



Unravelling the Interplay of Public Debt, Inflation and Unemployment on Poverty in Malaysia: A Comprehensive Examination

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DOI: <https://doi.org/10.30880/jstard.2023.05.02.003>

Received 24 September 2023; Accepted 16 October 2023; Available online 4 December 2023

Abstract: This study addresses a critical gap in the existing body of research by exploring the relationship between macroeconomic variables and poverty in Malaysia from 1992 to 2022. Employing the Fully Modified Ordinary Least Squares (FMOLS) method, the research investigates the impact of three key independent variables - unemployment, public debt, and inflation - on the dependent variable, the poverty rate. The findings reveal significant insights: unemployment positively affects the poverty rate, underlining the vulnerability of unemployed individuals to poverty. In contrast, public debt emerges as a negative determinant of poverty, emphasizing the importance of prudent fiscal management for poverty reduction. Intriguingly, inflation does not exhibit a statistically significant association with the poverty rate. These results offer a valuable contribution to the limited macroeconomic studies on poverty in Malaysia, shedding light on the intricate dynamics between economic variables and poverty, and provide valuable guidance for policymakers and researchers alike in the pursuit of targeted poverty alleviation strategies tailored to the Malaysian context.

Keywords: Public debt, poverty, unemployment, inflation

1. Introduction

Malaysia, a nation renowned for its cultural diversity, strong economy, and impressive strides in development, serves as a shining example of growth in Southeast Asia. Over recent decades, Malaysia has significantly reduced poverty and enhanced the living standards of its citizens. However, underlying these impressive achievements lie intricate economic and societal challenges that persistently affect Malaysia's efforts to eradicate poverty completely. Specifically, the interplay between national debt, inflation, and unemployment has emerged as a focal concern when examining poverty dynamics in Malaysia. The transformation of Malaysia from a predominantly agrarian economy to a thriving industrial and technological hub has been characterized by rapid urbanization, improved educational access, and the rise of a burgeoning middle class. These changes have undoubtedly contributed to substantial reductions in poverty rates, signaling progress toward the Sustainable Development Goal of poverty eradication. Nevertheless, persistent challenges continue to challenge Malaysia's goal of complete poverty elimination. Poverty exerts a multifaceted and pervasive negative impact on individuals, families, and entire communities. First and foremost, it deprives individuals of the basic necessities required for a dignified life, such as adequate nutrition, clean water, and safe shelter. This leads to a host of health problems, including malnutrition, limited access to healthcare, and increased susceptibility to diseases. Poverty also restricts educational opportunities, trapping generations in a cycle of limited

knowledge and skills. It perpetuates social inequalities and often leads to social exclusion, as those in poverty face discrimination and reduced access to various services and opportunities. Moreover, the psychological toll of poverty cannot be underestimated, as it often causes stress, anxiety, and depression, affecting mental well-being. Additionally, poverty can contribute to crime and social unrest, as individuals may resort to illegal activities in an attempt to escape their dire circumstances. In sum, the negative effects of poverty are far-reaching, encompassing physical, emotional, and societal dimensions, making it a critical issue that requires comprehensive and sustained efforts to address.

Numerous concerted efforts have been set in motion by the Malaysian government in its unwavering commitment to alleviate and ultimately eradicate poverty within its borders. These multifaceted initiatives reflect a comprehensive approach that spans various sectors and facets of society, aiming to uplift the socio-economic conditions of marginalized communities and individuals across the nation. One of the cornerstone initiatives in Malaysia's poverty eradication endeavors is the implementation of targeted social welfare programs. These programs are designed to provide financial assistance and support to the most vulnerable segments of the population. Notable among these programs is "Bantuan Sara Hidup" (BSH), a cash transfer program aimed at low-income households. Through BSH, eligible households receive financial assistance to help meet their basic needs, including food, shelter, and education. This program has not only eased the financial burden on impoverished families but also contributed to poverty reduction by improving their overall well-being. Furthermore, the Malaysian government has demonstrated a strong commitment to improving access to quality education as a means of breaking the cycle of poverty. Initiatives such as "Program Pendidikan 1Malaysia" and "Tabung Pendidikan 1Malaysia" have been established to provide financial support to students from disadvantaged backgrounds, enabling them to pursue higher education and acquire the skills necessary for better employment prospects. By investing in education, Malaysia seeks to equip its citizens with the tools they need to escape poverty and contribute to the nation's overall development.

Additionally, the government has prioritized inclusive economic growth as a key strategy in its poverty eradication efforts. Through initiatives like the "New Economic Model" (NEM) and the "National Transformation Program" (NTP), Malaysia has aimed to create an environment conducive to job creation and entrepreneurship. By fostering economic opportunities and reducing income inequality, these programs seek to empower individuals and communities to lift themselves out of poverty. Rural development initiatives also play a crucial role in addressing poverty, particularly in remote and underserved areas. Efforts such as the "Rural Transformation Program" and the "Rural and Regional Development Ministry" have focused on improving infrastructure, access to healthcare, and basic amenities in rural communities. By enhancing living conditions and providing opportunities for economic growth in these areas, the government aims to reduce rural poverty and promote more equitable development.

Furthermore, the Malaysian government recognizes the importance of healthcare in poverty alleviation. Universal healthcare coverage, under the "1Malaysia Clinics" and the "1Malaysia Public Health Clinic" initiatives, ensures that even the most economically disadvantaged individuals have access to essential medical services and healthcare facilities. This not only improves their health outcomes but also mitigates the financial burden of medical expenses, which can often lead to impoverishment. In the fight against poverty, Malaysia has also prioritized the development of affordable housing schemes. Programs like "Program Perumahan Rakyat 1Malaysia" (PR1MA) aim to provide affordable housing options to low and middle-income families. Access to secure and affordable housing is recognized as a fundamental component of poverty reduction, as it contributes to stability and improved quality of life for individuals and families.

Moreover, the Malaysian government is committed to tackling the root causes of poverty by addressing issues of corruption and governance. Initiatives like the "National Anti-Corruption Plan" (NACP) seek to promote transparency, integrity, and good governance at all levels of society. By combating corruption and ensuring that public resources are used efficiently, Malaysia aims to create an environment conducive to equitable economic growth and poverty reduction. In conclusion, Malaysia's multifaceted approach to poverty eradication encompasses various initiatives spanning social welfare, education, economic growth, rural development, healthcare, housing, and governance. These efforts underscore the government's commitment to lifting its citizens out of poverty, ensuring that no one is left behind in the nation's pursuit of sustainable development and shared prosperity. Through these ongoing initiatives, Malaysia aspires to create a more inclusive and equitable society where poverty becomes a relic of the past.

This study aims to delve into the complex relationship between national debt, inflation, and unemployment, and their collective impact on poverty incidence and persistence in Malaysia. By exploring the interconnected nature of these factors, the goal is to provide a comprehensive understanding of how they interact and influence the economic and social well-being of Malaysia's population. Furthermore, this research seeks to illuminate the implications of these findings for policymakers, economists, and scholars, empowering them to devise more effective strategies for reducing poverty and fostering sustainable economic development in Malaysia. Despite a wealth of research on the individual effects of national debt, inflation, and corruption on economic stability and development, there remains a significant gap in the literature regarding their combined influence on poverty in Malaysia. Existing studies often narrow their focus to individual aspects of these factors, disregarding the intricate ways in which they intersect and mutually impact each other within the Malaysian context. This research endeavors to bridge this knowledge gap by offering a comprehensive analysis that considers the interplay of national debt, inflation, and corruption as contributing elements to the nation's poverty dynamics. Addressing this critical gap in understanding equips stakeholders with a more holistic

perspective on the challenges faced by Malaysia in its poverty alleviation efforts. This, in turn, facilitates the development of more targeted and efficient policies aimed at improving the well-being of the Malaysian population.

1.1 Overview of Poverty Rate in Malaysia

Poverty in Malaysia is never ending issue which frequently discussed either on the side of the layman, academician as well as politicians. Moreover, the pressure of living costs seems to be aggravating the situation of poverty. Hence, the figure 1 below presented the scenario of poverty in Malaysia within 1995-2021. From 1992 to 2015, Malaysia experienced a remarkable and sustained decline in its absolute poverty rate, as discussed earlier. However, beyond 2015, the situation became more complex. After reaching a low of 4.1% in 2015, the absolute poverty rate began to exhibit fluctuations.

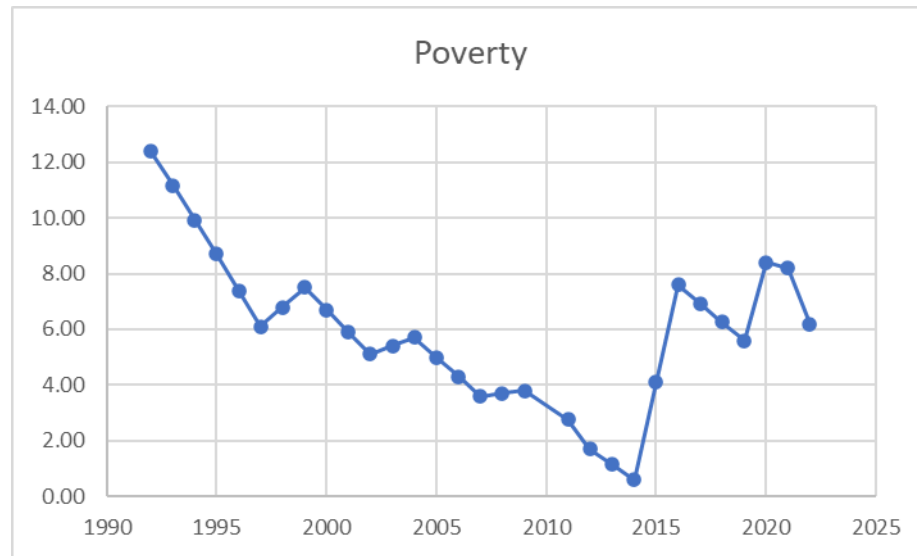


Fig. 1 - Poverty rate in Malaysia
Source: Department of Statistic Malaysia

Several factors contributed to this change in trajectory. One significant factor was the global economic landscape. Malaysia's economy is closely tied to international markets, and economic uncertainties in the global arena can impact the country's economic stability. Additionally, shifts in commodity prices, changes in trade dynamics, and global economic crises such as the 2008 financial crisis and, more recently, the economic repercussions of the COVID-19 pandemic, all had varying effects on the nation's income distribution. Furthermore, domestic policies and political developments also played a role in shaping the poverty trend. Changes in government leadership and shifts in policy priorities can influence income distribution and social welfare programs. These changes can either accelerate poverty reduction or hinder progress, depending on the nature of the policies implemented. The year 2020 marked a significant turning point, as the COVID-19 pandemic hit the world. Malaysia was not spared from its economic impact, with lockdowns, business closures, and reduced economic activity affecting jobs and incomes. This resulted in a notable increase in the absolute poverty rate, rising to 8.4% in 2020, a level not seen in over a decade. Government interventions, such as stimulus packages and social assistance programs, were implemented to mitigate the pandemic's impact on vulnerable populations. By 2021, the situation had slightly improved, with the absolute poverty rate decreasing to 8.2%, but it remained higher than pre-pandemic levels. The challenges brought about by the pandemic highlighted the importance of resilient and adaptable social safety nets and economic diversification strategies. In summary, the trend in Malaysia's absolute poverty rates from 1992 to 2021 reflects both remarkable progress and challenges. While the country made significant strides in reducing poverty up to 2015, external economic factors, domestic policies, and the unprecedented impact of the COVID-19 pandemic introduced fluctuations and an increase in poverty rates. As of 2021, the nation was working to recover from the pandemic's economic shock and implement strategies to address the challenges of a changing global landscape, ensuring that the progress made in poverty reduction over the years can be sustained and even improved upon in the future. Hence, this study would at least provide the ideas for respective authorities and government in planning and controlling which factors that are able to minimize the impact of poverty.

2. Literature Review

Previous research on poverty in Malaysia has predominantly relied on field surveys to comprehensively examine the multifaceted factors influencing this socioeconomic issue. For instance, in a notable study conducted by Hassan, Abdullah, and Mohaideen in 2020, the focus was on assessing the driving forces behind poverty within the northern regions of Malaysia. Their meticulous field survey approach involved collecting data from various samples, ultimately shedding light on a spectrum of elements contributing to poverty. These included physiological factors, educational attainment, skill levels, occupation, and income. Their findings unequivocally underscored the significance of all these factors as primary contributors to poverty within the region.

Likewise, Johari et al. (2015), in their investigation into poverty among new converts in Selangor, identified critical determinants of poverty. Their study highlighted the pivotal roles of education, family size, locality, and income in shaping the poverty landscape among this specific demographic. Rhumah (2016) extended the inquiry into the factors underpinning poverty, focusing on coastal fishermen. In this context, the size of the family, income, education, and marital status emerged as prominent determinants of poverty among this occupational group. However, a slightly different perspective was presented by Afroz, Muhibbullah, and Rahman in 2021 during their field study involving 400 farm households in Kedah. Their research emphasized the significance of climate change as a crucial determinant of poverty, particularly within the context of the farming industry. This unique finding underscores the environmental dimension of poverty, highlighting the vulnerability of certain livelihoods to climate-related challenges. Shifting the focus to urban poverty, Ahmed et al. (2019) concurred that income plays a pivotal role in determining the prevalence of poverty among urban households. Their research further underscores the need for targeted policies and interventions addressing income disparities within urban areas. In a specific examination of the northern states in Malaysia, Mohd et al. (2018) arrived at results consistent with those of Hassan, Abdullah, and Mohaideen (2020) and Rhumah (2016). Education levels and family size were identified as crucial factors in determining the extent of poverty. However, this research also unveiled additional contributors to poverty, including age, gender, and ethnic group. These findings align with the broader understanding, exemplified by Leng et al. (2018), that ethnic background is a noteworthy determinant of poverty within Malaysia.

In summary, past research into poverty in Malaysia has employed field surveys to explore an array of factors contributing to this complex issue. These studies have underscored the multifaceted nature of poverty, emphasizing the roles of income, education, family size, occupation, and even climate change in shaping the poverty landscape within various segments of the Malaysian population. Additionally, research has revealed that factors such as age, gender, and ethnicity can also significantly influence the experience of poverty in the country. These findings collectively provide valuable insights for policymakers and stakeholders seeking to design effective strategies to alleviate poverty in Malaysia. Therefore, it is obviously that macroeconomic factors on poverty are less popular among researchers in Malaysia. Meanwhile, the contributions of macroeconomic factors on poverty were widely studied by other countries. Such as Putra (2019) and Guimarães, Ribeiro, & Silva (2012). Therefore, this study would bridge the gap between selected macroeconomic variables and plus the role of public debt in poverty rate in Malaysia. Putra (2019) in the study for poverty in Indonesia had examined the effects of inflation and prices on poverty. Hence, the study had revealed the positive connection between inflation and poverty. Meanwhile Guimarães, Ribeiro, & Silva (2012) have expanded the factors of poverty on unemployment and national debt or public debt. Hence, the variables used for this study is basically based on these literatures as lack of attention on the factors for the issue in Malaysia specifically.

3. Methodology

The study covers the period of 1992-2022 with data sourced from World Bank and Department of Statistic in Malaysia (DOSM). Given the time series nature of the variables, their data underwent stationarity testing using the Augmented Dickey-Fuller (ADF) method. After confirming that the series exhibited a stationary trend, the estimation of model parameters relied on the fully modified ordinary least squares (FMOLS) technique.

3.1 Variables Descriptions

Table 1 presents the details of the variables which consist of independent variables and dependent variables.

Table 1 - Variable descriptions

Variables	Description	Proxy	Symbol	Source
Public Debt	Total government's debt	Total debt to Gross Domestic Product (GDP)	Pd	Ministry of Finance

Poverty	ratio of the number of people (in a given age group) whose income falls below the poverty line	Absolute poverty	PoR	Department of Statistic Malaysia (DOSM)
Unemployment	unemployed are people of working age who are without work, are available for work, and have taken specific steps to find work.	Unemployment, total (% of total labor force) (modeled ILO estimate)	Une	World Bank
Inflation	Inflation is the rate at which prices for goods and services rise	Percentage of changes in consumer prices annually	Inf	World Bank

3.2 Model Estimation

The model utilized in this study aims to gauge both the character and the extent of the influence exerted by the independent variables (unemployment, inflation and public debt) on the dependent variable (poverty). Essentially, the model can be expressed as follows.

$$PoR = f(Une, Inf, Pd) \dots \dots \dots (i)$$

Where:

- PoR = Poverty Rate
- Une = unemployment
- Inf = Inflation
- Pd = Public Debt

The model is explicitly presented in the following form:

$$PoR = \beta_0 + \beta_1 Une + \beta_2 Inf + \beta_3 Pd + \epsilon_{it} \dots \dots \dots (ii)$$

Where:

- β_0 = Intercept
- β_1 through β_3 = Parameters to be estimated
- ϵ_{it} = Error term (to account for explanatory variables not included in the model)

4. Findings

The result of the study is divided based on two tests which consist of unit root test and the last is Fully Modified Least Square (FMOLS).

4.1 Unit Root Test Results

The results of the unit root tests in table 2 reveal that the first differences of the variables, including the dependent variable "Poverty" (PoR) and the independent variables "Unemployment" (Une), "Inflation" (Inf), and "Public debt" (Pd), are all statistically significant and stationary. This finding is crucial for time series analysis as it ensures that the statistical properties of these variables do not change over time, making them suitable for inclusion in regression models. Specifically, the first differences of these variables exhibit highly significant intercepts, denoting their stability and supporting their use in understanding the relationship with poverty without concerns of spurious regression.

Table 2 - Unit root test results

Variables	Intercepts		Intercepts and trends	
	Level	1st Difference	Level	1st Difference
Por	-1.6351	-4.8593***	-2.0349	4.9518***
	0.4528	0.0005	0.5594	0.0022
Une	-2.8306**	5.2576***	-2.7129	5.6366***
	0.066	0.0002	0.2388	0.0004
Inf	4.1806***	8.4224***	5.1994***	8.3534***
	0.0028	0.0000	0.0011	0.0000
Pd	-2.017	-3.6854***	0.5505	-4.3915***
	0.2783	0.0099	0.999	0.0083

(Notes: ** and *** is significant at 5% and 1% respectively)

4.2 Fully Modified Least Square (FMOLS) Results

The Fully Modified Ordinary Least Squares (FMOLS) regression analysis results in table 3 reveal significant findings. "Public Debt" exhibits a negative coefficient, indicating that an increase in public debt is associated with a decrease in poverty, and this relationship is statistically significant. Conversely, "Inflation" shows a positive coefficient but lacks statistical significance, suggesting no robust association with poverty. However, "Unemployment" is a crucial factor, with a positive coefficient indicating that higher unemployment rates are significantly linked to higher poverty levels. Overall, this FMOLS analysis suggests that public debt and unemployment are important determinants of poverty, emphasizing the need for targeted policies addressing these factors to alleviate poverty effectively.

Table 3 - Fully Modified Least Squares (FMOLS) results

Variable	Coefficient	Std. Error	t-Statistic	Prob.
Pd	-1.446798**	0.644459	-2.24498	0.0335
Inf	0.039752	0.090348	0.439988	0.6636
Une	3.928745***	1.156808	3.396193	0.0022

(Note: ** and *** is significant at 5* and 1* respectively)

5. Discussion

The findings of the study revealed that public debt negatively affects the level of poverty. This result is consistent with Tung (2020) which found that public debt can have a negative impact on the poverty rate in Malaysia through several channels. Firstly, a high level of public debt can lead to increased government spending on debt servicing, diverting resources away from essential social programs and poverty alleviation initiatives. This can result in reduced funding for education, healthcare, and social welfare programs that are crucial for poverty reduction. Secondly, elevated public debt can lead to higher interest rates, which, in turn, may discourage private sector investments and economic growth, ultimately affecting job creation and income opportunities for the population, particularly for those in lower-income brackets. Lastly, a persistent high public debt burden can erode investor confidence and potentially lead to fiscal austerity measures, such as reduced public expenditures or increased taxes, which can disproportionately impact vulnerable households, exacerbating poverty levels. Thus, effectively managing and reducing public debt is vital to ensure sustainable economic growth and poverty reduction in Malaysia.

Meanwhile, unemployment positively affects the level of poverty. This finding is consistent with Mardiyana and Ani (2018). This may be due to the facts that unemployment can exert a positive relationship with the poverty rate in Malaysia by directly limiting individuals' access to steady income and economic opportunities. When individuals are unable to secure gainful employment, their financial resources become constrained or non-existent, leading to income instability or deprivation, particularly for those without a safety net. This, in turn, can result in reduced access to basic necessities, including food, shelter, and healthcare, pushing them into poverty. Moreover, prolonged periods of unemployment can erode an individual's skills and employability, making it harder for them to secure employment in the future, perpetuating a cycle of poverty. Additionally, unemployment can indirectly impact household and

community well-being, straining social support networks and increasing the risk of poverty among dependents. Therefore, addressing unemployment through job creation and workforce development initiatives is crucial to mitigate its adverse effects on poverty rates in Malaysia.

6. Conclusion

In conclusion, the results of this study underscore the significant role played by the independent variables of public debt and unemployment in influencing Malaysia's poverty rate. Public debt has been found to negatively impact the poverty rate, highlighting the importance of prudent fiscal management to ensure that excessive debt servicing does not divert resources away from critical poverty alleviation programs. Conversely, unemployment has shown a positive association with poverty, emphasizing the need for comprehensive employment strategies and job creation initiatives to reduce poverty rates effectively. These findings have critical policy implications, suggesting that policymakers should prioritize measures to manage and reduce public debt responsibly while concurrently implementing targeted policies aimed at enhancing employment opportunities and job security. By addressing both of these factors, Malaysia can take significant steps towards reducing poverty and improving the well-being of its population.

7. Limitations and Suggestion for Future Research

The study's limitations should be acknowledged. Firstly, the analysis focused on a specific set of variables, namely public debt and unemployment, to understand their impact on the poverty rate, neglecting potential interactions with other socio-economic factors. Additionally, the study employed cross-sectional data, limiting the ability to establish causal relationships. Future research could benefit from incorporating a more comprehensive set of variables and employing longitudinal data to assess the dynamic nature of poverty determinants. Furthermore, qualitative research methods, such as interviews or surveys, could provide deeper insights into the lived experiences of individuals affected by these factors, aiding in the development of more targeted and context-specific policy recommendations. Finally, considering the evolving economic landscape, examining the implications of emerging challenges, such as technological disruptions or the impact of global crises, on poverty dynamics would be pertinent for future investigations.

Acknowledgement

We would like to thank the journal's editor and the anonymous reviewers for their positive feedback and suggestions for the improvement of this article.

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