

Demographic Analysis of the Effect of Some Determinants of Fertility on Fertility Intentions – The Rural and Urban Factor

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Abstract

A demographic analysis of the effect of some contextual determinants of fertility on fertility intentions was carried out in this study in two local governments of Ondo State namely Akure South Local Government (an urban setting) and Ifedore Local Government (a rural setting). The data used for this study was gathered with the aid of questionnaires applied on some women of reproductive age in these LGAs (511 questionnaires returned). The statistical tools used in the analysis include Binary Logistic Regression Analysis, Chi-Square Analysis, Percentages and graphical representation. Findings revealed that age at birth of first child, current age of a woman; educational status as well as place of residence significantly affect fertility intentions of women generally. However, analysis of these variables on local government basis revealed that their effects are more pronounced in the rural than in the urban area. The place of residence (rural/urban factor) is seen in this analysis to have played a strong role in the contribution of the demographic variables under consideration to the number of children desired by women in the study.

Keywords: Place of residence, fertility intentions, Binary logistic regression

1.0 Introduction

In recent times the issue of birth rate in the last few decades has been generating a lot of discussions. Some countries of the world are said to be experiencing high birth rates while others are said to be experiencing low birth rates. A high birth or fertility rate is one of the indicators for high population growth which in turn has a downward impact on the economy of many countries. High fertility poses health risks for children and their mothers, detracts from human capital investment, slows economic growth, and exacerbates environmental threats (Angeles, 2010). The fertility level appears to be the outcome of various demographic, economic, social and cultural variables, such as age at marriage, level of educational attainment, Socio-economic status, mode of living, active participation in the work force, exposure to contraceptive information and effect of conservative religious practices. Among these factors, employment status, particularly married woman's active participation in labour force, contains many of build in variables that could influence her fertility level, though researchers have not been able to establish which one is the cause and what are the effects (Muhammad A. et al, 2012).

Family size in Africa is about the highest in the world thus confirming the extreme increase in Africa population survey. For example, according to evidence submitted by African Foundation For Population and Development AFPODEV (2005), Nigeria is the tenth most populous country in the world, and the largest in Sub-Saharan Africa. Nigeria has one of the fastest population growth rate in the world. The Nigerian population has more than double since she attained nationhood in the 1960. With the data obtained from the past censuses, the Nigerian population increased sharply from 54 million in 1963 to 88 million in 1991. Presently the Nigerian population is estimated to be about 178 million.

Family background, parental education and income have been found as factors that could affect family size. Researches carried out on education revealed that women with higher education had fewer children than those with less schooling. Women's quest for knowledge has also improved drastically, they tend to delay childbearing in order to pursue education. According to Population Reference Bureau (2000), women who achieve a relatively high level of education are more likely to enter labour force before they marry or begin child bearing and ultimately have smaller families than women who marry in their teens. It could be accepted that while trying to improve herself educationally, the fertility rate could be improved.

Cochrane (1979), observed that pursuit of education could affect family size through a number of inter-related factors including women's social and economic status within the house hold, age at marriage, family size desires, access to family planning information services and use of contraception.

This study looks at two major things. Firstly, to investigate and corroborate the effect of some demographic factors like age at first birth, current age as at the time of survey, level of education and number of children currently had, on women's desired number of children as already researched out by some other authors. Secondly, to take a step further to analyse the rural-urban effect on the contribution of these variables to desired number of children by women.

The major source of information or data in this work is through the use of carefully designed questionnaire applied to over 600 women in two local government areas, out of which five hundred and eleven women responded.

1.1 AIM AND OBJECTIVES OF THE STUDY

The aim of this research is to investigate the place of residence effect on the contribution of some determinants of fertility on the number of children mothers in a typical Nigerian setting desire to have in their lifetime. The following are the objectives of the study:

- To analyse the effect of some demographic factors on the number of children Nigerian women desire to have.
- To investigate the effect of place of residence (rural or urban) on the contribution of the demographic factors to the number of children desired.

1.2 Significance of the Study

This study helps to examine the effect of some socio-economic variables on the number of children women desire to have in Nigeria and how the rural-urban factor is rubbing off on these variables. Although much work has been done by researchers in understanding the effect of various variables on fertility, not much has been done on the effects of these variables on fertility intentions, as well as the rural – urban factor effect on the demographic variables affecting number of children women desire to have in their lifetime.

1.3 Limitations of the Study

The major difficulties encountered in the course of this work came up at the data gathering stage as follows:

- getting some of the women to spare some time to answer the questionnaire, especially when they could not see any immediate personal benefit to be derived from the exercise;
- difficulty in getting the women to disclose the actual number of children they were having because of the superstition that it is an abomination to do so in Africa.

1.4 HYPOTHESIS TESTING

The following hypotheses were tested:

- There is no significant difference between the average desired number of children by women in the two local governments.
- Age at birth of first child plays no significant role in affecting desired number of children by women.
- Educational status of women plays no significant role in affecting desired number of children by women.

2.0 Literature Review

2.1 Definition and Scope

Fertility is one of the most important components of demographic change, the others being mortality and migration. It is defined as the frequency of childbearing among the population; fertility rate, therefore, refers to the relative frequency with which births actually occur within a given population. (Kpedekpo, G.M.K.1976)

2.1.1 Socio-Economic Factors

One of the most consistently observed differences in family size involves socio-economic status. Generally the higher a person's socio-economic status, the fewer children that person tends to have. The three primary indicators of socio-economic factor are education, occupation, and income.

2.1.2 Education

Data collected by the U.S. Bureau of the census related the number of children ever born to women of a certain age group to their educational attainment and noted that the number of birth becomes smaller with each increase in education attainment. Similar results have been observed in other countries. (Shapiro, 2008).

One reason that educational attainment and family size are inversely related is that the probability of never marrying increases with education, as does the average age at marriage. Also, less educated persons tend to desire more children than persons with more education, although recent survey data indicate that the difference is relatively small.

2.1.3 Fertility and Income

Fertility is often higher in poorer families within a society, and across countries those with higher average fertility tend to have lower average income. It is hypothesized that some sources of family income encourage, and other sources discourage fertility, because different sources of family income modify the economic opportunities parents must sacrifice to have another child, or the price of children in terms of parental time and market goods (Mincer 1963).

2.1.4 Occupation

The more prestigious the husband's occupation, the lower the family size tends to be. In general, white-collar workers have the smallest families. Farm workers have the largest. This ordering is not strict. Occupational groups differ substantially in family size. Some of the differences in family size among the various occupations

are connected with the life styles and incomes associated with each occupation. And they undoubtedly also reflect the varying levels of educational attainment characteristics of each occupation group.

Another important economic trend is the rise in female labor force participation. In the U.S., the fraction of women at work increased from 35% to over 65% in the postwar period.

2.1.5 Age at Entry into Marriage and Fertility Rate

Age is a great influence in fertility levels. In some communities, especially in highly developed countries, couples in their late 30s and 40s are still attempting first pregnancy due to high level of delay in starting a family. However, in African countries (example Nigeria), women as young as 14 years have given birth or are in marriage unions and at the risk of pregnancy and childbirth (Ushie, 2009).

Age at marriage is a proximate or intermediate determinant of fertility. However, the determination of when to start family or age at marriage is determined by socioeconomic variables such as educational demands, career, law, suitable suitors, and economic backgrounds (Davis and Blake, 1956, Bongaarts, 1978, Aladeniyi, et. al. 2013). In Nigeria for instance, the law states that a girl must at least complete her basic education and must be at least 18 years before entering into marriage union. However, enforcing such law in Nigeria has been an uphill task given the cultural diversity in the country (Obong, 2003). This is because culture and religion plays significant positive influence on age of entry in marriage union and on fertility level (Lutz, 2002). Uniform policy of reducing fertility by increasing age at marriage to 18 years for all Nigeria does not recognize the fact that among the Igbos and Yoruba's, the age at first marriage is already higher than 18 years. Thus in the rural areas and in the Northern Nigeria, the age at first marriage is usually between 14 and 17 years (Isiugo- Abanihe, 1996; Obong, 2003).

2.1.6 Rural and Urban Fertility Behaviour

Andorka (1978), Li and Wang (1994) and Ushie et al 2011, characterized the relationship between fertility behavior and place of residence as having a direct urban or rural trait of the place of residence and fertility. The place of residence has a property of natural or manmade environment. On the other hand, the trait in rural area is determined by families living in relatively small ecological characteristic of urban-rural differential is also connected with different monetary costs and efforts necessary for raising and educating children that are much greater in urban than in the rural areas. Mackensen (1982), posit that, one general theory of fertility that could adequately explain fertility behavior in all societies and at all periods of time is neither possible nor justifiable. He is convinced that for this reason, every explanation, observation and research of fertility behavior like any other social behavior should proceed from the concept of specific structural and cultural characteristics of each society which is the product of certain historical processes. Similarly, Ushie et al, (2011) asserts that fertility behavior of an individual is connected with structural and cultural characteristics of his/her micro and macro social environment. Boyle (2003) also stressed the importance of geographical variations in place or context in understanding fertility decision-making of individuals.

Cernic-Istenic and Kveder (2008), posits that fertility behavior of individuals is closely linked with economic and social characteristics of their life settings. Ushie et al (2011) observe that, over the last decades, the social structure and culture of rural areas in Europe and other industrially developed countries has changed significantly due to massive abandonment of agriculture by a great part of rural population and their engagement in other occupations, rural areas became multifunctional and multi-structural. The improved communication links among urban and rural areas, the entire societies became increasingly urbanized, "infected" with urban values and the urban way of life. Owing to these changes, it could be supposed that urban-rural difference in fertility behavior is diminishing or even vanishing (Ushie et al, 2011). However Cernic-Istenic and Kveder (2008) argue that changes in social behavior do not occur quickly, or at the run of one single generation. In a study to examine the factors responsible for rural urban fertility differences, Yang (2003) selected education, occupational class, income, and the participation of women in the labour force. He tested the hypothesis that the educational level, economic status, and proportion of women working had direct negative effects on a community's fertility level; and these effects varied with place of residence. Findings showed significant rural-urban difference in each of the variables. In rural areas, education had a direct negative effect, income had a positive effect, and women working had no effect on fertility. In urban areas, education and income had no direct effect on fertility, while women working had positive effect on fertility.

3.0 Methodology

3.1. Method of data collection

The data used in this analysis was collected with the use of some well structured questionnaires applied to over 600 women of reproductive age precisely to mothers. Out of the questionnaires sent out, only 511 were returned. 150 questionnaires returned for Ifedore local government (representing rural area) and 361 for Akure South local government area (representing urban area).

The questionnaire was divided into two parts, the first part was designed to gather information on the personal data of the mothers while the second part was used to obtain information about the current number of

children they already had and the number of children they desire to have. The desired number of children as a variable is an indicator of fertility intention.

Skilled and experienced members of staff of National Population Commission whose main duties are to register births in the health facilities scattered at strategic locations of the local government areas were used to administer these questionnaires on the mothers.

3.2 Method of Data Analysis

3.2.1 Binary Logistic Regression

Binary logistic regression was used to determine the level of interaction of the independent variables on number of children desired by women captured in the survey.

Logistic regression can be binomial or multinomial. Binomial or binary logistic regression refers to the instance in which the observed outcome can have only two possible types (for example, "dead" vs. "alive"). Multinomial logistic regression refers to cases where the outcome can have three or more possible types (e.g., "better" vs. "no change" vs. "worse"). In binary logistic regression, the outcome is usually coded as "0" and "1", as this leads to the most straightforward interpretation.

Prediction Probability:

$$\ln(\text{ODDS}) = \ln\left(\frac{Y}{1-Y}\right) = a+bX$$

where Y is the predicted probability of the event which is coded with 1 (desired number of children is less than 4) rather than with 0 (greater than 4)

The odds of an event happening is giving by $\text{Exp}(\beta) = \frac{Y}{1-Y}$

-2 Log Likelihood is used to check whether model fits the data. The lesser the value, the better the model. The significance of the value is tested using the χ^2 value.

Conversion of odds to probabilities:

$$Y = \frac{\text{Odds}}{1+\text{Odds}}$$

Assumptions of Binary Logistic:

Binary logistic regression requires the dependent variable to be binary. Secondly, since logistic regression assumes that $P(Y=1)$ is the probability of the event occurring, it is necessary that the dependent variable is coded accordingly. That is, for a binary regression, the factor level 1 of the dependent variable should represent the desired outcome. Thirdly, the model should be fitted correctly. Fourthly, the error terms need to be independent. Fifthly, logistic regression assumes linearity of independent variables and log odds. Lastly, it requires quite large sample sizes.

4.0 Analysis and Results

The data analyzed below was obtained through a sample survey conducted in two local government areas of Ondo State, Nigeria namely Ifedore, representing the rural setting, and Akure South, representing the urban setting.

The survey was conducted with the use of a well-structured questionnaire divided into two sections A and B. Section A was designed to get the personal data of the mothers while section B was to elicit the mothers' responses on the effect of the demographic factors on their desired number of children.

Table 1: Demographic Data

VARIABLES	IFEDORE LGA		AKURE SOUTH LGA		TOTAL	
	COUNT	%	COUNT	%	COUNT	%
AGE						
Below 20	17	3.3	24	4.7	41	8.03
21-30	60	11.74	132	25.83	191	37.57
31-40	49	9.59	136	26.61	184	36.2
Above 40	24	4.7	69	13.5	93	18.2
TOTAL	150		361		511	100
RELIGION						
Christianity	118	23.09	266	52.06	384	75.15
Islam	29	5.68	75	14.68	104	20.36
Others	3	0.59	20	3.91	23	4.49
Total	150		361		511	100
EMPLOYMENT						
Employed	115	22.51	236	46.18	351	68.69
Not Employed	35	6.85	125	24.46	160	31.31
Total	150		361		511	100
STATE OF ORIGIN						
Ondo	90	17.61	266	52.06	356	69.67
Other States	60	11.74	95	18.59	155	30.33
TOTAL	150		361		511	100
NO OF CHILDREN						
4 and below	119	23.29	286	55.97	405	79.26
5 and Above	31	6.07	75	14.68	106	20.74
Total	150		361		511	100
EDUCATIONAL STATUS						
Secondary /Below	96	18.79	103	20.16	199	38.95
Tertiary	54	10.56	258	50.49	312	61.05
Total	150		361		511	100
AGE AT BIRTH OF FIRST CHILD						
<=20	49	9.59	68	13.31	117	22.9
21-30	88	17.22	240	46.96	328	64.18
31-40	10	1.96	50	9.78	60	11.74
Above 40	3	0.59	3	0.59	6	1.18
Total	150		361		511	100
MARITAL STATUS						
Single	11	2.15	36	7.05	47	9.2
Married	130	25.44	285	55.77	415	81.21
Divorced	3	0.59	21	4.11	24	4.7
Separated	6	1.18	19	3.72	25	4.59
Total	150		361		511	100
DESIRED NO OF CHILDREN						
4 and below	94	63	272	75	366	71.63
5 and above	56	37	89	25	145	28.37
TOTAL	150		361		511	100

Table 1 above shows a general overview of the demographic characteristics of the two Local Government Areas (LGAs) of interest i.e. Ifedore LGA and Akure South LGA. Out of the 511 respondents, 150 were from Ifedore LGA while the remaining 361 were from Akure South LGA. Further details of the variables were described below using graphs and percentages.

Table 2: Classification by State of Origin

State	IFEDORE			AKURE SOUTH		
	NW	%	Cum %	NW	%	Cum %
Indigenes	80	58.8	58.8	237	73.6	73.6
Non-indigenes	54 (6 States)	10.3	69.1	85 (15 States)	9.9	83.5

*NW= Number of Women

Table 2 shows that a greater percentage (73.6%) of mothers in Akure South Local Government Area are indigenes of Ondo State while Ifedore has only 58.8% of the mothers as indigenes. However, Akure South has a wider spread of non-indigene residents than Ifedore (15 states/6 states). This indicates the urban/rural status of the two local governments.

Age Group	IFEDORE			AKURE SOUTH		
	NW	%	Cum %	NW	%	Cum %
15 -20	17	11.3	11.3	24	6.7	6.7
21- 30	60	39.0	50.3	132	36.5	43.2
31- 40	49	33.7	84.0	136	37.6	80.8
41- 50	24	16.0	100	69	19.2	100
Total		100			100	

*NW= Number of Women

Table 3: Age Distribution of Women

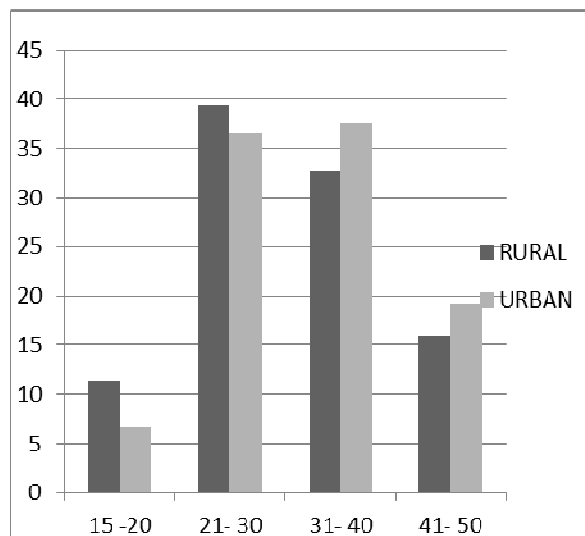


Fig. 1: Graphical Comparison of % Age Distribution by Location

Table 3 shows that the percentage of mothers age 20 and below is higher in the rural area than in the urban. Ifedore has 11.3% of such women while Akure South has 6.7%. Also there is a higher proportion of mothers aged 21-30 in the rural than in the urban. However, the urban areas have greater proportion of older mothers than the rural. This suggests that women in the rural areas go into childbearing earlier in life than those in the urban areas. This could be due to socio-economic factors like educational pursuits, employment challenges among others, which goes with life in the city. This suggests that fertility will be higher in the rural than urban area.

Marital Status	IFEDORE			AKURE SOUTH		
	NW	%	Cum %	NW	%	Cum %
Single	10	6.7		36	9.8	
Married	133	88.7		285	79.6	
Divorced	2	1.3		21	5.6	
Separated	5	3.3		19	5	
Total	150	100		361	100	

Table 4: Marital Status

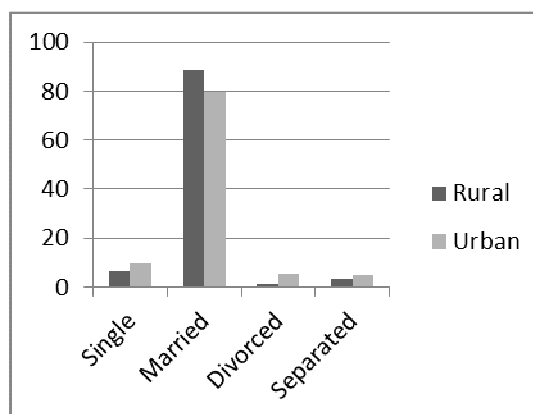


Fig.2: Graphical Comparison of Marital Status

Table 4 suggests that there is a higher percentage of single mothers in the urban area than in the rural (9.8%/6.7%). The urban area also has more cases of divorced and separated women, 5.6% and 5% as against 1.3% and 3.3% respectively. These are obviously disincentives to procreation. The rural areas on the other hand has higher percentage of married women than the urban (88.7%/79.6%), thus encouraging procreation and hence higher fertility in the rural area.

Edu. status	Ifedore			Akure South		
	NW	%	Cum %	NW	%	Cum %
Pry	37	25.0	25.0	22	6.2	6.2
Sec.	64	43.2	68.2	78	21.8	28.0
NCE	20	13.5	81.7	84	23.5	51.5
Poly	13	8.8	90.5	72	20.1	71.6
Univ.	14	9.5	100.0	102	28.4	100
Total	150	100		361	100	

Table 5: Educational Status

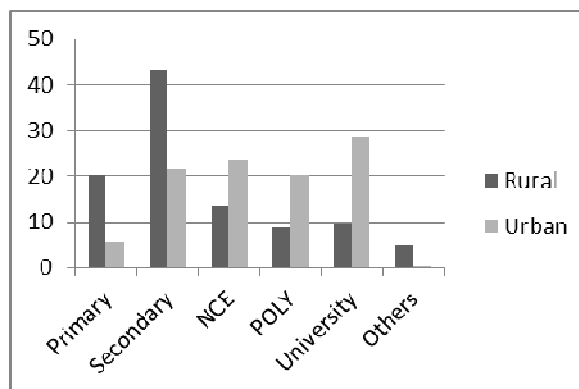


Fig.3: Graphical Presentation of Educational Status

Table 5 shows that where only 6.2% of the mothers in Akure South LG stopped at primary education, a quarter (25%) of those in Ifedore LG stopped at primary school education. Similarly, when only 21.8% of Akure South LG mothers stopped their educational career at secondary school level, going to half of Ifedore mothers (43.2%) had secondary school education as their highest. On the contrary, while Akure South LG had a whopping 72% of its mothers attaining higher education status, only 31.8% of Ifedore mothers got up to higher education, with less than 10% of these having university education.

NC	Ifedore(rural)			Akure south(urban)		
	NW	%	Cum %	NW	%	Cum %
1	32	21.3	21.3	47	13	13
2	38	25.3	46.6	80	22.2	35.2
3	25	16.8	63.4	89	24.7	59.9
4	22	14.7	78.1	64	17.7	77.6
5	14	9.3	87.4	37	10.3	87.9
6	8	5.3	92.7	24	6.6	94.5
7	5	3.3	96.0	10	2.7	97.2
8	3	2	98.0	8	2.2	99.4
9	2	1.3	99.3	1	0.3	99.7
10+	1	0.7	100	1	0.3	100
Total	150	100		361	100	

*NC= Number of Children, NW= Number of Women
 Table 6: Current Number of Children

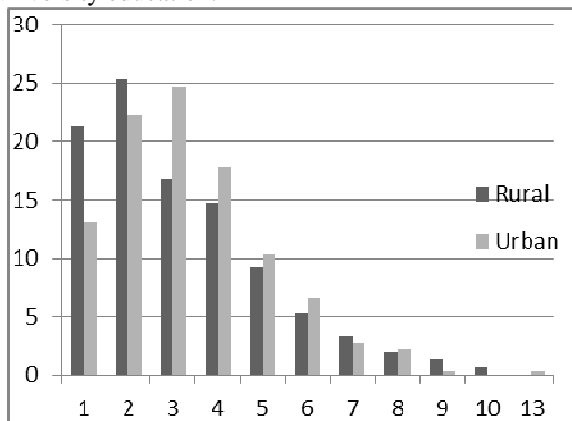


Fig.4: Graphical Presentation of current number of Children

Table 6 shows that 77.6% of mothers in the urban area have between 1 and four children as against 78.1% in the rural area. It should however be noted that greater proportion of mothers in the urban area are over forty and so must have completed their fertility cycle. On the other hand, table 3 already showed that majority of the mothers in the rural areas are still in their early years and so has the propensity to give birth to more than four children before they complete their fertility cycle thereby lowering the percentage far below 78.1%. Thus, the percentage of rural mothers having more than four children will increase considerably.

4.1 Test of Hypothesis

Hypothesis One: There is no significant difference in the average desired number of children in the two LGAs

Table 7: Desired Number Of Children

Desired No of Children	Ifedore			Akure South		
	No Of Women	%	Cumm %	No Of Women	%	Cumm %
1	4	2.7	2.7	3	0.8	0.8
2	7	4.7	7.4	37.0	10.3	11.1
3	23	15.3	22.7	98	27.1	38.2
4	60	40	62.7	139	38.5	76.7
5	29	19.3	82.0	43	11.9	88.6
6	11	7.3	89.3	28	7.8	96.4
7	2	1.3	90.6	3	0.8	97.2
8	10	6.7	97.3	10	2.8	100
9	1	0.7	98			
10	2	1.3	99.3			
11	11	-	-			
12	12	1	0.7	100		
Total	150	100		361	100	

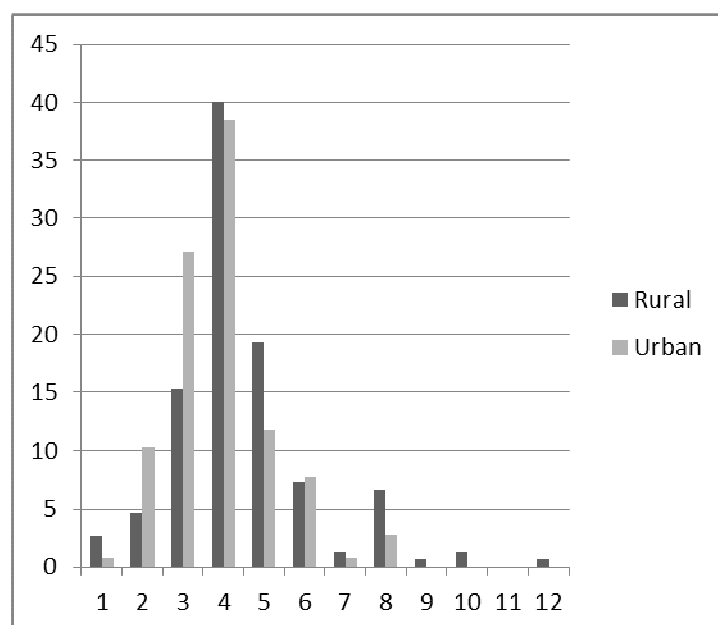


Fig 5: Graphical Presentation of Desired Number of Children

T-test for difference of Means

LGA	Means	df	Sig(2-tailed)	Decision
Ifedore	4.50	486	.000	Reject H0
Akure South	3.25			

The t - test analysis gave a p-value of 0.000 which shows that there is a significant difference between the average number of children desired by rural (4.5) and urban mothers (3.25). As shown in table 4, 37.3% of women in the rural area desire more than four children (between 5 and 12 children) while only 23.3% of women in the urban desire more than four (between 5 and 8 children). Generally speaking therefore, it is obvious that women in the rural areas desire more children than women in the urban.

Hypothesis two: Desired number of children is independent of educational status of women

A median of 4 children, which is the maximum number of children for which personal income tax relief is granted in Nigeria is regarded as the standard number of children per family in this project.

Desired No of Children		Pry	Sec	Tertiary	Total
		>4	34(39.3%)	39(28.3%)	60(23.3%)
	<=4	22(60.7%)	99(71.7%)	232(76.7%)	352

The above table reveals that across all age groups, majority of women who desire more than four (4) children are women with primary education. Majority of women who have secondary education and above desire less than four children showing that the higher the educational attainment, the lower the number of children

desired. The desire to have less than 4 children is in the ratio 1:1.18:1.28 for primary, secondary and tertiary.

The chi square value of 124.955 and p-value of 0.000 indicates that the variable ‘Educational Status’ is significant and therefore, we can conclude that Education has a significant effect on Fertility intention. Education can therefore be said to have a great effect on the fertility difference between the two LGAs.

Hypothesis Three: Age at birth of first child plays no significant role in determining rural/urban fertility intentions differential.

ABF Child Age	IFEDORE			AKURE SOUTH		
	NW	%	Cum %	NW	%	Cum %
<15	1	0.7	0.7	5	1.2	1.2
15-19	30	20.3	21	29	7.2	8.4
20-24	58	39.5	60.5	124	35.3	43.7
25-29	40	26	86.5	114	33.8	77.5
30-34	18	11.4	97.9	63	17.8	95.3
35-39	2	1.4	99.1	19	3.8	99.1
40-44	1	0.7	100	5	0.6	99.7
45-49	-	-		2	0.3	100
TOTAL	150	100		1	100	1.2

*NW= Number of Women

Table 8: Comparison Between Distribution of Age at Birth of First Child

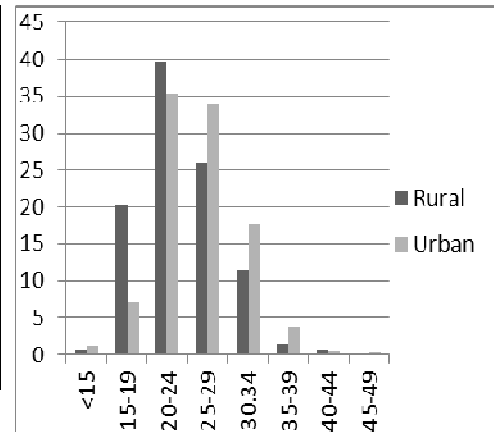


Fig.6: Graphical Presentation of Age at Birth of First Child

The chi square value of 47.360 and p-value of 0.023 indicates that the variable “age at birth of first child” is significant and therefore has a great effect in the fertility differential between the two LGAs.

21% of women in the rural area had their first child below age 20 compared to just 8.4% of women in the urban area. Also over 60% of women in the rural area had their first child before the age of 25 whereas only 43% of women in the urban area did same. This shows that women in the rural area begin childbearing earlier than their counterpart in the urban area thus having the propensity to have more children.

4.2 Effect of other demographic factors on fertility rate

1. Occupation

Occupatn	IFEDORE			AKURE SOUTH		
	NW	%	Cum %	NW	%	Cum %
Employed	114	77	77	230	65.5	65.5
Not Employed	34	23	100	121	34.5	100

*NW= Number of Women

Table 9: Distribution of Women Occupation

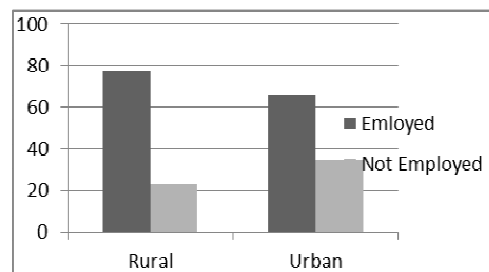


Fig.7: Graphical Presentation of Women Occupation

Table 9 and Fig. 7 show that a greater percentage of women in the rural areas are employed than in the urban areas. It should be noted however that these employed rural women are mostly farmers and traders.

2. Religion

Religion	IFEDORE			AKURE SOUTH		
	NW	%	Cum %	NW	%	Cum %
Islam	29	19.6	19.6	73	20.7	20.7
Christianity	118	79.7	99.3	262	74.2	94.9
Others	1	0.7	100	13	5.1	100

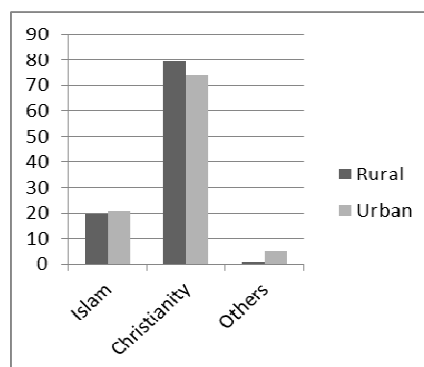


Table 10: Distribution of Women Religion

Fig.8: Graphical Presentation of Women Religion

Table 10 and Fig. 8 show that two major types of religion in Nigeria, Islam and Christianity, are almost equally spread among the mothers in the two local governments.

These imply that there are significant differences in the occupation, marital status, education, age at birth of first child and desired number of children between the two local governments in the South West region of Nigeria.

4.3 Fitting the Binary Logistic Model

Table 11: Combined Binary Logistic Model for the Two Local Government Areas

Variables in the Equation						
	B	S.E.	Wald	df	Sig.	Exp(B)
Age	-.508	.206	6.054	1	.014	.602
Religion			2.035	2	.362	
Religion(1)	-1.232	1.160	1.128	1	.288	.292
Religion(2)	-.879	1.148	.587	1	.444	.415
MaritalStatus			4.963	3	.175	
MaritalStatus(1)	-.812	1.384	.344	1	.558	.444
MaritalStatus(2)	-1.763	.863	4.175	1	.041	.171
MaritalStatus(3)	18.932	8471.551	.000	1	.998	166738993.971
EducationStatus			11.317	5	.045	
EducationSatus(1)	.260	.982	.070	1	.791	1.297
EducationSatus(2)	1.053	.948	1.232	1	.267	2.865
EducationSatus(3)	1.060	.967	1.202	1	.273	2.887
EducationSatus(4)	1.480	.993	2.224	1	.136	4.394
EducationSatus(5)	1.872	.990	3.577	1	.059	6.502
Nchildren	-.401	.093	18.791	1	.000	.670
ABChild	.077	.029	6.766	1	.009	1.080
LGAResidence	.368	.297	1.536	1	.215	1.445
Constant	2.620	1.791	2.139	1	.144	13.729

a. Variable(s) entered on step 1: Age, Religion, MaritalStatus, EducationSatus, Nchildren, ABChild, LGAResidence.

Table 11 above shows binary logistic model results, four variables proved to have significant contribution (at 5% level) to the number of children women in the study generally desire to have in life. These factors are Age (current age at the time of survey), Educational Status, NChildren (Number of children currently had at the time of survey) and ABChild (Age at birth of first child). The odds ratio for Age is 0.602 which shows that the women surveyed were almost twice less likely to have between 1 and 4 children than over 4 children as current age increases.

The odds ratio for "Educational status" shows an increasing trend from 1.297 to 6.502 which shows that the desire for less than 4 children increases as the educational status increases. For example, the odds for a

woman with university degree having less than 4 children to a primary school leaver is about 6:1.

The odds ratio for number of children currently had is 0.67. This reveals that the higher the number of children currently had by women in the survey, the less likely they are going to desire lesser number of children.

4.3.1 Logistic Regression for Ifedore

Table 12: Result of Logistic Regression for Ifedore

	B	S.E.	Sig.	Exp(B)
Age	-.346	.205	.091	.707
MaritalStatus	.939	.342	.006	2.558
Occupation	.659	.299	.028	1.933
Nchildren	-.419	.090	.000	.658
ABChild	.076	.030	.011	1.079
EducationSatus			.003	
EducationSatus(1)	.700	1.015	.490	2.014
EducationSatus(2)	1.510	.984	.125	4.525
EducationSatus(3)	1.661	.995	.095	5.264
EducationSatus(4)	2.036	1.010	.044	7.659
EducationSatus(5)	2.507	1.010	.013	12.274
Constant	-2.979	1.442	.039	.051

Table 12 above shows binary logistic model results, six variables proved to have significant contribution (at 5% level) to the number of children women in Ifedore (rural) desire to have in life. These factors are Age (current age at the time of survey), Marital status, Occupation, Educational Status, NChildren (Number of children currently had at the time of survey) and ABChild (Age at birth of first child). The odds ratio for Age is 0.707 which shows that the women surveyed are less likely to have between 1 and 4 children than over 4 children as current age increases.

The odds ratio for “Educational status” shows an increasing trend from 2.014 to 12.274 which shows that the desire for less than 4 children increases as the educational status increases. For example, the odds for a woman having a university degree having less than 4 children to a primary school leaver is about 6:1.

The odds ratio for number of children currently had is 0.66. This reveals that the women who currently have more than four children in Ifedore are less likely to have desired less than four children.

4.3.2 Logistic Regression for Akure South LGA

Table 13: Result of the Logistic Regression for Akure South LGA

Variables in the Equation						
	B	S.E.	Wald	df	Sig.	Exp(B)
Age	-.151	.231	.427	1	.514	.860
Nchildren	-.234	.100	5.511	1	.019	.791
ABChild	.042	.032	1.712	1	.191	1.043
EducationSatus			2.162	5	.826	
EducationSatus(1)	-19.516	40193.877	.000	1	1.000	.000
EducationSatus(2)	-19.145	40193.877	.000	1	1.000	.000
EducationSatus(3)	-19.193	40193.877	.000	1	1.000	.000
EducationSatus(4)	-19.441	40193.877	.000	1	1.000	.000
EducationSatus(5)	-18.887	40193.877	.000	1	1.000	.000
Occupation	.003	.342	.000	1	.994	1.003
MaritalStatus			5.216	3	.157	
MaritalStatus(1)	-2.028	1.315	2.379	1	.123	.132
MaritalStatus(2)	-1.601	1.072	2.230	1	.135	.202
MaritalStatus(3)	.163	1.495	.012	1	.913	1.177
Constant	21.860	40193.877	.000	1	1.000	31450.938

a. Variable(s) entered on step 1: Age, Nchildren, ABChild, Education Status, Occupation, Marital Status.

Table 13 above shows binary logistic model results, only one variable proved to have significant contribution (at 5% level) to the number of children women in the urban area under this study generally desire to have in life. This factor is NChildren (Number of children currently had at the time of survey). The odds ratio for number of children currently had is 0.79. This reveals that women in Akure South Local Government are less likely to desire to have less number of children than they currently have.

4.4 Discussion of Findings

The study revealed that differences in age at birth of first child which is predicated on age of entry into marital union is significantly related to rural/urban fertility differentials. According to Ushie 2009, in some communities especially in highly developed countries, couples in their late 30s and 40s are still attempting first pregnancy due to high level of delay in starting a family. However, in African countries (example Nigeria), women as young as 14 years have given birth or are in marriage unions and at the risk of pregnancy and childbirth. The determination of when to start a family is determined by socio-economic variables such as educational demands, career, law, suitable suitors, and economic backgrounds. (Davis and Blake 1956, Bongaarts 1978)

The study further revealed that the higher the educational attainment of mothers, the higher the likelihood to desire fewer children. In other words, the lower the educational status attained, the higher the desire to have many children. This is especially evident in the rural areas where fewer mothers have tertiary education. According to (Becker and Mincer 1963), education raises a woman's permanent income through earning thereby tilting her optimal fertility choices towards fewer offspring of higher quality. Female schooling may also affect fertility through its impact on the risks of child mortality. Censuses and surveys after World War II have documented for dozens of countries that child mortality rates tend to be 5 to 10 percent lower for mothers who have completed an additional year of schooling (Schultz 1981, 1997). However, the proportionate decline in fertility associated with women's education is larger than the proportionate increase in their child survival rates. Therefore, better educated women have smaller numbers of surviving children, which implies they contribute less to the overall rate of population growth than their less educated peers (Schultz 1994).

However it was observed that the level of education has no significant effect on fertility in the urban area unlike in the rural area. This could be as a result of Ushie et al 2011 findings that uneducated women who live in societies where large proportion are literate or where educational level is high may have a fertility rate different from that of uneducated women elsewhere. According to Ushie et al 2011, if aggregate educational distribution has on the whole a substantial depressing effect, fertility will decline more sharply in response to an increase in women's education than suggested by the estimates of individual level effects. In effect, this means that the higher the proportion of better educated women in a community, the lower the fertility rate in that community.

5. Conclusion

The place of residence (rural/urban factor) is seen in this study to have played a strong role in the contribution of the demographic variables under consideration to the number of children desired by women in life paying particular attention to women in the South West region of Nigeria.

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