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# Determinants of Community Welfare: The Mediating Role of Household Consumption

**Muh. Ihsan Said Ahmad[1], Nadilla Tul Hikma[2], Nurjannah[3*], Ratnah S.[4], Sri Hutami Adiningsih[5]**

[1,2,3,4,5] Department of Economics Education, Faculty of Economics, Universitas Negeri Makassar

*Corresponding author: nurjannahfe@unm.ac.id

**Abstract**

*Amidst global economic inequality and the urgency of sustainable human development, this study analyzes the determinants of community welfare in Lelilef Woebulen Village. Using a quantitative approach and Structural Equation Modeling (SEM-PLS), the study involved 147 respondents selected via simple random sampling. Results indicate that education and healthcare services significantly improve welfare. Conversely, income has no significant direct effect, suggesting that nominal growth without effective expenditure management fails to automatically enhance quality of life. A crucial finding reveals that household consumption acts as a robust mediator between education, income, and welfare. This underscores that transforming economic resources into tangible welfare depends on productive consumption patterns. Consequently, policies must focus on strengthening financial literacy and public service access to foster a sustainable standard of living.*

**Keywords:** ***Education, Income, Healthcare Services, Household Consumption, Community Welfare.***

## INTRODUCTION

Community welfare is a key indicator in assessing the success of inclusive and sustainable economic development. In modern economic perspectives, welfare is no longer narrowly defined as an increase in income, but also encompasses multidimensional aspects such as health, education, and overall quality of life. The report



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by United Nations Development Programme (2021) emphasizes that human development should focus on expanding individual capabilities to achieve a decent and productive life.

Empirically, household consumption serves as a primary indicator reflecting the level of community welfare. Consumption not only represents purchasing power but also illustrates the economic stability of households in fulfilling their basic needs. A study by Angus Deaton (2021) suggests that consumption-based measures are more reliable than income-based measures, particularly in developing countries where income tends to be volatile. Therefore, household consumption plays a strategic role as a mediating mechanism in the relationship between socio-economic factors and community welfare.

Recent studies indicate that community welfare is influenced by various determinants, including education level, access to healthcare services, and income inequality. Research by Michael Marmot (2021) highlights that social determinants of health significantly affect quality of life. Furthermore, findings from Esteban Dabla-Norris (2018, still highly relevant) reveal that income inequality can hinder equitable improvements in welfare.

From another perspective, contemporary welfare approaches underline the interaction between economic factors and household behavior. Research by Ed Diener (2020) shows that subjective well-being is strongly influenced by individuals' ability to manage their resources, including consumption patterns. This suggests that household consumption is not merely an outcome of income but also a process shaped by broader socio-economic conditions.

However, most previous studies tend to focus on the direct effects of socio-economic variables on community welfare, without considering the mediating role of household consumption. In fact, this mediating mechanism is crucial for understanding how these factors indirectly influence welfare. Therefore, a research gap remains, particularly in studies incorporating mediation analysis within this context.

In addition, empirical studies focusing on rural areas in Indonesia remain limited. Each region has distinct socio-economic characteristics, making it difficult to generalize findings across different contexts. Data from Badan Pusat Statistik (2023) indicate persistent disparities in welfare between urban and rural areas, highlighting the need for more context-specific research.

Lelilef Woebulen Village in Central Halmahera represents a unique rural setting with dynamic socio-economic conditions worthy of investigation. Changes in community economic conditions, access to resources, and household consumption patterns are


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important factors that are likely to influence welfare levels in this area. Thus, this study is relevant in providing a more specific and contextual empirical understanding.

Based on the above discussion, this study aims to analyze the determinants of community welfare by positioning household consumption as a mediating variable. This research is expected to contribute theoretically to the development of economic development literature and to provide practical insights for policymakers in designing more effective strategies to improve community welfare in a sustainable manner.

## METHOD

This study used a quantitative approach with an explanatory design to analyze the causal relationship between socioeconomic factors on community welfare and household consumption as a mediating variable. The study was conducted in Lelilef Woebulen Village, Central Halmahera Regency, with a population of all households in the area. The population in this study was 2.350 people. The Slovin formula was used to determine the required sample size. Therefore, the sample size was 147 people. The data used included primary data obtained through the distribution of structured questionnaires to respondents, as well as secondary data from official publications such as the Central Statistics Agency (BPS). The research variables consisted of socioeconomic determinants (e.g., income, education, and access to healthcare), household consumption as a mediating variable, and community welfare as a dependent variable, measured using a 1–5 Likert scale.

**Table 1. Operationalization of Research Variables**

| Variable | Indicators | Code | References |
|---|---|---|---|
| **Education (X1)** | Highest level of education attained | X1.1 | Michael Todaro & Stephen C. Smith (2015) |
| | Access to education | X1.2 | United Nations Development Programme (2021) |
| | Skills and competencies | X1.3 | Amartya Sen (1999; still relevant) |
| **Income (X2)** | Monthly household income level | X2.1 | N. Gregory Mankiw (2019) |


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| | | | |
|---|---|---|---|
| | Income stability | X2.2 | Angus Deaton (2016/2021) |
| | Ability to meet basic needs | X2.3 | United Nations Development Programme (2021) |
| **Health Access (X3)** | Accessibility of healthcare services | X3.1 | World Health Organization (2020) |
| | Quality of healthcare services | X3.2 | Michael Marmot (2021) |
| | Affordability of healthcare services | X3.3 | Michael Marmot (2021) |
| **Household Consumption (Z)** | Expenditure on basic needs | Z1 | Angus Deaton (2016/2021) |
| | Expenditure on non-basic needs | Z2 | Udaya R. Wagle et al. (2017) |
| | Consumption patterns (allocation of expenditure) | Z3 | Angus Deaton |
| **Community Welfare (Y)** | Economic welfare (income and consumption) | Y1 | United Nations Development Programme (2021) |
| | Social welfare (access to services) | Y2 | Michael Marmot (2021) |
| | Subjective well-being (life satisfaction) | Y3 | Ed Diener (2020) |

Data analysis was conducted using the Structural Equation Modeling (SEM) method based on Partial Least Squares (PLS) because it is appropriate for models with mediating variables and a relatively limited sample size. Testing was carried out in two stages: evaluation of the outer model (validity and reliability) and the inner model (testing the relationships between variables). Mediation tests were conducted using bootstrapping techniques to examine the indirect effects between variables, with a 5% significance level. The research instruments were tested for validity and reliability before use to ensure the quality of the data obtained.


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## RESULT

The following table presents respondent characteristics.

**Table 2. Respondent Characteristics**

| Characteristics | Category | Frequency | Percentage (%) | Description |
|---|---|---|---|---|
| **Gender** | Male | 68 | 46.3 | - |
| | Female | 79 | 53.7 | Relatively balanced distribution |
| **Age** | < 20 years | - | - | Very limited respondents |
| | 20–27 years | 91 | 62.0 | Dominant (young productive age) |
| | > 30 years | - | - | Limited respondents |
| | Extreme ages (15 & 66) | 2 | 1.4 | Each represented by 1 respondent |
| **Total** | - | **147** | **100** | |

*Source: Processed by researchers, 2025*

Based on the table of respondent characteristics, the distribution of participants shows a relatively balanced composition by gender. Female respondents accounted for 79 individuals (53.7%), while male respondents totaled 68 individuals (46.3%) out of 147 respondents. This indicates that there is no significant dominance of one gender over the other, suggesting that the data adequately represent both groups proportionally.

In terms of age, the respondents were predominantly from the young productive age group, particularly those aged 20–27 years, which comprised 91 respondents (62%). This age group represents the largest proportion compared to other age categories. Meanwhile, respondents aged below 20 years and above 30 years were relatively limited. There were also extreme age cases, specifically 15 and 66 years, each represented by only one respondent. This distribution indicates that the findings of this study are more reflective of the characteristics and economic behavior of the young productive population.


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**Evaluation of the Measurement Model (Outer Model)**

The results of the convergent validity test indicate that all variables in this study have an Average Variance Extracted (AVE) value above 0.50, namely Community Welfare (0.534), Household Consumption (0.537), Health Services (0.770), Income (0.571), and Education (0.518). This indicates that all constructs have met the convergent validity criteria. In addition, the outer loading value for each indicator is generally above 0.60, so it can be declared valid in representing the latent construct.

**Table 4. Results of Convergent Validity Analysis**

| Indicator | *Average Variance Extracted (AVE)* |
|---|---|
| Community Welfare (Y) | 0.534 |
| Household Consumption (Z) | 0.537 |
| Health Services (X3) | 0.770 |
| Income (X2) | 0.571 |
| Education (X1) | 0.518 |

*Source: Processed by researchers, 2025*

**Table 5. Results of Cronbach's Alpha Reliability Test Analysis**

| Indicator | *Cronbach's Alpha* |
|---|---|
| Community Welfare (Y) | 0,920 |
| Household Consumption (Z) | 0,920 |
| Health Services (X3) | 0,970 |
| Income (X2) | 0,936 |
| Education (X1) | 0,915 |

*Source: Processed by researchers, 2025*

**Table 6. Results of Composite Reliability Test Analysis**

| Indicator | *Composite Reliability* |
|---|---|
| Community Welfare (Y) | 0,920 |
| Household Consumption (Z) | 0,920 |
| Health Services (X3) | 0,970 |
| Income (X2) | 0,936 |
| Education (X1) | 0,915 |

*Source: Processed by researchers, 2025*

Discriminant validity testing using cross-loading showed that each indicator had the highest correlation with its respective variable compared to other variables, thus


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meeting the criteria for discriminant validity. Furthermore, reliability testing results showed that all variables had Cronbach's Alpha and Composite Reliability values above 0.70, indicating that all constructs in this study were reliable and consistent in measuring the variables studied.

**Structural Model Evaluation (Inner Model)**

The coefficient of determination ($R^2$) analysis shows that the Community Welfare variable has an $R^2$ value of 0.737, which is considered strong. This means that 73,7% of the variation in community welfare can be explained by the variables of education, income, health services, and household consumption. Meanwhile, the Household Consumption variable has an $R^2$ value of 0.263, which is considered weak, indicating that there are still other factors outside the model that influence household consumption.

**Table 7. Results of Adjusted R-square Analysis**

| Variable | R-square adjusted | Information |
|---|---|---|
| Community Welfare (Y) | 0.737 | Strong |
| Household Consumption (Z) | 0.263 | Weak |

*Source: Processed by researchers, 2025*

**Table 8. Results of Effect Size Analysis (F2)**

| Indicator | Effect Size (F2) |
|---|---|
| Household Consumption (Z) -> Social Welfare (Y) | 1.388 |
| Health Services (X3) -> Social Welfare (Y) | 0.059 |
| Health Services (X3) -> Household Consumption (Z) | 0.022 |
| Income (X2) -> Social Welfare (Y) | 0.030 |
| Income (X2) -> Household Consumption (Z) | 0.054 |
| Education (X1) -> Social Welfare (Y) | 0.115 |
| Education (X1) -> Household Consumption (Z) | 0.077 |

*Source: Processed by researchers, 2025*

Effect size ($f^2$) analysis shows that household consumption has a very strong influence on community welfare, with a value of 1.388. Conversely, the influence of education, income, and health services on household welfare and consumption is relatively small. This finding confirms that household consumption is a key variable in explaining community welfare in this research model.


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## Hypothesis Testing

**Table 9. Hypothesis Test Results**

| Hypothesis | Original sample (O) | P values |
|---|---|---|
| Education (X1) -> Social Welfare (Y) | 0.226 | 0.000 |
| Education (X1) -> Household Consumption (Z) | 0.299 | 0.006 |
| Income (X2) -> Social Welfare (Y) | -0.116 | 0.071 |
| Income (X2) -> Household Consumption (Z) | 0.253 | 0.043 |
| Health Services (X3) -> Social Welfare (Y) | 0.161 | 0.011 |
| Health Services (X3) -> Household Consumption (Z) | 0.164 | 0.068 |
| Household Consumption (Z) -> Social Welfare (Y) | 0.704 | 0.000 |
| Health Services (X3) -> Household Consumption (Z) -> Social Welfare (Y) | 0.115 | 0.066 |
| Income (X2) -> Household Consumption (Z) -> Social Welfare (Y) | 0.178 | 0.041 |
| Education (X1) -> Household Consumption (Z) -> Social Welfare (Y) | 0.211 | 0.007 |

*Source: Processed by researchers, 2025*

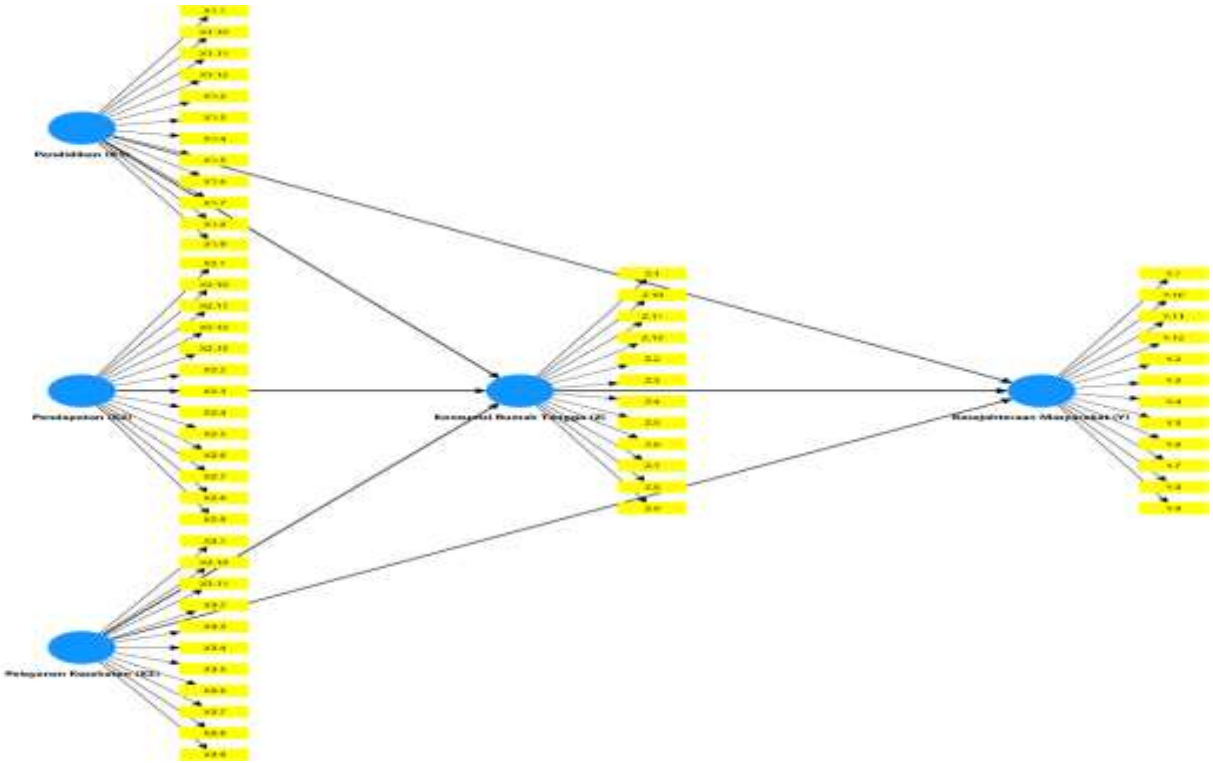


**Figure 1. Hypothesis Testing**



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The results of the hypothesis testing show that education has a positive and significant effect on community welfare (β = 0.226; p < 0.05) and on household consumption (β = 0.299; p < 0.05). Income has a positive and significant effect on household consumption (β = 0.253; p < 0.05), but does not have a significant effect on community welfare (β = -0.116; p > 0.05). Health services are proven to have a positive and significant effect on community welfare (β = 0.161; p < 0.05), but are not significant on household consumption.

Household Consumption has a positive and highly significant influence on Community Welfare (β = 0.704; p < 0.05), making it the most dominant variable in the model. In the mediation test, it was found that Household Consumption significantly mediates the influence of Income and Education on Community Welfare, but is unable to mediate the influence of Health Services.

## DISCUSSION

Education was found to have a positive and significant impact on community welfare in Lelilef Woebulen Village. According to Liu et al. (2020), education contributes to improving quality of life and reducing social inequality, while Friedman et al. (2018) assert that higher educational attainment fosters active participation in socio-economic activities. Education functions as a long-term investment that shapes human capital to be more productive, adaptive, and rational in economic decision-making.

Beyond its impact on general welfare, education significantly influences household consumption patterns. Higher education levels encourage households to adopt planned consumption behaviors oriented toward long-term quality of life, such as allocating funds for children's education and healthcare. In line with the human development theory by Todaro and Smith (2020), education enhances an individual’s capacity to manage economic resources efficiently and sustainably.

In contrast to education, income was found to have no significant direct effect on community welfare. This indicates that an increase in income does not automatically guarantee an improvement in the quality of life if not managed effectively. Syarofi (2020) supports this finding, stating that without consumption management oriented toward the long term, income tends to be exhausted on transitory consumptive needs, thereby failing to exert a tangible impact on overall welfare.

Despite its lack of direct influence on welfare, income exerts a positive and significant effect on household consumption. Consistent with the Keynesian theory of consumption, an increase in income is followed by an increase in expenditure to meet


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both primary and secondary needs. Income serves as the primary driver of a household's economic capacity to access better nutrition, healthcare, and education.

The healthcare services variable also proved to have a positive impact on community welfare, particularly through patient satisfaction and medical quality. Quality services assist the community in maintaining physical and mental health, ensuring they remain productive in socio-economic activities. However, healthcare services do not significantly influence household consumption because expenditures in this sector are non-routine and contingent upon health crises, as elucidated by Syarofi (2020).

Household consumption itself is a pivotal variable that most concretely reflects community welfare. Based on the principles of Welfare Economics, the level of welfare is measured by a household's ability to fulfill its needs decently. This research demonstrates that once basic needs are met, increased consumption in non-food and health sectors becomes the primary indicator representing advancements in the community's standard of living.

In the mediation pathway, household consumption serves as a critical channel linking education to welfare. Todaro and Smith (2020) explain that education shifts household economic behavior toward productive sectors. These research findings reinforce that the benefits of education on welfare reach an optimal point only when they successfully improve the quality and structure of household consumption, particularly in the education and non-food sectors.

Lastly, household consumption also mediates the influence of income on welfare. Stable income allows for more structured consumption planning, which in turn improves housing conditions and the fulfillment of basic needs. Aligned with the perspective of Syarofi (2020), consumption acts as a transformational pathway that converts the nominal value of income into a tangible and multidimensional form of community welfare.

## CONCLUSION

This study concludes that education and healthcare services are the primary determinants with a direct and significant impact on community welfare, whereas income was found to have no direct effect. This indicates that enhancing human capital and health stability is far more critical in determining quality of life than mere nominal income growth. The lack of a significant direct impact from income suggests that without proper expenditure management, increased earnings tend to be exhausted on short-term consumptive needs and fail to create sustainable welfare improvements. Furthermore, household consumption serves as a robust mediating variable that bridges the impact of


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education and income on overall welfare. This finding underscores that the benefits of higher education and stable income only transform into tangible welfare when effectively channeled through productive consumption patterns, such as investments in health and further education. Practically, government policies should focus not only on income stimulation but also on strengthening financial literacy and public service access to foster consumption patterns that can multidimensionally enhance the community's standard of living.

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