Economic Factors Affecting Economic Inequality Within the Economy: A Case of Pakistan

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Abstract

It is now common knowledge that rising inequality has serious consequences for economic growth and stability. As well as potentially leading to suboptimal use of human resources, political and economic instability, and an increased risk of disaster. Income inequality is also associated with lower levels of social cohesion; therefore, it is important to identify the causes of the economic inequality that exists in the country. So, looking at the economy of Pakistan as a case, this study is set out to identify the factors that help explain income inequality. It was decided to use the following categories of data as independent variables: financial development; FDI; GDP growth; remittances; inflation; poverty; and unemployment. Researcher compiled the study's statistical information from a variety of online sources. This research used both the statistical software EViews and the Microsoft Office suite of products to carry out the various processes and conduct the empirical analysis. In addition, we used the autoregressive distributed lag model (ARDL). Long-term co-integration among the dataset's variables was also obtained without losing any of the data's short-term context. For this study, we constructed an unbalanced panel data set and used annual data from 2006 to 2020. To begin, we used matrix correlation coefficients to make some statistical estimates. ARDL model is also used to double-check the direction of the ADF unit root test's results. When looking at the ARDL's estimates for the future, it's clear that issues like unemployment, inflation, and poverty all contribute to a widening income gap. On the other hand, three factors have been identified as driving a reduction in income inequality: economic growth, remittances, and financial development. However, there is little proof that foreign direct investment improves a country's economy.

***Keywords*:** *Income Inequality, FDI, Remittances, GDP, ARDL*

Introduction

The degree to which a society's income is unequally distributed is determined by the nature of economic growth and the distribution of income earned via factor markets, especially the labor and capital markets. The distribution of income also affects the economic growth. People with lower average incomes would not benefit from a gain in the national income if more economic growth is associated with higher income disparity. The correlation between economic growth and improvements in food security and nutrition, as well as average wage growth, may be less than expected in regions with substantial income disparity. This is especially true in nations with a wide wealth disparity to begin with. Hunger and malnutrition must be solved in a society where economic growth goes hand in hand with widespread inequality (Omar and Inaba, 2020).

Over the past two decades, a reversal of the trend in the evolution of the international distribution of income has been observed. In fact, both in certain industrialized countries and in various developing countries (DCs), the gap between incomes has widened again, whereas it had (sometimes sharply) narrowed during the previous decades. Researchers have identified a series of factors that may be responsible for this development and would explain the inequalities between nations. These factors include the economic growth, income distribution and income inequality, FDI, remittances, inflation, poverty and unemployment (Munir, & Sultan, 2017). According to Vo, Nguyen, and Tran, (2019) the distribution of income between different social groups and classes and related questions of poverty and economic development have always been among the basic questions of economics. Even the “classics” such as David Ricardo and Karl Marx dealt with questions of distribution. Recently, questions of distribution have gained an important status as a research subject in development economics, in the area of growth theory and in the new political economy. In

modern research, the focus of interest is less on the distribution of income between different groups or classes than on personal income distribution.

In order to reduce poverty, it is essential for the economy to grow, since this will raise people's median incomes. However, this is not a necessary criterion. If there is an increase in inequality as a consequence of growth, then the poor will benefit less than the rich. Growth will benefit the poor more if there is a decrease in inequality (Saleem, Farooq, & Aurmaghan, 2021). Poverty might worsen instead of improving if economic expansion exacerbates existing inequalities. This is because the effect of expanding inequality is greater than the effect of growth, since the negative impact of rising inequality will cancel out the beneficial impact of growth. Many believe that the issue of inequality has emerged as a consequence of workers leaving the more equal agricultural sector for the more economically unequal industrial sector in search of higher wages (Mahmood & Chuadhary, 2021). In addition, remittances and FDI from other countries have grown quickly in recent years, becoming an important new source of external financing for developing countries. According to Khan, Walmsley, and Mukhopadhyay (2021), a more equitable distribution of wealth results as economic activity rises and access to foreign funds improves. In addition to helping developing countries' balance of payments, remittances may boost economic growth by increasing consumption and investment. Households who receive remittances may benefit from a boost to the local economy if they spend and invest more of the money they receive in the community. The amount of empirical research conducted in recent years to confirm the link between remittances and income gaps in various countries and locations has increased dramatically. A possible explanation for this is that people are starting to realize how important remittances are in helping to even out incomes. Therefore, the most important thing is to determine whether the rapid stream of remittances could increase or decrease economic inequity in developing countries. One school of thought is that if high-income families get

remittances and low-income families don't, economic gaps might increase. However, most previous research has shown that remittances reduce macro-level income disparity. Equally important for emerging nations is FDI, or foreign direct investment (Mdingi, & Ho, 2021).

Scope of the Study

This study adds to the current body of literature by exploring the dynamic impact of economic growth, FDI, remittances, inflation, poverty, and unemployment on income inequality. These variables affect national income inequality because they are macroeconomic in nature and are sensitive to changes in either direction (Khan, Khan & Tariq, 2016). Furthermore, the findings of this study would have significant policy consequences, particularly with regard to the efficient use of remittances and FDI inflows in Pakistan to lessen income disparity. These factors contribute greatly to levelling wage disparities and, over time, reducing income inequality in developing nations like Pakistan for instance, these variables contribute to greater wage equality.

Statement of the Problem:

Inequality is on the rise, and this has serious consequences for the economy as a whole, as is well acknowledged. When there is a wide disparity in wealth, it may lead to less efficient use of human resources, add to political and economic unrest, and heighten the prospect of a catastrophe. So, it is very important to find out what is causing the economic divide in the country. Following are the objectives of this study.

1. To identify the impact of Economic Growth on income inequality in Pakistan.
2. To evaluate the association between Remittances and income inequality.
3. To identify the impact of Foreign Direct Investment on income inequality.
4. To evaluate the relationship between Unemployment and income inequality.
5. To identify the impact of Inflation on income inequality.
6. To evaluate the effect of financial development on income inequality.
7. To evaluate the association between Poverty and income inequality.

Research Questions:

1. What is the relation between Economic Growth and income inequality within the country?
2. How does Remittances influence income inequality within the country?
3. How does foreign direct investment influence income inequality within the country?
4. How unemployment affects income inequality within the country?
5. What is the association between inflation and income inequality within the country?
6. What is the association between Financial Development and income inequality within the country?
7. How poverty creates income inequality within the country?

Hypotheses of the Study

To achieve the objective of the study to get the answers of the questions raised, following hypotheses are established.

H1. Economic Growth has a significant and positive impact on income inequality.

H2. Remittances have a significant and positive impact on income inequality.

H3. Foreign Direct Investment has a significant and positive impact on income inequality.

H4. Unemployment has a significant and positive impact on income inequality.

H5. Inflation has a significant and positive impact on income inequality.

H6. Financial Development has a significant and positive impact on income inequality.

H7. Poverty has a significant and positive impact on income inequality.

Literature Review

Income Inequality

Existing empirical studies have employed a wide range of data sets, methodologies, time periods, and geographical locations, all in the name of investigating inequality. Due to this, the body of knowledge is vast and intricate. To that end, this part provides a thorough understanding of the existing empirical research, with a focus on inequality and the

macroeconomic factors that contribute to it. Since growth is so crucial to the field of macroeconomics, many scholars have devoted time and energy to studying the link between inequality and economic development. In spite of this, a consensus has not been reached (Guru & Yadav, 2019).

Omar and Inaba's (2020) influential work offered a historical perspective on the issue by highlighting the parabolic relationship between income and inequality. This connection was emphasized throughout the piece. The parabolic relationship suggests that higher incomes first increase inequality before having the reverse effect and reducing it. However, research by Bilan, Mishchuk, Samoliuk, and Yurchyk (2020) and Mijs (2021), among others, found that income inequality decreased as the degree of inequality increased. But Bonacini, Gallo, and Scicchitano (2021) argued for a nonlinear connection between economic growth and inequality. They emphasized how economic expansion is detrimental to developing countries but beneficial to developed ones. Aside from that, studies by Rodrguez-Pose and Storper (2020) reveal that income and inequality are not strongly correlated. The unequal distribution of income is, without a doubt, a major factor in the failure to end hunger and poverty. The uneven distribution of money is a major contributor to the failure. In spite of widespread progress in reducing extreme poverty, a widening economic gap remains between different groups of people. This suggests that rising prosperity, rather than narrowing income gaps, has been the primary driver of progress in eradicating poverty. This wealth gap has stayed at its current, alarming level for the last fifteen years.

Furthermore, even within the confines of a single country, there is a great deal of variety in the people and communities who live there (Bai, Feng, Yan, Yi, Chen, and Wei, 2020). It was hypothesized in a seminal work by Arndt et al. (2020) that rising incomes and wealth gaps go hand in hand. Thus, economic disparity worsens throughout the early stages of development before showing a general tendency toward improvement later on. Since then,

several studies on economic growth and inequality have been conducted, the results of which are documented in the database. Further, other studies yielded conflicting results (Huang et al. 2015

Finally, reversing the growth of poor working people requires courageous political measures in the productive stage, which eradicate the growing precariousness in which a part of our labor market is installed. A decent minimum wage, as well as measures that are currently being negotiated in the labor reform, can undoubtedly limit this job insecurity that generates income inequality.

Financial Development

Financial development is associated with the adequate allocation of resources for productive enterprises, with the reduction of informality and poverty levels, as well as with greater long-term economic growth. For this reason, the comprehensive evaluation of its development and the analysis of the challenges that arise on this front continue to be an imperative in the country's economic and financial agenda (Vo, Nguyen, Tran, & Vo, 2019). In an effort to enrich the conceptualization of financial development, its evolution and effects on the welfare of citizens, multilateral organizations such as the World Bank and the International Monetary Fund (IMF) have been publishing rigorous reports that today turn out to be a valuable input for local actors who make assessments of the improvements and lags in terms of financial development. Thus, the analysis that is expected to be obtained from the Capital Markets Mission will not only be essential to solve the problems that hinder the development of this market, but also to promote institutional strengthening and best practices that will contribute to that the capital market can develop and align with the financial performance of developed countries (Furceri, & Ostry, 2019).

Park, & Mercado Jr, (2018) has used Panel data for 54 world economies for the period 1999-2011, the estimation is made through the generalized method of moments (GMM). A

positive and statistically significant impact of institutional investors on economic growth is found. This work is mainly based on the study developed by Bauer, (2018) who investigate the relationship between financial development and economic growth for five Central and Eastern European economies, estimating through panel data for the period 1994-2011. The variables used in this study are the same used by these authors and are based on the extensive previous literature that exists regarding this relationship, specifically the variables are divided into two groups: the first corresponds to variables that belong to an equation growth standard, and the second, to variables of the sector and financial development of the sample countries. In addition to these variables, a measure of the presence of institutional investors is included in order to test their effect on economic growth. This variable is calculated as the sum of the assets held in insurance companies, mutual funds, pension funds and bank loans as a percentage of GDP and then the impact of each of these actors is measured separately.

Rao, Sauer, Gidden, & Riahi, (2019) analyzed the relationship between financial development and income inequality for an unbalanced data panel of seventeen countries during the period 1995-2016.For this, four dimensions of financial development are considered: depth, efficiency, stability and liberalization. Three kinds of analysis are performed; first of all, it is studied if the four financial dimensions are linearly related to income inequality. Secondly, it is studied if the relationship between financial development and income inequality depends on the in eat level of the countries. Finally, it is investigated if the relationship between financial depth and income inequality can be explained by the non-linear hypothesis of Greenwood-Jovanovic. Using the GMM estimator from Arellano–B.over/Blundell–Bond, it is found that financial efficiency and stability help to reduce inequality, while financial depth and liberalization contributes to increasing it. The results also show that for high-income countries financial depth is positively related to inequality, while for high-middle-income countries it is negatively related. Finally Analyzing the depth

dimension through the non-linear specification, it is found evidence in favor of the Greenwood-Jovanovic hypothesis youhat stands relationship between financial development and income inequality have an inverted U-shape. Estimates are made by controlling factors such as public spending, years of schooling, trade openness, inflation and GDP per capita.

Foreign Direct Investment

This type of investment makes it possible to increase job creation, increase development and attract foreign currency, stimulate competition, encourage the transfer of new technologies and boost exports. FDI flows have an unprecedented international dynamic in globalization with the transformation of transnational companies and the new cyclical patterns of accumulation. They registered two falls in the first decade of this century, after the maximum reached in 2000 with 1,392,957 million dollars, 86.5% concentrated in developed countries (Chiu, & Lee, 2019).

According to De Haan, Pleninger, & Sturm, (2018), FDI arrives in search of markets, efficiency and natural resources; considerations that must be delimited in the recent experience of Latin America where the appropriation of state companies was sought directly or after the failure of their privatization, due to low wages, low regulations on environmental pollution and, of course, for natural resources. FDI flows show the behavior of the short cycle, accentuated in this speculative phase. From 1999 to 2003 it fell dramatically, more than 60%: the most serious case was Argentina due to the collapse of the neoliberal model. It returns to register an expansive cycle in the following five years that accompanies the real estate bubble, reaching 132,000 million dollars in 2008; Among the countries that concentrate FDI, the greatest dynamism is recorded in Argentina, Chile and Colombia while Mexico, which is the second recipient in the region, presents a much lower rate than that registered in the first years of NAFTA (Sehrawat, & Giri, 2018).

When examining the relationship between FDI in the last twenty-five years, the first thing that jumps out is the scarce or null correlation between the growth of FDI and the region's economy, let alone development. The lost decade saw a large outflow of capital from the region due to interest payments that was not offset by the growing flow of foreign investment (table or data). Already in the 1990s, the growth rates of FDI and non-traditional exports did not match those of economic growth either; Poverty indicators increased significantly and behind them the inequitable inequality of income distribution has deepened and polarized, even more, the economic and social structure. To evaluate the effects of FDI with the new manufacturing-exporting pattern, we must also think about local transformations due to the weight that it means in terms of employment, in the creation or modernization of public infrastructure, due to the precarious living and working conditions of their workers (Jung, & Cha, 2021).

The evaluation of FDI in national development is more complex, since it requires not ignoring the harmful presence of foreign capital in its various forms, that is, as credit capital and financial investment; Added to this is the weight of the new national and transnational financial subjects, formed with the privatized pension funds, and the fiscal policies that favor the arrival of foreign capital and depress the income of public resources. (Ullah, Kui, Ullah, Pinglu, & Khan, 2021).

Remittances

Remittances have gradually expanded over the last decades and now constitute a substantial source of income for many people in developing countries, in contrast to government development assistance and foreign direct investment. If migrants continue to help economically, does this mean that poverty in developing nations will be alleviated? Are they only manipulating the nations into a new kind of dependence, or do they mean what they say? The effects of remittances on poverty, inequality of income and wealth, consumer behavior, health and education, economic growth and development, and the stability of

national balances of payments are hotly debated. On the one hand, this is due to the inadequate data situation, but on the other hand to different research methods (Turegano, & Herrero, 2018).

In the short term, the influence of remittances on the individual household income of the addressees can be assessed as positive. The great advantage of remittances is that they are paid directly to individuals and families. They do not flow to the state, companies or other organizations like state development aid and foreign direct investments, but directly increase disposable household income. As a result, they are usually used in a targeted manner to satisfy specific needs of the recipient families. It should be emphasized at this point that there can be no direct comparison between remittances and the sources of money just mentioned: remittances are private capital and it is therefore solely up to the individual migrants and their families (Ali, Tariq, & Khan, 2022).

Above all, their stability in economic troughs makes them extremely important for the recipients. A counter-cyclical increase is often observed, i.e. migrants abroad increase the level of support for their families in times of economic crisis. This behavior, for example, saved the Philippine economy during the financial crisis in Asia. A recession could only be prevented by increasing remittance flows, which supported domestic consumption and helped to get over the slump in export figures. The immediate increase in the available family income is therefore a significant support, especially for households in the lower- and middle-income segment. In addition to improving the standard of living, remittances also reduce vulnerability in the event of natural disasters or economic crises (LE, & nguyen, 2020).

The comparison of different case studies does not reveal a uniform pattern of effects on income distribution or even shows contradictory results. These differences may be due to traditional migration patterns, among other things. As a rule, it is the members of the middle-income bracket who are the first to move to other countries, as only they can bear the high

costs of migration. As soon as migration networks have formed, the expenses for leaving the country are much lower; which also enables poorer groups of people to emigrate. It is assumed that remittances go hand in hand with this migration behavior and therefore exacerbate an existing income unequal distribution in the short term, which, however, balances out in the long term (Tchamyou, 2020).

The new income situation of the remittance recipients also has an impact on spending behavior. The additional financial resources are primarily spent on daily consumption, house building, land acquisition, medical care and the education of the children. Only a small part of the money is saved and possibly put into investments. However, the main part is spent on covering the cost of living (Park, & Mercado Jr, 2018).

On the other hand, it could also be observed in isolated cases at household level that remittances have a negative impact on growth. In Kenya, for example, farmers with additional remittance income achieved significantly poorer field yields than farmers without financial support from abroad (Dewi, Majid, Aliasuddin, & Kassim, 2018).

Inflation

Inflation has been found to transfer income from wealthy elderly households to middle-class young households with mortgages. Inflation has the effect of closing the gap between young mid-career and older high-income earners. Conversely, in the last decade of deflationary trends, young and mid-career people in their 20s and 40s have been sacrificed, and older wealthy people and high-income earners have benefited. The great increase in interest in the issue of inequality may not be unrelated to long deflation. Therefore, if growth-line policies settle moderate inflation, inequality may close. However, we cannot simply jump to the conclusion that if inflation occurs due to the growth path, the disparity will be closed. It should be noted that there are some reservation conditions (Sehrawat, & Giri, 2018).

Inflation is an income transfer from households to the government/corporate sector, which has a tax-increasing effect on households as a whole. Low-income older people lose as much inflation as high-income older people do (Ratnawati, 2020). Inflation is a phenomenon of an increase in the prices of goods and services produced in a country. This happens when companies believe that their profit margins are too low: they therefore react by increasing their selling prices. Inflation therefore always results from an attempt by companies to improve their profitability (Younsi, & Bechtini, 2020).

Inflation often affects purchasing power. This means that prices are rising faster than wages. A wage-price spiral develops. Real wages are falling and purchasing power is falling. The government aims for an inflation rate of 2-3% per year. This has a positive impact on the economy. If the inflation rate is low, buyers are stimulated to spend more money on goods and services. However, if inflation is high, prices also rise and purchasing power falls. It is also detrimental to confidence in the monetary unit. The central bank intervenes with a higher interest rate in order to curb money creation (Law, & Soon, 2020).

When discussing the consequences of inflation, we address part of the cost of inflation. These are the social and distributional costs of inflation. The effects of inflation are manifold. Based on the relationships between the economic variables, four consequences of inflation can be identified, which means that there are inflation winners and losers (Wollie, 2018).

Poverty

Poverty in living conditions refers to a situation of lasting economic difficulty defined as the inability to cover, for financial reasons, a certain number of daily living expenses considered desirable, even necessary, to have decent living conditions (Destek, Sinha, & Sarkodie, 2020). This rise in inequality and poverty is part of a longer trend. The rate and number of poor people have been increasing since the early 2000s. For nearly 20 years, all economic policies have been held in check. Cuts in taxes and in the cost of labor in particular

weighed down public finances without supporting activity. Even the drop in unemployment that was felt from 2016 had little effect, partly because they are often just bits and pieces of low-paying, flex jobs. Between 2008 and 2018, the standard of living ceiling of the poorest 10% fell by 11% if we do not take social benefits into account: only our social model has made it possible to avoid a major crisis (Mohammad, & David, 2019).

This rise in inequality is the result of many factors. In general, there is a consensus that greater inequality implies higher poverty rates. But this hypothesis is not fulfilled in all cases since it depends on the attributes selected for the analysis. In this sense, several studies revealed that there is a direct relationship between inequality and poverty, that means that the increase in inequality generates greater poverty and vice versa. However, other studies have indicated that the relationship between inequality and poverty is inverse. Therefore, both phenomena are related, sometimes that relationship is stronger and sometimes weaker. In this context, there will be a strong relationship when a reference attribute is analyzed, for example, income. On the contrary, the relationship will be weak when various attributes are analyzed, for example, income is evaluated in poverty, and gender is analyzed in inequality (Del Amo González, Benítez, & Martín-Martín, 2018).

Therefore, the link between poverty and inequality generates the following dilemma in relation to determining whether the public policies applied should be aimed at reducing inequality or reducing poverty, In any case, poverty and inequality are related. In order to achieve economic recovery and reduce poverty and inequality rates, isolated measures cannot be adopted, measures are required to promote the growth of technology-intensive sectors, maintain transfers to the most vulnerable population, as well as restructuring the health and education systems. It is often difficult to know what many deplore and how they would like to remedy it. To begin with, sometimes there is talk of “inequality”; others, of “poverty”. By "poverty" it is possible to understand the lack of goods and resources necessary to lead a

decent life. This is a conception of “absolute” poverty. But generally, “poverty” is understood in “relative” terms: poorer relative to others. "Poverty" then becomes an extreme manifestation of "inequality." in many parts of the world that income would not prevent having the goods and resources necessary to lead a decent life. Thus, in some countries there may be considerable inequality, but not poverty; in others, a lot of equality and a lot of poverty (Monfort, Ordóñez, & Sala, 2018).

Unemployment

The optimal amount of income inequality for maximizing social welfare is a contentious topic. It seems reasonable that individuals who put in more work should be rewarded with a larger wage, since salary income is largely dependent on individual effort. On the other hand, this is by no means how things really are. Disparities in educational and employment possibilities seed economic disparity from a young age, which is unjust from a societal perspective. Our society's limited social mobility, however, makes it almost difficult for kids from the poorest households to become wealthy adults. This is due to the fact that these kids not only end up with lesser levels of knowledge, but also have a poorer return on their time spent learning. As a result, folks who come from lower-income households have a considerably more difficult time finding gainful employment than their more affluent counterparts. The poverty trap hits single-parent households the hardest, therefore they need special attention here (Teixeira, & Loureiro, 2019).

The economic crisis of 2008-2009 resulted in an increase in unemployment for all socio-professional categories. The fall in unemployment in recent years first affected executives (in 2015) and intermediate professions (in 2016), then workers and employees. In 2020, unemployment fell in a sham way, especially during the first confinement of the population which limited job search procedures and reduced availability for work. The

decline in the unemployment rate in 2020 is more marked for employees and manual workers (Mansi, Hysa, Panait, & Voica, 2020).

Two factors are at the root of the world's growing income gap. The first is the polarization of the labor market that has resulted from technical advancements. Middle-class jobs that include more routine tasks and can be easily codified are being eliminated as a result of technological advancements. New employment opportunities arise, but those who are unable or unwilling to adjust to the shifting labor market are pushed out. Those that are disadvantaged by this trend are destined for low-paying occupations with uncertain schedules and low pay (Ulu, 2018). The second element essential to comprehending the widening gap is the aftereffect of the recent economic crisis. A troubling labor oddity in our society is the widespread preference for layoffs in the face of economic downturns, which disproportionately impacts temporary employees (Kollamparambil, 2020).

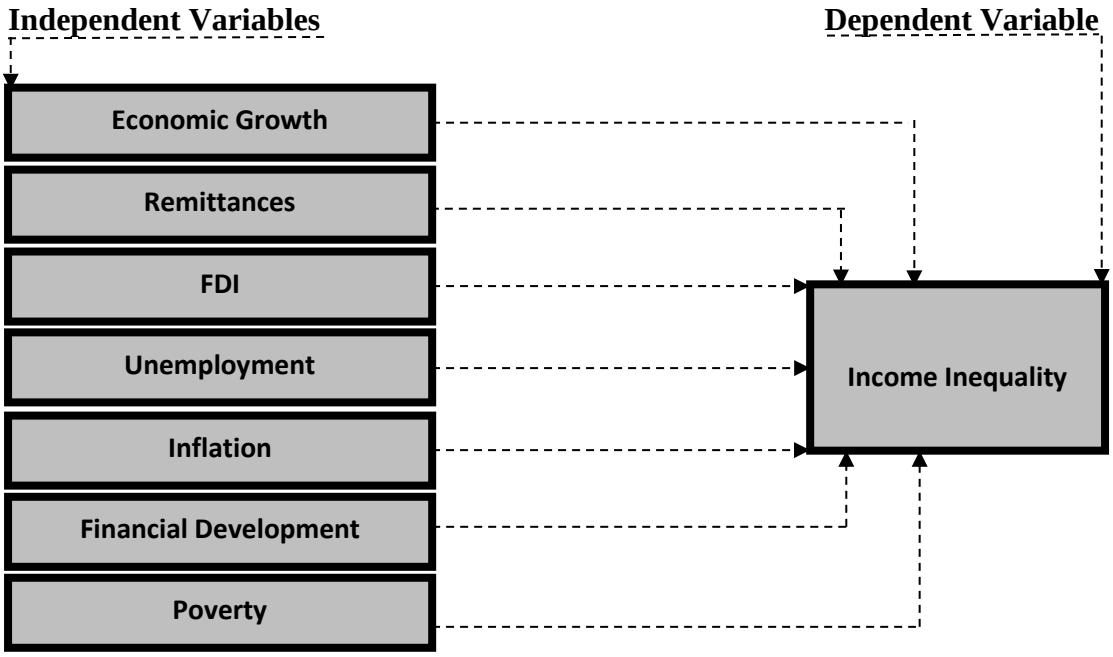
Research Methodology

Population, Sampling and Distribution

Population is defined as the units or individuals of interest in a study. In general, data is not available for entire individuals in a population. On the other hand, a subset of individuals called a sample in a population and data is available for individuals in samples (Hanlon, & Larget, 2011). Furthermore, in this research, the researcher used non-random sampling approach, which is less expensive, less complicated and can be done at the spur of the moment. Among non-random sampling approach, purposive sampling was used. In purposive sampling, the researcher uses his/her own judgment in terms of selecting more relevant respondents in order to meet the purpose of research study (Ecker, Francis, Olsson, & Schipper, 2015). Geographical and demographic distribution is not applicable in this study as the study used secondary data so there is no use of survey-based data.

Research Design and Framework

Deductive research is used to describe accepted principles, arguments. Additionally, the researcher applied a quantitative research in this current study and this type of research is defined as the systematic investigation of the collected data which is presented and collected in the form of quantifiable form.



Data Collection & Analysis

The study used secondary data collection method as we collected statistical data from online sources. Relevant social software must be used in any form of study job in order to uncover and assess the link between various factors. Therefore, the operations and empirical analysis in this study will be carried out using Microsoft Office and the statistical program EViews. The Auto regressive Distributive Lag (ARDL) model will also be implemented. We opted for this strategy since the model we're using includes an in-built criterion for dealing with the stationary data issue. The short-term information in the dataset will be preserved as we get long-run co integration among the variables. An imbalanced panel data set will be developed and used for the research, which will cover the years 2006 through 2020. The statistical estimating process based on matrices' correlation coefficients will begin. Mean,

median, standard deviation, and other descriptive statistics. The ARDL model will be used to validate the direction of the ADF unit root test's findings.

Results and Analysis

To check the stationarity of the data ADF test was applied. The results of ADF test are shown in Table 1.

Table 1

Results of Augmented Dickey Fuller Test

Variables	Level	First Difference	Critical Values of Unit Root 1%	5%	10%	Decision	Order of Integration
ECONOG	2.02508	-5.6008*	-4.3393	-3.5875	-3.22923	Nonstationary at level but stationary at 1st difference	$I_{(1)}$
REMITT	6.04803 6	-4.65813*	-3.6210	-2.9434	-2.6102	Nonstationary at level but stationary at 1st difference	$I_{(1)}$
FDI	1.97046	-3.767919*	-3.6329	-2.94840	-2.61287	Nonstationary at level but stationary at 1st difference	$I_{(1)}$
UNEMP	5.43997	-1.7866***	-2.6416	-1.9520	-1.61040	Nonstationary at level but stationary at 1st difference	$I_{(1)}$
INF	-0.90741	-7.58927*	- 2.63921	-1.95168	-1.61057	Nonstationary at level but stationary at 1st difference	$I_{(1)}$
FINAND	-0.38522	- 4.336305*	- 2.64167	-1.95206	-1.61040	Nonstationary at level but stationary at 1st difference	$I_{(1)}$
POVERT	-5.4062*	-	- 4.28458	-3.56288	-3.21536	Nonstationary at level but stationary at 1st difference	$I_{(0)}$
*Significant at 1%, ** Significant at 5% and *** Significant at 10%							

The results of above ADF table shows that Poverty (POVERT) is stationary at level while other variables are integrated at first difference. As ARDL is the co-integration method, therefore the estimation of this model via ARDL is completely justified. ARDL method can handle the data stationarity at different orders. The results would be unreliable if the data is stationary at second difference. According to the above results, none of these variables is

integrated at 2nd or above different. Therefore, we can say that the ARDL results would be reliable.

Results of ARDL Technique

The results of ARDL technique for co-integration based on Schwarz Bayesian Criterion (1, 0, 0, 1, 0, 0, and 1) are shown in Table 2.

Table 2

Results of ARDL Technique for Gini Coefficient

Variable	**Coefficients**	**T-ratio, p-Value**
GINI(-1)	0.74682	10.636, (0.000)*
ECONOG	0.021140	0.32561, (0.706)
ECONOG(-1)	-0.20366	-2.6662, (0.013)**
REMITT	-0.55029	-2.2661, (0.035)**
FDI	-0.15872	-0.2362, (0.816)
UNEMP	0.10713	1.8980, (0.072)**
INF	0.20612	1.7870, (0.081)**
FINANCD	0.010150	0.24561, (0.808)
FINANCD (-1)	-0.10488	-2.7784, (0.012)**
POVERT	3.0631	4.1604, (0.000)*
R square = 0.98433		Adjusted R square = 0.97806
D.W statistic = 1.97		F-statistics = 157.0000 [.000]

**Significant at 1%, **Significant at 5%*

As per the above test approach, F-statistic provided the evidence of co-integration among variables. There would be co-integration if it lies above the upper critical bounds. According to the F-statistic results a co-integration exist between these variables. Therefore, we reject the null hypothesis of no co-integration. The Gini coefficient's zero value shows perfect equality while 1 shows perfect inequality. The coefficient's positive signs show increase in income inequality so the desirable sign is negative. As per the estimation of ARDL co-integration, the lag value of inequality creates inequality in current period. The Unemployment, Inflation and Poverty are responsible for increase in income inequality.

However, Remittances, lag value of financial development, and Economic Growth are reducing inequality. Impact of the FDI is negative but it is insignificant. The results shows that the model holds a good explanatory power, for instance 98% of the variations are caused by the explanatory variables.

Results of ARDL Estimates for Long-run

Table 3

Results of ARDL Estimates for Long-run

Variables	**Coefficients**	**T-Ratio, p-value**
ECONOG	-.36218	-3.0600, (0.030)**
REMITT	-2.1735	-2.745, (0.012)**
FDI	-.62690	-.22945, (0.821)
UNEMP	.42313	1.7079, (0.103)***
INF	.33212	2.6086, (0.102)***
FINAND	-.37416	-2.0900, (0.050)**
POVERT	12.0985	3.1870, (0.005)*
F-statistic = 5.9514	Significant at 95%	
Lower bound = 2.4829	Upper bound = 3.9494	

**Significant at 1%, **Significant at 5% and ***Significant at 10%*

According to the above long-run ARDL estimation, Unemployment, Inflation, and Poverty have positive impact on income inequality. However, the Economic Growth, Remittances and financial development are appeared as a reducing factor of income inequality. Finally, the association between Foreign Direct Investment and inequality is insignificant.

Results of Diagnostic Test

This test is important because it helps in finding the reliability and accuracy of the empirical findings. The results are shown below:

Table 4: *Results of Diagnostic Test for ARDL Model for Gini-Coefficient*

Test	**Co-efficient, p-Value**
LM Lagrange Multiplier for no autocorrelation	1.6418, (0.215)
Ramsey reset test for functional form	1.1715, (0.293)
Jarque-Bera test for normality	0.40919, (0.815)
Regression of squared residual and square fitted residual for heteroscedasticity	1.4409, (0.240)

As per the above diagnostic tests, no autocorrelation found in the model, Ramsey's reset test accurately specified the functional form of the model. The acceptation of null hypothesis is shown by the JarqueBera results that all estimates of the model are normally distributed. Hence, no problem of heteroscedasticity in the given ARDL model is confirmed.

Results for Stability of the Model

Model stability is tested through CUSUM and CUSUMSQ test. The CUSUM graph shows that it remains within the critical bounds. On the other hand, the CUSUMSQ graph is out of the critical bounds. Therefore, there is a structural break in the model. We have employed Chow Test for the detection of structural break as shown below:

Table 5

Results of Chow Test

F-statistics = 149973	Prob. F(9,11) = 0.0000
Log Likelihood ratio = 339.8090	Prob. Chi-Square(9) = 0.0003
Wald Statistics = 134976	Prob. Chi-Square(9) = 0.0000

According to the above results, there is a structural break at 2001. Same results are indicated by the log likelihood, F statistic, and Wald statistic. Therefore, the alternative hypothesis is accepted, for instance structural break existence.

Results of Gregory-Hansen Test

We have incorporated the Gregory-Hansen test for confronting the structural instability problem.

Dtk = 0 if t < k
Dtk = 1 if t > k
Model 1: Cointegration with level shift
Model 2: Cointegration with regime shift

After the structural break, the level-shift model includes a dummy that represents the modification of the intercept. When dummy is multiplied by each model variable, the regime shift model displays the effect on each coefficient. The Gregory-Hansen Method is used to fix

structural problems by adding a dummy variable to the ordinary least squares (OLS) test. Tables 6 and 7 show the outcomes.

Table 6:

Results of Gregory-Hansen Test (with level shift) for Structural Break at 2001

Variable	Coefficient	t-Statistic	Prob
ECONOG	-6.041169	-3.704122	0.0012*
REMITT	-2.402314	-4.366101	0.0002*
FDI	3.208536	2.057053	0.0517**
UNEMP	0.321851	2.148204	0.0430**
INF	0.071962	0.947536	0.3537
FINANCD	125.8862	4.240853	0.0003*
POVERT	-2.067890	-2.604604	0.0162**
C	-335.1303	-4.180753	0.0004*
R2 = 0.899294		Adj R2 = 0.867251	
F – stat = 28.06543		F- stat Prob = 0.000000	
*significant at 1% and ** significant at 5%			

Table 7:

Results of Gregory-Hansen Test (with regime shift) for Structural Break at 2001

Variables	Co-efficients	T-test	Prob.
ECONOG	0.527437	4.400917	0.0005*
REMITT	0.057728	2.047926	0.0585**
FDI	0.211642	3.059660	0.0079*
UNEMP	0.002348	0.385924	0.7050
INF	0.002236	0.050238	0.8186
FINAND	-0.003372	-0.677849	0.5082
POVERT	30.31396	16.88762	0.0000*
Dummy	75.63643	4.824409	0.0002*
Dum_GI	1.000000	13.27957	0.0000*
Dum_ECONOG	-0.527437	-1.175275	0.2582
Dum_REMITT	-0.057728	-0.232086	0.8196
Dum_FDI	-0.211642	-0.468687	0.6460
Dum_UNEMP	-0.002348	-0.090047	0.9294
Dum_INF	-0.002236	-0.050238	0.8186
Dum_FINAND	0.003372	0.311728	0.7595
Dum_POVERT	-30.31396	-4.961765	0.0002*
C	-75.63643	-15.12549	0.0000*
R^2	0.999923	Adj.R2	0.999850
F-Stat	13847.04	F-stat Prob	0.000000
*Significant at 1%, **Significant at 5%			

According to the above Gregory-Hansen test there is a negative sign in the dummy coefficient. The intercepts change downwards after structural change. Results of regime shift where intercept and slope coefficient change show that variables of Gini-coefficient and Poverty are significant while other variables are insignificant.

Discussion, Conclusion and Recommendations

Discussion

According to the findings, unemployment, inflation, and poverty are three factors that contribute to income disparity in a good way. On the other hand, Economic Growth, Remittances, and Financial Development have emerged as factors that contribute to a reduction in income disparity. However, the effects of foreign direct investment have been demonstrated to be minimal. Financial efficiency and economic growth help to reduce inequality. Financial independence is positively related to inequality, while for high-middle-income countries it is negatively related. Estimates are made by controlling factors such as public spending, years of schooling, trade openness, inflation and GDP per capita. Economic growth being a decreasing factor of income inequality also improves poverty and level of unemployment. If the wages paid rise faster and government provide benefits, including pensions, unemployment benefits, sickness benefits then economic growth will gradually happen. Eventually economic growth creates job opportunities and decrease unemployment within the country. Remittances stability in economic troughs makes them extremely important for the recipients. The study found that the lack of employment is the main lever that generates income inequality, this will not be corrected unless public intervention puts all its machinery at the service of pre-distributive policies, which prevent instead of correcting, among which stands out par excellence to provide quality education, which equips all citizens with the necessary skills to access employment. The study tried to find the potential factors which can be used to improve economic growth and eventually reduce income inequality in developing nations, particularly Pakistan.

Conclusion

Economic downturns worsen income disparity. Poor people suffer more during economic downturns in nations with greater levels of inequality. Therefore, the purpose of the research was to determine what causes economic disparity in Pakistan. Unemployment, inflation, and poverty all contribute to income disparity, as shown by ARDL's long-run estimates. In contrast, economic growth, remittances, and advances in the banking sector have emerged as factors that work to reduce income disparity. While this may be true, the impact of FDI has been minimal. Budgets should prioritise economic development in order to reverse Pakistan's rising income gap. Progress in the banking sector has also become a significant element in Pakistan's fight against economic disparity. Policymakers should put much more effort into fostering financial growth.

Recommendations

- Reducing inequality requires change. Efforts must be increased to eradicate extreme poverty and greater investment in health, education, social protection and decent work, especially for young people.
- Within countries, empowering and promoting inclusive social and economic growth as well as employment is important. By eliminating discriminatory laws, policies and practices, we can ensure equal opportunity and reduce income inequality.
- In addition, governments and other stakeholders can, through well-planned and well-managed policies, promote the financial development and economic growth.

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