



# Republic of Sierra Leone

## 2004 Population and Housing Census

### Analytical Report on Nuptiality and Fertility

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## **ABBREVIATIONS**

<b>ASFR</b>	Age Specific Fertility Rate
<b>ASMFR</b>	Age Specific Marital Fertility Rate
<b>CEB</b>	Children Ever Born
<b>GFR</b>	General Fertility Rate
<b>GMFR</b>	General Marital Fertility Rate
<b>GRR</b>	Gross Reproduction Rate
<b>MNCEB</b>	Mean Number of Children Ever Born
<b>NRR</b>	Net Reproduction Rate
<b>SMAM</b>	Singulate Mean Age at Marriage
<b>TFR</b>	Total Fertility Rate
<b>UN</b>	United Nations
<b>UNFPA</b>	United Nations Funds for Population Activities

## **EXECUTIVE SUMMARY**

### **Nuptiality and Fertility**

Very little research has been done on marriage and marital pattern in Sierra Leone. This is unlike fertility in which more and detailed studies, establishing the levels, patterns and trends have been carried out. Although marriage is the gateway to childbearing, past censuses have not been consistent in obtaining data on both issues, simultaneously. Consequently, it has been impossible to examine the linkage between the two variables. The 2004 census however offered this opportunity.

Regarding the issues of nuptiality, only one question on marital status was asked unlike fertility in which four questions were asked reflecting both current and retrospective childbearing. The target population for both aspects of the study was respondents, ten years and over. Over enumeration of births in the last twelve months posed an initial problem which was eventually surmounted by further cleaning of the data.

### **Methodology**

In terms of methods of analysis, both direct and indirect demographic techniques were used, as a way of obtaining more realistic rates. These involved the use of methods such as pro-rating calculation of indices of central tendency standardisation and the application of other conventional indirect methods such as Brass P/F Ratio Method.

### **Findings**

The results on marital status of the population revealed that 50.9 percent of the population ten years and over were currently married unlike 42.1 percent who were never married. Among those previously married respondents, those widowed accounted for 68.6 percent.

Regional variations in marriage suggest that the percentage of respondents who were reported as never married was highest in the Western Area, 57.6 percent, compared to less than forty percent in each of the other three provinces. This difference may reflect the fact that in the Western Area, marriages are delayed because of modernization, unlike the provinces where customs and traditions are adhered to more strictly.

More females, 56.1 percent, are reported as currently married compared to males, 45.2 percent suggesting that the proportion of females currently in union is higher than that of males.

The results further indicate that widowhood is more common among women than men. This is clearly the case among those aged 60-64 years among whom 37.0



percent of the women are widowed compared to 4.1 percent males. This disparity may be attributed, in part, to the ten year war, which consumed far more males than females.

The national data suggest that marriages are fairly stable because almost ninety percent of the population who reported being ever married were still in marital union as of the date of the census. Only 12.2 percent were reported as 'divorced', 'separated' or 'widowed'.

With respect to type of marriage, the results indicate that more respondents are monogamously married, 36.0 percent, compared to 14.9 percent who were in polygamous union.

At administrative level, polygamy is most common in the districts of the Northern Province. These are to a large extent Muslim-dominated areas.

The Singulate Mean Age at marriage (SMAM) was used as an indirect estimate of the mean number of years lived by a cohort of women before marriage because no such question was asked. The results point to the fact that at national level, women stay single for up to 21 years indicating a three-year increase over the results of 18 years based on the 1985 census results. This delay is consistent with the tendency to delay marriage as noted earlier.

The SMAM was lowest in the Northern Province 19.5 years and highest in the Western Area, 25.6 years. This in effect suggests a delay of six years between women in the two extreme regions. The results further reveal differentials in the SMAM in terms of education, and place of residence. At national level the results are in the expected direction namely the SMAM increases with educational level; urban areas also have a higher SMAM (23.5 years) than rural areas (19.1 years).

Regarding fertility, various period and cumulative fertility rates were estimated and compared with previous levels. Generally, levels of fertility have declined only slightly in the last intercensal period, 1985-2004. Results of the 2004 census suggest a Total Fertility Rate of 6.1 children per woman, compared to 6.3 children based on the 1985 census returns. Other indicators of fertility such as the Crude Birth Rate (48.2 births per thousand population) and the General Fertility Rate (192.0) also show little changes over time.

In terms of regional differentials, the Southern Province continues to have the highest levels of fertility, based on both the TFR and the CBR (6.7 and 51.0 respectively) whilst the Western Area has the lowest levels of fertility irrespective of the index. (TFR is 4.2 and CBR 37.3). Over the years, this position has been maintained.

Various socio-demographic differentials of fertility were reported in the analyses. Irrespective of used for the indicator used for education, the analyses reveal an

inverse relationship with fertility, measured in terms of the mean number of children ever born. At national level, women with no education have 3.3 children compared to 1.5 children for women with tertiary education.

The results also indicate that rural women on average have 3.6 children compared to 2.7 children for urban women. Generally, rural-urban differentials are small and are consistent with past findings.

With respect to the issue of replacement, both the GRR and the NRR indicate that women adequately replace themselves with a maximum of three daughters by the end of their reproductive span.

Findings on marital fertility indicate that, as expected, married women have higher levels of fertility, 3.9 children, than single women (0.8). This holds true for all regions. This suggests that premarital births are low accounting for just about one child.

At national level the fertility of married women based on the mean number of children ever born is almost five times higher than that of never married women. (3.9 and 0.8 children respectively).

The census results show that irrespective of administrative region and place of residence, women who are polygamously married have a higher mean number of children ever born than their counterparts who are in monogamous union. At national level, monogamously married women reported 3.6 children compared to polygamous women who reported 4.4 children.

Finally, the analysis on childlessness suggest that at national level up to 8.1 percent of women aged 45-49 years have never had a child even though these women are close to menopause. As expected childlessness is more prevalent among 15-19 years old who 83.4 have never had a birth. This decreases with age.

## **Conclusions and Implications**

In the intercensal period 1985 to 2004, changes in the pattern of marriage were observed. Firstly, the percentage of persons 'never married' increased by 13.6 percent from 21.9 percent in 1985 to 35.5 percent in 2004.

Conversely, the proportion of persons contracting marriage has declined in the same period. This situation could possibly be the result of stringent economic conditions in the post war years, in addition to the increasing trends of urbanisation.

Regarding fertility, childbearing appears to have been delayed by five years as the peak of the Age Specific Fertility Rate curve was reported at age group 25-29 years unlike previous situations in which the peak was at age 20-24 years.

Secondly, the highest level of fertility in terms of the TFR has shifted from Pujehun district in 1985 to Moyamba district based on the 2004 census.

With respect to the level of childlessness, the census results suggest that close to one tenth of the women close to menopause are without children.

These levels and trends in marriage and fertility have complementary implications for the country:

- i. Demographically – the country would continue to have a young population, with a high age dependency burden, an almost constant age structure as well as a low median age.
- ii. Socio-economically – a large school age population is expected with its attendant problems of providing the necessary infrastructure (teachers, classrooms). The problem of unemployment may continue to pose a problem especially among the youthful population, unless there are dramatic improvements in the national economy.
- iii. As the country continues to display typical signs of a young population, the achievement of a demographic transition may become even more illusive.

## **1.0 INTRODUCTION**

### **1.1 Nuptiality**

Demographic research in Sierra Leone to a large extent has been centred on fertility (Harrel-Bond 1975, Kargbo 1984, Gage 1986, Okoye 1980), mortality (Okoye 1980, Kandeh and Dow 1980) and migration. Very little has been done in the area of nuptiality. The few studies carried out by sociologists, the Ministry of Social Welfare and lawyers have dwelt on the description of marriage procedures and how marriages are contracted (Aldridge, 1910, Aubert, 1936). A deviation from this norm was made by Harrel-Bond (1976). Her investigation centred on changes influenced by modernization, regarding family type in order to ascertain family formation attitudes. Kainganeh (1988) examined the dynamics of marriage and how this relates to childbearing in the Greater Freetown.

Questions on the marital status of respondents have not been consistently included in past National Census. In the 1963 and 1974 censuses, no questions were asked on nuptiality. In the last two censuses however such questions have formed part of the questionnaire. This inconsistency has made it almost impossible to determine the national trend and patterns of marriage over time. Available evidence in Sierra Leone based on past census reports of 1985, suggests that over three fourths of the population 10 years and over were married at least once as of the date of the census (December 1985).

### **1.2 FERTILITY**

Both the 1974 and 1985 census data indicate that fertility levels have been high. The Total Fertility Rate (TFR) for example, has ranged from 6.5 in 1974 to 6.3 children per woman in 1985. Similarly, the national Crude Birth Rate has ranged from 49.8 in 1985 to 50.2 in 1974 per thousand population.

These rates reflect the levels of fertility in the early seventies based on United Nations estimates (UN, 2001), implying that little change in the level of childbearing has occurred over a thirty-year period. Estimates for 1950-1955 for the TFR also suggest only slightly lower levels – 6.1 children (UN, 2001). Consequently, over a period of fifty years there has hardly been any decline in the level of fertility at national level. The average number of children per women has remained essentially six.

In Government's view, fertility levels have been considered as 'Too high' since 1976 although no forceful interventions have been implemented (UN, 1989). A National Population Policy was formulated in 1988 and adopted in 1992. Its level of implementation has been low and its contribution to reducing fertility levels has been negligible. The formulation of a National Family Planning Programme in 1992 and the implementation of this programme have also not resulted in any

drastic change in the level of fertility. The implementation of both programmes was greatly hampered by the pursuit of the eleven-year rebel war. The current census data therefore provide an opportunity for finding out the extent and direction of change in fertility if there has been any.

## **2.0 DATA SOURCE**

### **2.1 Nuptiality**

In the 2004 Population and Housing Census, data were collected on the marital status of the respondents, ten years and over, at the time of the census (December 2004). This information was used to determine the marital composition of the population. The following categories of marital composition were used: 'Never married or single'; 'Engaged', 'Currently Married' (polygamously and monogamously), 'Separated', 'Divorced' and 'Widowed'. The responses were based on the respondent's perception of their marital status rather than on any strict definition of marriage (Statistics Sierra Leone, 2004). During the training sessions prior to the census field exercise, Enumerators were asked to record the respondents' marital status as given. Cognisance was also taken of the fact that there could be various forms of marriage such as civil, religious, and customary or cohabiting as recognized by laws of Sierra Leone.

A total of 63,986, that is 1.9 percent, of all respondents 10 years and over, did not state their marital status. These were incorporated, by pro-rating into the rest of the population. More than fifty percent of those who did not state their marital status were males and constituted 53.6 percent of the entire group.

The population "engaged" was combined with those never married since, for most of the former respondents; they had not entered into the final contract of marriage. Those respondents who reported being monogamously and polygamously married were together considered as currently married.

### **2.2 Fertility**

Two measures of fertility were used in the 2004 national census. Firstly, period fertility was assessed using a question on births in the last twelve months prior to the census (December 2003). In order to assess retrospective fertility, a question on children ever born was asked. Both questions targeted women between 10 and 54 years old. Similar questions were asked in the previous two censuses (1974 and 1985), thereby making it possible to compare the various levels of fertility indices over time.

### **2.2.1 Evaluation of Fertility Data**

The enumerated data on fertility revealed the following of inconsistencies:

- i. Close to 7000 births (constituting about 5.3 percent of all births) were inaccurately reported as occurring during the reference period - twelve months before the census. As noted above, only births up to December 2003 were used in the analyses.
- ii. Regarding the quality of the cumulative fertility data, respondents 10-14 years old were reported as having given birth up to 10 children. A similar pattern of error was detected among 15-19 year olds.
- iii. Considering these inaccuracies, it was obviously necessary to review the data prior to calculating the required indices. With respect to births in the last twelve months, all 'excess' births reported from February to November 2003 were discarded. Problems with the retrospective fertility data were also cross-checked with the raw data to improve its quality.

### 3.0 ANALYSES

#### 3.1 Nuptiality

##### 3.1.1 Marriage Pattern at National Level

Data on marital status were cross-classified by age, as shown in Table 1.

**Table 1: Percentage Distribution of the Population Age 10 Years and Over by Marital Status and Age for Sierra Leone**

Age Group	Never Married	Currently Married	Separated	Divorced	Widowed	Total
10 - 14.	97.0	1.7	0.1	0.1	1.1	100 (566163)
15 - 19	79.9	18.6	0.3	0.2	1.0	100 (536507)
20 - 24	52.8	44.9	1.0	0.5	0.8	100 (414117)
25 - 29	31.1	65.8	1.5	0.7	0.9	100 (404754)
30 - 34	17.7	77.7	2.0	1.0	1.6	100 (312031)
35 - 39	10.9	83.5	2.1	1.1	2.4	100 (299509)
40 - 44	8.8	82.6	2.6	1.5	4.5	100 (213169)
45 - 49	6.8	82.7	2.5	1.6	6.4	100 (176903)
50 - 54	5.7	78.4	2.8	1.7	11.4	100 (128387)
55 - 59	4.7	76.5	2.8	1.9	14.1	100 (84815)
60 - 64	4.7	68.5	2.7	1.8	22.3	100 (87675)
65+	4.3	60.5	2.5	1.8	31.0	100 (215254)
<b>Total</b>	<b>42.1</b>	<b>50.9</b>	<b>1.5</b>	<b>0.8</b>	<b>4.8</b>	<b>100 (3439284)</b>

The results in the above Table indicate that as of the census date, close to 60.0 percent (58.0) of all respondents, 10 years and over, were ever-married<sup>1</sup>. One half of the entire sub-population were reported as being currently married. Previously married respondents accounted for a total of 7.0 percent whilst those widowed represented 4.8 percent of this total.

Irrespective of age, the percentage of respondents who had never married, as expected was highest among 10-14 year olds (97.0). This percentage consistently declines with age suggesting a negative relationship.

##### 3.1.2 Crude Marriage Rate

The crude marriage rate is a gross rate that indicates the relative frequency of marriage as reported during the census. At national level the crude marriage rate is estimated as 405 per one thousand persons in the population, irrespective of the age and sex of the respondents.

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<sup>1</sup> This comprises respondents currently married, widowed, divorced and separated.



The rate is reported for various administrative regions in Table 2.

**Table 2: Crude Marriage Rate by Administrative Region and Sex**

Administrative Region	Crude Marriage Rate Per Thousand Population		
	All	Male	Female
<b>Sierra Leone</b>	<b>401</b>	161	239
<b>Eastern Province</b>	<b>421</b>	181	239
Kailahun	402	163	240
Kenema	579	252	327
Kono	562	254	308
<b>Northern Province</b>	<b>416</b>	156	260
Bombali	514	196	317
Kambia	413	154	258
Koinadugu	412	152	260
Port Loko	422	158	264
Tonkolili	421	158	263
<b>Southern Province</b>	<b>426</b>	170	255
Bo	603	250	353
Bonthe	482	192	290
Moyamba	450	174	276
Pujehun	420	165	256
<b>Western Area</b>	<b>317</b>	136	181
Western Rural	364	155	208
Western Urban	307	132	175

Based on the Table, marriage is highest in the Southern Province and lowest in the Western Area. In terms of districts, the highest Crude Marriage Rate is reported in Bo District (603 per thousand population) and lowest in Western Urban (307 per thousand population). The data also indicate that irrespective of province or district the rates for females are higher than those for males. With respect to females the rates range is from 353 in Bo to 175 in Western Urban. For males the rates range from 254 in Kono to 132 in the Western Urban. For both males and females the rates are lowest in the Western Urban District. Although the Crude Marriage Rate provides some glimpse into the level of marriage, the fact that the denominator takes into consideration those not at risk of marrying, suggests that it should be interpreted with caution.

### 3.1.3 Variation in Marital Status by Region

Owing to socio-cultural differences among the various administrative regions, differences in marital status are expected. The proportion of respondents who were never married varies by regions, as in Table3. The proportion of single respondents is highest for Western Area (57.6). For the other three regions, the proportions are as follows, East (39.3), North (37.9), and South (36.7). There are only small differences among the provinces. This suggests that there is considerable similarity in the proportions of persons entering into marital union in the provinces. However, large variations exist between the Western Area and the individual Provinces. The proportion currently married is lowest in the Western

Area and highest in the Northern Province, although the difference at provincial level is again small.

**Table 3: Percentage Distribution of the Population Aged 10 Years and Over by Marital Status by Region for Sierra Leone**

Administrative Region	Never Married	Currently Married	Separated	Divorced	Widowed
<b>SIERRA LEONE</b>	<b>42.1</b>	<b>50.9</b>	<b>1.5</b>	<b>0.8</b>	<b>4.8</b>
<b>EAST</b>	39.3	53.1	1.5	0.8	5.3
<b>NORTH</b>	37.9	55.5	1.2	0.9	4.5
<b>SOUTH</b>	36.7	55.1	1.6	0.7	5.9
<b>WEST</b>	57.6	36.5	1.5	0.8	3.5

Differences in the proportions of respondents currently married between the Western Area and the Provinces may reflect the tendency to maintain traditional values of marriage in the provinces as opposed to the Western Area, where modernization may gradually be eroding these values. It is not surprising therefore that the percentage of single respondents is highest in the Western Area.

### 3.1.4 Marital Status by Place of Residence and Age

The timing of marriage is expected to vary by place of residence because of the inhibiting effect of modernization in contracting marriage in the urban areas in contrast to the rural areas where customs and traditions favor early marriages. The proportions of persons married by place of residence and age are presented in Table 4.

**Table 4: Percentage Distribution of the Female Population of Age 10 Years and Over by Marital Status, Place of Residence and Age for Sierra Leone**

Age Group	Never Married		Currently Married		Previously Married	
	Rural	Urban	Rural	Urban	Rural	Urban
10-14	96.3	98	2.3	0.7	1.4	1.3
15-19	73.6	88.4	24.8	10.1	1.6	1.5
20-24	40.4	67.2	57.2	30.7	2.4	2.1
25-29	21.9	44.1	74.9	52.8	3.2	3.1
30-34	11.9	26.8	83.8	68.3	4.3	4.9
35-39	7.2	17.3	87.6	76.4	5.2	6.3
40-44	6.2	13.4	85.4	77.9	8.4	8.7
45-49	5	10.2	84.9	78.6	10.1	11.2
50-54	4.3	8.2	79.7	76	16	15.8
55-59	3.6	6.9	77.7	74.2	18.7	18.9
60-64	3.7	7.1	69.4	66.5	26.9	26.4
65 +	3.5	6.3	61.9	56.9	34.6	36.8
<b>Total</b>	<b>35.1</b>	<b>52.7</b>	<b>57.3</b>	<b>41.2</b>	<b>7.6</b>	<b>6.1</b>

Table 4 shows that the percentage of married women on the whole is lower for urban areas than rural settlements. In all, 57.3 percent of all women are currently married in all rural areas compared to 41.2 percent in the urban areas. This pattern remains consistent even when age is controlled for. The differences in the proportion married between rural and urban areas are largest especially for age group 20 to 34 years. Beyond age 35 years the difference is reduced considerably. Finally, in both the urban and rural areas, the percentage of previously married women increases positively with age and the proportions are similar at all ages.

### **3.1.5 Age and Sex Differential in Marriage**

Both the age and sex of the respondents have considerable effects on the pattern of marriage.

The 2004 Population and Housing Census data in Table 5 below reveal the following:

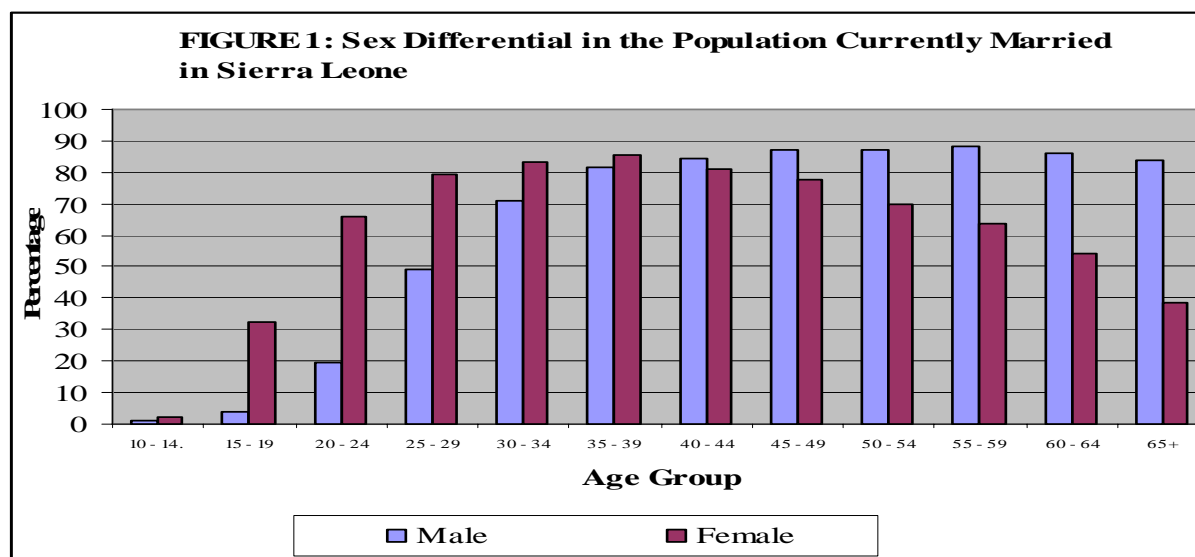
- i. Considerable variation in the percentage of males (45.2 percent) and females (56.1 percent) who reported being currently married
- ii. A much wider disparity is noted between the sexes regarding their single status. Whereas a third of all women were unmarried as of the date of the census, more than one half of all males were in this category.
- iii. Far more women are widowed (7.9 percent) compared to men (1.5 percent)
- iv. The “intensity” of widowhood when looked at by age, is much greater among women than men. At age 60-64 for example 37.0 percent of women in the age group had lost their male spouses whilst only 4.1 percent males in the same age group faced the same plight.
- v. Widowhood among women increases consistently after age 40 years.
- vi. The results also indicate that marital dissolution by divorce is rare among both sexes but separation is a more common practice. It is not unlikely that very few couples bother to go through the legal process of divorce. A quicker and obviously less expensive process of marital dissolution may be adopted.

Yumkella and Kaindaneh (1992) found similar patterns of marriage by age for the population 10-65 years although no analysis by sex was done.

**Table 5: Percentage Distribution of the Male and Female Population 10 Years and Over by Marital Status and Age Group**

Age Group	Never Married		Currently Married		Separated		Divorced		Widowed		Total	
	M <sup>1</sup>	F <sup>2</sup>	M	F	M	F	M	F	M	F	M	F
10 - 14	97.7	96.4	1	2.3	0.1	0.1	0.1	0.1	1.2	1.1	100(291340)	100 (274823)
15 - 19	94.7	65.9	4	32.4	0.1	0.6	0.1	0.3	1.1	0.8	100 (261782)	100 (274725)
20 - 24	78.9	31.3	19.6	65.9	0.5	1.4	0.2	0.6	0.7	0.8	100 (188833)	100 (225284)
25 - 29	48.8	16.9	49.1	79.3	1	1.8	0.6	0.8	0.5	1.2	100 (181050)	100 (223704)
30 - 34	26.1	11	70.7	83.4	1.8	2.2	0.9	1	0.5	2.4	100 (139656)	100 (172375)
35 - 39	14.7	7.6	81.7	85.2	1.9	2.3	1	1.1	0.7	3.8	100(138068)	100 (161441)
40 - 44	11.1	6.7	84.1	81.2	2.3	2.8	1.4	1.5	1.1	7.8	100 (104641)	100 (108528)
45 - 49	7.7	5.7	87.3	77.5	2.2	2.9	1.4	1.7	1.3	12.2	100 (94219)	100 (82684)
50 - 54	6.4	4.9	87	69.9	2.7	2.9	1.7	1.8	2.2	20.5	100 (64303)	100 (64084)
55 - 59	4.9	4.6	88.2	63.8	2.6	3.1	1.8	1.9	2.5	26.6	100 (44048)	100 (40767)
60 - 64	5.1	4.3	86.1	54.4	2.8	2.6	1.8	1.7	4.1	37.0	100 (39093)	100 (48582)
65+	4.2	4.4	83.7	38.8	2.9	2.2	2	1.6	7.2	53.1	100(103866)	100 (111388)
<b>Total</b>	<b>51.3</b>	<b>33.5</b>	<b>45.2</b>	<b>56.1</b>	<b>1.3</b>	<b>1.6</b>	<b>0.7</b>	<b>0.9</b>	<b>1.5</b>	<b>7.9</b>	<b>100 (1650899)</b>	<b>100(1788358)</b>

Further comparison between the percentage of males and females currently married is made in Figure 1.



It is clear in Figure 1 that women marry at much younger ages than men. At age group 20 to 24 years, for example, 65.9 percent of the women are already in marital union, whilst only 19.6 percent of males are married (a difference of 46.3 percent). The data also reveal that the percentage of married women consistently declines from beyond age 40 years. This appears to have corresponding

1 'M' represents Male.  
2 'F' represents Female

increases in the proportion of widowed women in Table 5. Males tend to enter into marital union later than females.

### 3.1.6 Marital Dissolution

An attempt to measure marital dissolution is made in terms of the population ever married and those that are previously married. On the whole, the national data suggest that marriages are fairly stable as only 12.2 percent of the populations were not currently in union as of the date of the census. Among males, 7.1 percent were not currently in union in one way or the other, compared to 15.6 percent females – more than twice the prevalence among males.

### 3.1.7 Changing Marriage Patterns

In the intercensal period, considerable changes in the pattern of marriage have occurred as seen in Table 6 below. In the period, the proportion of persons 'never married' increased by 13.6 percent. There is a corresponding decline of 10.4 percent among currently married respondents. With respect to the other categories of marital status, few changes are noticed. Similarly, the age pattern of widowhood especially after age 49 years has remained unchanged although the magnitude has essentially increased by varying degrees in the 2004 census.

One of the main observations in Table 6 is that the proportion of persons contracting marriage has been on the decrease in the intercensal period. Although it is difficult to provide justification for such a trend it is not unlikely that the post war period and its accompanied economic constraints may have contributed to it. It is also possible that as a way round this problem respondents have resorted to consensual union which was not one of the categories of marriage in the census questionnaire.

**Table 6: Percentage Distribution of Women Aged 10-65+ According to Current Marital Status by Current Age for 1985 and 2004 Censuses**

Age Group	Never Married		Currently Married		Separated		Divorced		Widowed	
	1985*	2004	1985	2004	1985	2004	1985	2004	1985	2004
10 - 14	89.91	91.39	7.46	2.26	0.14	0.09	0.02	0.10	0.06	1.00
15 - 19	39.75	64.47	57.52	31.63	0.98	0.56	0.25	0.29	0.33	0.8
20 - 24	15.33	30.96	80.66	65.32	1.91	1.32	0.50	0.63	0.73	0.8
25 - 29	7.05	16.75	88.66	78.79	1.95	1.76	0.55	0.84	1.08	1.2
30 - 34	4.08	10.90	90.27	82.94	2.20	2.15	0.65	1.10	2.02	2.4
35 - 39	2.75	7.57	90.17	84.84	2.39	2.25	0.82	1.14	3.26	3.8
40 - 44	2.45	6.68	86.84	80.83	2.68	2.76	1.07	1.48	6.34	7.8
45 - 49	2.04	5.70	82.60	77.14	3.03	2.87	1.33	1.67	10.45	12.2
50 - 54	2.11	4.89	75.89	69.46	3.17	2.91	1.42	1.79	16.77	20.4
55 - 59	1.90	4.56	68.80	63.54	3.19	2.99	1.55	1.93	23.88	26.6
60 - 64	1.92	4.24	61.43	54.08	2.89	2.58	1.39	1.72	31.60	37.0
65+	1.84	4.26	40.44	60.06	2.41	2.47	1.34	1.74	53.04	53.0
<b>Total</b>	<b>21.86</b>	<b>35.5</b>	<b>66.5</b>	<b>56.1</b>	<b>1.87</b>	<b>1.6</b>	<b>0.68</b>	<b>0.9</b>	<b>8.07</b>	<b>7.9</b>

\* Obtained from 1985 Census Analytical Report.

### **3.1.8 Type of Marriage**

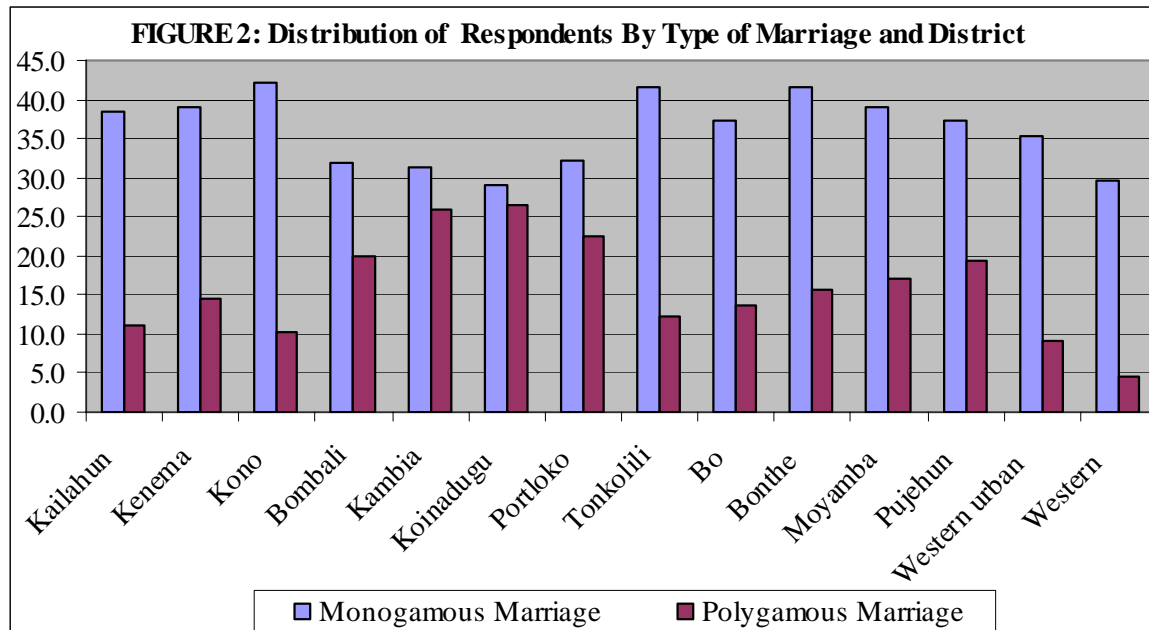
#### **3.1.8.1 Polygamy and Monogamy**

The subject of polygamy and monogamy are important in a discussion of marriage in Sierra Leone because of their cultural implications for fertility and ultimately population growth. Polygamy is usually defined as the state of being married simultaneously to more than one spouse and monogamy is when a man is married to one wife. The more common form of polygamy is where a man marries more than one wife and polyandry is when a women marries to more than one man. Little if anything, is documented on polyandry in Sierra Leone.

Men who enter into polygamous marriages do so for various reasons: the need for assistance on their farm underlies the tendency to marry many women in order to produce many children to assist in the family business. Men who think children are some sort of insurance toward old age also marry more than one wife, so that their many children could take care of them in their old age. Others also decide to marry more wives when they fail to get the preferred sex, particularly sons, from their current wife or wives. For all respondents currently married, 14.9 percent reported being in polygamous unions and 36.0 percent are monogamously married.

#### **3.1.8.2 Variation in Type of Marriage by District**

Whilst monogamy remains prevalent at both the national and district levels, variations do exist at district level as seen in Figure 2. The most significant being that there are more polygamously married respondents in Koinadugu (26.47%) than in other districts. This is followed by Kambia (25.59%). The Western Area (4.64%) has the least percentage of polygamously married respondents. One reason could be that the Western Area is an urban setting where agriculture is not a predominant economic activity, so the demand for physical labour is very low. Consequently men do not marry many wives. The effect of modernization on the types of marriage cannot be examined in this analysis although it is assumed that it could lead to the decline of customs and traditions, thereby reducing the chances of polygamy.



### 3.1.9 The Singulate Mean Age At Marriage (SMAM)

The Singulate Mean Age at Marriage refers to the mean number of years lived by a cohort of women before marriage (Shyrock and Siegel, 1976). The method of estimation, in the absence of direct estimates, uses the proportions of never-married women in each age group. An underlying assumption of the method is that the mean age at marriage is equal to the mean duration of single life (Yumkella and Kaindaneh, *ibid.*). The method results in an estimate of the average number of years lived in the single state by those who married before age 50 (Shyrock and Seigel, 1976. *op.cit* pp167-8).

Apart from indicating the timing of marriage, the SMAM also gives an indication of the extent of exposure to childbearing. Early marriage is thought to be positively related to the number of children ever born in societies where both pre-marital births and contraceptive use are low.

In estimating this index of marriage an indirect technique was used since no question was asked on age at first marriage in the 2004 national census. Hajnals method of estimating SMAM was adopted. For Sierra Leone the SMAM is 21 years.

#### 3.1.9.1 Differential in Singulate Mean Age at Marriage (SMAM)

Here we looked at the relationship between selected background variables and SMAM.

### 3.1.8.1.1 Differential by Place of Residence and Administrative Region

The results of these analyses for females are presented in Table 7.

**Table 7: Singulate Mean Age at Marriage for the Female Population 15-54 Years by Region and Place of Residence**

Region	Place of Residence			1985 Estimates
	Rural	Urban	All	
<b>Sierra Leone</b>	<b>19.1</b>	<b>23.5</b>	<b>21.0</b>	<b>18.0</b>
<b>Eastern Province</b>	<b>19.5</b>	<b>20.9</b>	<b>20.0</b>	<b>NA*</b>
Kailahun	20.5	20.8	20.6	17.1
Kenema	18.4	21.5	19.7	17.0
Kono	19.6	20.2	19.8	17.3
<b>Northern Province</b>	<b>19.0</b>	<b>21.4</b>	<b>19.5</b>	<b>NA</b>
Bombali	19.3	22.2	20.0	17.6
Kambia	18.7	19.8	18.9	16.9
Koinadugu	19.4	20.9	19.6	17.4
Port Loko	18.8	22.2	19.4	17.2
Tonkolili	18.8	20.9	19.2	17.5
<b>Southern Province</b>	<b>18.8</b>	<b>22.5</b>	<b>19.9</b>	<b>NA</b>
Bo	18.4	22.7	20.5	17.6
Bonthe	18.5	23.6	19.5	17.3
Moyamba	19.0	21.8	19.3	17.8
Pujehun	19.3	20.9	19.5	17.1
<b>Western Area</b>	<b>22.6</b>	<b>26.3</b>	<b>25.6</b>	<b>NA</b>

\* *Not Available*

The overall results for the regions range from 25.6 years in the Western Area to 18.9 years in Kambia. For most of the districts, marriage is contracted in the late teens. Data on place of residence indicate that marriage is contracted earlier in the rural areas than in the urban areas. At national level, there is a difference of over four years. The least variation occurs in Kailahun where there is only a difference of 0.3 years, suggesting little or no rural-urban differential in the timing of marriage.

Compared to the results of the 1985 national census, the current estimates suggest that there has been an increase in the age of entry into marital union in all regions. This increase varies, between 3.5 years as the highest, in Kailahun and 1.5 years as the least, in Moyamba. These results indicate that marriages are being delayed suggesting that there is a reduced exposure to childbearing if pre-marital births childbearing is held constant.



### 3.1.9.1.2 Differential in SMAM by Educational Level

Education is expected to have a negative effect on the age at marriage because of prolonged schooling. This ultimate effect could lead to a reduction in the level of fertility amongst women.

Table 8 below displays the SMAM of women by educational level achieved.

**Table 8: Singulate Mean Age at Marriage by Educational Level of Women and Administrative Divisions**

Administrative Region	Educational Level			
	None	Primary	Secondary	Tertiary
<b>Sierra Leone</b>	<b>21.1</b>	<b>22.1</b>	<b>26.5</b>	<b>30.1</b>
<b>Eastern Province</b>	<b>16.7</b>	<b>21.4</b>	<b>24.7</b>	<b>26.6</b>
Kailahun District	21.6	21.6	25.9	21.1
Kenema District	18.2	21.2	24.5	27.0
Kono District	19.6	21.1	23.8	30.5
<b>Northern Province</b>	<b>20.4</b>	<b>20.9</b>	<b>24.6</b>	<b>27.2</b>
Bombali District	22.5	20.3	24.4	24.8
Kambia	22.1	20.3	24.7	23.6
Koinadugu	19.4	24.5	25.3	29.9
Port Loko	20.0	20.4	24.4	29.5
Tonkolili	19.2	21.3	24.8	28.5
<b>Southern Province</b>	<b>19.6</b>	<b>21.0</b>	<b>25.1</b>	<b>28.0</b>
Bo	20.1	21.1	24.4	27.3
Bonthe	20.0	21.3	24.4	NA
Moyamba	18.2	21.0	24.5	24.3
Pujehun	18.2	20.2	25.2	27.3
<b>Western Area</b>	<b>26.8</b>	<b>25.0</b>	<b>28.3</b>	<b>30.8</b>
Rural	25.3	23.1	25.1	30.8
Urban	27.0	25.5	28.6	30.8

At national level the Singulate Mean Age at Marriage increases with level of education. This is the general trend even at regional level. Completion of primary school suggests a delay of about four years before entering into marriage union. In Kailahun and to some extent in Kambia the reduced age at marriage could have resulted from the possibility that these women had married before achieving tertiary education.

## 3.2 FERTILITY

### 3.2.1 Estimates of Period Fertility

The reported Age Specific Fertility Rates and their implied Total Fertility Rates are used as indicators of current fertility during the reference period. These results are presented in Table 9 below.

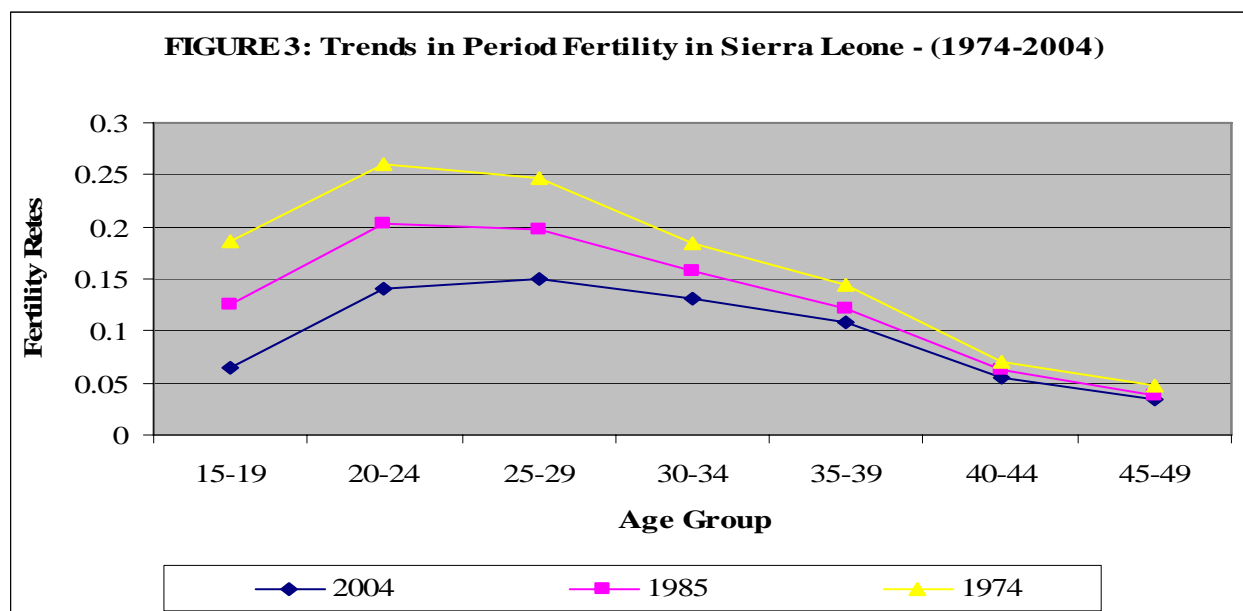
**Table 9: Reported Age-Specific Fertility Rates and Implied Total Fertility Rates Based on the 2004 Census and Previous Censuses**

Age of Woman (Years)	Year of Census		
	2004	1985	1974
15 – 19	0.0650	0.1255	0.1860
20 – 24	0.1405	0.2039	0.2600
25 – 29	0.1492	0.1981	0.2460
30 – 34	0.1308	0.1578	0.1840
35 – 39	0.1074	0.1223	0.1438
40 – 44	0.0547	0.0625	0.0710
45 – 49	0.0342	0.0389	0.0472
<b>Implied TFR</b>	<b>3.4090</b>	<b>4.5450</b>	<b>5.691</b>

The reported fertility levels indicate a systematic decline for each age group over the thirty-year period (1974 to 2004). This is also reflected in the Implied Fertility Rates, which indicate a forty percent decline from 1974 to 2004.

These data also suggest that although the fertility of young persons (15-24 year olds) constituted about 30.1 percent of all births in 2004, there is a significant decrease from the 1974 situation in which the same target population contributed about 39.2 percent of all births. These point to the possibility that there has been a decline in the contribution of young persons to overall fertility. Teenage births for 13-19 year old contributes about 10.0 percent of all births in the last twelve months period to the 2004 Census.

As further revealed in Figure 3, there has been a change in the timing of births over the years, based on the reported levels of fertility.



The 2004 data indicate a late peak of childbearing at age 25-29 years compared to the early childbearing pattern of the previous census in which the peak of the fertility schedule was at age 20-24 years. This could suggest that births are being delayed.

### 3.2.1.1 Estimation of Child Woman Ratio

This fertility index measures the average number of children under five years per one thousand women in their reproductive span. The results based on the reported data are presented in Table 10.

**Table 10. Child Woman Ratio for Sierra Leone by Province and District**

	<b>Number of Women 15-49</b>	<b>Child Women Ratio</b>
<b>Sierra Leone</b>	<b>1248741</b>	<b>602.9</b>
<b>Eastern Province</b>	<b>293868</b>	<b>627.9</b>
Kailahun	89967	631.1
Kenema	122692	621.5
Kono	81214	634.0
<b>Northern Province</b>	<b>435146</b>	<b>644.6</b>
Bombabi	99504	614.3
Kambia	64498	726.7
Koinadugu	68223	577.9
Port Loko	114044	667.7
Tonkolili	88867	640.3
<b>Southern Province</b>	<b>265312</b>	<b>667.4</b>
Bo	112332	609.4
Bonthe	33439	755.9
Moyamba	63124	698.7
Pujehun	56417	695.7
<b>Western Area</b>	<b>310832</b>	<b>356.2</b>
Western Area Rural	44343	565.2
Western Area Urban	210072	407.8

Based on these results the highest level is recorded for Bonthe (755.9 children) compared to the Western Area Urban 407.8 children. The Southern Province has the highest level of 666.7. This is consistent with the pattern of fertility by province.

### 3.2.1.2 Regional Variations in Reported Current Fertility

Owing to social, cultural and economic differences among regions it is expected that variations would occur in current fertility levels. The findings are presented in Table 11 below.

**Table 11: Reported Age Specific Fertility Rates by Administrative Divisions 2004**

Administrative Division	AGE OF FEMALES							TOTAL	TFR
	15-19	20-24	25-29	30-34	35-39	40-44	45-49		
<b>Sierra Leone</b>	<b>0.0650</b>	<b>0.1405</b>	<b>0.1492</b>	<b>0.1308</b>	<b>0.1074</b>	<b>0.0547</b>	<b>0.0342</b>	<b>0.6818</b>	<b>3.4089</b>
<b>Eastern Province</b>	<b>0.0769</b>	<b>0.1665</b>	<b>0.1738</b>	<b>0.1460</b>	<b>0.2278</b>	<b>0.0582</b>	<b>0.0383</b>	<b>0.7774</b>	<b>3.8871</b>
Kailahun	0.0716	0.1564	0.1613	0.1412	0.1152	0.0619	0.0421	0.7496	3.7481
Kenema	0.0829	0.1709	0.1782	0.1470	0.1201	0.0547	0.0371	0.7908	3.9542
Kono	0.0742	0.1703	0.1801	0.1498	0.1171	0.0593	0.0359	0.7868	3.9339
<b>Northern Province</b>	<b>0.0632</b>	<b>0.1368</b>	<b>1460</b>	<b>1279</b>	<b>0.1081</b>	<b>0.0576</b>	<b>0.0367</b>	<b>0.6763</b>	<b>3.3817</b>
Bombali	0.0554	0.1323	0.1375	0.1157	0.0987	0.0545	0.0359	0.6763	3.3817
Kambia	0.0784	0.1552	0.1584	0.1490	0.1241	0.0605	0.0390	0.7647	3.8233
Koinadugu	0.0507	0.1165	0.1280	0.1095	0.0944	0.0540	0.0340	0.5871	2.9357
Port Loko	0.0646	0.1360	0.1457	0.1275	0.1038	0.0559	0.0382	0.6717	3.3583
Tonkolili	0.0689	0.1444	0.1604	0.1407	0.1218	0.0648	0.0363	0.7373	3.6867
<b>Southern Province</b>	<b>0.0803</b>	<b>0.1703</b>	<b>0.1769</b>	<b>0.1594</b>	<b>0.1302</b>	<b>0.0662</b>	<b>0.0402</b>	<b>0.8235</b>	<b>4.1173</b>
Bo	0.0730	0.1611	0.1684	0.1516	0.1162	0.0599	0.0368	0.7670	3.8352
Bonthe	0.0904	0.2000	0.2074	0.1888	0.1503	0.0835	0.0453	0.9657	4.8285
Moyamba	0.0906	0.1853	0.1926	0.1662	0.1436	0.0668	0.0400	0.8851	4.4256
Pujehun	0.0800	0.1566	0.1591	0.1489	0.1275	0.0656	0.0438	0.7814	3.9072
<b>Western Area</b>	<b>0.0407</b>	<b>0.0946</b>	<b>0.0968</b>	<b>0.0844</b>	<b>0.0621</b>	<b>0.0301</b>	<b>0.0152</b>	<b>0.4239</b>	<b>2.1196</b>
Western Rural	0.0670	0.1337	0.1224	0.1081	0.0854	0.0434	0.0224	0.5823	2.9117
Western Urban	0.0358	0.0869	0.0913	0.0791	0.0565	0.0270	0.9134	0.3901	1.9504

The reported age specific fertility rates were used to estimate the Total Fertility Rates (TFR).

Data for the Provinces show that the highest reported TFR was recorded in the Southern Province (4.1173 children) whereas the Western Area reported the lowest TFR, about half the value for the Southern Province. At district level, the highest level of fertility is recorded in Bonthe (4.8285) as opposed to the Western Urban Area, which has the lowest TFR of 1.9504 children.

Since 1974, the Western Area has consistently maintained the lowest level of fertility. On the contrary, at provincial level, there has been geographic variations in the highest level of fertility<sup>3</sup>.

<sup>3</sup> In the 1974 Census, the highest adjusted TFR was reported in the Northern Province (6.696). In 1985 however, the highest level of 6.88 children was observed in the Southern Province.

With respect to the timing of births, both the provinces and the districts (with the exception of the Western Rural Area) consistently reflect a pattern of late childbearing with the peak of fertility occurring at age group 25-29.

### 3.2.2 Mean and Median Ages at Childbearing

These indices reflect differences in the age pattern of childbearing among women in their reproductive span. The above measures are calculated on the basis of the age specific birth rates rather than the number of births.

The results are presented on comparative basis for the 2004 and 1985 censuses, in Table12.

**Table12: Mean and Median Ages of Childbearing by Province 2004 and 1985**

District	2004		1985*	
	Mean (Years)	Median (Years)	Mean (Years)	Median (Years)
SIERRA LEONE	30.00	29.52	28.6	27.7
NORTHERN PROVINCE	30.45	29.73	28.7	28.0
EASTERN PROVINCE	30.0	29.17	28.5	27.6
SOUTHERN PROVINCE	30.22	29.56	28.2	28.8
WESTERN AREA	26.67	28.96	27.8	27.7

\*Source: *The Analytical Report, 1985 Population and Housing Census.*

Table 12 suggests that over the nineteen-year period, there has been an increase in both the mean and median ages of childbearing for Sierra Leone, as a whole and for each of the other administrative regions. The median age in the Western Area, for example, increased from 27.7 years in 1985 to 28.96 years in 2004, a difference of 1.26 years. This suggests a delay of over one year in the intercensal period.

### 3.2.3 Life Time Fertility

Estimates of cumulative fertility were based on the number of children ever born to all women ten years and over.

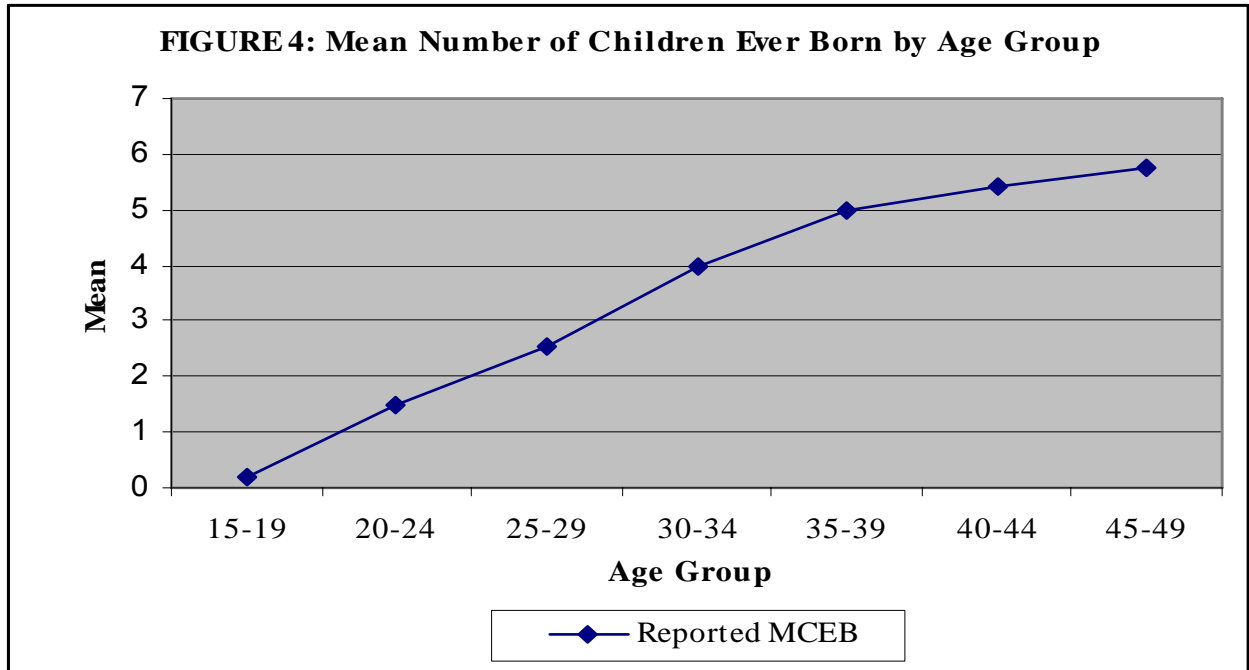
Barring all inaccuracies it is expected that the number of children ever born would increase with the age of the woman. The results are presented in Table 13.

**Table 13: Mean Number of Children Ever Born Alive by Age Group and Administrative Divisions**

Administrative Division	AGE GROUP OF FEMALES						
	15-19	20-24	25-29	30-34	35-39	40-44	45-49
<b>SIERRA LEONE</b>	<b>0.21</b>	<b>1.47</b>	<b>2.56</b>	<b>4.03</b>	<b>5.05</b>	<b>5.54</b>	<b>5.94</b>
<b>Eastern Province</b>	<b>0.23</b>	<b>1.61</b>	<b>2.70</b>	<b>4.18</b>	<b>5.21</b>	<b>5.75</b>	<b>6.12</b>
Kailahun District	0.23	1.56	2.58	4.09	5.08	5.60	6.06
Kenema District	0.25	1.64	2.74	4.22	5.27	5.83	6.06
Kono District	0.21	1.62	2.77	4.22	5.27	5.80	6.25
<b>Northern Province</b>	<b>0.23</b>	<b>1.59</b>	<b>2.71</b>	<b>4.27</b>	<b>5.28</b>	<b>5.71</b>	<b>6.14</b>
Bombali District	0.19	1.49	2.60	4.07	4.99	5.45	5.80
Kambia District	0.25	1.76	2.84	4.57	5.58	6.12	6.42
Koinadugu District	0.21	1.46	2.60	4.06	5.02	5.41	6.00
Port Loko District	0.24	1.61	2.70	4.26	5.32	5.75	6.16
Tonkolili District	0.24	1.63	2.84	4.44	5.54	5.94	6.46
<b>Southern Province</b>	<b>0.27</b>	<b>1.73</b>	<b>2.61</b>	<b>4.43</b>	<b>5.44</b>	<b>5.91</b>	<b>6.25</b>
Bo District	0.23	1.60	2.70	4.23	5.18	5.64	5.98
Bonthe District	0.28	1.72	2.86	4.50	5.61	6.20	6.35
Moyamba District	0.28	1.85	2.99	4.63	5.65	6.14	6.48
Pujehun District	0.33	1.87	2.81	4.54	5.57	5.92	6.40
<b>Western Area</b>	<b>0.11</b>	<b>0.96</b>	<b>1.88</b>	<b>2.93</b>	<b>3.83</b>	<b>4.47</b>	<b>4.87</b>
Western Rural	0.19	1.38	2.45	3.57	4.61	5.16	5.45
Western Urban	0.10	0.88	1.75	2.79	3.64	4.31	4.73

Based on the Table, women have about six children by the time they reach menopause. The exception is the Western Area, where they have about five children.

As is expected, the number of children increases with the age of women especially for women in their reproductive span (15-49 years) at national and regional levels as seen in Figure 4.



Although the curve in Figure 4 is in the expected direction there are indications of ‘slowing down’ in the process of childbearing after age group 35-39 years.

### 3.2.4 Indirect Estimates of Fertility

#### 3.2.4.1 Direct Standardization

This is a procedure of adjusting crude rates in order to estimate the effect of differences in population composition. Variables such as age and sex are known to produce significant effects on key variables of interest.

Because of the possibility that errors could occur in the age data of women in their reproductive span, which will distort the accuracy of fertility rates, Total Fertility Rate the General Fertility Rate and the Crude Birth Rate were standardized using the direct method. Using this method of standardization, the population of Liberia, 2005, based on a UN projection (UN,2001) was used as the standard population whilst the reported age specific fertility rates for Sierra Leone based on the 2004 census were used as the study population. Liberia was considered as having a similar age structure to that of Sierra Leone.

The methodology essentially involves calculating the expected number of births ( $\sum f_a p_a^f$ ) and dividing that by the total population of women age 15 – 49 ( $\sum p_a^f$ ) for the standard population multiplied by 1000, in the case of the GFR. The total standard population was to calculate Standardized Crude Birth Rate.

Using this approach the standardized General Fertility Rate for Sierra Leone was 113 births per 1000 women. The GFR prior to standardization was 105.5969. These figures indicate a seven percent difference. The Standardized Crude Birth Rate was 26.3 using the standard population.

### 3.2.4.2 Estimating Fertility from Data on Children Ever Born

The Trussell P/F Ratio Technique, an improvement over the original Brass P/F Ratio Method, is used in this analysis to adjust the estimates of fertility obtained directly from both current and retrospective data. The use of such a method is justified on the grounds that there are discrepancies in the cumulative and period fertility, as indicated earlier. Secondly, the data on children ever born has shown a declining pattern with age, which is unexpected. Thirdly, errors in age reporting more specifically age shifting have been shown to characterize Sierra Leone's census data. For example, the Age Ratio for women 20-24 and 35-39 years in the 2004 census were 90.4 and 114.9 respectively, indicating various degrees of transfer. Lastly, evidence found during the 'cleaning' of the data point to reference period error resulting from a misperception of the twelve-month reference period. In order to improve the quality of the resulting fertility indices it became necessary to apply Indirect Estimation Techniques such as the Brass P/F Ratio Method. The choice of this method ensures comparison with previous census results on fertility, which also utilized this method.

**Table 14: Application of the P/F Ratio Technique to 2004 Fertility Data for Sierra Leone**

Age Group of Women	Reported Births Last 12 Months ( $f_{(i)}$ )	Average CEB ( $P_i$ )	Cumulative $Q_{(i)}$	Estimated Parity $F_i$	P/F Ratio	Adjusted $f_{(i)}$
15 – 19	0.065	0.210	0.325	0.146	1.436	0.1364
20 – 24	0.141	1.470	1.028	0.736	2.003	0.2581
25 – 29	0.149	2.560	1.774	1.482	1.727	0.2665
30 – 34	0.131	4.030	2.428	2.173	1.854	0.2307
35 – 39	0.107	5.050	2.965	2.766	1.826	0.1857
40 – 44	0.055	5.540	3.238	3.091	1.793	0.0891
45 – 49	0.034	5.940	3.409	3.369	1.763	0.0545
<b>TFR</b>	<b>3.4090</b>					<b>6.1050</b>

Adjusted Factor  $P_2/F_2 + P_3/F_3 + P_4/F_4/3$

Based on the P/F Ratios, there are indications that at all age groups there is considerable over-reporting of births (all P/F ratios are greater than 1). Such high levels of over-reporting may possibly have resulted from the tendency of enumerators to apply a social definition rather than a biological one when collecting the relevant data on children ever borne.



Also, there is no marked decrease in the ratios for older women over 30 years suggesting that the degree of omission is virtually consistent. The P/F ratio for age group 20-24 is the highest indicating that the reported parity was twice higher than the estimated number of children ever borne.

In choosing an Adjustment Factor, Brass suggested the use of  $P_2/F_2$  because this age group (20-24 years) is associated with the highest degree of accuracy in reporting births because they are young, unlike their older counterparts aged 35 years and over who may be affected by varying degrees of recall lapse.

Nevertheless, the use of this value (2.003) would imply a TFR of 6.8274 for Sierra Leone, a level which could be unrealistic in the light of past census analysis as well as other United Nations estimates.

The use of the average  $P_2/F_2 + P_3/F_3 + P_4/F_4/3$  yields a more acceptable estimate of 6.1052 as the nations Total Fertility Rate.

The results of this analysis for the Provinces and Districts of the country together with other adjusted indices of fertility are presented in Table 15 below.

**Table 15: Adjusted Indices of Fertility by Administrative Regions in Sierra Leone**

Administration Region	Total Fertility Rate	Crude Birth Rate	General Fertility Rate
<b>Sierra Leone</b>	<b>6.1052 ( 6.30)</b>	<b>48.2</b>	<b>192.0</b>
<b>Southern Province</b>	<b>6.7059 (6.88)</b>	<b>51.0</b>	<b>210.1</b>
Bo	6.3506 (6.79)	48.7	201.0
Bonthe	6.8592 (6.70)	51.2	213.8
Moyamba	6.9604 (6.79)	50.4	208.2
Pujehun	6.9452 (7.37)	53.6	217.1
<b>Eastern Province</b>	<b>6.2072 (6.76)</b>	<b>49.0</b>	<b>198.7</b>
Kailahun	6.1850 (6.92)	48.6	193.4
Kenema	6.1805 (6.65)	49.4	200.5
Kono	6.2834 (6.79)	49.0	202.3
<b>Northern Province</b>	<b>6.5765 (5.89)</b>	<b>50.6</b>	<b>202.8</b>
Bombali	6.2509 (6.49)	46.2	189.7
Kambia	6.9143 (6.36)	51.6	216.5
Port Loko	6.5041 (5.41)	50.8	202.2
Koinadugu	6.4035 (5.41)	50.0	194.6
Tonkolili	6.9317 (5.81)	54.7	213.7
<b>Western Area</b>	<b>4.2365 (NA)</b>	<b>37.3</b>	<b>138.9</b>
Western Urban	3.9834 (5.46)	35.6	130.9
Western Rural	5.2579 (6.21)	43.8	172.1

(-) *Estimates Based on 1985 Census.*

The national TFR of 6.1050 implies only a slight decline from its level of 6.30 children in 1985. On regional basis, the highest TFR (6.9143) is reported in Moyamba whilst the lowest of 3.9834 is reported in the Western Urban Area.

Whilst the latter finding is not unexpected, Moyamba in the Southern Province appears to be new among those districts reporting the highest TFR. The highest TFR since 1985, has however been reported in the Southern Province.

Another feature of the panel on TFR is that the lowest levels of TFR (6.2072) are reported in the Eastern Province. Similarly, the greatest declines in levels were reported in the same province.

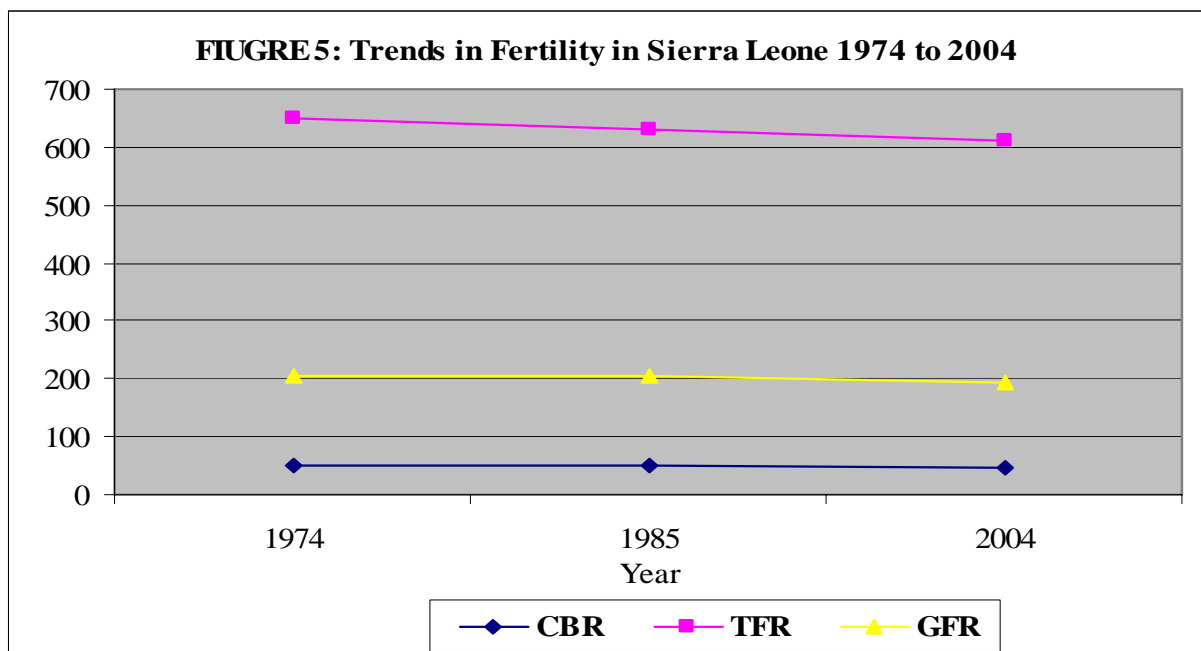
There is no consistent pattern of change in the TFR between 1985 and 2004. Some districts, such as Bonthe, Moyamba and Pujehun experienced an increase compared to Kenema and Kailahun where the rate decline. Both the rural and urban areas of the Western Areas also experienced a decline.

In the Northern Province, on the contrary, most districts have experienced an increase in fertility. In Port Loko, Koinadugu and Tonkolili, there has been an increase of at least one child in the last intercensal period.

As regards the Crude Birth Rate, the highest level is reported in the Southern Province with 51.0 live births per thousand population. The results also point to the fact that all provinces (Just like the districts) have rates higher than the national level. The Western Area is an exception.

The General Fertility Rate is highest in Pujehun (217.1), but lowest in the Western Area (138.9).

The national trends in fertility indicate that there has been little or no decline in fertility over a period of three decades as seen in Figure 5 below.



Based on the graph the TFR appears to have experienced the largest drop over the years.

### 3.2.4 Parity Analysis

The number of children previously born alive to women 10 years and over as of the date of the census is examined in Table 16.

**Table 16: Percentage Distribution of Women by Parity and Age for Sierra Leone**

Age of Women as of census	Parity											Total
	0	1	2	3	4	5	6	7	8	9	10+	
15 – 19	83.6	12.6	3.0	0.6	0.1	0.0	0.0	0.0	0.0	0.0	0.0	100
20 – 24	43.3	23.0	20.4	12.0	6.0	2.8	1.3	0.1	0.1	0.0	0.0	100
24 - 29	17.6	14.4	19.3	18.4	14.2	9.3	5.3	0.6	0.4	0.2	0.3	100
30 – 34	10.7	8.1	12.0	14.1	14.5	12.7	10.1	7.5	4.7	2.6	3.0	100
35 – 39	7.9	5.4	8.2	10.3	12.0	12.5	11.3	11.4	8.4	5.3	7.2	100
40 -44	8.6	5.1	7.0	8.7	9.9	10.6	10.5	10.3	9.2	7.2	12.8	100
45 - 49	8.1	4.7	6.3	7.5	8.8	9.6	9.8	10.4	9.8	8.3	16.7	100

As is expected, the percentage of zero parity women decreases with age from 83.6 percent among 15 – 19 year old 5 to 8.1 percent among women close to menopause (45 – 49 years).

The data is also consistent with the fact that parity increases with age. For example 16.7 percent of women aged 45 – 49 years already had ten or more children as of the date of the census whilst only 0.3 percent of women 25 – 29 years were in this category.

### 3.2.6 Prevalence of Childlessness

Childlessness or infecundity is considered as the inability to conceive after several years of exposure to the risk of pregnancy (UNFPA 1993). Although cognizance is taken of the fact that childlessness could be ‘primary’, or ‘secondary’, the data here refer to the former implying that the women have never had a birth. The importance of childlessness lies in the fact that it is closely related to the concept of replacement. Where the percentage of childlessness is high among women, the chances of replacement may be reduced.

#### 3.2.6.1 Childlessness among Women 40 to 49 Years Old

Limiting childlessness to this category of women enables us to asses the level among women who are close to their menopause. These results are presented in Table17.

**Table 17: Prevalence of Childlessness among Married Women 40 – 49 Years Old by Administrative Regions**

Administrative Regions	Age of Women	
	40 - 44	45 - 49
<b>Sierra Leone</b>	<b>8.6</b>	<b>8.1</b>
<b>Eastern Province</b>	<b>7.8</b>	<b>7.5</b>
Kailahun	8.3	7.1
Kenema	8.0	9.2
Kono	7.2	8.4
<b>Northern Province</b>	<b>7.8</b>	<b>9.5</b>
Bombali	8.6	9.3
Kambia	7.5	9.1
Port Loko	7.4	10.1
Koinadugu	7.7	9.1
Tonkolili	7.4	10.2
<b>Southern Province</b>	<b>7.8</b>	<b>9.1</b>
Bo	8.5	10.0
Bonthe	6.6	9.2
Moyamba	8.0	8.7
Pujehun	7.1	8.1
Western Rural	12.1	12.1
Western Urban	9.2	9.0

At national level, the results suggest slightly high prevalence of childlessness among women 40 – 44 years compared to their counterparts aged 45 – 49 years. However for most of the other regions women in the latter age group display higher levels of childlessness than their younger counterparts. In Kono and Kenema, the whole of the Northern and Southern province this pattern is upheld. Given that the number of children ever born increases with age the above trend is perhaps unexpected. The fact that data on the prevalence of sexually transmitted diseases, which could be sterility producing (Shyrock and Seigel, 1976 *ibid*) are lacking it becomes more enigmatic to explain the above pattern. A similar pattern was reported for the 1985 Census.

### **3.2.6.2 Childlessness by Place of Residence**

The analysis in Table18 is based on the percentage of childlessness among women in marital union living either in rural or urban areas. These results are calculated at national and provincial levels.

**Table 18: Percentage of Childlessness Among Married Women 40 – 49 years Old by Place of residence and Provinces**

Regions	Place of Residence			
	Rural		Urban	
	Age of Women			
	40 44	45 - 49	40 44	45 - 49
<b>SIERRA LEONE</b>	<b>8.5</b>	<b>7.7</b>	<b>9.0</b>	<b>8.8</b>
EASTERN PROVINCE	7.8	7.4	7.7	7.6
NORTHERN PROVINCE	8.8	7.7	9.0	8.3
SOUTHERN PROVINCE	8.2	7.8	6.9	7.9
WESTERN AREA	10.2	8.6	10.1	9.8

The results in Table 18 reveal an inconsistent pattern for women 40 – 44 years by place of residence. This suggests that place of residence does not affect the percentage of childless women aged 40 – 44 years. However a more consistent pattern is observed among older women 45 – 49 years. The results reveal that there are fewer childless women in this age group in the rural areas than in the urban areas. The difference is however small as in the case of the Southern Province. The conclusion that can be arrived at here is that place of residence does not consistently affect the percentage of childless women in Sierra Leone, using the two age groups above.

### **3.2.7 Fertility Differentials**

The demographic literature is replete with efforts to examine the effects of demographic and socio-economic factors on levels of fertility, as a way of understanding the dynamics of childbearing with the ultimate aim of designing strategies to reduce fertility levels especially in developing countries. Among the factors commonly examined are place of residence, education and contraceptive use and age.

In the context of Sierra Leone, place of residence and education have been examined both at national and sub-national levels. Okoye (1980) concluded that although urban fertility is lower than rural fertility, the differentials are minimal. Ketkar's 1978 study of the Western Area did not support the accepted inverse relationship between education and fertility.

#### **3.2.7.1 Educational Differentials in Fertility Levels**

Generally, education is thought to be inversely related to fertility. This may not however hold true for all categories of education especially when the groups compared are people with no schooling and those with up to four or six years of primary education (UN, 1975). The UN (1975 *ibid.*) also suggests that a threshold of 10-14 years of schooling has to be acquired to produce any significant impact on fertility levels.

Calton, (1982) indicated that the influence of education on fertility behaviour is through:

- i. Access to information about fertility control methods.
- ii. Increased capacity for the efficient use of fertility control methods.
- iii. Intensity of motivation with respect to family size.

In Sierra Leone where levels of contraceptive use are still low, the effect of formal education on fertility would therefore be through prolonged schooling after menarche. It is not surprising therefore that part of Government's policy to improve the overall status of women, which includes reducing their level of fertility, has been the implementation of programmes to increase the enrolment and retention of girls in school.

Two questions of education were asked during the 2004 national census:

- i. "Ever attended school" with three categories: 'Never attended', 'Still attending' and 'left school'.
- ii. "Highest level of education attained". This had the following categories: 'None', 'Kindergarten', 'Primary 1-6', 'Secondary (Junior or Senior)', 'Various levels of Tertiary Education', 'Vocational/Commercial', 'technical, nursing and koranic.

The current analysis is however limited to the formal educational system because these are conventional categories with standard measurements and therefore can be compared with previous results. The mean number of children ever born is estimated based on both questions respectively. The results based on educational status are presented in Table 19 below.

**Table 19: Mean Number of Children Ever Born Based on Women Who Had Ever Attended School for Sierra Leone and Administrative Regions**

Administrative Regions	Educational Background		
	Never	Still	Left
Sierra Leone	3.84	0.14	2.76
Eastern Province	3.80	0.14	2.99
Kailahun District	3.85	0.13	2.87
Kenema District	3.77	0.17	3.12
Kono District	3.80	2.57	2.91
Northern Province	3.91	0.16	2.89
Bombali District	3.90	0.05	2.80
Kambia District	4.11	0.05	2.94
Koinadugu District	3.56	0.06	2.86
Port Loko District	3.94	0.19	2.76
Tonkolili District	4.00	0.05	3.19
Southern Province	4.00	0.16	3.37
Bo District	3.78	0.15	3.18
Bonthe District	4.10	0.07	3.77
Moyamba District	4.28	0.14	3.67
Pujehun District	3.98	0.09	3.27
Western Area	3.34	0.12	2.29
Rural	3.60	0.06	2.77
Urban	3.26	0.12	2.18

The results in the table are in the expected direction even though they represent only a 'crude' analysis. The level achieved prior to leaving school for example, is unspecified. Respondents who have never attended school have the highest levels of fertility compared to the other two groups. The result also indicates that female respondents currently in school have the lowest levels of fertility. In all cases, this is less than one child, on average. In Kono however those in school have over two children. This suggests that some women may go back to school after having their child(ren) especially if such births were unplanned.

The relationship between fertility and education based on highest level of education achieved a more refined indicator, is examined in Table 20 below.

**Table 20: Mean Number of Children Ever Born By Highest Level of Education and Age for Sierra Leone**

Age Group	EDUCATIONAL LEVEL			
	None	Primary	Secondary	Tertiary
15 – 19	0.2531	0.1121	0.0663	0.0408
20 – 24	1.5030	1.4586	0.6823	0.2607
25 – 29	2.5979	2.6184	1.7036	0.7826
30 – 34	3.9786	4.0026	2.8805	1.4892
35 – 39	4.9087	5.0065	3.6868	1.9533
40 – 44	5.0692	5.3193	4.2181	2.7321
45 – 49	5.5862	5.8333	4.5201	2.7321
50 – 54	5.4670	5.9605	4.8146	2.9522
55 – 59	5.7544	5.8216	4.7244	2.8635
60+	4.8091	5.1042	4.3567	3.0977
ALL	3.3200	2.0839	1.6589	1.4879

The results in Table 20 indicate an inverse relationship between education and the number of children ever born. Although on the whole, a significant drop is observed between women with no education and those with primary education (a difference of 1.2 children), it is observed that beyond age 24 years women with primary education have higher levels of fertility than those with no education although the difference is small in all age groups.

It appears that, both measures of education (ever attended and level of education completed) have indicated a negative relationship with fertility although to varying degrees.

### 3.2.7.2 Mean Number of Children Ever Born by Place of Residence

The results of this analysis are presented in Table 21 below.

**Table 21: Mean Number of Children Ever Born by Place of Residence and Administration Regions**

Administrative Region	Place of Residence		
	Rural	Urban	Differential
<b>Sierra Leone</b>	<b>3.65</b>	<b>2.69</b>	<b>0.96</b>
<b>Eastern Province</b>	<b>3.52</b>	<b>3.00</b>	<b>0.52</b>
Kailahun District	3.38	3.15	0.23
Kenema District	3.64	2.93	0.71
Kono District	3.54	3.0	0.54
<b>Northern Province</b>	<b>3.66</b>	<b>3.18</b>	<b>0.48</b>
Bombali	3.65	2.87	0.78
Kambia	3.86	3.61	0.25
Koinadugu	3.69	3.0	0.69
Port Loko	3.71	3.49	0.22
Tonkolili	3.67	2.81	0.86
<b>Southern Province</b>	<b>3.80</b>	<b>2.96</b>	<b>0.84</b>
Bo	3.67	2.81	0.86
Bonthe	3.92	3.23	0.69
Moyamba	4.00	3.39	0.61
Pujehun	3.66	3.46	0.20
<b>Western Area</b>	<b>3.20</b>	<b>2.31</b>	<b>0.89</b>

The Table reveals higher mean numbers of children in all rural areas than in urban areas in all administrative regions. But these differences are small. They range from 0.20 children in Pujehun to 0.89 the Western Area. At national level the difference is almost one child between rural and urban areas. The national differential is 0.96, almost one child.

These small differences may in part be attributed to the fact that the dichotomy between rural and urban settlements is based on size of town rather than on the availability of socio-economic factors, which could produce greater differences on



childbearing. The fact that the relationship holds suggests that size of town (implying some level of modernization) could be a necessary factor although not a sufficient condition to influence the level of childbearing, drastically .

### 3.2.8 Reproductivity

This section deals with the rate at which Sierra Leonean women are replacing themselves in terms of the number of daughters they reproduce by the end of their reproductive span assuming they follow a given age specific fertility schedule. In this connection estimates of the Gross Reproduction Rate (GRR) and the Net Reproduction Rate (NRR or Ro) are provided. The estimates for the GRR are shown in Table 22 below.

**Table 22: Estimates of Gross Reproduction Rate for Sierra Leone and Other Administrative Regions.**

<b>Administrative Regions</b>	<b>Sierra Leone</b>			<b>Eastern Province</b>	<b>Southern Province</b>	<b>Northern Province</b>	<b>Western Area</b>
GRR	3.0455			3.0676	3.3318	3.3172	2.1022
<b>Administrative Regions</b>	<b>Kailahun</b>	<b>Kenema</b>	<b>Kono</b>	<b>Bo</b>	<b>Bonthe</b>	<b>Moyamba</b>	<b>Pujehun</b>
GRR	3.0727	3.0563	3.0864	3.1896	3.4282	3.3942	3.4413
<b>Administrative Regions</b>	<b>Bombali</b>	<b>Kambia</b>	<b>Port Loko</b>	<b>Koinadugu</b>	<b>Tonkolili</b>	<b>Western Rural</b>	<b>Western Urban</b>
GRR	3.1305	3.4291	3.2433	3.3657	3.5338	2.6290	1.9250

The estimates suggest that all regions of the country do have a convenient replacement rate of over three daughters by the time women attain menopause. In the Western Area and in other urban settings, replacement is about two daughters. Other regions have GRRs, higher than the national level. One disadvantage of this rate through is that it assumes Mortality is nil. In other words, no woman dies throughout the reproductive span.

The Net Reproduction Rate (NRR), unlike the GRR, takes into consideration the effect of mortality on the women in their reproduction span. In estimating the level of mortality of the female population in this age bracket the life expectancy of 49.4 years (Sengeh and Williams, 2006) was used to obtain the Lx values of women in their reproductive span, from the North Model Life Table (estimated level 12.8). The Lx values were divided by 100,000 (radix). The results were then multiplied by the age specific fertility rates for each age group, summed up and lastly multiplied by the proportion of female births. The final results indicate that the NRR for Sierra Leone is 2.1 daughters per woman. Like the GRR, the NRR also suggests that the women are adequately replacing themselves.

$$NRR = 5 \frac{B^f}{B_t} \cdot \sum \frac{B_{i \cdot n}}{P_i} \frac{L_x}{l_0}$$

Where  $\frac{B^f}{B_t}$  - proportion of females births

$B_i$  - births to women in age group i

$P_i$  - female population in age group i,

${}_nL_x$  - number of survivors between age x and x+n

$l_0$  - radix (100,000)

$\sum$  - summation

### 3.2.9 Marital Fertility

In communities where pre-marital fertility is low and marriage is contracted early, a large proportion of births are expected to occur within marriage. Yumkella and Kaindaneh (Ibid) found out that pre-marital births account for 2.0 percent of all births in the entire population. Part of the findings also suggests that such births constituted 6.90 percent among 15-19 year olds (the highest) and declined with age.

This section examines the levels and pattern of childbearing among married women but also compares these findings with those of single women.

#### 3.2.9.1 Mean Number of Children Ever Born by Marital Status

As expected, married women have higher mean number of children than never married women as seen in Table 23.

**Table 23: Mean Number of Children Ever Born by Marital Status of Women 10 Years and Over by Administrative Regions**

Administrative Regions	Mean Number of Children Ever Born		
	Never Married	Married	Previously Married
<b>Sierra Leone</b>	<b>0.8312</b>	<b>3.8923</b>	<b>4.8603</b>
<b>Eastern Province</b>	<b>0.8510</b>	<b>3.8022</b>	<b>4.9753</b>
Kailahun	0.9965	3.7896	4.9876
Kenema	0.7562	3.8051	4.8673
Kono	0.7923	3.8107	5.1169
<b>Northern Province</b>	<b>0.7934</b>	<b>4.0346</b>	<b>5.0741</b>
Bombali	0.6674	3.9964	5.0761
Kambia	1.0781	4.2237	5.0623
Koinadugu	0.5167	3.9025	4.6582
Port Loko	0.8766	3.9970	4.9649
Tonkolili	0.8575	4.0833	5.3408
<b>Southern Province</b>	<b>0.7905</b>	<b>4.0754</b>	<b>4.8572</b>
Bo	0.6946	3.8880	4.6091
Bonthe	0.8442	4.1973	5.0471
Moyamba	0.9180	4.3197	4.9551
Pujehun	0.8717	4.0610	5.0153
<b>Western Area</b>	<b>0.8670</b>	<b>3.3527</b>	<b>4.2522</b>
Western Rural	1.3325	3.6159	4.7099
Western Urban	0.7962	3.2811	4.1225

The results suggest that the incidence of pre-marital births is a common phenomenon in all regions. The rural areas of the Western Area reported the highest level of 1.3325 children per woman followed by Kambia district (1.0781 children). All other regions have less than one child per woman. The higher level of pre-marital births in the Western Rural Area may be attributed to the effect of urbanization and modernization, which could imply that marriages are contracted late. The view that marriage is no longer a major pre-requisite for childbearing may also contribute to this level.

The difference in the mean values between never married women and those who were currently married as of the date of the census is quite significant at all levels. For the country as a whole, the fertility of married women is almost five times higher than that of single women. The difference is highest in the Koinadugu district (which also has the lowest incidence of pre-marital births).

The highest level of marital fertility was recorded amongst previously married women as seen in the Table above. At national level these women reported one child more than the currently married counterparts. The highest level of marital fertility is reported in Tonkolili district (5.3408) whilst the Western Urban Area, reported the lowest (4.1225). A plausible explanation for this phenomenon is that widowed women may be inherited by the brother of their deceased husband and

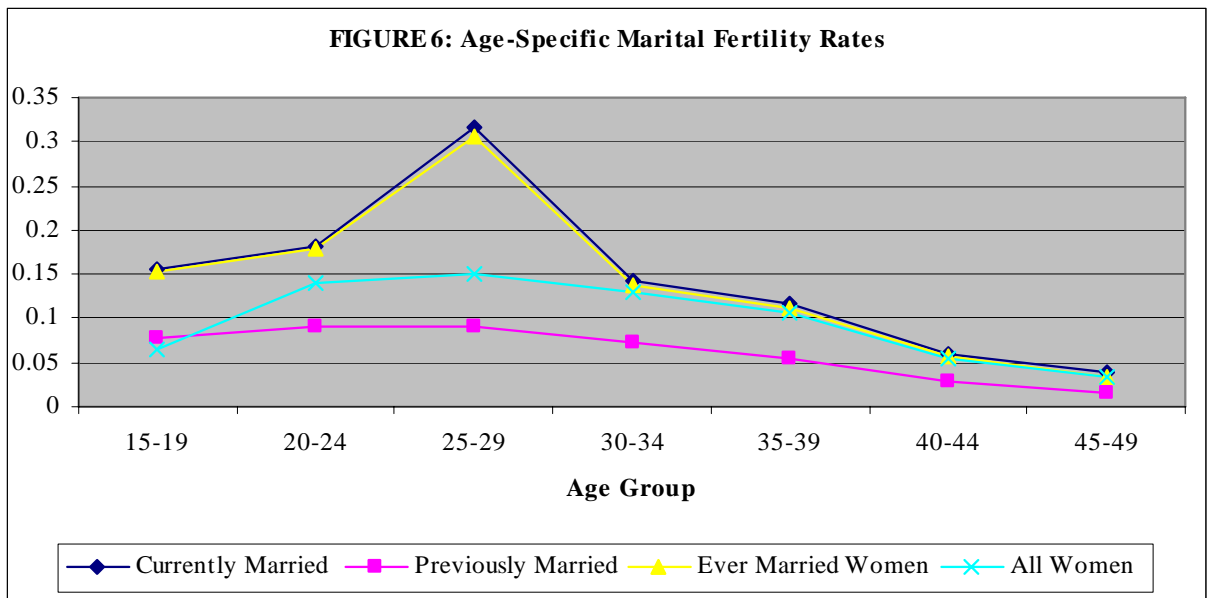
therefore can continue bearing children, while still indicating that they are widowed.

### 3.2.9.2 Period Marital Fertility Rates

In this section marital fertility rates are compared with non- marital fertility rates. These rates would also help us to separate the effects of marital fertility from general fertility.

### 3.2.9.3 The Age Specific Marital Fertility Rate

In Figure 6 below, there are clear indications that the fertility of currently married women is only slightly higher than that of ever married women.



In the twelve months prior to the census, the Figure suggests that the level of fertility for previously married women is low. The fertility of all women (married and unmarried) is much lower than the level of marital fertility (age for age). However, beyond age 30, the levels are similar to those of married women. The data reveal a late peak in childbearing (age group 25-29) for almost all groups.

### 3.2.9.4 General Marital Fertility Rate

This General Marital Fertility Rate represents the total number of live births irrespective of age or marital status of the mother per 1000 married women aged 15-49 years. These results are presented in Table 24 below:

**Table 24: Estimates of General Marital Fertility Rates for Sierra Leone and various Administrative Regions:**

<b>Administrative Regions</b>	<b>Sierra Leone</b>			<b>Eastern Province</b>	<b>Southern Province</b>	<b>Northern Province</b>	<b>Western Area</b>
<b>GMFR</b>	154.065			171.724	171.730	137.180	144.332
<b>Administrative Regions</b>	<b>Kailahun</b>	<b>Kenema</b>	<b>Kono</b>	<b>Bo</b>	<b>Bonthe</b>	<b>Moyamba</b>	<b>Pujehun</b>
<b>GMFR</b>	173.728	170.035	172.300	168.776	194.257	177.397	159.593
<b>Administrative Regions</b>	<b>Bombali</b>	<b>Kambia</b>	<b>Port Loko</b>	<b>Koinadugu</b>	<b>Tonkolili</b>	<b>Western Rural</b>	<b>Western Urban</b>
<b>GMFR</b>	129.620	151.407	138.2674	115.708	149.703	159.525	124.620

The results in Table 24 suggest that the General Marital Fertility Rates range from 194.257 in Bonthe to 124.620 in the urban areas of the Western Area. Over fifty percent of the regions have higher rates than the national values of 154.065.

As a component of the General Fertility Rate, the General Marital Fertility Rate accounts for a considerable proportion of all fertility. At national level, the latter accounts for 80.2 percent of all births suggesting that most births in the twelve month period occurred to married women.

### **3.2.9.5 Total Fertility Rates by Marital Status**

The childbearing pattern of women in their reproductive span is examined by marital status in Table 25 below.

**Table 25: Unadjusted Total Fertility Rates by Marital Status of Women for Sierra Leone and Various Administrative Regions, 2004 National Census**

Administrative Regions	MARITAL STATUS		
	Never Married	Currently Married	Previously Married
<b>Sierra Leone</b>	<b>1.5607</b>	<b>4.3384</b>	<b>1.8047</b>
<b>Eastern Province</b>	<b>2.0626</b>	<b>4.7249</b>	<b>2.7826</b>
Kailahun District	2.3015	4.6137	2.9473
Kenema District	1.8676	4.7618	2.6068
Kono District	1.9496	4.7774	2.7909
<b>Northern Province</b>	<b>1.4890</b>	<b>4.0786</b>	<b>1.9312</b>
Bombali District	1.1441	3.9015	1.8138
Kambia District	2.0338	4.4698	2.3595
Koinadugu District	1.2347	3.5469	1.7273
Port Loko District	1.6782	4.0229	1.9351
Tonkolili District	1.4104	4.3931	2.6347
<b>Southern Province</b>	<b>1.9205</b>	<b>4.9769</b>	<b>2.6682</b>
Bo District	1.6935	4.8151	2.1559
Bonthe District	2.6016	5.6730	3.0683
Moyamba District	2.1601	5.2204	3.3201
Pujehun District	1.9041	4.6036	2.3458
<b>Western Area</b>	<b>1.3000</b>	<b>3.3245</b>	<b>1.2905</b>
Western Rural	1.8964	3.8221	1.3988
Western Urban	1.2090	3.1903	1.1545

The Table above suggests that childbearing is most frequent within marital unions. However, the contribution of previously married women is also high. The lowest unadjusted Total Marital Fertility Rates is reported in the Western Area.

### **3.2.9.6 Fertility by Type of Marriage**

Analysis of the results on marriage indicates that monogamous marriages are more common than polygamous marriages. Thirty percent of all marriages are monogamous whilst 14.9 percent are polygamous.

The fertility levels of these women in the different types of marriage vary by administrative regions, as seen in Table 26 below.

**Table 26: Mean Number of Children Ever Born by Type of Marriage and Administrative Regions**

Administrative Regions	Type of Marriage	
	Monogamous	Polygamous
<b>Sierra Leone</b>	<b>3.64</b>	<b>4.42</b>
<b>Eastern Province</b>	<b>3.63</b>	<b>4.30</b>
Kailahun	3.66	4.21
Kenema	3.59	4.28
Kono	3.66	4.46
<b>Northern Province</b>	<b>3.71</b>	<b>4.48</b>
Bombali	3.57	4.55
Kambia	3.77	4.67
Koinadugu	3.44	4.31
Port Loko	3.60	4.45
Tonkolili	4.02	4.38
<b>Southern Province</b>	<b>3.89</b>	<b>4.45</b>
Bo	3.71	4.30
Bonthe	4.07	4.51
Moyamba	4.18	4.60
Pujehun	3.78	4.51
<b>Western Area</b>	<b>3.20</b>	<b>4.14</b>
Western Rural	3.44	4.25
Western Urban	3.14	4.10

Differences range from 1.0 child in Bombali to 0.37 child in Tonkolili.

### 3.2.9.6.1 The Polygamy-Fertility Hypothesis Revisited

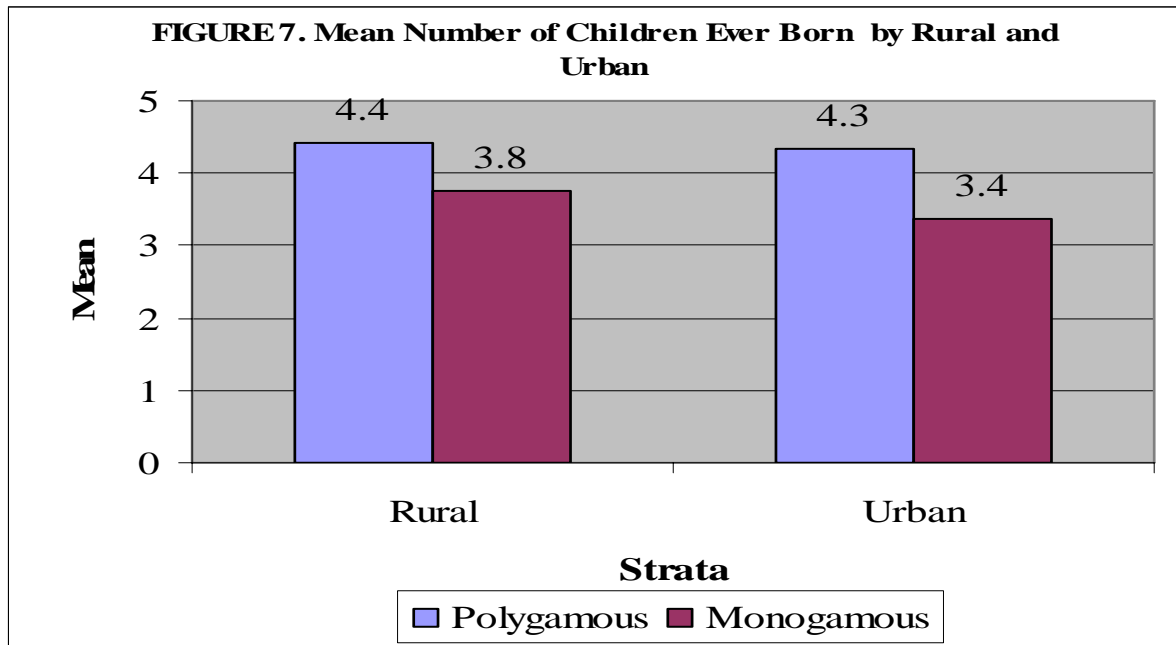
This hypothesis suggests that polygamous women have lower levels of realised fertility (children ever born) than monogamously married women because the former have fewer coital exposure and greater-adherence to traditional post-partum sexual abstinence. They are therefore engaged in fertility restricting customs and practices. It is noted that the relationship between polygamy and family size preference is however expected to be positive, as more children may be seen by polygamous wives as emotional and status security safe guards.

Very few studies have examined this relationship in Sierra Leone. Weekes (1988) noted only slight differences in levels of fertility between the two groups of women in Greater Freetown, an urban setting.

After standadisation for duration of marriage, this difference disappeared and monogamous women had only 0.14 child of marriage than polygamous women. Dorjahn (1959) had found out that among the Temnes, a dominant tribal group in Sierra Leone, monogamous women have more children than polygamous women. In this section, the hypothesis is further examined at national level controlling for rural/urban place of residence.

The results indicate:

- (a) Polygamous women had a mean number of children ever born of 4.4008 children compared to 3.6178 for monogamously married women.
- (b) After controlling for place of residence women married polygamously continue to have high levels of fertility than their counterparts as seen in Figure 7.



- (c) Polygamous women in the rural areas have slightly more children than those in the urban areas. The same pattern is noted for monogamous women.

The results suggest further that the difference between the two groups of women is larger in the urban areas (almost one child) than in the rural areas (0.66 children). The traditional hypothesis does not seem to hold in the national context. Possible explanations for this change in trend could be the effect of modernization, which may have eroded that strict adherence to post-partum abstinence. Secondly, more children may be seen by the polygamous wives as emotional and status security safeguards (Farooq, 1985). In fact, Effah, (1999) has noted that previous findings that supported the polygamy-fertility Hypothesis were methodologically flawed.

#### 4.0 DISCUSSIONS OF FINDINGS



Fertility levels have experienced only slight decline in almost two decades, since the last census. This is not surprising because there is hardly any impetus to support a decline in fertility, nationwide. The conventional factors which engender fertility decline, such as contraceptive use, and large scale female participation in modern sector employment have been very low. Current contraceptive prevalence rate, irrespective of the contraceptive method and marital status, is still less than ten percent, (Ministry of Health, 2006; Population Reference Bureau, 2006.) even though there are existing family planning organizations and similar programmes including, a national family planning programme had been implemented in the past. The country still remains predominantly agricultural. This could provide additional support for current high levels of fertility.

The census results however point to the fact that some changes are taking place with respect to marriage. For example, the proportion of persons entering into marital union is on the decrease compared to results of the last census. Marriages are also being delayed and pre marital births are low. The level of fertility has not declined commensurately over the years may be due to the possibility that late marriage is not a sufficient condition to produce any substantial impact on fertility. Until recently, Sierra Leone had never benefited from any social scheme that would provide socioeconomic support for the population at old age. Consequently, parents have had to rely on support from their children. This makes it imperative to have large families. Indirect steps to address fertility are however currently being taken. Within the educational system, female pupils are being encouraged to stay longer in school. This, it is expected, would produce the desired inhibiting effect on fertility. Issues pertaining to the empowerment of women are also in Governments development agenda as a measure to improve the overall status of women. It is expected that in the long run, these interventions will produce a reducing effect on fertility.

## **5.0 CONCLUSIONS**

The following conclusions emanate from various analyses of the 2004 National Census and comparisons with data from previous censuses.

### **5.1 Nuptiality**

1. The results suggest that patterns of marriage have changed over the years. The data point to a lower proportion of respondents getting married.
2. The timing of entry into marital unions seem to have changed and marriage is being contracted at much later dates. It is noted that the percentage of young girls aged 15-19 getting married has dropped in the intercensal period.
3. Nationally, polygyny is not a very common cultural practice although the data suggests, as expected, that it is more common in the rural areas.

### **5.2 Fertility**

1. Levels of fertility have hardly declined at national level.
2. There has been a delay in the timing of births by about five years (from age group 20-24 years to 25-29 years). The mean and median ages at childbearing have also increased over the three decades period. This delay occurs among married women and the general female population. This may have resulted in the slight decline observed in the fertility level.
3. In terms of fertility differentials, the analyses suggest that the level of education, marital status and rural-urban place of residence produce a salutary effect on the number of children ever born. With respect to education, the data shows that the acquisition of secondary education could have a significant effect on the level of fertility. Regarding marital status, it appears that married women have about 2.5 more children than single women. In relation to place or residence, rural residents have one child more than living in the urban areas. In short, fertility is affected by a number of social factors.
4. More females are in Marital Union than their male counterparts.
5. There are possible indications that polygynous marriages could result in larger family sizes than monogamous marriages.
6. Replacement levels-both GRR and NRR- are high and have decline only slightly over two decades.

## **6.0 POLICY IMPLICATIONS**

1. Levels of fertility have remained persistently high and could be a major cause for increases in the rate of population growth given the accompanying decline in mortality levels. More rigorous steps such as the resuscitation of a viable family planning programme need to be taken by Government to effect a reduction in the level of births in the country. This will contribute significantly to accelerating a demographic transition.
2. Given the observed relationship between levels of education and fertility, there is the need to intensify the drive to increase both the enrollment and retention of girls in school in order to produce a delay in the age at marriage and ultimately a reduction in the levels of fertility.

## **7.0 RECOMMENDATIONS**

1. A National family planning programme that seeks to limit births either through spacing or through regulation should be implemented more vigorously in order to effect a decline in the level of fertility. Although marriages are being contracted at older ages, the desired effect on fertility may be small and slow if the demographic transition process is to be effected through cultural and traditional means only.
2. Further ad-hoc research is required to examine the polygamy-fertility hypothesis, the original state of which is currently being contested.
3. There is need to revise the National Population Policy and to ensure its effective implementation as a means of producing a decline in the level of fertility.

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