Pages: 105 – 112 | **Vol.** VIII, **No.** I (Winter 2023) | **DOI:** 10.31703/ger.2023(VIII-I).10
URL: http://dx.doi.org/10.31703/ger.2023(VIII-I).10 | Global Economics Review (GER)

Role of Official Development Assistance, Foreign Direct Investment and Trade Openness in Reducing Income Inequality: An Empirical Analysis from Selected Asian Countries

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p-ISSN: 2521-2974 | **e-ISSN:** 2707-0093 | **L-ISSN:** 2521-2974

Citation: Ihsan, A., Ali, F., & Ali, F. (2023). Role of Official Development Assistance, Foreign Direct Investment and Trade Openness in Reducing Income Inequality: An Empirical Analysis from Selected Asian Countries. *Global Economics Review, VIII*(I), 105-112. https://doi.org/10.31703/ger.2022(VIII-I).10

Abstract: *Income inequality has been increasing steadily in developing economies. Many factors are responsible for such income inequality and deteriorated economic growth in Asian economies. For this reason, a lot of debate has been made about reducing income inequality. Though the existing study also takes into account the important role of official development assistance, foreign direct investment, and trade openness in reducing income inequality in selected Asian countries, the study found that official development aid, foreign direct investment, trade openness, and labour force participation have greatly reduced income disparity in 10 Asian nations. For growth, good production and exports require more jobs. Globalization and international ties should be prioritized. Finally, economies need a stable economic and political environment to attract aid and foreign investment and grow and expand.*

Key Words: Income Inequality, Official Development Assistance, Trade Openness, Asian Countries

JEL Classification:

Introduction

In both developing and established economies, there has been a growing concern regarding income inequality. It's possible that this will slow down economic progress and development in developing countries. The disparity in wealth that exists between industrialized and underdeveloped countries has gradually begun to narrow. The disparity was quite large at the beginning of the 1990s, but by the conclusion of the decade, it had significantly shrunk. It has been widely acknowledged that international assistance, and especially official development assistance, is one of the most important factors in working toward accomplishing the Millennium Development Goals. (MDGs). The total amount of ODA achieved its all-time high of US$ 128.5 billion in the year 2010. At the end of 2011, it had constituted 7% (or $1.7 trillion) of worldwide resource streams to underdeveloped economies. This is despite the fact that it had experienced a slight decrease as a direct result of the worldwide financial recession. Economies that are not yet

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fully established benefit from the promotion of economic growth that is provided by official development assistance. It has made a significant contribution to the reduction of poverty and the resolution of the problem of inequality that developing countries around the globe are struggling with to a great extent.

The primary driver of progress is what's known as direct investment from overseas, which is an important component of a global financial structure that is both visible and actual. Its benefits have not been able to be acquired in a natural and consistent manner by countries, industries, or local societies up to this point. In recent years, the topic of the influence of foreign direct investment has been one of the most exhaustively discussed subjects among economists and officials in both developed and underdeveloped countries. This is because foreign direct investment can have a significant impact on the economy. The rapid increase in the amount of foreign investment flowing into developing countries has had a substantial impact on the discussion's level of depth and breadth. It is estimated that the total amount of foreign direct investment inflows to countries that are not as developed reached $35 billion in 2015. This represents a 133 per cent increase since 2005. (UNCTAD, 2016). Policymakers have confidence that growth and development will be added to the countries that host foreign direct investment through the transfer of modern technology and administrative expertise, the development of human capital, and an approach to export markets.

Over the course of the last twenty years, less developed economies have steadily increased their proportion of the total revenues generated by foreign direct investment around the globe. It has emerged as one of the most significant sources of external financing for less developed countries and now serves as a foundation. This type of foreign direct investment is frequently observed as a consistent foundation for private global investment due to the fact that it links a long-standing connection with permanent benefits. (OECD, 2016).

The idea behind the link between financial development and economic inequality is the finance-led growth theory (Patrick, 1966; Schumpeter, 1911) and the Kuznets (1955) hypothesis. According to these ideas, income inequality can grow in societies where people don't have fair access to financial resources, even though financial development can boost growth in the early stages of a country's development. (as argued by McKinnon, 1973, Levine, 2005, and King and Levine, 1993). External factors like high transaction costs and lending rates play a big role in widening the income gap between households. However, limited access to financial services and products is more of a structural problem that is common in countries that are just starting to grow.

At present, globalization is a dominant research activity and a financial occurrence that is increasingly being discussed. Globalization has been commonly deliberated as part of the subsequent financial incorporation of the communication association of various markets. Though, it defends the linkages of various countries around the globe by strengthening the financial flows, One of the major ways this has been noticeable for numerous decades has been the reflection of the unexpected and remarkable upsurge in the movement of capital, goods, and persons. Trade openness is an excellent way to increase exports and earnings. Trade openness also helps in reducing poverty and income inequality by improving the growth of the economies.

Labour force participation also substantially influences inequality in obtaining developmental goals, it has been a vital policy issue. Individuals with high skills and talents may become the workforce of numerous economies, which in this way may reduce income inequality. Much absorption of people in the workforce may prove them financially sound and may affect inequality.

A lot of variables lead to income disparity in Asian economies. Unequal income distribution has created many problems in these economies. Considering the seriousness of such an issue, this research is an effort to highlight the factors that contribute to less income inequality. For this, the study shows the positive role of official development assistance, foreign direct investment, trade openness, labour force participation, and the unemployment rate in reducing income inequality in the selected Asian economies.

Significance of the Study

It is believed that the growth structure of economies is becoming more fragile as a result of the widespread poverty and economic disparity that exists within them. A study was conducted for the purpose of demonstrating the primary elements that are responsible for the reduction of wealth inequality in the Asian nations that were chosen. In order to achieve high growth and reduce income disparity, the research considered international aid and trade as well as participation in the labour force.

Research Objectives

The current study shows how foreign aid, trade and labour force participation lead to a decrease in income inequality in selected Asian countries.

The important objectives are as follows

- It analyses the impact of official development assistance on income inequality in selected Asian countries.
- It examines the impact of foreign direct investment on inequality in selected Asian countries.
- It highlights how labour force participation decreases income inequality in selected Asian countries.
- It investigates the impact of trade openness on income inequality in selected Asian countries.
- It finds out how unemployment contributes to income inequality in selected Asian economies.

Research Hypothesis

The major hypothesis of this study is given as

H1: There is a negative link between official development assistance and income inequality in selected Asian countries.

H 2: Higher foreign direct investment, lowers income inequality in selected Asian countries.

H 3: There is a negative association between trade openness and income inequality in selected Asian countries.

H 4: Labor force participation and income inequality are negatively associated.

H 5: Higher unemployment rate, and lower income inequality in selected Asian countries.

The introduction can be found in Section I. The concerned literature analysis is the focus of the second part of this section. The statistics and the methodology are presented in Section III. Nevertheless, section IV presents the empirical findings, and the conclusion is elaborated upon in the following section.

Literature Review

This section summarizes a significant amount of observational research that indicates the relationship between the primary factors that contribute to income inequality. Both economic growth and the distribution of wealth have been affected by foreign aid. In light of this, Chenery and Strout (1966) came to the conclusion that developing economies have been able to close the investment and saving gaps, as well as the export and import gaps, thanks to foreign assistance. All of this made it possible to alleviate the problem of poverty and integrate economies, which led to significant growth and development. Again, Burnside and Dollar (2000) discovered that assistance has facilitated the expansion of economies by facilitating the adoption of appropriate policies.

Gupta et al., (2002) placed a strong emphasis on the role that misconduct has played in contributing to inequality and poverty. According to the findings, misconduct is to blame for the widening disparities. Using data ranging from 1971 to 2002, Chong et al. (2009) focused their attention on the effect of foreign aid on the reduction of income inequality and the eradication of poverty. It was discovered that assistance from other countries helped reduce wealth disparity to some degree.

Using data ranging from 1963 to 2002, Hamori and Hashiguchi (2012) conducted an investigation into how international commerce influenced the degree of income inequality. The findings demonstrated that increased trade openness and GDP have contributed to a widening income gap in 126 developing countries.

The flow of direct investment from abroad is another important factor that helps reduce wealth disparity. Moore (2017) brought attention to the role that international assistance plays in reducing the income gap in African countries. According to the findings of the research, economic inequality in these countries has shrunk as a direct result of increased foreign aid. Despite this, Baloch et al. (2017) have implemented the GMM method to data that was collected between 2006 and 2013. Education was found to reduce income disparity, but inflation was found to increase inequality across 103 countries. While education may have reduced income disparity, inflation increased inequality.

Despite this, Rudra (2019) examined the relationship between the amount of money spent on education by the government, the amount of trade, and the distribution of wealth in 35 developing countries. The findings indicated that increased trade and educational expenditures have contributed to a reduction in the degree of income inequality in these countries.

In their study on the impact of entrepreneurship on wealth inequality in the United States, Atems and Shand (2018) looked at data spanning the years 1989 to 2013. The results of the GMM study revealed that increased entrepreneurial activity has contributed to less income inequality in American economies. According to Yehiyes and Woldemariam's (2020) research, the impact of remittances and official development assistance (ODA) on human development outcomes in 35 African countries were analyzed. The findings demonstrated that both of the variables have contributed to greater human development by enhancing the standard of institutional environments.

Le et al., (2021) have concentrated their attention on the effects of foreign direct investment on income inequality in Vietnam. The findings of the GMM indicated that the presence of a significant amount of FDI had the effect of reducing inequality between the various districts.

Alderson and Nielsen (2022) brought attention to the fact that globalization and participation in the labour force both play a part in income inequality. According to the findings of the research, globalization and an increase in the labour force, both contributed to a reduction in inequality.

Avom et al., (2022) investigated the ways in which the distribution of natural resources can affect inequality. It was discovered that the distribution of natural resources has contributed to inequality in a detrimental way.

Data and Methodology

The research study used statistics from ten different Asian economies for our analysis. The information spans the years 2003 to 2018, and it was obtained from the World Bank's Development Indicators. As the dependent variable, the Gini coefficient, which is a proxy for wealth inequality, is examined. Independent variables include the following logs: government development assistance in US millions of dollars, foreign direct investment inflow as a percentage of GDP, trade openness as measured by exports and imports as a percentage of GDP, labour force participation rate, and unemployment rate. The technique of fixed effects was used in the research to investigate the connection that exists between the dependent and the explanatory variables.

Model

$$GINIit = \beta_1 LODAit + \beta_2 FRDINit + \beta_3 TRADOit + \beta_4 LFPRAit + \beta_5 UNEMTit + uit$$

Where *GINIit* is the Ginni coefficient measuring income inequality of economies, *LODAit* is the log of official development assistance, *FRDINit* is foreign direct investment flow, *TRADOit* is trade openness, *LFPRAit* is labour force participation and *UNEMit* is the unemployment rate. The subscript i shows each country and the subscript t indicates each time period here. The term *uit* signifies

Empirical Results

This section signifies the results from empirical analysis in selected Asian countries.

Descriptive Statistics

Table 1.

Summary Statistics

Variables	Observation	Mean	Std.Dev	Min	Max
GINI	146	0.6664	0.0901	0.473	0.802
LODA	160	1.0059	1.7604	-0.2875	12.7956
LFDI	160	2.4391	2.8568	-0.2542	23.5374
TRADO	160	68.0907	41.6509	25.3062	210.3738
LFPRA	160	64.605	25.3062	52.536	80.169
UNEMP	160	5.6012	52.536	0.398	15.275

The statistical breakdown of significant considerations is presented in Table 1. There is a significant amount of variation in these statistics. In terms of the distribution of wealth, Gini coefficients can range anywhere from 0.473 to 0.802 per cent of the total. The gini coefficient in these countries is, on average, somewhere around 0.67 per cent. Approximately 2.4391 per cent of total investment is made by international companies. The percentage of people actively participating in the labour market also varies greatly, with a range that goes from 52.536 per cent to 80.169 per cent. These nations have a collectively staggering unemployment rate of 5.6012% on average across the board.

Empirical Results

The findings of the fixed effects of the variables are presented in Table 2. Since the value of the probability of Chi2 is 0.0000, this indicates that the fixed effect procedure is the one that should be used. It has been discovered that increasing trade openness, along with government development assistance and foreign direct investment, leads to a reduction in the income inequality that exists in certain Asian countries.

Table 2

Fixed Effect Results

Variables	Coefficients Standard Errors t-statistics
LODA	-0.0052** 0.0025 (-2.10)
FRDIN	-0.00302** 0.0012 (-2.41)
TRADO	-0.0012 * 0.0002 (-6.67)
LFPRA	-0.0067* 0.0015 (-4.58)

Variables	Coefficients Standard Errors t-statistics
UNEMP	0.0010 0.0024 (0.43)
C	1.1708 0.0961 (12.18)
R-Square within	0.53
R-Square between	0.67
R-Square Overall	0.52
t-values in parentheses	
*** p<0.01, ** p<0.05, * p<0.1	

Dependent Variable: Gini index

Aid from other countries plays a significant part in reducing the wealth gap between different Asian countries. The coefficient of government development assistance is significantly negative and carries a negative sign. It has been demonstrated that a one per cent increase in official development assistance results in a 0.0052 per cent reduction in inequality. A significant portion of the funding for international assistance goes toward investments, which in turn create opportunities for individuals to find work. And as a result, individuals have a strong sense of financial security. It draws attention to the fact that aid contributes to a more equitable distribution of wealth in these economies. The findings of Yehiyes and Woldemariam lend credence to the conclusion reached here. (2020).

One more significant factor that helps to reduce the income gap between countries in Asia is the inflow of direct investment from other nations. The findings indicate that a reduction in the income gap of selected Asian nations of 0.0030 per cent can be attributed to a rise of one per cent in the level of foreign direct investment. This foreign investment not only helps improve the distribution structure of the economy but also maximizes the employment possibilities available to the local population. The findings are in line with those found in the research by Le et al., (2020).

Participation in the labour force helps improve income distribution, which in turn helps to lessen the disparity that exists between people in these Asian countries. It was discovered that a one per cent increase in the number of people actively participating in the labour force led to a 0.0012 per cent increase in inequality. All aspects of society benefit when there is an increase in disposable revenue and employment opportunities. Those with more financial resources are able to make investments, which boosts the incomes of less fortunate members of the population who take advantage of available work opportunities and join the labour force. The conclusion contradicts the findings that were found by Alderson and Nielsen (2022) as well as those found by Le et al. (2021).

Trade openness is essential for the countries that are being considered. People's overall quality of living is elevated as a result. Additionally, it makes a significant contribution towards high rates of growth and development. According to the findings, a 0.0012 per cent reduction in income inequality can be attributed to a one-unit increase in trade openness. A significant amount of production, exports, and trade all contribute to an improvement in the distribution of wealth in these countries. The conclusion is consistent with the findings of Alderson and Nielsen. (2022). There is a strong correlation between unemployment and wealth inequality in the economies that are being discussed. The fact that the coefficient is positive suggests that an increase in the number of unemployed people leads to a greater revenue gap in these countries.

V Conclusion and Suggestions

Income inequality which is becoming an increasingly prevalent issue in a number of Asian countries has been the primary target of this research. We have investigated the ways in which openness to trade, foreign direct investment, and official development assistance all contribute to the uneven distribution of wealth in certain economies. It has been found that foreign direct investment, official development assistance, trade openness, and labour force participation among these countries are significant factors that have decreased inequality.

Both aids from other countries and direct investment from other countries help these economies to grow and progress more quickly. Additionally, the people's quality of life, as well as their standard of living, have both increased as a direct result of this investment and assistance. The employment rate of disadvantaged people in these economies has increased, along with their improved financial standing, as a result of the increased number of work opportunities available in a variety of localities. Therefore, it is safe to draw the conclusion that both direct investment from other countries and aid from other countries have contributed to an improvement in the disparity and development of economies.

On the premise of the findings, it has been proposed that all sectors of the population in these economies should have access to an increased number of employment opportunities. A significant amount of attention and resources should be directed toward lessening the wealth gap in the economies that are of concern. Stability on both the economic and political fronts is essential for these countries at this point in time. More aid and investment will be drawn to these economies by a political and economic environment that is certain and stable, which will be beneficial in the long run for high growth and development while maintaining an equitable disparity structure. There ought to be more openness and equality in the distribution of aid, which will have a beneficial impact on the provision of additional assistance. Finally, an increase in industrialization is required in these countries in order to achieve high levels of production and export and substantial gains from commerce.

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