

Budgetary Allocations for Growth and Poverty Reduction: A Comparative Study of Pakistan and Bangladesh

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Candidate Declaration Form

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Dedication

This thesis is dedicated to

My Family

for their consistent support and unconditional love at every step of

My Life.

Acknowledgement

First praise is to Allah, who is worthy of all acknowledgements on whom we all depend for guidance and sustenance. Second, my sincere appreciation goes to my supervisor Dr. Aijaz Mustafa Hashmi, for constant guidance and constructive comments that enabled me in completing my thesis. His analytical approach assisted me in improving my work time and helped me in giving final shape to my thesis. I would be incomplete without acknowledging the inspiration and support from my family and friends during the course of my work. They were truly the source of motivation and encouragement for me.

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Abstract

The primary goal of this study was to analyze the impact of Budgetary Allocations on Economic Growth and Poverty Reduction in Pakistan with comparative analysis with Bangladesh. Budgetary allocations were the independent variables which includes Education, Health, Infrastructure and Agricultural spending by governments while economic growth and poverty reduction was taken as dependent variable. Economic growth included GDP growth rate while Poverty reduction included Per Capita Income. The study used annual time series data ranging from 1972 – 2023 for both Pakistan and Bangladesh. E Views software was used for data analysis. Research utilized ADF unit root test to check stationarity of data. Correlational analysis confirmed that Education, Health, Infrastructure and Agricultural spending are significantly positively correlated to Economic Growth and Poverty Reduction for both Pakistan and Bangladesh. Auto Regressive Distributive Lag (ARDL) was then applied which yielded significant impact of budgetary allocations such as Educational spending, Health spending, Infrastructural spending and Agricultural spending on Economic Growth in Bangladesh and Pakistan. In summary comparison, it is identified that Bangladesh spending is more than Pakistan which accounts for greater impact on Economic Growth and Poverty Reduction. It is proposed that Pakistan should increase its spending on these sectors for achieving rapid Economic growth and Poverty reduction.

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CHAPTER 1

INTRODUCTION

1.1. Background of the Topic

A government budget is a financial plan that is prepared by a government in order to determine how to raise and spend finances for the government over a particular period of time through the use of those monies. In addition to being the principal instrument for controlling government expenditure and managing public debt, the budget is also responsible for defining the policy priorities and objectives adopted by the government. The term "government spending" refers to the allocation of public monies by the government for a variety of objectives, including the construction of infrastructure, social welfare programs, education, health, agriculture, and other government services. These expenditures are accounted for in the budget plan of the government and are representative of the financial resources that are necessary for the government to accomplish its policy goals.

Government budget spending is critical for supporting economic growth, reducing poverty, maintaining social stability and meeting the needs of citizens. (Etyang, 2023) Stated that the government's expenditure is a crucial element in nurturing economic growth. The structure of government expenditures has important long-term and short-term implications on economic growth. (Waqas, 2022) Investigated relationship between poverty, social protection expenditures, economic growth and income disparity in Pakistan and came to the conclusion that government spending on social protection had a favorable impact on economic growth, as well as a reduction in poverty and inequality. (Sadiq, 2003) Explained the success of government spending on the efficiency and openness of the management of the public sector, as well as the availability of money to support the expenditures that were anticipated. It is commonly known that the budget has a significant impact on economic growth and the alleviation of poverty. There are several different ways in which this can take place. The direct supply or funding of essential services and initiatives that are specifically designed to alleviate poverty are two additional ways in which budgetary spending can have an impact on poverty.

The academic community and legislators should give a lot of thought to the link between expenditure of the government and the eradication of poverty. Spending by the government has the potential to have a positive impact on economic development and the elimination of poverty

that it causes. This is accomplished through the provision of physical facilities and services that are necessary for rapid economic development. Pakistan has kept battling with issues of poverty and economic progress ever since it acquired freedom. For most cases, both of these components still show a positive link with one another. Regarding the chances of poverty reduction, a nation with strong economic development is less prone to face resistance. The government must have sophisticated policies if it is to ensure that the budget is allocated fairly and suitably. Absence of such policies can result into increased poverty figures despite of having huge economic growth e.g. India having GDP of \$3.75 trillion (Forbes, 2023) but still 14.96 % people are living below poverty line (Rangarajan, 2023).

The Poverty Reduction Strategies Program of the World Bank (William G, 2004) placed a strong emphasis on investments in the areas of primary education, healthcare and the social sector in order to promote the building of human capital for the purpose of alleviating poverty. The expenditure of this kind by the government contributes to the enhancement of human capabilities, which in turn increases the skills and productivity of the general population. (Alina, 2023) Analyzed that spending on education has a favorable long-term influence on economic growth in Eastern European countries, countries that were formerly communist, and countries that are currently members of the European Union. (Rangarajan, 2023) Budget allocations in health care sector helps in reduction of poverty. Sound health care facility improves productivity of labor and income level among the poor which significantly reduces poverty.

A number of different policies have been implemented by the government of Pakistan in the past; however, these policies have not been able to perform to their full potential due to issues of bad governance, corruption, a worsening peace and order situation, and contentious development methods that have been used by the government on occasion. Furthermore, the political and economic challenges that have been faced have harmful effects that include the energy crisis, unemployment, global recession, the worst law and order situation, COVID 19, and the inadequate execution of development strategies. This necessitates to adopt a strategy to find solutions to the difficulties that have been brought forward, as well as to modify the priorities of the government's expenditures. It is required to undertake an analysis of the influence that government expenditure has on the growth of the economy and the reduction of poverty in order to make the role of the government more productive and in accordance with the present political and economic situation in the economy. This may be accomplished by doing the analysis. The most important purpose of

this research is to investigate the connection that exists between the various forms of government spending and the expansion of the economy and the alleviation of poverty.

The main emphasis of this work is on the critical investigation of budgetary allocations in Pakistan and Bangladesh, two adjacent nations with different socioeconomic issues but same developmental paths. Given the ongoing problems with underdevelopment and poverty afflicting both countries, public expenditure strategic priority becomes critical. This comparison study aims to show how important budgetary decisions are not only financial ones but also major determinants of either poverty levels or economic progress. This study tries to simplify the complication of fiscal planning and its direct effects on socio-economic health by investigating the allocation patterns among several sectors like education, health, agriculture and infrastructure in every nation. In the end, knowledge gained from this analysis could give legislators necessary direction that fits the double goals of poverty reduction in their particular situation and economic growth. The findings of the research show the areas where additional government spending will be needed to reach sustainable economic development and poverty reduction.

1.2. Reason for Selecting my Topic

I selected this topic because in present era, goal of every country is to improve its economy. Trend is shifting from having huge battle fleet to how strong a country is in terms of its economy. Prosperity of a country will be measured primarily basing on its economic growth and provision of secure environment in which all inhabitants can have access to basic living facilities. All those individuals who do not have access to these facilities are considered to be living below poverty line. People living below poverty line are most likely to resort to criminal ways to fulfill their needs and will create law and order situation and will badly effect productivity of a country. It makes poverty and economic growth interrelated. Since both these factors e.g. economy and poverty are mainly influenced by government spending in terms of fair and just budgetary allocations, so I decided to study their relationship with each other. For comparative analysis, I selected Bangladesh because we belong to almost similar geographic location and analyzed post separation era.

1.3. Research Gap

The persistent and unsustainable decline in economic development in Pakistan has been a source of concern for the government of Pakistan. The unsustainable economic growth was mainly due to series of global events which not only badly effected global economic outlook but took Pakistan economic condition to nose dive. Outbreak of global pandemic in 2019 in the form of COVID-19 caused interruption in economic growth which resulted in decline in growth (Naseer, 2023). In early 2022, the Russia-Ukraine conflict exacerbated commodity prices and intensified domestic inflation rates (Pal, 2023). Domestic natural disaster shock in the form of devastating flood in 2022 aggravated economic growth vulnerability. Moreover political unrest has further worsened the situation. Bangladesh also faced the adverse effects of global events but managed to maintain its economic growth (Dorosh, 2023). However already struggling economy of Pakistan faced adverse effects. Contemporary economic situation needed a study to access the situation suggesting possible way forwards. Moreover understudy variables have not been covered collectively in any study so far for comparative analysis between Pakistan and Bangladesh with annual time series data since post separation.

1.4. Problem Statement

The distribution of fiscal resources is crucial for stimulating economic growth and alleviating poverty, especially in emerging nations. Nevertheless, the improper distribution of these resources can impede economic advancement and intensify socio-economic disparities. In Pakistan, despite regular budget allocations, the diversion of fiscal resources from essential areas like education, healthcare, infrastructure and agriculture has led to stagnant economic growth and enduring poverty. As a result, it has caused persistent budget deficits, heightened inflationary pressures and a decline in foreign investment. It has perpetuated inequality, restricted access to key services and impeded human capital development. The failure to meet essential infrastructure and energy requirements has hindered industrial expansion and agricultural output, which are vital components of Pakistan's economy. The enduring consequences of these challenges encompass an escalating financial burden, environmental deterioration and a decline in public confidence in governmental institutions. Conversely, Bangladesh, a nation experiencing same historical and financial problems, has shown notable progress in terms of lowering poverty and growing the economy. One mainly credits this result on better use of the given financial resources. The different

routes Pakistan and Bangladesh have decided to follow offer a great chance to look at how the allocation of financial resources affects the rates of poverty and economic growth.

This study aims to investigate the impact of inappropriate fiscal resource allocation on economic growth and poverty reduction in Pakistan, with a comparative analysis of Bangladesh's fiscal policies and outcomes. Inappropriate allocation of fiscal resources has been a grave concern for Pakistan. It has resulted in poor economic cycles for Pakistan. The study considered Pakistan and Bangladesh who got separated in 1971. Bangladesh economy kept flourishing with reduced poverty statistics. Contrary to this, Pakistan economy remained distressed and poverty alleviated. There was a need to compare our spending pattern with that of Bangladesh and carryout corrective measures for promoting economic growth and reducing poverty.

1.5. Research Objectives

The main research objectives were:

- a. To analyze the impact of budgetary allocations on economic growth in Pakistan.
- b. To analyze the impact of budgetary allocations on poverty reduction in Pakistan.
- c. To make a comparative analysis of the impact of budgetary allocations on economic growth and poverty reduction in Pakistan and Bangladesh.

1.6. Research Questions

The study had the following research questions:

Q1. What is the impact of Budgetary Allocations on Economic Growth in Pakistan and Bangladesh?

- Q1a. What is the impact of Educational Spending on Economic Growth?
- Q1b. What is the impact of Health Spending on Economic Growth?
- Q1c. What is the impact of Infrastructural Spending on Economic Growth?
- Q1d. What is the impact of Agricultural Spending on Economic Growth?

Q2. What is the impact of Budgetary Allocations on Poverty Reduction in Pakistan and Bangladesh?

- Q2a. What is the impact of Educational Spending on Poverty Reduction?
- Q2b. What is the impact of Health Spending on Poverty Reduction?
- Q2c. What is the impact of Infrastructural Spending on Poverty Reduction?
- Q2d. What is the impact of Agricultural Spending on Poverty Reduction?

1.7. Significance of the Study

Budget allocation is one of the most vital tools available to governments for addressing poverty and stimulating economic advancement. The significance of budget allocation has intensified in recent years due to rising poverty rates and ongoing economic instability. Despite a substantial annual budget allocated for poverty alleviation and economic development initiatives, progress in these domains has been sluggish. This underscores the intricacy of the relationship between government spending and anticipated outcomes. Expenditures aimed at alleviating poverty yield more rapid effects as they prioritize social welfare and directly assist disadvantaged individuals (Elshahawany, 2024). In contrast, growth-oriented expenditure, which seeks to enhance economic activity, frequently have an indirect effect on poverty alleviation. Both kinds of expenses are rather important and could finally help to lower poverty. The problem that has to be addressed is realizing how these expenses interact and how long-term consequences follow.

A key issue in this context is determining the optimal level and balance of government expenditure. Given that sustainable development relies on investments that foster both growth and poverty alleviation, it is crucial to achieve an optimal balance between the two (Ahluwalia, 1979). Avoid disproportionately prioritizing one aspect over the other to achieve sub optimal results. For example, although eliminating poverty is the primary objective, an overemphasis on growth-oriented spending may neglect immediate poverty alleviation demands, so compromising long-term sustainability. The maintenance of this equilibrium is especially crucial in developing countries, where competing aims and limited resources necessitate the optimal allocation of financing.

This study provides valuable insights for the government of Pakistan, offering guidance on how to navigate the challenges of fiscal allocations. By analyzing the effects of different kinds of government expenditure on poverty and economic development, the study offers suggestions for best allocation of budgets. This study provides doable answers for the problems. These revelations are relevant not only for Pakistan but also for other developing nations facing problems similar to those of Pakistan. The report provides a policy input for governments as they are developing their fiscal strategy. It helps them to more wisely distribute resources so that their objectives of lowering poverty and boosting economic growth may be realized.

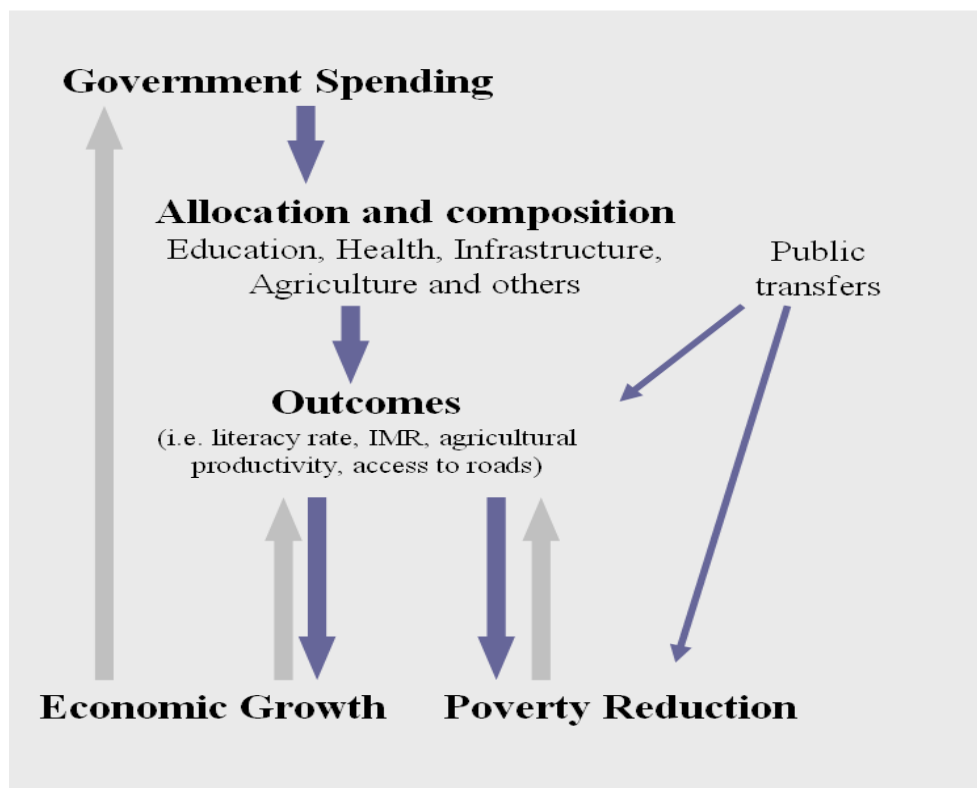
Moreover, the research contributes to the academic discourse on the relationship between government spending, poverty, and economic growth. Apart from laying a foundation for later

studies on the methods in which financial policies may be developed to have the maximum impact on development goals, it also motivates more inquiry on the ways in which they could be implemented. This paper emphasizes the need of evidence-based policymaking and offers governments a structure to apply in order to make decisions grounded on the results. It addresses the subtleties of budget allocation and the resulting effects to do this. Ultimately, the results underline the need of a sophisticated approach to budget allocations, one that recognizes the interdependence of economic development and poverty reduction and seeks the goal of leveraging the potential of both growth-oriented and poverty reduction-oriented expenditures in order to build a society that is more equitable and rich.

CHAPTER 2

LITERATURE REVIEW

The correlation between budgetary allocation, economic growth, and poverty alleviation has been extensively examined in numerous studies. The majority of the research demonstrated a positive correlation between the allocation of financial resources and economic growth, as well as a reduction in poverty. Certain studies, conversely, identified either a tenuous correlation or an absence of correlation altogether. This section emphasizes the existing material concerning the relationship between budget allocations, economic growth, and poverty alleviation.



Source: (Fiestas, 2005)

Government expenditure and economic growth are interrelated and assessed via sectoral outcomes; for instance, increased growth results in enhanced sectoral outcomes (such as literacy rates, improved educational institutions, health metrics, and access to infrastructure), while superior sectoral outcomes also contribute to elevated growth rates, particularly through investments in education, health, and infrastructure. Enhanced access to sectors services and goods facilitates greater poverty alleviation; yet, increased poverty reduction may concurrently elevate the desire for superior sectoral outcomes (Fiestas, 2005).

2.1 Theories of Economic Growth

2.1.1 Keynesian Theory of Economic Growth (1930) owes its genesis from John Maynard Keynes (1883 – 1946) a British economist who is considered as the father of modern macroeconomics. Initially economic growth was analyzed only by static conditions. This approach was revolutionized by John Maynard Keynes, in *Treatise*, who introduced a dynamic approach whereby economy of any country gets its drive from flow of incomes and pattern of expenditure, opening new avenues of economic analysis.

He explained that there exist relationship between overall demand and unemployment. Overall inadequate demand results in extended periods of unemployment. An output of goods and services of economy is achieved by adding four components: Government purchases, investment, consumption and net exports. Increase in demands are required to be met out of these four components (Sarwat, 2014). During recession in 1930, demand was reduced by strong forces thus reducing the spending. Economic decline causes uncertainty which shatters user confidence leading to reduction in spending which is more pronounced in luxurious items like cars or property. This results into reduction in investment by investors and businessman as a response to reduced demand. Here comes the role of government to stabilize the situation by ensuring increase in output. As per Keynesian Economics, government role is necessary to moderate the situation during the period of booms in economy or decline. Variation in aggregate demand, expected or unexpected, has effect on output and employment opportunities. As per Keynesian, prices are rigid and less likely to be effected, change in any of the four components: Government purchases, investment, consumption and net exports, results in change in output. For Example, if government spending increases, keeping other spending components constant, then output will also increase. Likewise increase in multiple components can also result into increase in output supporting multiplier effect phenomenon. If fiscal multiplier is more than 1, then 1 unit increase in government spending will lead to addition in output greater than 1 unit. Therefore as per Keynesian Macroeconomic model, increase in public

spending particularly of recurrent nature contributes significantly and positively towards economic growth. This increase in spending helps in increased demand which helps in creating employment opportunities, profitability and investment volume resulting into multiplier effect on aggregate output.

2.1.2 Wagner Law (1893) owes its genesis from Adolph Wagner (1835 – 1917) a German economist and politician and “Wagner law of increasing state activity” is named after him. He argued that in the initial phases of progress, governments tend to increase expenditure due to increase in political pressure for economic and social progress. This makes it one of the fundamental theory that links economic growth with public spending. Relationship between government spending and economic growth as stated in Wagner Law of increasing state activity is somewhat different from Keynesian Theory of Economic Growth. According to Wagner law, government expenditure is influenced by progress of the state which is driven by economic and social progress of the country. This means that economic development and growth in national income makes it attractive for the government to increase its public spending. (Bazan, 2022)

According to Wagner, there are three reasons which result in to increase in public expenditure (Tarila, 2018). **First**, when a country develops, it’s administrative and legal infrastructure tends to increase for bringing it at par with contemporary economic giants. Increase in population and urbanization also demands greater expenditure by government for smooth administrative activities. **Second**, increase in public expenditure gets its drive from increase in income. When income increases, demand for better educational facilities, recreational facilities and government facilities also increase. This demands brings increase in public spending. **Third**, country with better industry requires advanced technologies which is possible only by having huge amount of capital infrastructure. Government intervention is mandatory to meet these requirement. Hence these three reasons are accrued when a country develops and economy grows making it necessary for government to increase its spending.

2.2 Strategies of Poverty Reduction

Few strategies that developing countries can implement to reduce poverty are:

- 2.2.1 Stimulating Exclusive Economic Growth.** (Osmani, 2000) Indicated that economic growth is vital for developing countries in breaking poverty trap provided funds are effectively directed to increase income for the poor people. Effectiveness can be achieved if economic growth is inclusive in nature and needs to happen at a pace quicker than the population growth rate. Since agriculture is predominant source of income of poor people, government to direct its efforts to increase agriculture production and lower the cost involved in harvesting of crops. Government expenditure in infrastructural development i.e. communication infrastructure, power, education, basic health facilities, irrigation and sanitation systems, stimulates economic growth.
- 2.2.2 Economic and Institutional Reforms.** (Ayoo, 2022) Stated that Economic and Institutional reforms are very important in developing countries as their implementation helps in reducing poverty and stimulates rapid economic growth. These reforms create ideal conditions that helps in effective utilization of resources, draws foreign investments, ensures swift economic growth, and makes available requisite competitive environment including wide range of job opportunities. Reforms support governance, accountability and eliminates corruption that hampers economic performance. Requisite reforms to include improving governance to ensure greater accountability, transparency and inclusivity; ensuring a greater focus on the necessities and urgencies of the poor: involving youth and poor in decision making; reducing misappropriation of government funds and fruitless expenses; upholding macroeconomic steadiness and addressing structural constraints to economic growth.
- 2.2.3 Upholding Microfinance Bodies and Programs.** (Urga, 2017) Indicated that shortage of funds is a major limitation for the launch of small scale startups and other income spawning activities in developing countries. By dedicating sufficient funds for agriculture through microfinance bodies, this limitation can be mitigated and the very required credit given to small startups who remain mostly deprived from getting access to credit from formal financial institutions. Apropos,

microcredit can be influential in steering rapid economic activity, generating jobs, increasing individual incomes, and reducing poverty. Microfinance is a workable and favorable path to poverty alleviation. Bangladesh is a country where microcredit has played vital role in lowering poverty by addressing concerns of poor rural women, improved economic activities. Microcredit can be influential in improving the capacities of households to save and ensure better health and educational facilities for their families.

2.2.4 Improving the Marketing System. (Karnani, 2017) Suggested that Reducing poverty most effectively is by improving the output of economically underprivileged households. Empowerment of low-income households to increase their output depends on efficient marketing channels. These technologies help products to be supplied to markets at reasonable rates, hence increasing revenues. To this end, the government must allocate money fairly to sectors like infrastructure and agriculture to meet needs. Growing countries thus have to look for fresh directions to increase their export markets. By helping the local, regional, and national levels of the economy to be better, the implementation of these deeds can help to create a fair and continuous reduction of poverty.

2.3 Budgetary Allocations in South Asia

Understanding the socioeconomic dynamics of the South Asia depends on a thorough knowledge of historic budgetary allocations, which provides a necessary guideline. This area faces different challenges in the process of distributing financial resources since it is unique in terms of the existence of a great range of civilizations, economics and political systems. These difficulties are made much more difficult by a number of variables, including the increase of the population, the differences in economic conditions, and the urgent requirement for the development of infrastructure. In the process of putting economic policies into action and actions that are designed to improve social welfare, the effectiveness of the decisions that are made regarding the budget is becoming an increasingly significant factor. This is because governments are working hard to find an equilibrium between economic progress and social fairness. Moreover, the impact of bilateral agreements and international organizations complicates the budgeting process even more; so, it is essential to do an extensive analysis of how these elements interact to identify the main budget

objectives. The financial allocation patterns reveal not just the immediate objectives of South Asian countries but also the fundamental ideas guiding their paths of growth. This helps one to have understanding of both of these facets of them.

When we take a deep look at South Asian budgetary allocations, we find out notable differences in resource distribution, especially in relation to poverty reduction and health care facilities. In crises situation like the epidemic of COVID-19, South Asian countries faced a lot of difficulties to include high rates of poverty and inadequate health funding systems. For example, good health funding policies were crucial in enabling countries to react to the health crisis and minimize its effects on underprivileged groups (Bao, 2023). Moreover, different strategies to poverty reduction highlight the areas of financial conundrums. It is clear from careful analysis of these elements that good budgetary allocation can support health equity, enhance public welfare and eventually help South Asia to be sustainable.

Understanding the context of budgetary allocations in South Asia allows one to understand how past economic policies and external influences have affected current financial practices. Over the years, many outside organizations most notably the World Bank have drastically impacted government and development projects. This is evident from the way initiatives in nations like Sri Lanka have experienced major ideological changes in form of strategies linked with development and rule of governance as expressed in World Bank development reports. These changes show a conflict between imported management theories and local needs, which usually results in inadequate handling of the complexity of socioeconomic issues (Shahzad, 2010). Furthermore, a recent study showed that simple public expenditure increases are unable to close ongoing development disparities, thus creative micro-policies catered to local settings are absolutely necessary (Castaneda, 2022). Therefore, analyzing these historical dynamics is essential to grasp how South Asian financial allocations keep changing and reacting to regional issues.

Fiscal policies developed in South Asian countries show the major responses those countries have made to address both internal and external economic challenges. Over their history, these countries have stressed centralized administration and infrastructure building depending on banking systems that frequently reflected colonial legacy. Conversely, the start of globalization and the impact of international aid organizations most importantly the World Bank have changed these objectives. For example, World Bank studies released between 1978 and 2006 show a trend toward including local settings into Sri Lankan development initiatives. These reports also highlighted the

significance of adapting management styles that resonate with the needs of the community rather than simply adhering to external prescriptions (Shahzad, 2010). This ever changing landscape highlights the growing acknowledgment of the intrinsic complexity that is present in the distribution of budgetary expenditures.

2.4 Current Trends of Budgetary Allocations in South Asia

The background of budgetary allocations in South Asia has developed remarkably in recent years, showing a mounting weight on sustainable development and poverty alleviation. Governments across the region are progressively directing funds towards sectors that directly impact social equity, including education, healthcare and infrastructure. This alteration is prompted by the requirement to resolve crucial concerns, such as high poverty rates and limited public facilities, which hinder general economic growth. These issues contribute to the need for this modification. The lessons that have been learned from effective tactics for reducing poverty in countries such as Malaysia and China, for instance, demonstrate the usefulness of well-identified investments in human capital and social welfare programs (Kalu, 2017).

The sector-wise allocation of budgets in South Asia exposes notable differences that influence social development and economic growth all throughout the area. Driven by the pressing need to maximize indigenous resources for economic growth, countries like Pakistan show very strong inclination toward infrastructure and energy. Pakistan's switch to coal and other higher carbon substitutes emphasizes the need of giving cleaner technology top priority in order to slow down consequences of climate change while still concurrently spending between U\$ 8 billion and U\$ 17 billion for sustainable development (Aslam, 2011). In Bangladesh, too, despite increases in enrollment, high dropout rates and quality issues compromise the allocation for basic and secondary education, hence underscoring a compounded issue of exclusion in educational access. Not just for fair development but also for building strong economies able of overcoming social and environmental difficulties, addressing these allocations is crucial (Ahmed K. S., 2007).

2.5 Budgetary Allocations in Pakistan

In Pakistan, the way the country's socioeconomic perspective is shaped mostly in the critical sectors of education, health, agriculture and infrastructure depends on the way budgetary resources are distributed. These sectors not only interact but also form the basis of steady development and rapid economic growth. In order to effectively address the pressing issues that the Pakistani people is confronted with, such as the reduction of poverty, the reduction of social inequality, and the

improvement of public services, it is absolutely vital to distribute financial resources within these sectors in an efficient manner. (Finkelstein, 2021) Decisions made regarding the budget are reflective of the objectives of the government as well as the effects that these decisions have on the overall quality of life. Moreover, careful analysis of these allocations will highlight the possibility to improve human capital by means of health and education investments as well as the need of agriculture and infrastructure in promoting economic resilience. In the end, a thorough awareness of budget allocations will show directions for strategic investment in Pakistan and focused changes.

The goals that Pakistan has set for the allocation of its budget show a crucial intersection between the immediate needs of the country's development and the long-term strategic planning requirements. Over the past few years, the government has placed a greater emphasis on various areas, including education, health, agriculture, and infrastructure, in recognition of the importance that these sectors play in promoting sustainable growth and social fairness (Bashir, 2022). Education, for example, calls for a sizeable amount of the budget in order to address the historically low literacy rates and to encourage the development of skills that are necessary for a modern workforce. At the same time, health sector allocations continue to struggle with difficulties in terms of accessibility and quality both of which are essential for enhancing the outcomes of national health care. It is imperative that agriculture receive attention in order to ensure food supply and boost productivity. This is the case because agriculture is the backbone of Pakistan's economy. According to the conclusion, the goal of infrastructure investments is to create a solid foundation for economic activity. On the other hand, the impact of these allocations can be hidden by issues with prioritization, as has been demonstrated in other economies. This demonstrates the need of having monitoring and evaluation procedures that are both effective and capable of maximizing the impact of these allocations by maximizing their efficiency.

The historical background of Pakistani budget distribution for education exposes notable differences motivated by regional, gender, and policy aspects. Funding disparities have often reflected socioeconomic differences across provinces; for example, Sindh faces particular difficulties including a lag in female teacher employment even with advancements in girls' school building (Ismail, 1996). Though variances still show up across different provinces, the government's dedication to improving educational infrastructure over years has led to higher regular and capital investment. Especially in view of post 2014 resource inflows, the impact of

external funding and local resource revenues further complicates this scene by influencing the allocation priorities in education alongside other vital sectors like health and infrastructure (Batten, 2011). Therefore, promoting fair distribution of resources and raising educational results all throughout Pakistan depend on an awareness of past trends.

Pakistan's educational funding policies have changed significantly since it became independent under the impact of both internal interests and foreign aid dynamics. Originally concentrated on improving access to school, funding policies changed in the 1980s towards improving quality and curriculum development, therefore reflecting a greater awareness of educational standards (Ahmed, 2021). But a lack of consistent assistance has often hampered its development; this is particularly true in budget support for education, where changes in foreign donor pledges have especially negative effects. The erratic nature of these levies makes long term planning difficult and forces governments to carefully distribute resources. Moreover, the development of the non-profit sector in the field of education provides chances for better service provision even if government regulations and support create some difficulties. These constituents when taken into consideration indicate the need of a more considerate and reliable approach as they reveal the composite setting defining Pakistan's educational budget.

The current budget allocations for education in Pakistan reflect a worrying trend that greatly influences the availability and quality of educational resources. Funding for political agendas typically favors areas that might not directly help the most underprivileged groups, therefore aggravating disparity in educational opportunities (Siddiqui, 2023). This lack of coordination in aid and investment makes it difficult to distribute resources effectively and it has a disproportionately negative impact on groups that are already marginalized and disadvantaged. Decisions regarding the budget indicate a preference for more teacher inputs than very basic educational materials. This is due to the fact that the choices made about expenditures in the public sector often diverge from the ideal resource allocation for learning.

It is clear from looking at Pakistan's health budget allocation that the priorities of expenditure greatly affect the availability and quality of healthcare services. The allocation procedure is quite often a mirror of the general socioeconomic problems the country is now confronting. In spite of the fact that it has the ability to increase productivity and decrease inequality, eye health, which is an essential component of overall well-being, receives little attention for its importance. To give just one example, it is anticipated that by the year 2050, over 1.8 billion individuals around the

world will suffer from vision impairment, with a disproportionate impact on nations with low and intermediate incomes such as Pakistan (Burton, 2021). The government's programs which are required to finance health sector should be quickly reviewed to effectively handle such unavoidable health issues. Moreover, modern public policies must validate that gender specific health needs are acknowledged and that money is spent with the aim of reducing inequalities. As shown by the effectiveness of randomized controlled trials in assessing healthcare interventions, it is abundantly evident that thorough data analysis, the basis for excellent public health policies, requires large investment. Therefore, not only will the resolution of these financing problems improve the delivery of healthcare but also general public health indicators, guarantee fair access to medical services, and enable the creation of long-term sustainable solutions for Pakistan. A careful examination of the priorities of the health allocation is surely essential to guarantee justifiable health results for every group. In order to guarantee that every Pakistani citizen has access to fundamental services as well as to support sustainable growth and increase the general level of living all throughout the nation, a careful evaluation of budgetary priorities is finally necessary.

The analysis of budget allocations for education, health, agriculture and infrastructure in Pakistan reveals critical disparities and highlights the urgent need for strategic reform. Where education and health sectors receive insufficient funding to meet growing demands, agriculture and infrastructure investments, although vital, often lack efficiency and innovation. In order to increase the overall well-being of the public, it is necessary to reallocate resources in such a way that education is given priority. This will ensure that the workforce is well-trained and healthcare services are improved. In addition, the incorporation of technology into agricultural methods has the potential to increase production, which would result in a twofold benefit such as the decrease of poverty and the expansion of the economy. Moreover, it is essential to mix a dedication to the construction of infrastructure with ecologically beneficial activities to guarantee long-term profitability and resistance against climate change. This is the only approach ensuring resistance and long-term survival. The ultimate goal of Pakistan's economic future is to create a more sustainable and fair economic future by means of a balanced approach that solves current inefficiencies while also investing in industries with growth orientation. This will be achieved by means of a balanced strategy.

2.6 Budgetary Allocations in Bangladesh

Examining the budget allocations in Bangladesh offers critical insights into the nation's developmental priorities and the socio-economic factors influencing these decisions. In recent years, the government's financial strategy has emphasized education, health, agriculture, and infrastructure as pivotal sectors for fostering sustainable growth (Islam, Impact of institutional quality and human capital creation on economic growth in Bangladesh: evidence from an ARDL approach. , 2022). The improvement of the overall quality of life for the people of Bangladesh is dependent on each of these areas, which are interconnected and each play an important contributing role. A competent workforce is crucial for economic progress, and increased investment in education helps cultivate that workforce. On the other hand, spending for healthcare has a direct influence on the outcomes of public health and productivity. In addition, giving agricultural priority not only reinforces the safety of food supplies but also encourages the growth of rural areas and the creation of employment possibilities. The same is true for connection and economic activities; strong infrastructure facilitates both of them. This introduction aims to set the stage for a more in-depth examination of how budget allocations reflect Bangladesh's dedication to overall development and how they meet the immediate needs of its people in the framework of a world fast changing global scene.

The allocation of funds in Bangladesh's budget reflects a strategic framework that was created to fulfill both the urgent requirements of the country as well as the long-term aims of national development. The government's aim is to raise human capital, which is necessary for long-term economic development; it does this by giving areas like education and health care top priority. On the other hand, this trend in allocation has not been without challenges; the significant rise in revenue expenditures has usually hidden the spending on development. According to the findings of the economic review (Khanam, 2017), despite the fact that overall government spending has increased, the composition of that spending has undergone a significant shift, which has resulted in a decrease in investments that are directly aimed at productive sectors such as agriculture and manufacturing. This reallocation has brought questions about the long-term viability of economic growth. This reallocation shows that development cannot be ensured by raising governmental expenditures by itself. Therefore, it is imperative to emphasize on balanced sector-wise allocations in order to progress national growth while also preserving social fairness and economic resilience.

When it comes to the eradication of structural injustices and the advancement of long-term development in Bangladesh, the allocation of the money for education is of highest relevance. Though a lot of work has been done in increasing access to education, challenges still have to be solved (Ashraf, 2023). The reason for this is because political goals frequently take resources away from groups that are already being underserved, which makes the gaps that already exist much more pronounced. There is a considerable number of people who are of the opinion that resources are typically distributed in a manner that is advantageous to specific regions or populations, while leaving the most vulnerable groups without any assistance. This misallocation could thus have harmful effects on the efforts to reach the Sustainable Development Goals. This is especially related to the fact that consistently insufficient investment results in inadequate educational performance, which so stops the national development. Furthermore demonstrated is the wide spectrum of effects resulting from including gender issues into the distribution of budgetary funds. To stimulate economic development, the World Bank has underlined the need of women's involvement in important industries (John, 2011). Given this, a review of the budget's educational allocation not only helps to correct historical inequalities but also has the potential to raise general society's welfare in Bangladesh.

In analyzing the critical landscape of health budget allocations in Bangladesh, it is essential to consider the implications of resource distribution on the country's overall health outcomes. The challenges faced in sustaining health services stem from inadequate targeting and insufficient funds allocated for routine operation and maintenance, which creates the risk of regression in previously achieved gains. Furthermore, handling poverty linked health programs depends on efficient management and organizational capacity within the health industry. Apart from establishing exact criteria and structure, the results of a thorough research highlight the need of enhancing the knowledge and skills of healthcare personnel to guarantee the application of health policies (Denise, 1992). Moreover, it is crucial to take a long term approach for the allocation of health budgets, keeping these challenges in mind, in order to ensure long-term up gradations in health and to increase access to key facilities for the citizens of Bangladesh.

By analyzing the expenditures made in the healthcare sector in Bangladesh, one can see that there is a direct correlation between the results of public health initiatives and the distribution of financial resources. This provides an indication of the extent to which the availability of hospitals and other healthcare facilities is influenced by the amount of financial investment. The adoption

of austerity policies in recent years has resulted in a decrease in the government expenditure on medical treatment. Other underdeveloped countries experiencing financial challenges have seen this tendency as well. As a result of this, the reliance on the engagement of the private sector, non-governmental groups, and cooperatives for the delivery of health care has increased significantly. As a result, those who are economically disadvantaged are frequently left particularly exposed to poor access and quality of care. This pattern, which is known all across the world, is in agreement with studies that urge for higher health investments as crucial for supporting economic development and reducing poverty (Kanwa, 2006).

As a result of analyzing the budgetary allotments for education, health, agriculture, and infrastructure in Bangladesh, it is clear that strategic investments continue to be essential for the promotion of sustainable development. Because of the interaction between these several sectors, it is absolutely necessary to allocate resources in a holistic manner that not only meets the requirements of the present but also reduces the risks that are associated with the future. Modern research have shown that adaptations to present developmental approaches stress fair involvement with underprivileged people (Eriksen, 2021). This guarantees that the needs of these groups directly influence policy decisions. Moreover, since it is expected that the infrastructure needs would surpass reasonable budgetary limits, major investments are being made to close current gaps and satisfy the demands presented by climate change (Hasan, 2017). An approach with several dimensions especially one that sought to simplify finance across several sectors while also promoting fair involvement was finally what helped Bangladesh's resilience and well-being to grow. Such focused efforts helped the country to significantly advance toward more fair results of development and sustainable development outcomes.

Bangladesh's economic development is influenced by the distribution of financial resources, particularly in important sectors such infrastructure, education, healthcare, and agriculture. With relation to the second choice, this is especially true. More education means more skill sets and knowledge bases for individuals, which could increase their capacity for innovation and output. Enough investments in these spheres result in an economic demand that is fundamental for continuous development. Economic involvement and development depend on a better workforce, hence improving healthcare systems helps to create such workforce. Since agriculture is still a vital industry supporting both food security and rural life, it is imperative to consider financial issues focusing on modern technologies and agricultural resilience.

2.7 Economic Growth

When the output of products and services inside an economy rises during a given period, that economy is considered to be undergoing economic growth. The increase in Gross Domestic Product (GDP) helps one to generally measure this increase. Often driven by a multitude of elements including increased investment, technical developments, better worker productivity, and efficient resource allocation, it is a gauge of the capacity of an economy to generate. Economic growth and higher income levels, better living standards, and lower poverty rates are clearly correlated. One basic indicator of the state of the economy is its growth. It does not, however, particularly consider the general well-being of the population, the sustainability of the environment, or the income distribution.

Numerous academicians and economists have provided a number of different definitions of economic growth. Each of these definitions places an emphasis on a distinct facet of the idea of economic growth with the intention of highlighting that particular facet. One can take into consideration a number of different definitions, including the following:

Simon Kuznets (1901 – 1985)

(Kuznets, 1973) Economist Kuznets, who was awarded the Nobel Prize in Economics, described economic growth as a sustained increase in the ability to provide its people with a wider range of economic commodities; this expansion is predicated on developing technology and the institutional and ideological changes it necessitates.

Paul Samuelson (1915 – 2002)

(Samuelson, 1972) Another Nobel laureate, described economic growth as the increase of the economy's production possibilities over time, highlighting the increase in the potential output of an economy.

Robert Solow (1924 – 2023)

(Solow, 1988) Economic growth is defined by Solow as the upsurge in the volume of goods and services fashioned by an economy over time, with an emphasis on the role that technological advancement and capital accumulation play in the process. Solow is best known for his work on the Solow-Swan growth model.

John Maynard Keynes (1883 – 1946)

(Schumpeter, 1946) One of the most influential figures in contemporary macroeconomics, Keynes, centered his attention on the demand side of the economy. He believed that greater aggregate demand was the driving force behind economic expansion, and that this demand could be boosted through the implementation of fiscal and monetary policies.

Joseph Schumpeter (1883 – 1950)

(Reinert, 2006) Schumpeter, who is famous for his theory of economic development, characterized economic progress as a process that is driven by innovative and entrepreneurial activity, which he referred to as "creative destruction." When it comes to the factors that drive economic advancement, he stressed the importance of new technology, new markets, and new organizational forms.

Amartya Sen (1993 – Todate)

(Atkinson, 1999) One of the recipients of the Nobel Prize, Sen, offered a more comprehensive viewpoint by defining economic growth not only in terms of GDP but also in terms of the enhancement of human talents and freedoms. He claimed that the influence of growth on people's ability to lead lives that they value should be the criterion by which growth should be evaluated.

The perception of "economic growth" can be taken in a variety of ways, (Kapkaev, 2015) each of which offers both quantitative and qualitative landscapes. In addition to revealing shifts in the quantity of commodities and services that are shaped, quantitative characteristics also offer insight into the dynamics of these shifts: The qualitative side indicates the potential of the economic structure to accomplish the ever growing desires of society. When it comes to a certain time, it always has a numerical index because it is a process that is not fixed, but rather one that is moving and changing. The dynamics of fundamental macroeconomic indicators, including gross domestic product (GDP), gross national product (GNP), and national income, are regarded as the essential determinants of economic growth (Boldeanu, 2015). However, when we talk about the qualitative side of economic structure, there are a lot of landscapes that define it. There are many types of checks of quality of life levels and living standards included in this domain. When we try to determine an assessment of the standard of living, the two basic measures which are taken into

deliberation are the consumer basket and the cost of living. The nature of one's work and the activities they engage in during their spare time are both indicators of the quality of life that one possesses. Levels of comfort in the workplace and in everyday life, the environment, the functioning of social institutions, and other aspects of life are all important factors.

The kind of economic growth process is the mode in which the most comprehensive characteristics of the process are expressed. The field of economics differentiates between a numbers of key points of view regarding the various types of economic growth (Kapkaev, 2015). The **first point of view**, the factorial approach offers insight into many forms of economic growth by examining alterations in production inputs, encompassing both quantitative and qualitative changes. Economic theory encompasses two forms of economic growth: intensive and extensive. Furthermore, there exists a novel form of economic growth that constitutes a component of an intensive type of economic growth. What distinguishes the extensive form of growth from other types of growth is the quantitative rise in the utilization of one or more factors of production. Therefore, three distinct groups: capital, labor, and resources, can assist in achieving better and thorough economic development. We can examine robust economic growth, often termed qualitative growth, characterized by advancements in production factors, such as the utilization of ultra-precise modern equipment in manufacturing, efficient non-waste technologies, and a more skilled workforce. It is essential to emphasize that these two modes of development are interconnected and should not be viewed as conflicting. Apart from the rates of population increase, the criteria and possibilities of the society shape the **second point of view**. Roy Harrod, a British scientist and economist, is recognized for inventing the concepts of natural, assured, and actual types of economic growth. The core of this approach is evident in his produced works. Natural economic growth is chiefly driven by population expansion, an escalation in the needs of this population, and the aspiration of each individual to fulfill their material and spiritual desires to the fullest extent, while concurrently leveraging all available opportunities for economic advancement. Actual growth refers to the specific extent of economic expansion resulting from the interplay of natural and assured economic growth. Roy Harrod characterizes guaranteed economic progress as a projected trajectory of advancement that entrepreneurs are willing to pursue and find contentment in their endeavors. Actual growth is the aggregate effect of intrinsic and assured economic growth. **The third point of view** examines the economic expansion is contingent upon the existing productive forces, equipment, and production technologies. Within this framework, economists

differentiate between three distinct types of economic growth: pre-industrial (defined as the stage of traditional civilization), industrial, and post-industrial. Pre-industrial growth refers to the economic development in nations where agriculture is the predominant industry, contributing over fifty percent to the GDP. Several economically disadvantaged nations remain in the pre-industrial phase of agricultural development, although developed capitalist countries finished this phase in the previous century. The pre-industrial model of economic growth is generally marked by significantly lower growth rates compared to the industrial model. As a result of the overturn in the material foundation of production that is characteristic of the industrial type of expansion, the industry begins to follow agriculture and begins to play a dominant role across the national economy. The beginning of the nineteenth century marked the beginning of the period of time that is now known as the modern industrialized countries' period of industrial progress, which is still ongoing.

2.8 Poverty Reduction

Among the most pressing problems facing the world today is alleviated poverty, particularly in developing nations like Pakistan and Bangladesh. If the two countries want to get sustained development, social stability and financial progress, they must solve major poverty related issues. Reduction in poverty is vital step for unlocking Pakistan's economic potential (Sarwar, 2021). High levels of poverty have effects include development of human capital, declining productivity and obstacle to economic growth. Reducing poverty will help Pakistan to build a workforce with improved skills, attracting investment and encouraging economic activity all of which are goals related to development. Poverty closely relates to unrest in society, criminal activity and extremism. Reducing poverty will help to solve these issues by improving people's livelihood and therefore reducing the attraction around radicalism. Regarding long-term development, a stable society is definitely required.

The low provision of fundamental services including education, healthcare and other basics is connected to the great degrees of poverty in Pakistan (Sarwar, 2021). Reducing poverty can result in an increase in literacy rates, a drop in the mortality rate of children and a general improvement in quality of life which in turn helps people to contribute more importantly to society. Poverty disproportionately affects women in Pakistan, hence their access to healthcare, education, and employment is rather restricted. Reducing poverty can help women to advance gender equality, empower themselves and help to create more inclusive policies. Many times poverty drives

communities to misuse their natural resources, leading to soil degradation, deforestation and a scarcity of easily accessible water. Reducing poverty will enable the fight against climate change, which disproportionately affects existing underprivileged groups. One can contribute to lower poverty by concentrating on the improvement of governance, investment in education and healthcare, supporting rural development and providing job prospects through industrialization and entrepreneurial activity.

Bangladesh's considerable achievement in poverty reduction over the last few decades adds to our understanding of its economic progress. Sustaining this development, reducing income disparity, and ensuring that economically disadvantaged regions benefit from economic growth will require ongoing effort. Poverty reduction is essential for maintaining social harmony in Bangladesh. The increasing trends of urbanization and population growth have given rise to challenges such as the proliferation of slums and the strain on resources. This is so as poverty is a social issue needing attention. Apart from fostering social cohesiveness, tackling poverty will assist to reduce the consequences of these issues. Bangladesh's efforts have clearly resulted in significant increases in the human development metrics of life expectancy and primary school attendance. Conversely, poverty still stands in the way of universal access to wastewater treatment, education, and healthcare being attained. Bangladesh has made notable progress in empowering women, particularly through microfinance initiatives and female labor force participation (Islam, 2011). Continued poverty reduction efforts are essential to further advance gender equality and women's rights. As one of the most climate-vulnerable countries, Bangladesh faces significant challenges related to environmental degradation and natural disasters. Poverty reduction can enhance resilience and enable communities to adopt sustainable practices. Certain steps can help reduce poverty, which includes strengthening social safety nets, expand access to microfinance, invest in climate resilience, and promote inclusive economic growth.

South Asia is a region that is characterised by high levels of poverty and inequality, and both Pakistan and Bangladesh are important players in this region. The reduction of poverty in these countries has the potential to contribute to the stability of the area, the integration of the economy, and the improvement of diplomatic relations (Hossain, 2014). Showing realistic ways to reach the Sustainable Development Goals (SDGs) of the United Nations, particularly SDG 1 (No Poverty), the eradication of poverty in Pakistan and Bangladesh could perhaps be an inspiration for other developing nations. Reducing poverty is a pragmatic imperative for Pakistan, Bangladesh, and the

other countries as well. If these nations act to fight poverty, they have the chance to reach their full potential, improve the lives of millions of people, and help the world to be stable and rich. To reach this goal, policies especially targeted, effective government, and international cooperation are absolutely needed.

As a diverse notion, poverty reduction has been defined and understood in a variety of ways by scholars. These definitions and interpretations have been influenced by the disciplinary viewpoints of the scholars as well as the setting in which they study poverty. Definitions and points of view from a variety of academics and institutions are included in the following list:

Amartya Sen (Capability Approach)

(Atkinson, 1999) It is through the lens of the capabilities approach that Amartya Sen, who was awarded the Nobel Prize in Economics, explains the concept of poverty reduction. He contends that poverty is not simply a matter of having a poor income; rather, it is a matter of being deprived of fundamental capabilities, such as the capacity to lead a healthy life, to have access to education, and to take part in other aspects of society. The expansion of people's freedoms and opportunities to pursue well-being is consequently an essential component of poverty reduction in today's world.

World Bank

From the perspective of the World Bank, poverty reduction is defined as the process of making an effort to reduce the percentage of people who are living below the international poverty line (for example, \$2.15 per day as of 2022). It places a strong emphasis on economic growth, social inclusion, and resilience to shocks as major methods for eliminating poverty around the world.

United Nations Development Program (UNDP)

The United Nations Development Program (UNDP) emphasizes multidimensional poverty, which results from inadequate access to living standards, health and education. In this sense, poverty reduction is the addressing of these aspects by means of programs and policies enhancing human development.

Joseph Stiglitz (Economic Inequality)

(Stiglitz, 2015) Nobel Prize winner, Joseph Stiglitz, highlighted the vital involvement of economic inequality in reducing poverty. According to him, progressive taxation, building social safety nets and validating fair access to resources and opportunities help to solve the systematic inequalities that exist and therefore help to reduce poverty. He believes that this is the only way one may reach this goal.

Paul Collier (Bottom Billion)

(Collier, 2008) Paul Collier, in his book *The Bottom Billion*, defines poverty reduction as lifting the poorest billion people out of poverty traps, situations where poor individuals or communities are stuck in cycles of deprivation due to factors like conflict, poor governance and lack of infrastructure.

Muhammad Yunus (Microfinance and Social Business)

Muhammad Yunus, the Grameen Bank founder, raises two distinct approaches when debating the eradication of poverty: social enterprise and microfinance. These approaches both fit the label of "social business." By means of small loans and the creation of self-sufficient businesses, he believes it is feasible to enable those living in poverty to become self-sufficient and pull themselves out of it.

Thomas Pogge (Global Justice)

Thomas Pogge, a philosopher, asserts that the alleviation of poverty is fundamentally an issue of global equality. One of the assertions he presents in his critique of the global economic system is that it is responsible for the persistent prevalence of poverty. He additionally advocates for the execution of systemic reforms to ensure that resources and opportunities are allocated in an equitable manner.

Jeffrey Sachs (Ending Poverty through Investment)

Jeffrey Sachs in his book titled *"The End of Poverty,"* Jeffrey Sachs provides a definition of poverty reduction as a process that involves making targeted investments in areas such as health, education, and infrastructure in order to break the cycle of poverty. The "big push" approach, in which coordinated efforts are undertaken to address several aspects of poverty at the same time, is something that he advocates for.

Robert Chambers (Participatory Development)

When it comes to alleviating poverty, Robert Chambers places an emphasis on participatory approaches. In his argument, he asserts that integrating low-income communities in decision making processes guarantees that interventions will be tailored to the unique environment and will be permanent.

Martha Nussbaum (Human Dignity)

Using Sen's capabilities approach as a foundation, Martha Nussbaum describes poverty reduction as the process of ensuring that every individual has the potential to continue living a life that is

worthy of dignity. Addressing not only the issue of material deprivation but also the issue of social and political isolation is required here.

A reduction in poverty requires not just an increase in income but also an improvement in access to fundamental services, opportunities, and freedoms on the part of the individual. In order to accomplish this, it is necessary to address systemic concerns such as inequality, governance, and the institutions of the global economy. Promoting the empowerment of individuals and communities to take part in their own development is an essential component of sustainable poverty reduction. The complexity of poverty is brought into focus by these various points of view, as is the requirement for comprehensive and situation-specific responses in order to effectively alleviate poverty.

2.9 Budget Allocations and Economic Growth

Economic growth and government expenditure significantly affect the economic path of a country, which is closely correlated with budget allocation and economic development. Fund allocation influences GDP growth in multiple respects: Investments in infrastructure, technology, and education raise both productivity and creativity. Public infrastructure projects (roads, schools, hospitals) generate employment which increases income and consumer spending by themselves. Two sectors where strategic allocation might inspire private sector participation are energy and transportation. Greater government spending, or fiscal stimulus, can increase demand and growth even in recessionary times. Many important areas can see rapid development with the help of focused funding allocations. Improvements in utilities, ports, and transportation systems help businesses to reduce overhead costs by means of increased efficiency. The engine driving technical innovation and economic growth is a highly educated and capable workforce. Both of which are advantages of well-maintained healthcare systems are a better population equals more production and less financial burden in the long term. Research and Development promotes both completely new economic sectors and technological innovations in whole. Social safety nets have as their objectives guaranteed steady consumption patterns and a reduction of inequality. In developing countries, food security and rural incomes are absolutely essential; Agriculture and Rural Development helps to offer both.

Both mismanagement and corruption can compromise financial targets and show up as unproductive spending. (Yusuf, 2021) Suggested that assuming too much debt to fund budgets

might lead to debt problems and thereby impede economic development. In due course, transient political aims could take precedence over long-term economic ones. Fiscal policies provide a solution for economic crises so that one may pass these challenges. During a recession, expansionary fiscal policy that is, increasing government spending or decreasing taxes can help to boost development. On the other hand, contractionary fiscal policy which seeks to reduce inflation involves either tax increases or expenditure cuts, therefore hindering development even if it would assist to control inflation. Maintaining long-term stability and developing investor confidence depend on maintaining financial discipline. (Jones, 2022) Identified many cases from all around the world contribute to define directed allocation. China's tremendous economic expansion can be partially explained by its large infrastructure and industry investments. Germany also emphasizing education, creativity, and industries with export-oriented emphasis helped the steady development of the country to be encouraged. More money invested on digital infrastructure and healthcare has made India's economy more resilient. One can examine the expansion of the economy with great numbers of measuring criteria. The GDP growth rate of the economy provides a general indicator of its situation. The employment rate reflects the quantity of jobs generated with governmental expenditure. Measuring development in sectors including education, health, and people's quality of living, the Human Development Index (HDI) shows how confident private investment is of the government programs.

In Eastern European countries, countries that were formerly communist, and countries that are currently members of the EU, spending on education has a beneficial impact on economic growth (Alina, 2023). The structure of government spending influences economic growth both in the near term and the long term. Government expenditure on transportation and Information Communication Technology, together with Foreign Direct Investment, favorably influences economic growth in the short term. The data reveal that the impact of government investment on transport expenditure is beneficial in the near term but negative in the long term. This development is due to the fact that the government primarily funds most transport infrastructure projects via foreign borrowing. Ultimately, such loans accrue interest that the government must manage in conjunction with the principal, so adversely affecting economic growth. Pakistan Government Expenditure and economic growth from 1980 to 2020 showed positive relationship (Sidra, 2023). Gross Domestic Product and Government Expenditure, Inflation and Gross Domestic Product per capita were taken into consideration. Results indicated positive and significant impact of

Government expenditure and Gross Domestic Product per capita on Gross Domestic Product. Inflation has a significantly negative impact on Gross Domestic Product of the country. Expansionary Fiscal Policy was suggested for boosting economic situation during the time of economic distress.

Agriculture also plays pivotal role in economic development of a country. Studies carried out by (Adewale, 2023) and (Biradar, 2023) investigated the relationship between government spending on agriculture sector and economic growth in the context of Nigeria and India respectively. Results indicates significantly positive relationship between government expenditure and agriculture output in case of Nigeria. Flow of Foreign Direct Investment is discouraged as it dilutes the output. However, in case of India, there is negative relationship between total government spending on Agriculture and economic growth however there exist positive relationship between total government spending on agriculture sector and agriculture output. Macroeconomic indicators like current account balance, gross debt, revenue, government total expenditure, inflation, volume of exports and volume of imports also effect Economic Growth of countries specially South Asian countries for period 1980–2020 (Ashraf T. M., 2023). Fiscal and monetary policies tools affect inflation in Vietnam (Nguyen, 2022). Government expenditure, interest rate, fiscal deficit and money supply all significantly affect main inflation. Among the conclusions, government spending has the largest influence on inflation and generates economic development.

Optimum level of input are necessary for ensuring stable economic growth and poverty reduction. The phenomenon was studied in case of Congo and agriculture sector was taken into consideration. It was revealed that below satisfactory economic growth and reduced rate of poverty reduction were due to sub optimum level of spending in agriculture sector. Results proposed two sector growth, economic growth and poverty alleviation, can be achieved in faster pace by investing optimum level in agriculture. From 2002 to 2012, Democratic Republic of Congo (DRC) invested only 45 % of requisite optimum level in agriculture sector and achieved slow paced economic growth and poverty reduction. Simulation results recommend that extra agricultural investment together with enhanced agricultural inputs productivity will expedite the country's speed toward accomplishing economic growth and poverty reduction targets: if labor output in terms of its productivity is increased by 10 % coupled with same amount of increase in land output in terms of productivity, it will help in achieving CAADP goals 18 years earlier than the estimated time and also speeds up poverty reduction process (UlimwenguInter, 2020). Although each main

component has varied influence, state budget expenditure of Vietnam (2000 - 2017) has beneficial effect on the economy (Hieu, 2019). While the development investment is shown to be statistically irrelevant, recurrent expenditure has major positive impact on the economy. This has warned about low public investment efficiency in Vietnam.

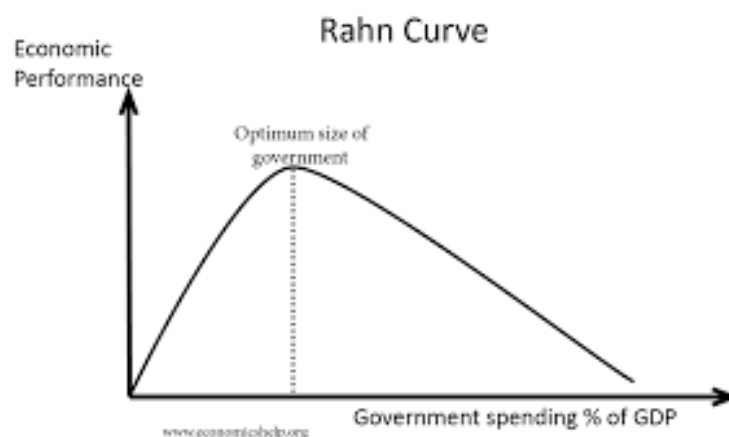
(Yaya, 2010) The findings of an investigation on the causal relationship between budget deficit and economic growth in six different countries were less than conclusive. With regard to three of the situations, he did not discover any causal connection between the budget deficit and growth. On the other hand, in the other three cases, evidence indicates that the budget deficit had a negative impact on the growth. (Mehmood, 2010) Concluded that it is sad that in the case of developing countries like Pakistan, growth is achieved through the reduction of development expenditures, which has a negative impact on the productivity and economic efficiency of a system. However, in the long run, there is a positive relationship between government expenditure and spending and economic growth. According to (Shaista, 2010), there is a correlation between social expenditures and economic growth in developing countries in Asia over the long term for these countries. In the case of ten Asian developing countries (Bangladesh, India, Indonesia, Korea, Malaysia, Pakistan, Philippine, Singapore, Sri Lanka, and Thailand), an analysis was conducted to determine the long-term impact of expenditures in areas such as education, health, and social security/welfare, as well as the fiscal deficit or surplus, on economic growth. The study comes to the conclusion that spending in the social sector have the potential to boost economic growth, as indicated by the analysis. These kinds of social expenditures boost production by ensuring that infrastructure, education, and health care are provided, as well as by bringing private and public interests into harmony.

(Ejiogu, 2013) The study investigated the commitment of the federal government of Nigeria to education by analyzing the allocations of her budget. Additionally, the study evaluated the causal relationship between the government's expenditure on education and economic growth by employing time series observations on the variables that were chosen. However, when the budgetary allocations to education were compared with the 26% of the total budget that is suggested by UNESCO for developing countries like Nigeria, it became abundantly evident that the government has to allocate a greater amount of resources to the field. (Dandan, 2011) On the basis of the related data of government expenditures (recurring expenditures, development investment expenditures, transfer payment, and interest payment) and GDP of Jordan at the

aggregate level, a relationship between government expenditure and economic growth in Jordan was tested during the period of 1990-2006. The results of this test confirmed that the more the government spends, the better the growth of the economy.

With the help of Keynesian theories and an endogenous growth model, this study aims to investigate the influence that public spending had on the expansion of the Kosovo economy between the years 2002 and 2015 (Elshani, 2018). They developed a model in which the gross domestic product served as the dependent variable, and with the following four factors serving as independent variables: total budget revenue, exports, governmental expenditures, and foreign direct investment. Based on the findings of the study, it was determined that both exports and governmental expenditures had a favorable influence on economic growth. It was determined that the total budget revenue did not meet the criteria for statistical significance, and the foreign direct investment was found to be negative and lack statistical significance.

In 1996, Rahn acknowledged that government expenditure had an effect on the economy; nevertheless, he also acknowledged that the relationship between government spending and the pace of economic growth is not always precisely proportionate (Sanger, 2022). The "Rahn Curve" was a model that was developed by Rahn, R., and it was designed to illustrate the connection between public spending and economic expansion. The Rahn Curve proposed that modest public expenditure directed on public goods like infrastructure, etc. would help to boost economic growth. The Rahn Curve, however, also indicated that should public expenditure exceed a designated level, the effect would be inverted (Figure). The inverted U-shaped curve implies that 15 to 25 percent of world GDP is the ideal level of government expenditure.



Source: (Sanger, 2022)

According to (Fasanya, 2013), Tajudeen and Ismail conducted an investigation of the influence that public spending had on the expansion of the economy in Nigeria between the years 1970 and 2010. A distinction was made between capital expenditures and recurrent expenditures in the public sector. Through the use of empirical evidence, this study came to the conclusion that complete public spending would not be effective in stimulating economic growth in Nigeria. It has been discovered that the recurring expenditure has a negligible positive impact on the expansion of the economy.

The increase in public expenditure on education contributes to economic growth and the alleviation of poverty (Total government expenditure and capital inflows were held constant). However, the results can vary from country to country, which means that the effects of education expenditure on poverty and growth will vary from country to country (Thorbecke, 2001). For this reason, solutions for alleviating poverty must to be meticulously adapted to the technological and structural characteristics of each nation. An increase in the amount of money spent on education must to be backed by proper policy measures in order to guarantee the greatest possible benefit. The following are some examples of measures:

- a. In most of the cases, higher public expenditure on education results in increased income to poor and rapid economic growth. However, in absence of accurate targeting, results of rapid economic growth and poverty reduction will be marginal. In order to ensure proper targeting, governments to construct more schools in and attract more teachers at rural areas (Thorbecke, 2001).
- b. Mostly educated and skilled labors are poor because of low demand and less job opportunities. This mismatch between demand and supply of educated labors reduces the desired dividends required to be achieved through higher expenditure on education (Thorbecke, 2001).
- c. Efforts be made to produce type of skilled labors, in terms of varying skills, matching the pattern of labor demand (Thorbecke, 2001).
- d. Increasing the number of employment options in order to help alleviate poverty and promote economic growth. The effects of increased public investment on education on the alleviation of poverty and the growth of the economy are more positive in the situation of a surplus labor supply, which is related with higher employment growth. (Thorbecke, 2001).

Government expenditure and economic growth in Pakistan positive relationship between them. But increase in government spending creates budget deficit (Zahid, 1998). There is a negative correlation between the budget deficit and the growth and output of the economy since the budget deficit is regarded to be an indicator of macroeconomic instability. A study that was conducted on 43 developing nations between the years 1970 and 1990 came to the conclusion that an increase in the proportion of recurrent expenditures produces growth benefits that are both positive and statistically significant (Devarajan, 1996).

2.10 Budget Allocations and Poverty Reduction

The allocation of financial resources plays a crucial role in alleviating poverty, particularly in emerging nations such as Pakistan and Bangladesh. Both nations exhibit far higher poverty rates than the national average, with a considerable portion of their populations residing below the poverty line. The governments of these countries have passed several fiscal policies and budgetary initiatives to reduce poverty; nonetheless, the intended results have not come from these expenditures. Many times used as a framework for budgetary allocation meant to lower poverty are public finance and development economics. The Public investment theory holds that by means of government investment on social sectors like education, health and social protection, the direct reduction of poverty can be attained by means of improvement of human capital and provision of safety nets. The theory of pro-poor growth places an emphasis on the necessity of fiscal policies that prioritize fair growth and target communities that are marginalized at the same time. The Social Protection Theory emphasizes the significance of targeted cash transfers, subsidies, and social safety nets in the process of alleviating poverty from the population (Singh D. S., 2008). These frameworks provide a basis for understanding how budgetary allocations can influence poverty outcomes in Pakistan and Bangladesh.

Budget allocations in health care sector helps in reduction of poverty (Rangarajan, 2023). Sound health care facility improves productivity of labor and income level among the poor which significantly reduces poverty. Impact of economic growth and social public spending on poverty reduction has also been given due importance and studied through a panel of eight Latin America countries along the period of 2000 to 2019 (Davila, 2023). Results reflected strong impact of economic growth on poverty reduction however the impact of social protection expenditure reflected weak impact on poverty reduction. As per forecast error variance decomposition,

economic growth accounts for 40% of poverty variation while almost 16% due to a change in social protection expenditure. (Waqas, 2022) Analyzed Pakistan annual data available from 1983 to 2015 showed that Social protection spending, poverty, income inequality, and economic development have favorable correlations. Three econometric time series models have been developed; the first model investigated the effect of social protection expenditures on poverty; the second model investigated the impact of social protection expenditures on income inequality and a third model shows the impact of poverty, income inequality and social protection expenditure on economic development. Based on co-integration methods, results imply that, in Pakistan, social security programs lower poverty and inequality. Moreover, spending more on social protection initiatives helps to boost the economic development.

Infrastructural spending is one of the effective way to reduce poverty (Xiao, 2022). Two types of infrastructure are likely to bring positive outcomes i.e. electrical and irrigation. There exists positive correlation between electrical infrastructure and agricultural income of poor. Likewise there exist significant positive correlation exists between agricultural irrigation infrastructure and poor household income. Both infrastructural expenditures helps in poverty alleviation and rapid economic growth.

There exists significant positive relationship between Economic Growth and Poverty Reduction (Ayoo, 2022). Chapter 2 of the book stresses upon the need of poverty reduction and strategies required for ensuring it. Poverty is declared as severe economic problem. Extermination of poverty is a key goal in Millennium Development Goals of United Nations General Assembly which were embraced in Sep 2000 and was also key priority in Sustainable Development Goals of United Nations General Assembly which were embraced in January 2016. Poverty is predominant in all countries across the globe, however extreme poverty is more pronounced in Sub Sahara Africa and South Asia. Agriculture is the main occupation in this region. Government spending in Education, Health and Infrastructure acts as catalyst for increasing Agricultural productivity which helps in putting an end to enormous distress of the deprived people thus tumbling poverty. (Stefano, 2007) With particular relevance to Ghana, contribution of elementary, secondary, and higher education as well as infrastructure guarantees development in developing nations cannot be overlooked. Though infrastructure investment suffers, increasing elementary and secondary education has major macroeconomic and poverty reducing effects. Though universal basic education shows promise, tertiary education spending has the biggest effect on development. (Robinson, 2008)

Described augmented expenditures in agriculture, transportation, and communications yield modest economic growth; nevertheless, enhanced investment in health facilitates more accelerated growth and substantial poverty alleviation.

(Obi, 2007) Stated Fiscal policy plays vital role in fight against poverty. Effect of fiscal policy in reducing poverty were predominantly visible in Nigeria. In addition to government revenue, government expenditures are the important and effective tool of income redistribution and reduction in poverty. Fiscal policy should be formulated in such a way that it redistributes the income from the rich people of the society to poor ones.

Government expenditure, particularly targeted subsidies over certain timeframes, serves as an effective source of financing (Mehmood, 2010). It can enhance employment opportunities, stimulate private investment, and improve human capital through educational and health expenditures, thereby alleviating poverty. In the short term, there exists an inverse correlation between government expenditure and poverty when expenditures are directed towards developmental initiatives such as infrastructure, social amenities, capital formation, public utilities, education, and healthcare; however, this can mitigate poverty in the long term. The primary concern is the configuration of government expenditure. Typically, an increase in government expenditure results in a fiscal deficit that undermines the economy. Governments implement various strategies to reduce fiscal imbalances, such as cutting subsidies, development expenditures, and social expenditures, which adversely impact welfare. If the reduction of the fiscal deficit is a concern, stakeholders can address it by enhancing productivity and growth rather than by decreasing expenditure.

(Thorat, 1999) Differentiated between investment on rural education, targeted rural development, public health, irrigation, electricity generation, agricultural R&D, and rural roads, therefore estimating the impact of public expenditure on levels of rural poverty across Indian states. Rural poverty is found to be negatively and statistically significantly influenced by agricultural R&D, rural roads, rural education and focused rural development expenditure. Of these, funding on rural roads and agricultural R&D has by far the biggest effects on poverty lowering and development. (Martin, 1995) Examined the impact of government expenditure on poverty and contended that impoverished regions with historically limited infrastructure access can derive more advantages from new investments.

Exports especially in developing countries have enormous capacity to help to lower poverty. Particularly in labor intensive sectors like manufacturing, agriculture and textiles, companies that focus on export usually create job opportunities (Iqbal, 2023). This also provides low-skilled workers, who are typically most prone to poverty, alternative ways of revenue generation. It could help a country's economy to be more diverse, therefore lowering dependency on one industry and creating more steady work opportunities. Export businesses usually pay more wages which enables workers to be pulled from poverty. Apart from this, it attracts foreign capital that can be used for infrastructure development, social program funding and import of vital goods. Export companies often adopt technologies and innovations deemed cutting edge, which can have a knock on effect on other spheres of the economy. Export companies give their employees opportunity to acquire new skills and information therefore enhancing their employability and productivity. The agriculture sector is also fairly crucial since many developing countries export from it. Rising agricultural exports could boost farmers' income and enable rural communities to be free from poverty. When activities associated with export are carried out, they frequently stimulate local economies by generating demand for goods and services, which is beneficial to informal sectors and small enterprises. Additionally, they provide tax income for governments, which can be utilized to fund programs that aim to alleviate poverty, as well as improve education, healthcare and infrastructure.

Increased revenues from exports will enable governments to spend in public goods including hospitals, roads, and schools therefore benefiting the impoverished. Like companies in textiles and apparel many others depend significantly on women. These sectors give women the chance to become financially independent, raise their social level and maybe help to promote more gender equality, all of which are closely related to the lower prevalence of poverty. Especially in underdeveloped areas, the advantages of more exports are shared extensively. Rising labor skill levels will enable more people to grab chances for exporting their products. (Irawan, 2021) Analyzed that often big participants in export markets, small and medium-sized companies (SMEs) also have considerable capacity to create employment for the economically poor. Although exports could be a useful weapon for reducing poverty, their effectiveness depends on the degree of good management and distribution of the gains. Policies that support fair growth, skill development and sustainability will help to maximize the possibilities of exports to lower poverty by means of their influence on these aspects.

(Zhang, 2002) Performed a comparable examination of the impact of public expenditure on rural poverty across Chinese provinces, differentiating between expenditures on rural education, targeted poverty alleviation, telecommunications, irrigation, power generation, agricultural research and development, and rural infrastructure. Expenditures on rural education exert the most significant influence on poverty, succeeded by investments in agricultural research and development, and subsequently by funding for rural infrastructure.

(Ravallion, 2002) Assessed the factors influencing variations in the decline of the poverty headcount among Indian states from 1960 to 1994. State government development expenditure significantly impacts poverty alleviation, even when accounting for variations in agricultural and non-agricultural productivity and temporal trends.

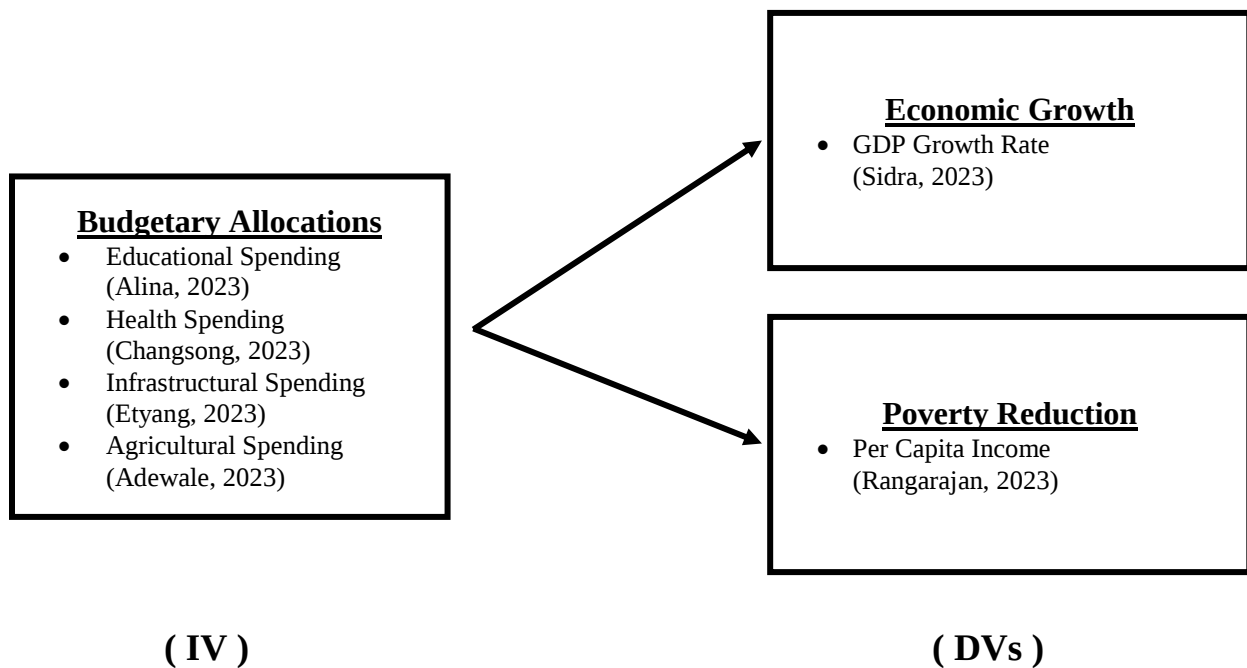
(Fiestas, 2005) The budget allocation is a crucial tool for the government to foster economic development and alleviate extreme poverty. Certain researchers contend that augmenting public expenditure may diminish the poverty rate by fostering economic growth. However, Wilhelm & Fiestas assert that budget allocation can influence growth and poverty alleviation in two principal ways: it can enhance growth performance and simultaneously elevate the likelihood of the impoverished participating in the growth process, primarily by bolstering human capabilities and minimizing transaction costs.

(Dahmardeh, 2013) Contended that government expenditure may exert both direct and indirect effects on poverty alleviation. The direct effects manifest as benefits received by the impoverished from spending on employment and welfare programs, while the indirect effects occur when government investments, especially in rural infrastructure, agricultural research, and health and education, promote growth in both agricultural and non-agricultural sectors. This increase then generates additional work and income opportunities for the impoverished, enabling them to get affordable food.

(Muturi, 2016) Researching the impact of public expenditure on poverty reduction tends to yield diverse results in the particular locations. For instance, public spending on health and agriculture in Kenya shows to have a positive and notable impact on the poverty rate; spending on infrastructure has a negative and notable impact on the poverty rate. Spending on education had little effect on the poverty rate in meanwhile.

Even though different types of government spending have different effects on poverty reduction, but most of the studies concluded that public spending has significant effect on poverty reduction. Therefore, increasing government spending is believed would help to reduce poverty effectively.

2.11 Research Framework



In this study, impact of Budgetary Allocations (IV) on Economic Growth (DV) and Poverty Reduction (DV) will be under consideration. To carryout research, budgetary allocations in the field of Educational spending, Health spending, Infrastructural spending and Agricultural spending will be taken. Then their impact on economic growth will be studied by looking at figures of Gross Domestic Product growth rate. Likewise impact of budgetary allocations on poverty reduction will be studied by looking at the figures of Per Capita Income. Variables selected are taken keeping in view 17 United Nations Sustainable Development Goals (UNSDG).

Variables	United Nations Sustainable Development Goals (UNSDG)
Educational spending	Goal 4 – Quality Education
Health spending	Goal 3 – Good health and well being
Infrastructural spending	Goal 9 – Industry, Innovation and Infrastructure
Agricultural Spending	Goal 2 – Zero Hunger
Economic Growth	Goal 8 – Decent work and Economic Growth
Poverty Reduction	Goal 1 – No poverty

Operational definition are as under.

Variables	Calculation
Educational spending	Log of government spending
Health spending	Log of government spending
Infrastructural spending	Log of government spending
Agricultural Spending	Log of government spending
GDP growth rate	Change in the GDP of the country in comparison to previous year and calculated in %. Calculated using formula:- $(GDP_{2023} - GDP_{2022}) / GDP_{2022}$
Per Capita Income	Log of government spending.

2.11.1 Educational Spending

Education that is both efficient and effective is a fundamental component of every nation's socioeconomic growth, and this is a premise that is especially applicable to Pakistan. The nation's investment in education through budget allocations is of the utmost importance, given that the population exceeds 240 million people and that the youth demographic forms a large proportion of the population. On the other hand, historical trends indicate that the educational sector has been dealing with persistent underfunding and an imbalanced focus, both of which have slowed down the advancement of the nation (Naviwala, 2016). Indeed, the actual financial assistance for education frequently falls short of the recommended benchmarks that are established by global standards, despite the fact that progressive policies and commitments have been made to enhance literacy rates.

The current state of education funding in Pakistan reflects a significant disparity in resource allocation that undermines the country's educational development (Yasin, 2023). Political priorities often skew budget allocations, resulting in limited investment in basic education, particularly for marginalized groups. This inequity is exacerbated by a lack of coordination among aid agencies, which often do not align with local government needs, leading to inefficient use of resources and weak implementation of educational policies. The vicious cycle of underinvestment is further exacerbated by the presence of bureaucratic hurdles and red tape, both of which reduce the efficiency of funding projects.

In order to solve these concerns, policymakers need to reevaluate the existing frameworks that regulate education financing. Funding strategies should make sure that inclusion and equal access take front stage (Veillette, 2012). Ultimately, a systematic reform of budget allocations is essential to create an educational environment that meets the demand of every kid in Pakistan, therefore helping to realize national development goals. This study aims to expose the differences between the allocation of money and the actual needs as well as to look at Pakistan's present level of educational financing. Examining these aspects helps us to better understand the challenges that prevent us from building an education that is both equal and of great quality, therefore laying the foundation for major reform and investment in the next generations.

2.11.2 Health Spending

The term "health spending" refers to the total amount of money that is spent on medical treatments, inclusive of those that are preventative, curative, palliative and rehabilitative (Singh, 2014). It discusses both public and private spending, including budgets for the government, personal payments made out of one's own pocket, insurance programs, gifts, and rewards from the government. When it comes to determining whether or not a nation is dedicated to improving the welfare and general well-being of its residents, one of the most crucial indications is the amount of money that countries spend on health care. Appropriate health care spending directly correlates with better health outcomes including lower illness prevalence, higher life expectancy, and lower mortality rates. A population in health is more productive, which helps the economy grow.

Investing in health helps to lower the load of disease, so preventing any hindrance to development. Medical treatment paid out of pocket could cause households to become

impoverished (Halfon, 2002). By boosting public health expenditure, one can help vulnerable people avoid financial problems. Appropriate financial distribution of health care makes it feasible to give fair access to health services, especially for underprivileged and disadvantaged groups. Adequate health expenditure by nations strengthens their systems, which helps them to react better to natural disasters, pandemics, and other health emergencies.

Pakistan and Bangladesh have low public health expenditure and high out-of-pocket costs, they both suffer significant problems financing their healthcare systems (Rahman, 2018). Improving health outcomes, lowering poverty, and ensuring that everyone has equal access to medical treatment all depend on increasing the money these nations spend on healthcare. By means of higher investment, strengthening health systems not only solves present health issues but also support long-term social and economic growth.

2.11.3 Infrastructural Spending

Infrastructure expenditure is the distribution of financial resources by governments, businesses, or public-private partnerships for the aim of building, preserving, and enhancing organizational and physical structures required for the running of an economy. Investments in transportation (roads, bridges, railroads and airports), energy (power plants, grids), water supply and sanitation, telecommunications and social infrastructure (schools, hospitals) compose this total. The growth of the economy is significantly influenced by the extension of current infrastructure (Esfahani, 2003). Benefits of this include rising production, reduced corporate costs, and simpler trade and commerce to achieve. Large-scale infrastructure projects directly produce employment in the building sector as well as indirectly in sectors related to it. This causes income levels to rise and unemployment to drop. When citizens have access to consistent infrastructure, which includes facilities offering clean water, energy and transportation, their general quality of life is raised.

Good infrastructure helps to draw foreign direct investment (FDI) since companies are seeking for locations with dependable utilities and transportation systems (Owusu, 2019). Establishing links between rural areas and metropolitan hubs helps infrastructure to promote balanced regional development and help to lower regional inequalities. Pakistan has been making investments in the China-Pakistan Economic Corridor (CPEC), which is comprised of ports, trains, and roadways from China to Pakistan (Sharif, 2022). In order to

alleviate the energy crisis, significant investments have been undertaken, including the creation of projects that utilize wind, solar, and hydropower. Efforts are being made to enhance water storage and supply through projects such as the Diamer-Bhasha Dam. Despite this, expenditure on infrastructure is restricted due to limited fiscal flexibility and high levels of ongoing debt. It is possible for projects to be delayed due to frequent changes in government and inconsistency in policy. It is possible for infrastructure development to be hampered by security concerns in specific places.

Bangladesh has undertaken a number of notable projects with the intention of enhancing transportation, including the Padma Bridge and the Dhaka Metro Rail (Jalil, 2021). Capital expenditures on infrastructure are absolutely necessary for the long-term growth and development of both Pakistan and Bangladesh. Both countries are confronted with their own distinct issues; yet, judicious investments in infrastructure have the potential to propel economic growth, enhance quality of life, and strengthen resilience against shocks from the outside world. It is vital to have effective governance, transparent project management, and international cooperation in order to maximize the benefits that can be gained from investing money on infrastructure developments in these countries.

2.11.4 Agricultural Spending

"Agricultural spending" is the financial support governments, companies and international organizations provide for the agricultural industry. Spending on infrastructure, research and development, subsidies, credit facilities, extension services and other activities aiming at improving agricultural productivity, sustainability and rural development falls under this area of expenses (Fan, 2012). Spending more money on agriculture helps to ensure enough food production to meet human needs, reducing reliance on imports and improving food security.

Agriculture makes a considerable contribution to the GDP of several rising economies (Anwer, 2015). Spending more can lead to higher production, which increases farmers' revenue and promotes overall economic development. In countries such as Pakistan and Bangladesh, agriculture employs a substantial section of the population. Investments in this business can help reduce poverty and create jobs. Agricultural investment typically includes the construction of infrastructure such as roads, irrigation systems, and storage

facilities. This can help to increase the level of life in rural areas. Investing in ecologically friendly farming techniques and technologies can greatly limit environmental damage while sustaining long-term agricultural yields.

The Pakistani government has set aside a portion of its annual budget for agriculture; yet, this amount has repeatedly been questioned as insufficient (Khan, 2018). Pakistan has various hurdles, including a lack of capital, obsolete farming techniques, and inadequate water supplies, all of which contribute to low agricultural production. Some projects, such as the Prime Minister's Agriculture Emergency Program, have been developed to solve these difficulties by committing extra monies to water management, research, and development. It is impossible to overstate the importance of guaranteeing food security through greater agricultural expenditures, especially in light of the fact that the population is growing. Rice and cotton are two agricultural products that are important exports and contribute to earnings in foreign currency.

In the same spirit, Bangladesh's government has increased its agricultural budget to support the business (Alam, 2009). This is because the government recognizes the significance of agriculture in ensuring food security and a stable economy. Agricultural expenditure is essential for the rural development, food security, and economic growth of both Pakistan and Bangladesh. Despite facing similar challenges, each nation allocates funds for agriculture differently. These challenges include land fragmentation, the effects of climate change, and the lack of modern technologies. Programs like the National Agricultural Technology Program (NATP) aim to increase Bangladesh's overall output through research, extension services, and farmer training. Increased agricultural expenditure targeted in a certain direction has the potential to promote long-term development, reduce poverty, and improve food security in these rural economies.

2.11.5 Per Capita Income

"Per capita income" denotes the monetary earnings attributed to each individual within a designated area (such as a country, region, or city) over a certain timeframe, typically one year. The formula for determining it is to divide the total income of the region by the population of the region. Per capita income is often used as an indicator of the standard of living and economic well-being of a population. Per capita income is a key metric to assess

the economic development of a country (Wilson, 2007). Higher per capita income generally indicates a higher standard of living and better access to goods and services. It allows you to compare living standards and economic success between different countries or areas. Per capita income numbers help governments and officials make economic plans, allocate resources, and address income inequality. Per capita income helps businesses and investors understand how much people in a country can spend and the possibility for sales in that market. It aids in determining poverty rates and analyzing income distribution within a population.

Pakistan and Bangladesh are South Asian countries with comparable histories, gaining independence in 1947 and 1971, respectively. However, their economic paths have diverged in recent decades. Pakistan faces significant economic challenges including high inflation, low tax revenues and a large informal economy (Afzal, 2009). Political instability and concerns about safety have slowed down the economy. Pakistan's average income indicates that the country needs to take action to support its increasing population. This includes reducing the gap between rich and poor, improving healthcare and education, and creating more jobs. Over the course of the past two decades,

Bangladesh's economy has experienced significant growth thanks to a number of factors, including the textile industry, the money brought back by workers who are currently residing outside of Bangladesh, and better agricultural techniques. Rising income per person in Bangladesh indicates that business and living situations are improving (Sultana, 2015). However, problems like unfair economy, climate change, and bad infrastructure still remain. When Bangladesh and Pakistan became independent, they were in similar positions. However, recently, Bangladesh's income per person has surpassed that of Pakistan. This is a result of several elements including Bangladesh's focus on export-oriented companies, better governance and effective use of remittances. On the other hand, Pakistan has struggled with basic economic problems. However, the large labor force of the country and the possibility for development in sectors such as technology and agriculture offer chances for improvement.

2.12 Research Hypothesis

H1: There is positive impact of Educational Spending on Economic Growth.

H2: There is positive impact of Health Spending on Economic Growth.

H3: There is positive impact of Infrastructural Spending on Economic Growth.

H4: There is positive impact of Agricultural Spending on Economic Growth.

H5: There is positive impact of Educational Spending on Poverty Reduction.

H6: There is positive impact of Health Spending on Poverty Reduction.

H7: There is positive impact of Infrastructural Spending on Poverty Reduction.

H8: There is positive impact of Agricultural Spending on Poverty Reduction.

H9: There is a significant difference in the impact of budgetary allocations on economic growth in Pakistan and Bangladesh.

H10: There is a significant difference in the impact of budgetary allocations on poverty reduction in Pakistan and Bangladesh.

CHAPTER 3

METHODOLOGY

3.1. Data and Analysis

The research design used in this study was descriptive with a quantitative approach which involved an investigation of association among variables. The study used Economic Growth and Poverty Reduction as the dependent variable keeping Budget Allocations (Government Expenditures) as Independent Variable.

EViews software was used for data analysis. Research utilized ADF unit root test to check stationary data. Then applied Auto Regressive Distributive Lag (ARDL) approach among Educational spending, Health spending, Infrastructural spending, Agricultural spending, Gross Domestic Product growth rate and Per Capita Income.

3.2. Population

Analysis of annual data of Pakistan and Bangladesh from year 1972 to 2023 was carried out to test the hypothesis.

3.3. Data Source

World Developmental Indicators was my primary source of data collection. Additional source of data collection included Ministry of Finance website, Pakistan Bureau of Statistics, Economic Surveys of Pakistan and Bangladesh, Poverty Reduction Strategy Papers, Ministry of Planning Development and Special Initiatives, Annual Budget Statements of Pakistan and Bangladesh, IMF reports, State Bank of Pakistan Statistics, Bangladesh Bank Statistics, Statistica Website, World Bank Reports and International Journals.

3.4. Econometric Equations

Long term relationship between the Economic Growth (EG), Poverty Reduction (PR) and Budgetary allocations in the presence of controlled variables Educational spending (ES), Health spending (HS), Infrastructural spending (IS) and Agricultural spending (AS) is shown by functional equation 1 and 2 respectively.

$$EG_t = f (EG_{t-1}, ES_t, HS_t, IS_t, AS_t) \dots\dots\dots (Equation 3.1)$$

$$PR_t = f (PR_{t-1}, ES_t, HS_t, IS_t, AS_t) \dots\dots\dots (Equation 3.2)$$

The empirical model to check the impact of budgetary allocation on Economic Growth and Poverty Reduction is shown as equation 3 and 4 respectively.

$$EG_t = \alpha_0 + \alpha_1 LNEG_{t-1} + \alpha_2 LNES_t + \alpha_3 LNHS_t + \alpha_4 LNIS_t + \alpha_5 LNAS_t + e \dots (\text{Equation 3.3})$$

$$LNPR_t = \alpha_0 + \alpha_1 LNPR_{t-1} + \alpha_2 LNES_t + \alpha_3 LNHS_t + \alpha_4 LNIS_t + \alpha_5 LNAS_t + e \dots (\text{Equation 3.4})$$

Key

EG	=	Economic Growth
PR	=	Poverty Reduction
ES	=	Educational Spending
HS	=	Health Spending
IS	=	Infrastructural Spending
AS	=	Agricultural Spending

CHAPTER 4

DATA ANALYSIS AND DISCUSSION

Bangladesh

4.1 Descriptive Analysis

Descriptive analysis summarizes data in a way that helps in understanding basic features of data. It includes Mean, Standard Error, Kurtosis, Skewness, and Count etc. It provides detailed picture of data and does not give any conclusions.

Table 4.1 Descriptive Statistics for Bangladesh

Descriptive Statistics	GDPG	Per Capita Income	Education Spending	Health Spending	Infrastructure Spending	Agriculture Spending
Mean	6.245	755.315	93.658	154.211	746.701	341.647
Standard Error	2.265	95.517	22.089	35.389	344.53	88.256
Kurtosis	3.912	1.843	1.010	1.939	6.808	7.623
Skewness	0.144	1.724	1.477	1.738	2.543	3.655
Count	52	52	52	52	52	52

Table 4.1 shows descriptive statistics of Bangladesh for 52 years from 1972 to 2023. Mean values shows Bangladesh has an average of 6.245% GDP growth with average per capita income of 755 USD. Government spent an average of 93 Bn Taka on education, 154 Bn Taka on health, 746 Bn Taka on infrastructure and 341 Bn Taka on agriculture. Kurtosis values of Per Capita Income, Education Spending and Health Spending with values close to zero show no extreme values, GDP Growth, Infrastructure Spending and Agriculture Spending values > 3 shows presence of extreme values. Skewness value of GDP Growth (0.14), Per Capita Income, Education Spending and Health Spending are close to zero indicating normal distribution of data. Infrastructure Spending and Agriculture Spending are positively skewed showing few values are pulling mean to the right.

4.2 Correlational Analysis

When it comes to describing the relationship between variables that are measured quantitatively and variables that are measured continuously, correlation statistics is the most common and valuable type of statistical analysis. If the researcher wants to check the probable connections

between variables and wants to explain the level of relationship between the movements of the variables, then the correlation analysis is a valuable tool for the researcher to employ. An investigation of the relationship between variables is carried out by the correlation analysis, provided that the statistical data is accessible. When there is a high correlation between two variables, it indicates that the relationship between them is strong. In the event that the correlation is low, it indicates that the variables are connected to one another in some way. The correlation coefficient could be anything between +1 and -1, with +1 indicating a high degree of positive correlation and -1 indicating a high degree of negative correlation among the variables.

Table 4.2 Correlational Analysis for Bangladesh

	GDPG	Per Capita Income	Education Spending	Health Spending	Infrastructure Spending	Agriculture Spending
Economic Growth	1.000					
Per Capita Income	0.641**	1.000				
Education Spending	0.371**	0.422**	1.000			
Health Spending	0.187**	0.251**	0.651**	1.000		
Infrastructure Spending	0.451**	0.221**	0.554**	0.771**	1.000	
Agriculture Spending	0.142**	0.341**	0.178**	0.546**	0.741**	1.000

** At 95% Confidence Level

Table 4.2 shows correlational analysis of variables related to Bangladesh. According to the findings, there is a positive and significant correlation between the amount of money spent by the government on education, health, infrastructure and agriculture and the rate of economic growth and the reduction of poverty. This demonstrates that an increase in government spending leads to an increase in economic growth and a reduction in poverty as a result of an increase in both the growth of the GDP and the income per capita.

4.3 Unit Root Analysis

The Augmented Dickey Fuller for unit root (ADF) test was carried out to check whether the data, which is time series in nature, contains the unit root or not. It explained the stationarity of data as stationarity of data has implications on further tests. For moving on to further tests, it needs to be ensured that data is stationary in nature. For data to be stationary, t statistics should be negative. If

a variable is not stationary at level, the its stationary is checked at first difference. **Test results signifies that data is stationary and does not contain unit root.**

Table 4.3 Augmented Dickey-Fuller test for unit root for Bangladesh

Variable	Description	t-statistics	
		AT LEVEL [I(0)]	AT FIRST DIFFERENCE [I(1)]
ES	Educational Spending	-0.386	-7.712
HS	Health Spending	-4.153	-8.393
IS	Infrastructural Spending	-2.910	-5.023
AS	Agricultural Spending	-0.831	-7.887
PCI	Per Capita Income	3.214	-9.142
GDPG	Gross Domestic Product Growth	3.116	-6.971

Table 4.3 shows that education spending, health spending, infrastructure spending and agriculture spending are stationary (negative values) at level while per capita income and gross domestic product growth became stationary at first difference. Therefore, ARDL approach was used to check long-term relationship. Results indicate that data is stationary.

4.4 Auto Regressive Distributive Lag (ARDL) Model of Regression

Auto Regressive Distributive Lag (ARDL) Model of Regression was used to check the relationship between Independent variables (Education Spending, Health Spending, Agriculture Spending and Infrastructure Spending) and Dependent variables (GDP Growth and Per Capita Income) and the amount of change brought by independent variable on dependent variable. Initially, diagnostics tests needs to be carried out before running regression.

Table 4.4 Diagnostics for the data utilized in the study for Bangladesh

Test Statistic	F Version
Serial Correlation	F (1,52) [0.008]
Functional Form	F (1,52) [0.054]
Heteroskedasticity	F (1,52) [0.011]

Table 4.4 give evidence that econometric issues, like as autocorrelation, have not been noticed. In the same way, there is no inaccuracy in the model specification that pertains to the functional form. In addition, there is no problem with the heteroskedasticity in the data.

Table 4.5 ARDL Results for Bangladesh

IVs	Economic Growth		Poverty Reduction	
	Coefficient	Prob.	Coefficient	Prob.
LNGDP (-1)	0.071	0.000	-	-
LNPCI (-1)	-	-	0.015	0.020
LNES	0.079	0.005	0.034	0.012
LNES (-1)	0.018	0.038	0.022	0.031
LNHS	0.051	0.153	0.071	0.047
LNIS	0.025	0.016	0.014	0.032
LNAS	0.019	0.037	0.011	0.000
F-Stat	6144.5		9571.1	
F [1, 52]	[0.000]		[0.000]	

Table 4.5 shows that the calculated F-statistics is 6144.5 for economic growth and 9571.1 for poverty reduction, which is significant at the 5 percent level of significance. This leads to the conclusion that the null hypothesis of no co-integration cannot be accepted, and that there is a co-integration relationship between the variables in this model. Results also indicates that all understudy variables have significant impact on economic growth and poverty reduction except health spending which is insignificant at 0.153 for economic growth. Model is good fit is indicated by F statistics which is significant at significance level of 5%. Coefficients indicate percentage change brought by independent variables on economic growth and poverty reduction.

GDP growth of previous year accounts for 7.1 % increase in current year GDP growth.

Per Capita Income of previous year accounts for 1.5 % increase in current year Per Capita Income.

1 % increase in education spending accounts for 7.9 % increase in GDP growth and 1.2 % increase in per capita income.

1 % increase in health spending accounts for 5.1% increase in GDP growth and 7.1 % increase in per capita income.

1 % increase in infrastructural spending accounts for 2.5% increase in GDP growth and 1.4 % increase in per capita income.

1 % increase in agricultural spending accounts for 1.9 % increase in GDP growth and 1.1 % increase in per capita income.

Table 4.6 shows the results of the long-term coefficients measured using the ARDL Approach. According to the findings, the variables have a substantial long term impact on the economic growth and poverty reduction in case of Bangladesh.

Table 4.6 Long term Coefficients under ARDL Approach for Bangladesh

Regressor	Economic Growth		Poverty Reduction	
	Coefficient	Prob.	Coefficient	Prob.
LNGDP (-1)	0.071	0.000	-	-
LNPCI (-1)	-	-	0.066	0.001
LNES	0.014	0.041	0.075	0.037
LNHS	0.028	0.071	0.017	0.021
LNIS	0.011	0.025	0.035	0.033
LNAS	0.027	0.001	0.013	0.024

The estimated long run coefficients identify the presence of the long run significance of Educational Spending, Infrastructural Spending and Agricultural Spending on Economic growth and poverty reduction in Bangladesh. However Health Spending was found insignificant in long run for economic growth and significant for poverty reduction. Coefficients indicate percentage change brought by independent variables on economic growth and poverty reduction in long run.

GDP growth of previous year accounts for 7.1 % increase in GDP growth in long run.

Per Capita Income of previous year accounts for 6.6 % increase in Per Capita Income in long run. 1 % increase in education spending accounts for 1.4 % increase in GDP growth and 7.5 % increase in per capita income in long run.

1 % increase in health spending accounts for 2.8 % increase in GDP growth and 1.7 % increase in per capita income in long run.

1 % increase in infrastructural spending accounts for 1.1 % increase in GDP growth and 3.5 % increase in per capita income in long run.

1 % increase in agricultural spending accounts for 2.7 % increase in GDP growth and 1.3 % increase in per capita income in long run.

Error Correction Representation of the variables having long term impact as indicated above is reported in Table 4.7.

Table 4.7 Error Correction Representation for the Selected ARDL Model for Bangladesh

ARDL (1,0,0,0,0) selected based on Schwarz Bayesian Criterion Dependent variable in dLNGDP and dLNPCI 52 observations used for estimation from 1972 to 2023				
Regressor	Economic Growth		Poverty Reduction	
	Coefficient	Prob	Coefficient	Prob
dES	0.179	0.001	0.219	0.113
dHS	0.150	0.003	0.325	0.103
dIS	0.169	0.035	0.214	0.142
dAS	-0.025	0.024	0.011	0.007
ECM (-1)	0.028	0.000	0.034	0.000
R-Squared	0.281	F [1,52] [0.003]	0.357	F [1,52] [0.000]
DW-Statistic	1.921		2.314	

The long-run relationship provide indication of the degree to which the disequilibrium that exists in the short run will be fixed (or removed) in the long run is provided by the coefficient of ECM (-1). 2.8% of the disequilibrium in economic development and 3.4% in poverty reduction from its equilibrium route from the previous year will be adjusted in the long run, according to the coefficient of the ECM term, which implies that the adjustment process is relatively slow.

Pakistan

4.5 Descriptive Analysis

Descriptive analysis summarizes data in a way that helps in understanding basic features of data. It includes Mean, Standard Error, Kurtosis, Skewness, and Count etc. It provides detailed picture of data and does not give any conclusions.

Table 4.8 Descriptive Statistics for Pakistan

Descriptive Statistics	GDPG	Per Capita Income	Education Spending	Health Spending	Infrastructure Spending	Agriculture Spending
Mean	4.693	698.714	54.227	74.325	1026.224	524.154
Standard Error	0.338	65.313	34.259	45.241	541.53	233.2545
Kurtosis	0.379	1.144	1.450	2.221	5.241	3.251
Skewness	0.113	0.607	1.971	2.548	1.127	2.655
Count	52	52	52	52	52	52

Table 4.8 shows Pakistan data of 52 years from 1972 to 2023. Pakistan has an average of 4.693% GDP growth with average per capita income of 698 USD. Government spent an average of Rs 54 Bn on education, Rs 74 Bn on health, Rs 1026 Bn on infrastructure and RS 524 Bn on agriculture. Kurtosis values of GDP growth (0.379), per capita income (1.144) and education spending (1.450) with values close to zero show no extreme values, health spending (2.221) value < 3 shows presence of fewer extreme values, infrastructure spending (5.241) and agriculture spending (3.251) values > 3 shows presence of extreme values. Skewness value of GDP growth, per capita income, education spending and infrastructure spending are close to zero indicating normal distribution of data. Health Spending and Agriculture Spending are positively skewed showing few values are pulling mean to the right.

4.6 Correlational Analysis

When it comes to describing the relationship between variables that are measured quantitatively and variables that are measured continuously, correlation statistics is the most common and valuable type of statistical analysis. If the researcher wants to check the probable connections

between variables and wants to explain the level of relationship between the movements of the variables, then the correlation analysis is a valuable tool for the researcher to employ. An investigation of the relationship between variables is carried out by the correlation analysis, provided that the statistical data is accessible. When there is a high correlation between two variables, it indicates that the relationship between them is strong. In the event that the correlation is low, it indicates that the variables are connected to one another in some way. The correlation coefficient could be anything between +1 and -1, with +1 indicating a high degree of positive correlation and -1 indicating a high degree of negative correlation among the variables.

Table 4.9 Correlational Analysis for Pakistan

	GDPG	Per Capita Income	Education Spending	Health Spending	Infrastructure Spending	Agriculture Spending
GDPG	1.000					
Per Capita Income	0.723**	1.000				
Education Spending	0.187**	0.113**	1.000			
Health Spending	0.112**	0.224**	0.214**	1.000		
Infrastructure Spending	0.375**	0.425**	0.25**	0.741**	1.000	
Agriculture Spending	0.165**	0.327**	0.551**	0.125**	0.411**	1.000

** At 95% Confidence Level

Table 4.9 shows correlational analysis of variables related to Bangladesh. According to the findings, there is a positive and significant correlation between the amount of money spent by the government on education, health, infrastructure and agriculture and the rate of economic growth and the reduction of poverty. This demonstrates that an increase in government spending leads to an increase in economic growth and a reduction in poverty as a result of an increase in both the growth of the GDP and the income per capita.

4.7 Unit Root Analysis

The Augmented Dickey Fuller for unit root (ADF) test was carried out to check whether the data, which is time series in nature, contains the unit root or not. It explained the stationarity of data as stationarity of data has implications on further tests. For moving on to further tests, it needs to be

ensured that data is stationary in nature. For data to be stationary, t statistics should be negative. If a variable is not stationary at level, the its stationary is checked at first difference. **Test results signifies that data is stationary and does not contain unit root.**

Table 4.10 Augmented Dickey-Fuller test for unit root for Pakistan

Variable	Description	t-statistics	
		AT LEVEL [I(0)]	AT FIRST DIFFERENCE [I(1)]
ES	Educational Spending	-0.114	-11.554
HS	Health Spending	-4.221	-7.157
IS	Infrastructural Spending	-3.553	-7.221
AS	Agricultural Spending	-0.117	-5.451
PCI	Per Capita Income	0.091	-3.114
GDPG	Gross Domestic Product Growth	3.556	-9.331

Table 4.10 shows that education spending, health spending, infrastructure spending and agriculture spending are stationary (negative values) at level while per capita income and gross domestic product growth became stationary at first difference. Therefore, ARDL approach was used to check long-term relationship. Results indicate that data is stationary.

4.8 Auto Regressive Distributive Lag (ARDL) Model of Regression

Auto Regressive Distributive Lag (ARDL) Model of Regression was used to check the relationship between Independent variables (Education Spending, Health Spending, Agriculture Spending and Infrastructure Spending) and Dependent variables (GDP Growth and Per Capita Income) and the amount of change brought by independent variable on dependent variable. Initially, diagnostics tests needs to be carried out before running regression.

Table 4.11 Diagnostics for the data utilized in the study for Pakistan

Test Statistic	F Value
Serial Correlation	F (1,52) [0.000]
Functional Form	F (1,52) [0.014]
Heteroscedasticity	F (1,52) [0.001]

Table 4.11 give evidence that econometric issues, like as autocorrelation, have not been noticed. In the same way, there is no inaccuracy in the model specification that pertains to the functional form. In addition, there is no problem with the heteroskedasticity in the data.

Table 4.12 ARDL Results for Pakistan

Economic Growth			Poverty Reduction	
IVs	Coefficient	Prob.	Coefficient	Prob.
LNGDP (-1)	0.014	0.000	-	-
LNPCI (-1)	-	-	0.024	0.015
LNES	0.017	0.034	0.046	0.032
LNES (-1)	0.046	0.051	0.031	0.049
LNHS	0.034	0.224	0.012	0.067
LNIS	0.021	0.014	0.042	0.013
LNAS	0.033	0.054	0.024	0.006
F-Stat	F [1, 52]	541.7 [0.000]	845.1 [0.000]	

Table 4.12 shows that the calculated F-statistics is 541.7 for economic growth and 845.1 for poverty reduction, which is significant at the 5 percent level of significance. This leads to the conclusion that the null hypothesis of no co-integration cannot be accepted, and that there is a co-integration relationship between the variables in this model. Results also indicates that all understudy variables have significant impact on economic growth and poverty reduction except health spending which is insignificant at 0.224 for economic growth. Model is good fit is indicated by F statistics which is significant at significance level of 5%. Coefficients indicate percentage change brought by independent variables on economic growth and poverty reduction.

GDP growth of previous year accounts for 1.4 % change in current year GDP growth.

Per Capita Income of previous year accounts for 2.4 % change in current year Per Capita Income.

1 % increase in education spending accounts for 1.7 % increase in GDP growth and 4.6 % increase in per capita income.

1 % increase in health spending accounts for 3.4 % increase in GDP growth and 1.2 % increase in per capita income.

1 % increase in infrastructural spending accounts for 2.1 % increase in GDP growth and 4.2 % increase in per capita income.

1 % increase in agricultural spending accounts for 3.3 % increase in GDP growth and 2.4 % increase in per capita income.

Table 4.13 displays the results long term coefficients under ARDL Approach. Results indicate the variables that show a significant long run effect on economic growth in Pakistan.

Table 4.13 Long term Coefficients under ARDL Approach for Pakistan

Regressor	Economic Growth		Poverty Reduction	
	Coefficient	Prob.	Coefficient	Prob.
LNGDP (-1)	0.003	0.000	-	-
LNPCI (-1)	-	-	0.052	0.006
LNES	0.051	0.033	0.041	0.021
LNHS	0.034	0.141	0.011	0.073
LNIS	0.041	0.035	0.023	0.041
LNAS	0.027	0.021	0.031	0.002

The estimated long run coefficients identify the presence of the long run significance of Educational Spending, Infrastructural Spending and Agricultural Spending on Economic growth and poverty reduction in Bangladesh. However Health Spending was found insignificant in long run for economic growth and significant for poverty reduction. Coefficients indicate percentage change brought by independent variables on economic growth and poverty reduction in long run.

GDP growth of previous year accounts for 0.3 % increase in GDP growth in long run.

Per Capita Income of previous year accounts for 0.6 % increase in Per Capita Income in long run.

1 % increase in education spending accounts for 5.1 % increase in GDP growth and 4.1 % increase in per capita income in long run.

1 % increase in health spending accounts for 3.4 % increase in GDP growth and 1.1 % increase in per capita income in long run.

1 % increase in infrastructural spending accounts for 4.1 % increase in GDP growth and 2.3 % increase in per capita income in long run.

1 % increase in agricultural spending accounts for 2.7 % increase in GDP growth and 3.1 % increase in per capita income in long run.

Error Correction Representation of the variables having long term impact as indicated above is reported in Table 4.14.

Table 4.14 Error Correction Representation for the Selected ARDL Model for Pakistan

ARDL (1,0,0,0,0) selected based on Schwarz Bayesian Criterion				
Dependent variable in dLNGDP and dLNPCI				
52 observations used for estimation from 1972 to 2023				
Economic Growth			Poverty Reduction	
Regressor	Coefficient	Prob	Coefficient	Prob
dES	0.019	0.014	0.023	0.009
dHS	0.010	0.013	0.027	0.22
dIS	0.034	0.035	0.042	0.030
dAS	0.046	0.044	0.039	0.012
ECM(-1)	0.022	0.000	0.034	0.000
R-Squared	0.178	F Stat [0.000]	0.210	F Stat [0.000]
DW-Statistic	1.724		2.334	

The long-run relationship indication of the degree to which the disequilibrium that exists in the short run will be fixed (or removed) in the long run is provided by the coefficient of ECM (-1). 2.2% of the disequilibrium in economic development and 3.4 % in poverty reduction from its equilibrium route from the previous year will be adjusted in the long run, according to the coefficient of the ECM term, which implies that the adjustment process is relatively slow.

4.9 Discussion on Results

4.9.1 Education Spending impact on Economic Growth and Poverty Reduction

The findings of the tests support existing literature. Education spending has been shown to have a positive and considerable impact on both the expansion of the economy and the elimination of poverty.

In case of Bangladesh Economic Growth and Poverty Reduction, the education spending is significant at significance level of 0.005 and 0.012 respectively, which shows that education spending leads to change in GDP Growth and Per Capita Income. Bangladesh spends an average of 93 Bn Taka on education. Regression shows that 1 % increase in education spending accounts for 7.9 % increase in GDP Growth and 3.4 % increase in Per Capita Income. Overall, Increase in Education spending improves GDP Growth and Per Capita Income.

In case of Pakistan Economic Growth and Poverty Reduction, the education spending is significant at significance level of 0.005 and 0.012 respectively, which shows that education spending leads to change in GDP Growth and Per Capita Income. Pakistan spends an average of Rs 54 Bn on education. Regression shows that 1 % increase in education spending accounts for 1.7 % increase in GDP Growth and 4.6 % increase in Per Capita Income. Overall, Increase in Education spending improves GDP Growth and Per Capita Income.

Keeping above in view, it can be said that Hypothesis H1 stands correct and accepted which states that there is positive impact of Educational Spending on Economic Growth and Hypothesis H5 stands correct and accepted that states that there is positive impact of Educational Spending on Poverty Reduction.

4.9.2 Health Spending impact on Economic Growth and Poverty Reduction

The findings of the tests support existing literature. Health spending has been shown to have positive and insignificant effect on expansion of the economy however has positive and significant impact on the elimination of poverty.

In case of Bangladesh Economic Growth, the health spending is insignificant at significance level of 0.153 but for reduction in poverty health spending is significant at significance level of 0.047, which shows that health spending leads to change in GDP Growth and Per Capita Income but its impact on economic growth is low. Bangladesh spends an average of 154 Bn Taka on health. Regression shows that 1 % increase in health spending accounts for 5.1 % increase in GDP Growth and 7.1 % increase in Per Capita Income. Overall, Increase in Health spending improves GDP Growth and Per Capita Income.

In case of Pakistan Economic Growth, the health spending is insignificant at significance level of 0.224 but for reduction in poverty health spending is significant at significance level of 0.067, which shows that health spending leads to change in GDP Growth and Per Capita Income but its impact on economic growth is low. Pakistan spends an average of Rs 74 Bn on health. Regression shows that 1 % increase in health spending accounts for 3.4 % increase in GDP Growth and 1.2 % increase in Per Capita Income. Overall, Increase in Health spending improves GDP Growth and Per Capita Income.

Keeping above in view, it can be said that Hypothesis H2 stands correct and accepted which states that there is positive impact of Health Spending on Economic Growth and Hypothesis H6 stands correct and accepted that states that there is positive impact of Health Spending on Poverty Reduction.

4.9.3 Infrastructure Spending impact on Economic Growth and Poverty Reduction

The findings of the tests support existing literature. Infrastructure spending has been shown to have a positive and considerable impact on both the expansion of the economy and the elimination of poverty.

In case of Bangladesh Economic Growth and Poverty Reduction, the infrastructure spending is significant at significance level of 0.016 and 0.032 respectively, which shows that infrastructure spending leads to change in GDP Growth and Per Capita Income. Bangladesh spends an average of 746 Bn Taka on infrastructure. Regression shows that 1 % increase in infrastructure spending accounts for 2.5 % increase in GDP Growth and 1.4 % increase in Per Capita Income. Overall, Increase in Infrastructure spending improves GDP Growth and Per Capita Income.

In case of Pakistan Economic Growth and Poverty Reduction, the infrastructure spending is significant at significance level of 0.005 and 0.012 respectively, which shows that infrastructure spending leads to change in GDP Growth and Per Capita Income. Pakistan spends an average of Rs 1026 Bn on infrastructure. Regression shows that 1 % increase in infrastructure spending accounts for 2.1 % increase in GDP Growth and 4.2 % increase in Per Capita Income. Overall, Increase in Infrastructure spending improves GDP Growth and Per Capita Income.

Keeping above in view, it can be said that Hypothesis H3 stands correct and accepted which states that there is positive impact of Infrastructure Spending on Economic Growth and Hypothesis H7 stands correct and accepted that states that there is positive impact of Infrastructure Spending on Poverty Reduction.

4.9.4 Agriculture Spending impact on Economic Growth and Poverty Reduction

The findings of the tests support existing literature. Agriculture spending has been shown to have a positive and considerable impact on both the expansion of the economy and the elimination of poverty.

In case of Bangladesh Economic Growth and Poverty Reduction, the agriculture spending is significant at significance level of 0.037 and 0.000 respectively, which shows that agriculture spending leads to change in GDP Growth and Per Capita Income. Bangladesh spends an average of 341 Bn Taka on agriculture. Regression shows that 1 % increase in agriculture spending accounts for 1.9 % increase in GDP Growth and 1.1 % increase in Per Capita Income. Overall, Increase in Agriculture spending improves GDP Growth and Per Capita Income.

In case of Pakistan Economic Growth and Poverty Reduction, the agriculture spending is significant at significance level of 0.054 and 0.006 respectively, which shows that agriculture spending leads to change in GDP Growth and Per Capita Income. Pakistan spends an average of Rs 524 Bn on agriculture. Regression shows that 1 % increase in agriculture spending accounts for 3.3 % increase in GDP Growth and 2.4 % increase in Per Capita Income. Overall, Increase in agriculture spending improves GDP Growth and Per Capita Income.

Keeping above in view, it can be said that Hypothesis H4 stands correct and accepted which states that there is positive impact of Agriculture Spending on Economic Growth and Hypothesis H8 stands correct and accepted that states that there is positive impact of Agriculture Spending on Poverty Reduction.

4.10 Comparison between Pakistan and Bangladesh

The result of our study shows that Education Spending, Health Spending, Infrastructure Spending and Agriculture Spending has positive impact on the economic growth and poverty reduction for both Pakistan and Bangladesh which is clearly evident from Table 4.15.

Table 4.15 Comparison Impact of Spendings on Economic Growth and Poverty Reduction

Variables	Economic Growth		Poverty Reduction	
	Pakistan	Bangladesh	Pakistan	Bangladesh
Education Spending	1.7 %	7.9 %	4.6 %	3.4 %
Health Spending	3.4 %	5.1 %	1.2 %	7.1 %
Infrastructure Spending	2.1 %	2.5 %	4.2 %	1.4 %
Agriculture Spending	3.3 %	1.9 %	2.4 %	1.1 %

Table 4.15 shows that Education Spending, Health Spending, Infrastructure Spending and Agriculture Spending's impact on Economic Growth and Poverty Reduction in Pakistan as compared to that of Bangladesh.

Table 4.16 Comparison of GDP Growth and Per Capita Income

	GDP Growth	Per Capita Income
Bangladesh	6.245 %	755 USD
Pakistan	4.693 %	698 USD

Table 4.16 shows Bangladesh has more GDP growth and Per Capita Income as compared to Pakistan.

Table 4.17 Comparison of Spendings

Variables	Pakistan		Bangladesh	
	Rs in Bn	USD in Bn (Avg 54.88)	Taka in Bn	USD in Bn (Avg 35)
Education Spending	54	0.98	93	2.65
Health Spending	74	1.34	154	4.4
Infrastructure Spending	1026	18.69	746	21.31
Agriculture Spending	524	9.54	341	9.74

Table 4.17 shows that Bangladesh spends more on Education Spending, Health Spending, Infrastructure Spending and Agriculture Spending as compared to Pakistan.

Keeping above in view, it can be said that Hypothesis H9 stands correct and accepted which states that there is a significant difference in the impact of budgetary allocations on economic growth in Pakistan and Bangladesh and Hypothesis H10 stands correct and accepted that there is a significant difference in the impact of budgetary allocations on poverty reduction in Pakistan and Bangladesh.

CHAPTER 5

CONCLUSION AND RECOMMENDATION

5.1 Conclusion

The study analyzed the impact of Budgetary Allocations on Economic Growth and Poverty Reduction in Pakistan with comparative analysis with Bangladesh. Budgetary allocations were kept as Independent variable (IV) which includes Education, Health, Infrastructure and Agricultural spending by governments. Economic Growth and Poverty Reduction were kept as Dependent variable (DV). Economic Growth included GDP growth rate while Poverty reduction included Per Capita Income. The study used annual time series data ranging from 1972 – 2023 for both Pakistan and Bangladesh. World Developmental Indicators was my primary source of data collection. Additional source of data collection included Ministry of Finance website, Pakistan Bureau of Statistics, Economic Surveys of Pakistan and Bangladesh, Poverty Reduction Strategy Papers, Ministry of Planning Development and Special Initiatives, Annual Budget Statements of Pakistan and Bangladesh, IMF reports, State Bank of Pakistan Statistics, Bangladesh Bank Statistics, Statistica Website, World Bank Reports and International Journals. E Views software was used for data analysis. Descriptive analysis revealed that Bangladesh has an average of 6.245% GDP growth. Government spent an average of 93 Bn Taka on education, 154 Bn Taka on health, 746 Bn Taka on infrastructure and 341 Bn Taka on agriculture. While, Pakistan has an average of 4.693% GDP growth. Government spent an average of 54 Bn Rs on education, 74 Bn Rs on health, 1026 Bn Rs on infrastructure and 524 Bn Rs on agriculture. Research utilized ADF unit root test to check stationarity of data which yielded that data is stationary. Correlational analysis confirmed that Education, Health, Infrastructure and Agricultural spending are positively correlated to Economic Growth and Poverty Reduction. Then applied Auto Regressive Distributive Lag (ARDL) which yielded that 1 % increase in Educational spending, Health spending, Infrastructural spending and Agricultural spending accounts for 1.7 %, 3.4 %, 2.1 % and 3.3 % increase respectively in GDP Growth and 4.6 %, 1.2 %, 4.2 % and 2.4 % increase in Per Capita Income respectively in Pakistan while 7.9 %, 5.1 %, 2.5 % and 1.9 % increase in Economic Growth and 3.4 %, 7.1 %, 1.4 % and 1.1 % increase in Per Capita Income respectively in Bangladesh. Bangladesh spending is more than Pakistan which accounts for greater impact on Economic

Growth and Poverty Reduction. Pakistan needs to increase its spending on these sectors for achieving rapid Economic growth and Poverty reduction.

5.2 Recommendations

Budgetary Allocations effect the economic growth and Poverty Reduction. Education, Health, Infrastructure and Agricultural sectors are vital sectors which can ensure rapid economic growth and poverty reduction provided these sectors are given due funding. Bangladesh increased its allocations to these sectors and went ahead of Pakistan in terms of Economic growth and Poverty Reduction. If Pakistan wants to increase its Economic Growth and Reduce poverty, it has to further increase its allocations to these sectors. Increasing spendings in these sectors will strengthen them and will reflect Pakistan's dedication towards achievement of Sustainable Development Goals. Moreover, apart from increasing spending, government needs to ensure justified and targeted utilization of funds for achieving better outcomes. Education allocations should focus on technological advancement and scholarships so that our students remain abreast with international need. Health allocation should focus on introduction of latest technology and medicine development and ensure subsidized treatment to poor people. Infrastructure allocations to focus on quality of infrastructure so that funds are not wasted in frequent maintenances. Instead, these funds can be directed to further increase road structure and should help in meeting requirements of energy crisis. Agriculture allocations should focus on providing subsidized items to farmers so that agricultural outputs be available to common man in reduced rate and it will help in reducing prices of basic utilities. Agriculture department to focus on converting barren land into cultivable land so that agriculture sector which is major contributor to GDP can further boost economy. It will not only increase GDP but will reduce poverty and joblessness. Moreover, poverty is calculated as per capita income which is based on national income. But this income does not reflect the maximum people. Focusing on above mentioned recommendations will help distribution of income to real poor people and will reduce poverty in reality.

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