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SECTOR SPECIFIC AID FLOW, OFFICIAL DEVELOPMENT ASSISTANCE AND INCOME DISPARITY: AN ANALYSIS FROM SELECTED ASIAN COUNTRIES

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ABSTRACT

Over the decades, there has been much-observed income disparity in poor and developing countries. For this, donor countries provide aid for disbursement in some specific sectors to alleviate poverty and disparity. Considering the severe issue of income disparity in Asian economies, this research has focused on the role of sector-specific and foreign aid in lessening income disparity in these economies. We have used panel data from 10 selected Asian countries and found that aid for the education and health sectors. This research has utilized the data drawn from 10 selected Asian economies such as Bangladesh, India, Indonesia, Malaysia, Sri Lanka, Pakistan, Philippines, Iran, Jordan and China. The data has been considered from 2003 to 2018 due to data deficiency of important variables. The data has been taken from World Bank Development Indicators. The Gini coefficient income inequality) was considered a dependent variable. Education aid commitments (total number of commitments for education from donor countries), health aid commitments (total number of commitments for aid for the health sector from donor countries), official development assistance ($US million) and total population have been used as independent variables. The study used the fixed effect method to indicate an association of dependent and independent variables. Results of the study revealed that official development assistance has played a key role in lessening income disparity in these economies. Findings suggest its transparent allocation to both sectors for high growth, attracting more aid from the donor countries. There is a serious need for a stable political environment. Finally, measures should be taken to control the population in these countries.

Keywords: Income disparity; Foreign aid; Population growth.
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INTRODUCTION

In the last decade, foreign aid has emerged as a key tool in the fight against poverty in impoverished and underdeveloped economies. Foreign aid, recognized as official development assistance, is regarded as a movement or allocation of reimbursement together with a funding component through authorized organizations, state and local governments, or by their decision-making activities for unindustrialized states and multifaceted organizations. The major aim of providing foreign aid is to grow financial and good growth in underdeveloped and emerging nations. Foreign aid is supposed to permit discourse on the poverty and income disparity issue by assisting more rapidly and continued economic growth in the concerned countries. Poor nations are fronting threatened capital for saving and investments for generating income and economic growth. Economically disadvantaged nations experience reduced income levels and savings, leading them into a cycle of poverty (Nelson, 1956; Sachs et al., 2005; Erikson, 2005).

Alternatively, they may find themselves caught in a "low-level equilibrium trap," where increased income does not contribute to higher savings but instead results in a rise in population.

Chenery and Strout (1968) conducted a previous study on the correlation between foreign aid and economic growth, employing the "two-gap" model. In this model, they posited that foreign aid swiftly addresses both the financing gap, signifying insufficient resources for investments, and the trade balance gap, indicating a deficiency in essential production levels and foreign exchange earnings. The idea was that foreign assistance could potentially break the poverty trap, propelling less industrialized nations into a positive cycle of output and growth, thereby improving living standards. Despite this optimistic perspective, the role of foreign aid in fostering economic growth and development in underdeveloped economies has remained a contentious issue among policymakers and academics for over five decades.

In the intervening years, numerous studies have failed to provide clear evidence that foreign aid significantly enhances economic growth. For instance, works by Mosley et al. (1987) and Boone (1994) yielded inconclusive results regarding the relationship between aid and growth. This ongoing debate underscores the complexity of the issue and highlights the need for continued examination and nuanced understanding of the impact of foreign aid on the development trajectory of underdeveloped economies.

On the contrary, Burnside and Dollar (2000) showed that aid improved growth through the use of better fiscal, monetary and trade policies of the beneficiary nations. However, Easterly (2003) found that foreign aid has not been provided a better role in growth in nations having better financial policies in various times and economies. In spite of the deficient positive association of aid and growth, the economists and officials emphasized the straight influence of foreign aid on poverty and income inequality in beneficiary nations. Amongst the works that emphasize the influence of aid on poverty are Collier and Dollar (2002) and Kraay and Raddatz (2007). However, underprivileged financial enactment and unsatisfactory poverty-lessening practices in chief aid beneficiaries compared with states that have been able to attain noteworthy development lacking foreign assistance. Presently, insufficient practical work has been done showing the influence of foreign aid on inequality (Chong et al. 2009).

Based on empirical investigations, the forces propelling Asia's rapid economic growth have, in turn, contributed to increasing inequality. Zhuang et al. (2014) identify technological advancements, market-oriented reforms, and globalization as primary drivers of accelerated growth, particularly in developing Asia. However, the same authors elaborate that these drivers exacerbate inequality by widening disparities among capital and labor owners, skilled and unskilled workers, as well as urban and rural sectors. Policymakers and government authorities find themselves unable to curtail these drivers without compromising higher productivity, given their fundamental role. In addition to fiscal factors, unequal access to fundamental services—such as education, health, and finance—along with institutional weaknesses and social exclusion based on religious and cultural factors play pivotal roles in explaining regional inequality in Asia.

Broadening income inequality is an important task of our time. In developed nations, the gap between the opulent and deprived has been high for decades. Disparity tendencies have been more varied in developing markets and emerging nations. Increasing inequality is an extensive apprehension. Inequality within unconventional and developing markets and nations has augmented, a phenomenon that has gotten substantial consideration. A new Pew Research Center (PRC 2014) survey indicated the gap between the affluent and the poor is well-thought-out a main contest by more than 60 percent of defendants in the world. Income disparity is a major topic to be defined and discussed. As it indicates variances recognized in the money made and general standards of welfare amongst diverse clusters of persons. Such sets may denote entire nations, which many times deliberated, or groups within local, nationwide, or regional populations, or even individuals within these groups (Atkinson, 2015). As stated by Piketty (2014), the major cause for income disparity has been the cumulative inequality in wages and salaries, particularly among extremely and low-skilled workers, in addition to between industrialized and emergent economies. Income inequality has very significant costs. Initially, it is linked to the health difficulties of inhabitants, as long as in nations with high-income disparity, healthcare is provided greatly by the high-income groups (Sapolsky, 2005).

Significance of the Study

Economies have been seen as weak due to high poverty and income disparity issues. Considering this seriousness, we have focused on the role of sector-specific aid and official development assistance in improving the income disparity of these selected Asian economies.

Research Objectives

It has been made an effort to highlight the role of sector-specific aid and foreign aid on income inequality in selected Asian countries.

The main aims of the study are given as:

1. It finds out how aid flow for education affects income inequality in selected Asian countries.
2. It analyses the influence of aid for the health sector on inequality in selected Asian countries.
3. It indicates how official development assistance lessens income inequality in Asian countries.
4. It examines how an increased population has increased income inequality in selected Asian countries.

Research Hypotheses

The major hypotheses of this study are given as:

H_1: A negative association exists between official development assistance and income inequality in selected Asian countries.

H_2: The higher the aid for the education sector, the lower the income inequality in selected Asian countries.

H_3: There is a negative relationship between aid for the health sector and income inequality in selected Asian countries.

H_4: The higher the population, the higher the income inequality in selected Asian countries.

REVIEW OF LITERATURE

Reuveny et al. (2003) have focused on the influence of openness (trade flows, foreign direct investment flows and financial capital flows) by using data from 1960 to 1996 in developing economies. Findings indicated that democracy and trade have reduced income inequality. However, foreign direct investments have increased inequality. Heathcote et al. (2010) have conducted an analysis of cross-sectional inequality in the US by using survey data. The results showed an incessant and substantial increase in wage inequality during such a time period. Moreover, taxes and transfers compressed income inequality, and the approach toward financial markets has reduced the level and growth of consumption inequality. Saidon et al. (2013) emphasized a link between foreign aid and income inequality across 75 countries that received foreign aid. Utilizing data spanning from 1995 to 2009 and employing the GMM technique, the study findings revealed that sector-specific foreign aid exhibited varying impacts on income inequality in different sectors. Aid to the economic sector has successfully decreased income inequality. Contrarily, aid to multi-sector led to enhanced inequality.

Acharya and Roberto (2013) focused on the influence of remittance on poverty and inequality. Study results highlighted that remittances have decreased poverty and inequality in India. According to Mumtaz et al. (2019), poverty can be reduced by the use of efficient poverty reduction programs. Ali and Ahmad (2013) focused on how foreign aid influenced income inequality in Pakistan. Johansen cointegration test and vector error correction models were used. It was found that economic growth has decreased income inequality, though foreign aid, foreign direct investment and labor force participation have increased inequality. Anyanwu et al. (2016) used data from 1970 to 2011 and checked the influence of per capita income and secondary education on inequality in African countries. It was found that inequality was increased due to high per capita income. It was found that having secondary education and democracy have lessened inequality. Sharma and Abekah (2017) have emphasized how foreign aid and foreign direct investment influenced inequality from 1970 to 2014 in 71 African economies. Findings indicated that foreign aid has increased inequality, but foreign direct investment has lessened inequality.

Younsi et al. (2019) conducted an analysis of the connection between foreign aid and income inequality in 16 African countries, utilizing data spanning from 1990 to 2011. The GMM results revealed a positive impact of foreign aid, foreign direct investment, trade openness, and corruption on inequality. Frisk (2022) explored the effects of foreign aid on income inequality using data from 1960 to 2020, and the fixed-effect results indicated an increase in income inequality attributed to foreign aid. Khan and Yahong (2022) investigated the influence of carbon emissions and ecological footprint on income inequality in 18 Asian developing economies based on data from 2006 to 2017. Their findings underscored an increase in income inequality associated with carbon emissions. Additionally, the study highlighted that foreign direct investment, easy access to electricity, and population growth were factors contributing to a decrease in income inequality.

METHODOLOGY

This research has utilized the data drawn from 10 selected Asian economies such as Bangladesh, India, Indonesia, Malaysia, Sri Lanka, Pakistan, Philippines, Iran, Jordan and China. The data has been considered from 2003 to 2018 due to data deficiency of important variables. The data has been taken from World Bank Development Indicators. The Gini coefficient income inequality) is considered as a dependent variable. Education aid commitments (total number of commitments for education from donor countries), health aid commitments (total number of commitments for aid for the health sector from donor countries), Log of official development assistance ($US million) and log of total population have been used as independent variables. The study has been using the fixed effect method to indicate an association of dependent and independent variables.

Model

Income inequality has been taken as a dependent variable and explanatory variable for health and education, official development assistance and population growth. Aid and population growth have affected inequality using the random-fixed effect technique.

The model is illustrated below:

$$GINIit= \beta_1 DCEDUit + \beta_2 DCHLTit + \beta_3 OFDAit + \beta_4 LPOPTit + uit \quad (1)$$

Where *GINIit* is the ginni coefficient gauging income disparity of Asian countries, *DCEDUit* is the log of aid commitments for the education sector, *DCHLTit* shows log of the aid commitments for health sector, *OFDAit* is the log of official development assistance, and *LPOPTit* reveals log of the total population. The subscript i shows each country, and the subscript t signifies each time period at this point. The term *uit* implies the error term.

RESULTS AND DISCUSSION

The empirical results about the impact of sector-specific aid inflows and official development assistance on income inequality are shown in this section.

Descriptive Statistics

Table 1 indicates the descriptive statistics of major variables affecting income inequality. Large differences have been perceived in the data. Gini coefficients take a range of 0.473 percent to 0.802 percent in terms of income disparity. On average, education commitments are 177.12 percent in selected Asian countries. The range of health commitments is observed from -1.589 to 2.548, which indicates many differences in the data. On average, the log of the total population is 8.0519 percent.

Table 1. Summary statistics.

Variables	Observation	Mean	Std.Dev	Min	Max
GINI	146	0.6663	0.0900	0.473	0.802
DCEDU	160	177.1193	193.0831	13.985	889.967
DCHLT	160	1.2498	0.9233	-1.589	2.548
OFDA	160	1.0059	1.7604	-0.2875	12.7956
LPOPT	160	8.0519	0.6885	6.7323	9.1461

Empirical Results

Table 2 highlights results using the fixed-effect method. The value of Chi^2 is 93.14, and the probability value is 0.0000, which suggests fixed effect result validity. It shows that sector-specific aid inflow and official development assistance lessens the income disparity in some selected Asian economies.

Table 2. Fixed effects results (Dependent variable: Gini index).

Variables	Coefficients Standard Errors t-statistics
DCEDU	-0.00005** 0.00002 (-2.30)
DCHLT	-0.0056** 0.0027 (-2.10)
OFDA	-0.0038*** 0.0021 (-1.78)
LPOPT	0.4575* 0.0527 (8.68)
C	0.0002 0.0001 (1.99)
R-Square within R-Square between R-Square Overall	0.59 0.57 0.54

Note: *** p<0.01, ** p<0.05, * p<0.1.

Sector-specific aid inflow commitments have a major contribution to reducing income disparity in selected Asian countries. The coefficient is negative and significant, which signifies that a one percent increase in aid commitments for the education sector has reduced income inequality in Asian economies by 0.00005 percent. The reason may be that education level can be improved by this aid flow, and disparity can be made less by having more education and income opportunities. It shows that aid for the education sector has been used carefully, and it reduces inequality. The result is supported by the study results of Saidon et al. (2013).

Aid for the health sector also has a noteworthy role in lessening income inequality in Asian countries. The finding highlights that one percent increased aid commitment for the health sector leads to reduced inequality by 0.0056 percent in Asian countries. People utilizing the health facilities may perform efficiently, which results in increased production and earnings. According to Khatoon et al. (2021), good health helps to accelerate the life expectancy rate and human capital, which leads to an increase in economic growth as a whole. All this has reduced income inequality among the people in economies.

Official development assistance has also contributed well to reducing income disparity. The coefficient is negatively significant, which reveals that a one percent increase in official development assistance has resulted in decreased income disparity by 0.0038 percent in concerned Asian economies. It is a general belief that properly allocated and disbursed aid may enhance growth and development and high living standards, which helpfully decreases disparity. Our study result is according to findings by Younsi et al. (2019).

Another factor that may increase income inequality is the increased total population. It has been observed that population growth is greater than the resources in these Asian economies. Much of the population is less educated or low-skilled or with a greater dependency burden. This increased population is creating inequality more. The finding shows that a one percent increase in total population will cause increased inequality by 0.4575 percent in these economies.

CONCLUSIONS AND RECOMMENDATIONS

The existing study is an effort to highlight the role of sector-specific aid flow and official development assistance in reducing the income disparity of selected Asian countries. By using panel data from Asian countries, it is shown how aid commitments for the education and health sectors have resulted in decreased income inequality. The fixed effect results also highlighted the impact of official development assistance on income inequality. Moreover, high population growth seems to be enhancing income inequality more in these economies. Sector-specific aid inflow has been playing a positive role in determining growth and development along with reducing the income gap in these economies. People with much education and good health are in a position to get jobs and perform employment duties very well, increasing growth and making them financially strong. The study results conclude the overall significant role of aid commitments in lessening the income disparity of the economies. Considering the significant results, it is recommended that governments should allocate more proper aid for the education and health sector to improve economic growth and development, as much growth will cause further aid from donor countries. The government must make policies for fair income distribution among the general public. Control should be made on rapidly increasing population growth to have high economic growth and better living standards for people.

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