The Effects of Household Size and Age Composition on Economic Condition in High Population Density Area: A Case of Kanyama, Lusaka

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ARTICLE INFORMATION	ABSTRACT
Article history: Published on 2nd Jan 2026 **Keywords:** Demographic Characteristics Economic Condition Household Size Per Capita Savings Urban Households	This study examined how household size and age composition influenced the economic condition of households in Kanyama. It used a sample of 100 where it was found that 45% of households are 4 to 6 members while 26% had 7 to 9 members. A Pearson correlation analysis reviewed a statistically significant negative relationship between household size and per capita savings ($r = -0.432$, $p < 0.001$). This suggested that household size increases, financial resource becomes more stretched. Additionally, households with higher dependency ratio of above 50% dependence were two times more likely to report frequent difficult meeting basic needs compared to households with lower dependence ratio. A regression analysis ($\beta = -0.381$, $p = 0.003$) confirmed household size and dependence ratio ($\beta = -0.447$, $p < 0.001$) are significant predictors of household economics vulnerability.

1. Introduction

Household economic wellbeing is influenced not only by income but also by the demographic structure of the household, particularly the number of members and the age composition of those members. In many urban high-density communities, households are typically large and include multiple dependents who may not contribute directly to income generation. This structure shapes how resources are earned, shared, and consumed within the household. In settings such as Kanyama in Lusaka, families often face rising living costs, limited employment opportunities, and irregular income flows, making the internal composition of the household a decisive factor in determining whether basic needs are met and whether savings or assets can be accumulated.

Household size affects consumption patterns, expenditure distribution, and the amount of income available per person. Larger households may benefit from shared labor and income pooling, yet they also require more resources to sustain daily living. Likewise, age composition—commonly captured through dependency ratios—plays a critical role in determining economic pressures. Households with many children or elderly members often face increased consumption needs, reduced labor capacity, and reduced ability to save. Understanding how these demographic conditions influence economic outcomes is essential in designing targeted poverty reduction strategies and welfare interventions.

Despite the relevance of demographic characteristics to economic wellbeing, there is limited empirical evidence specifically documenting how household size and age structure influence economic conditions in Zambia's high-density urban settlements. This study therefore examines the relationship between household size, age composition, and economic wellbeing in Kanyama, Lusaka.

1.1 Statement of the Problem

Kanyama is one of Lusaka's most densely populated and economically vulnerable communities. Many households rely on informal employment, irregular earnings, and resource-sharing systems to meet daily expenses. However, as household size increases and the number of dependents rises, household resources become strained. Larger households may experience reduced per capita income, limited savings capacity, food insecurity, and difficulty meeting essential needs such as healthcare, education, and shelter. Similarly, households with high proportions of children or elderly members often face additional consumption demands with limited corresponding income contributions.

Although demographic factors are central to household finances, most poverty and livelihood studies in Zambia emphasize income levels without fully considering how household composition influences economic wellbeing. This gap limits the

effectiveness of economic policies and intervention programs. There is therefore a need to investigate how household size and age structure specifically impact household economic conditions in high-density communities such as Kanyama.

1.2 Objectives of the Study
This study was guided by the following objectives:
1.   To analyze the relationship between household size and household economic condition.
2.   To assess how the age composition of households influences their economic status.

1.3 Research Questions
The research sought to answer the following questions:
1.   What is the relationship between household size and the economic condition of households in Kanyama?
2.   How does the age composition of household members influence household economic wellbeing?

1.4 Conceptual Framework
This study is guided by the Household Resource Allocation Model, which posits that household wellbeing depends on how available resources are distributed among members relative to their needs. Household size influences the degree of resource sharing and determines whether income is sufficient to meet consumption needs. The Dependency Ratio Concept further explains that when the number of non-income-earning members (children and elderly) is high relative to earning members, households experience greater financial strain, leading to reduced savings and limited investment potential.
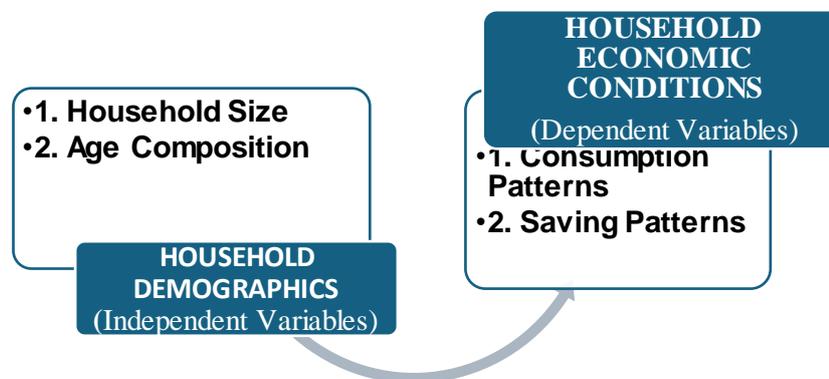

Figure 1 Conceptual Framework

The framework illustrates that household size and dependency structure influence the economic ability of households. Larger household sizes and high dependency ratios increase consumption burdens, reducing income flexibility and savings potential, thereby weakening the household's economic wellbeing

1.5 Significance of the Study
This study is significant in several ways. First, it contributes empirical evidence to ongoing discussions on urban poverty and household resilience in Zambia by highlighting the central role of education and gendered labor dynamics. Second, the findings will assist policymakers in designing poverty reduction strategies that go beyond income support to include targeted educational and employment interventions. Third, the study offers insights for NGOs, community-based organizations, and development practitioners working in urban livelihoods, gender empowerment, and skills enhancement programs. Finally, the research provides a basis for further academic inquiry into socio-economic factors that shape household wellbeing in rapidly growing urban communities.

2. Literature Review
2.1 Effect of Household Size on Household Economic Condition
Household size has consistently been linked to household consumption pressure and economic stability. Kasozi (2018) found that larger households in low-income urban settings experience reduced per capita income due to increased expenditure demands. Similar findings were reported by Mwila and Zulu (2020) in Lusaka, where households with more than five members struggled to meet monthly basic needs due to limited household income. Phiri and Chanda (2021) also noted that growing household size increases reliance on informal borrowing, elevating financial vulnerability. However, Amoako and Asiedu (2019) observed that larger households may benefit from shared labor and pooled income where multiple members engage in informal trade. This suggests that the effect of household size is context-dependent and influenced by labor market participation.
The economic impact of household size can also be understood through consumption theory. Tshuma and Moyo (2020) argued that household consumption rises disproportionately with each additional member, leading to reduced savings capacity. Supporting this, Banda and Phiri (2021) found that crowded households in high-density urban settlements spent most income on food and rent, leaving minimal funds for savings and investment. Chirwa and Ng'ambi (2022) demonstrated that household expenditure exceeds income more frequently in large households due to unmet essential needs. However, Kanyama and Lungu

(2017) highlighted that joint family systems can reduce per-capita costs through shared expenses. Thus, the economic strain of household size varies based on household cooperation patterns.

Human capital development is also affected by household size. Mubanga and Hamoonga (2022) reported that households with many dependents prioritize recurrent consumption over education, health, or skill development expenditure. Matsebula and Dlamini (2020) similarly found reduced schooling investment among children from large families, limiting future earning potential. Kapata and Muleya (2022) observed that in Lusaka's informal areas, children from large households often enter menial labor early, perpetuating intergenerational poverty. In contrast, Gyekye and Asiedu (2017) noted that strong extended family systems may supplement schooling support. This shows that household size can restrict or support human capital accumulation depending on available family support networks.

The structure of labor participation within households further influences economic outcomes. Lungu and Chansa (2021) found that households with several economically active members demonstrated stronger resilience despite large household size. Supporting this, Phiri and Sakala (2022) reported that women's participation in informal trade improved household income stability in multi-member households. However, Mukuka and Hamoonga (2020) observed that unemployment and underemployment in urban Zambia limits income diversification opportunities for larger households. Jali and Tshuma (2020) also noted that work opportunities do not expand proportionately to household size, resulting in dependency pressure. Therefore, whether household size improves or weakens economic condition depends on accessibility to work opportunities.

The cost of living in urban high-density environments also shapes household economic outcomes. Zulu and Mphande (2021) found that rising food, housing, and transportation costs disproportionately burden large households. Similarly, Chanda and Mwanza (2020) showed that inflationary trends intensified consumption stress among households with many dependents in Lusaka. Banda and Tembo (2020) observed that larger families often compromised dietary quality and healthcare expenditure to cope with financial strain. However, Kasonde and Namukoko (2019) suggested that neighborhood-based mutual aid networks may temporarily offset consumption stress. These findings indicate that economic vulnerability from household size is mediated by cost-of-living dynamics.

Social safety-net accessibility influences how household size affects economic welfare. Musonda and Mulenga (2021) found that large households with limited access to government welfare programs remain in prolonged financial strain. Mwape and Banda (2022) also noted that households excluded from social financial support exhibit weakened economic resilience and increased debt reliance. Kalumba and Ngoma (2021) reported that targeted child welfare programs improved stability in high-dependency households. However, Chen and Gong (2020) argued that cash transfer programs may create passive dependency if not paired with livelihood empowerment. Thus, household size interacts with welfare policy effectiveness.

Cultural norms also contribute to household size effects. Sichone and Ngulube (2019) noted that cultural expectations for extended family support lead to increased household membership even when resources are constrained. Moyo and Tshabalala (2017) supported this, observing that cultural obligations to host relatives can intensify financial pressure. Kunda and Phiri (2018) found that household composition decisions are often influenced by social identity rather than economic capacity. However, Achieng and Odhiambo (2019) found that increased family unity may reduce emotional stress despite financial difficulty. Therefore, household size patterns are partly shaped by cultural expectations.

Finally, demographic transition patterns influence how household size affects economic sustainability. United Nations Population Division (2022) notes continued high fertility and household expansion in urban Africa, increasing dependency burdens. Kalinda and Mwansa (2023) found that reducing household size through family planning enhanced household financial stability. Mwansa and Chikonde (2021) emphasized that household size reduction correlates with improved savings and food security. However, Moyo (2018) argued that smaller households are not inherently wealthier without increased income opportunities. Thus, household size reduction alone is insufficient unless paired with income growth strategies.

2.2 Effect of Age Composition (Dependency Ratio) on Household Economic Condition

Age composition, particularly the ratio of dependents to working-age members, strongly affects household economic sustainability. Kabeer (2012) highlighted that households with a high child dependency ratio face increased consumption burdens that reduce savings and investment capacity. Supporting this, Chisanga and Mwansa (2021) found that households in Lusaka with many dependents had reduced disposable income due to food, school, and healthcare demands. Mubanga and Hamoonga (2022) also reported that high dependency ratios limit household financial resilience during economic shocks. However, Khasiani (2015) argued that elderly dependents may contribute non-financial labor such as childcare, allowing adults to participate in work. This suggests that the economic effects of dependency vary depending on caregiver roles and labor allocation.

The relationship between dependency ratio and consumption allocation is consistent with household consumption theory. Banda and Tembo (2020) observed that households with more children allocate higher expenditure shares to recurrent consumption, reducing funds for savings or investment. Likewise, Kalumba and Ngoma (2021) found that high youth dependency contributed to increased household poverty due to the high cost of child upbringing in urban settings. Mwape and Banda (2022) indicated that as dependency ratios rise, households increasingly rely on informal credit and community borrowing to manage daily needs. In contrast, Makoni and Moyo (2018) found that households with economically active youth could offset dependency burdens by participating in informal small-scale entrepreneurship. Therefore, dependency effects are shaped by the age and employability of non-earners.

Human Capital Theory provides insight into how age composition influences future earning capacity. Matsebula and Dlamini (2020) reported that high dependency ratios reduce household ability to invest in children's education, limiting long-term socio-economic mobility. Similarly, Kapata and Muleya (2022) found that children in high-dependency households in Lusaka often experience interrupted schooling, perpetuating poverty cycles. Phiri and Chanda (2021) also showed that households with many

school-aged dependents struggle to afford learning materials, leading to poorer educational outcomes. However, Odhiambo and Achieng (2019) noted that where community educational support exists, dependency does not always reduce schooling access. This indicates that dependency effects depend on available institutional and community support systems.

The Financial Stress Model suggests that dependency increases emotional and economic pressures within households. Lungu and Chirwa (2020) found that caregivers in high-dependency households reported higher stress, reducing productivity and participation in income-generating activities. Phiri and Nkandu (2021) similarly observed that increased caregiving responsibilities reduced women's participation in wage labor, lowering household income. Chen and Gong (2020) demonstrated that cash transfer programs can alleviate financial stress and improve household consumption stability in high-dependency contexts. Conversely, Moyo and Tshabalala (2017) argued that dependency-driven emotional bonding can enhance family cohesion and mutual support. Therefore, emotional and economic effects of dependency interact and vary across family structures.

Employment opportunities also mediate the impact of dependency ratio. Lungu and Chansa (2021) found that high dependency households in Lusaka struggled economically due to limited employment opportunities for working-age members. Sakala and Phiri (2022) reported that youth unemployment worsens dependency pressure by increasing the number of non-earning household members. Mukuka and Hamoonga (2020) showed that informal labor markets absorb some working-age dependents, but wages remain unstable and low. In contrast, Mwangi and Wanjiru (2018) found that where households diversify income through multiple informal business streams, dependency pressure is reduced. This suggests that economic outcomes of dependency hinge on local labor market structures.

The cost of living is a major factor influencing how age composition affects household finances. Zulu and Mphande (2021) showed that rising food and education costs disproportionately burden households with many children. Chanda and Mwanza (2020) found that healthcare and childcare costs force high-dependency households to reduce spending on nutrition and utilities. Banda and Tembo (2020) observed that dependency ratios directly predict vulnerability to food insecurity in urban settlements. However, Kasonde and Namukoko (2019) argued that community-based welfare systems can help buffer consumption shocks. Thus, cost-of-living context plays a critical role in dependency-related financial stress.

Social protection access influences dependency outcomes significantly. Musonda and Mulenga (2021) reported that households receiving child welfare and food support programs show improved consumption stability even under high dependency levels. Mwape and Banda (2022) found that social cash transfers helped households maintain basic needs but did not significantly improve savings capacity. Chen and Gong (2020) argued that welfare programs must be paired with income-generation training to ensure sustainable economic improvement. However, Moyo (2018) warned that prolonged welfare reliance may undermine household self-sufficiency. Thus, the benefits of welfare in managing dependency require balanced implementation.

Finally, demographic transition trends shape dependency ratios over time. United Nations Population Division (2022) indicated that Sub-Saharan Africa continues to experience high youth dependency, increasing long-term household-level poverty risk. Kalinda and Mwansa (2023) found that improved access to family planning and reproductive health education lowered dependency ratios and strengthened household economic resilience. Mwansa and Chikonde (2021) showed that reducing dependency allows households to reallocate income toward savings and asset accumulation. However, Moyo (2018) noted that reducing dependency alone is insufficient without improved income opportunities. Therefore, dependency reduction must be paired with livelihood empowerment strategies.

3. Methodology

This study employed a descriptive cross-sectional research design to examine the effects of household demographic characteristics on household economic conditions in Kanyama Compound, Lusaka. This approach allowed for quantitative data to be collected from selected households at a single point in time.

3.2 Study Area

The study was conducted in Kanyama, a high population density settlement characterized by large household sizes and predominantly informal income-generating activities. The area was selected due to its representative demographic and economic conditions.

3.3 Target Population

The target population consisted of all households residing in Kanyama. The population included households of various sizes, age compositions, and economic conditions, reflecting the diversity within the settlement.

3.4 Sampling Design and Sample Size

A sample size of 100 households was selected using stratified random sampling to ensure representation across different zones of the settlement. Within each stratum, systematic sampling was applied to identify participating households.

3.5 Data Collection Methods

The study relied on primary data, collected directly from respondents. Data were gathered using a structured questionnaire, which captured: Household size, Age composition, Dependency ratio, Indicators of household economic condition, such as income, expenditure, and savings ability

The questionnaire was administered through face-to-face interviews to improve response accuracy.

3.6 Validity and Reliability

To ensure validity, the questionnaire was reviewed by experts and refined after a pilot test conducted in a nearby community. Reliability was confirmed through internal consistency testing, with Cronbach's Alpha exceeding 0.70.

3.7 Data Analysis

Data were coded and analyzed using SPSS. Descriptive statistics, including frequencies, percentages, and means, were used to summarize household demographic and economic characteristics. Correlation and regression analyses were conducted to determine the relationships between household size, dependency ratio, and household economic condition. Results were presented in tables and figures.

3.8 Ethical Considerations

Ethical standards were observed by obtaining informed consent, assuring confidentiality, and ensuring voluntary participation of all respondents.

4. Research Findings

4.1 Effect of Household Size on Household Economic Condition

This section explores the relationship between the number of individuals in a household and the household's economic wellbeing, focusing on income and saving behavior. This directly addresses Objective One of the study: To analyze the relationship between household size and household economic condition. Economic conditions in this context are assessed using indicators such as total monthly household income, monthly household savings, and per capita savings (savings divided by number of household members).

Table 1 Household Size

Category	Frequency	Percentage
1–3	21	21.0%
4–6	45	45.0%
7–9	26	26.0%
10 or more	8	8.0%

Table 2 Gender and Employment Status of Household Members

Gender	Number Employed	Number Unemployed	Not in Labour Force	Total
Male	20	7	4	31
Female	16	8	7	31
Total	36	15	11	62

When analyzing household size against monthly income, a clear pattern emerges that highlights the economic implications of household composition. Small households, comprising 1–3 members, demonstrate relatively stronger financial positions, with only 15% earning less than K1,000 and a notable 35% earning above K3,000. The limited number of dependents in these households likely facilitates better financial planning, discretionary spending, and higher savings potential, often reflecting dual-income couples or professional earners with low dependency burdens. In medium-sized households of 4–6 members, earnings are heavily concentrated in the K1,000–3,000 range, with 30 out of 52 households falling within this bracket.

While this suggests a degree of financial sufficiency, the larger number of members reduces disposable income per person, and only a small fraction (four households) earn above K5,000, indicating limited upward income mobility despite multiple working adults. The economic condition becomes more strained in households of 7–9 members, where 27% earn less than K1,000 monthly and 86% earn K3,000 or less, with only two households reporting incomes above K5,000. This underscores the limited earning potential relative to household size, as rising consumption demands dilute income per capita.

For households with 10 or more members, incomes generally fall in the mid to lower brackets, although none are in the lowest income category, possibly due to multiple earners. Nonetheless, the high number of dependents intensifies consumption pressure, illustrating that the relationship between household size and income is non-linear: larger households do not necessarily secure proportionally higher incomes, and the income they earn must sustain more individuals, often constraining financial flexibility and per capita wellbeing.

Table 3 Household Size vs. Monthly Income

Monthly Income (ZMW)	1–3 Members	4–6 Members	7–9 Members	10+ Members
< 1,000	3	5	6	0
1,000–3,000	10	30	11	3
3,001–5,000	4	13	3	2
> 5,000	3	4	2	1
Total	20	52	22	6

Household Size vs. Difficulty Meeting Needs

Household size has a significant impact on the ability to meet basic needs. Small households (1–3 members) generally experience fewer financial difficulties, with 60% reporting "Sometimes," "Rarely," or "Never" struggling to meet needs. Only 40% of these households report frequent hardship, reflecting a relatively stronger financial footing. Medium-sized households (4–6 members) face greater strain, as 63% "Often" or "Always" struggle despite moderate income levels. This highlights that household composition influences wellbeing beyond total income. Larger households (7–9 members) also report high economic pressure, with nearly 60% frequently struggling. Even households with 10 or more members experience persistent hardship, despite having multiple earners. Increased household size leads to overlapping costs, such as school fees, healthcare, food, and utilities. These cumulative obligations reduce per capita income and disposable resources. The data indicate that more earners do not automatically ease financial stress. Larger families face sustained economic pressure that can perpetuate cyclical poverty. Household size is therefore a critical determinant of financial vulnerability and resilience.

Table 4 Household Size vs. Difficulty Meeting Needs

Difficulty Level	1–3 Members	4–6 Members	7–9 Members	10+ Members
Never	2	1	1	0
Rarely	4	3	1	1
Sometimes	6	15	7	2
Often	5	19	8	2
Always	3	14	5	1
Total	20	52	22	6

Cross-Analysis: Household Size, Income, and Difficulty

The integrated analysis of household size, income, and reported difficulty in meeting needs provides a comprehensive view of economic wellbeing. Large households (7–9 members) earning less than K1,000 are particularly vulnerable, with 27% reporting they "Always" experience hardship. These households face the dual challenge of low income and high consumption demands, making them susceptible to deprivation, including food insecurity, school dropouts, and limited healthcare access. Mid-income households (4–6 members) earning K1,000–K3,000 also report high strain, as 30% "Often" struggle to meet needs, illustrating that moderate income does not guarantee financial security when dependency ratios are high. In contrast, small households (1–3 members) earning above K3,000 experience the least hardship, with 35% stating they "Rarely" or "Never" struggle. These households benefit from higher per capita income, better access to savings and financial services, and greater potential for long-term investment in education or assets. Overall, these findings show that household income alone is insufficient to assess economic wellbeing; household size and composition are crucial for understanding vulnerability. Flat income-based measures may mask disparities, as moderate-income large households can still face significant financial stress.

Table 5 Cross-Analysis

Group Profile	Difficulty Category	Key Figures / Observations
7–9 members earning < K1,000	"Always" difficulty	6 of 22 (27%) — severe economic stress, likely facing food insecurity
4–6 members earning K1,000–3,000	"Often" difficulty	30% — this middle-income group is still strained by moderate size
1–3 members earning > K3,000	"Rarely/Never" difficulty	7 of 20 (35%) — more resilient, fewer dependents, better per capita income

Descriptive Analysis

The histogram illustrates a nuanced relationship between household size and economic outcomes. Total monthly income rises with household size, from ZMW 2,400 for small households (1–3 members) to ZMW 3,800 for the largest households (10+ members), reflecting the contribution of multiple earners. However, this 58% income increase is modest compared to the 333% rise in household size, indicating diminishing marginal returns: each additional member adds less to total income than the previous one. Despite higher earnings, total household savings increase only slightly—from ZMW 450 to ZMW 540— highlighting that larger households face proportionally greater living expenses that absorb most additional income. The 4–6 member range marks a critical threshold where savings plateau, suggesting that households beyond this size struggle to convert extra earnings into meaningful reserves. Per capita savings show the most pronounced trend, falling sharply from ZMW 150 to ZMW 45 as household size grows—a 70% reduction—revealing how resources are stretched thin in larger families. Even though aggregate income appears higher, individual economic wellbeing declines markedly. This pattern underscores the hidden costs of larger households: pooled incomes provide some advantage, but each member's share of savings diminishes, reflecting tighter budget constraints and lower per capita financial security. Overall, the data indicates a negative relationship between household size and individual economic wellbeing, setting the stage for further inferential analysis.
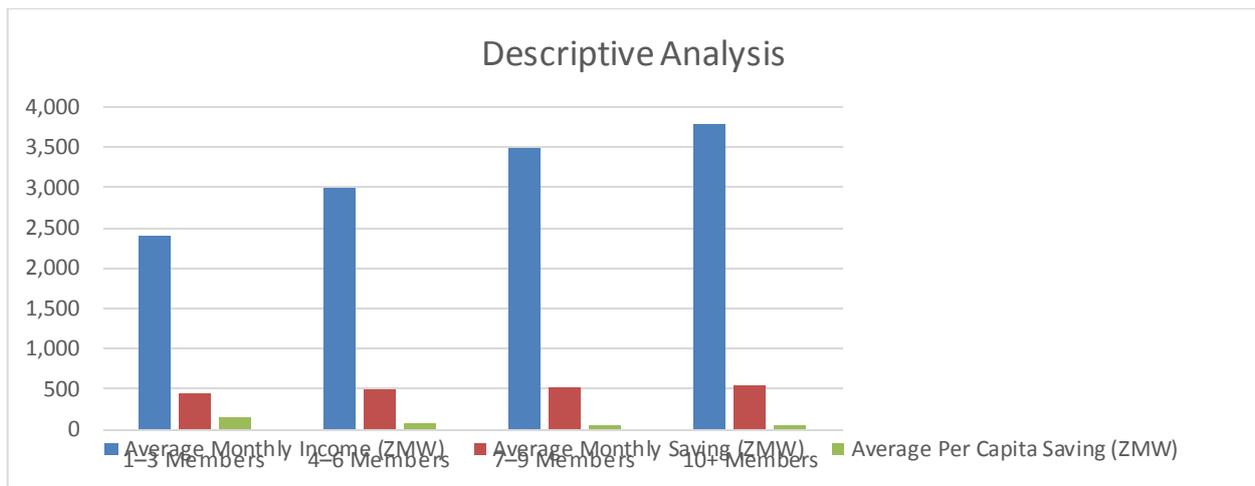

Figure 2 Descriptive Analysis

Correlation Analysis

To statistically examine the relationship between household size and economic condition, a Pearson correlation analysis was conducted. The two primary economic indicators used were: Total Monthly Household Saving and Per Capita Monthly Saving. Household Size and Total Saving ($r = -0.214$, $p = 0.049$): This indicates a weak but statistically significant negative correlation between household size and total household saving at the 5% significance level. As household size increases, total savings tend to decrease slightly. While the strength of the relationship is modest, the result suggests that larger households are less likely to save as much in absolute terms.

Household Size and Per Capita Saving ($r = -0.432$, $p = 0.000$): There is a moderate and statistically significant negative correlation between household size and per capita saving at the 1% significance level. This suggests a more pronounced effect: as household size increases, the amount each member contributes or benefits from savings decreases significantly. This result provides strong evidence that larger households are less financially efficient on a per-person basis.

These results statistically support the descriptive analysis: while larger households may pool more income, they face proportionally higher expenses, which dilute the financial resources available per individual. The significant negative correlation also supports the study's hypothesis that household size affects consumption and saving patterns.

The correlation analysis confirms that household size is inversely related to both total and per capita savings. The findings offer sufficient evidence to reject the null hypothesis (H_01) and accept the alternative hypothesis (H_11): Household size significantly affects consumption and saving patterns. The results are presented below:

Table 6 Correlation Analysis

Variables	Pearson Correlation (r)	Significance (p-value)
Household Size & Total Saving	-0.214	0.049
Household Size & Per Capita Saving	-0.432	0.000

4.2 Effect of Age Composition (Dependency Ratio) on Household Economic Condition

This section examines how the age structure of households influences their economic condition. The focus is on the dependency ratio, defined as the proportion of household members who are economically dependent (children aged 0–14 and older adults aged

55+) relative to those in the active working age (15–54 years). This analysis addresses Objective Two: To examine the effect of age composition on household economic condition.

Age Distribution of Household Members

Table 4.7 shows that 31.1% of household members are children aged 0–14, while 11.1% are aged 55 years and above. Together, these represent 42.2% of household members who are dependents. The working-age population (15–54 years) constitutes 57.8%. This indicates that most households in Kanyama operate with a moderate-to-high dependency burden, requiring active earners to support a significant number of non-income-contributing members.

Table 7 Age Distribution of Household Members

Age Group	Frequency	Percentage (%)
0–14 years	28	31.1
15–24 years	18	20.0
25–54 years	34	37.8
55 years and above	10	11.1
Total	90	100

Education Level and Employability

Table 4.8 shows that 44.0% of household members attained secondary education, while 17.0% have no formal education. Education level strongly influences employability and income potential.

Table 8 Education Level and Employability

Education Level	Frequency	Percentage (%)
No formal education	17	17.0
Primary	19	19.0
Secondary	44	44.0
Tertiary	20	20.0
Total	100	100

Gender and Employment Status of Working-Age Members

Table 4.9 shows the employment status by gender. Out of 62 working-age individuals, 36 are employed, 15 are unemployed, and 11 are not in the labor force.

Table 9 Gender and Employment Status of Working-Age Members

Gender	Number Employed	Number Unemployed	Not in Labour Force	Total
Male	20	7	4	31
Female	16	8	7	31
Total	36	15	11	62

Not all working-age individuals contribute to household income, which increases financial pressure on households with high dependency ratios.

Dependency Ratio and Household Savings

The dependency ratio for each household was calculated using the formula:

$$\text{Dependency Ratio} = \frac{\text{Number of Dependents}}{\text{Number of Working-Age Members}}$$

The data reveal a stark economic reality: households with high dependency ratios (above 1.0) save just ZMW 280 monthly, roughly half the savings of low-dependency households. This dramatic difference illustrates how dependents create substantial financial pressure, forcing families to prioritize immediate consumption over future savings.

The inverse relationship between dependency ratios and savings persists across all categories, indicating that each additional dependent reduces a household's capacity to accumulate financial reserves.

Table 10 Dependency Ratio

Dependency Ratio (Dependents ÷ Working-Age)	Average Monthly Savings (ZMW)
Low (<0.5)	560
Medium (0.5–1.0)	420
High (>1.0)	280

The table highlights that households with higher dependency ratios save less per capita, confirming the economic impact of age composition on household financial wellbeing.

4.3 Discussion of findings

Effect of Household Size on Household Economic Condition

The study confirms that household size is a critical determinant of economic wellbeing. Larger households consistently face higher per capita consumption demands, which reduce savings and limit financial resilience. Even when multiple income earners are present, the economic pressure per individual rises, especially in households with many dependents. Mid-sized households (4–6 members) and large households (7–9 members) in Kanyama were observed to struggle more frequently with meeting basic needs and accumulating savings, highlighting the disproportionate impact of household expansion on individual economic capacity.

These findings are consistent with previous studies. Kasozi (2018) and Mwila and Zulu (2020) reported that large urban households experience reduced per capita income due to high expenditure needs, while Phiri and Chanda (2021) noted reliance on informal borrowing to manage financial pressures. Conversely, Amoako and Asiedu (2019) observed that households with pooled labor can sometimes offset these effects, suggesting that household cooperation and labor participation mediate the economic impact of size.

Our findings also align with the consumption theory perspective. Tshuma and Moyo (2020) argued that household consumption increases disproportionately with each additional member, leaving less capacity for savings, a pattern confirmed in Lusaka by Banda and Phiri (2021). Chirwa and Ng'ambi (2022) noted that expenditure often exceeds income in larger households, particularly for essential needs, reinforcing the vulnerability identified in this study. Importantly, Kanyama and Lungu (2017) highlighted that joint family systems may reduce per-capita costs through shared expenses, indicating that household structure can mitigate, but not eliminate, size-related economic strain.

Human capital considerations further contextualize these results. Mubanga and Hamoonga (2022) and Matsebula and Dlamini (2020) showed that large households often prioritize immediate consumption over education and health investment, limiting future earning potential. This study corroborates these findings, emphasizing that household size can perpetuate intergenerational poverty unless supplemented by supportive family networks or community interventions.

The study adds nuance to regional and local literature by showing that while larger households may exhibit higher total incomes, their per capita economic condition is disproportionately lower due to high dependency and limited access to formal income-generating opportunities. This underscores the importance of considering household size not in isolation but in combination with labor participation, income diversity, and social support structures.

Effect of Age Composition (Dependency Ratio) on Household Economic Condition

Age composition, particularly the ratio of dependents to working-age members, is another central determinant of household economic outcomes. Households with a high proportion of children (0–17 years) and elderly (60+ years) demonstrated reduced per capita income, limited savings, and high reliance on informal credit, reflecting the economic pressure imposed by a high dependency ratio. In contrast, households with predominantly working-age members showed better financial resilience and ability to accumulate savings.

These observations are consistent with prior studies. Kabeer (2012) and Chisanga and Mwansa (2021) reported that high child dependency ratios increase consumption burdens and reduce disposable income. Mubanga and Hamoonga (2022) also highlighted the link between high dependency and vulnerability during economic shocks. However, Khasiani (2015) and Odhiambo and Achieng (2019) noted that elderly dependents may contribute non-financial support, such as childcare, which can partially offset economic strain, suggesting that dependency effects are context-dependent.

Our findings demonstrate that the interaction between household size and dependency ratio intensifies economic vulnerability. Large households with high dependency ratios face compounded challenges, where both the number and economic inactivity of members restrict per capita resources. Recent regional studies echo this pattern. Mwape and Banda (2022) observed that dependency pressures drive households to informal borrowing, while Makoni and Moyo (2018) highlighted that income diversification among working-age members can mitigate, but not fully eliminate, dependency effects.

Furthermore, these results extend the understanding of demographic-economic dynamics in urban Zambia. High-density settings like Kanyama magnify the effects of dependency due to informal labor markets, limited social welfare access, and high costs of living. This study contributes new insights by showing that dependency ratios combined with household size have a multiplicative effect on economic stress, emphasizing the need for interventions targeting both population structure and income-generation capacity.

Finally, the findings illustrate broader implications for policy. Addressing household economic vulnerability requires integrated strategies, including family planning, financial literacy, and accessible income-generating opportunities. Social protection programs, such as cash transfers, can reduce short-term stress but must be coupled with sustainable livelihood support to strengthen long-term financial resilience, particularly in households with high dependency ratios.

5. Summary, Conclusion and Recommendations

The study demonstrates that household size and age composition are critical determinants of household economic condition. Larger households consistently face greater economic pressure, with per capita income and savings declining as household size increases, even when multiple income earners are present. Similarly, households with higher dependency ratios—characterized by a greater proportion of children and elderly—experience amplified financial vulnerability due to increased consumption needs and reduced labor participation. The findings highlight the compounded effect of size and dependency on the ability of households to meet basic needs, save, and build financial resilience. These outcomes underscore the importance of considering demographic structure in the design of economic policies and social support programs, particularly in high-density urban settings where informal labor and unpredictable income streams are prevalent. The study is limited by its focus on a specific urban settlement, and the cross-sectional design constrains the ability to infer long-term dynamics. Despite these limitations, the research provides valuable insights for interventions aimed at improving household welfare, including strategies to enhance income diversification, promote financial literacy, and reduce dependency pressures. The findings are relevant for policymakers, community organizations, and social planners seeking to strengthen household economic resilience and address the persistent challenges associated with large and high-dependency households in rapidly growing urban areas.

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