# CHAPTER FIVE

## DIFFERENTIALS AND DETRMINANTS OF FERTILITY.

5.1 Introduction

This chapter present result of the analysis of fertility differentials in South Africa informal settlements.

Several socioeconomic characteristics are often used to measure fertility differential in a population. Total fertility rate (TFR) and mean number of children ever born (CEB) are therefore presented and broken down by the woman's highest level of education, marital status, religion, income, employment status and household ownership of durable items (radio and television). Because almost all (98%) of the women in South Africa's informal settlements were black, fertility differential within racial or population groups was not analyzed.

Table 5.1 below shows the distribution of the average number of children ever born (CEB), children surviving and the total fertility rates of women aged 35 to 49 by selected socioeconomic factors in South African informal settlements.


5.2 Education and Fertility.

The role education plays in shaping the pattern of fertility in any society has long been acknowledged. From the results presented in table 5.1, the mean number of children ever born and surviving as well as total fertility rate decreases with increase in education in South Africa informal settlements.  In other words, better educated women are less likely to have children than less educated women. However, the total fertility rate of primary educated women is almost the same as that of non educated women. That is often the case in pre-transitional and societies in early transition, especially in the Sub Sahara, where primary education is associated more with the abandonment of traditional birth-spacing practices than with increased willingness or ability to control fertility (Jejeebhoy, 1995). In addition, mean number of children surviving shows also that on average, children of educated women are more likely to survive than those of uneducated

women. This suggests that children of better educated women are less likely to die than those of less educated.

**Table 5.1 Mean number of Children ever born, surviving and total fertility rate by economic characteristics, SA 2001 Census**

| SES | Mean number of children ever born (35-49) | Mean number of children surviving (35-49) | TFR |
|---|---|---|---|
| **Education** | | | |
| No educated | 3.062 | 2.82 | 3.0 |
| Primary | 2.879 | 2.67 | 3.1 |
| Secondary | 2.155 | 2.058 | 2.8 |
| Higher | 1.513 | 1.479 | 2.5 |
| **Marital status** | | | |
| Ever married | 3.596 | 2.663 | 3.4 |
| Never married | 2.751 | 1.950 | 2.6 |
| **Religion** | | | |
| Christian | 3.295 | 3.166 | 2.7 |
| African & Traditionalist | 3.300 | 3.069 | 2.9 |
| Non Christian | 3.358 | 3.199 | 2.2 |
| No Religion | 3.094 | 2.899 | 3.1 |
| **Income** | | | |
| Low income | 2.448 | 2.303 | 2.8 |
| High income | 2.25 | 2.123 | 2.4 |
| **Employment status** | | | |
| Unemployed | 2.365 | 2.223 | 3.3 |
| Employed | 2.507 | 2.376 | 2.8 |
| **Ownership of Radio** | 2.448 | 2.304 | 4.9 |
| **Ownership of TV** | 2.559 | 2.416 | 0.9 |

Source: computed from 2001 SA Census 10% Sample.


**5.3** Marital Status and Fertility.

When analyzing marital status, results in table 5.1 suggest that the mean number of children ever born and surviving, as well as the total fertility rate are greater among ever married than among never married women. Indeed, mean number of children ever born, children surviving and total

fertility rate are about 3.6, 2.7 and 3.4 respectively among ever married women against 2.8, 2 and 2.6 respectively for never married women.

5.4 Religion and Fertility.

Religion has been found to be a major determinant of fertility in most societies. In South African informal settlements however, there are no clear fertility differences by religion. In fact, the mean number of children ever born and surviving are almost the same for the different religion groups. Fertility is however higher among women with no religion, followed by African/traditionalist, Christian and then non Christian.

5.5 Income and Fertility.

With regards to women's income, mean number of children ever born, surviving and total fertility rate were 2.5, 2.3 and 2.8 respectively for low income women against 2.3, 2.1 and 2.4 respectively for high income women. These results imply that children born to women with higher income are more likely to survive than low income children.

5.6 Employment status and Fertility.

When comparing fertility across women's employment status, table 5.1 indicate that unemployed women have more children than those that were employed, although mean number of children ever born and surviving do not portrayed clear patterns. This may be explained by the large proportion of unemployed women in South African informal settlements, who have the tendency not to correctly disclose the little money they make or do not make any monies at all.

5.7 Wealth and Fertility.

In terms of household goods ownerships, women living households with TV and radio have lower fertility.

A graphical presentation of the fertility pattern by relevant socioeconomic background is given in figures 5.1 and 5.2 below.

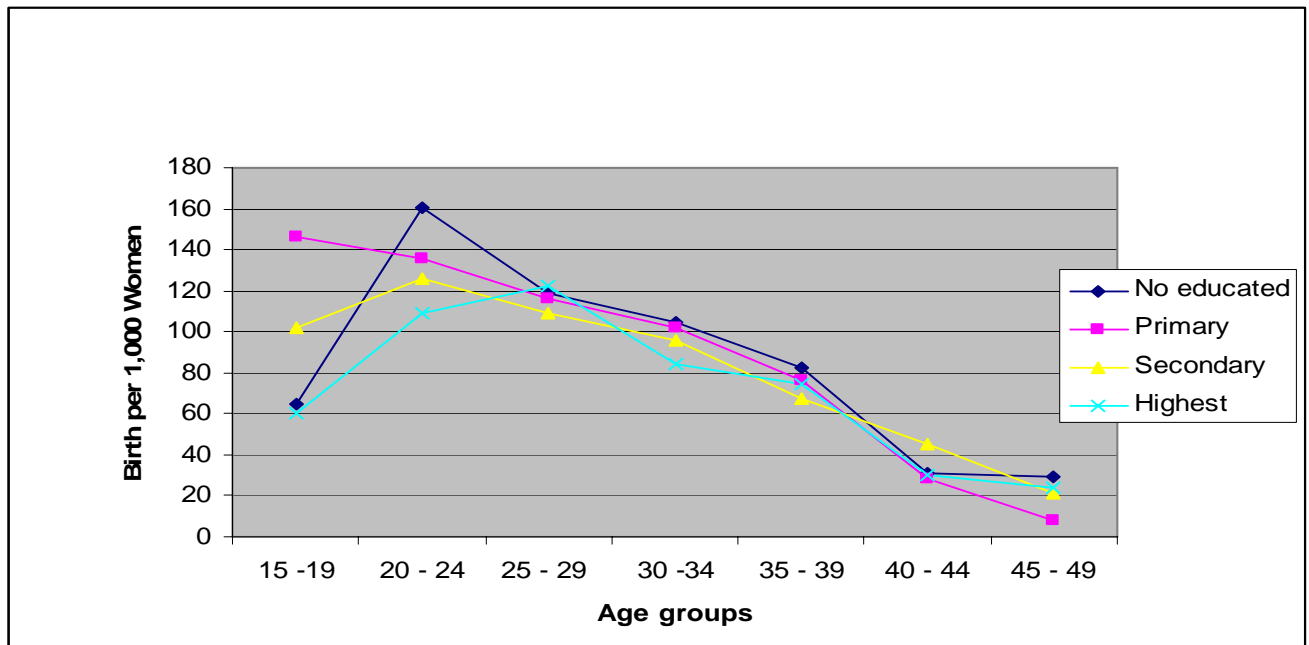**Figure 5.1 Fertility by highest education level of in South Africa informal settlements**



Figure 5.1 indicates that from the peak at age 20-24, fertility is highest for none educated. ASFR for none educated women is about 160, primary educated 130, secondary 120, while the ASFR for higher educated women is below 120 in the peak point. The pattern holds for almost all the age groups, but the greatest difference is again, observed in young age groups.

**Figure 5.2 Fertility by employment status of Women in South Africa informal settlements**
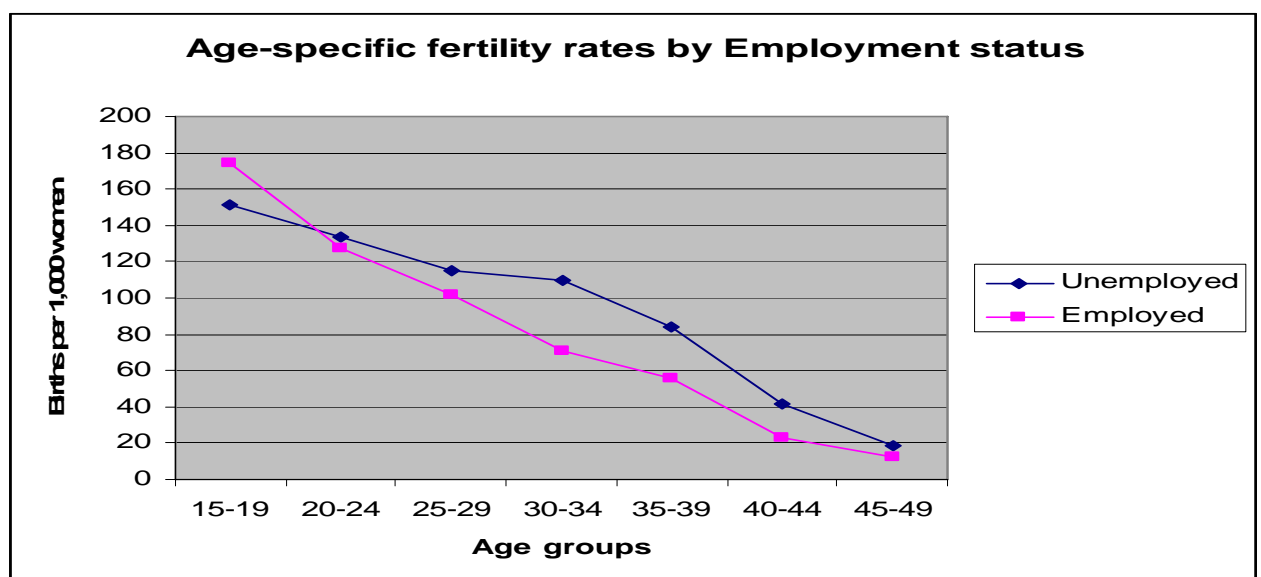
From figure 5.2, it clear that fertility is higher for unemployed women than for employed women in South African informal settlements. In fact, in the early young age groups fertility of employed women is greater than that of unemployed. From ages 20-24 up to age group 49, fertility is greater among unemployed women compared with employed women.

Fertility is however the result of a combination of factors, which often operates together. In order to identify most important factors affecting fertility in South Africa informal settlements, further analysis is often required. This is what I am analysing in the next chapter.

5.8 Analysis of Fertility determinant

This section aim to identify statistically, socioeconomic factors of fertility in South Africa informal settlement. It's including the regression analysis and a summary of the analysis.

5.2. Multiple regressions Output.

**Model Summary**

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|---|---|---|---|---|
| 1 | .248[a] | .062 | .060 | 1.94 |

The R square in the output above represents the proportion of variance in the dependent variable that is accounted for by the dependent variables. The R-square of 0.062, means that only about 6.2 percent of the variability of fertility in South Africa informal settlements is accounted for by the variables in the model. This suggests that others variables need to be include in the model to better predict fertility in South Africa informal settlements. Provision of fewer variables in a census did not allow us to capture more explanatory variables in the model.

## 5.3. Multiple regressions Output.

**ANOVA<sup>b</sup>**

| Model | | Sum of Squares | df | Mean Square | F | Sig. |
|-------|--|----------------|-----|-------------|--------|---------|
| 1 | Regression | 2948.359 | 14 | 210.597 | 56.211 | .000ª |
| | Residual | 44928.390 | 11992 | 3.747 | | |
| | Total | 47876.749 | 12006 | | | |

The model F (56.211) with 14 degrees of freedom is significant (p<0.0001) suggesting that all

model is a fits the data.

## 5.10 Summary results.

## 5.4 Multiple regressions Output.

| | Coefficients ª | | | | |
|---|---|---|---|---|---|
| | Unstandardized Coefficients | | Standardized Coefficients | | |
| | B | Std. Error | Beta | t | Sig. |
| (Constant) | 2.368 | .197 | | 11.990 | .000 |
| No educated women | .508 | .049 | .104 | 10.394 | .000 |
| Primary education | .376 | .041 | .092 | 9.273 | .000 |
| Higher education | -.427 | .178 | -.023 | -2.405 | .016 |
| married women | .889 | .047 | .181 | 18.998 | .000 |
| lving together | .177 | .060 | .027 | 2.944 | .003 |
| Widow, Separate & Divorced | .756 | .048 | .150 | 15.914 | .000 |
| Christian | .233 | .051 | .053 | 4.560 | .000 |
| African & Traditional | .229 | .068 | .038 | 3.348 | .001 |
| Non christian | .222 | .176 | .012 | 1.263 | .207 |
| Employed women | -.261 | .049 | -.064 | -5.316 | .000 |
| Unemployed women | -.139 | .049 | -.034 | -2.854 | .004 |
| Low income women | .188 | .185 | .010 | 1.018 | .309 |
| Do not own radio | .146 | .038 | .036 | 3.852 | .000 |
| Do not have TV | -6.93E-02 | .041 | -.016 | -1.689 | .091 |

The table above gives the coefficients for each of the variables indicates the magnitude and

direction of change in fertility given a unit change in the value of each independent variable

when all other variables in the model are held constant. A positive coefficient indicates that the

independent variable considered is likely to enhance fertility while a negative coefficient means

that the independent variable considered is likely to depress or lower fertility. (Russel, 2000).

Beta coefficient, also know as standardised regression coefficient portray the relative strength of the various predictors within the model. They reflect their importance in predicting respondent's fertility behaviour. Statistical significance is at the 5% level.

The results suggest that the coefficients for non-Christians, low income for income and no TV were not significant. This suggests that fertility level in South Africa informal settlement is explained by the significant variables in the model.

When, we analyse the highest level of education achieved by women in South Africa informal settlements, no education and primary education have a positive coefficients while higher education has a negative one. This suggests that no education and primary education are related to an increase in fertility in South Africa informal settlement. On the other hand, higher education is related to a decrease in CEB by a factor of 0.43 children. Looking at marital status, the output indicated that married women, living together and widow, separate and divorced have higher fertility than never married women. Religion also positively affects fertility in South Africa informal settlements. In fact, the output above indicates that Christian women, African & traditional and non Christian have higher fertility than those without religion when other factors are taken into account, although the effect of non Christian women is not significant at the 95 per cent level. Employment inversely affects fertility in South Africa informal settlements. Ownership of radio positively affects fertility in informal settlements, women dwelling household without radio are enhancing fertility in South Africa informal settlements. A scrutiny analysis of income indicates that after controlling for other variables in the model, low income women have higher fertility in South Africa informal settlement, even though it is insignificant at 95 per cent level of significant.