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RESEARCH ARTICLE

Impact of Unemployment, Income Inequality, Inflation Rate, and Political Stability on Poverty: An Empirical Study of Nepal

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Abstract

This study examines the impact of income inequality, political stability, inflation rate, and economic growth on poverty in Nepal. It is based on the positivist research philosophy and quantitative. This study is based on secondary data, covering 33 data points from 1990 to 2022, which are collected from reports from the World Bank and economic surveys of Nepal. Simple economic tools like descriptive statistics, simple linear regression, Omnibus ANOVA test, multicollinearity test, Durbin−Waston test for autocorrelation, normality test (Shapiro−Wilk), Q−Q plots, residual plots are used in the analysis. Income inequality and political stability are statistically significant in determining poverty, but inflation and economic growth are not statistically significant enough to explain poverty in Nepal. The coefficient for the inflation rate suggests that a one-unit increase in the inflation rate is associated with a 0.2286-unit rise in poverty. However, this result is not statistically significant at 0.05. The coefficient for the Gini Index indicates that a one-unit increase in the Gini Index, which measures income inequality, is associated with a 1.6137 unit increase in poverty, and this relationship is statistically significant ($p = 0.025$). The coefficient for the political stability index suggests that a one-unit increase in political stability is associated with a 0.4530 unit decrease in poverty, and this relationship is statistically significant ($p = 0.001$). It is observed that 60.6 percent variation in poverty levels can be explained by income inequality, inflation rate, political stability, and economic growth of Nepal. Policy implications drawn from these findings suggest that addressing income inequality and promoting political stability should be prioritized to alleviate poverty in Nepal. At the same time, careful consideration is needed in assessing the impact of inflation rate and economic growth on poverty levels.

Keywords: Absolute poverty, Alleviate, collinearity, violence, residuals

JEL classification: E24, D63, I31

1. Introduction

Poverty remains a persistent challenge across the globe, affecting millions of individuals and families regardless of geographical location or economic development status. In the pursuit of understanding and addressing this complex issue, researchers have identified several vital socio-economic factors that significantly influence the prevalence and intensity of poverty within societies. Among these factors, unemployment, income inequality, inflation rate, and political stability emerge as critical determinants deserving closer examination.

Unemployment is a prominent contributor to poverty, as individuals lacking stable employment opportunities often struggle to meet their basic needs and secure a decent standard of living (Card & Krueger, 1995). High levels of unemployment contribute significantly to poverty by reducing

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household income and limiting access to resources necessary for a decent standard of living. Unemployment leads to decreased consumer spending, which affects businesses, leading to further layoffs and economic downturns, perpetuating the cycle of poverty (Ghatak & Jiang, 2020).

Income inequality, characterized by wealth distribution disparities within societies, is another crucial aspect influencing poverty dynamics (Piketty & Goldhammer, 2014). Income inequality exacerbates poverty by concentrating wealth in the hands of a few, limiting the resources available for the impoverished majority to improve their standard of living. Moreover, fluctuations in the inflation rate can significantly impact the purchasing power of individuals and households, particularly those already grappling with financial constraints (Aizenman & Marion, 2010). Inflation can intensify poverty by eroding the purchasing power of low-income individuals and families, making essential goods and services less affordable (Dabla-Norris et al., 2015).

Furthermore, the stability of political institutions and governance frameworks plays a pivotal role in shaping societal poverty outcomes. Political stability reduces poverty by affecting effective governance structures, inclusive policies, and transparent decision-making processes (Alberto & Rodrik 1994). Political stability can significantly impact poverty reduction efforts by fostering an environment conducive to economic growth, investment, and development initiatives. A stable political climate encourages domestic and foreign investment, leading to job creation and income generation, ultimately lifting people out of poverty. Conversely, political instability can disrupt economic activities, undermine social services, and deter investment, exacerbating poverty levels.

Ultimately, poverty is influenced by unemployment, income disparity, inflation rate, and political stability. Elevated unemployment rates and income inequality pose significant obstacles to the advancement of poverty alleviation endeavors, while inflation undermines the purchasing power of those experiencing poverty. Furthermore, political stability is paramount in establishing a favorable economic expansion and investment atmosphere, both of which are vital for reducing poverty. Addressing these linked causes through comprehensive policies and initiatives is crucial to combat poverty and promote sustainable development. By focusing on these critical domains, nations can strive towards constructing more inclusive and robust economies characterized by a more equitable distribution of possibilities. This, in turn, has the potential to alleviate poverty for millions of individuals and foster a sense of shared prosperity for all.

This study examines the impact of income inequality, inflation rate, economic growth, and political stability on poverty in Nepal. It further aims to observe individual and joint effects of independent variables on dependent variables.

This study is divided into six segments. The remaining sections of this research are listed as section two reviews the related literature of this study. Section three includes the research design, materials collection, and data analysis process. Segment four consists of the data presentation and analysis. In segment five, results are discussed; the last six include the research conclusion, policy implication, and limitations of this study.

2. Literature review

Numerous studies have delved into the complex interplay between unemployment, income inequality, inflation rate, political stability, and their combined impact on poverty. Research suggests that high unemployment rates significantly contribute to poverty by limiting individuals' access to stable income and employment opportunities (Katz & Krueger, 2017). Moreover, income inequality has been consistently linked to higher poverty rates, as it concentrates wealth in the hands of a few people, leaving many with insufficient resources to meet their basic needs (Milanovic, 2016). Additionally, inflation has been identified as a factor that erodes the purchasing power of low-income individuals, exacerbating poverty by making essential goods and services less affordable (Mdingi & Ho, 2023). Furthermore, political stability is crucial for poverty reduction efforts, as it fosters an environment conducive to economic growth, investment, and development initiatives. Collectively, these factors underscore the multidimensional nature of poverty and emphasize the importance of addressing various socio-economic and political factors to combat poverty and promote inclusive growth effectively.

The poverty Trap Hypothesis suggests that inflation can intensify poverty by eroding the purchasing power of low-income individuals. As prices rise, those living below the poverty line may struggle to afford necessities, trapping them in a cycle of poverty (Sachs, 2005). Inflation-Induced According to the Income Redistribution Hypothesis, inflation can redistribute income from fixed-income groups, such as pensioners and low-wage workers, to those with more flexible incomes, such as businesses and asset owners. This redistribution can widen the gap

between the rich and the poor (Alesina & Summers, 1993).

Security Hypothesis suggests that political stability, characterized by low levels of violence, conflict, and political unrest, creates an environment conducive to economic development and poverty reduction. Stable political institutions and a secure environment attract investment, promote economic growth, and improve livelihoods, thereby reducing poverty (Collier & Hoeffler, 2004). According to the Social Contract Hypothesis, political stability arises from a social contract between the government and its citizens, wherein the government provides public goods, services, and social protection in exchange for political legitimacy and support. A stable social contract fosters trust in institutions, reduces social tensions, and makes poverty reduction efforts more effective (Ahlquist et al., 2007). The Elite Bargaining Hypothesis suggests that political stability depends on agreements and compromises among political elites to share power and resources. When elites cooperate and maintain strength, policies aimed at poverty reduction are more likely to be implemented successfully (Urpelainen, 2011).

Fujii (2013) observed food inflation's impact on poverty in the Philippines. He found the positive effects of inflation on the poverty level. Poverty has increased due to the increase in the price of food. Supriyadi (2017) found that inflation significantly affects poverty in both rural and urban areas. Danlami et al. (2020) observed the bidirectional causality between inflation and poverty in Nigeria from 1980 to 2016. Olaniyi & Odhiambo, 2024 found several dimensions of the nexus of inflation and poverty. Positive inflationary shocks can cause poverty reduction through investment and employment opportunities in Botswana, Cameroon, Gabon, Mauritania, South Africa, and Togo. However, inflation causes poverty in Congo, Madagascar, Nigeria, and Senegal.

Afandi et al. (2017) and Francis and Webster (2019) found that economic growth doesn't influence poverty reduction. Still, inflation positively influences the poverty level, and income equality has no significant impact. Amponsah et al. (2023) examined the linkages between poverty, income inequality, and inclusive growth in Sub-Saharan Africa. They found that increased income inequality adversely impacts poverty and worsens inclusiveness. Influence poverty reduction, but inflation has a positive influence on poverty level. Income inequality has no significant impact on the poverty level.

Aghion & de Aghion, 2004 found that economic growth is necessary but insufficient to reduce poverty. Kraay (2006) and Dollar and Kraay (2004) found that economic growth decreases poverty in the nation. Nindi and Odhiambo (2015) concluded that economic growth primarily benefits the rich, inequality can worsen, and poverty persists. Erlando et al. (2020) observed the negative impact of socio-economic growth on poverty.

Li et al. (2021) concluded that political instability is the most significant challenge for poverty reduction globally, i. e., political stability is necessary to climb up poverty. Iheonu and Ichoku (2021) found the considerable impact of terrorism and political instability on the poverty level. Kavanagh (2011), Ali and Li (2016), and Shaheen et al. (2017) concluded that terrorism-related political instability increases poverty.

The literature review thoroughly examines the complex factors that impact poverty, focusing on the influence of indicators like unemployment, income inequality, inflation, political stability, and economic growth. Nevertheless, there is a significant lack of research regarding the precise interplay of these elements in the unique context of Nepal, specifically in comprehending how they collectively influence the poverty situation in the country. Furthermore, although the paper briefly addresses multiple hypotheses and empirical evidence from diverse nations, it lacks a comprehensive examination of Nepal's distinct socio-economic and political circumstances and their impact on poverty dynamics. Acknowledging and rectifying this deficiency is imperative to formulate precise poverty alleviation tactics customized to Nepal's unique circumstances and obstacles.

3. Material and methods

This study is based on the descriptive and exploratory research design. The positivist research philosophy guides it, and it is quantitative. This study is based on secondary data, covering 33 data points from 1990 to 2022, which are collected from reports from the World Bank and economic surveys of Nepal. Only five variables, income inequality, inflation rate, political stability, economic growth, and poverty, are included in this study. Poverty is the dependent variable, and the rest are the independent variables. Simple economic tools like descriptive statistics, simple linear regression, Omnibus ANOVA test, multicollinearity test, Durbin–Waston test for autocorrelation, normality test (Shapiro–Wilk), Q–Q plots, residual plots are used in the analysis.

The simple linear regression is used to search the impact of income inequality, economic growth, inflation rate, and political stability on poverty in Nepal. The model is specified as given below:

Poverty = f(Income inequality, inflation rate, political stability index, economic growth) (1)

In symbol, PVTY = f(LINFTR, LGNIX, POSI, ECOGF) (2)

Simple linear regression models the relationship between two continuous variables typically denoted as X (the independent variable) and Y (the dependent variable). The relationship is represented (Ekinci, 2016) by a straight−line equation:

$$Y = \beta_0 + \beta_1 * X + \mu \quad (3)$$

In equation (3), Y is the dependent variable, and X is the independent variable. β_0 is the y-intercept (the value of Y when X is zero. β_1 is the slope of the line (the change in Y for a one-unit change in X. μ is the error term, representing the difference between the observed and predicted values of Y.

A simple linear regression model using study variables is given below.

$$PVTY = a + b_1 * LINFTR + b_2 * LGNIX + b_3 * POSI + b_4 * ECOGR + \mu \quad (4)$$

In equation (4), PVTY represents absolute poverty as percent of total population, LINFTR represents the annual inflation rate, and LGNIX represents the Gini coefficients, indicating income inequality. POSI and ECOGR represent the Nepalese economy's political stability and economic growth rate, respectively. In equation (4), a and μ represent the intercept and error terms. b_1, b_2, b_3, b_4 represent the coefficients of the respective independent variables. This equation assumes a linear relationship between profitability and each independent variable. The coefficients b_1, b_2, b_3, and b_4 represent the change in profitability for a one-unit change in each independent variable, holding all other variables constant (Kutner et al., 2004).

The Omnibus ANOVA (Analysis of Variance) test is used to determine whether there are any statistically significant differences between the means of three or more independent groups. The term "omnibus" refers to the overall test of group differences.

The general formula for the Omnibus ANOVA F-test statistic is:

$$F = \frac{\text{Between} - \text{group variability}}{\text{Within} - \text{group variability}} \quad (5)$$

Between-group variability represents the variability between the means of different groups. Within-group variability represents the variability within each group. If the F-statistic is greater than the critical value, evidence suggests that at least one group's mean is significantly different.

R-squared (R^2) represents the proportion of the variance for a dependent variable explained by an independent variable(s) in a regression model. In simpler terms, R-squared indicates how well the independent variables explain the variability of the dependent variable (Figueiredo et al., 2011). The formula for R-squared is given below.

$$\text{R squared } (R^2) = 1 - \frac{SS_{Residual}}{SS_{Total}} \quad (6)$$

SSresidual is the sum of squared residuals, and SS_{total} is the sum of squares.

4. Presentation and analysis

Descriptive statistics summarize and describe the main features of a dataset, providing information such as measures of central tendency (mean, median, mode) and measures of dispersion (standard deviation, range). The mean values of poverty level (3.61), inflation rate (1.86), and Gini index (3.55) suggest moderate to high levels within their respective scales, while Political stability index (−1.21) and Economic growth rate (4.50) are interpreted within specific contexts; negative values for Political stability index might indicate a sentiment index or a different scale where negative values hold meaning, while economic growth (4.50) might represent a scale where higher values denote more substantial economic growth. Looking at variability, the standard deviations indicate the spread of data around the mean, with the poverty level (0.437) and inflation rate (0.517) having relatively low variability compared to the other variables. Economic growth exhibits the highest variability, with a standard deviation of 2.22. Skewness measures the asymmetry of the distribution. Negative skewness for poverty level, inflation rate, and economic growth indicates a slight left-skewed distribution, meaning there are more data points on the right side of the mean. Political stability's skewness is very close to zero, suggesting near symmetry. Kurtosis reflects the peakedness of the distribution. Poverty and political stability exhibit negative kurtosis, indicating flatter distributions, while the Gini index and economic growth have slightly negative kurtosis, implying they are platykurtic. Inflation rate, with a kurtosis of −0.167, is close to zero, indicating a near-normal distribution.

Where LPVT indicates the poverty rate of the total population, LINFR shows the annual rate of price increment. LGNIX, POSI, and ECOGR represent

Nepal's Gini index, Political stability index, and economic growth rate, respectively (see Table 1).

4.1. Linear regression analysis

Linear regression analysis is used to model the relationship between one or more predictor variables and a response variable, aiming to understand and predict the average value of the response variable based on the values of the predictor variables. Table 2 shows the outcomes of the linear regression equation that searches for the impact of unemployment, inequality, political stability, inflation rate, and economic growth on poverty in Nepal.

The linear regression analysis predicts poverty (dependent variable) based on various predictors. The intercept term (8.2681) represents the expected poverty level when all predictor variables are zero. The coefficient for LINFTR (Inflation rate) suggests that a one-unit increase in the inflation rate is associated with a 0.2286-unit rise in poverty. However, this result is not statistically significant at 0.05 ($p = 0.105$). The coefficient for LGNIX (Gini Index) indicates that a one-unit increase in the Gini Index, which measures income inequality, is associated with a 1.6137 unit increase in poverty, and this relationship is statistically significant ($p = 0.025$). The coefficient for POSI (Political Stability Index) suggests that a one-unit increase in political stability is associated with a 0.4530 unit decrease in poverty, and this relationship is statistically significant ($p = 0.001$). The coefficient for ECOGR (Economic Growth) indicates that a one-unit increase in economic growth is associated with a 0.0206-unit rise in poverty. However, this relationship is not statistically significant ($p = 0.501$).

In summary, according to this model, higher political stability and lower income inequality are associated with lower poverty levels. In contrast, the inflation rate and economic growth impact on poverty is statistically insignificant. The linear regression equation is estimated below.

$$\text{Poverty} = 8.2681 + 0.2286 * \text{LINFTR} - 1.6137 * \text{LGNIX} - 0.4530 * \text{POSI} + 0.0206 * \text{ECOGR} \quad (7)$$

4.2. Analysis of variance (ANOVA) and model fit measures

Analysis of Variance (ANOVA) is a method used to compare the means of three or more groups to determine whether there are statistically significant differences between them. ANOVA measures whether the variability between group means is greater than the variability within the groups, providing insights into whether the differences observed are likely due to chance or represent actual differences between the groups. Table 3 shows the outcomes of the analysis of variance and model fit measures.

The omnibus ANOVA test examines the overall significance of the regression model by evaluating the variance explained by the predictors compared to the residual variance. In this analysis, the predictors are the Inflation rate (LINFTR), Gini Index (LGNIX), Political Stability Index (POSI), and Economic Growth (ECOGR), with Poverty as the dependent variable. Specifically, the Political Stability Index (POSI) shows a highly significant effect on Poverty ($F = 15.218$, $p < 0.001$), indicating that variations in political stability significantly influence Poverty levels. The income inequality also significantly impacts poverty ($F = 5.62$, $P < 0.05$). On the other hand, the Inflation rate (LINFTR), Gini Index (LGNIX), and Economic Growth (ECOGR) do not

Table 1. Key information of the study variables.

Measures	LPVT	LINFTR	LGNIX	POSI	ECOGR
Mean	3.61	1.86	3.55	−1.21	4.50
Median	3.67	2.04	3.49	−1.38	4.67
Standard deviation	0.437	0.517	0.140	0.830	2.22
Range	1.44	2.23	0.482	2.77	11.3
Minimum	2.71	0.819	3.30	−2.84	−2.37
Maximum	4.16	3.05	3.78	−0.0711	8.98
Skewness	−0.528	−0.394	0.520	−0.0272	−0.862
Std. error skewness	0.409	0.409	0.409	0.409	0.409
Kurtosis	−0.924	−0.167	−0.398	−1.18	2.37
Std. error kurtosis	0.798	0.798	0.798	0.798	0.798

Source: Jamovi software 2.4.11, 2024.

Table 2. Linear regression analysis.

Model Coefficients: Dependent variable Poverty					
Predictor	Estimate	SE	t	p	Stand. Estimate
Intercept (C)	8.2681	2.3856	3.466	0.002	–
LINFTR (Inflation Rate)	0.2286	0.1366	1.673	0.105	0.271
LGNIX (Gini Index)	1.6137	0.6807	2.370	0.025	0.518
POSI (Political Stability Index)	−0.4530	0.1161	−3.901	0.001	−0.861
ECOGR (Economic Growth)	0.0206	0.0302	0.682	0.501	0.105

Source: Jamovi software 2.4.11, 2024.

Table 3. Analysis of Variance (ANOVA) and model fit measures.

Omnibus ANOVA Test						Model Fit Measures				
Predictor	Sum of Square	df	Mean square	F	P	R^2	Overall model Test			
							F	df_1	df_2	P
LINFTR	0.386	1	0.386	2.80	0.105	0.606	4.06	4	28	0.01
LGNIX	0.775	1	0.775	5.62	0.025					
POSI	2.099	1	2.099	15.22	0.001					
ECOGR	0.064	1	0.064	0.465	0.501					
Residual	3.862	28	0.138	–	–					

Source: Jamovi software 2.4.11, 2024.

have statistically significant effects on Poverty levels ($p > 0.05$). This implies that while political stability is crucial in addressing poverty, other factors such as inflation rate, income inequality, and economic growth may not be as influential in explaining poverty-level variations within the given context.

The overall model fit measures indicate that the regression model accounts for a significant portion of the variance in the dependent variable, with an R-squared value of 0.606. This means that approximately 60.6% of the variability in Poverty levels can be explained by the predictors included in the model. The overall model test, as indicated by the F-statistic of 4.06 with a p-value of 0.010, suggests that the model is statistically significant. Therefore, the predictors collectively contribute to predicting Poverty levels in the context under study.

4.3. Assumptions check of the model

In regression analysis, the key assumptions include linearity (the relationship between variables is linear), independence of errors (errors are not correlated with each other), homoscedasticity (constant variance of errors), normality of residuals (errors are normally distributed), and absence of multicollinearity (predictor variables are not highly correlated). These assumptions are essential for ensuring the validity and reliability of the regression model's results. Table 4 displays some assumption checks of linear regression models like Durbin–Waston test for autocorrelation, collinearity statistics, and normality test (Shapiro–Wilk).

The Durbin-Watson (DW) statistic is a measure used to detect autocorrelation in the residuals of a regression model. In this instance, the DW statistic is 0.697 with a p-value of 0.061. With a p-value more significant than the conventional significance level of 0.05, there is insufficient evidence to conclude that considerable autocorrelation is present in the residuals, suggesting that the assumption of independence may hold for this regression model.

The collinearity statistics, precisely the Variance Inflation Factor (VIF) and Tolerance assess the degree of multicollinearity among predictor variables in a regression model. Generally, VIF values above ten or Tolerance values below 0.1 indicate multicollinearity concerns. In this case, all VIF values are below 2.5, and Tolerance values are above 0.4, indicating that multicollinearity is not severe among the predictors. Therefore, it can be concluded that no significant multicollinearity issues are present in the regression model. This suggests that the estimates for the regression coefficients are reliable and can be interpreted without concern for inflated standard errors due to multicollinearity.

In the Shapiro–Wilk test for normality, the test statistic of 0.951 indicates the degree of departure from normality, while the p-value of 0.043 determines the significance of that departure. A p-value below the conventional significance level of 0.05 suggests significant evidence to reject the null hypothesis of normality. Therefore, in this case, the data may not be normally distributed at the 0.05 significance level, indicating a departure from normality.

Table 4. Assumption Check of linear regression model.

Durbin–Waston Test for Autocorrelation		Collinearity Statistics			Normality Test (Shapiro–Wilk)	
Base	Value	Predictors	VIF	Tolerance	Base	Value
Autocorrelation	0.697	LINFTR	1.16	0.864	Statistic	0.951
D-W statistic	0.485	LGNIX	2.11	0.473	P-value	0.143
P-value	0.061	POSI	2.16	0.464		
		ECOGR	1.04	0.961		

Source: Jamovi software 2.4.11, 2024.

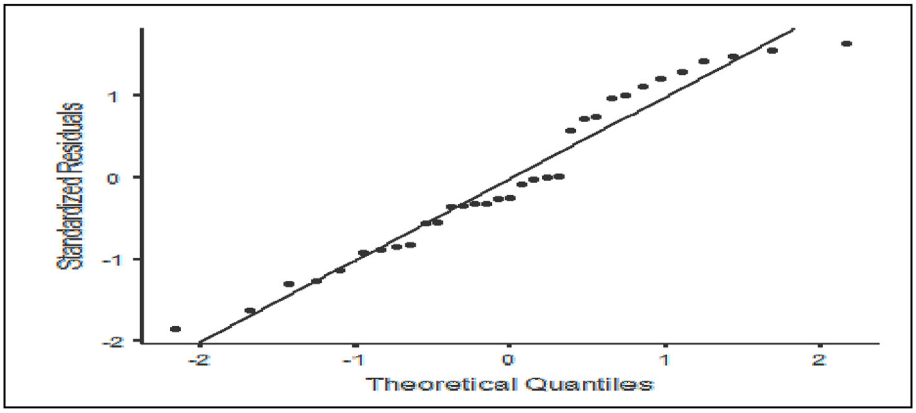

Fig. 1. Quantile- Quantile (Q–Q) plot diagnostic. Source: Jamovi software 2.4.11, 2024.

4.4. Q–Q plot for model validation

Fig. 1 shows the Q–Q plot of model validation. A Q–Q plot, short for the quantile–quantile plot, is used to measure whether or not a dataset follows a particular probability distribution (e.g., normal distribution), which is essential for selecting appropriate statistical models. It's a way to visually compare the distribution of a sample to a theoretical distribution, such as the normal distribution. Each data point represents a quantile from the sample data and its corresponding quantile from the theoretical distribution. If the points on the Q–Q plot roughly form a straight line, it suggests that the sample data likely follows the chosen distribution. Deviations from a straight line indicate departures from that distribution.

4.5. Residual plots of the model

Residual plots are graphical representations used in regression analysis to examine the goodness-of-fit of a statistical model. Specifically, they judge whether the assumptions underlying the regression model are reasonable and whether the model adequately captures the relationship between the independent variables and the dependent variable. Ideally, residuals should be randomly scattered around the horizontal axis with no discernible pattern. This suggests that the model captures the underlying relationship between the variables well and that the regression model's assumptions are being met. Based on Fig. 2, the plotted values are scattered. So, this suggests that the linear model may adequately capture the relationship between the variables.

5. Results and discussions

Income inequality and political stability are statistically significant in determining poverty, but inflation and economic growth are not statistically significant enough to explain poverty in Nepal. The coefficient for the inflation rate suggests that a one-unit increase in the inflation rate is associated

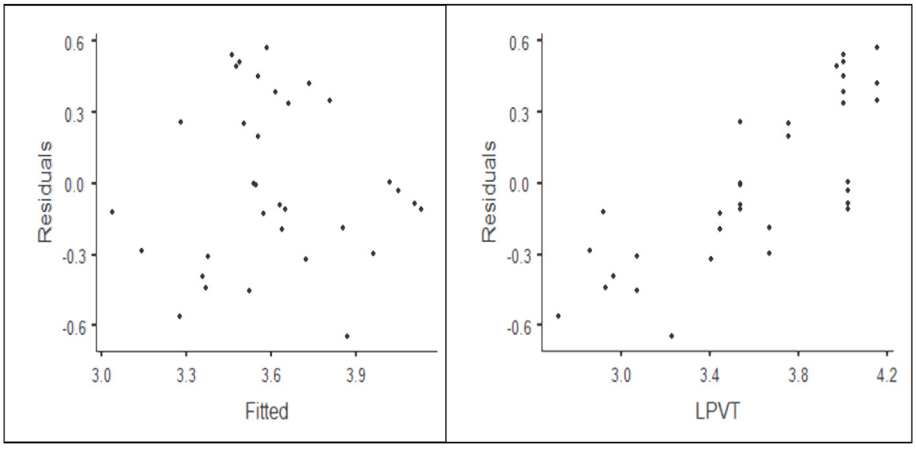

Fig. 2. Residual Plots of the model. Source: Jamovi software 2.4.11, 2024.

with a 0.2286-unit rise in poverty. However, this result is not statistically significant at 0.05 ($p = 0.105$). The findings of Fujii (2013), Supriyadi (20170 and Danlami et al. (2020) do not support these findings. However, Olaniyi & Odhiambo, 2024 found the positive effect of inflation on reducing poverty in some countries. The coefficient for the Gini Index indicates that a one-unit increase in the Gini Index, which measures income inequality, is associated with a 1.6137 unit increase in poverty, and this relationship is statistically significant ($p = 0.025$). The findings of Afandi et al. (2017) and Amponsah et al. (2023) do not align with this conclusion because they found the insignificant impact of income inequality on poverty.

The coefficient for Political Stability Index suggests that a one-unit increase in political stability is associated with a 0.4530 unit decrease in poverty, and this relationship is statistically significant ($p = 0.001$). The findings of Li et al. (20210 Iheonu and Ichoku (2021), Ali and Li (2016), and Shaheen et al. (2017) align with the findings of this study. The coefficient for economic growth indicates that a one-unit increase in economic growth is associated with a 0.0206-unit rise in poverty. However, this relationship is not statistically significant ($p = 0.501$). The research findings of Aghion & de Aghion, 2004 align with the findings of this study. However, the findings of Kraay (2006), Dollar and Kraay (2004), and Nindi and Odhiambo (2015) do not align with the present study findings because they found that economic growth decreases poverty. Erlando et al. (2020) found the negative impact of economic growth on poverty. It is observed that 60.6 percent variation in poverty levels can be explained by income inequality, inflation rate, political stability, and economic growth of Nepal.

The concentration of wealth among a small segment of the population due to income inequality can worsen poverty levels, as it restricts the resources available to others, making it difficult for them to break free from poverty. The influence of political stability on poverty can be observed by its direct impact on government policy and the allocation of resources towards initiatives aimed at alleviating poverty. The relationship between inflation rate and economic growth, although significant economic indicators, may not directly impact poverty levels. This is due to the influence of multiple factors, including fiscal policy, international trade dynamics, and monetary policy. These factors can hinder the direct translation of improving living standards for the most vulnerable populations. Furthermore, elevated inflation rates might gradually diminish the ability of the impoverished to buy goods and services. However, this effect can be alleviated by implementing specific social welfare initiatives and laws.

6. Conclusion, policy implications, and limitations

This study has examined the impact of unemployment, income inequality, inflation rate, and economic growth on absolute poverty conditions in Nepal. Income inequality and political stability are statistically significant in determining poverty, but inflation and economic growth are not statistically significant enough to explain poverty in Nepal. The coefficient for the inflation rate suggests that a one-unit increase in the inflation rate is associated with a 0.2286-unit rise in poverty. However, this result is not statistically significant at 0.05 ($p = 0.105$). The coefficient for the Gini Index indicates that a one-unit increase in the Gini Index, which measures income inequality, is associated with a 1.6137 unit increase in poverty, and this relationship is statistically significant ($p = 0.025$). The coefficient for Political Stability Index suggests that a one-unit increase in political stability is associated with a 0.4530 unit decrease in poverty, and this relationship is statistically significant ($p = 0.001$). The coefficient for economic growth indicates that a one-unit increase in economic growth is associated with a 0.0206-unit rise in poverty. However, this relationship is not statistically significant ($p = 0.501$). It is observed that 60.6 percent variation in poverty levels can be explained by income inequality, inflation rate, political stability, and economic growth of Nepal.

The data suggest that income inequality and political stability are critical factors in determining poverty levels in Nepal. However, there is no statistically significant association between unemployment, economic growth, and poverty. This implies that implementing measures targeting the reduction of income disparity and promoting political stability may be efficacious in addressing poverty. Possible priorities could include the implementation of progressive taxation, the establishment of social assistance programs, and the adoption of policies aimed at fostering political inclusion and stability. Nevertheless, it is imperative to exercise prudence when assessing the impact of inflation rate and economic growth, as they do not exhibit substantial correlations with poverty within this particular framework. Policymakers must comprehensively examine the intricate interplay between inflation and economic growth to formulate precise measures to mitigate poverty in Nepal.

This study is based on secondary data, covering 33 data points from 1990 to 2022, which are collected from reports from the World Bank and economic surveys of Nepal. Only five variables, income inequality, inflation rate, political stability, economic growth, and poverty, are included in this study. Poverty is the dependent variable, and the rest are the independent variables. Simple economic tools like descriptive statistics, simple linear regression, Omnibus ANOVA test, multicollinearity test, Durbin–Waston test for autocorrelation, normality test (Shapiro–Wilk), Q–Q plots, residual plots are used in the analysis. Therefore, further study is necessary on the untouched area of this study. One most noticeable weakness of the study is that it only examines absolute poverty conditions in Nepal, potentially overlooking nuances in the dynamics of relative poverty or other dimensions of socio-economic well-being.

Ethics information

The author(s) declare that there are no conflicts of interest regarding the publication of this paper.

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Conflict of interest

The authors declare no conflict of interest.

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