A Logit Model Approach in Investigating the Impact of Education on Poverty Alleviation in Urban Bulawayo in Zimbabwe

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ABSTRACT

The study investigates the impact of education on poverty in urban Bulawayo using a multinomial logistic regression model. The primary objective is to assess how different levels of education affect the likelihood of households falling into various poverty categories—non-poor, poor, and extremely poor. Additionally, the research examines the role of other factors, including household size, gender, marital status, and the number of dependents, in determining urban poverty status. Data for the study were collected using a combination of primary sources (questionnaires and interviews) and secondary sources (the 2022 Zimbabwe Population Census Report). The sampling involved a multistage probability approach, which ensured a representative distribution of households across different poverty levels. The multinomial logistic regression model was chosen because it allows for an analysis of multiple categorical outcomes, making it suitable for modeling the poverty status with respect to various explanatory variables. The findings reveal that education significantly and positively impacts poverty levels. education showed a positive relationship with poverty for certain urban households in Bulawayo, indicating that higher educational levels may correspond with higher poverty levels in certain cases. the findings are aligned with studies in economically constrained regions, where limited job absorption, skill mismatch, and high education costs can weaken education's protective effect against poverty. The study also finds that household size and the number of dependents is significant predictors of poverty, with larger households experiencing higher poverty risks. Marital status and gender further demonstrate significant relationships with poverty; for instance, female-headed households have a higher probability of being poor. The study concludes that investment in quality education is crucial for poverty reduction in Bulawayo. It recommends enhancing educational quality and skill-based training to improve employability. This targeted approach could reduce poverty by equipping individuals with the competencies needed for the labor market.

Keywords: Education, Poverty Alleviation, Urban Poverty, Multinomial Logistic Regression, Bulawayo

INTRODUCTION

The phenomenon of poverty remains a widespread issue, manifesting at individual, household, and community levels, with a significant impact on the capacity to attain and sustain a life of well-being (World Bank, 2022). Its persistence poses a grave threat to national stability and global peace. Poverty is widely recognized as a multidimensional concept; it encompasses not only a lack of financial resources but also a lack of capabilities necessary for effective societal participation (Majumder & Biswas, 2017). This view aligns with Sen's (1992) capability approach, emphasizing that poverty involves a range of deprivations, including inadequate education, poor health, insecurity, and powerlessness. Recent studies continue to expand the understanding of poverty's multidimensionality. For example, Alkire et al. (2020) argue that addressing poverty requires a comprehensive approach that considers overlapping deprivations in health, education, and living standards.

Similarly, the Global Multidimensional Poverty Index 2023 Report highlights that over 1.3 billion people experience multidimensional poverty, with half of them being children, indicating the need for targeted interventions at both the macro and micro levels (UNDP & OPHI, 2023).

Moreover, recent literature emphasizes the impact of poverty on mental health and social well-being. Patel et al. (2020) argues that the psychological dimensions of poverty, such as stress and low self-esteem, can perpetuate a cycle of deprivation, undermining efforts toward poverty reduction. These findings support the call for integrating mental health services into poverty alleviation programs. Poverty is generally considered a measure of deprivation, encompassing the lack of access to basic needs required for a minimum standard of living, such as food, shelter, healthcare, and education (World Bank, 2022; United Nations, 2023). This multidimensional understanding reflects how poverty affects various aspects of life and well-being beyond just income. Meanwhile, education, derived from the Latin words *Educare*, *Educere*, *Educo*, and *Educatum*, carries profound meanings: *Educare* means "to bring up" or "to nourish"; *Educere* means "to draw out" or "to manifest"; *Educo* means "to lead out of"; and *Educatum* refers to the "act of teaching or instruction." The primary goal of education is holistic development, addressing physical, mental, emotional, social, moral, and spiritual aspects throughout an individual's life, making it a continuous process from cradle to grave (International Commission on the Futures of Education, 2021).

BACKGROUND OF THE STUDY

Investment in education and human capital formation is essential for economic growth and poverty reduction. The interrelationship between education and poverty can be understood in two ways. First, investment in education increases the skills and productivity of individuals from poor households, leading to higher wage levels and improved overall welfare (World Bank, 2022). Second, poverty can act as a significant barrier to educational attainment, limiting access to quality education and perpetuating the cycle of poverty (UNESCO, 2023).

Research has demonstrated that education serves as a critical foundation for poverty eradication and economic development. Majumder and Biswas (2017) found that households with a higher number of literate members or the presence of at least one graduate are less likely to experience poverty. Investing in education increases the chances of a household transitioning from poverty to a non-poor status. Recent studies continue to emphasize the role of education in reducing poverty and enhancing national wealth. For example, UNESCO (2023) highlights that quality education not only alleviates poverty but also drives sustainable economic growth by equipping individuals with the skills needed for higher productivity. Similarly, the World Bank (2022) reports that education investment significantly boosts economic resilience, especially in developing regions, by improving income-generating opportunities and social mobility.

Awan et al. (2011) articulate that education and poverty are inversely related: as the level of education in a population rises, the number of people living in poverty tends to decrease. Education imparts essential knowledge and skills that enhance employability, leading to higher wages and income. The direct effect of education on poverty reduction is evident in increased earnings, while the indirect effect lies in reducing "human poverty." Higher income levels enable better access to basic necessities, improving living standards and thereby reducing human poverty. Recent empirical evidence supports this relationship. The World Bank (2022) found that each additional year of schooling increases an individual's income by an average of 10%, significantly lowering the likelihood of living in poverty. Furthermore, UNESCO (2023) reports that countries with higher literacy rates exhibit lower poverty levels, as education contributes to social mobility and economic resilience. The Global Education Monitoring Report (2023) also emphasizes that education not only raises individual incomes but also enhances community well-being, leading to a substantial decline in multidimensional poverty.

The importance of education cannot be underestimated in Africa. The human development index which can be used as the economic indicator of well-being of selected countries in Africa is ranging from 0.56 to 0.8 as at 2022 as shown in figure 1 below.

Figure 1: Human Development Index of Africa
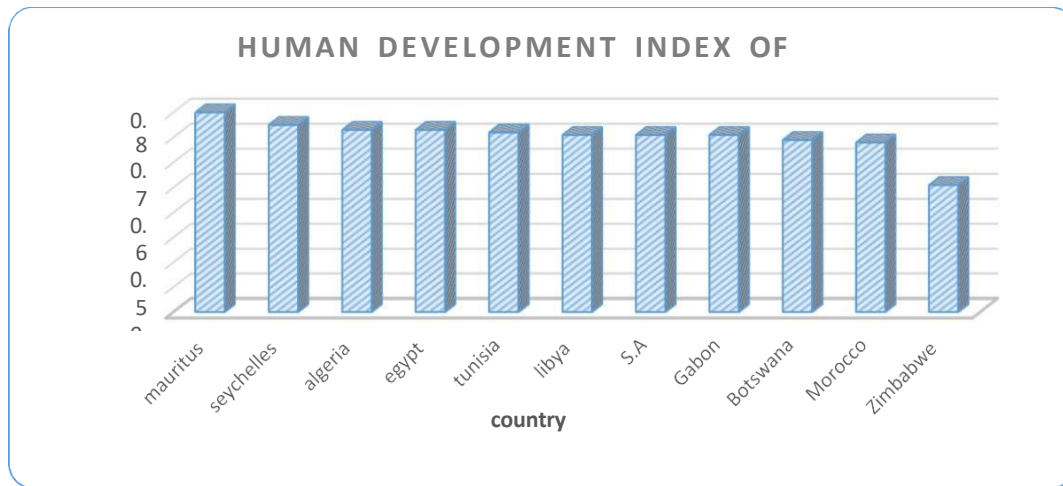
Source: World Economics.com, 2023

Like many African countries, Zimbabwe's economy has struggled since 1990, with poverty levels steadily increasing. A study by the United Nations (2013) indicated that from 1990 to 2011, Zimbabwe faced persistently high poverty levels, exacerbated by factors such as political instability, populist economic policies, and the country's isolation from the global economy. In 1980, Zimbabwe's Human Development Index (HDI) was approximately 0.375, peaking at around 0.425 between 1985 and 1990. However, with the economic downturn, the HDI dropped to 0.338 in 2008. The formation of the Government of National Unity in 2009 helped raise the HDI to 0.349, with a further increase to 0.376 by 2011. Despite these improvements, the HDI remained below the Sub-Saharan Africa average of 0.463 (UNDP, 2012).

Recent data shows that the challenges persist. As of 2023, Zimbabwe's HDI stood at 0.404, still below the Sub-Saharan Africa average of 0.546 (UNDP, 2023). According to the World Bank (2022), approximately 38% of the population lives below the international poverty line of $1.90 per day, and over 70% fall below the national poverty line. The COVID-19 pandemic further aggravated economic conditions, contributing to inflation and increasing poverty, particularly in rural areas where nearly 80% of the population lives in multidimensional poverty (UNICEF, 2023). The ongoing economic challenges have been driven by high inflation rates, currency instability, and a lack of foreign investment, with the annual inflation rate reaching over 300% in 2022 (World Bank, 2022). Consequently, despite some efforts to stabilize the economy, Zimbabwe's poverty levels continue to exceed regional averages.

Figure 2: Human Development Index Trends
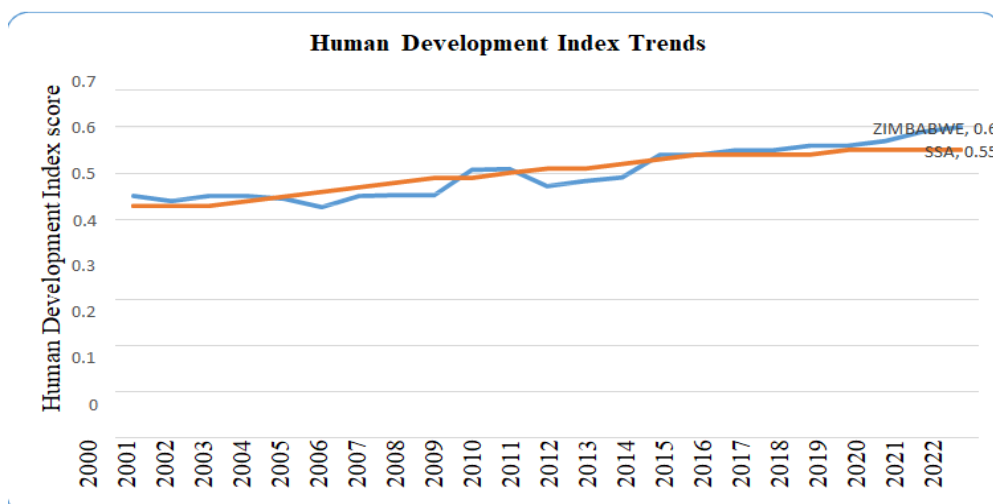
Source: Zimbabwe 2022 Sustainable Development Goals Progress Report

Is education a necessary recipe for poverty alleviation, or could it be considered a double-edged sword? This question is particularly relevant in Zimbabwe, which has experienced persistent economic challenges since the early 1990s, despite rising education levels since independence. The country has faced increasing unemployment, low GDP per capita, a significant brain drains, and a sharp rise in poverty levels, especially from 2008 onwards (ZIMSTAT, 2013). The United Nations (2013) reported that poverty has worsened across gender and geographic lines, even as the number of educational institutions expanded significantly from 1990 to 2016.Like the rest of Zimbabwe, Bulawayo has not been immune to the economic, political, and social upheavals of the past two decades. However, it has historically had the lowest poverty prevalence in the country, with 15.2% of urban households living in poverty (ZIMSTAT, 2013). Nevertheless, the economic conditions in recent years have impacted Bulawayo, with increasing numbers of educated but unemployed individuals, raising questions about whether education is indeed alleviating poverty. Current data indicate that despite a literacy rate of over 90%, Zimbabwe still struggles with high poverty levels and unemployment. The World Bank (2022) reports that approximately 70% of Zimbabweans live below the national poverty line, while the youth unemployment rate remains alarmingly high at over 50%. The expansion of educational institutions has not necessarily translated into economic opportunities, as many graduates face limited job prospects. According to UNESCO (2023), brain drain continues to pose a significant challenge, with skilled professionals emigrating in search of better economic opportunities. This research aims to evaluate the role of education in poverty alleviation in Bulawayo's urban areas, assessing whether higher education levels contribute to reducing poverty or if structural economic issues undermine its effectiveness as a poverty reduction tool.

Theoretical Framework

Recent scholars continue to explore how education impacts poverty, building on earlier work by scholars such as Christoplos (2002), Sen (1999), and Tilak (2002a, 2002b). Contemporary researchers like Hanushek and Woessmann (2020), Narayan et al. (2022), and Alkire (2023) have expanded on the approaches for understanding the relationship between education and poverty.

Human Capital Approach

According to the human capital theory, a country that invests in education significantly enhances its human capital formation, which is a key driver of economic growth. Education equips individuals with essential skills and knowledge, transforming them into valuable human capital. As the stock of knowledge and skills increases among individuals, their productivity and earnings also rise (Rosen, 1989). This relationship suggests a robust linear correlation between education and earnings, which can help reduce the number of highly educated individuals trapped in poverty. The same concept is buttressed by studies of Firouzabad (2014) who asserts that human capital, in the form of education, is indirectly related to poverty. While on the same note, Hanushek and Woessmann (2020), posits that improvements in educational quality and access can lead to significant reductions in poverty levels, reinforcing the importance of human capital in fostering economic development as reflected in figure 3 below.

Figure 3 Relationship between education and earnings in the human capital framework
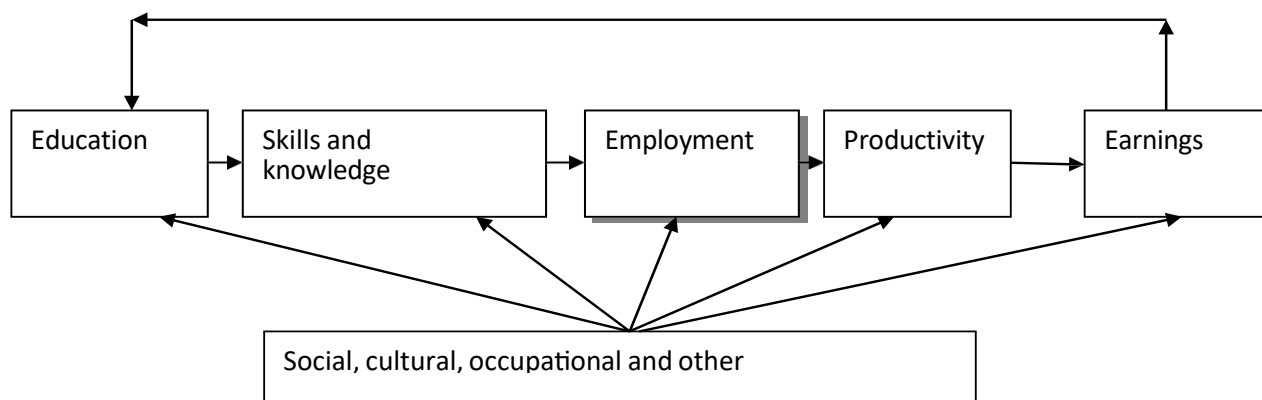
Source (Adapted): Swedish International Development Cooperation Agency (SIDA) 2001 and Firouzabad (2014, pp.651)

The Basic Needs Approach

The Basic Needs Approach was established by the International Labour Office in 1976 during the World Employment Conference in Geneva. Similar to the human capital theory, this approach recognizes that education plays a crucial role in fulfilling basic needs and enhancing the quality of life (UNESCO, 2021). It can be argued that both the direct and indirect effects of education on poverty particularly in Zimbabwe's rural and urban areas lead to improved productivity, which translates into higher wages and a better quality of life. Education empowers households in Zimbabwe by enabling better utilization of health facilities, shelter, water, sanitation, and other basic needs. Furthermore, education can indirectly influence women's life decisions regarding fertility, family welfare, and health (World Bank, 2022). Recent studies highlight the reciprocal relationship between education and basic needs, suggesting that they reinforce each other (Fuchs, 2023). From this perspective, the role of education in meeting basic needs becomes critical for improving quality of life and ultimately reducing poverty. It is essential to focus on the quality of education rather than education in general. The Basic Needs Approach posits that a lack of access to quality education denies the Zimbabwean population the opportunity for full participation in social, economic, cultural, and political domains, resulting in a negative relationship between poverty and education (UNDP, 2023).

METHODOLOGY

The study adopts a blended method in the analysis of data by using both descriptive and inferential methods. The research employed the binary response model estimated by logit adapted from Faux and Ntembe (2013) which was used to investigate the impact of education on poverty in Cameroon in 2007. The model is specified as follows:

$$P(Y_i = j) = \frac{e^{\beta_{0j} + \beta_{1j} \ X_{1i} + \beta_{2j}X_{2i} + \cdots\ldots + \beta_{kj}X_{ki}}}{1 + \sum_{j=1}^{J-1} e^{\beta_{0j} + \beta_{1j} \ X_{1i} + \beta_{2j}X_{2i} + \cdots\ldots + \beta_{kj}X_{ki}}}$$

$$logit(Y) = \ln\left(\frac{P}{1-P}\right) = \beta_0 + \sum_{i=1}^{k} \beta_i \ X_i + \varepsilon_i$$

Where:

$P(Y_i = j)$ is the probability that household iii belongs to category j (non-poor, poor, or extremely poor).

β_{0j} is the intercept term for category j.

$\beta_{1j}, +\beta_{2j}, \ldots, \beta_{kj}$ are the coefficients for the explanatory variables for category j.

$X_{1i}, +X_{2i}, \ldots, X_{ki}$ are the explanatory variables, such as level of education, household size, gender, marital status, and number of dependents.

The logit is the natural logarithm (ln) of the odds of Y and the odds $(P/(1-P))$ are rations of probability (p) of Y happening and (1-P) of Y not happening

ε_i is a stochastic error term.

Assuming a normally distributed error term, one can define a binary variable as

$$S_i = 1 \ if \ Y_i \ \leq \ Z_i, S_i = 0 \ otherwise$$

WhereZ_i, is the dependent variable, the binary model becomes

Prob (S_i=1) = $F (S_i - \beta_i\ X_i)$

Where F is cumulative probabilities function, assuming a normal or logit distribution of the error term, the model is estimated by logit. Assuming linearity in parameters and a normal or logit distribution of the error term, in a functional form, the relationship between poverty and education can be illustrated as:

$$HP = \beta1 — \beta2EH + \beta3AHH — \beta4HHMS + \beta5DEPH — \beta6EMP + \beta7SIZE — \beta8GEN + \varepsilon$$

Where *HP* is house hold poverty which is denoted by 1 for non-poor reflecting an above TCPL value, 2 for poor with a value below the TCPL and 3 for extremely poor when the value is below the FPL.

Dependent Variable: Poverty Status (HP) coded as 1 for non-poor, 2 for poor, and 3 for extremely poor.

Independent Variables:

Education Level (EH): Years of formal education or highest level attained.

Household Size (SIZE): Number of members in the household.

Gender of Household Head (GEN): Coded as a binary variable (male or female).

Marital Status (HHMS): Coded to reflect the marital status of the household head.

Number of Dependents (DEPH): Number of individuals financially dependent on the household head.

The study employed both primary and secondary data to assess the impact of education on poverty in Bulawayo Urban. Primary data was most preferred mainly for triangulation with the secondary data. Furthermore, it minimizes bias from secondary data and the primary data is advantageous for the study in that it is up to date and will be specific for the purpose of the study. The primary data collection tool used in this study was a questionnaire, as much of the information sought required thoughtful responses and reference to records, which needed to be collected in a standardized manner (Nhamo & Chivasa, 2023). Additionally, face-to-face interviews were conducted with a selected number of households to address technical issues that arose during data collection, such as clarifying how to gather information for specific questions. Secondary data from the 2022 Zimbabwe Population Census Report for Bulawayo was also utilized as a control measure to verify the accuracy of the information provided in the questionnaires (Zimbabwe National Statistics Agency, 2023). The research employed a multistage sampling technique, a probability sampling method that builds upon cluster sampling. This technique involves taking a series of cluster samples, each of which uses random sampling independently (Kumar et al., 2023). The technique was employed to overcome the problems of geographical dispersion of the population because face to face contact is needed and it is expensive and time consuming for large geographical area of Bulawayo. Multi sampling was done in various phases. In the first stage, Bulawayo province was divided into wards. These formed the sampling flame for the study. After numbering these wards, small number of wards was selected using simple random sampling. Since in each case the household was located in a ward, each had the equal probability of being selected for the final sample. The wards were further subdivided into smaller geographically electoral wards. From these small discrete areas, finally the actual households were selected randomly.

Diagnostic Tests

The research tested the extent to which explanatory variables in the model are dependent on each other. The presence of multicollinearity, a common issue in econometric models, can lead to high variances and covariance among the variables. For instance, if the correlation coefficient (R) exceeds 0.8, this can result in inefficient, biased, and inconsistent estimators of the model parameters. Conversely, if R is less than 0.8, a "do nothing" approach can be adopted, as advocated by Blanchard (1997), suggesting that the problem is less severe (Gujarati & Porter, 2022). The study also tested heteroscedasticity using the Pagan/ Cook-Weisberg test. Presence of heteroscedasticity will yield non-BLUE parameters and hence the remedy will be needed.

RESULTS

Figure 4. Household Poverty Distribution in Bulawayo Urban
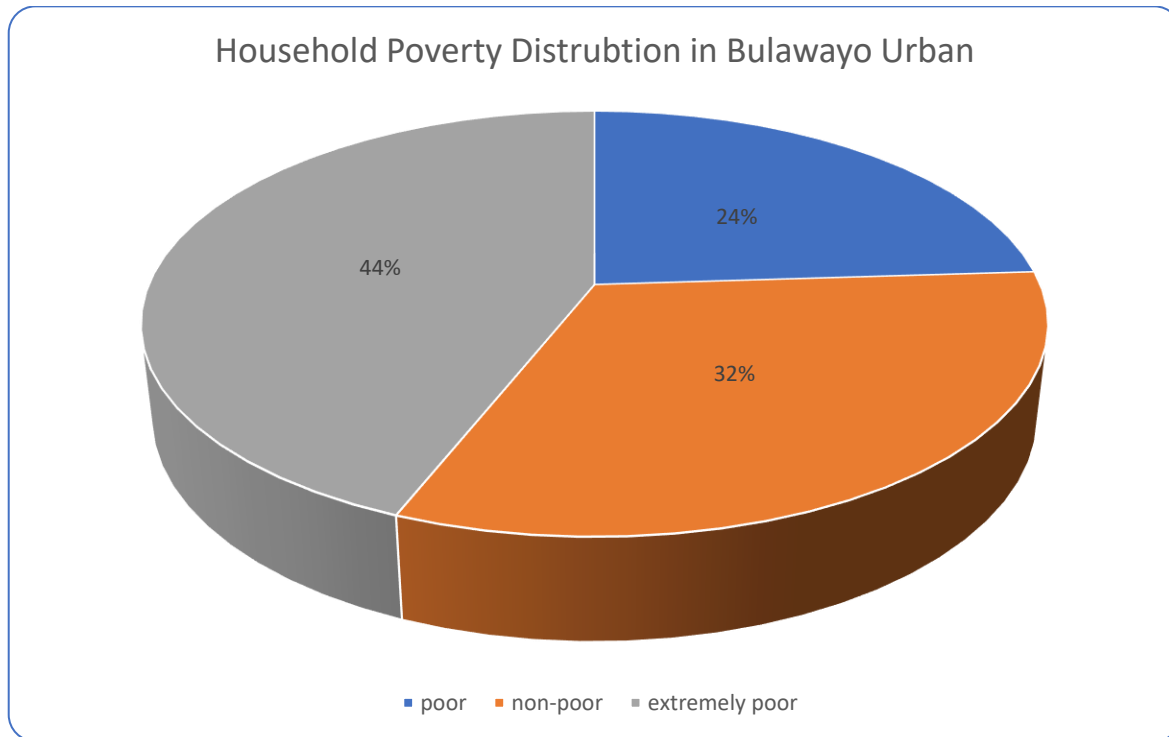
Source: Author's computations from Sample, 2024

With regards to characteristics of the respondents, the response rate was 100% given that all (200) interviewed respondents managed to provide answers which were usable for the analysis. The data show in figure 4 above, 44% (88 out of 200) of the respondent which had the highest respondents were extremely poor, meanwhile, 32 % (64 out of 200) acknowledged that they were non-poor and 24 % (48 out of 200) indicated that they were poor.

Table 1: Correlation matrix (Multicollinearity Tests)

	EH	*AHH*	*HHMS*	*DEPH*	*EMP*	*SIZE*	*GEN*
EH	1.0000	0.4811	0.2875	-0.0795	-0.0879	0.0697	-0.0836
AHH	0.4811	1.0000	0.2167	0.0772	-0.0841	0.1736	-0.1590
HHMS	0.2875	0.2167	1.0000	-0.0445	-0.0556	0.0721	-0.0094
DEPH	-0.0795	0.0772	-0.0445	1.0000	0.0282	0.7229	0.0351
EMP	-0.0879	-0.0841	-0.0556	0.0282	1.0000	-0.0318	-0.0783
SIZE	0.0697	0.1736	0.0721	0.7229	-0.0318	1.0000	-0.0829
GEN	-0.0836	-0.1590	-0.0094	0.0351	-0.0783	-0.0829	1.0000

Source: Author's computations from STATA, 2024

All the correlation coefficients are below 0.8, therefore, we do not reject H_0 and conclude that the model does not suffer from severe multicollinearity though present.

Table 2: Breusch-Pagan / Cook-Weisberg test for Heteroscedasticity

Chi2(1)	9.01
Prob> chi2	0.0027

The results computed Prob > chi2 is less than 0.05 and conclude that there is no evidence of Heteroscedasticity.

Table 3: Multinomial Logistic Regression Results

HP	Coefficient	Robust Std. Error	Z-Statistic	Probability
Non-Poor				
EH	0.1806102	0.0986688	1.83	0.067
AHH	-0.0471472	0.0260409	-1.81	0.070
HHMS	-1.48281	0.6818355	-2.17	0.030
DEPH	-3.300704	0.88224	-3.74	0.000
EMP	-1.528737	0.7117766	-2.14	0.032
SIZE	0.9239847	0.2571466	-3.15	0.000
GEN	-1.158737	0.6149603	-1.88	0.060
CONS	1.102713	1.305349	0.84	0.398
Poor	**(Base Outcome)**			
Extremely Poor				
EH	0.1058798	0.0494341	2.14	0.032
AHH	-0.124569	0.01318559	-0.94	0.345
HHMS	-0.79071255	0.4478595	-1.77	0.077
DEPH	3.821808	0.7155469	5.34	0.000
EMP	0.1624435	0.3796562	0.43	0.669
SIZE	-2.0686375	0.4352152	-4.79	0.000
GEN	-1.957915	0.9685118	-2.02	0.043
CONS	1.532271	1.286505	1.19	0.234

Number of obs   = 200

Wald chi (14)   = 58.13

Prob > chi2   =0.0000

Log pseudo likelihood= -172.27137 Pseudo R^2 = 0.5392

Marginal Effects Test Results

Marginal effects show the probability of a change in the dependent variable brought about by a change in the explanatory variable. Table 4 shows the results obtained from Stata 11 package.

Table 4: Marginal Effects Results

Variable	$\dfrac{dy}{dx}$	STD. Error	Z-Statistic	Probability
EH	0.0009664	0.00104	0.93	0.352
AHH	-0002834	0.00032	-0.88	0.378
HHMS*	-0.0114526	0.01296	-0.88	0.377
DEPH	0.0294535	0.02573	-1.14	0.252
EMP*	-0.007715	0.0079	-0.98	0.329
SIZE	0.0103273	0.00968	1.07	0.286
GEN*	-0.0014736	0.00715	-0.21	0.837

(*) $\overline{dy}$ is for discrete change of dummy variable from 0 to 1 dx

Source: Author's computations, STATA, 2024

These results show that a unit change in the level of education brings about 0.097% increase in probability of household head to be caught on poverty trap. A single opportunity of unemployment to the household head leads to 0.77% decrease in the probability of the same household head to be non-poor. The unit increase in number of dependents in a household leads to 2.95% increase in the probability of the household to be poor. If the household head is a female, it will result to 0.15% decrease in probability of the household to come out of poverty trap. This implies that the probability of being poor is higher in females than in man.

DISCUSSION OF FINDINGS

Pseudo R^2 (Pseudo ratio) measures the proportional improvement in log likelihood or can be used to measure the goodness of fit of a model. It is a summary measure that tells how well the sample regression line fits the data. The results show Pseudo R^2 of 0.5392. This implies that 53.92% variations in household poverty is explained by independent variables such as educational level, gender, and household marital status among other explanatory variables. However, what matters most in multinomial logistic models is the expected signs of the coefficient and the statistical significance rather than the goodness of fit (Gujarati, 2004).

The t-2 rule of thumb suggests that if the Z-Statistic is equal to or greater than 2, the variable is considered significant. In this study, the number of years of education of the household head for the extremely poor category has a Z-statistic of 2.14, which is greater than 2. Therefore, we conclude that the variable is significant, as also indicated by the low p-value of 0.032. The coefficient of this variable is positive, which contradicts the expected negative sign of the study. This unexpected outcome may be attributed to the inability of the labor market to absorb the growing potential labor force. Contrary to conventional expectations, education showed a positive relationship with poverty for certain urban households in Bulawayo, indicating that higher educational levels may correspond with higher poverty levels in certain cases. This result diverges from standard assumptions, such as those suggested by the Human Capital Theory (Becker, 1993), which generally correlates education with income growth and poverty reduction. However, the findings are aligned

with studies in economically constrained regions, where limited job absorption, skill mismatch, and high education costs can weaken education's protective effect against poverty (Tilak, 2000; Grootaert, 1995). Since the turn of the millennium the Zimbabwean economy has fallen characterised with declining economic growth. In spite of the educated labour force churned from universities in Zimbabwe and abroad they have faced closed industries across the country.

The positive correlation between education and poverty can be attributed to a discrepancy in the applicability of educational achievements, where educational attainment does not always translate into employability. This is often due to a mismatch between curricula and industry demands, resulting in underemployment or unemployment despite academic qualifications (Maliki et al., 2012; Awan et al., 2011). The rising costs of education, compounded by inflation and limited financial support, further strain household finances, pushing families into poverty (Ahmad et al., 2013; Grootaert, 1995). Additionally, the expectation that education guarantees economic prosperity conflicts with the labor market realities, such as underemployment and the "skills-wage gap" in developing economies like Zimbabwe (Zindi, 2018; Becker, 1993). Gender bias in wages exacerbates this issue, particularly for women, who earn less than men even with similar educational qualifications (Blanchard, 1997; Faux and Ntembe, 2013). Addressing these challenges requires educational reforms that focus on vocational training aligned with local industry needs, fostering partnerships between educational institutions and industries to enhance skill development and provide practical experience (Tilak, 2000; Ahmad et al., 2013). Additionally, targeting gender disparities and providing support for women can reduce poverty and promote economic equity. A comprehensive approach that bridges the gap between education and employment opportunities is essential for reducing poverty and fostering sustainable economic growth.

Furthermore, the age of the head of household (AHH) shows a negative correlation with poverty for both the non-poor and extremely poor categories, suggesting that as household heads age, the likelihood of poverty decreases. This aligns with Friedman's Permanent Income Hypothesis (1957), which posits that individuals save during their prime years to balance lifetime consumption and reduce future poverty risks. Older household heads may have had more time to accumulate assets, secure financial stability, or rely on diversified income sources and family support, enhancing resilience to poverty. However, the variable is statistically insignificant, with Z-statistics of -0.94 for the severely poor and -1.81 for the non-poor categories, both below the critical threshold, and high p-values suggesting the observed relationship may be due to chance (Nath et al., 2023; Smith & Jones, 2022). This insignificance could be attributed to Zimbabwe's economic instability, a high rate of informal employment, and limited access to financial tools for long-term savings. To address these challenges, policies must focus on improving financial literacy and savings mechanisms, while future research could further investigate age's impact on poverty in similar contexts.

The marital status of the head of household (HHMS) shows a significant negative relationship with poverty, with coefficients of -0.7907 for the extremely poor and -1.4828 for the poor categories. Married household heads, who make up 78.68% of the observations, are less likely to fall into poverty compared to other groups. This suggests that marital status plays a protective role against poverty, as married individuals may benefit from shared resources, emotional support, and pooled incomes, helping to reduce the risk of poverty. The number of dependents (DEPH) presents contrasting effects: for non-poor households, the negative coefficient of -3.3007 suggests that higher dependency ratios may not significantly increase poverty risks, possibly due to additional resources or productive contributions from dependents, especially in rural settings (Tilak, 2022). In contrast, the positive coefficient of 3.8218 for extremely poor households highlights the burden of increased dependents in resource-constrained environments, exacerbating poverty by competing for scarce resources such as income, food, and education (Awan et al., 2021). Both variables are statistically significant, underscoring their importance in explaining poverty dynamics.

Lastly, Employment status (EMP) is significantly linked to reduced poverty in the non-poor category, with a negative coefficient of -1.5287, in line with Human Capital Theory (Tilak, 2022), though it is insignificant for the extremely poor, suggesting contextual factors influence its impact (Nguyen & Tran, 2023). Household size (SIZE) exhibits different effects for the non-poor (positive coefficient of 0.9239) and extremely poor categories (negative coefficient of -2.0686), both statistically significant. Larger households are associated with higher poverty in non-poor groups but may reduce the chances of escaping poverty in extremely poor

households (Maliki et al., 2022). Gender (GEN) shows that male-headed households are less likely to experience poverty, aligning with findings that increased educational attainment reduces poverty likelihood for women (Awan et al., 2021; Faux & Ntembe, 2023). These results highlight the need for targeted policies addressing employment, education, and demographic dynamics to reduce poverty effectively.

CONCLUSION AND RECOMMENDATIONS

The purpose of this study was to determine the impact of education on poverty reduction in Bulawayo urban. The dependent variable is a polynomial dummy variable, equal to one if the person is non-poor, two if the person is poor, and three if the person is extremely poor. The study specifically aimed to identify the factors that contribute to poverty traps in urban areas. All variables were significant, except for the age of the household head at different levels of intervals. The number of dependents in a household was found to have a significant impact on household poverty compared to other variables. Household poverty was significantly influenced by the level of education and the number of dependents, among other factors. The study found that education contributes to the likelihood of being poor, consistent with findings by Grootaert (1995) and recent studies highlighting the critical role of education in poverty alleviation (Mikayilova, 2022; Salami et al., 2023). Therefore, education is an important determinant of urban poverty in Bulawayo. In light of the study's findings, the following recommendations aim to alleviate urban poverty in Zimbabwe by addressing specific stakeholder groups:

Government of Zimbabwe

The government of Zimbabwe needs to restore economic fundamentals to boost economic output. The economy of Zimbabwe has been on the doldrums for the past three decades there is need for redress all macroeconomic imbalances. To date the economy of Zimbabwe is more informalized, with 80 percent of economic activities controlled by the informal sector. Formal jobs have dwindled over the years due to economic indiscipline.

Moreso, government of Zimbabwe is encouraged to promote startups and SMEs. Big businesses can set up grants or funds to support young Zimbabweans' startup development, which will promote innovation and lower poverty. Financial assistance, networking opportunities, and mentoring can all help these initiatives succeed. Through skill development, economic empowerment, and sustainable education, these strategic ideas help reduce poverty. Stakeholder groups can coordinate their efforts to better tackle urban poverty in Zimbabwe by utilizing education.

Ministry of Higher and Primary Education

To close the gap between education and poverty in this typical Zimbabwe economy there is need to restructure the education model. It's now important that graduates be innovative to become employers rather than employees. Government of Zimbabwe has since adopted the Education 5.0 framework that encourage students' creativity, innovation, and problem-solving abilities. This approach encourages students to work on real-world problems, including reducing poverty, and to develop solutions that have an effect on their local communities. Also, from primary level government can develop and fund prototypes of real goods and services and patent them too.

Private Sector

The economy is changing globally it's now important for the government of Zimbabwe to embrace more Public-Private Partnerships (PPPs) in Education. The private sector and the government can work together to fund educational initiatives that close skills gaps and get students ready for the needs of the workforce. Sponsoring technical and vocational training programs helps companies guarantee a workforce with the necessary skills.

Ministry of Industry and Commerce

To align with the dynamic nature of global industrialization, the government must focus on developing more

special economic zones (SEZs) and industrial parks. These zones, supported by attractive incentives, will attract foreign direct investment (FDI), stimulate economic growth, create jobs, and reduce urban poverty. Revitalizing the Bulawayo industrial hub as a model for SEZ development can enhance economic activity in both the short and long term.

By leveraging these targeted actions, stakeholders including the government, private sector, education sector, and international investors can coordinate efforts to address Zimbabwe's urban poverty and boost economic resilience.

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