

# Impact of Fiscal Policy on Poverty Reduction in Pakistan

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**Abstract:** This research articles explores the relationship between trade, inflation, investment, tax rate and HDI for Pakistan economy. Data is used form 1990-2019. The study used relevant tools of econometrics for estimation. The employed techniques include the unit root analyses and bound testing. Our results show that trade and inflation have a positive impact on HDI. On the other hand, consumption and tax has a negative impact on HDI. Our results are important for the policymakers of Pakistan. These results could be used for policy making in Pakistan to eradicate poverty. This paper tested the connection between poverty and its factors in Pakistan. The paper uses data for 1990-2019 and applied the ARDL approach. Our results showed several important relationships among variables. We got to know that trade and inflation are positive in their effects on HDI. On the other hand, general government consumption expenditure (GGCE) and tax revenue are negatively associated with HDI in Pakistan. Our results are important for policymaker of Pakistan.

**Key Words:** Poverty, Tax Rate, HDI, Pakistan

## Introduction

Poverty is one of the key challenges facing the globe in the 21st century. The World Bank estimates that 3.5 billion people live below the poverty line, which is more applicable to upper middle-income countries with a daily allowance of \$6.85. This number remained stable during the 1990s due to population growth (World Bank, 2024). October 2024, the United Nations estimates that about seven hundred million human beings in the globe will survive in tremendous poverty, characterized as a smaller amount than \$2.15 a day. This represents a large portion of the world's community, and most people in extravagant poverty live in Sub-Saharan Africa or in unstable, conflict-affected countries. Poverty is a global phenomenon, affecting global and national economies to varying degrees. It affects people at different depths, at different stages and at different times. There is no country that is completely free from poverty. Poverty trends vary from one nation to another. Pakistan, a economically developing nation, is ranked one hundred fifty four out of one hundred eighty nine countries. Over the past two decades, poverty in Pakistan has reduced from 61.6 percent in 1998-1999 to

21.5 percent in 2018-2019. Meanwhile, poverty in city zones decreased from 47.4 percent to 10.7 percent, while in villages communities it decreased from 67.5 percent to 27.6 percent through the similar time. ("The State of Poverty in Pakistan PIDE Report, 2021).

Extremely low educational attainment worsens poverty at the household level. Poor people are those who have no formal education or have only studied in religious schools. At the same time, population with advanced stage of

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technical knowledge are less likely to be poor. Expenditure patterns and socioeconomic status are other important variables that have a detrimental effect on poverty. Low prevalence of poverty is reflected in middle and high socioeconomic status, which is also inversely related to education. Since district-level variation is only 7% of the total, geography does not play a significant role. To the greatest of our expertise, there are very limited findings that show a direct relationship between poverty and socioeconomic level, which makes it unique. In the meantime, district-level change is favorable for upcoming poverty reduction strategies (Saleem et al., 2023).

Poverty is a universal condition that manifests itself as a lack of personal wealth. It occurs wherever people are deprived of the means to meet the needs necessary for their survival and well-being. People who live in poverty can experience social and psychological effects. In developing countries, where infrastructure, basic needs and facilities such as health care and education are lacking, poverty is more acute (Heshmati et al. 2015). When an individual or a society lacks financial resources to meet the minimum living needs, it is called poverty. Low income or unemployment that prevents one from meeting basic needs is considered poverty. Inadequate and substandard housing, deficiency of approach to safe drinking water, healthy food and well-being are further indicators of poverty (Adeyeye et al., 2023).

About five hundred eighty-four million women and one hundred fourteen million kids in the globe are not able to attain primary schooling caused by poverty. Most of them are from South Asia and sub-Saharan Africa, the highest saturated centers from poor people. Pakistan has not been an exclusion, with the problem of poverty has been the huge front in the past of economy. Poverty is also major problem in a country like Pakistan. Pakistan is facing many trials like poverty, unemployment, price rises, financial shortfall, dishonesty, fuel shortage and short economic growing. Although Pakistan presented good enhancement in poverty bring down during the 1970s, the cycle was also linked with an expansion in income imbalance through zones with across areas. Aggregate nationalized poverty numbers showed a significant decrease in the 1980s, then the situation increased once again in the 1990s afterwards continual to rise until 2010 (Amjad & Kemal, 1997). Poverty has become a major problem on the globe roughly all nations are experiencing from this obstacle. Different countries have distinct reasons for poverty.

Poverty causes multiple problems such as corruption, unemployment, unproductive jobs income inequality, high dependency ratio, lack of education, lack of health and care centers. The poor are suffering from many diseases. They don't have the resources for treatment. Lack of government health facilities forces the poor to seek treatment. A poor family that earns only for their food cannot afford to spend on treatment if a family member is sick. Poverty also causes debt burden, high dependency on foreign aid and political instability in the country. Therefore, the elements that make up the basic socio-economic dimensions, namely schooling, wellness and shelter can seem measured as indices, reasons and effects of indiscriminate poverty. This is especially true in emerging nation in citizens rely on residence earnings to increase their housing, wellness, and schooling because governments are unable to provide free or heavily discounted services. In developing nations like Pakistan, poverty appears to be a cyclical phenomenon, in which either increasing poverty leads to a decline in socioeconomic status or declining socioeconomic position leads to an increase in poverty and vice versa. An important lesson to be learned from this fact is that governments can address either of these two aspects of the problem to solve both (Khan et al., 2014).

Pakistan's economy is currently navigating a complex landscape characterized by low foreign reserves, significant fiscal deficits, low tax revenue, high inflation, and escalating public debt (Ramzan et.al, 2023 and Zafar 2023). Fiscal policy seeks to support economic and social development primarily by adopting policy positions that ensure a sense of stability among taxation, spending and borrowing that is reliable with sustainable development and poverty reduction (Agu et al., 2015).

Governments in diversified economies use fiscal policy tools to combat economic imbalances by keeping public spending and taxes at moderate levels that manage aggregate demand, fiscal ambiguity besides financial deformations. Keynes believed this methodology was necessary, specifically in the times of economic depression, to establish a fixed basis for attaining maximum employment. The outcomes of this theoretic model have been applied in practice as a rule show to sustain financial activities over time. Classicists claimed for an efficient pricing method in which effective and flexible resources could secure financial autonomy without government intervention to deal with economic crises. In

contrast, monetary policy is applied through an economy's central bank to increase aggregate demand by modifying the money supply and interest ratios. During an economic crisis, the government uses a combination of monetary and fiscal policies to counter the swings of the business cycle. Similarly, the government developed a trade policy to improve trade relations and provide basic protection net against external shocks because of a stable rate of exchange (Adegboyo et al., 2021).

Fiscal policy aims to promote economic conditions that are conducive to business expansion while ensuring that any such government measures are conducive to economic growth and poverty reduction. Fiscal policy is an essential tool offered to governments in underdeveloped countries to combat poverty. Taxes and expenditures are two basic fiscal instruments. The primary objective of fiscal policy is to make income from taxes, and these taxes are used to meet government expenditure. The government collects these taxes from different forms including value-added tax, personal tax, business tax.

## Literature Review

This study will present fresh empirical data on the association among poverty and fiscal decentralization. It aims on the association between fiscal decentralization and poverty in fifty-three emerging nations between 1990 and 2014 and how institutional quality can explain this relationship. The findings revealed that the connection between fiscal decentralization and poverty may be explained by both outcome-based institutional quality and process-based approaches (Digdowiseiso, 2022).

The purpose of this research is to examine the asymmetric effect of fiscal policy on the expansion of Somalia. Annual time series data and Nonlinear Autoregressive Distributed Lag (NARDL) model from 1970-2019 have been used. Rise and cutbacks in leadership spending have large optimistic outcomes on development in the long term, but benefit is more pronounced when public spending decreases than when it increases. Although increases in administration expenditure had a greater effect on rise in national income than decreases, equally increases and decreases in government spending had a significantly favorable short-term effect on economic growth (Ali et al., 2024).

Panel data of OECD economies used during the last forty years; this analysis offers fresh validation on the distributional consequences of fiscal policy. We examine the responses of four benchmarks of poverty and wealth disparity to different stock and flow factors that are considered by financial measures. We find that a less unequal distribution of wealth is encouraged by increases in government spending and debt (Salotti & Trecroci, 2018).

This study employed time series methods and a rigorous empirical model to analyses the relationship relating several components of Ethiopia's fiscal policy and economic growth across 35 years of annual data. Autoregression distributed lag technique were used. The bound tests revealed a long-run link between the variables. The current examination identified that ineffective spending and undistorted tax revenues had no effect on growth. Furthermore, growth is positively affected by productive spending, but there is evidence that distortionary taxes distort growth. To formulate spending and tax strategies in Ethiopia to confirm that nonproductive expenditure is decreased however in the constant period community capital is increased (Tilahun Mengistu, 2022).

We used descriptive data to show how government fiscal policy contributes to economic growth, similarly, to determine and clarify development amounts to regulate the connection among financial development and administration in multiple models. An ordinary least square (OLS) was used. Cost elements after confirming data stationarity. The results show that the entire administration expenditure has been growing in line with government revenue, with expenditure growing more rapidly than revenue. Investing expenditure was significantly less than repeated expenditure, showing the nation's disappointing development (Agu et al., 2015).

In this analysis, we look at the link between the Covid epidemic, authority, and how it affects financial performance and poverty rates. Data from the Centre for American Progress are investigated using spatial econometric approaches for panel data across 49 US states during a ten-year period (2011-2020). The effects of each state's situation on neighboring states were investigated. The findings revealed that the governance index and the economic disparity factors

had the greatest impact on poverty. Unemployment, the gender wage gap, hunger and uncertain access to food, healthcare plan, community, and graduate education all influence poverty. (Ronaghi & Scorsone, 2024).

This study looks at the effect of fiscal, monetary and economic policy on Nigeria's enhancement originating in 1985-2020. Its research uses the endogenous growth model as its speculative structure. The results of the unit root test show a mixed level of stationarity among the variables. The results of the bound test indicate that the variables are correlated. ARDL's long-term findings show that fiscal policies promote economic growth, while trade policies inhibit Nigeria's economic growth. The short-run outcome indicates that fiscal policies have an uneven impact on Nigeria's financial development which is inconsistent with the long-run outcome. The govt expenditure is fueling financial development in Nigeria, administration revenue has little impact on the economy (Adegboyo et al., 2021).

This research investigates the relationship between government spending and financial development. It constructs an endogenous growth framework using variables from models and divides govt spending into creative and non-creative categories. Our results, which use panel data from thirty-seven well-off and twenty-two low to average-income nations from 1993 to 2012, are constructed on OLS fixed-effects and GMM approaches. We test the existing experiential works on emerging economy by presentation that a move in administration spending free from unproductive and toward prolific spending is linked through advanced stages of development in in cooperation well-off and low-slung- to average-income countries (Chu et al., 2020).

Prior to the Global Banking Crisis (GIFC), the banking deregulation and liberalization process resulted in fiscal policies being restrictive and unable to create jobs. In the post-crisis period, budgets were constrained to meet huge external debt servicing obligations. COVID-19 brought to light the social costs of Latin American countries, particularly in the health sector, and inconsistency of fiscal and monetary policies (Girón & Correa, 2021).

In this study, the author examines the measurement of fiscal policy and composite growing spending the absolute relatively poor measure of growth. Panel data of forty-eight African nations from 1996-2020 and the Generalized Method of Moments (GMM) technique were used for analysis. It is curious to note that while govt expenditure reduces inequality and raises poverty, tax rises reduce poverty but improve wealth gap. While the upper-class citizens benefit from the tax increase, the salary shares of the low- and middle-class groups are affected (Mamman et al., 2023).

Reviewing and synthesizing relevant research on poverty and development, moreover, examining the causal association among the two facts. This analysis finds significant variation in poverty, which reduces the utility of growth. Moreover, nonetheless of the level of imbalance, our data support the idea that poverty drops as development progresses. Growing rates have different effects on poverty decline. Development is beneficial instead of poverty reduction, it is not sufficient. In this age when the wealthy are getting richer, and needy are getting needy (Škare & Družeta, 2016).

How fiscal decentralization affects the global epidemic of poverty declines in low-income countries is an unclear problem in the theory and method of fiscal decentralization. The study confirmed that when fiscal decentralization is accompanied by increased fiscal independence of local units among appropriate budget assignment, classification, and responsibility, it can potentially reduce poverty. Some institutional barriers, such as corruption, can be reduced through accountability and appropriate legislation. As a result, we proposed an organized and lawful structure that is extra efficient, applicable and visible (Agyemang-Duah et al., 2018).

World Bank panel analyzes the impact of competition, authority and globalization on poverty in the case of seventy-three emerging nations. This data is taken from 2005 to 2016. The World Governance Indicators are a source of governance indicators, and factor analysis is used to create an overall index. Eight models through numerous governance alternatives and one with no administration are expected in this work. The results, which were calculated using a robust generalized least squares method, showed that poverty is negatively affected by all governance factors. In the same vein, investments in growth, globalization and competitiveness help reduce poverty (Hassan et al., 2020).

Author used the Iranian domestic spending and earnings analysis from 2011 to 2012 to explore the effects of various factors on reducing poverty and variation in Iran's financial system. The author introduces new improved indicators of capacity to assess how different taxes and transferences are working to lower imbalance and poverty. The poverty

headcount ratio is 10.5 percent, variation is 0.0854 Gini points. Transferences are more efficient in reducing poverty and inequality than tariffs (Enami et al., 2019).

With an emphasis on the redistributive role of fiscal policy, this article examines the observational characteristics of earnings difference in China and other key emerging market economies from 1980-2013. We establish evidence for the continuation of a Kuznets curve, an inverted U shape among earnings difference and financial growth, with instrumental variable techniques to address potential endogeneity in a panel of China and BRIC+ countries. Empirical results show that tariffs and administration spending have inverse results on income inequality. While tariff increase the division of income, they appear to bear negative effect on government spending (Cevik & Correa-Caro, 2020).

The principle of this inquiry is to analyze the incidence of multidimensional poverty at the regional level in the privatization of education, health and housing facilities in the province of Sindh, Pakistan. Outcome showed that the difference in the socio-economic aspect deprivation levels is the primary cause of the considerable regional variations in the MDP magnitude. In addition, each region's rural and urban areas have greater MDP magnitudes (A. U. Khan et al., 2014).

Using traditional methods of monetary indicators, income and consumption is no longer sufficient. This study aimed to calculate multidimensional poverty in Pakistan using the Alkire and Foster method and (PSLM) data from the Pakistan Bureau of Statistics for 2018-19. The national global (MPI) is 0.24 according to the findings, indicating that 24% of Pakistan's population is multidimensionally poor. Education (44.7%) is the most disadvantaged of the three and needs special attention. Furthermore, if its entire yearly salary improves and enhances more significantly than the sample average pay (Haq et al., 2024).

This thesis investigates the macroeconomic impacts of fiscal policy on macroeconomic indicators in Pakistan. The study examines quarterly data from 1976Q1 to 2017Q4 and uses a VAR framework. The results showed that private investment is trending downwards, while private consumption and prices rose by three-quarters after government spending increased. Taxes have a negative association through individual consumption and interest rates, while they have a positive association with individual investment and prices (Munir & Riaz, 2019).

This study asserts that it is the first to examine the short- and long-term effects of the magnitude and makeup of fiscal adjustment on Pakistan's development. Mankiw et al. Experimental calibration has been done on the model, while Pesaran et al. Of the (ARDL) technique. Work has been done to estimate. To treat the breakdown of degeneracy cases, ARDL techniques are extended with the model of Sam et al. However, in the case of Pakistan, tax-based adjustments will ultimately slow growth. There is a feedback effect from economic growth to fiscal adjustment as the Granger causality test shows that fiscal adjustment is weakly exogenous (Hussain et al., 2021).

In this study, we re-examine how Ghana's tax system affects poverty and inequality to account for potential imbalances. We use time series data from 1983-2016 with the (NARDL) estimate technique. The outcome presents that, while the link among the tax system and poverty is asymmetric, the relationship between the tax system and variation is inverse. While positive (negative) shocks to direct taxes increase (decrease) the level of poverty, shocks to the indirect and aggregate tax systems produce negative outcomes. Furthermore, similar facts are only detected for indirect taxes and inequality in the long run, and the relationship is positive (Adu et al., 2023).

Using an asymmetric (ARDL) cointegration approach, the present analysis objects to investigate the asymmetric effects of unemployment alongside inflation on poverty in Pakistan since 1970-2016. The results show that poverty, unemployment, and inflation all have longrun imbalances. The unfamiliar reaction of poverty to both positive and negative impact to price rises and joblessness is also supported by these data (Meo et al., 2018).

This study investigates the degree to which decentralization helps European countries and regions reduce poverty and community exclusion. There is evidence that poverty is reduced, and community exclusion is addressed at the national level when the central government devolves more political, administrative, and financial powers to sub-levels of government (Tselios & Rodríguez-Pose, 2024).

The present study intends to investigate the consequences and possible causes of rural poverty at the area level. To investigate regional-level effects on poverty, individual- and district-level variables are integrated using a multilevel



binary logistic model. The results indicate that 60% of factors are considered poor, while the remaining 30% are classified as non-poor despite being above the poverty line. Only 59 people out of 4804 have high socio-economic status, while most people are in low and moderate socio-economic range (Saleem et al., 2023).

To quantify the factors influencing the rural multidimensional poverty index, the Alkire-Foster approach and an ordered logistic regression model were used in this work. In southern Ethiopia, 415 randomly selected households provided data. The results indicated that dependence proportion, detachment to bazaar, detachment to highway, and illness of familial relations were positively and significantly connected to countryside poverty, schooling, property size, tropical livestock component, off-farm participation, and savings are connected is significantly associated with rural poverty (Eshetu et al., 2022).

This analysis investigates the effect of societal protection (SP) on poverty and vulnerability in Punjab, Pakistan. It uses a hierarchical modeling approach and endogenous switching regression to analyze data from 90,000 households. The results show that social protection (SP) positively reduces poverty and vulnerability to poverty (vtp). However, the temporary flood relief cash transfer program, govt employee pensions, in addition to family unit frequent purchases from the network of utility stores are the main causes of this impact (Azeem et al., 2019).

The key target of the present search is to investigate and estimate the presence of financial domination position between 1971-2020. Combining fiscal and monetary variables, the present work models inflation as a monetary-driven monetary event. To observe the extended and temporary dynamics in an integrated framework, the study used the automatic distributed lag (ARDL) technique. Strong and statistically significant long-run correlations have been empirically found among finances shortfalls and money evolution, as well as linking money formation and price increases. The findings suggest that in developing countries like Pakistan, achieving and maintaining price stability requires managing monetary dominance through a practical and ongoing process of fiscal adjustment supported by fiscal policy (Batool et al., 2024).

This study investigates how taxes and governmental transfers affect Ethiopian children's wellbeing. It uses the (CEQ4C) methodology to analyses how taxes affect children's wellbeing differently and how government investment and transfers help them. The study combines administrative data with data from the Ethiopia Socioeconomic Survey 2018–19, which also gathered data on transfers and taxes. The study shows a progressive, poverty-reducing, and equitable financing system for children, including regressive indirect taxes in urban areas and progressive primary education spending. The system reduced poverty by 21% and 33%, especially for rural girls and children (Ambel et al., 2024).

The aim of the article is to gain a better knowledge of the salient features of the Chinese financial system and how they affect China's economic development. To verify the association between fiscal policy variables and economic growth, the study conducts empirical analysis. According to the results, local expenditure growth has a greater effect on production growth than central expenditure growth. Liquidity constraints hampered the response of output growth to tax changes, while public investing in the production region impacted greatest to output growth in market-based reforms (Kim et al., 2021).

This study examines whether state governments are more effective in reducing poverty because of fiscal decentralization of welfare programs. We use the State Expenditure Report from the National Association of State Budget Officers (NASBO), which provides reports on spending by the territory and federal government in various sectors. We believe this unfortunate outcome stems from the types of additional products that are being mandated by the federal government to Medicaid recipients (Swanson & Ki, 2023).

Unemployment is still hovering around 30 percent, economic growth has stalled, price increases are still above average, and half of South Africa's people are still alive in poverty. We summarize the latest data on poverty and discrimination in family members to general financial policy and the social provisions of the Constitution. The results indicate that by not addressing how power perpetuates variation, South Africa is not capable to effectively address extreme levels of inequality (Francis & Webster, 2019).

This research examined the prevalence of (MDP) in the Rawalpindi province of Pakistan, which includes these factors: housing, health and education. The results showed a different pattern of decline in MDP over time. The main reason for this disparity was housing deprivation, differences in health and education levels in the region. Rural areas had higher MDP than cities (Khan et al., 2014).

This article looks at Vietnam's success in reduction of poverty and some of the contributing factors. It also looks at the current challenges the Vietnamese government faces in additional dropping poverty. This observation examines the function of public management in poverty decline, particularly considering the contribution of organizational reforms, decentralization and decent control. Vietnam has made significant progress in reducing poverty. Between 1993 and 2015, the poverty rate fell from about 58 percent to 3 percent (Thanh Binh & Ha, 2019).

Author examines the redistributive effectiveness of fiscal policy for a sample of 35 nations from 2000 to 2016 while considering the degree of decentralization. The author accomplishes this in two steps. Examine the redistributive efficiency of direct taxes and cash transfers at the federal and subnational levels using a bootstrap (DEA) method. The study shows a decline in redistributive efficiency after the Great Recession, with low efficiency in Southern European countries and high efficiency in Europe and Latin America, highlighting the need for good governance in decentralization (Miranda-Lescano et al., 2024).

This study examines how Myanmar's fiscal policy affects economic expansion. The (OLS) analysis is used to check the relationship between fiscal shortfall and nominal gross domestic product using annual data since 1979-2016. The results prove a statistically significant relationship involving economic growth and a country's budget unevenness. Keynesian hypotheses are supported by investigation that shows the multiplier impact of shortfall expenditure on economic growth. Due to the lack of private investment in infrastructure projects, Myanmar needs to enhance state expenditure on substructure development and public service delivery (Tun Lin Oo, 2019).

This article examines how pro-poor and inclusive development can be promoted through effective governance. The paper illustrates that growth is generally pro-poor, using a sample of 112 countries from 1975 to 2012. However, a 20 percent decrease in the underneath end of the earnings division shows that progress is not included. Single administration efficiency and the rule of law have been found to improve inclusive growth, even if all aspects of good governance increase income and reduce poverty. The study shows that financial development, infrastructure development, and education are the key drivers of inclusive and pro-poor growth, with the effect of authority being nonlinear and linear (Dolumbia, 2019).

This overview looks at the relationship between disease, poverty and hunger in Africa, as well as the problems, impacts and solutions. Existing research on the underlying causes, mechanisms, outcomes, and treatment of poverty, malnutrition, and disease in Africa is critically reviewed in this study. Uncontrolled rapid population growth, inefficient industrial and agricultural practices, corrupt and poor governance resulting in high levels of debt in many African countries, the COVID-19 epidemic, the AIDS epidemic, diseases such as malaria and the Ebola virus, as well as inadequate and poor health infrastructure and armed conflict, all in poverty and malnutrition these are contributing factors. African poverty is a global problem, with many people deprived of basic human needs. Despite abundant resources, many African countries have low GDP per capita. Twenty-two of the 24 countries on the United Nations' Human Development Index are in sub-Saharan Africa, and more than 200 million people were undernourished in 2014–2016, with Africa having the highest levels of undernourishment world (Adeyeye et al., 2023).

Although poverty rates have fallen sharply and ASEAN countries have seen tremendous economic growth in recent decades, wealth inequality has not. Exploring the factors that can lead to more evenly distributed development in ASEAN is the objective of this study. The study shows that financial structural factors such as financial distribution, women's labor force involvement, productivity growth, FDI entries, digitalization, and savings significantly drive general development in ASEAN (Alekhina & Ganelli, 2023).

Using data from the most recent Turkish Household Budget and Consumption Expenditure Survey, which included 11,595 complete responses, this study examines the impact of financial inclusion, as measured by a multidimensional index, on three measures of poverty. Measured by the lowest income poverty line, lower middle-income line, and the

upper middle-income line. This study uses logistic regressions and a novel method to analyze financial inclusion in Turkey. Findings indicate that increasing financial inclusion decreases poverty, with health spending and income being necessity factors. Policies to enhance financial inclusion are needed to alleviate poverty (Dogan et al., 2022).

Two consecutive, similar and consistent household assessment datasets from a emerging market are used in this work to assess the performance of development in poverty reduction. Pro-poor growing indices, which assess the relationship among overall poverty decline resulting from distributionally neutral growth from both an absolute and relative angle, are used for data analysis. There are experimental samples. According to the study, economic expansion could not have been absolutely or relatively poverty-reducing because it was not pro-poor despite the period of economic boom. The study discovers that the poverty-reducing efficiency of growth was lacking during the growth period. (Chukwu, 2024).

The effect of these measures on the parts of government expenditure is examined in this article. According to System-GMM estimates conducted on a sample of 53 industrialized and emerging nations between 1980 and 2011, fiscal consolidation has a mixed effect, i.e., they substantially reduce the ratio of government investment to consumption. This much contraction of government investment compared to government consumption is at work, especially when debt is high, and the economy is in its low phase. It is robust to a broad range of tests, involving when using narrative techniques to identify financial stability (Bamba et al., 2020).

This study examined the dynamics and spatial agglomeration effect that influence rural poverty and schooling levels (namely, elementary, junior secondary, and senior secondary education) in 27 Chinese provinces between 2010 and 2017. Varying degrees of education have varying effects on rural poverty, according to the results of a (SAR) model. Compulsory schooling has a bigger impact on rural poverty than senior secondary education. The study suggests that regional poverty mitigation policies should study both internal and external factors, incorporate educational differences and learn from local experiences (Liu et al., 2023).

This study systematically examines the claimed exceptionalism of Malaysia's growth trajectory and its possible causes from a comparative perspective. Based on conditional correlations, we generate evidence based on three outcomes using cross-country regressions and aggregate indicators of gender equality, poverty, health and education outcomes. The findings favor the hypothesis that Malaysia's human development growth, mainly for the period 1970-1990, has been outstanding contrasted to nations by similar economic development. Malaysia's progress in poverty reduction and growth can be attributed to income mediation and support-led methods, initial accent on schooling healthiness, infrastructure development and early gains in state capacity (Asadullah et al., 2021).

A huge socioeconomic issue that most emerging nations deal with is poverty. 30% of Egyptian citizens live below the poverty line. Well government spending can reduce poverty because it is mandatory to promote economic growth. Promoting poverty reduction and better income distribution. Panel data is used from 2010 to 2018. Results at the national level show that just welfare state expenditure significantly alters poverty decline at the nationwide. Spending on welfare services, health care, and education had a significant detrimental effect on poverty in the region, particularly in Cairo and Upper Egypt (Elshahawany & Elazhary, 2024).

The main objective of the author is to know how fiscal decentralization affects poverty. Data from 505 districts from 2010 to 2019 were used, with many individuals that are poor. Using the fixed effect model shows that fiscal decentralization has an important part in decreasing poverty levels in the district. The panel data model used with STATA captures the dynamics of the dependent and independent variables. Econometrics models are used to examine the endogeneity problem and heteroscedasticity of error. (Nursini & Tawakkal, 2019).

The aims of this investigation are to evaluate the impact of direct tax, indirect tax and government consumption expenditure in this study and growth in the new European Union member. Autoregression and annual Eurostat data used from 2007 to 2019. According to the results, there is correlation between government consumption expenditure and economic growth in the countries of central and eastern Europe, inefficient public spendings. The findings of this study show that policymakers in the nations of central and Eastern Europe can boost economic growth in the country. Investment and GDP while reducing the share of direct tax revenue in GDP (Stoilova & Todorov, 2021).



The purpose of this research is to highlight the contribution of donors and the government of Uganda to upgrade the public sector and public expenditure efficiency as the best means of combating poverty in the country. Health care, education especially at the primary level, and agricultural sector, maintenance of roads was the focus of the government. These include decentralization, privatization, public sector restructuring, and macroeconomic changes, with a focus on poverty reduction. The government has made significant efforts over the past ten years to strengthen institutional capacity and implement fiscal reforms because it realizes that these measures are essential for success. Nevertheless, there has been intense rivalry for resources in a nation with limited resources and a small tax base. Due to increased revenue and donor support, the government has been able to implement programs such as universal primary education. Nevertheless, severe local budget constraints hamper the decentralization movement (Kayizzi-Mugerwa, 2002).

The author aims to analysis the impact of distribution and tax benefits in chili in 2013. The four findings show that fiscal measures have a net positive effect on poverty and the lowers effect of progressive tax on poverty. The CEQ methodology is an analysis to assess the distributional effect of taxes. The results of this findings indicate that financial interventions in Chile have a positive control on lowering poverty and inequality, and particularly on increasing economic mobility among poor people (Martinez-Aguilar et al., 2017).

A multiple regression analysis ECM with three components using an automated distributed lag framework was used. Data from 1980 to 2011 was used. The final findings of the study are that government capital expenditure does not reduce poverty in Nigeria. (ECM) and autoregressive distributed lag model were used, and OLS method was also used. The Unit root test and augmented Dickey fuller test are used to test the stationarity otherwise time series used for estimation (Personal et al., 2016).

This paper uses quality financial incidence analysis to study how extremely income reallocation and alleviation of poverty is capable during financial systems in eighteen Latin American countries. We show that there is considerable variation in income. The facet and poverty reduction power of LAC financial systems. The net results are income taxes, direct payments, and in-kind benefits are equal, paying on physical condition and schooling is poor. Data use from (CEQ) Council on Environmental Quality (Lustig, 2016).

This paper examines fiscal policy on inequality and poverty in twenty-nine low- and middle-income nations for the year 2010. Fiscal policy reduces poverty and variation in the nation. Spending on nursery and first-stage education is almost always pro-poor (per capita transfers decrease with income) but spending on secondary schooling is less common to be pro-poor and expend on post-graduate schooling is generally more pro-poor. Even so, only in relative terms are progressives (equality, not poverty). Health costs are always flat, Jordan is an exception (Lustig, 2017).

The World Bank predicts that poverty will further increase because of the COVID-19 pandemic. According to this forecast, the poverty level in 2020 could increase by 0.3 to 0.7% points, or about 9 percent. This research examines the effect of fiscal decentralization on poverty decline with the aim of shedding light on poverty in Pakistan. The Asian Development Bank estimates that about two hundred and ten million impoverished people live in Pakistan. This research uses a unit root test for station data covering the years 1975 and 2018. Statistical models are built with the intention of automatically estimating the distributed interval using integration techniques. The outcomes of the research show that fiscal decentralization directly as well as indirectly contributes to poverty alleviation. World Development Indicators (WDI) and Handbook of Statistics are two websites from which the data was collected (Hussain et al., 2021).

To assess poverty in all areas of Pakistan, this study has established a multidimensional poverty index using Alkire-Foster technique and geographic information system. The results of the study show that the intensity of MDP and headcount varies between provinces, with Punjab and Baluchistan having the highest and lowest values, respectively. The spatial scores flashed that most Punjabi districts were gather in significantly little and very low quantiles in standings of equally MDP and headcount poverty, while Baluchistan regions were pointed in high and very high quantiles. Data collected between 2019 and 2020 from the Pakistan Social and lifestyle Measurement (PSLM) investigate (Khan & Sloboda, 2022).

Library techniques were used to collect data for this research. According to Wolfson, government revenue is used to increase public welfare. Make recommendations for ways to increase the effectiveness of public spending, such as closer monitoring of the program's infrastructure plan. Formation of revenue streams to reduce dependence on certain industries and increase economic resilience, suggest diversification of the country's revenue streams. Enhance Community Welfare Advocate for community empowerment through training and education initiatives to ensure that economic development is more equitable and directly impacts the improvement of community well-being (Aisyah et al., 2024).

Data from 2010 to 2021 is used on conservation, education, health, housing, and community. A ridge regression model technique is used to analyze the association with MPI and administration spending on home, physical condition care and social security. We find no conclusive evidence that government investment in social protection and housing significantly reduces multidimensional poverty other than health. Co-production should be promoted in the provision of social security, housing, and health care (Mokoena & Mazenda, 2023).

## Research methodology

### Model

In this study, we used multiple regression analysis to analyze relationship between variables and it is given in the following equation.

$$Prt = \beta_0 + \beta_1 EXPt + \beta_2 INFt + \beta_3 Tradet + \beta_4 TXt + \epsilon t$$

Where poverty is the dependent variable,  $\beta_0$  is the intercept,  $\beta_1$  is the slope expenditure,  $\beta_2$  is the slope inflation,  $\beta_3$  is the slope trade,  $\beta_4$  is the slope Tax.

**Table 1**

*Variable Description*

Variables	Variables Name		Time period	Data sources
INF	Inflation		1990 to 2019	WDI
GGCE	General Govt Expenditure	Consumption	1990 to 2019	WDI
TRD	Trade		1990 to 2019	WDI
Tx	Tax		1990 to 2019	UNU-WIDER
HDI	Human development index		1990 to 2019	WDI

### The Unit Root Analysis

The unit root analysis is shown in Table 2. Some variables are stationary while some are non-stationary. Hence the integration is not uniform. Hence the ARDL is appropriate.

**Table 2**

*Unit Root Test*

Variables	Level	1st Difference	Decision
Trade	-1.793 0.3840	-5.057*** 0.0000	I (1)
Inflation	-2.110 0.2405	-5.248*** 0.0000	I (1)
General Govt consumption expenditure	-2.960** 0.0388	-6.575 *** 0.0000	I (0)
HDI	-0.362 0.9162	-7.403*** 0.0000	I (1)
Tax	-1.237 0.6575	-5.321*** 0.0000	I (1)

## The Bound Test

The ARDL test results are shown in Table 3 for all variables. The variables are cointegrated based on the ARDL results. Hence we accepted cointegration.

**Table 3**

*Bound test*

F test	Critical values	I(0)	I(1)	Decision
4.078	10%	2.45	3.52	Cointegrated
	5%	2.86	4.01	
	2.5%	3.25	4.49	
	1%	3.74	5.06	

## The ARDL Results

The table shows the results of an F-test used to assess cointegration between variables at various significant levels. The F-test value of 4.078 is compared to the critical values for both I(0) (no cointegration) and I(1) (cointegration) at different significant levels. At the 10% significance level, the critical values are 2.45 for I(0) and 3.52 for I(1), and because the F-test value of 4.078 is greater than the I(1) critical value, the series is considered cointegrated at this level. Similarly, the F-test value is still higher than the critical value for I(1) at the 5% significance level, which supports consistency on the surface. The critical values are 2.86 for I(0) and 4.01 for I(1). The series is statistically significant at these stricter levels, though, as the F-test values at the 2.5% and 1% significance levels are less than the I(1) significance values of 4.49 and 5.06, respectively. Not linked. In conclusion, there is evidence of convergence in the series at the 2 and 1% levels, but not at the 10% and 5% levels.

## Findings

### Long Run Results

Table 4 presents the result of ARDL long run test. The coefficient of tax is -0.0177, indicating that higher taxes are associated with a decrease in the dependent variable, the P-value is 0.000, indicating that tax has a significant effect on the dependent variable. Trade has a coefficient of 0.144 significant at 10 percent. Consumption is negative and significant at 10% and inflation is not significant.

The model fit is strong, with an R-squared of 0.9419, indicating that the independent variables explain approximately 94.19% of the variation in the dependent variable. The Adjusted R-squared of 0.7577 demonstrates that the model is still robust after controlling the number of predictors. To summaries, consumption and tax have strong long-run effects on the dependent variable, whereas trade has a marginally significant influence, and inflation appears to have little to no impact.

**Table 4**

*ARDL Long Run Test*

Variables	Coefficients	Std. Err	T
Trade	.144*	.073	1.98
Consumption	-.762***	.108	-7.02
Inflation	.0189	.015	1.20
Tax	-.017***	.001	-11.44
Constant	-0.001	0.001	1.00
R Square	0.941		
Adj R square	0.757		

### Short Run Results

The Table 5 shows the results of a regression analysis, including coefficients, standard errors, t-statistics, and p-values for several independent variables, as well as an error correction term (ECT). The coefficient for HDI is -1.5892,

indicating a negative relationship with the dependent variable. Inflation rate cast positive impact and trade cast negative influence. Moreover, tax is positive in the model. Finally, the ECT is negative and significant showing strong convergence.

**Table 5**

*Short Run Findings*

	Coefficients	St. Err	T	P>t
HDI	-1.589***	.378	-4.20	0.006
Inflation	.004	.004	1.04	0.341
Trade	-.024	.016	-1.50	0.184
consumption	.174**	.058	3.01	0.024
Tax	.002*	.001	2.39	0.054
_cons	.596	.168	3.55	0.012
Ect	-.297	.082	-3.59	0.012

## Conclusion

This paper tested the connection between poverty and its factors in Pakistan. The paper uses data for 1990-2019 and applied the ARDL approach. Our results showed several important relationships among variables. We got to know that trade and inflation are positive in their effects on HDI. On the other hand, general government consumption expenditure (GGCE) and tax revenue are negatively associated with HDI in Pakistan. Our results are important for policymaker of Pakistan.

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