



## The Paradox of Globalization: Unraveling the Short and Long-Term Impacts on Income Inequality in Indonesia

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### KEYWORDS

Globalization  
Income Inequality  
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### ABSTRACT

This study investigates the impact of globalization and financial growth on income inequality in Indonesia using empirical data from 1995 to 2020. The analysis reveals that globalization and financial development, while initially appearing advantageous, can exacerbate income inequality over time. In Model I, the overall measure of globalization contributes to income inequality in both the short and long run. Initially, globalization may reduce income inequality, but its long-term effects are detrimental. Financial development and inflation in Indonesia also have a significant and positive impact on income inequality in this model. Model II shows that economic, political, and social globalization have statistically significant impacts on income inequality in both the short and long term. Economic and political globalization can help mitigate income inequality over time, but in the short term, income inequality in Indonesia worsens. Social globalization, on the other hand, consistently has a positive influence on income disparity in both the short and long term. The study highlights the need for proactive government measures to maintain the stability of economic, political, and social globalization. Policymakers should implement progressive policies that address the adverse effects of globalization on income distribution to ensure a more equitable society.

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## 1. INTRODUCTION

The topic of globalization frequently sparks engaging discourse at both the national and global levels. This phenomenon can be attributed to the potential of this activity to facilitate the expansion of commerce and financial flows, foster collaboration across nations, and enhance technological proficiency (Ajide et al., 2021; Gaies et al., 2022; Lau et al., 2022). Globalization can be understood as the interconnectedness and interdependence of economic activities beyond national boundaries. Globally, the phenomenon of globalization significantly influences the economic landscape of a nation. To comprehend the dynamics of globalization alliances, it is necessary to analysis their activist endeavors (Adler, 2021). The impact of globalization has been tremendous across various dimensions, including politics, culture, ecology, and economy (Borisenko et al., 2018; Huang

et al., 2022). Each of these dimensions encompasses significant elements of the discussion.

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Considerable emphasis has been devoted to examining the effects of economic globalization on inequality, as evidenced by the works of Berumen (2015), Bourguignon (2015), Gygli et al. (2019), Milanovic (2003), and Mills (2009). This evidence lends credence to the notion that globalization is associated with a decrease in economic growth and an increase in inequality (Gurbuz, 2022; Permadi, 2018; Vértesy, 2021). Moreover, income differences, employment availability, and even conflicts can serve as catalysts for inequality. Consequently, globalization serves to intensify the disparities in development. Bourguignon (Bourguignon, 2015) argues against the prevailing notion that the ongoing phase of rapid globalization has resulted in the economic impoverishment of advanced economies in favor of emerging nations. This phenomenon might be attributed to the fact that both factions derive advantages from the process of globalization. The process of market opening in developing nations has been found to positively impact various aspects of economic development, including the acceleration of production growth, enhancement of productivity levels, and attraction of higher levels of foreign direct investment (FDI). Nevertheless, a common occurrence in developing nations is the trade-off between economic growth and income inequality.

Research on inequality in Indonesia has been extensively conducted since the 1970s. Various studies have explored topics such as inter-regional migration and social inequality (Titus, 1978), labor wages, education, and gender (Chun & Khor, 2010; Lee, 2015; Syera et al., 2018), as well as health and the impact of COVID-19 (Anindyajati, 2022; Ihsani & Rohman, 2022; Miranti, 2010; Rangkutiy et al., 2021; Warsito, 2020). Additionally, issues of income inequality, economic growth, and poverty have gained significant attention (Broadbent, n.d.; Mills, 2009). The Gini ratio index variable is commonly employed in the analysis of various approaches to inequality. The KOF globalization index is used to assess the effects of globalization on income distribution, hence enabling the measurement of globalization's impact. The KOF index of globalization is a comprehensive measure that encompasses multiple facets of globalization, including economic, social, and political dimensions. These characteristics can impact inequality and the redistribution of resources. The use of the KOF globalization index addresses the issue of multicollinearity and mitigates variable bias (Dreher, 2006; Lockwood, 2004). The affected prior studies relying on the Kearney Globalization Index (Martens & Zywiec, 2006). Moreover, it facilitates the examination of the direct consequences of different dimensions of globalization on income inequality.

This study conducts an empirical analysis to investigate the collective impact of globalization and financial development on income disparity. This study analyzes various aspects of globalization and financial advancements that impact income distribution within emerging nations, with a specific emphasis on Indonesia. This study examines the relationship between globalization (measured by economic, social, political, and aggregate indices) and financial growth (represented by bank-based and stock market-based indicators) on inequality using annual time series data. This methodology will facilitate the formulation and implementation of proactive development policies aimed at mitigating income disparity. In addition, the

user text should be rewritten in an academic manner without adding any additional information. This study aims to contribute to the existing literature by conducting an empirical analysis of the impact of economic globalization on income inequality and economic growth in Indonesia from 1995 to 2020. This analysis examines the factors contributing to income disparity in Indonesia and proposes policy solutions that leverage the beneficial aspects of globalization to foster the country's economic progress. Moreover, these findings make a valuable contribution to the ongoing scholarly discourse.

This paper is organized as follows. Section 2 provides an overview of the research approach and methods employed in this study. Section 3 of this study presents an examination of the data collected in Indonesia. Section 4 provides a concise overview of the primary arguments and underscores significant policy issues. This analysis examines the factors contributing to income disparity in Indonesia and proposes policy solutions that can use the favorable outcomes of globalization to foster the country's economic progress. Furthermore, the findings make a valuable contribution to the continuing discourse within the scientific community.

## 2. METHODOLOGY AND MODEL DESCRIPTION

### 2.1 Data and Model Specifications

According to the empirical model, the level of income inequality (INQ) is determined to be a function of globalization (GI), financial development (FD), and inflation control factors (INF), all of which are given in Equation (1). The estimation of the model is conducted using annual data from Indonesia spanning 1995-2020. The primary source of this dataset is the World Development Indicators (WDI) issued by the World Bank.

$$LINQ = \alpha_0 + \alpha_1 LGI + \alpha_2 LFD + \alpha_3 INF + \varepsilon_t \quad (1)$$

The series under consideration, denoted as FD to indicate financial development, is defined by the use of two key indicators: domestic credit to the private sector as a proportion of gross domestic product (GDP), and market capitalization as a proportion of GDP. Table 1 provides an overview of the definitions and sources of the variables that were analyzed. Table 1 presents data on the Gini coefficient (LINQ), which serves as a metric for assessing income inequality, as well as the proxy consumer price index (INF), which is used to gauge the inflation rate. Inflation diminishes the purchasing power of all individuals; however, it disproportionately affects middle- and low-income groups compared within high-income groups. According to Easterly and Fisher (2001), individuals belonging to the affluent and commercial sectors can employ hedging strategies to mitigate the impact of inflationary circumstances. This disparity arises from the differential accessibility of financial services and markets between high-income individuals and those belonging to low- and middle-income brackets. Therefore, inflation exacerbates the disparity in income distribution.

**Table 1.** Definition and Source of Variables

Variable	Notation	Size	Data source
Income inequality	INQ	Gini coefficient	WDI, World Bank
Globalization Index	GI	KOF Index	KOF Swiss Economic Institute
	EG	Economic globalization (Trades Openness Index)	WDI, World Bank
	PG	Political globalization	KOF Swiss Economic Institute
	SG	Social globalization	KOF Swiss Economic Institute
Financial development index	FD	Aggregate financial development index: (i) Market capitalization of listed domestic companies (% of GDP) (ii) Domestic credit to private sector by banks (% of GDP)	WDI, World Bank
Inflation	INF	Consumer price index (CPI)	WDI, World Bank

variations in these variables over time, both in the immediate and distant future.

**Table 2.** Descriptive Statistics

Variable*	Obs	Means	std. Dev.	Std.Dev/mean (%)	Min	Max
INQ	26	35,927	3,402	9,468	29,500	40,800
GI	26	60,067	3,565	5,936	50,685	64,223
EG	26	55,607	6,488	11,667	47,334	70,038
PG	26	81,242	4,770	5,871	72,696	87,585
SG	26	43,352	9044	20,863	27,596	54,152
FD	26	67,117	16,976	25,293	32,489	95,450
INF	26	9,095	10,841	119,199	1921	58,451

\*Statistics are calculated using numbers before taking logarithms

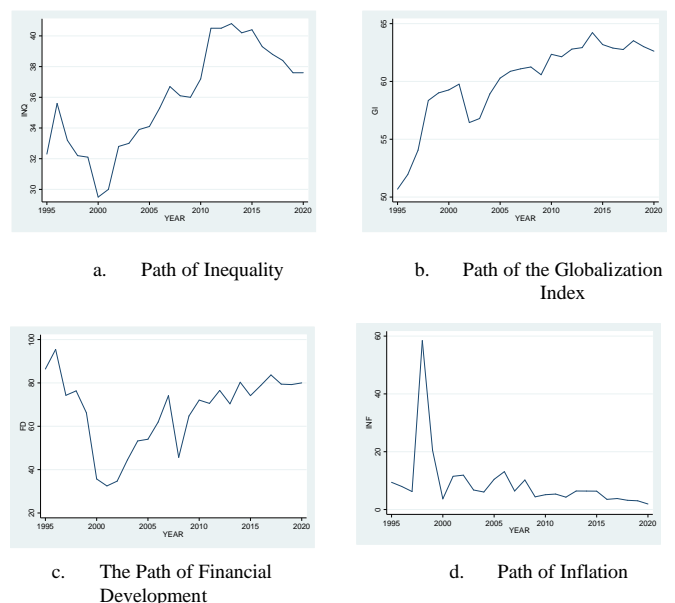
Figure 1 illustrates a discernible inclination towards an upward trajectory in both the aggregate level of inequality and the globalization index from 1995 to 2020. Conversely, financial development and inflation exhibit a propensity to fluctuate within this time frame.

According to findings presented in Gygli et al.'s (Gygli et al., 2019) study, typically, the measurement of globalization revolves around the degree of trade openness in international markets, which is commonly represented by the volume of exports and imports. This particular perspective primarily pertains to the concept of economic globalization. Dreher (Dreher, 2006) introduced the KOF globalization index, which offers the advantage of a thorough assessment across multiple dimensions, including economic, social, and political aspects. Globalization, a complex notion, encompasses more than mere economic openness and money movements. This index serves as a means of accepting globalization. Since 1970, this index has been extensively used as the predominant measure of globalization within the realm of scholarly literature. In this study, we employ four models to evaluate the impact of different dimensions of globalization, namely aggregate (GI), economic (EG), political (PG), and social (SG), on income inequality. However, for economic globalization, we use the traded openness index as a proxy, as indicated by Equation (2).

$$Model I : LINQ = f(LGI, LFD, LINF) \quad (2)$$

$$Model II : LINQ = f(LEG, LPG, LSG, LINF)$$

In contrast, Table 2 exhibits numerous statistical features of the data. One notable observation is the standard deviations, which quantify the relationship between the standard deviation and the mean. In comparison to other variables, inflation exhibits the greatest percentage of variance, namely at a rate of 119.2%. This indicates a significant degree of dispersion or fluctuation in annual inflation levels. Moreover, this result is supported by an average increase of 60.07% in the globalization index. On the other hand, the dependent variable in this study, namely the Gini index (INQ), demonstrates a rather narrow range of variability, totaling 9.47% during the investigation. The significance of examining the connections between variables, such as degrees of inequality and other factors, can be further emphasized by the presence of



**Fig. 1.** Time path evolution of the series

### 2.2 Cointegration with ARDL

In this study, an empirical investigation into the long-term relationship and the dynamic interaction of income inequality with financial development and controllable variables is conducted. The model was estimated by applying of the cointegration autoregressive distributed lag (ARDL) approach. Sehrawat and Giri (2015) asserted that the adoption of this approach was motivated by three distinct reasons. The bound co-integration test is relatively less complex than other multivariate co-integration procedures, such as the Johansen and Juselius (1990) approach (Mosconi & Paruolo, 2022). After selecting the lag sequence, the ordinary least squares (OLS) method can be employed to evaluate the co-integration relationship. Furthermore, as stated by Camba Jr and Camba

(2021), the bound test process differs from other procedures such as Engle and Granger (1987) and Johansen (1992) in that it does not necessitate pre-testing of the variables included in the model for unit roots. These approaches necessitate the integration of all variables in a consistent order, specifically in the first order (I(1)). Alternatively, the loss of predictive capacity may occur.

However, the ARDL technique can be used regardless of whether the regressor in the model demonstrates stationary properties (I(0)) or integrated properties (I(1)). In addition, it is important to acknowledge that testing demonstrates increased efficiency when performed on reduced sample sizes, as demonstrated in the present study. In addition, the error correction approach adeptly integrates both short-term dynamics and long-term equilibrium, thereby maintaining essential long-term information. The application of the unrestricted error correction model (UECM) within the autoregressive distributed lag (ARDL) model framework for the examination of both long-term and short-term relationships, as denoted by Equation (3).

$$\begin{aligned} \Delta LINQ = & \delta_0 + \delta_1 T + \delta_2 LGI_{t-1} + \delta_3 LFD_{t-1} \\ & + \delta_4 LINF_{t-1} \\ & + \sum_{i=1}^q \alpha_i \Delta LINQ_{t-i} + \sum_{i=1}^q \beta_i \Delta LGI_{t-i} \\ & + \sum_{i=1}^q \mu_i \Delta LFD_{t-i} + \sum_{i=1}^q \sigma_i \Delta LINF_{t-i} \\ & + \varepsilon_t \end{aligned} \tag{3}$$

The series is defined as previously stated, with T representing the time trend and L indicating that the variable has been transformed into its natural logarithmic form. The initial component of Equation (3) involving the variables and  $\delta_2, \delta_3,$  and  $\delta_4$  pertains to the long-term coefficients, whereas the subsequent component pertains to the short-term coefficients. The null hypothesis posits the absence of co-integration, whereas the alternative hypothesis the presence of cointegration among the variables (Equation 3)  $\alpha, \beta, \mu, \sigma H_0 = \delta_1 = \delta_2 = \delta_3 = \delta_4 = 0 H_1 = \delta_1 \neq \delta_2 \neq \delta_3 \neq \delta_4 \neq 0$

2.3 ARDL Co-integration Bound Test Procedure

The initial stage of the ARDL test uses ordinary least squares (OLS) to estimate Equation (3) and examine the long-term relationship between variables. An F-test assesses the significance of the lagging level coefficient, with null and alternative hypotheses. A co-integration test with critical values H0, H1, and I(d) determines whether the F-statistic falls within the critical value range, leading to acceptance or rejection of the null hypothesis regarding a long-run association. Moreover, if the computed values lie within the range of the lower and higher bounds, the determination of co-integration remains unclear, where the values of d are bounded by 0 and 1. According to Pesaran et al. (2001), I(0)I(1). The ARDL bound testing approach is employed to utilize the cointegration formula in order to estimate the number of regressors. The variable "q" specifies the maximum number of lags used, whereas  $(\rho+1)^q$  denotes the total number of variables.

In the subsequent stage, once co-integration achieved, the estimation of the ARDL long-term model depend on the variable LINQ\_t and can be represented by Equation (4).

$$\begin{aligned} \Delta LINQ = & \alpha_0 + \sum_{i=1}^q \delta_1 LINQ_{t-i} + \sum_{i=1}^q \delta_2 LGI_{t-i} \\ & + \sum_{i=1}^q \delta_3 LFD_{t-i} + \sum_{i=1}^q \delta_4 LINF_{t-i} + \varepsilon_t \end{aligned} \tag{4}$$

where all variables are defined before. This involves selecting the orders of ARDL $q_1, q_2, q_3,$  and  $q_4$  models using SIC.

In the third and final step, we derive short-term dynamic parameters by estimating an error correction model (ECM) with long-term forecasts. This is determined using, Equation (5):

$$\begin{aligned} \Delta LINQ = & \mu + \sum_{i=1}^q \alpha_i \Delta LINQ_{t-i} + \sum_{i=1}^q \beta_i \Delta LGI_{t-i} \\ & + \sum_{i=1}^q \mu_i \Delta LFD_{t-i} + \sum_{i=1}^q \sigma_i \Delta LINF_{t-i} \\ & + \phi ECM_{t-1} + \varepsilon_t \end{aligned} \tag{5}$$

where  $\alpha$  is the short-run dynamic coefficient toward equilibrium and  $\phi$  is the velocity adjustment coefficient.  $\alpha, \beta, \mu, \sigma, \phi$

3. RESULTS AND DISCUSSION

3.1 Stationary Test

Unit root test: we test variable unit-roots before ARDL testing to establish integration order. The unit root test is employed to verify that no data series exhibits integration of order 2 (I(2)). The present investigation employed the ADF, KPSS, and Phillips-Perron unit root tests, as illustrated in Table 3. The findings from the analysis of the unit root test indicated that all variables exhibited stationarity at level I(0) and/or first-order I(1), providing evidence that no variable demonstrated stationarity at the second-order I(2). This demonstrates that the ARDL model has the potential for future analysis.

Table 3. Variable Stationarity Test

	ADF	DF-GLS	Phillips-Perron
LINQ	0.678*	-1,701*	0.704
LGI	1,716*	-0.949*	1,505
LEG	-0.287*	-1,205*	-0.276
LPG	5,517*	-1,408*	5.166
LSG	2,761*	-1,880*	2,953
LFD	-0.199*	-1,999*	-0.197*
LINF	-1,204*	-2,695*	-1,086
dLINQ	-3,377	-4,065	-5,248*
dLGI	-3,014	-3,526	-3,513*

dLEG	-3,645	-3,768	-4,008*
dLPG	-2,067	-2,206*	-2,908*
dLSG	-2,363	-2,199*	-4,320*
dLFD	-3,449	-3,182	-5,106*
dINF	-7,112	-2,349	-7,824*

Note: t-statistics from the ADF, DF-GLS, and Phillips-Perron methods \*5% Critical Value [ADF = -1.95; DF-GLS = -3.071; pperron = -1.950 ]

This study employs the ARDL bound test approach to estimate co-integration. The maximum lag order is determined using the Akaike Information Criterion (AIC). By implementing the Ordinary Least Squares (OLS) regression technique. The results of computing the F-statistics and diagnostic tests are presented in Table 4. The computed F-statistic is greater than the upper critical value (UCB) at both the 1% and 5% levels of significance. Therefore, on the basis of results obtained, we may reject the null hypothesis that there is no co-integration, indicating the presence of a long-term cointegration link between income disparity and globalization. Based on statistical estimations, it may be concluded that the model definition has successfully passed all diagnostic tests. This study employs the ARDL bound test to analyze the cointegration relationship among globalization, financial development, and income inequality. According to existing literature, it has been observed that the F-statistic's value is influenced by the number of delays present in various variables. Therefore, the lag length was determined using a general-to-specific approach based on the data range and AIC criterion.

The lag selection process yielded a maximum of four lags, which were subsequently incorporated into the ARDL model. Specifically, for model I, the optimal lag structure was determined to be ARDL (3,3,0,0), whereas for model II, it was ARDL (1,2,2,2,2). The results of the empirical bound test are displayed in Table 4. The findings indicate that the estimated F-statistic for models 1 and 2 surpasses the critical value, that the null hypothesis about the presence of long-term co-integration is not rejected for these models. This confirms the existence of long-term co-integration in models 1 and 2. The user's text is concise.

**Table 4.** ARDL bound test

Estimated models	Calculated F-statistics					
<i>Model I : LINQ = f(LGI, LFD, LINF)</i>	8.112 <sup>a</sup>					
<i>Model II : LINQ = f(LEG, LPG, LSG, LINF)</i>	27.373 <sup>a</sup>					
<b>Critical value bounds of F-statistics: intercept, 24 observations, k=2</b>						
	99% levels		95% levels		90% levels	
	I(0)	I(1)	I(0)	I(1)	I(0)	I(1)
<i>Model I: ARDL (3,3,0,0)</i>	4.29	5.61	3.23	4.35	2.72	3.77
<i>Model II: ARDL (1,2,2,2,2)</i>	3.74	5.06	2.86	4.01	2.45	3.52

Note: Null hypothesis: No long-run relationships exist.

<sup>a</sup>Refer to 1% significance level; <sup>b</sup>Refer to 5% significance level.

**3.2 Impact of Globalization and Financial Development on Income Inequality in the Long Term**

The findings of the estimation of the long-term model are presented in Table 5. According to Model I, the coefficient for

globalization (GI) demonstrates a positive and statistically significant relationship. The empirical findings indicate that the observed outcomes demonstrate a positive relationship between the degree of globalization (GI) and income inequality (INQ), whereby a 1% rise in globalization is associated with a substantial 174.5% increase in income inequality, assuming that all other factors remain constant. This observation indicates that the overall state of Indonesia's globalization index significantly influences the extent of income inequality. Because of the phenomenon of globalization, various paths have evolved, encompassing open government efforts, e-administration, e-governance, and the articulation and spread of governmental and quasi-governmental policies. This aligns with the viewpoint expressed by Amadi and Harcourt (2018).

Model 2 demonstrates that over an extended period, economic and political globalization exert a noteworthy and adverse impact. Specifically, a 1% alteration in the economic globalization index corresponds to a 34.2% decrease in income inequality, whereas a 1% modification in the political globalization index results in a 98.8% reduction in the income inequality rate. In contrast to social globalization, which exerts a notable and beneficial impact. A 1% rise in the social globalization index is associated with an 82.9% increase in income inequality. In contrast, in model II, the long-term impact of inflation on income inequality is negligible. In line with research Nooh (2023) which states that globalization is a social phenomenon that encourages increased interaction and interconnectedness between nations and countries.

**Table 5.** Long-run coefficients

Dependent variable = LINQt				
Variables	Model I		Model II	
LGI <sub>t</sub>	1.745***	(6.55)	-	-
LEG <sub>t</sub>	-	-	-0.342***	(-3.57)
LPG <sub>t</sub>	-	-	-0.988**	(-2.62)
LSG <sub>t</sub>	-	-	0.829***	(7.44)
LFD <sub>t</sub>	0.145***	(5.08)	-	-
LINF <sub>t</sub>	0.045***	(3.01)	0.025	(0.22)

\*Refer to 10% significance level; \*\* Refer to 5% significance level; \*\*\* Refer to 1% significance level

However, model I's long-term financial development (FD) and inflation (INF) factors are considerable. This income disparity is significantly affected by long-term financial development and inflation. When financial development experiences a 1% increase, it leads to a corresponding 14.5% rise in income inequality and a 4.5% increase in inflation.

**3.3 Relationship between Globalization, Financial Development, and Income Inequality in the Short Term**

The estimation findings of the short-run model demonstrate that the coefficient of the Gini index in the prior period exhibited a statistically significant beneficial impact. In the context described, a mere 1% alteration in the Gini index during the preceding year corresponded to a notable surge of 60.51% in the existing levels of income disparity. In the short run, it has been observed that both the current globalization index (ΔLGI<sub>t</sub>) and the two preceding eras (ΔLINQ<sub>t-2</sub>) exert a statistically significant negative influence on income inequality. When there is a 1% shift in globalization

(aggregate) compared to the preceding two years, it is projected to result in a reduction of current income inequality by 133.57% and 77.75%. This observation demonstrates that over an extended period, the globalization index undergoes adjustments and exerts varying impacts on the degree of income disparity. Table 6 presents the outcomes of the short-term dynamics analysis conducted using the error correction model (ECM) variant of the autoregressive distributed lag (ARDL) approach.

Model II provides empirical evidence of a significant influence exerted by the economic globalization index (LEG), political factors (LPG), and social factors (LSG) on both short-term and long-term results. The phenomena of economic and political globalization have the capacity to alleviate income disparities over a prolonged duration. Nevertheless, it is crucial to acknowledge that in the short term, these two aspects have the propensity to exacerbate income inequality in Indonesian. According to estimates, a 1% rise in economic globalization is projected to lead to a 34.2% decrease in income disparity. Likewise, it is anticipated that a rise in the political globalization index will result in a significant reduction of 98.8% in income inequality. In contrast to the circumstances observed in the realm of social globalization, it becomes clear that the consequences of globalization in Indonesia, both in the short-term and long-term, result in a good conclusion with regard to wealth disparity. To clarify, a small 1% augmentation in social globalization exhibits a substantial correlation with a significant 82.9% escalation in economic disparity. Likewise, within a short-term context, a marginal change of 1% in social globalization during the preceding period would have a substantial impact, resulting in a 38.70% increase in the existing income inequality.

**Table 6.** Short-run coefficients

Dependent variable = $\Delta$ LINQ <sub>t</sub>				
Variables	Model I		Model II	
Short-Run	ARDL(3,3,0,0)		ARDL(1,2,2,2,2)	
$\Delta$ LINQ <sub>t-1</sub>	0.6051***	(4.4)	-	-
$\Delta$ LINQ <sub>t-2</sub>	0.1653	(1.08)	-	-
$\Delta$ LG <sub>t</sub>	-1.3357***	(-4.46)	-	-
$\Delta$ LG <sub>t-1</sub>	-0.2917	(-1.16)	-	-
$\Delta$ LG <sub>t-2</sub>	-0.7775***	(-4.02)	-	-
$\Delta$ LEG <sub>t</sub>	-	-	0.4111***	(4.09)
$\Delta$ LEG <sub>t-1</sub>	-	-	0.2120**	(2.61)
$\Delta$ LPG <sub>t</sub>	-	-	4.4606***	(6.29)
$\Delta$ LPG <sub>t-1</sub>	-	-	4.3201***	(7.39)
$\Delta$ LSG <sub>t</sub>	-	-	-0.0759	(-1.04)
$\Delta$ LSG <sub>t-1</sub>	-	-	0.3870***	(4.99)
$\Delta$ LINFT	-	-	0.0154	(1.13)
$\Delta$ LINFT-1	-	-	0.0347***	(3.82)
CONS	-3.3068***	(-3.10)	5.4106***	(5.57)
ECM <sub>t-1</sub>	-0.7774***	(-4.64)	-0.8943***	(-7.45)
Robustness indicators				
$\chi^2$ Normal	4,046	[0.8529]	4,897	[0.8979]
$\chi^2$ Series	7,330	[0.0621]	3,821	[0.1480]
$\chi^2$ ARCH	0.121	[0.7277]	0.322	[0.5705]

$\chi^2$ Hetero	0.050	[0.8312]	0.020	[0.8975]
$\chi^2$ Resets	2,890	[0.0622]	0.660	[0.5894]

Note: Figures in parentheses [#] and (#) are estimated p-values and t-values, respectively.  $\chi^2$ Normal indicates to the Jarque-Bera statistics of the test for normal residuals,  $\chi^2$ Serial is the Breusch-Godfrey LM test statistics for no serial relationship,  $\chi^2$ ARCH is the Engle's test statistics for no autoregressive conditional heteroscedasticity,  $\chi^2$ Hetero is the heteroscedasticity test based on the regression of squared residuals on squared fitted values, and  $\chi^2$ Reset is the test for functional form based on Ramsey's RESET test using the square of the fitted values.

\*Refer to 10% significance level

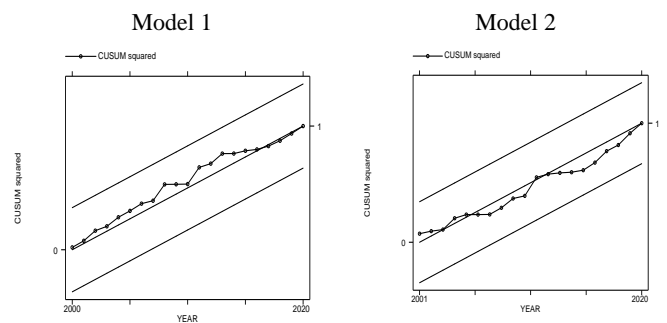
\*\* Refer to 5% significance level

\*\*\* Refer to the 1% significance level

In general, the findings of the analysis indicate that the phenomenon of globalization, when considered as a whole, can both elevate income disparity eventually and diminish it in the short run within the context of Indonesia from 1995 to 2020. In models I and II, the error correction coefficient exhibits a statistically significant negative value at a significance level of 1%. This observation provides empirical support for the existence of a consistent and enduring association between the variables. The error correction coefficient quantifies the rate at which a system readjusts to its long-term equilibrium state following short-term aberrations. The error correction coefficient estimates indicate that in model I, deviations from the long-run equilibrium path are corrected at a rate of 77.74% per year, whereas in model II, the rate of correction is 89.43% per year. Indicators of model validation are displayed in the lower section of Table 6.

**3.4 Model Stability Test**

The CUSUM and CUSUMSQ tests were originally introduced by Brown, Durbin, and Evans in their seminal work published in 1975. Sethi (Sethi et al., 2021) conducted a similar study to examine the durability of both long-term and short-term factors. The CUSUM and CUSUMSQ plots depicted in Figure 2 exhibit values that fall within the critical limitations established at a significance level of 5%. This observation affirms that the stability characteristics of both long-term and short-term variables, which influence income disparity in Indonesia, have been satisfied. Hence, it can be observed that all models exhibit stability and exact delineation, making them suitable for informing policy-making processes.



**Fig. 2.** Plot of cumulative sum of residual residuals

**4. CONCLUSIONS AND POLICY IMPLICATIONS**

This study investigates the presence of a persistent association between financial development and income

inequality in Indonesia by employing the ARDL and ECM co-integration bound tests to analyze short-term dynamics for the period of 1995-2020. The implications of our findings hold significant relevance for policy considerations. The relationship between globalization (aggregate) and income inequality can be observed to have both long-term and short-term positive effects. The contemporary phenomenon of globalization, along with its preceding historical epochs, can diminish measure of income disparity in the immediate timeframe. However, over an extended period, these two indices may contribute to the exacerbation of income inequality. Hence, it is imperative to implement policy measures that are precisely tailored to bolster the economic, political, and social stability of globalization. The inevitability and irreversibility of globalization are the underlying factors contributing to this phenomenon. These shortcomings necessitate a thorough reassessment.

Furthermore, the analysis's long-term implications indicate that income inequality might be exacerbated by the financial development index, as represented by the capitalization of the stock market and private sector domestic credit provided by banks. This trend is also shown in relation to the inflation rate. Hence, it is imperative for the government to address this issue because unregulated financial growth can amplify disparities in income distribution. Furthermore, it is imperative to exercise control over inflation to effectively manage income disparities. In this scenario, it is imperative to prioritize the maintenance of price stability within the realm of public policy. The adoption of inflation targeting by Bank Indonesia is a prudent and commendable move. Thirdly, it can be observed that the three indices of globalization, namely economic, political, and social, exert a notable impact on the level of income inequality. The long-term impact of economic and political globalization on the income inequality index a potential reduction. However, it is important to note that in the near term, these indices can worsen income disparity in Indonesia. In both the short and long term, social globalization in Indonesia has been observed to have a favorable influence on income disparity. Likewise, the long-term impact of income inequality is further intensified by the presence of inflation. The impact of social globalization on income disparity in Indonesia has been good, both in the short term and in the long run. Likewise, the long-term impact of income inequality is further intensified by the inflation rate. The impact of social globalization on income disparity in Indonesia has been good, both in the short term and in the long run. Likewise, the long-term impact of income inequality is further compounded by the inflation rate.

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