruiz, N. (2011). Measuring the joint distribution of household's income, consumption and wealth using nested Atkinson measures.
63. Stiglitz, J. E. (2012). Macroeconomic fluctuations, inequality, and human development. *Journal of Human Development and Capabilities*, *13*(1), 31-58.
64. Stiglitz, J. E. (2012). Macroeconomic fluctuations, inequality, and human development. *Journal of Human Development and Capabilities*, *13*(1), 31-58.
65. Fitoussi, J. P., &Saraceno, F. (2010). Inequality and macroeconomic performance.
66. Browning, M., &Leth-Petersen, S. (2003). Imputing consumption from income and wealth information. *The Economic Journal*, *113*(488), F282-F301.
67. Attanasio, O. P., &Pistaferri, L. (2016). Consumption inequality. *Journal of Economic Perspectives*, *30*(2), 3-28.
68. Carroll, C. D., Crossley, T. F., &Sabelhaus, J. (Eds.). (2015). *Improving the Measurement of Consumer Expenditures* (Vol. 74). University of Chicago Press.
69. Meyer, B. D., Mok, W. K., & Sullivan, J. X. (2015). Household surveys in crisis. *Journal of Economic Perspectives*, *29*(4), 199-226.
70. Piketty, T., &Saez, E. (2003). Income inequality in the United States, 1913–1998. *The Quarterly journal of economics*, *118*(1), 1-41.
71. Burkhauser, R. V., Feng, S., Jenkins, S. P., & Larrimore, J. (2012). Recent trends in top income shares in the United States: reconciling estimates from March CPS and IRS tax return data. *Review of Economics and Statistics*, *94*(2), 371-388.
72. Blundell, R., Pistaferri, L., & Preston, I. (2008). Consumption inequality and partial insurance. *American Economic Review*, *98*(5), 1887-1921.
73. Attanasio, O., Hurst, E., &Pistaferri, L. (2014). The evolution of income, consumption, and leisure inequality in the United States, 1980–2010. In *Improving the measurement of consumer expenditures* (pp. 100-140). University of Chicago Press.
74. Aguiar, M., &Bils, M. (2015). Has consumption inequality mirrored income inequality?.*American Economic Review*, *105*(9), 2725-56.

75. Fisher, J., Johnson, D. S., &Smeeding, T. M. (2015). Inequality of Income and Consumption in the US: Measuring the Trends in Inequality from 1984 to 2011 for the Same Individuals. *Review of Income and Wealth*, *61*(4), 630-650.
76. Meyer, B., and Sullivan, J., "Consumption and Income Inequality in the U.S. Since the 1960s," Working Paper, July 2016
77. Saez, E., & Zucman, G. (2016). Wealth inequality in the United States since 1913: Evidence from capitalized income tax data. *The Quarterly Journal of Economics*, *131*(2), 519-578.
78. Jantti, M., Sierminska, E., &Smeeding, T. (2008). The Joint Distribution of Household Income and Wealth.
79. Meyer, B. D., & Sullivan, J. X. (2011). Further results on measuring the well-being of the poor using income and consumption. *Canadian Journal of Economics/Revue canadienned'économique*, *44*(1), 52-87.
80. Meyer, B. D., & Sullivan, J. X. (2003). *Measuring the well-being of the poor using income and consumption* (No. w9760). National Bureau of Economic Research.
81. Meyer, B. D., & Sullivan, J. X. (2012). Identifying the disadvantaged: official poverty, consumption poverty, and the new supplemental poverty measure. *Journal of Economic Perspectives*, *26*(3), 111-36.
82. Aguiar, M., &Bils, M. (2015). Has consumption inequality mirrored income inequality?.*American Economic Review*, *105*(9), 2725-56.
83. Fisher, J. D., Johnson, D. S., &Smeeding, T. M. (2013). Measuring the trends in inequality of individuals and families: Income and consumption. *American Economic Review*, *103*(3), 184-88.
84. Attanasio, O. P., &Pistaferri, L. (2016). Consumption inequality. *Journal of Economic Perspectives*, *30*(2), 3-28.
85. Fuchs-Schündeln, N., Krueger, D., & Sommer, M. (2010). Inequality trends for Germany in the last two decades: A tale of two countries. *Review of Economic Dynamics*, *13*(1), 103-132.
86. Krueger, D., Mitman, K., & Perri, F. (2016). Macroeconomics and household heterogeneity. In *Handbook of Macroeconomics* (Vol. 2, pp. 843-921). Elsevier.
87. Fisher, J., Johnson, D., Latner, J. P., Smeeding, T., & Thompson, J. (2016). Inequality and mobility using income, consumption, and wealth for the same individuals. *RSF: The Russell Sage Foundation Journal of the Social Sciences*, *2*(6), 44-58.
88. Barro, R. J., & Sala-i-Martin, X. (1997). Technological Diffusion. *Convergence and*.
89. Adelman, I., & Robinson, S. (1988). Macroeconomic adjustment and income distribution: Alternative models applied to two economies. *Journal of Development Economics*, *29*(1), 23-44.
90. Lindert, P. H., & Williamson, J. G. (1985). Growth, equality, and history. *Explorations in Economic History*, *22*(4), 341-377.
91. Lindert, P. H., Brenner, Y. S., Kaelble, H., & Thomas, M. (1991). Income Distribution in Historical Perspective.
92. Papanek, G. F., &Kyn, O. (1986). The effect on income distribution of development, the growth rate and economic strategy. *Journal of Development Economics*, *23*(1), 55-65.
93. Levine, R., &Renelt, D. (1992). A sensitivity analysis of cross-country growth regressions. *The American economic review*, 942-963.
94. Leamer, E. E. (1983). Let's take the con out of econometrics. *Modelling Economic Series*, *73*, 31-43.
95. Chu, M. K. Y., Davoodi, M. H. R., & Gupta, M. S. (2000). *Income distribution and tax and government social spending policies in developing countries* (No. 0-62). International Monetary Fund.
96. McKay, A. (2004). Assessing the Impact of Fiscal Poverty on Poverty.
97. Mosley, P., Hudson, J., & Verschoor, A. (2004). Aid, poverty reduction and the 'new conditionality'. *The economic journal*, *114*(496), F217-F243.
98. Stefano, P., Anand, R., & Tiongson Erwin, R. (2005). How Does the Composition of Public Expenditure Matter.*World Bank Policy Research Working Paper*, (3555).
99. Rhee, C., Zhuang, J., Kanbur, R., & Felipe, J. (2014). Confronting Asia's rising inequality: policy options. In *Inequality in Asia and the Pacific* (pp. 103-124). Routledge.
100. Castro-Leal, F., Dayton, J., & Demery, L. (2000). Public spending on health care in Africa: do the poor benefit?.*Bulletin of the World health Organization*, *78*, 66-74.
101. Davoodi, H. R., Tiongson, E. R., &Asawanuchit, S. S. (2010). Benefit incidence of public education and health spending worldwide: evidence from a new database. *Poverty & Public Policy*, *2*(2), 5-52.

102. Cox, D., Hansen, B. E., & Jimenez, E. (2004). How responsive are private transfers to income? Evidence from a laissez-faire economy. *Journal of Public Economics*, *88*(9-10), 2193-2219.
103. Cox, D., &Jiminez, E. (1993). *Private transfers and the effectiveness of public income redistribution in the Philippines* (No. 236). Boston College Department of Economics.
104. Sahn, D. E., & Alderman, H. (1996). The effect of food subsidies on labor supply in Sri Lanka. *Economic Development and Cultural Change*, *45*(1), 125-145.
105. McKay, A. (2002). *Assessing the impact of fiscal policy on poverty* (No. 2002/43). WIDER Discussion Papers//World Institute for Development Economics (UNU-WIDER).
106. Goñi, E., López, J. H., &Servén, L. (2008). *Fiscal redistribution and income inequality in Latin America*. The World Bank.
107. Easterly, W., & Fischer, S. (1999). *Inflation and the Poor*. The World Bank.
108. Bourguignon, F., & Fields, G. (1997). Discontinuous losses from poverty, generalized Pα measures, and optimal transfers to the poor. *Journal of Public Economics*, *63*(2), 155-175.
109. Meyer, D., & Shera, A. (2017). The impact of remittances on economic growth: An econometric model. *EconomiA*, *18*(2), 147-155.
110. Acharya, C. P., & Leon-Gonzalez, R. (2012). The impact of remittance on poverty and inequality: A micro-simulation study for Nepal. *National Graduate Institute for Policy Studies*, 1-32.
111. Siddique, H. M. A., Shehzadi, I., Manzoor, M. R., & Majeed, M. T. (2016). Do international migration and remittances reduce poverty in developing countries?.
112. Lahouij, H. (2017). The Effects of Income inequality on Economic Growth Evidence from MENA Countries.
113. Coskun, Y., SencerAtasoy, B., Morri, G., & Alp, E. (2018). Wealth effects on household final consumption: stock and housing market channels. *International Journal of Financial Studies*, *6*(2), 57.
114. Dabla-Norris, M. E., Kochhar, M. K., Suphaphiphat, M. N., Ricka, M. F., &Tsounta, E. (2015). *Causes and consequences of income inequality: A global perspective*. International Monetary Fund.
115. Min, H. G., Shin, S. O., & McDonald, J. A. (2015). Income Inequality and the Real Exchange Rate: Linkages and Evidence. *Annals of Economics & Finance*, *16*(1).
116. Chen, J. (2012). Real exchange rate and economic growth: evidence from Chinese provincial data (1992-2008).
117. Garcia, P. (1999). *Income inequality and the real exchange rate* (No. 54). Banco Central de Chile.
118. Madni, G. R. (2019). Probing Institutional Quality Through Ethnic Diversity, Income Inequality and Public Spending. *Social Indicators Research*, *142*(2), 581-595.
119. Zhuang, J., de Dios, E., & Martin, A. L. (2010). Governance and institutional quality and the links with economic growth and income inequality: With special reference to developing Asia. *Asian Development Bank Economics Working Paper Series*, (193).
120. Doan, H. Q. (2019). Trade, Institutional Quality and Income: Empirical Evidence for Sub-Saharan Africa. *Economies*, *7*(2), 48.