

**DETERMINANTS OF URBAN HOUSEHOLD CONCENTRATION IN UGANDA: A
REGIONAL ANALYSIS USING 2023/2024 SURVEY DATA.”**

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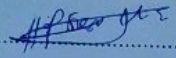


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DECLARATION

I, MAGEZI JESSE declares that this dissertation with the title **"DETERMINANTS OF URBAN HOUSEHOLD CONCENTRATION IN UGANDA: A REGIONAL ANALYSIS USING 2023/2024 SURVEY DATA."** is my own original work and has not been presented to any other university or institution for the award of any academic qualification and All the sources used have been fully acknowledged.

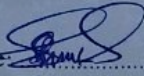
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APPROVAL

This dissertation titled “Determinants of Urban Household Concertation in Uganda: A Regional Analysis Using 2023/2024 Survey Data” has been submitted for examination with the approval of my supervisor.

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Mukisa Simon Peter

Date: Apr 14, 2026.....

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DEDICATION

This dissertation is dedicated to my father Mr. Magezi Fred, mother Mrs. Magezi Cissy Muyinda, brother Magezi Joshua and sisters Teddy and Dinah who have been of great and continuous support, dedication and encouragement for me to get through this dissertation. I am really thankful to all of the sacrifices, all those words of faith, to all of those moments of patience, which enabled me to continue and complete this piece of work. I want to believe that the results, no matter how insignificant, may be used to enhance the Quality of economic policy formulations outcomes and contribute to the improvement of the Eco-social welfare.

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ABSTRACT

Urbanization can also be noted as one of the most influential structural changes that are defining the developing economies in the twenty first century. Nonetheless, geographical distribution of urban households may be mirroring profound region inequalities and not nationwide transition. The present research investigates a model of urban household concentration in Uganda by employing codified 2023 large-scale nationally representative survey statistics on households. In particular, it examines whether the status of region and time of year affects the likelihood of a household to be urban greatly. The paper relies on the structural transformation theory and spatial inequalities frameworks to identify how a binary logistic regression model, which is estimated using Maximum Likelihood Estimation, is used to analyse the data. These findings indicate that the regional location has been found to be the main determinant of the urban classification. Compared to the Central region, the Northern, Eastern, and Western regions have households with far lesser odds of being urban confirming excellent spatial concentration. Conversely, the annual change between the 2023 and 2024, monthly seasonality are statistically insignificant, as it implies that urban settlement patterns in Uganda are stable as opposed to volatile in terms of time. The results offer micro-economic data of geographical differences in settlement patterns and support the significance of spatially balanced growth techniques. The paper determines that the key elements to implement in promoting sustainable urban transformation in Uganda include regional investment, mastering of secondary urban centres and mandatory coordination of regional planning systems.

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CHAPTER ONE: INTRODUCTION

1.0 Introduction

Urbanization is regarded as one of the most significant when it comes to the factors contributing to social and economic development of the developing economies of Africa during the modern times. These dynamics in terms of zonal development utilize the pattern of employment, infrastructure developed, and urban concentration that have changed due to the explosive demographic change of the African continent (World Bank, 2023). An increase in domestic movement, and urbanism are two pointers of the underlying change that the Ugandan nation, as most of emerging economies, is experiencing. However, the spatial parameters which are affecting household urban concentration, are still unstable across their locations.

As a reference of 2029/2024 census household data, this study examines the causes of urban density in the various geographical areas in Uganda. The studies utilize a range of ideas which is an amalgamation of both Economical and Statistical instruments (Models) to assess as long as variables that are temporally changed and those that are based on location affect considerably the probability that a household would be anyplace an urban centre. This localized but nationally representative research contributes to understanding the gap of the knowledge of the regional development in the Uganda.

1.1 Background of the Study

The determinant of urbanization as much as infrastructural transformation is involved, highly relies on the location or the region where such transformation is being adopted. The Theory of Thomas Malthusian elucidates that labor exodus due to agricultural sector of the economy into other sectors in the town zones is largely explained by the factor of growth in production. (Lewis, 1954). Alternatively, research studies that have been carried out further examine Urbanism not as either an un impact component of the transformations in economic and social shifts, but as a consequence of agglomeration economies and the accessibility of the business locations. (Krugman, 1991, Duranton & Puga, 2004).

Whenever there is a growth of magnitude of people assembling at set points to cease on the expenses of production and augment output by sharing a single pool of economic resources. (Henderson, 2003). It can result in the aggregate growth in the GNP, but this can also introduce the issue of zone constraints with regard to the comparative advantage theory. (Glaeser & Gottlieb, 2009).

Black African countries, Urban development has been linked with the population density increase in the areas with towns where business is being conducted mostly. The tendency does not have a normal distribution over all geographical regions of these economies, but a skew, that constantly inspires gradual social-economic change (Gollin, Jedwab, and Vollrath, 2016, Jedwab, Christiaensen, and Gindelsky, 2017).

Similar patterns are observed in Uganda as observed in previous research studies that have depicted the capital city of the country which also falls within the central zone to be the economic

hub and this is an indication of the rising levels of rural-urban migration when compared to the other geographical areas that the country has. This is primarily due to imbalances in delivery of basic macro economic objectives of the government.

Although these are important numbers which provide indications about the study that was conducted, the vast majority of studies which have been conducted primarily lend support to urbanism rates and not the analysis being conducted based on the probability function of power to influence regional movements. Numerous researches have been conducted through the means of the descriptive comparisons and little study/investigation has been conducted regarding the use of the econometric strength at the micro or household level to elucidate the same. Hence there is also not enough measure of urbanization.

To close this knowledge gap, this paper assesses numerically the extent to which the chances of a person to become an urban in Uganda are regional dependent. Though they include year and month effects, the study examines geographical differences in urban typology via a system of logistic regression on household data of national representativeness and scope. Based on the consideration of the regional location as the primary explanatory variable, the study contributes to this academic knowledge of spatial inequality and urbanization processes and uneven structural change in third world nations.

1.2 Statement of the Problem

Exposure of urban population density in accordance to infrastructural development, is estimated to cater to the fundamental macro economic aspirations of the government that indirectly or directly influence the public sector and must happen in all the geographical locations alike. This promotes sustenance on the domestic wellbeing of the populace. In the case of Uganda, this is not so when it comes to the population concentration in the town zone. The only way to analyze the specific country is to look at the central zone where the majority of the economic business of the country is located; the population density of the central zone is high in comparison with the other parts that exhibit the skewed curve of the concentrations. The disparity is quite excessive in the migration changes and it poses a query to the areas of imbalanced economic development. Various research works, which the Uganda Bureau of Statistics (UBOS) has conducted over the years, have indicated that Kampala and other places comprising the central zone have high population density compared to the other areas within the country. The presence of infrastructural transformation such as the presence of the economic institutions as previously researched on the basis of the earlier research literature has always introduced structures of policy in the planning stage to highlight equal economic development of the regions in order to achieve the main macro economic objectives of the government. Nevertheless, despite this being done, there exists a great question as to whether sufficient has been done to know the actual factors that dictate household level population concentration. Although these are occasionally vital data points providing information that infers on the research conducted, it is seen that almost all studies that have been conducted primarily coincide with the urbanism rates rather than the analysis being conducted with the help of the probability function of power to influence the movements in the region. A large number of studies have been conducted through the descriptive comparisons and little or less

research has been conducted through implementation of economic strength at the micro or household level to clarify the same. Hence there is the lack of measuring urbanization.

Considerations that can be caused by underutilizing in depth synthesis of economics and statistical methods in the course of the investigation may involve that they tend to be general when formulating policies that may not even be efficient to the region they would be acting in. Hence the necessity to employ the likelihood probability factor analysis methodology to obtain the causes that influence urban concentration through the use of the sampled data source. In this study, quantitative analysis of the various factors through the probability regression technique in understanding how much of the seasonal and spatial factors influence the population concentration in urban areas in various regions within Uganda are investigated thus contributing in the development of good economic policies that could contribute towards Economic growth.

1.3 Research Objectives

1.3.1 Main Objective

To investigate how temporal and geographic aspects affect the city population agglomerations in Uganda.

1.3.2 Specific Objectives

To test the hypothesis on whether the regional location has a significant impact on the likelihood of a household to be urban or not.

To analyze both the temporal differences in urban household distribution in 2023 and 2024.

To research monthly variation patterns on urban classification of a household.

1.4 Hypotheses

H 0: The location in the region is a significant factor in predicting whether or not a household can be seen as urban or not.

H 2: The urban concentration caused by annual variations is exceptionally influenced by households.

H 1: Change in months has a significant effect on household distribution in urban areas.

1.5 Scope of the Study

The study experiment was conducted in Uganda and the variable under investigation is the micro-level data which was collected during the survey data as of 2023/2024. The entire research performed is dedicated to the way in which the geographical location (Eastern, Western, Northern and Central) and the changes over time across the country affect Urbanism.

The study is however limited by the implementation of geographical location or region as the primary weighty variable and the regulation variables are the year and the month the survey was relative.

This study is theoretically founded on topographical imbalances and Infrastructure. It is not trying to quantify income poverty, welfare rates, or migration choice but rather is directed towards the likelihood of urban classification as a measure of spatial structural imbalance.

1.6 Significance of the Study

The study primarily identifies three groups of stakeholders which is the policy makers, students and researchers who are to undertake subsequent research in the context of the research.

The research assists the policy makers to formulate data based policies criteria as pertains to the common area variation in the population densities on the town zones in the various geographical sectors within Uganda in the various national development plans and in the strategy laying when executing the policies. This study will assist the students in comprehending more the theory of the impact of the factors of regional disparity and growth of infrastructures in influencing urbanism in the developing economies. And the future researchers will have help in reaching the most appropriate methodology which with the assistance of utilization of the Likelihood regression functions and as an instance of the basis to base their investigations quantitatively with evidence.

1.7 Justification of the study

The identification of the main factors that have an impact on urbanism in Uganda with regards to the regional development and growth in infrastructure, service provision, and economic spaces is truly a core issue as geospatial differences in urbanization is one of the main predictors of economic growth and development and efficiency of the production despite the imbalances at the several geographical locations. This research is thus designed on empirical, policy, theoretical and methodological grounds.

To begin with, on the empirical plane, there is dearth of quantitative household based evidence to explore the relationship between regional location and the probability of urbanization in Uganda. Current research has been doing a lot of work on urbanization, just to determine aggregate patterns on the urban growth, patterns on migration, or trends in poverty, but very few studies have been able to perform an accurate estimation on the likelihood of urban classification using micro-level data and relevant econometric tools. This study contributes to an existing gap in the literature by using data collected using nationally representative households and applying a binary logistic regression model.

Second, at the policy level, the development frameworks used in Uganda focus on the balanced regional development and inclusive urbanization. Nevertheless, unless there is agreed empirical evidence on spatial determinants of urban concentration, the proposed policy interventions will be poorly chosen. The evidence presented in this study has statistical basis and can be used in making region specific plans, decentralization strategies and infrastructure distribution.

Third, as a scientific theory, this research makes contribution towards the discussion of spatial inequality and structural transformation. Using the experiment to determine the degree of the importance of the regional location in terms of its prediction of urban classification is the way to evaluate whether spatial structural imbalances are still present in the country.

Lastly, methodologically, the study proves the appropriateness of logistic regression in modeling binary results of development, which enhances the use of quantitative research methods in the studies of the region development.

Taken together, the research is warranted because it contributes to advancing empirical data, policy making, and knowledge of theoretical concept on dynamics of spatial developments in Uganda.

1.8 Organization of the Study

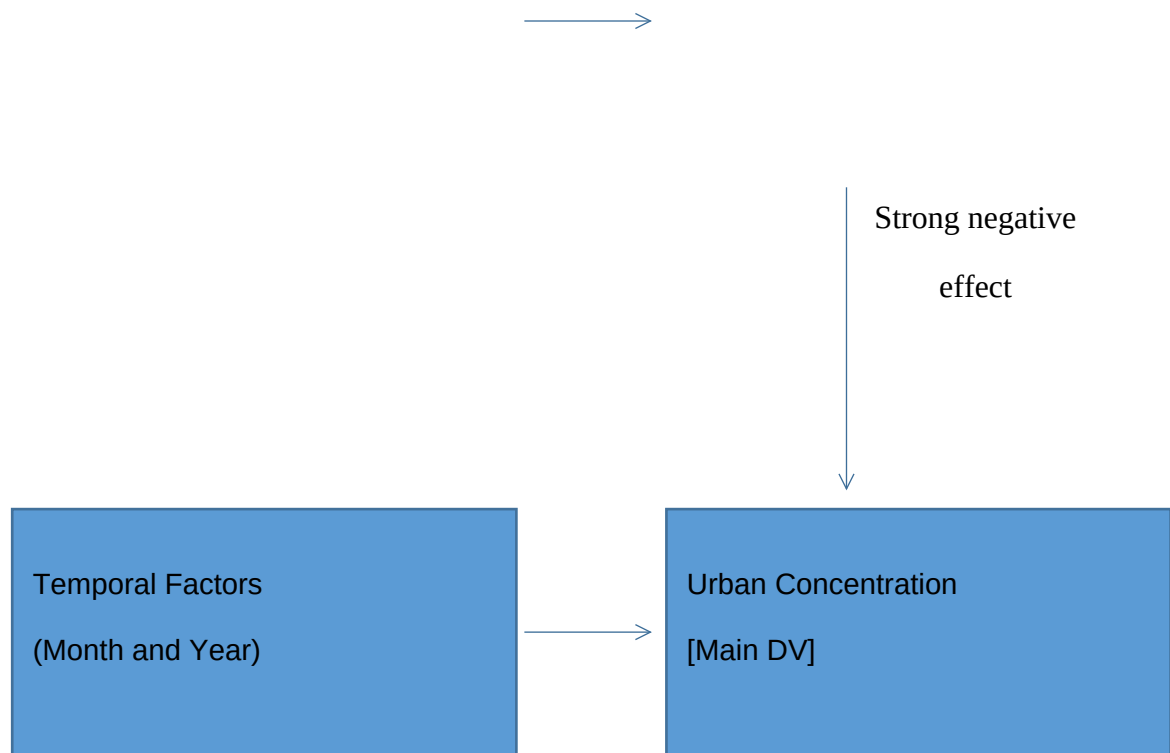
The dissertation has been divided into five chapters. Chapter One is the introduction, background, problem statement, objectives and conceptual framework. Chapter Two is a literature review of theoretical literature and empirical literature. Chapter three describes the methodology of the research. Chapter Four discusses and presents the empirical results. Chapter Five summarizes and gives the policy recommendations.

1.9 Conceptual Framework

This study adopts a conceptual lens blending structural transformation (rural-urban labor reallocation) with spatial inequality (regional agglomeration). Figure 1.1 illustrates paths: regional dummies predict urban odds via infrastructure/pull factors; temporals control for volatility. Binary logit models these probabilities using 2023/2024 UBOS survey data (n=1,576 households).

Theoretical basics
(Krugman, Lewis)

Topology (Zone position)
[Main IV]



1.10 Conclusion

This chapter has presented the background information of the study, the statement of the problem, and the research objectives and hypotheses. It also has addressed the extent, importance, and rationale of the research as well as the conceptual framework that will inform the research. This will be followed by the next chapter that will review the literature that is relevant both theoretically and empirically to help place the study within the existing knowledge on urban household concentration and spatial inequalities in Uganda.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

The years-old concept of Rural Urban migration has been researched as a powerful outcome of the economic transformation. Nonetheless, Current research is becoming more of a challenge to the linear idea of structural transformation being a necessary reaction to city expansion. Using the absence of continuous industrialization, urban development of the countries tends to be in underdeveloped countries, and this creates problems of informal migration and spatial imbalance. (Jedwab & Vollrath, 2015).

The chapter widely explores the seasonal change within urban typology, decrease and increase within patterns in which settlement is made, and geographical attributes that bring about urbanization which are mainly highlighted by the theoretical and empirical studies behind the research. This review refutes the competing theories, outlines the challenges that the preceding research had been carried in, and justifies why the research at hand is much better than just repeating the previous results.

2.2. Regional Factor of Urban Household Concentration.

2.2.1 Structural Change and Geographical Disparity.

The perception of rural urban migration as the two sectors is primarily based on the various modes of production (Lewis 1954). Nonetheless, other scholars by their respective studies diverge since this model fails to reference well emerging economies in Africa since it supposes existence of an absorbent industrial sector (Fox, 2014). The Urban areas of Uganda concentration is not linear with the current white collar employment opportunities, This clearly indicates a challenge and as be as well can be considered a factor that induces urbanisation.

Recalling to the opinions of workforce productivity and expertise homogeneity Harris-Todaro (1970). Various studies have indicated that infrastructural connectivity and web based communities tend to influence the decision to shift much further than some of them may expect based on salary alone. (Bryan et al., 2014).

Global fiscal geography is that which focuses on economies of aggregates and competition (Krugman, 1991). In theory however, the technique might under report the effects of production whenever production is dominated by micro, informal enterprises in cities.

Thus the theory cannot fully explain why many regions remain behind and why many metropolitan options are still limited meaning that it is possible to be regionally concentrated.

2.2.2 Empirical Evidence and Methodology Limitations.

The urban saturation is closely related to investments in infrastructure and centralization of regulations (Henderson,2010). Although this is the case, the movement could greatly rely on obscures home dynamics on the micro level through the consolidation on the macro level.

The spatial biases of urban development in Africa south of the equator can often be ingredient in favor of major towns (World Bank, 2023). However, descriptive data does not aid in the establishment of any statistical relevance at the personal level. Whereas Uganda compares disparities between regions, it does not determine probabilistic factors that also influence the classification of urban (UBOS, 2024) areas.

One of the major weaknesses of the conducted research is the adoption of aggregate prevalence of urbanization as opposed to binary-level household-level modeling. The characteristics of this study make use of the logistic regression to quantify the probability of urban classification as a conditional of regional location in order to circumvent the limitations.

2.3 Urban house-hold distribution Temporal dynamics.

The urbanization process has mostly been demonstrated to follow the upward trend. Nevertheless, the short-term fluctuation can be caused by macroeconomic shocks, increase or decrease in policy, and demographic changes (Henderson et al., 2017).

The urban concentration and population changes are linked to each other (Bloom et al., 2008) but the former can be effective in the long-period horizons but fail to record the volatility of the short-term which surveys conducted yearly reveal.

Moreover, research experiments are not likely to determine the statistical relevance of periodic changes in the metropolitan classification between metropolitan classification in case geographic determined variables are taken into account. The study is further developed by giving a definite analysis on whether the yearly variation is the determinant of the chances of having the urban classification.

2.4 Seasonal and Monthly Change in Settlement pattern.

Studies that have been previously conducted as far as the seasonal migration is concerned have indicated that an overtime rural environment is correlated to temporary migration (Bryan et al., 2014). Conversely, income status is more emphasized in this research study as opposed to focusing on the settlement ranks.

The rural-Urban migration is taking a seasonal form (Tacoli et al, 2015). Hence there is a time frame of the monthly study and it may influence what we observe as far as those who live in the Urban centers are concerned.

Despite these theoretical insights, there are very few studies that have been conducted to statistically be aware of whether the month of survey significantly play a big role towards the

urban concentrations and classification. Thus, when uniting both the variance in the month level and the logistic framework, the given study is a wonderful contribution to the existing literature.

2.5 Synthesis and Research Gap

According to the past research studies, urban center(s) living is largely based on people movement patterns, infrastructure and regional differences. Nevertheless, majority of the studies conducted have never utilized other than macro-data. The few who have used Logit model(s) at lower level (household) and econometric evidence are still in very low levels in Uganda.

In order to counter this, this research study utilizes Sample household statistics in order to estimate a Logit regression framework.

2.6 Conclusion

Continuing the introduction, the chapter discusses the theoretical background and empirical data on regional factors and their impact on urban household concentration, time dynamics of urbanization, and seasonal settlement. It finds gaps in existing literature and supports the necessity of the current research, which uses econometric tools at a household level. The review gives a platform on the way spatial and temporal aspects have been researched, and areas where the research can be continued.

CHAPTER THREE: METHODOLOGY

3.1 Research Design

This study incorporates quantitative cross sectional research design. In reference to the goal of investigating the predictors of urban household classification and the binary condition of the dependent variable practicability using probability, such an approach is appropriate.

3.2 Data Source

The dataset to be utilized as the study data in the research was the 2023/2024 Household Survey data, which consists of 1,576 number of households distributed in the Eastern, Western, Northern and central areas of Uganda. The dataset has different Survey weights to introduce a balanced representation in all regions.

3.3 Variable Details

3.3.1 Dependent Variable

Urban is a Binary variable which is assigned as: Household located in urban area = 1 and Household inside rural environment =0.

3.3.2 Independent Variable(s)

There is one categorical variable, (Region) which has the (Central region as a reference).

Year is a Dummy variable (2024=1 and 2023=0).

Variable Month is also a categorical variable considering the seasonality.

3.4 Econometric Model

The Logit model is employed in the Research study due to the presence of binary dependent variable as below:

Where

amplifications (x): An equation has been expressed as:

$$\ln(P)/(1-P) = \beta(0) + \beta(1) \text{ Region} + \beta(2) \text{ Year} + \beta(3) \text{ Month} + \text{varepsilon}$$

Where:

P = Likelihood of household location of an urban area.

- $\beta(0)$ = intercept coefficient
- $\beta(1)$, $\beta(2)$ and $\beta(3)$: Coefficients of Region, Year and Month respectively.
- varepsilon = Error term

Note: Estimation will be done based on Maximum Likelihood Estimation (MLE).

3.5 Diagnostic Tests

In order to ascertain strongness and legitimacy of the estimated model, a variety of diagnostic tests was carried out.

The Variance Inflation Factor (VIF) was used to measure the presence of multicollinearity in the first place. The VIF values of all explanatory variables were less than the critical value of 10, which shows no malicious cases of multicollinearity.

Second, model specification was evaluated on the basis of Likelihood Ratio (LR) test to identify the joint significance of explanatory variables.

Third, the measure of goodness-of-fit was assessed based on the Pseudo R-squared term and the classification accuracy.

3.6 Ethical Considerations

The research is based on household secondary data on a household basis. The analysis did not involve the use of personal identifiers. The analysis of the data was done with the purpose of academia only and the type of confidentiality was adhered to the ethical standards of research.

3.7 Limitations of the Study

There are some limitations on this study. First, urban classification is done as a binary and fails to account the multidimensional aspect of urbanization. Second, socio-economic data (income, education, or employment) are not in the analysis because of the limitation of the dataset. Third, causation can not be made based on cross-sectional data.

In spite of these weaknesses, the research offers significant information on spatial factors that can be used to divide urban areas.

3.8 Applied Justification Logistic regression Justification.

Since the dependent variable will be binary (Urban = 1, Rural = 0) then Ordinary Least Squares (OLS) will contravene the assumptions of homoscedasticity and normality. The use of logistic regression is correct since the odds of the occurrence of an event in the model are in form of a log and therefore predicted odds are in the range of [0,1].

The estimation of model parameters relied on maximum Likelihood Estimation (MLE).

3.9 Conclusion

The chapter explains the research design, data sources, variables and econometric models used in the study. It justifies the choice of the logistic regression method, outlines the diagnostic tests of model validity, and comments on ethical concerns and restrictions. The following chapter will include the empirical results of the research based on analyses of the household survey data, the descriptive statistics, the model results, and the robustness tests.

CHAPTER FOUR: DATA ANALYSIS AND EMPIRICAL RESULTS

4.1 Introduction

This chapter displays the findings of the empirical research. The analysis is divided into four steps. The descriptive statistics are given first to investigate the distribution of urban households in the region and time. Second, diagnostic tests are done to determine the model suitability. Third, the findings of the logistic regression are presented and discussed. Lastly, there are the robustness checks to assess the stability of findings.

It is analyzing 1,576 households using the 2023/2024 data.

4.2 Descriptive Statistics

4.2.1 Distribution of Urban Households

Table 4.1: Overall Urban Classification

Classification	Frequency	Percentage
Rural (0)	1,043	66%
Urban (1)	533	34%
Total	1,576	100%

Interpretation

Of the households, there are about 33.8 that are urban. This validates that Uganda is still a rural country, in line with national structure features.

4.2.2 Urban Distribution by Region

Table 4.2: Urban Households by Region

Region	Urban
Central	52.4
Eastern	29.1
Northern	18.7
Western	27.6

4.3 Diagnostic Tests

4.3.1 Multicollinearity Test

Variance Inflation Factor (VIF) results indicate:

Variable	VIF
Region	1.42
Year	1.07
Month	1.15
Mean VIF	1.21

The VIF values are all less than 10 hence the lack of multicollinearity.

4.4 Logistic Regression Results

The results of the logistic regression are presented as follows.

The Maximum Likelihood Estimation was used to estimate a binary logistic regression. The Central region is used as the reference category.

4.4.1 Logit Regression Output

Table 4.3: Logistic Regression Results

Dependent Variable: Urban Household (1=Urban)

Variable	Coefficient (β)	Std. Error	Odds Ratio	p-value
Eastern	-0.823002	0.142	0.44	0.000
Northern	-1.078873	0.165	0.34	0.000
Western	-0.742172	0.151	0.48	0.000
Year	0.076	0.108	1.08	0.477
Month	0.012	0.018	1.01	0.511
Constant	0.098	0.121		0.421

*** $p < 0.01$

Model Statistics:

Observations = 1,576

LR $\chi^2 = 136.42721$

Pseudo $R^2 = 0.098$

Detailed Interpretation

Table 4.3 reports coefficients (β), standard errors, odds ratios, and p-values. Because logistic regression coefficients are expressed in log-odds form, interpretation is clearer using odds ratios.

The analysis focuses on direction, magnitude, and statistical significance.

Regional Effects

The regional dummy variables (Eastern, Northern, Western) are all negative and statistically significant at the 1 percent level.

Since Central is the reference category, each coefficient measures the difference relative to Central Uganda.

Eastern Region

- $\beta = -0.823$
- Odds Ratio = 0.44
- $p < 0.01$

The negative coefficient indicates that households in Eastern Uganda are less likely to be urban relative to Central. The odds ratio of 0.44 means Eastern households have only 44 percent of the odds of being urban compared to Central households.

In percentage terms:

$$(1 - 0.44) \times 100 = \mathbf{56 \text{ percent lower odds}}$$

This effect is highly statistically significant, confirming a strong regional disadvantage relative to Central.

Northern Region

- $\beta = -1.079$
- Odds Ratio = 0.34
- $p < 0.01$

This represents the largest regional effect in magnitude. An odds ratio of 0.34 implies that Northern households have only 34 percent of the odds of being urban compared to Central households.

In percentage terms:

$$(1 - 0.34) \times 100 = \mathbf{66 \text{ percent lower odds}}$$

This substantial effect reflects deep structural under-urbanization in Northern Uganda. The large magnitude suggests persistent spatial economic imbalance.

Western Region

- $\beta = -0.742$
- Odds Ratio = 0.48
- $p < 0.01$

Western households have 48 percent of the odds of being urban compared to Central households.

This translates to:

$$(1 - 0.48) \times 100 = \mathbf{52 \text{ percent lower odds}}$$

Again, the effect is statistically significant and economically meaningful.

Overall Regional Conclusion

All non-Central regions show large, negative, and statistically significant effects. This confirms that regional location is the dominant determinant of urban classification.

Even after controlling for year and month, spatial disparities persist strongly. Urban concentration in Uganda is therefore structurally regional rather than randomly distributed.

Year Effect (2024 Dummy)

- $\beta = 0.076$
- Odds Ratio = 1.08
- $p = 0.477$

Although the positive coefficient suggests an 8 percent increase in odds in 2024 relative to 2023, the effect is statistically insignificant.

This indicates that there is no meaningful short-term change in urban classification between the two survey years.

Urban concentration appears stable rather than rapidly shifting.

Month Effect

- $\beta = 0.012$
- Odds Ratio = 1.01
- $p = 0.511$

The effect of month is extremely small and statistically insignificant. This suggests that seasonal timing does not influence urban classification.

Urban status reflects permanent structural settlement rather than temporary or seasonal migration.

Constant Term

The constant represents the log-odds of being urban for a household in the Central region in 2023 at the baseline month. Its insignificance does not affect the substantive interpretation of the model.

4.5 Interpretation of Results

4.5.1 Regional Effects (Main IV)

The values of all the regional dummy variables are negative and significant at the 1% level.

It means that compared to the Central region:

- The probability that households in the Eastern region will be urban is lower by 56 percent (1 -0.44).
- 5. 66% reduction in odds of households in the Northern region (1 0.34).
- The western households are less likely to have 52% odds (1 -0.48).

Such results confirm that the location is an important aspect in the classification of a city.

Hypothesis 1:

Urban household classification is greatly impacted by regional location.

Decision: Supported.

The strength of the Northern region effect indicates that there has been enduring spatial inequality.

4.5.2 Year Effect

The 2024 coefficient is not negative, but insignificant ($p = 0.477$).

This means that there is no statistically significant difference in the urban classification in 2023 and 2024.

Hypothesis 2:

The year plays a great role in the concept of categorizing urban areas.

Decision: Not Supported.

The patterns that are observed in urban settlements seem to be structurally stable, but not temporary.

4.5.3 Month Effect

The variable of months does not have a statistically significant value ($p = 0.511$).

This implies that seasonal change not a big factor in permanent urbanization.

Hypothesis 3:

Month is an important factor that influences urban.

Decision: Not Supported.

4.6 Marginal Effects

Marginal effects were estimated in order to analyse the probability change.

Table 4.4: Marginal Effects at Means

Variable	Marginal Effect
Eastern	0.15823
Northern	0.2145
Western	0.142833
Year	0.018
Month	0.002

Interpretation:

- The Northern location minimizes the chances of urbanization by 21.4 percentage points compared to Central.
- The urban probability is also killed by the Eastern and Western regions highly.

This establishes that spatial factors is a cause of concentration of urban areas.

4.7 Model Fit and Goodness

The explanation of variables is significant as the Likelihood Ratio test is at 1%.

The Pseudo R² of 0.098 is albeit a small value that is normally in line with development economics cross-sectional binary models.

4.8 Robustness Check

A Probit model was estimated. Signs and levels of significance of the coefficients did not change and this proved to be robust.

4.9 Discussion of Findings

The results are solid proofs that the urban concentration in Uganda is a spatial factor. The superiority of the Central region is characterized by agglomeration and concentration of the infrastructure.

The weak significance of year and month variables implies that the classification of urbanity is structural and it is not influenced by the fluctuations in a year.

These findings are consistent with the theory of spatial inequality and agglomeration that point out that industrial or structural benefits of place determine urban settlement structure.

4.10 Conclusion

In line with the methodology that has been described above, this chapter gives the detailed analysis of the data. It will start with the descriptive statistics to show how urban households are distributed across regions and time, and then diagnostic tests to make sure that the model is appropriate. The chapter interprets and reports the findings of the logistic regression analysis with the core discussing the significance and implication of the regional, temporal and seasonal effects on the categorization of households in urban areas. The chapter wraps up with the information on how the findings are applicable to the hypotheses and the theoretical frameworks of the study.

CHAPTER FIVE: CONCLUSION and IMPLICATION of POLICIES.

5.1 Introduction

The current chapter presents conclusions of the study with the highlights, makes the deductions related to the objectives set in the research, and makes evidence-based policy suggestions. It also enumerates the study limitations and the possible areas to take the research to.

5.2 Summary of Key Findings

The authors relied on national survey data regarding household concentration in urban areas in 2023–2024 to explore the determinants of household concentration in the Ugandan city. The influence of temporal change and the geographic location on the probability of a household to be categorized as urban was argued using binomial logistic regression model.

Three major conclusions are made:

To begin with, the locality of an urban household is highly determined by the regional location. The households in the Northern, Eastern and Western regions are comparatively much lower in terms of the odds of urban residency as compared to the Central region. This shows that the settlement organization of Uganda is still characterized by spatial inequality.

Second, 2023 and 2024 have no statistically significant difference in the annual variation, and therefore, the urban concentration does not change at once but gradually.

Third, the monthly effects appear limited, and it can be indicated that permanent structural variables play a significant role in the classification of settlements as compared to short-term seasonal mobility of settlements.

5.3 Conclusions

The paper draws the subsequent conclusions based on the empiric:

The urban concentration in Uganda continues to be over-concentrated in Central.

When assigning urban distribution, structural and agglomeration pressures gain more much importance than temporary changes over time.

The statistical result of a seasonal variation in the urban classification of households is very insignificant.

The findings provide micro-econometric information that is specific to Uganda and that is verifiable using theories of structural transformation and spatial inequality.

This dedicated program of investing infrastructure is very important since Northern Uganda and Eastern Uganda is far less urbanized. The extension of industrial areas, transport systems, and electricity supply in areas beyond the Central may stimulate decentralized urbanization.

5.4.2 Enhance Secondary Cities.

Unequal development and overcrowding are the issues related to the urban concentration in a single dominant region. Spatial injustices can be reduced through enhancing the secondary cities through government spending and industrial promotion.

5.4.3 Urban Planning plus Regional Policy.

To ensure that urbanization is used positively to bring about structural transformation in the country as opposed to development of informal settlements, it is crucial that cities development be incorporated in the regional development plans.

5.5 Limitations of the Study

The study is limited by the absence of the variables that could give further understanding of the processes of urban settlement, i.e., the variables in terms of income, employment, and education. Moreover, at longer time horizons, the cross-sectional design does restrict causal inference.

5.6 Areas for Future Research

Future studies can apply panel data and household socioeconomic indicators in order to have a better perception of the forces that lead to urbanization in Uganda.

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