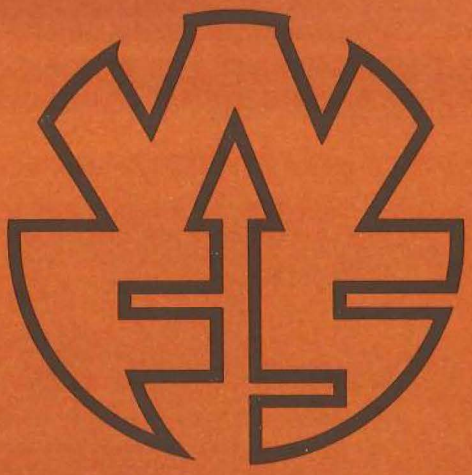

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Illustrative Analysis : Socio-Economic Differentials in Cumulative Fertility in Sri Lanka – A Marriage Cohort Approach

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The World Fertility Survey is an international research programme whose purpose is to assess the current state of human fertility throughout the world. This is being done principally through promoting and supporting nationally representative, internationally comparable, and scientifically designed and conducted sample surveys of fertility behaviour in as many countries as possible.
The WFS is being undertaken, with the collaboration of the United Nations, by the International Statistical Institute in cooperation with the International Union for the Scientific Study of Population. Financial support is provided principally by the United Nations Fund for Population Activities and the United States Agency for International Development.
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Illustrative Analysis : Socio-Economic Differentials in Cumulative Fertility in Sri Lanka — A Marriage Cohort Approach

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Preface

One of the main concerns of the World Fertility Survey has been the analysis of the data collected by the participating countries. It was decided at the outset that, in order to obtain quickly some basic results on a comparable basis, each country would produce soon after the field work a 'First Country Report', consisting of a large number of cross-tabulations with a short accompanying text. Precise guidelines for the preparation of the tables were produced and made available to the participating countries.

It was also recognised, however, that at later stages many countries would wish to study in greater depth some of the topics covered in their first reports, or indeed new but related subjects, using more refined analytic techniques. In order to assist the countries at this stage a general 'Strategy for the Analysis of WFS Data' was outlined, a series of 'Technical Bulletins' was started, dealing with specific methodological issues arising in the analysis, and a list of 'Selected Topics for Further Analysis of WFS Data' was prepared, to serve as a basis for selecting research topics and assigning priorities.

It soon became evident that many of the participating countries would require assistance and more detailed guidelines for further analysis of their data. Acting upon a recommendation of its Programme Steering Committee, the WFS then launched the present series of 'Illustrative Analyses' of selected topics. The main purpose of the series is to illustrate the application of certain demographic and statistical techniques in the analysis of WFS data, thereby encouraging other researchers and other countries to undertake similar work.

In view of the potentially large number of research topics which could be undertaken, some selection was necessary. After consultation with the participating countries, 12 subjects which are believed to be of top priority and of considerable interest to the countries themselves were selected. The topics chosen for the series span the areas of fertility estimation, levels, trend and determinants, marital formation and dissolution, breastfeeding, sterilization, contraceptive use, fertility preferences, family structure, and infant and child mortality.

It was envisaged that each study would include a brief literature review summarizing important developments in the subject studied, a clear statement of the substantive and methodological approach adopted in the analysis, and a detailed illustration of the application of such an approach to the data from one of the participating countries, but with emphasis on the general applicability of the analysis. These studies have been conducted in close collaboration with the country concerned, where possible with the active participation of national staff.

It should perhaps be emphasised that the studies in the 'Illustrative Analyses' series are meant to be didactic examples rather than prescriptive models of research, and should therefore not be viewed as cookbook recipes to be followed indiscriminately. In many cases the investigators have had to choose a particular course of action from several possible, sometimes equally sound, approaches. In

some instances this choice has been made more difficult by the fact that demographers or statisticians disagree among themselves as to the approach most appropriate for a particular problem. In the present series we have, quite intentionally, resisted the temptation to enter the ongoing debates on all such issues. Instead, and in view of the urgency with which countries require guidelines for analysis, an attempt has been made to present what we believe to be a basically sound approach to each problem, spelling out clearly its drawbacks and limitations.

In this difficult task the WFS has been aided by an *ad hoc* advisory committee established in consultation with the International Union for the Scientific Study of Population (IUSSP) and consisting of Ansley Coale (Chairman), Mercedes Concepción, Gwendolyn Johnson-Ascadi and Henri Leridon, to whom we express our gratitude. Thanks are also due to the referees who have generously donated their time to review the manuscripts and to the consultants who have contributed to the series.

Many members of the WFS staff made valuable contributions to this project, which was co-ordinated by V.C. Chidambaram and German Rodriquez.

Dr. Miloš Macura
WFS Project Director

Acknowledgements

The authors express their appreciation to John Cleland for his substantial contributions to the design and execution of this analysis. His suggestions on the drafting of the report were also invaluable. Comments on an earlier draft by Chris Langford of the London School of Economics are also gratefully acknowledged.

1 Introduction

The analysis of fertility in Sri Lanka is a challenging prospect for demographers. The country is heterogeneous in nature, with a diversity of ethnic and religious groups and a varied terrain. Furthermore, the three decades prior to the 1975 Sri Lanka Fertility Survey have seen considerable changes in the demographic profile of the country. Indicators of socio-economic status, such as level of education and per capita income, have risen. This has been accompanied by a rise in the average age at marriage and increased knowledge and use of contraception. A combination of factors has resulted in a reduction in age specific fertility, which is documented in the First Report of the Sri Lanka Fertility Survey (World Fertility Survey, 1975) and discussed in detail in another illustrative analysis in this WFS Scientific Reports series (Alam, forthcoming). Any analysis of survey data should take into account the changing experience of the cohorts which have been interviewed. The present illustrative analysis is concerned with the study of socio-economic differentials in cumulative fertility. A simple approach to this subject would be to take the most direct measure of cumulative fertility available from WFS surveys, the number of children ever born at interview (more loosely termed parity), and to analyse its relationship with a set of demographic and socio-economic variables. Such an approach may be appropriate in less developed countries where age-specific fertility has remained, for the most part unchanging, and differentials in fertility can be regarded as relatively stable. It has the merit of being unaffected by errors in the reporting of birth dates in the birth histories of respondents, which may be considerable in some WFS surveys. However this approach was considered inappropriate for Sri Lanka. There is no reason to assume that fertility has declined equally among different socio-economic groups in the country. Hence a basic requirement of the analysis is to consider changes in the pattern of differentials between cohorts, or in other words *trends in differentials,* or *differentials in trend.* The result is a cohort analysis of fertility differentials. For reasons discussed in the text marriage cohorts rather than birth cohorts are compared in the present study.

The choice of measures of fertility and of a cohort analysis is based on suitability for the Sri Lankan situation, and other choices may be preferable for other countries. However, many issues addressed here are likely to arise in more general contexts. The first of these issues is the problem of association between the socio-economic and the demographic variables. The method of analysis in this paper attempts to assess the impact of these associations on the differentials for any particular variable of interest. The procedure adopted is based on stepwise multiple linear regression with variables introduced in a predetermined order. A similar technique was used for the illustrative analysis of socio-economic determinants of contraceptive use in Thailand (Cleland, Little, and Pitaktepsombati, 1980). A second issue concerns the role of sampling weights in the multivariate analysis. In Sri Lanka differential probabilities of selection were employed in different parts of the country to obtain satisfactory regional estimates of fertility. As a result individuals are given unequal weights in cross-tabulation to allow for differential probabilities of selection. The role of these weights in a regression analysis is rather a difficult issue, of little substantive but considerable technical interest. This problem is discussed in some detail in later sections.

On a more general level, it should be emphasized that a considerable by-product of the detailed interviewing process which forms the basis of the World Fertility Survey is the collection of extensive multivariate data about fertility and related factors at the level of the individual woman. The analysis of these data is fraught with technical and (more importantly) interpretational problems. However efforts should be made to make full use of the information, in order to increase our understanding of the process we are attempting to measure. The authors hope that the present study constitutes a step in this direction.

2 The 1975 Sri Lanka Fertility Survey

2.1 AN OUTLINE OF THE SURVEY

Sri Lanka, an island of 65,608 square kilometres, had a population of 13.4 million in 1975. Its population consists of several ethnic groups. The largest of these are Sinhalese, who constitute approximately 72 percent of the population. They are predominantly Buddhist with a small Christian minority. Tamils, who contribute about 22 percent to the population, form two subgroups within the community; Sri Lanka Tamils and Indian Tamils, both mainly Hindu in religious belief. The latter are the more recent Indian migrants to the country and live mainly on the plantations in the South-Central hills. The third group are the exclusively Muslim Sri Lanka Moors, a closely knit community descended from the early Arab traders. Each ethnic group has preserved over the years the social and cultural norms associated with its own religious beliefs.

Although small the country shows a geographical diversity which has led to the concentration of minority ethnic groups in particular areas of the country. For the purpose of sampling, therefore, the country was divided into 6 zones of somewhat similar socio-economic characteristics. Different sample probabilities were applied in each zone so that zonal estimates could be made from the survey.

The Zones are located on a map of Sri Lanka in Figure 2.1, and are loosely described as the city of Colombo (Zone 1), the South-Western lowlands (Zone 2), the South-Eastern coastal belt (Zone 4) the Northern peninsula and adjoining districts (Zone 5), the South Central Hilly areas (Zone 6) and other areas (Zone 3). More description of the zones appears in Section 6.3.1.

Each zone was further divided into three strata – urban, rural, and the estates, the latter identifying the tea and rubber plantations cultivated by Indian Tamils. Differing probabilities of selection were applied to each stratum. Finally each individual was assigned a sample design weight to compensate for differences in sampling probabilities and response rates.

Interviews were conducted from August to October, 1975. First a household schedule, consisting of a listing of household members with age, sex and marital status, and other household information, was administered to selected households. Then a detailed individual interview was conducted with each eligible woman in the household, where eligibility was defined as ever married and between 12 and 49 years of age. A total of 6812 women were successfully interviewed, representing an overall response rate of 89 percent. Most of the non-response was due to non-contact, and refusals were negligible.

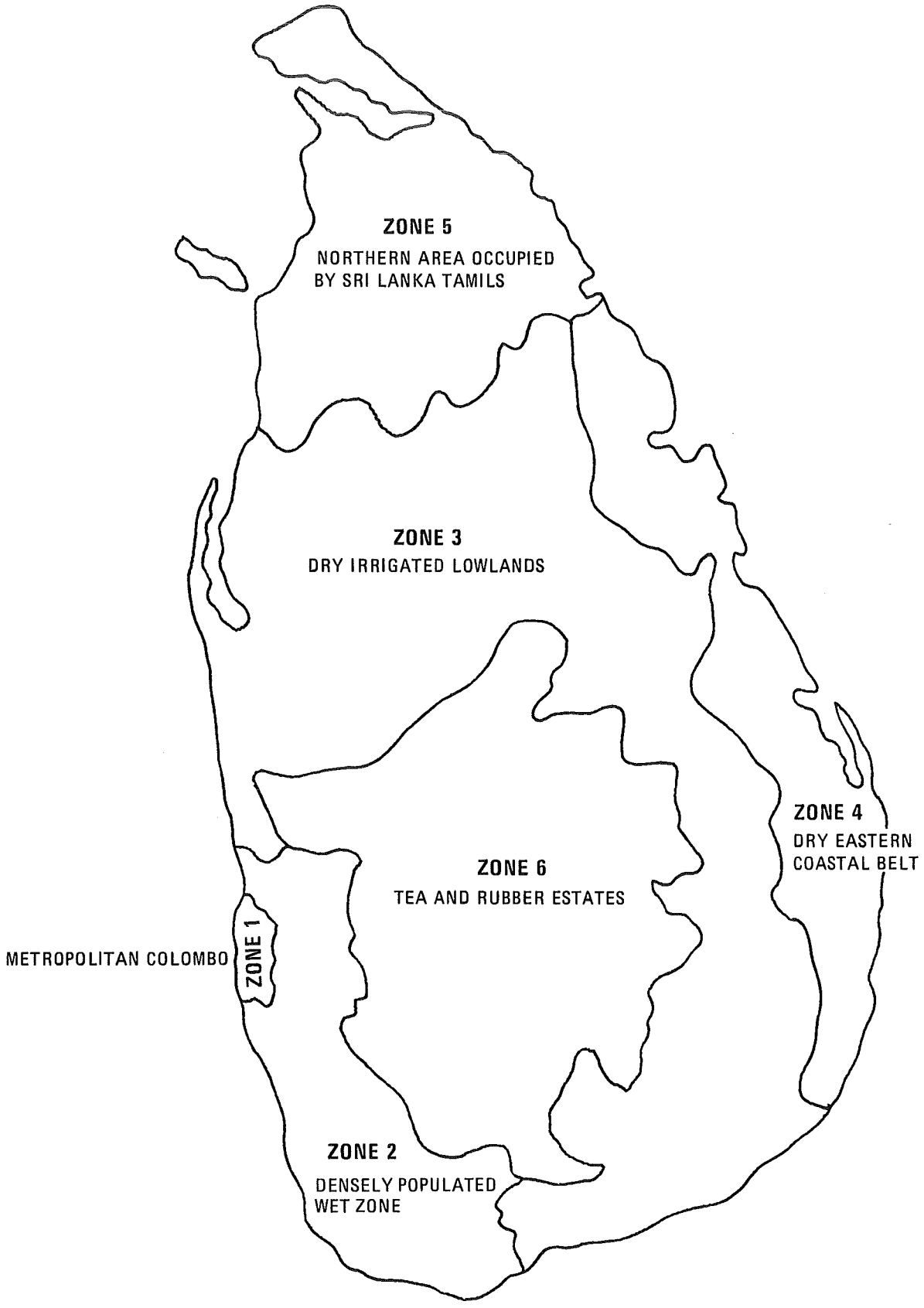
The Sri Lanka questionnaire was closely comparable to the WFS core questionnaire. The present analysis makes use of the data from the sections on Respondent's Background, Marriage History, Maternity History, Work History, Husband's Background and some supplementary questions on household schedule about housing conditions and ownership of assets.

The measurement of fertility was not based on a single direct question on the number of children born but a series of questions designed to minimise omissions due to recall lapse. Each respondent was asked: (1) the number of sons living with her; (2) the number of sons living away from home; (3) the number of daughters living with her; (4) the number of daughters living away from home; and finally, (5) the number of children dead. The sum of these five categories was entered as the total number of children born, after verification with respondent. Further questions in the pregnancy history section identified any live births which owing to their short life span had not been reported as such. The date of birth of each child was ascertained on the response to the question "In what month and year was ..... (name) born?". When the year of birth was not known, age of the child was estimated by asking "How many years ago was ..... (name) born?"

Calendar year and month were obtained for 64 percent of births, calendar year only for a further 27 percent, leaving a small residue of 9 percent for which 'years ago' only was stated. A considerable proportion of these births of unknown month and year are births to older women. Calendar months and years were assigned to all births of unknown month and year, using an automatic computer procedure which allocated events within a calendar year or within the stated year prior to the survey, in such a way as to avoid creating inconsistencies with adjacent vital events.

The survey collected some basic information on the socio-economic conditions of the respondents. Questions were included on the place of residence of the respondent; her ethnic group, religion, educational achievements; type of work done before and after marriage; and similar background information relating to her husband. A more detailed description of these characteristics and their role as socio-economic indicators will be discussed in Section 6.

Figure 2.1 Map showing Zones of Sri Lanka



2.2 FINDINGS FROM THE SURVEY

2.2.1 FERTILITY TRENDS

An examination of the fertility trends both from the survey and from other sources reveal radical changes in fertility levels over the last 2½ decades. The crude birth rate which ran on a more or less horizontal course during the first half of the century began a downward path in the early 1950's. This trend continued with the increasing rates of decline through the 1960's up to the present time. Prior to 1950, the crude birth rate was fluctuating between 35 and 40 per 1000. The decline which began in the early 1950's was slow and erratic at first and the crude birth rate remained at 36.6 births per 1000 at the time of the 1963 census. At the 1971 census a level of 29.4 births per 1000 was recorded, representing an annual decline of nearly 2 percent in the intervening 10 years. In the next five years the rate of decline increased to 2.21 per cent per annum which led to a crude birth rate of 27.3 in 1975.

As can be seen in Table 2.1 the changes in the age specific fertility schedules over the period considered are consistent with the decline in crude birth rates. The total fertility rate declined from 5.3 in 1953 to 3.7 in 1973, mainly because of 30-40 percent declines in the rates of the 20-24, 25-29, and 30-34 age groups. Marital fertility changed little during the early period of the fertility decline. However, since 1963, age specific marital fertility rates of all age groups except 15-19 declined gradually. The highest reductions are recorded for the ages between 30-39.

Factors responsible for this dramatic fertility decline over a span of twenty years have been the subject of several other studies. The early slow and unsteady decline has been attributed mainly to changing age structure and decreasing proportions married in childbearing ages. Fernando (1970) postulates that the effects of the malaria epidemic in the years 1934-38 on infant and child mortality resulted in a female age structure with a small proportion of women in reproductive ages in the early 60's. The steady drop in birth rates between 1963, and 1971 has been attributed to rising age at marriage and, to lesser extent, to declining marital fertility. It is interesting to note that during this period the female age structure changed to include larger proportions of women between 15-49. Thus the decline in fertility was achieved despite the opposing influence of the changing age structure. (Fernando, 1972.)

The preliminary results of the survey indicate a further decline in marital fertility in the early 1970's, concentrated particularly in the 25-34 age group. Thus socio-economic differentials have to be considered in the context of a well-established decline in fertility between cohorts in the study. We first examine differentials for the cohort aged 45-49 who have essentially completed their childbearing by the survey date.

2.2.2. FERTILITY DIFFERENTIALS

Ever-married women aged 45-49 report an average of 6.0 live births. Means for various subgroups of the sample are given in Table 2.2. For each variable, row A gives the observed means and row B gives means standardized on the distribution of age at marriage in the whole sample.

Regional differences are evident in the first row of the table. Zones 1 and 2 have lower mean parities than average, Zones 5 and 6 have values close to the overall mean, and Zones 3 and 4 have higher than average fertility. Adjustment for age at marriage brings the means for Zones 1 and 4 back to the overall mean, suggesting that the compositional effect of this variable accounts for the respectively low and high fertility of these groups.

Urban-rural differentials are in the expected direction, urban mean parity being half a birth lower than that for rural areas. The Indian Tamil estate workers have a low fertility, despite their early age at marriage and low socio-economic status. This rather unusual group are excluded from the main analysis in the present study, but their cohort fertility is compared with the rest of the sample in a supplementary analysis in Chapter 6.

The relationship between education and fertility is also as expected, with uneducated women having on average 2.2 more children than women with ten or more years of education. These differentials are partly attributable to differences in the distribution of age at marriage. For this cohort the highly educated women are a small and selective group, and in later sections we shall also consider the fertility of the more substantial groups of highly educated women in more recent cohorts.

Differentials by occupation of husband are also evident, with mean parities ranging from 4.5 for wives of professionals to 6.8 for wives of self-employed agricultural workers. Wives of unskilled workers have a relatively high mean of 6.5, and other groups have intermediate values.

Table 2.1 Age Specific Fertility Rates and Marital Fertility Rates From Various Sources

	Age Specific Fertility Rates				Age Specific Marital Fertility Rates		
Age Group	1953 Census[2]	1963 Census[2]	1971 Census[2]	1973 Survey[2]	1963 Registration[1]	1970 Registration[1]	1973 Survey[2]
15-19	64	52	40	36	354	449	357
20-24	259	228	184	151	396	408	330
25-29	295	278	232	203	344	323	284
30-34	246	240	199	172	270	253	202
35-39	150	157	131	124	175	151	125
40-44	38	46	40	41	53	42	42
45-49	7	7	6	13	8	7	17
TFR	5.32	5.04	4.16	3.70	–	–	–

[1] Marital Rates for 1963 and 1970 are based on vital registration data (see Fernando, 1974).

[2] Other Rates are adapted from Alam (forthcoming). The 1973 rates are revised estimates from the 1974 survey, based on a three-year moving average.

The cross-classification by religion does not reveal large differentials, but the related breakdown by ethnic group shows a high mean parity for the small group of Sri Lanka Moors and a low mean parity for the Indian Tamils. For reasons explained below we consider a joint categorization of religion and ethnic group for further analysis.

The First Report also tabulates for the same group of background variables the current parity of women married for 10 to 19 years at the time of survey. The main observation is that differentials follow largely the same pattern as the unstandarized means for 45–49 age group, given in Table 2.2.

Searching for life-cycle variations in the socio-economic determinants of fertility, the First Report examines the effect of variables on parity at the end of the first five years of marriage for the same cohort who have been married for 10-19 years. Muslims stand out as a high fertility group. Significantly the more educated women have slightly higher parity than the less educated. Indian Tamils and Hindus who have been observed as low fertility groups emerge as

Table 2.2 Mean Parity of Ever-Married Women Aged 45-49, by Background Variable

Row A: as Observed, and
Row B: Standardized on the Overall Distribution of Age at First Marriage.

Numbers in Parenthesis ( ) are Based on 20 to 49 Cases. Overall Mean Parity of this Subsample is 6.0.

	Region of Residence					
Row	Zone 1	Zone 2	Zone 3	Zone 4	Zone 5	Zone 6
A	5.5	5.2	7.0	(6.8)	6.0	6.3
B	6.1	5.5	6.7	(6.1)	6.0	5.9

	Type of Place of Residence		
Row	Urban	Rural	Estate
A	5.5	6.2	5.2
B	5.9	6.1	4.9

	Level of Education			
Row	None	1-5 Years	6-9 Years	10+ Years
A	6.4	6.1	5.5	4.2
B	6.0	5.9	5.9	4.9*

	Religion			
Row	Buddhist	Hindu	Muslim	Christian
A	6.1	5.6	6.2	5.5
B	6.1	5.5	5.8	6.0

	Ethnic Group			
Row	Sinhalese	Sri Lanka Tamil	Indian Tamil	Sri Lanka Moor
A	6.1	5.6	5.3	(6.4)
B	6.1	5.6	4.9	(5.7)

	Occupation of Husband						
Row	Professional	Clerical and Sales	Self-Employed Agriculture	Non-Self-Employed Agriculture	Service	Craftsmen	Unskilled
A	4.5	5.4	6.8	5.6	5.5	5.6	6.5
B	4.9	5.8	6.5	5.3	5.6	5.9	6.5

* Because of small cell frequencies, this standardized mean is based simply on a division of age at marriage into categories <25 and $\geqslant 125$.

Source: Table 2.2.6, *Sri Lanka Department of Census and Statistics (1978).*

low fertility groups even in early marriage. In addition those women who worked before marriage have somewhat lower mean parity than other work status groups.
The estate workers report a lower parity than their counterparts right from early durations of marriage to the end of reproductive span. It is important to note that variations in age at marriage cannot explain these differentials.
Finally examining the current fertility, as measured by births in the five years preceding the survey, one observes that Zones 3 and 4, Moors and Muslims are high fertility subgroups while as expected estate workers report low fertility levels. There is no evidence of differentials in current fertility across educational categories.
The preliminary findings of the survey identify certain subgroups of the population as low fertility groups and certain others as high fertility groups. Many of the differentials can be attributed to variations in age at first marriage. A second mechanism is the differential tempo of childbearing between subpopulations after the first few years of marriage.

3 Previous Research on Fertility Differentials in Sri Lanka

Studies on fertility differentials in Sri Lanka, unlike those on trends, are few and limited in scope. Data for such studies have come from censuses, mainly those since 1946, vital registration and the four round socio-economic surveys. Such sources have their limitations in a study of fertility differences among population subclasses, and measures of fertility have been confined to overall indices such as the crude birth rate, age specific rates and child-women ratios. Further, the nature of information available has limited the investigations to examination of differentials across variables regardless of the possible correlations amongst them.

Among the early writers on the subject are R. Raja Indra (1954) and N.K. Sarkar (1957) whose investigations were based on the 1946 census and vital statistics. S. Kumaraswamy (1956), using 1953 census data commented on differentials over a longer span of time. Sarkar examined urban-rural differentials in terms of crude birth rate and child-woman ratios separately for married women and all women and demonstrated a higher rural fertility. He attributed this difference to the early marriage of rural women and the larger proportion of married women in the rural sector. Raja Indra estimated the number of children born per woman aged 45-49 years for each sector within each district and concluded that urban fertility was 38 percent higher than rural fertility during the period under study. Kumaraswamy found that estate women have lower fertility than rural women even though estate workers had the earliest age at marriage.

More recently Dallas Fernando (1974) analysed the urban-rural and regional differentials in fertility. Using 1963 Census and 1969/70 socio-economic survey data, he computed a series of indices such as the crude birth rate, age specific fertility rates and child-woman ratios. In a regional analysis, he showed that an area corresponding to Zones 1 and 2 of the present study has the lowest fertility. Eastern and North-Central dry zone has the highest levels of fertility and the central hilly areas and the northern part were intermediate. Within each area considered, except the last, rural fertility is higher than the urban.

An inverse relationship of education and fertility has been well established. The first examination of this relationship was by Raja Indra, who computed generation literacy rates for the years 1911, 1921 and 1946. Fertility decreased with increasing literacy. S. Kumaraswamy, using 1953 census data, showed that the average number of children per woman decreased with level of education. The most pronounced change was from the school to college level. This observation, that the most highly educated group of women have a distinctly lower level of fertility than the others among whom differences are minimal, is in keeping with the observations for the more recent years, including the 1975 survey.

The most recent and, perhaps, the most detailed investigation of the relationship of fertility to socio-economic factors is by Hanna and Nadarajah (1976). The measure of fertility used in their study is the number of children per fertile woman up to stated ages. In addition to ethnic and regional differentials, they considered variations across a socio-economic variable measuring education and economic activity. Two levels of education – educated and uneducated – and two levels of work status – economically active and inactive – jointly form four broad groups. Fertility of these four groups within each major ethnic group were considered. Activity status was shown to have a little effect on fertility among uneducated women. They concluded that while fertility is negatively related to education, the impact of economic activity depends on the nature of employment. Low paid manual jobs and the associated life styles are conducive to higher fertility. The study also examined the effect of variations in age at marriage for given durations of marriage. The observed lower fertility of educated women was believed to be mainly due to their later marriage.

Differentials of fertility across ethnic groups have been a major topic of research. The general approach has been to investigate the crude birth rate and general fertility rate for each ethnic group at the census years 1946, 1953, 1963 and 1971. The most striking observation has been the consistently high fertility of the Moors, a finding which is usually attributed to their early marriage. Indian Tamils have generally had the lowest levels of fertility. Fertility of each group has declined over the years. The decline however, has been differential leading to a widening gap between the highest and lowest levels. The smallest decline is recorded for Moors and the largest for Indian Tamils. The consistency of the ordering of the groups – Moor, Sinhalese, Sri Lanka Tamil and Indian Tamil, in descending order, for the years 1963 and 1971, is noteworthy.

All previous studies have used empirical observations of population subclasses to identify existing fertility differentials at various periods of time over the last several decades. The methodology adopted has been the interpretation of the variations of an index of fertility over the categories of the classifying variable. The findings identify an established ordering of ethnic groups, higher rural fertility and a negative education/fertility correlation. Examination of differentials within subgroups of age at marriage has led to the inference that deviations of some subgroups could be attributed to their age at marriage.

4 Demographic Framework for the Study

4.1 THE BASIC SET OF CROSS TABULATIONS

It is evident from the summary of Chapter Three that initial steps towards a cohort analysis of this process of family building were taken in the First Report of the Sri Lanka Fertility Survey, which included a discussion of childbearing in the first five years of marriage. This measure, of necessity, makes use of the dates of births as recorded in birth histories. In the present study, we extend this approach to examine the nature and extent of changes in the pattern of differentials, simultaneously across (a) cohorts of women; and (b) stages in women's reproductive careers.

In the analysis a fundamental choice in the structuring of the data has to be made between birth cohorts or marriage cohorts. Selection of three birth cohorts, such as one representing completed fertility, one representing the middle ages of 30 to 40 and finally one consisting of the younger women of less than 30 years seemed an attractive approach. However, in a situation of high and rising age at first marriage, a cross-sectional sample of ever-married women suffers a major selection bias among younger cohorts owing to the exclusion of never married women. As age at marriage is itself closely related to the socio-economic variables which influence marital fertility, the bias precludes proper study of women aged less than 30, among whom substantial proportions in Sri Lanka are still single. Against this serious defect, the marriage cohort approach is decidedly superior. Three marriage cohorts covering the whole sample are selected. The first is the cohort of women who have completed 20 or more years of marriage. These women, for practical purposes, can be regarded as having completed their fertility, as their increment of births before menopause will be slight. The second cohort of women are those of marriage duration 10 to 19 years. They are in midstream of their childbearing careers. Married between 1955 and 1965 they share the experiences of the post-independence social and economic changes of the country. The women married for less than 10 years form the third cohort. These are the women who have received the full benefits of the free education system (started in 1958) and the attendent social changes. Further, they entered married life at a time when ideas of intentional family limitation were becoming accepted.

The next step in shaping the demographic framework of the study was to decide how to classify or segment fertility according to stage of family formation, in order to study the pattern of differentials at different stages. The choice of marriage duration as the means of classification flows naturally from the previous decision to use marriage rather than birth cohorts. Accordingly it was decided to split fertility into two broad components – 'early' marital fertility as indicated by births in the first ten years following date of first marriage (BM0-9) and 'late' fertility as indicated by births in the tenth to nineteenth years following first marriage (BM10-19). A finer division, for instance into five year marital duration groups, was considered but rejected because of the dangers of an extensive proliferation of data and the increased effects of sampling error. Another reason for rejection was concern that the degree of accuracy of dates given in birth histories might not warrant finer divisions. As the results of a detailed evaluation of the quality of data were unavailable when the analysis was done, it was safer to use a broad division, thus minimizing the risks of obtaining spurious findings caused by possible errors in the data. In the event, the study by Alam (1980) indicated few major defects in the reporting of dates, so that this aspect is less worrying for an analysis of Sri Lanka data than might be the case for other surveys.

Having fixed the framework of analysis both in terms of cohorts and stages of family building, the next problem concerned the differing exposure of cohorts to 'early' and 'late' marital fertility, as defined above. For the earliest cohort, those married 20 or more years ago, there is no difficulty as these women have complete exposure throughout the first and second decade following first marriage.

The second cohort of women have complete exposure in the first decade but their exposure in the second decade is of varying length. For a woman with incomplete exposure, the number of children she would have during the ten year period can be estimated from the average number of children born per year of her actual exposure. If a woman has had B10-19 births during M10-19 months of exposure in this period, the estimated number of births for the 10-19 marriage period is given by

$$BM10\text{-}19 = 120 \times B10\text{-}19/M10\text{-}19. \qquad (4.1)$$

The mean fertility of the cohort of marriage duration 10-19 years in the second decade of marriage is found by averaging this estimate, with each individual weighted by the product of the sample weight and her exposure M10-19. This weight implies that the average is simply cumulated births divided by cumulative exposure, since for any average,

$$\Sigma \text{ exposure } (\text{births/exposure})/\Sigma \text{ exposure} = \Sigma \text{ births}/\Sigma \text{ exposure} \qquad (4.2)$$

The fertility of the cohort married less than ten years in the first decade of marriage is estimated in a similar manner. The estimated fertility of a respondent with B0-9 births in the first M0-9 months of marriage is

$$BM0\text{-}9 = 120 \times B0\text{-}9/M0\text{-}9. \qquad (4.3)$$

In averages this quantity is weighted by the product of the sample weight and the exposure M0-9 months.

Since the tempo of childbearing is higher at earlier durations of marriage, these rates somewhat overestimate the respective levels of fertility, though they are most unlikely to bias differentials to an important extent. For this reason and others to be discussed in a subsequent section, all women with less than one year of exposure within each duration considered are excluded from the estimate.

Note that the equations (4.1) and (4.3) reduce to the original measures of fertility, births in the first and second decades of marriage, for cohorts where all women have ten years of exposure, and hence M10-19 = M0-9 = 120. Thus they can be used to define 'early' and 'late' marital fertility for all cohorts and periods in the study.

The basic structure results in the cross-tabulation of means in Table 4.1. The columns represent the three marriage cohorts, women married 20 or more years, 10-19 years and less than ten years. The rows represent three fertility measures, births in the first decade of marriage (BM0-9) births in the second decade of marriage (BM10-19) and

number of children ever born (NCEB). The entries form a triangular array arising from the cross-sectional nature of the data. The means of BM0-9 for the 0-9 cohort and BM10-19 for 10-19 cohort are restricted to women with at least one year of exposure in the interval, and adjusted for differential exposure by the method discussed above. Strictly speaking, the mean of NCEB for the 20+ cohort might also be adjusted for differential exposure; however since over 90 percent of births occur in the first 20 years of marriage this adjustment was considered an unnecessary refinement.

Table 4.1 Subclass Means, by Cohort and by Duration

		Marriage Cohort		
Measure		20+	10-19	0-9
BM0-9	MEAN	3.502	3.363	3.566
BM10-19	MEAN	2.398	1.966	
NCEB	MEAN	6.374		

The first row of means indicates that births in the first ten years of marriage are fairly constant across cohorts. However the decline in fertility, discussed in the previous chapter, is evident in the difference in the mean number of births in the second decade of marriage between the 20+ and 10-19 cohorts (2.40, 1.97). The bias in the adjustment for differential exposure leads to an underestimate of this decline.

Table 4.1 is not very informative in the study of trends, since a finer grouping is necessary. However our concern here is with differentials between socio-economic groups, and these are revealed by further cross-classifying the means in Table 4.1. For example, differentials by Educational Level are studied with the aid of the three-way cross-tabulation of Table 4.2a. For each fertility measure (BM0-9, BM10-19 and NCEB), the columns indicate differentials in fertility between educational levels for each of the three cohorts. The rows reveal trends in fertility for each education group. Thus the table embodies the study of *trends in differentials*, or equivalently, *differentials in trends* of fertility. This table, repeated for a set of background variables, forms the starting point of the study.

An alternative form of Table 4.2a which brings out the pattern of differentials for each cohort is given in Table 4.2. The table is produced in two stages. Firstly, standardized means for each cohort and measure are calculated by averaging the education means with respect to the distribution of education in the whole sample. Thus a comparison of the standardized means between columns represents the trend adjusted for the effects of changes in the distribution of education between marriage cohorts. Secondly, the education means for each cohort and measure are expressed as percentage deviations from the standardized mean for that cohort and measure.

These procedures are not as complicated as they sound. Consider, for example, the number of births in the second decade of marriage for respondents with secondary education (SECOND). For the 20+ cohort the fertility of this group is 10.8 percent below the mean, and for the 10-19 cohort it is 15.7 percent below the mean. The change in the relative position of this group is caused by the fact that the fertility of this group has declined more than that of the other education categories. The reader may query why percentages are taken from a standardized mean rather than from the raw mean of each cohort. The reason is that the raw mean weights the means for each education group by the distribution of education for each cohort, and this distribution changes across cohorts. To remove the effect of

Table 4.2 Mean Fertility, by Marriage Duration, by Marriage Cohort, and by Respondent's Education

		(A) Means				(B) Percent Changes from Standardized Mean		
		Marriage Cohort				Marriage Cohort		
Measure	Group	20+	10-19	0-9	Group	20+	10-19	0-9
BM0-9	No Schooling	3.585	3.457	3.720	No Schooling	3.25	2.88	4.11
	Primary	3.455	3.427	3.531	Primary	−.48	1.99	−1.17
	Secondary	3.477	3.359	3.551	Secondary	.16	−.04	−.62
	High School	3.591	3.265	3.685	High School	3.44	−2.85	3.12
	University	2.837	2.582	3.233	University	−18.28	−23.17	−9.51
	Mean	3.502	3.363	3.566	Std. Mean	3.47	3.36	3.57
	Sd	0.281	0.325	0.172	Sd	8.10	9.67	4.81
	Chi-Squared (4DF)	6.3	30.4	8.6	Chi-Squared (4DF)	6.3	30.4	8.6
BM10-19	No Schooling	2.722	2.470		No Schooling	24.57	26.24	
	Primary	2.404	2.171		Primary	10.04	11.00	
	Secondary	1.948	1.648		Secondary	−10.84	−15.74	
	High School	1.491	1.362		High School	−31.78	−30.40	
	University	0.918	1.060		University	−57.97	−45.81	
	Mean	2.398	1.966		Std. Mean	2.18	1.96	
	Sd	0.642	0.516		Sd	29.40	26.39	
	Chi-Squared (4DF)	90.6	94.1		Chi-Squared (4DF)	90.6	94.1	
NCEB	No Schooling	6.922			No Schooling	14.33		
	Primary	6.326			Primary	4.50		
	Secondary	5.709			Secondary	−5.70		
	High School	5.266			High School	−13.02		
	University	3.756			University	−37.96		
	Mean	6.374			Std. Mean	6.05		
	Sd	1.077			Sd	17.79		
	Chi-Squared (4DF)	69.5			Chi-Squared (4DF)	69.5		

these changes on the percentage deviations, standardized cohort means are calculated. (An alternative would be to take percentage deviations from the *unweighted* education means for each cohort.)
Two other quantities are tabulated in Tables 4.2a and 4.2b. The standard deviation (SD) is the unweighted standard deviation of the education means, expressed in raw (Table 4.2a) and percentage (Table 4.2b) terms. This measure summarizes the substantive differences in the means. The chi-squared values which are the same in both tables, provide measures of statistical significance. Under the null hypothesis that the population means are equal, they are approximately chi-squared deviates with four degrees of freedom, given by the number of categories of education minus one. The derivation of the latter is discussed in the next chapter.

4.2 ASSOCIATION BETWEEN BACKGROUND VARIABLES

The tables described in the previous section were prepared for the following set of background variables:

Zone of residence (Zone)
Race/Religion (Race)
Type of Place of Residence (Current and Childhood)
Respondent's Education Level (R EDUC)
Respondent's Work Status (WORK)
Husband's Educational Level (H EDUC)
Husband's Occupation (H OCCUP)

The variables represent nearly all the background variables collected in the survey, and (with the exception of husband's education which was not discussed) they all showed substantial associations with fertility in the First Report.
A detailed description of the categories of each variable is deferred until Chapter 6. However, they are clearly not independent of one another. For example, women whose husbands are poorly educated are themselves poorly educated; and husband's occupation is highly associated with husband's education. Therefore, fertility differentials observed across categories of a given variable cannot be attributed entirely to differences between these categories. For instance regional differentials in fertility may be caused by regional variations in one or more of the other variables such as ethnic composition or level of education. An understanding of these intervariable associations is essential to a critical evaluation of fertility differentials across any variable.

Table 4.3 presents all two way associations among the seven background variables. Reading along a row gives the percentage distribution of the category in that row over all variables. For instance, row 1 shows that, of the Zone 1 respondents, 2 percent are rural, 25 percent rural migrants, 1 percent urban migrants, and 72 percent urban. Similarly 58 percent of Zone 1 women are Sinhala Buddhists, 11 percent are Sinhala Christians, etc.
Some of the more important relationships from Table 4.3 are summarized below: (1) Region of residence shows a clear association with all other variables. Zone 1 is distinguished from other zones by its predominately urban nature and correspondingly different occupational profile. This zone together with Zone 4 are the most racially heterogeneous regions. All other zones are marked by a predominance of one ethnic group. Educational levels of both the respondent and husband vary across the country, with more educated adult populations in Zones 1, 2 and 5 than in other zones.
Ethnic groups also show a distinct association with other variables. Moors and Christians (both Sinhala and Tamil) have a more urban distribution than average. On the other hand, 82 percent of the Sinhala Buddhists are rural compared to a national average of 75 percent. Interestingly, among both rural and urban migrants the proportions of Sinhala Christians are twice as high as in the whole sample. Sinhala and Tamil Christians are better educated; their proportions in the two higher levels of education of both the respondents and husbands are nearly 75 percent in excess of the national averages. Moor women have the largest proportions in the lowest educational levels.
Women's pattern of work is somewhat similar among ethnic groups. The only exceptions are the Moors who are least likely to have worked and Sinhala Christians who are most likely to have done so.
Pattern of occupation among Sinhala Buddhists closely resembles that in the overall sample. Christians and Moors have the lowest proportions in the agricultural sector but corresponding higher proportions in professional and clerical occupations (Christians) or in sales and service (Moors). The Tamil Hindu group is characterized by the large number of agricultural employees.
There is a high degree of association between levels of education of respondents and their husbands. In general a woman's educational level is either equal to or below that of her husband. Over 90 percent of women with 5 to 9 years of schooling are wives of men who have had more than 5 years of schooling. Understandably, the relationship is less strong for university educated women. Yet, 45 percent of them are married to similarly educated men.
The pattern of work bears an interesting relationship to level of education. University educated women have a pattern totally different from that of the overall sample. Over half (55 percent) of them worked both before and after marriage. In the total population only 11 percent did so. Further, only 26 percent of them have never worked at any time in contrast to the corresponding proportion in the total population which is as high as 69 percent. The pattern of work within the other education categories, however, does not vary.
The association between work status and husband's education is less strong. Only 35 percent of the wives of university educated men worked before and after marriage.
Among women who worked after marriage only, relatively larger proportions are those with low levels of education and wives of men with lower educational achievements.
Husband's education and husband's occupation have the expected relationship, in that the higher the educational level the larger the proportions in professional and clerical occupations and the lower the educational attainments the larger the proportions in agricultural occupations. Similarly most wives of farmers and agricultural workers have less than 6 years of schooling.
A woman's work status does not seem to be too strongly related to her husband's occupation. However, wives of farmers seem to have the largest proportions of women who have never worked.

In addition to these variables, a standard of living index is included in the analysis. The index is a score obtained from sixteen variables on the household schedule, and takes values ranging from 0 to 25. A detailed description is deferred until Section 6.9, but in broad terms the index includes components for construction materials of the home, sanitation facilities, and ownership of modern objects. As can be seen from Table 4.3, the index has positive associations with education, urbanity, and non-agricultural occupations.

Table 4.3 Pairwise Association of Background Variables Shown as Percent Distributions

Background Variable	Number of Respondents	Percent	2 Region of Residence	3 Type of Place	4 Race/ Religion	5 Level of Education	6 Work Status	7 Husband's Education	8 Husband's Occupation	Standard of Living
Region of Residence			(1) (2) (3) (4) (5) (6)	(1) (2) (3) (4)	(1) (2) (3) (4) (5)	(1) (2) (3) (4) (5)	(1) (2) (3) (4)	(1) (2) (3) (4) (5)	(1) (2) (3) (4) (5)	
(1) Zone 1	432	100	– – – – – –	2 25 1 72	58 11 12 5 14	9 29 42 15 5	68 13 7 11	3 23 41 23 10	2 24 0 28 46	8.3
(2) Zone 2	1894	100	– – – – – –	75 12 5 9	84 9 4 0 3	13 38 31 12 6	60 14 11 15	4 36 42 13 6	16 14 10 20 41	5.8
(3) Zone 3	961	100	– – – – – –	89 3 4 4	78 9 2 0 11	24 45 22 7 2	79 6 9 6	9 45 33 9 4	55 8 5 11 21	4.1
(4) Zone 4	391	100	– – – – – –	67 13 5 14	16 2 46 5 32	33 40 21 5 2	89 4 6 2	16 47 25 8 4	27 11 18 15 28	3.8
(5) Zone 5	472	100	– – – – – –	71 9 6 15	1 0 78 16 5	10 43 29 16 2	80 4 9 6	5 36 30 21 8	26 16 14 15 30	4.4
(6) Zone 6	2019	100	– – – – – –	87 4 5 5	91 2 3 0 4	24 39 24 9 4	68 9 11 12	10 42 33 10 6	36 10 10 16 28	4.9
Type of Place of Residence										
(1) Rural	4622	100	0 31 19 6 7 38	– – – –	79 3 11 1 5	22 42 24 9 3	69 10 11 11	9 43 34 10 4	36 9 11 29 14	4.5
(2) Rural Migrants	523	100	21 42 6 10 8 14	– – – –	61 13 15 3 8	13 34 32 13 7	71 10 8 11	4 30 39 18 10	7 22 4 42 26	6.7
(3) Urban Migrants	293	100	2 33 13 7 9 37	– – – –	67 12 11 3 7	10 32 38 16 5	67 12 11 9	3 26 37 21 13	18 19 4 36 23	6.7
(4) Urban	731	100	42 22 5 8 10 13	– – – –	44 12 18 6 19	10 29 40 16 6	74 11 5 10	3 24 38 23 12	7 24 1 41 27	7.6
Race-Religion										
(1) Sinhala Buddhist	4473	100	5 36 17 1 0 41	82 7 4 7	– – – – –	19 39 27 10 4	68 11 10 11	7 40 37 11 5	33 11 8 16 33	5.2
(2) Sinhala Christian	336	100	13 49 24 2 0 12	44 20 11 26	– – – – –	3 33 40 15 9	64 17 5 14	2 24 44 19 11	19 20 4 21 37	5.7
(3) Tamil Hindu	753	100	7 10 3 24 49 8	68 11 4 17	– – – – –	20 42 25 11 3	73 6 10 11	9 39 29 16 7	24 15 19 13 29	4.4
(4) Tamil Christian	131	100	17 6 2 15 56 4	47 12 6 35	– – – – –	13 39 28 15 5	71 6 11 12	3 34 30 21 11	17 22 10 16 35	5.9
(5) Moor	439	100	13 11 25 29 6 17	55 9 5 31	– – – – –	34 47 15 4 1	87 2 8 4	10 46 28 13 3	17 11 13 33 26	5.4
Level of Education										
(1) No Schooling	1177	100	3 21 20 11 4 41	85 6 3 6	72 1 14 1 13	– – – – –	66 7 15 12	20 56 22 2 1	37 2 17 11 33	3.4
(2) Grades 1-5	2432	100	5 30 18 7 8 32	80 7 4 9	72 5 13 2 9	– – – – –	71 10 12 8	8 51 36 5 1	34 4 11 16 34	4.2
(3) Grades 6-9	1667	100	11 35 13 5 8 29	66 10 7 17	74 8 11 3 4	– – – – –	77 12 6 6	2 27 49 18 5	23 15 6 21 34	6.0
(4) Grades 10-11	644	100	10 35 11 3 12 30	64 11 7 18	73 8 13 4 3	– – – – –	70 10 4 16	0 8 29 41 22	14 36 1 25 23	8.3
(5) University and Other	247	100	8 47 6 2 4 32	63 15 6 16	76 12 8 3 2	– – – – –	26 9 11 55	0 2 23 30 46	7 60 2 17 14	10.1
Work Status										
(1) Never Worked	4292	100	7 27 18 8 9 32	74 9 5 13	71 5 13 2 9	18 40 30 11 2	– – – –	6 38 38 13 4	33 12 6 18 31	5.4
(2) Worked Before Marriage	611	100	10 45 10 3 3 30	73 9 6 13	81 9 7 1 1	14 39 33 10 4	– – – –	5 42 37 12 6	22 9 11 16 43	4.8
(3) Worked After Marriage	606	100	5 35 14 4 7 36	81 7 6 7	76 3 13 2 6	29 47 15 4 4	– – – –	14 51 27 5 3	23 8 20 12 36	3.5
(4) Worked Before and After Marriage	659	100	8 42 9 1 4 36	76 8 4 12	75 7 13 2 3	21 29 14 16 21	– – – –	8 32 26 15 19	15 24 16 18 26	6.0
Husband's Education Level										
(1) No Schooling	449	100	3 17 18 14 5 44	89 4 2 5	73 2 15 1 9	52 41 6 1 0	63 7 19 12	– – – – –	38 1 21 9 30	2.5
(2) Grades 1-5	2402	100	4 28 18 8 7 35	83 6 3 7	74 3 12 2 8	28 52 19 2 0	68 11 13 9	– – – – –	35 2 15 13 34	3.7
(3) Grades 6-9	2175	100	8 36 15 5 7 30	73 9 5 12	76 7 10 2 6	12 40 37 9 3	74 10 7 8	– – – – –	28 7 5 21 38	5.5
(4) Grades 10-11	765	100	13 32 11 4 13 27	57 12 8 22	65 9 16 4 7	3 14 39 34 9	73 10 4 13	– – – – –	13 37 1 29 20	8.1
(5) University and Other	354	100	12 30 11 5 10 33	51 15 11 24	66 10 16 4 4	1 5 23 39 32	53 8 5 35	– – – – –	5 78 0 8 9	10.2
Husband's Occupation										
(1) Self-employed Farmers	1805	100	1 17 30 6 7 41	92 2 3 3	81 4 10 1 4	25 47 22 5 1	80 7 8 6	10 49 35 6 1	– – – – –	4.1
(2) Professional and Clerical	757	100	13 34 10 5 10 28	55 15 7 23	65 9 16 4 7	3 14 33 31 20	65 7 7 21	0 5 21 37 37	– – – – –	9.2
(3) Agricultural Workers	569	100	0 32 9 13 12 34	93 3 2 2	60 2 25 2 10	35 46 16 1 1	48 12 21 19	16 62 20 2 0	– – – – –	2.9
(4) Sales and Service Workers	1065	100	11 36 10 6 6 31	62 13 7 19	68 7 9 2 14	18 41 28 10 3	73 9 7 11	7 42 42 8 2	– – – – –	6.5
(5) Skilled and Unskilled Manual Workers	1972	100	10 39 10 6 7 28	68 11 5 15	75 6 11 2 6	19 43 29 7 2	67 13 11 9	7 41 42 9 2	– – – – –	4.6
Total Sample			7 31 16 6 7 32	74 8 5 12	73 6 12 2 7	19 39 27 10 4	69 10 10 11	7 39 35 12 6	28 12 9 17 32	5.2

Notes: (a) Based on weighted data; (b) Estate women are excluded; (c) Small deviations from the total weighted sample size are caused by not stated cases.

5 Statistical Methodology

5.1 ADJUSTMENT BY REGRESSION

The tables of the type described in Section 4.1 provide a considerable amount of information on fertility differentials. However their analysis is subject to the following limitations. The impact of Age at Marriage, a key variable in the fertility decline in Sri Lanka, is not taken into account. Also simple cross-tabulation by the background variables does not allow for the fact that the variables are associated, and hence their effects on fertility cannot be treated in isolation.

The solution adopted is to adjust the means of each variable for age at marriage and the other background variables by multiple linear regressions, *applied separately to each cohort and measure in the triangular array.* Age at Marriage is represented by linear and quadratic terms, and categorical variables are represented by sets of dummy variables, in the manner illustrated in the next section.

An important question now arises, namely, when the effects of a particular variable are under study which other variables should be controlled by inclusion in the regression equation. One commonly applied procedure is to include all the variables of interest in a single regression, and to interpret the coefficients of each variable as they appear in the equation. That is, effects for each variable are calculated with all other variables in the study adjusted. This scheme has considerable difficulties, particularly when highly associated regressors, such as husband's and respondent's education, are simultaneously included. See, for example, Gordon (1968). An alternative scheme is to decide on a predominant causal ordering between the variables, and to calculate the so-called total effect of each variable, where causally prior regressors are controlled and causally posterior variables are not controlled. For example, if Y is the regressand variable and three regressor variables have the causal ordering

$$X_1 \rightarrow X_2 \rightarrow X_3 \rightarrow Y.$$

Then the total effect of X_1 is unadjusted, the total effect of X_2 is adjusted for X_1, and the total effect of X_3 is adjusted for X_1 and X_2. The idea of the method is strongly related to recursive path analysis. (See, for example, Kendall and O'Muircheartaigh, 1977.) This procedure is theoretically satisfying, but in practice is severely limited by the difficulties in specifying a causal ordering with even approximate validity.

The approach adopted here does not specify a unique set of controls when evaluating the effects of a variable. Instead a sequence of estimates is obtained for a variety of controls, starting with the unadjusted effects and finishing with all other variables adjusted by inclusion in the equation. The extreme form of this approach would be to calculate the effects of each variable for all possible subsets of controls. However, this involves an enormous number of regressions and produces an extremely unpalatable mass of data. The compromise adopted here is to add controls to the equation according to a predetermined sequence and to monitor the regression coefficients of the variable of interest as each new control is added. The method is discussed in detail in Section 5.3.

5.2 CALCULATING ADJUSTED MEANS FROM REGRESSION

The procedure for calculating adjusted means may be illustrated with reference to the educational differentials in Table 4.2a. Consider the births in the first decade of marriage (BM0-9) for the 10-19 cohort. Level of Education is replaced by four binary variables PRIM, SECOND, HIGH, UNIV, taking values 1 if the respondent has primary, secondary, high school or university education respectively, and 0 otherwise. One category, no education, is not represented by a dummy variable, and this is called the *reference* category. Initially a regression is performed of BM0-9 on PRIM, SECOND, HIGH, UNIV, restricted to the 10-19 cohort. The resulting regression equation, with variables measured about these sample means, is:

$$\text{BM0-9} = \overline{\text{BM0-9}} + b_1 (\text{PRIM} - \overline{\text{PRIM}}) + b_2 (\text{SECOND} - \overline{\text{SECOND}}) + b_3 (\text{HIGH} - \overline{\text{HIGH}}) + b_4 (\text{UNIV} - \overline{\text{UNIV}}), \quad (4.1)$$

where $\overline{\text{BM0-9}}$=3.363, $\overline{\text{PRIM}}$= .433, $\overline{\text{SECOND}}$=.276, $\overline{\text{HIGH}}$= .076, $\overline{\text{UNIV}}$=.045 are the means of the regressand and regressor variables, and the regression coefficients are:

$$b_1 = -.030,\ b_2 = -.098,\ b_3 = -.192 \text{ and } b_4 = -.875.$$

Women in the reference group, no schooling, take the value zero for all the dummy variables. Hence setting PRIM= SECOND=HIGH=UNIV=0 in the equation, we obtain the predicted mean for this group as:

$$(\text{BM0-9}|\text{no school}) = b_0 = \overline{\text{BM0-9}} - b_1 \overline{\text{PRIM}} - b_2 \overline{\text{SECOND}} - b_3 \overline{\text{HIGH}} - b_4 \overline{\text{UNIV}} = 3.457.$$

Women with primary school take values PRIM=1, SECOND =HIGH=UNIV=0 in the equation. Hence the predicted mean for this group is:

$$(\text{BM0-9}|\text{PRIMARY}) = b_0 + b_1 = 3.457 - .030 = 3.427.$$

Similarly the predicted means for the other three groups are:

$$(\text{BM0-9}|\text{SECOND}) = b_0 + b_2 = 3.359$$
$$(\text{BM0-9}|\text{HIGH}) = b_0 + b_3 = 3.265$$
$$(\text{BM0-9}|\text{UNIV}) = b_0 + b_4 = 2.582.$$

The predicted means from regression are simply the sample means for each education category in Table 4.2a. Hence the cross-classification of means has been reconstructed from the dummy variable regression.

The next step is to adjust for (or control) age at marriage. That is, we ask to what extent the education differentials are attributable to differences in the distribution of age at marriage between education groups.

There is often an unspoken assumption here that the effect of education on fertility acts partly through an upward shift in the distribution of age at marriage, in that the extension of schooling delays marriage. The extent to which such causal mechanisms can be said to operate between variables, and even more pertinently the extent to which such

mechanisms can be presumed to continue to operate in the future, is a perilous and difficult question which cannot be decided on the basis of cross-sectional observational data. (For some further remarks, see Little, 1979). Nevertheless many analysts feel that the study of such indirect paths is useful even though causal inferences are problematic.

In the regression framework, adjustment for age at marriage is achieved by introducing variables for age at marriage in the regression equation. Various choices for representing age at marriage are possible. One is to form age at marriage categories and include age at marriage in the regression through a set of dummy variables. The results are then identical to a multiple classification analysis. Another possibility is to include age at marriage as a covariable. This is not entirely satisfactory since it effectively assumes that the effect of age at marriage on births in the first decade of marriage is *linear*. A priori we might expect the effect of age at marriage on this fertility measure to be positive at low ages at marriage and negative at high ages at marriage, according to the degree to which the first ten years of marriage includes the period of highest fecundity. Such an effect is modelled by introducing two covariates, the linear and quadratic terms of age at marriage. This is the approach adopted here.

A regression is performed of BM0-9 on PRIM, SECOND, HIGH, UNIV, AGFM and AGFMSQ=AGFM^2, where AGFM is age at first marriage in years. The resulting regression is:

$$\text{BM0-9}=\overline{\text{BM0-9}}+b_1(\text{PRIM}-\overline{\text{PRIM}})+b_2(\text{SECOND}-\overline{\text{SECOND}})+b_3(\text{HIGH}-\overline{\text{HIGH}})+b_4(\text{UNIV}-\overline{\text{UNIV}})+b_5(\text{AGFM}-\overline{\text{AGFM}})+b_6(\text{AGFMSQ}-\overline{\text{AGFMSQ}}). \quad (5.2)$$

The coefficients b_1, b_2, b_3 and b_4 now represent the expected differences in mean fertility between their respective education categories and the reference category if all education groups had a distribution of age at marriage with the same mean, that is, *adjusted for age at marriage.* The adjusted mean for the reference category, b_0, is obtained by substituting:

PRIM=SECOND=HIGH=UNIV=0 and

AGFM=$\overline{\text{AGFM}}$, AGFMSQ=$\overline{\text{AGFMSQ}}$, giving

$$b_0 = \overline{\text{BM0-9}} - b_1\,\overline{\text{PRIM}} - b_2\,\overline{\text{SECOND}} - b_3\,\overline{\text{HIGH}} - b_4\,\overline{\text{UNIV}}.$$

Education means adjusted for age at marriage are then:

$$b_0,\ b_0+b_1,\ b_0+b_2,\ b_0+b_3,\ b_0+b_4.$$

Adjustment for other variables is achieved in a similar manner. Additional variables are introduced into the regression, and the adjusted mean for the reference category is calculated by substituting zero for PRIM, SECOND, HIGH and UNIV and sample means for the other variables. Adjusted means for the other categories are found by adding the appropriate coefficient of PRIM, SECOND, HIGH or UNIV.

5.3 ORDER OF ADJUSTMENT

The method of the previous section was applied to a sequence of regressions, with variables added using a stepwise regression program. The order of inclusion was determined by the following rules:

(1) The first variable introduced was the variable of direct interest. Thus in studying education differentials, the dummy variables representing education were introduced first. In this way the first step always corresponds to simple cross-tabulation of means by the variable of interest.

(2) The second variable introduced was the covariate, years since first marriage. This represents a further refinement of the marital duration control, and generally has little effect on the differentials.

(3) Other variables were added according to their position in the following sequence:

age at marriage, zone, race, type of place of residence, respondent's education, work status, husband's education, husband's occupation, standard of living. (5.3)

For example, in the study of educational differentials, variables are added in the following order:

respondent's education, years since first marriage, age at marriage, zone, race, type of place of residence, work status, husband's education, husband's occupation, standard of living.

For the study of zonal differentials the same order was adopted except that the positions of zone and respondent's education were reversed.

As previously noted, this procedure does not nominate any particular adjusted effects as representing the unique true effect of that variable on the regressand, such as the total effects of path analysis. Rather it recognizes that in the absence of a clear causal ordering between the variables, effects have to be regarded as specific to the set of other variables which have been controlled by inclusion in the regression equation. However, the method does require the formation of the hierarchy (5.3) which determines the order in which other variables are controlled. This sequence is fairly arbitrary. The demographic controls, years since first marriage and age at marriage are controlled first. Characteristics which are largely determined at birth are introduced next (zone, race, type of place of residence), although the temporal assumption is only partly true since type of place of residence and zone may have changed if internal migration has occurred. The education and occupation variables follow a plausible causal sequence. Finally the standard of living index is regarded as a consequence of the other socio-economic characteristics, again an unjustified causal inference if this variable includes components of inherited wealth that itself determined socio-economic status.

Despite the somewhat arbitrary nature of the ordering the strategy of control allows us to build up a fairly detailed picture of the effects of association on the fertility differentials.

5.4 WEIGHTING*

The role of weighting in the context of regression analysis of complex sample surveys is a difficult issue, which is puzzling to professional statisticians as well as to demographers (See, for example, Brewer and Mellor, 1973). In this section we describe the main issues involved and how they were resolved in the present study.

We begin by returning to the basic cross-tabulation of means in Table 4.2. In calculating this table each individual is assigned a weight, proportional to the product of the sample design weight and the months of exposure in the interval. The sample design weight is introduced to correct for differential probabilities of selection of units and thus to produce unbiased estimates of the means in the population. Months of exposure are included in the weights so

*This section describes an important technical issue. However, it involves complex statistical arguments, and readers concerned more with substantive results may wish to omit and turn to section 5.5.

that the mean has a convenient interpretation as cumulated births divided by cumulated exposure.

We have noted in Section 5.2 that the first step in the regression analysis, where a factor is introduced as a set of dummy variables, is equivalent to a cross-tabulation of means of the form of Table 4.2. However, an ordinary least squares regression analysis would not yield the values in the table. The reason is that the regression weights each observation equally, and thus corresponds to an *unweighted* cross-tabulation of means. In order to yield the desired tables a weighted regression analysis is required, with weights equal to those used in the cross-tabulation.

These considerations suggest a regression analysis with weights proportional to the product of the sample design weight and the months of exposure. However, statistical arguments lead to a slightly different choice of weights. In Section 5.6 we present a statistical test, analogous to the F-test in analysis for variance, for assessing whether differences in the subgroup means could be attributable to random variation. For unweighted regressions these tests are based on an assumption of *homoscedasticity,* that is, that the 'error' term incorporating unexplained variation in the regressand has the same variance for all values of the regressors. For weighted regressions the tests assume that the error variance is inversely proportional to the weights. That is, for individual i with weight w_i the error variance is σ^2/w_i, where σ^2 is a constant.

If weights are chosen to reproduce the cross-tabulation, this would imply that the error variance is inversely proportional to both a) the sample design weight and b) the months of exposure. The latter proposition b) is in fact quite plausible and preferable to an assumption of homoscedasticity. The regressand is of the form births/exposure, and it is quite reasonable to suppose that the variance of this regressand decreases as the denominator increases. In fact, cases with less than one year of exposure were excluded because of their high variance. However the proposition a) relating the error variance to the sample design weight is much less reasonable, since the selection probabilities were determined by sample size considerations rather than questions of variance.

Based on these arguments, two choices of weights are considered for the analysis:

$$w_i^m \ \alpha \ \text{months of exposure}_i \qquad (5.3)$$

$$w_i^{md} \ \alpha \ \text{months of exposure}_i \times \text{design weight}_i \qquad (5.4)$$

The symbol α denotes proportionality. In both cases the weights are scaled so that they sum to the number of observations in the sample base. We call w_i^m *model* weights since they are designed to allow for unequal error variances in the model. We call w_i^{md} *model x design* weights since they are products of the model weight and the design weight for each case.

One further element in deciding between (5.3) and (5.4) is the role of the stratifying variable zone. For simplicity we assume that the sample design weights vary between zones, but are constant within zones, an assumption which is approximately valid. Then the theoretical position can be stated more precisely as follows. *If zone is included as a regressor variable,* the design weights are irrelevant for statistical inferences, and the model weights w_i^m should be used in the regression. *If zone is not included as a regressor,* then the data are subject to selection biases and neither the model weights nor the model x design weights are correct. An exact maximum likelihood procedure can be developed. Simulations indicate that the model x design weights give better approximations to the correct inferences than the model weights in this situation. (See Holt and Smith, 1979).

These considerations lead to the following solution as yielding the most satisfactory statistical inferences from the data: for regressions including zone, the model weights (5.3) are used, and for regressions excluding zone, the model x design weights (5.4) are used. This is in fact the procedure adopted.

Finally, from what has been said it is clear that for this choice of weighting, the calculation of adjusted means described in Section 5.2 will yield the desired cross-tabulations when zone is excluded from the regression, but biased cross-tabulations when zone is included in the regression. However, it is possible to modify the calculation so that unbiased cross-tabulations are obtained in all cases. Regression equations are considered in the form of equation (5.2), with the means subtracted from the variables. For regressions including Zone, the regression coefficients (b_1, b_2, ...) are calculated from regressions weighted by the model weights, but the means (BM0-9,PRIM,SECOND, ...) are replaced by means calculated with model x design weights.

The procedure adopted seems at first glance to be quite complicated, although in practice it involves little extra work within the regression framework of analysis. A slightly simpler method which relies on a single set of weights in all cases, is to use the model x design weights throughout. This is certainly preferable to ignoring the issue of heteroscedasticity entirely, but it should be recognized that statistical tests are no longer strictly valid for unequal probability sample designs. In all cases the weights should be scaled to sum to the number of unweighted observations, a precaution which some computer programs carry out automatically but others (including the current version of SPSS) regrettably do not.

5.5 THE ADDITIVITY ASSUMPTION

A major simplifying assumption in the methodology described in previous sections is the absence of interactions between the regressor variables for regressions on each cohort and fertility measure. For example, in the analysis of educational differentials a sequence of other variables, age at marriage, zone, race, and so on were adjusted by inclusion in the regression. The resulting regression equations are additive, and in particular assume that educational differentials are the same for all levels of the adjusted variables.

This assumption is not realistic and the inclusion of interactions is likely to reveal significant interaction effects. Despite this, interactions were not analysed in the present study for the following reasons:

(a) The amount of information collected from the additive regressions for each cohort and measure is formidable, and the categorical nature of many of the variables leads to a large number of interaction terms. Thus the inclusion of interactions would create an unmanageable amount of data.

(b) The study already effectively incorporates interactions between cohorts and other variables, through the disaggregation of the sample into three marriage cohorts. Thus fertility differentials are not assumed equal between marriage cohorts. This form of interaction is arguably the most important in the study of differentials in a country with declining fertility, such as Sri Lanka.

The omission of non-zero interactions from the model has the following consequences. The estimated adjusted effects are averages of the effects within levels of other factors, which are not equal if interactions are present. Also the residual interaction effects are included in the unexplained or error component of the model, leading to a slight inflation of the error variance obtained if relevant interactions were included in the model. These consequences should be borne in mind when the effects from the additive model are interpreted.

5.6 MEASURES OF THE OVERALL SIZE OF EFFECTS

The variable educational level has four categories, which implies that its effect cannot be described by a single number. Nevertheless summary measures are useful to provide indications of statistical significance, to compare the size of differentials between cohorts and to evaluate the overall impact of adjusting for covariates.

As noted in Chapter 4, two summary measures are tabulated in tables of adjusted or unadusted means. Statistical significance for the effects of a factor or variable A, adjusted for the effects of other factors and/or variables B, is gauged from the chi-squared value:

$$X^2\ (A|B) = \frac{SS(A+B) - SS(B)}{\text{residual mean square.}}$$

In this expression the numerator is the sum of squares added by A, calculated as the difference of the sum of squares explained by the regression on A and B, SS(A+B), and the sum of squares explained by the regression on B, SS(B). The denominator is the residual mean square from the regression at the last step, with all effects included. If A has df_A degrees of freedom, then $X^2\ (A|B)$ is df_A times the usual F-statistic from analysis of variance. If as here the residual degrees of freedom are large, the F-test can be replaced by a chi-squared test based on $X^2(A|B)$, and this is preferred because chi-squared quantities are simpler and more familiar to social scientists.

The values of $X^2(A|B)$ can be used to test whether the observed differences in the adjusted means can be attributed to random variation. Suppose that i) the regression model including the effects of A and B is true, ii) the error terms measuring deviations from the model are distributed independently over respondents, with zero mean and variance inversely proportional to the regression weights. Then under the null hypothesis that the effects of A adjusted for B are zero (that is, the means of A adjusted for B are equal), $X^2(A|B)$ has a chi-squared distribution with df_A degrees of freedom. Thus large values of $X^2(A|B)$ indicate significant differences between the adjusted means.

The chi-squared test as described above is not strictly valid, for several reasons, of which the following are most important. Firstly, the additivity assumption of the model is often unjustified. Secondly, the independence assumption is questionable, given that the sample is not selected by simple random sampling but by a complex stratified cluster sample design. Thirdly, the variance assumption is unlikely to be exactly true, although the introduction of model weights as described in Section 5.4 compensates for unequal variances introduced by differential exposure between respondents. For these reasons, the significance levels of formal tests should be treated as approximations. Nevertheless, the chi-squared values are useful indicators of broad levels of significance, and will be used as such. Percentiles of the chi-squared distributions are presented in Appendix Table 8 for reference purposes.

As a measure of substantive differences the chi-squared value is sensitive to the number of individuals in the sample base, and the distribution of individuals with respect to the variable of interest. Specifically, large substantive differences in the adjusted means do not necessarily yield large chi-squared values, if the deviant adjusted category means contain a small proportion of the sample. The other measure of overall significance, the unweighted standard deviation of the adjusted means, is designed to be insensitive to these factors, and as such concentrates purely on the size of differences in the adjusted means.

6 Results from the Analysis

6.1 INTRODUCTION

Before launching into the analysis of the tables some preliminary words of guidance may be useful. The section begins with an analysis of the relationship between age at marriage and fertility, based on the co-efficients of the linear and quadratic terms of Age at Marriage in the regressions. Sections 6.2 to 6.8 discuss the differentials by geographic and socio-economic variables contained in Appendix Tables 1.1 to 7.10. After a detailed description of the categories of the variable, differentials are discussed in three stages. Firstly the unadjusted differentials in early, late and completed fertility are presented. These are based on Step 2 of the regressions, where marital duration is controlled but none of the other variables are in the equation. Secondly the impact of Age at Marriage is assessed, by comparing results from Steps 2 and 3. Finally the impact of other controls is studied, by reference to Steps 4 to 10 of the regressions. The last subsection consists of an analysis of the regression coefficients of the Standard of Living Index. A separate analysis of Estate Workers, a special group who are omitted from the main analysis, is deferred until Chapter 7.

6.2 THE EFFECT OF AGE AT MARRIAGE

It is widely recognised that a major factor in the decline in birth rates in Sri Lanka has been the rise in age at marriage, with the consequent reduction of the period during which women are exposed to the risk of childbearing. It is not the purpose of the present study to chart this increase in age at marriage and to attempt to quantify its impact on natality. Such a study would require a birth cohort approach, involving other data such as information on the proportion single in each age group collected in the household survey, and census data on age at marriage. However, some understanding of the relationship between age at marriage and marital fertility is indispensable for the interpretation of socio-economic differentials in fertility, given the associations between age at marriage and other variables such as ethnicity, education and work status.

The mean age of marriage is 16.9 years for the marriage cohort married 20 or more years, 19.4 for the cohort married 10-19 years and 21.0 years for the cohort married less than ten years. The increase between marriage cohorts reflects the rise in age at marriage in the population. A superior measure of the increase would be obtained by comparing the age at marriage of birth cohorts, since marriage cohort means are affected by the age structure of the sample and may give a misleading impression of trends. The birth cohort approach is illustrated in another study (Trussell, 1980) and is not repeated here.

The relationship between age at marriage and fertility is measured by regressions of the fertility of each marriage cohort on linear and quadratic terms in age at marriage, as explained in Chapter 5. Summary results from these regressions are displayed in Table 6.2.1. Effects are presented for two steps of each regression, Step 3, where Zone and marital duration are controlled, and Step 10, where all the other regressors are controlled.* The change in effects between the two steps indicates the extent to which the effect of Age at Marriage is attributable to compositional effects of other variables.

The method of presentation of the effects in Table 6.2.1 is best explained by example. Consider the first entry in the table, based on the regression of BM0-9 for the 20+ marriage cohort. The regression of BM0-9 at Step 2 was

$$\hat{BM0\text{-}9} = .023\ (AGFM - 16.9) - .0115\ (AGFM - 16.9)^2 + \text{other terms},$$

where age at marriage is measured about the mean of 16.9, and the other terms do not involve age at marriage. The

*Zone is included so that both equations are based on regressions excluding sample design weights, according to the strategy described in Section 5.4.

Table 6.2.1 Effect of Age at Marriage on Number of Births in Successive Ten-Year Marriage Periods. Calculated by Linear Regressions on Age at Marriage and Age at Marriage Squared, Adjusted for (a) Zone and Marital Duration, and (b) Zone, Marital Duration and all Other Controls

		Marriage Cohort		
Measure	Step	20+	10-19	0-9
BM0-9	3	.023 −.023 (AGFM −16.9)	−.025 −.013 (AGFM −19.4)	−.033 −.010 (AGFM −21.0)
	10	.027 −.022 (AGFM −16.9)	−.011 −.013 (AGFM −19.4)	−.024 −.010 (AGFM −21.0)
BM10-19	3	−.099 −.018 (AGFM −16.9)	−.121 −.006 (AGFM −19.4)	
	10	−.080 −.014 (AGFM −16.9)	−.103 −.008 (AGFM −19.4)	
NCEB	3	−.117 −.029 (AGFM −16.9)		
	10	−.087 −.027 (AGFM −16.9)		

Interpretation:

Entries take the form a + 2b (AGFM −c), where: c = mean age at marriage for that cohort
a = effect of Age at Marriage for women married at age c
b = coefficient of the quadratic term of AGFM in the regression
a + 2b (AGFM −c) = effect of Age at Marriage for women married at age AGFM.

effect of age at marriage is defined as the derivative of this equation with respect to age at marriage, that is:

$$\frac{\partial \hat{BM0\text{-}9}}{\partial AGFM} = .023 - 2(.0115)\,(AGFM - 16.9)$$

$$= .023 - .023\,(AGFM - 16.9),$$

as displayed in Table 6.2.1. This definition of the effect as a derivative implies that it is interpreted as the effect of a small change in age at marriage from AGFM to AGFM+Δ, measured in units of Δ. This is the natural definition of the effect of a variable in the presence of non-linear terms.

Note that the inclusion of the quadratic term implies that the effect of age at marriage depends on the value of age at marriage. Thus for women married at the mean age, 16.9, the estimated effect is .023; that is, the effect of increasing the age at marriage by Δ is to increase BM0-9 by .023Δ. For women married at age 14.9, the estimated effect is .069; and for women married at age 18.9 the estimated effect is negative, namely −.023. These values correspond to prior notions of the relationship between age at marriage and early marital fertility, namely, that the relationship is positive among women who marry early and negative among women who marry late.

A similar pattern emerges for the effects of age at marriage on early fertility for the other two cohorts, although the coefficients of the quadratic terms are somewhat lower. However in substantive terms the effect of age at marriage on early marital fertility is small. The effects are more substantial in the second decade of marriage, as might be expected. Women who marry later tend to have less children at this stage, and the negative effect becomes more pronounced as age at marriage increases.
The effect of adjustment for other variables is to somewhat reduce the impact of age at marriage, as evidenced by the lower coefficients at Step 10 than at Step 3 in Table 6.2.1. However substantial and statistically significant effects remain.
We shall see in subsequent section that this relatively strong relationship has a considerable impact on differentials in fertility between socio-economic groups which differ in their average age at marriage.

6.3 DIFFERENTIALS BY ZONE OF RESIDENCE

6.3.1 INTRODUCTION

The Zone variable distinguishing regions of residence was described briefly in Chapter 2. (See Figure 2.1.) The city of Colombo, the major urban centre of the country, formed Zone 1, and is a mixture of almost all ethnic, religious and social groups. Zone 2 consisted of the South-Western lowlands where the majority of the population are Sinhalese Buddhists and Christians. It is an area with a relatively high level of urbanisation and its proximity to Colombo makes it susceptible to the diffused effects of major developments in the city. The dry South-Eastern coastal belt formed Zone 4. Thirty percent of the country's Moor population live in this region and constitute about one third of its population. The majority, however, are Sri Lanka Tamils. This is an area of low development. The northern peninsula, together with two adjoining districts mainly occupied by Sri Lanka Tamils formed Zone 5. The peninsula is a relatively developed area. The South-Central hilly areas cultivated with tea and rubber became Zone 6. The inhabitants of this zone, comprising one-third of the total population, belong to two distinct categories: the Indian Tamil workers who are concentrated on the plantations (excluded in the present analysis), and the Sinhalese Buddhists who are scattered throughout the rest of the zone. The remaining districts which surround the hilly areas on the Eastern and Northern sides were grouped together into Zone 3. This zone, like Zone 4 is heterogeneous in ethnic composition, consisting of Sinhalese, Tamils and Moors. It has a very large proportion of the country's cultivated land and the inhabitants are principally engaged in agricultural occupations.
Table 6.3.1. summarizes the zonal distributions of the weighted and unweighted sample. The difference between these distributions results from the oversampling in Zones 1, 4 and 5 required to obtain satisfactory Zonal estimates of fertility.

6.3.2 UNADJUSTED DIFFERENTIALS

Modest zonal differentials in fertility in the first years of marriage are found in the first two marriage cohorts (see Appendix Table 1.2) Women in Zone 5 appear to have slightly higher fertility than average. Zone 4 has the highest early fertility in the second cohort, with an average value 10 percent above the mean; however this finding is not repeated for the other cohorts, and hence has questionable significance. In the third (that is, most recent) cohort there is no evidence of differentials whatsoever.
For fertility in the second decade of marriage a striking pattern emerges. Strong zonal differentials are evident, as reflected in the highly significant chi-squared values of 79.1 and 89.3, on five degrees of freedom. For the first cohort, a pairwise grouping of low, medium and high fertility zones emerges. After an average of 3.6 births in the first decade of marriage, women in Zones 1 and 2 had on average 2 births in the next ten-year period; in the same period women in Zones 5 and 6 had about 2.4 births and women in Zones 3 and 4 had about 2.8 births. The completed fertility of this cohort shows a similar pattern, although the slightly lower early fertility of Zone 5 results in this zone, with an average parity of six births, falling between the first two.
A different pattern of late fertility emerges for the second

Table 6.3.1 Percent Distribution of the Sample According to Zone

	Zone 1	Zone 2	Zone 3	Zone 4	Zone 5	Zone 6	Total*
Weighted Data:	7.0	30.7	15.6	6.3	7.6	32.7	6168
Unweighted Data:	14.6	17.1	19.7	13.6	12.2	22.8	6342

* Women from the Estates are excluded.

cohort. The women in the low fertility Zones, 1 and 2, report an average fertility of 1.6 births, 0.4 births lower than the first cohort. Similar reductions of nearly half a birth are reported for the northern and north central Zones 3 and 6. However the eastern Zone 4 and the hilly Zone 5 report levels of fertility similar to the first cohort. As a result of these changes, Zones 1 and 2 have fertility levels about 20 percent below the mean, Zone 6 has a fertility level close to the mean, Zones 3 and 5 have similar fertility nearly 20 percent above the mean, and Zone 4, an area of low development, is left with a fertility some 40 percent above the mean level of two births. Thus the result of the confinement of fertility declines between these cohorts to four of the six zones is that the marked zonal differentials in fertility in the first cohort are even greater in the second cohort.

6.3.3 ADJUSTMENT FOR AGE AT MARRIAGE

Zonal differentials in the distribution of age at marriage can be seen in Table 6.3.2, where mean ages at marriage are cross-classified by zone and marriage cohort. This table requires careful interpretation since as noted in Section 6.2 it does not take into account differences in the age structure of the subgroups.

Table 6.3.2 Mean Age at First Marriage, by Zone and by Marriage Cohort

	Marriage Cohort			
Zone	20+	10-9	0-9	Mean
1	18.4	20.0	21.5	20.2
2	18.1	21.0	23.3	21.0
3	16.1	17.9	19.7	18.0
4	14.8	16.2	17.8	16.5
5	16.1	18.3	20.1	18.3
6	16.4	19.2	21.3	19.0
Mean	16.9	19.4	21.4	

However, it does suggest considerable zonal differentials in age at marriage. The extent to which these differences account for zonal differentials in fertility can be assessed by adjusting for age at marriage, as in Appendix Table 1.3. The effect on differentials in early marriage is negligible, and we shall concentrate on fertility in the second decade of marriage. The effect of adjustment for age at marriage is summarized in Table 6.3.3. For both cohorts the control for age at marriage leads to a considerable reduction in differentials. The standard deviation of the differentials is reduced by one third, and the chi-squared values are more than halved. Most of the substantial deviations from the mean are reduced by one third to one half when age at marriage is controlled. In particular, the high fertility of Zones 3 and 4 is considerably reduced after adjustment, reflecting the low age at marriage of these zones. For the second cohort a comparison of the unadjusted and adjusted means of Zones 1 and 2 is interesting. Both these zones have low fertility and high mean age at marriage, but the mean age at marriage of Zone 2 is the higher of the two. As a result the control of age at marriage has a greater effect on the adjusted fertility of Zone 2 than that of Zone 1. Whereas Zone 2 has a lower fertility than Zone 1 before adjustment, after adjustment their relative positions are reversed.

6.3.4 ADJUSTMENT FOR OTHER CONTROLS

The effect of adjustment for controls other than age at marriage can be assessed by studying Appendix Tables 1.4 to 1.10. Again we restrict attention to fertility in the second decade of marriage.

The adjustment for Race-Religion does not reduce the overall measures of zonal differentials. However it should be emphasised that age at marriage has already been adjusted, and so the impact of racial differentials through differences in their age at marriage distributions are not taken into account. Also for the second cohort some individual deviations are changed by the race adjustment. In particular, the deviation for Zone 4 is reduced from 25 percent above the mean (Step 3) to 18 percent above the

Table 6.3.3 Mean Fertility in the Second Decade Since First Marriage, by Cohort and by Zone, Expressed as Percent Deviations from Standardized Mean, (a) Unadjusted, (b) Adjusted for Age at Marriage, and (c) Adjusted for All Controls

	First Cohort			Second Cohort		
Zone	Step 2	Step 3	Step 10	Step 2	Step 3	Step 10
1	−16.9	−11.3	−0.1	−18.3	−15.0	0.0
2	−14.6	− 9.5	−7.4	−21.9	− 9.5	−5.7
3	16.2	11.9	7.9	17.8	9.9	3.4
4	20.8	12.6	12.4	41.5	25.3	16.1
5	− 1.6	− 5.2	−1.7	19.7	13.3	4.8
6	6.3	4.7	1.7	3.8	− 0.2	−0.2
Std Mean	2.38	2.39	2.39	1.97	1.97	1.97
Standard Deviation	.143	.097	.065	.222	.138	.067
Chi-Squared (5 df)	79.1	37.4	13.5	89.3	24.9	7.1

mean (Step 4), and the deviation for Zone 5 is reduced from 13 percent above the mean (Step 3) to 6 percent above the mean (Step 4). The reason for these changes is that these zones have a high proportion of Moors and Indian Tamils not in the estates. We shall see in the next section that these groups have a higher than average fertility for this cohort, reflecting the fact that unlike other racial groups their fertility has not declined from the level of the first cohort.

The urban-rural composition variable basically distinguishes Zone 1 (Colombo and surrounding areas, 73 percent urban) from other zones (80 percent to 93 percent rural). Hence the effect of adjustment for Type of Place of Residence is to account for most of the negative deviation of Zone 1. For example, the deviation of Zone 1 for the second cohort is reduced from 17 percent below the mean to 6 percent below the mean. This result has little substantive interest. After this step zonal differentials are marginally significant for the first cohort. The only departure from the mean worthy of mention is the apparently higher fertility of Zone 4 after all socio-economic factors have been taken into account (columns 3 and 6 of Table 6.3.3).

The overall conclusion is that considerable zonal differentials in fertility exist, but these are largely accounted for by differentials in age at marrriage, racial composition, urbanity and socio-economic factors.

6.4 DIFFERENTIALS BY RACE AND RELIGION

6.4.1 DESCRIPTION OF THE VARIABLE

The population of Sri Lanka is largely composed of four racial groups, Sinhalese, Sri Lanka Tamils, Indian Tamils, and Moors and four religious groups, Buddhists, Hindus, Moslems, and Christians. The First Country Report treated race and religion as separate variables, but this does not bring out the strong ties between them. The Moors are practically all Moslem and conversely nearly all the Moslems in the sample are Moors. The majority racial group, the Sinhalese, are over 90 percent Buddhist, and the remainder are nearly all Christians. The Tamils are mainly Hindus, with a small Christian minority. For the present study it was decided to form a joint race and religion variable that distinguished the main groups in the joint classification. The variable consists of the following categories (figures in parentheses are percentages of the weighted sample; estate workers are excluded, as noted in the description of the third category):

1. *Sinhalese Buddhists* (72.5 percent) This large group excludes Sinhalese Christians but includes the negligible number of Sinhalese who profess a religion other than Buddhism or Christianity.
2. *Sinhalese Christians* (5.4 percent)
3. *Tamil Hindus* (12.2 percent) The Estate Workers, a group of Indian Tamil origin, are a rather special group and were exluded from the main analysis. Hence the Tamil Hindu group is predominantly composed of Sri Lanka Tamils, although it also includes the small number of Indian Tamils who do not live in the tea Estates. These women were too few in number to form a separate group, and it was decided to include them with the Sri Lanka Tamils of the same religion, although this is not an ideal classification. This category also includes a negligible number of Tamil Buddhists and Moslems, but excludes the more numerous Tamil Christians.
4. *Tamil Christians* (2.1 percent) This group consists of Sri Lanka Tamils and a few Indian Tamil Christians not in the tea Estates.
5. *Moors* (7.1 percent) As noted above, these women are virtually all Moslems.

A general consequence of the relatively small numbers belonging to racial minorities is that racial differentials are unlikely to explain a high percentage of the variance. In fact the levels of statistical significance of the differentials are generally low, despite the presence of sizeable numerical differences in the category means. We now discuss these differences in detail.

6.4.2 RACIAL DIFFERENCES UNADJUSTED FOR OTHER CONTROLS

Women of different racial or religious groups show small differences in their fertility behaviour in the first ten years of marriage. The Moors have an early marital fertility noticeably higher than the others; their deviation from the cohort average is more significant in the younger cohorts. In the youngest cohorts, Moors have .4 births more than the average number of 3.6 births, a rather surprising performance in view of their very early age at marriage (Table 6.4.2). Tamil Hindus in the earliest cohort report a lower fertility than average, but this effect is less pronounced for other cohorts and may be attributable to reporting errors. (Appendix Table 2.2.)

In the second decade of marriage a strikingly different pattern of fertility differentials emerges for the first and second marriage cohorts (Table 6.4.1). In the earliest cohort the small Sinhala Christian group have an average of 1.7 births, compared with the overall mean of 2.4. The other Christian group, the Tamil Christians, also has slightly lower fertility than average, but apart from Sinhala Christians all the racial groups lie within a narrow range between 2.2 and 2.5 births. In contrast, for the middle cohort wide variations in fertility between different racial groups emerge in the second decade of marriage, as reflected in the large chi-squared value of 52.7 and the standard deviation of .43. Comparing the fertility in the early and middle cohorts, we see that the reason for the emergence of racial differentials

Table 6.4.1 Fertility in the Second Decade of Marriage, by Race-Religion Group

Race-Religion Group	Number of Births	Percent Deviation
First Cohort		
Sinhala Buddhist	2.43	2.2
Sinhala Christian	1.74	−26.7
Tamil Hindu	2.43	2.4
Tamil Christian	2.21	− 7.0
Moor	2.51	5.7
Mean	2.40	2.38
Standard Deviation	.28	.12
Chi-Square (4 df)	19.9	19.9
Second Cohort		
Sinhala Buddhist	1.88	− 5.1
Sinhala Christian	1.49	−24.5
Tamil Hindu	2.44	23.4
Tamil Christian	2.15	9.0
Moor	2.72	37.4
Mean	1.99	1.98
Standard Deviation	.43	.22
Chi-Squared (4 df)	52.7	52.7

is that the decline in fertility between the first cohort (2.4) and the second cohort (2.0) has been confined to Sinhalese women. Thus the fertility of the Sinhalese Buddhists declines from 2.4 births (2 percent above the mean) for the first cohort to 1.9 births (5 percent below the mean) in the middle cohort. The Sinhalese Christians also report a reduction in fertility.

On the other hand the Tamils and the Moors report similar levels of fertility for both cohorts, and consequently for the middle cohort Tamil Hindu fertility is 23 percent higher than average (2.43 births) and the fertility of Moors is 37 percent higher than average (2.72 births). These figures are subject to large sampling errors, and hence should be treated as rough estimates. Nevertheless there is little doubt that large differentials exist for the middle cohort.

The study of differentials in completed fertility is restricted to the first cohort. The chi-squared of 17.6 indicates significant differentials. The Sinhalese Christians again have considerably lower average fertility (5.5) than the mean (6.4); and there is some evidence that the Moors have higher fertility than average.

Table 6.4.2 Average Age at Marriage of Women in the Sample, by Race-Religion Group and by Marriage Duration Cohort

Race-Religion Group	First Cohort	Second Cohort	Third Cohort
Sinhala Buddhists	17.0	19.5	21.6
Sinhala Christians	18.1	20.9	21.6
Tamil Hindu	15.9	17.8	19.2
Tamil Christian	16.5	18.6	20.0
Moor	14.9	15.8	18.2
Mean	16.6	18.8	20.7

6.4.3 THE EFFECT OF AGE AT MARRIAGE ON RACIAL DIFFERENTIALS

Sinhala, Tamil and Moor, the major ethnic groups in Sri Lanka, have maintained their distinct cultural traditions with respect to marriage arrangements and childbearing. Moors have always been a young marrying group granting great importance to large families. The laws governing Moor marriages are different from the general marriage laws of the country in that the lower age limit of entering into a marriage is not applicable to the Moor community. Their marriage rites are performed by a Quasi and he will admit the marriage of a girl of any age provided the parents' consent is granted. The Moor parents consider it their prime duty to give their daughters in marriage as early as possible. The marked differences between ages at marriage of the different ethnic groups can be seen in Table 6.4.2.

Among Sinhalese, the minority of Christians have married considerable later than did their Buddhist counterparts; among Tamils too the Christian women have delayed their marriage longer than the more traditional Hindus. The Moors marry at very young ages and the Sinhalese, in particular the Sinhalese Christians, have the highest mean age at marriage. Within each racial group, there is a clear rapid rising trend in the average age at marriage from the earliest to the latest cohort. For all groups, except Moors, the rise is much larger from the first to second cohort than from the second to the third.

The extent to which differentials in late fertility are attributable to differences in age at marriage between ethnic groups can be gauged from Table 6.4.3, where ethnic differentials are presented unadjusted and adjusted for age at marriage. The impact of differences in age at marriage is small for the first cohort, but considerable for the second cohort, where the adjusted chi-squared is reduced from 52.7 to 15.1, the standard deviation of the percent deviations is halved and the percent deviation for the Moors is reduced from 37 percent to 17 percent. It appears that one reason for the emergence of differentials in late fertility for the second cohort is that the rise in Sinhalese age at marriage was accompanied by a reduction of fertility, whereas the rise in age at marriage of other ethnic groups (from somewhat lower levels) had less impact on fertility in the second decade of marriage.

6.4.4 EFFECT OF OTHER CONTROLS ON RACIAL DIFFERENTIALS

The effects of controls introduced after age at marriage on racial differentials are less striking. The small differentials in early fertility, and in particular the somewhat lower reported fertility of Tamil Hindus for the first two cohorts, persist when other factors are controlled. As far as late fertility is concerned, the effect of adjustment for the other controls is a gradual erosion of the ethnic differentials; the chi-squareds for births in the second decade of marriage are reduced from 17.5 to 10.0 for the first cohort, and from 15.1 to 7.5 for the second cohort. For the latter, the steps when zone and respondent's education are adjusted have the greatest impact. The relatively high fertility of Tamil Hindus is partly attributable to their residence in high ferti-

Table 6.4.3 Mean Number of Births in the Second Decade of Marriage Expressed as Percent Deviations from the Standardized Mean, Unadjusted and Adjusted for Age at Marriage

	First Cohort		Second Cohort	
Race-Religion Group	Unadjusted	Adjusted	Unadjusted	Adjusted
Sinhala Buddhist	2.2	3.4	5.1	−2.4
Sinhala Christian	−26.7	−23.0	−24.5	−15.0
Tamil Hindu	2.4	−2.6	23.4	15.3
Tamil Christian	−7.0	−9.6	9.0	6.2
Moor	5.7	−0.6	37.4	17.4
Mean	2.38	2.38	1.98	1.98
Standard Deviation	.118	.093	.216	.120
Chi-Squared (4 df)	19.9	17.5	52.7	15.1

lity zones, and the low mean fertility of Sinhala Christians is increased when adjusted for respondent's education, suggesting that the higher educational level of this group partly accounts for their low fertility. For the first cohort, the low fertility of the Sinhala Christians (23 percent below the mean after the adjustment for age at marriage) is again partly attributable to higher socio-economic status, although about two-thirds of the deviation remain after adjustment for other controls.

6.5 DIFFERENTIALS BY TYPE OF PLACE OF RESIDENCE

6.5.1 THE TYPE OF PLACE OF RESIDENCE CLASSIFICATION

The urban-rural dichotomy in Sri Lanka does not reflect a sharp division of the living conditions of the people, and perhaps for this reason the urban-rural differentials in fertility are not pronounced. Although Sri Lanka is largely rural – at interview four-fifths of the sample were living in areas classified as rural – a certain amount of urbanization has taken place during the lifetimes of the cohorts of women under study, and consequently a joint variable was formed to distinguish women whose reported childhood type of place of residence differed from the type of place of residence at interview. The four categories of the resulting variable are displayed in Table 6.5.1. There are obvious hazards in the classification adopted. Childhood type of place of residence is based on the respondent's subjective assessment and is thus subject to considerable response errors. A change from rural to urban between childhood and interview may reflect migration or a change in the character of an area through urbanization, and the timing of the change is unknown. Despite these problems it was thought that the more detailed residence variable was worthy of study at this second stage of analysis.

Table 6.5.1 The Type of Place of Residence Classification

	Category	Childhood Residence	Current Residence	Per Cent of Sample (Weighted)
(1)	Rural	Rural	Rural	74.9
(2)	Rural Migrant	Rural	Urban	8.5
(3)	Urban Migrant	Urban	Rural	4.7
(4)	Urban	Urban	Urban	11.9

6.5.2 UNADJUSTED DIFFERENTIALS

There is no evidence of urban-rural differentials in early fertility (Appendix Table 3.2). For example, the chi-squared values for births in the first decade of marriage for the three cohorts are 1.6, 3.4, and 2.8 on 3 degrees of freedom, all non-significant, and the average number of births for each category is always within 0.2 births of the mean.

By the second decade of marriage, however, statistically significant differentials in fertility are apparent. Rural women have slightly higher fertility than urban women, the difference being 0.4 births for the first cohort and 0.2 births for the second cohort. An interesting feature is the low fertility of the rural migrants, who report the lowest fertility in both cohorts; for the second cohort their fertility is 1.52, 23 percent less than the mean.

The completed family size of the first cohort of women reflects the same pattern of differentials as late fertility (Table 6.5.2). Here again, the most noteworthy observation is the low completed family size of the women who have moved from rural areas into urban areas later in their lives. Table 6.5.2 gives the mean number of children ever born to those women who have been married for 20 or more years.

Table 6.5.2 Mean Number of Children Ever Born to Women Married 20 Years or More, by Type of Place of Residence

Type of Place of Residence	Number of Children Ever Born
Rural	6.49
Rural Migrants	5.66
Urban Migrants	6.36
Urban	5.98
Mean	6.37
Standard Deviation	.3276
Chi-Squared (3 df)	17.8

6.5.3 EFFECT OF ADJUSTMENT FOR AGE AT MARRIAGE

Type of place of residence is a variable which shows only a small degree of association with age at marriage. The range in age at marriage across the different categories is narrow in comparison with other variables and does not exceed 2 years for any cohort.

We have seen earlier that differentials by type of place of residence exist only in late and completed fertility. The effect of age at marriage on these differentials can be assessed by comparing the first two rows of Tables 6.5.3 and 6.5.4. The low fertility levels of the urban and rural migrant move a little closer to the average level thus enabling a certain proportion of their deviations to be attributed to their slightly higher ages at marriage.

Table 6.5.3 Children Born in the Second Decade of Marriage, by Type of Place of Residence, for Women in the First Cohort, Adjusted for Indicated Controls

Control Added	Rural	Rural Migrants	Urban Migrants	Urban	Standard Deviation	Chi-Squared (3 df)
Marriage Duration	2.48	1.95	2.23	2.11	.1950	25.9
Age at First Marriage	2.46	2.04	2.37	2.16	.1667	15.8
Zone	2.45	2.06	2.40	2.27	.1519	12.5
Race	2.44	2.08	2.45	2.32	.1477	7.2

Table 6.5.4 Children Born in the Second Decade of Marriage, by Type of Place of Residence, for Women in the Second Cohort, Adjusted for Indicated Controls

Control Added	Rural	Rural Migrants	Urban Migrants	Urban	Standard Deviation	Chi-Squared (3 df)
Marriage Duration	2.07	1.52	1.90	1.85	.1986	17.8
Age at First Marriage	2.06	1.59	2.02	1.84	.1821	12.9
Zone	2.05	1.73	1.92	1.80	.1222	6.4
Race	2.04	1.74	1.96	1.77	.1298	6.3

6.5.4 EFFECT OF ADJUSTMENT FOR OTHER CONTROLS

As in the previous subsection we shall restrict attention to the urban/rural differentials in fertility in the second decade of marriage. The effect of additional controls of zone and race can be seen in the last two rows of Tables 6.5.3 and 6.5.4. For both cohorts the chi-squared for the urban/rural differentials is reduced to below 7.8, 95th percentile of the chi-squared distribution on 3 degrees of freedom. Thus there is little evidence of urban/rural differentials after adjustment for the distributions of age at marriage, zone, and race. After adjustment for zone, the effect of type of place of residence is an average of the differentials within each zone. Since Zone 1 is entirely urban and more of the urban women are concentrated in Zones 1 and 2, the absence of a significant effect after zone is controlled is of little substantive interest. After adjustment for all controls, the fertility of rural migrants still appears to be somewhat lower than other groups, but in view of the smallness of this group and the lack of statistical significance this possibility cannot be confirmed by the data presented here. Perhaps the only conclusion to be drawn is that the rural/urban migrants appear to be more akin to urban women than to rural women with regard to reported fertility.

6.6 DIFFERENTIALS BY WORK STATUS

6.6.1 DESCRIPTION OF THE VARIABLE

After some preliminary analysis it was decided to confine respondent's work status to a four category variable indicating simply whether the respondent ever worked before or after marriage, apart from normal housekeeping activities. Over two-thirds of respondents in the (weighted) sample (69.6 percent) reported never working. The remainder was almost equally composed of women who worked before and after marriage (10.7 percent), women who worked only before marriage (9.9 percent) and women who worked only after marriage (9.8 percent). Two types of work may be distinguished, working on a family farm or wage-earning occupations outside the family, the latter being concentrated in urban areas and thus overrepresented in the sample. However these two groups were not separated for the present analysis.

Before discussing fertility differentials between these groups, it will be useful to review associations with the other socio-economic factors, as shown in Table 4.3. Women who stopped working after marriage are mostly concentrated in the two most developed Zones 1 and 2. They are almost entirely Sinhalese except for the 8 percent Tamils and 1 percent Moors; they have somewhat large proportions in the middle levels of education. The women who took up work subsequent to their marriage are considerably less educated than the average – 76 percent of them have received only primary education compared to 58 percent in the whole sample; 65 percent of them are wives of men with only secondary or lower level education – only 43 percent of the women in the total sample fall into this category. Less than average proportion of their husbands are in professional, managerial or clerical occupations. Finally, the women who have continued their economic activities uninterrupted by marriage can be seen to have better than average socio-economic standing. Fifty percent are in the districts of Colombo, Galle and Matara, comprising the two zones of highest development. An outstandingly large proportion of 37 percent have received higher education of which 21 percent had a university or higher education – only 4 percent of the overall sample have had the privilege of university education. Their husbands are also highly educated. Twenty-four percent of them are wives of men in the highest occupational ranks of professional and clerical workers. This proportion is twice as high as the average, and they enjoy the highest average standard of living of 6 points.

Women who gave up their work after marriage have a higher social standing than those who took up work after marriage. It may be speculated that in general the latter group was compelled to seek and accept some form of work – probably manual work – to supplement their husband's income, while the former group had no necessity for additional income from their work or perhaps their work was only a temporary involvement until they were married. The women who worked throughout, irrespective of marriage, judging from the exceptional educational achievements could perhaps be workers by choice in professional or similar occupations. Their occupations would be those that provide a large enough income or of such social value that compete in importance with the housewifely duties.

The interpretation of fertility differentials for this variable is complicated by the fact that women may change their

Table 6.6.1 Work Status: Percent Distribution by Marriage Cohort

Marriage Cohort	Never Worked	After Not Before	Before Not After	Before and After
20+	73.0	14.5	5.5	7.0
10-19	66.0	12.0	10.3	11.7
0-9	69.8	4.1	13.3	12.8

work status after marriage in the course of their reproductive histories. Thus the composition of the variable for a given marriage cohort is fluid. Also there is no clear temporal or causal relationship with fertility. Table 6.6.1 shows the (weighted) distribution of the sample by work status for the three marriage cohorts considered here. The distribution of the first two cohorts may be considered near to final, and a decline in the proportion who never worked is apparent. For the third cohort further changes in the distribution are certain, from the first and third to the second and fourth categories. However, comparing the first two with the last two categories, a clear increase in the proportion of women who report working before marriage is discernable. Although reporting errors may be a factor here, it seems reasonable to conclude that this trend is real and is associated with the rising trend in age at marriage.

6.6.2 UNADJUSTED DIFFERENTIALS

The work status variable is one of the few socio-economic factors for which significant fertility differentials exist even in the first decade of marriage. Three predominant patterns are evident in the data in Appendix Table 5.2. Firstly, for all cohorts and for early and late fertility women who worked before and after marriage have the lowest (or near the lowest) fertility. Secondly, the predominant factor for the first marriage cohort appears to be whether the respondent worked before marriage or not. Thus, for fertility in the second decade of marriage, the two groups who worked before marriage have fertility 10 percent and 12 percent below the mean, compared with 3 percent and 2 percent above the mean for the two groups who did not work before marriage. A similar, though less clearcut pattern emerges for the first decade of marriage. Thirdly, in the recent past the work status after marriage seems to be a more significant factor than work status before marriage. For fertility in the first decade of marriage for the most recent cohort, women who worked after marriage have fertility about 10 percent below the mean, whereas women who have worked before marriage but not after have fertility 9 percent above the mean. This pattern of differentials is even more striking for fertility in the second decade of marriage for the second cohort. Women who worked after marriage have fertility 16 percent below the mean, irrespective of work status before marriage. Their fertility is 10 percent below that of women who worked before marriage only, and 20 percent below the fertility of women who have never worked.

The observed relationship between work status after marriage and fertility is of course entirely consistent with expectations. Nevertheless the implication of the results is that only in the recent past has this relationship had any marked effect on the fertility of Sri Lankan women.

6.6.3 EFFECT OF AGE AT MARRIAGE AND OTHER CONTROLS ON WORK STATUS DIFFERENTIALS

The relationship between age at marriage and the work status variable is summarized in Table 6.6.2.

The two variables are related in a rather complex way in that the definition of work status depends on the timing of work in relation to marriage. For example, women who marry straight after leaving school have less opportunities of working outside the family before marriage than women who marry late. From Table 6.6.2, it is evident that women who worked before marriage have a higher average age at marriage than other women. Among those who worked before marriage, a differential between those who also worked after marriage and those who did not appear in the second and third cohorts; in the third cohort this differential is no less than four years. These data suggest the emergence of a group of women who marry late and continue to have a career after marriage, and who should be contrasted with women who worked before marriage, perhaps on a family farm or through economic necessity, and then discontinued work after marriage.

Table 6.6.2 Average Age at Marriage of Women in the Sample, by Marriage Cohort and by Work Status

	Age at Marriage		
Work Status	First Cohort	Second Cohort	Third Cohort
Never Worked	16.6	18.4	20.0
Worked Before and After Marriage	17.2	21.5	24.0
Worked Before Marriage Only	18.0	20.4	20.0
Worked After Marriage Only	16.0	17.8	20.2
Mean	16.6	18.8	20.7

The effect on fertility differentials of adjusting for age at marriage can be seen by comparing Appendix Table 5.2 with Table 5.3. For the first cohort, the adjustment results in a reduction of the differentials between those who worked before marriage and other women, reflecting the higher ages at marriage of the former group. As might be anticipated, the reduction is most marked in the second decade of marriage. The chi-squared statistic for the work status differentials is reduced from 10.6 to 6.6 by the control for age at marriage, the latter being not significant at the 5 percent level. The further control for zone reduces the differentials for this cohort to insignificant levels, and hence we can conclude that differentials in fertility by status are accounted for by differentials in age at marriage and zonal composition between those who did and did not work before marriage.

The effects of controlling age at marriage for the second and third cohorts are striking. Women who worked before and after marriage have low fertility and high age at marriage. Consequently the effect of adjusting for age at marriage is to increase their fertility towards the mean. Most dramatically, for the late marital fertility of the middle cohort, the effect of adjusting age at marriage is to increase the mean fertility of this group from 16 percent below the mean to only 2 percent below the mean, as shown in Table 6.6.3. For the early fertility of the third cohort, the effect of adjusting age at marriage is to increase the fertility from 9 percent below the mean to 4 percent below the mean, and subsequent controls for other socio-economic variables reduce the duration to negligible proportions. In summary, the low fertility of the group of women who work before and after marriage is almost entirely accounted for by the high age at marriage of this group.

Table 6.6.3 Differentials in Fertility in the Second Decade of Marriage for the Second Cohort by Respondent's Work Status, Expressed as Percentage Deviations from the Standardized Mean, and Adjusted for Indicated Controls

	Respondent's Work Status				
Control	Never Worked	Worked Before and After	Worked Before Not After	Worked After Not Before	Chi-Squared (3 df)
Marital Duration	5.7	−16.3	−5.8	−16.8	22.5
Age at Marriage	2.9	− 1.7	4.7	−23.4	19.8
Zone	2.5	− 2.0	7.3	−23.3	20.6
All Controls	2.3	− 0.0	8.1	−24.0	20.8

For women who work after marriage but not before a completely different pattern emerges. These women have a lower fertility and lower age at marriage than average, and hence the effect of adjusting for age at marriage is to further reduce their adjusted mean fertility. Most strikingly we see in Table 6.6.3 that for the second cohort fertility in the second decade of marriage is 17 percent below the mean before adjustment for age at marriage, and 23 percent below the mean after adjustment for age at marriage. Further controls for other variables have no effect on this figure, as can be seen from the last two rows of the table. We conclude that these women have low fertility despite their low age at marriage, and their low fertility is not accounted for by their socio-economic status. To help put this result in perspective, we remind the reader that this group is not a major sector of the married population, comprising only 12 percent of the second cohort. Nevertheless it appears that work after marriage has played a role in the decline in marital fertility in Sri Lanka. While it is possible that entry into the labour force was a consequence rather than a cause of less frequent childbearing, it seems more plausible to us that opportunity, together with the desire or need to work, was an important consideration in a conscious decision to reduce fertility.

6.7 DIFFERENTIALS BY EDUCATIONAL LEVEL

6.7.1 DESCRIPTION OF THE VARIABLES

A similar categorization of education (or more precisely, formal schooling) is adopted as that in the First Country Report. Five categories are formed, distinguishing groups with no schooling (in the weighted sample, 19.1 percent of respondents and 7.3 percent of husbands), one to five years of education (39.4 percent of respondents and 39.1 percent of husbands), six to nine years of education (27.0 percent of respondents and 35.4 percent of husbands), ten or eleven years of education (10.4 percent of respondents and 12.4 percent of husbands) and higher education (4.0 percent of respondents, 5.8 percent of husbands). These groupings are labelled no schooling, primary, secondary, high and university in the tables, a correspondence which is close enough for our purposes.

As can be seen in Table 4.3, education of respondent and husband are highly associated. Forty-three percent of couples have the same level of education. The somewhat higher level of formal education among husbands is reflected by the fact that in 17 percent of couples the wife has more education than the husband, and in 40 percent of couples the husband has more education than the wife.

For the analysis, the option to treat education as an interval scaled variable, scored as years of formal schooling, was not readily available because of the absence of the ungrouped variable on the recode tape. Three other possibilities were considered. The most detailed treatment of education would form a joint variable for all combinations of husband's and respondent's education with a significant number of women in the sample. Another alternative is to treat respondent's and husband's education as separate variables, thus ignoring any interaction effects between them.

The least detailed option is to use just one of the two variables to represent the education dimension. The second of these options was selected, because respondent's or husband's education alone did not appear sufficient, and the joint variable was cumbersome because of the large number of categories with a significant number of cases.

6.7.2 EDUCATION DIFFERENTIALS UNADJUSTED FOR OTHER CONTROLS

As the wife's educational background is closely linked to that of her husband, fertility differentials for both variables will be discussed together.

Little association is apparent, between educational level of either husband or wife and fertility in the first ten years of marriage for any of the three marriage cohorts. The only group to possess a distinctly different level of early marital fertility is the small minority where either spouse had received a university education. Their mean number of births is lower than the overall mean by an amount varying between 10 and 22 percent.

As in the case of other variables behaviour between educational groups diverges during the second ten-year period of marriage duration, by the end of which very large differentials have been established. For the earliest cohort, the mean number of births fall monotonically from 2.7 for women with no schooling to 1.1 births for those with university education. A similar fall is observed when wife's education is substituted by husband's education, though we may note that, at each level of education, fertility classified by husband's education is slightly higher than that for women. Figures for completed fertility, where difference between educational categories are even more pronounced suggest a continued divergency in behaviour beyond the nineteenth year of marriage.

Comparison of fertility in the second decade of marriage between the earliest and middle cohort, shown in Table 6.7.1, reveals a decline in fertility at all educational levels, with the exception of the university group who maintain approximately the same level of fertility across the two cohorts. For husband's educational levels, the magnitude of the decline is similar for the no schooling, primary, second-

Table 6.7.1 Mean Number of Births in Marital Duration 10-19 Years

	Wife's Education			Husband's Education		
Education	First Cohort (a)	Second Cohort (b)	Ratio (b)/(a)	First Cohort (a)	Second Cohort (b)	Ratio (b)/(a)
No Schooling	2.69	2.46	.91	2.70	2.33	.86
Primary	2.40	2.17	.90	2.53	2.09	.87
Secondary	2.00	1.65	.83	2.32	2.05	.88
High	1.59	1.37	.86	1.65	1.34	.81
University	1.06	1.07	1.01	1.11	1.15	1.04
Standard Deviation	.58	.51		.59	.46	
Chi-squared (4 df)	70.5	90.3		79.4	54.3	

Table 6.7.2 Mean Age at Marriage, by Education of Respondent and Husband

	Education				
	No Schooling	Primary	Secondary	High	University and Other
Respondent	17.0	18.3	20.0	23.2	26.0
Husband	17.1	18.1	19.6	21.7	23.7

ary and high school categories, but for women's education, the decline is rather steeper for secondary and high school women than for the two lower categories. The net effect is reduction in the extent of differentiation in the middle cohort (as shown by chi-squared values and standard deviations) between husband's but not between wife's educational categories.

6.7.3 EFFECT OF AGE AT FIRST MARRIAGE ON EDUCATIONAL DIFFERENTIALS

Age at first marriage is closely related to educational attainment, the dispersion being greater across women's own educational levels than across categories of their husband's education. The rapid rise in age at marriage by intervals of over two years with improving education can be seen in Table 6.7.2.

Such wide variation combined with a relatively late age at entry into marital unions by Asian standards is likely to have a strong influence on educational differentials in fertility, because the better educated late marrying women spend less of their married life in the most fecund ages of 20 to 29. Control of age at marriage by regression allows us to examine the residual association between educational status and marital fertility, after the biological component of the relationship has been removed.

As expected, educational differentials are greatly reduced after controlling for age at marriage, the effect being more pronounced for the more recent marriage cohorts and for the extreme educational categories. The lower early marital fertility of university women is largely attributable to their high age at marriage in the two more recent cohorts but a difference persists for the earliest cohorts.

The contribution of age at marriage to the emergency of differentials in late marital fertility is illustrated in Table 6.7.3. For the cohort first married 20 or more years ago, the negative fertility differential is halved for the high school and university educated women, while the positive differential is reduced by a third for those with no schooling. For the Middle Cohort, the range of percent deviations in fertility is compressed from +26 percent to −45 percent to +16 percent to −13 percent and the fertility of university women, after adjustment for age at marriage, actually becomes higher than that for secondary or high school women. For husband's educational levels, the effects of age at marriage are similar, but less radical because age at marriage itself is less strongly related to husband's than to wife's education.

Differences are greatly reduced when age at marriage is controlled, but the fertility of the no schooling category remains substantially higher and that of university women stays substantially lower, in comparison with intermediate categories. This finding differs from the results of the First Country Report for women aged 45 to 49, where educational differentials between no schooling and intermediate groups disappeared after standardization for age at marriage (See Appendix Table 4.3).

Table 6.7.3 Percent Deviation in Fertility from Standardized Mean Fertility in Marital Duration 10-19 Years, Before and After Adjustment for Age at Marriage

Respondent's Education	First Cohort		Second Cohort	
	Before	After	Before	After
No Schooling	22	15	26	16
Primary	9	5	10	5
Secondary	−10	− 8	−16	−13
High	−28	−14	−30	−13
University	−52	−28	−45	− 6
Standard Deviation	26	15	26	12
Chi-squared (4 df)	70.5	31.8	90.3	27.1

	Children Ever Born – First Cohort	
	Unadjusted	Adjusted
No Schooling	6.85	6.77
Primary	6.32	6.29
Secondary	5.82	5.95
High	5.49	5.98
University	4.06	4.85
All	6.37	6.37
Standard Deviation	.94	.63
Chi-squared (4 df)	49.5	26.6

6.7.4 EFFECT OF OTHER CONTROLS ON EDUCATIONAL DIFFERENTIALS

In view of the general homogeneity in reproductive behaviour among educational groups in the first ten years of marriage and because the pattern of differences in completed fertility stems mainly from the second decade of marriage, we shall confine attention in this section to the second decade.

The successive introduction of zone, race and childhood and type of residence into the regression brings about a modest and gradual attenuation of differentials between either a wife's or husband's educational categories. There is thus no evidence that these differentials are merely a spurious result of underlying geographical or racial differences in educational attainment and fertility. Perhaps more surprisingly, the variable 'work status' also fails to diminish the differences between educational categories. Clearly, the education: fertility link is independent of any enhancement of work opportunities due to educational qualifications either before or after marriage, though it remains possible that the nature of employment may be an important consideration.

The effect of the introduction of husband's education on differences between the categories of the wife's education, and vice versa, is of particular interest in attempting to establish the relative importance of the two variables. Table 6.7.4 shows the relevant percent deviations from the standardized mean before and after adjustment for spouse's

education. It should be pointed out that 'unadjusted' deviations are in fact adjusted for prior controls (zone, race, type of place, and, for women's education only, work status).

The pattern of results displayed in Table 6.7.4 is an intriguing one. For the earlier cohort, differentials by wife's education are greatly compressed when husband's education is controlled. In particular, the substantial negative deviations for the high school and university group disappear. However, for the middle cohort, differentials are unaffected by the introduction of husband's education.

Turning to differentials between the husband's educational categories, the cohort comparison is reversed: the differentials persist more strongly for the early than for the middle cohort. It thus appears that the influence of the wife's educational background on fertility has increased for the more recent marriage cohort. For the earlier cohort, husband's education clearly emerges as the more important determinant of fertility, as evidenced by the persistently large negative deviations of high school and university groups, the higher standard deviations and X^2 value. For the other cohort, women's educational level shows a slightly closer association with fertility than husband's level.

Table 6.7.4 Percent Deviation in Fertility from the Standardized Mean Fertility in Marital Duration 10-19 Years, Before and After Adjustment for Spouse's Education

	First Cohort		Second Cohort	
Education	Unadjusted	Adjusted	Unadjusted	Adjusted
		Respondent		
No Schooling	+14.0	+ 9.3	+11.7	+11.8
Primary	+ 3.0	– 0.6	+ 6.6	+ 5.3
Secondary	– 5.7	– 5.1	–11.3	–11.9
High	–15.0	– 2.7	–15.9	–11.4
University	–16.0	+ 5.2	– 0.5	+ 4.5
Standard Deviation	11.3	5.3	10.4	9.6
Chi-squared (4 df)	21.0	10.4	24.1	24.0
		Husband		
No Schooling	+ 9.1	+ 6.2	+ 4.2	– 0.8
Primary	+ 6.0	+ 4.6	– 1.0	– 3.7
Secondary	+ 3.1	+ 3.8	+ 8.7	+ 9.7
High	–19.3	–16.6	–17.6	–11.3
University	–29.2	–26.6	–14.1	– 8.9
Standard Deviation	15.3	13.4	10.3	7.3
Chi-squared (4 df)	26.6	15.8	17.2	14.0

6.8 DIFFERENTIALS BY HUSBAND'S OCCUPATION

6.8.1 DESCRIPTION OF THE VARIABLE

Any occupational classification into a small number of categories involves the somewhat arbitrary placement of disparate professions into the same category. The grouping of occupational categories in this study is of necessity broad because of sample size limitations. The ten categories discussed in the First Country Report were further grouped to produce a simplified husband's occupation variable with the following five categories:

(1) *Farmers (28.1 percent).* This group consists of self-employed farmers, fishermen and hunters and a small (1 percent) residual group of men with undefined occupations.

(2) *Professional, Technical, Managerial, and Clerical Workers (12.3 percent).* Two-thirds of this group are wives of professional, technical or managerial workers. The remaining small group of clerical workers were included here rather than with Sales and Service workers because in preliminary analysis their fertility appeared more closely in line with this group.

(3) *Agricultural Workers (9.2 percent).* This group comprises the farm workers who did not report as self-employed.

(4) *Skilled and Unskilled Manual Workers (32 percent).* Preliminary analysis did not suggest that the fertility of wives of skilled and unskilled workers differed to a significant extent. Thus in the interests of parsimony these groups were combined.*

(5) *Sales and Service Workers (17.3 percent).* This category includes a rather heterogeneous group of occupations, but a finer grouping did not seem justified.

6.8.2 UNADJUSTED DIFFERENTIALS

As for other socio-economic factors, differentials in early marital fertility by husband's occupation are not marked, the chi-squared values being clearly significant in just one of the three cohorts, the middle cohort. For this group the wives of men in professional and clerical occupations have a reported early fertility of about 9 percent below the mean cohort level of 3.3 births, and the wives of self-employed farmers who are about 6 percent higher than average. A suggestion of low fertility among the professional and clerical group can also be recognised in the first and the third cohorts. Wives identified by all other occupational categories of the husband – agricultural workers, skilled and unskilled workers and sales and service workers – remain within a very narrow range covering the average fertility within each cohort.

For births in the second ten-year period, the occupational categories differ widely from one another. The substantial extent of these differences is reflected in the very large chi-squared values of 75.2 and 76.6 shown in the Appendix Table 7.2.

As in the case of other variables we have examined, these differences are established as a result of differential declines in the mean number of births achieved in passing from the first to second ten-year period of marriage. The most impressive reduction is in the class of professional and clerical workers. Their level of late fertility is less than one half of what it was in the first ten-year period of marriage and about 35 percent below the mean level for both cohorts. The effect of this large reduction in fertility is to raise the proportional deviations of the self-employed farmers and also, to a somewhat lesser extent, that of agricultural workers whose fertility levels declined much less rapidly. The sales and service workers also show a lower than average level of later fertility. The extent of their deviation, however, in comparison with the professionals and clerical workers is almost negligible.

Proportional deviations in late fertility are reproduced in Table 6.8.1. A salient feature is the similarity in the pattern of differentials for the two cohorts. In percentage terms the differences are slightly more pronounced in the middle

* This combination may seem questionable on substantive grounds, and in fact arose for a practical limitation with respect to the space required to run regressions with all variables included. One degree of freedom had to be saved and this was achieved by combining two occupational categories into a single group.

Table 6.8.1 Mean Number of Births in the Second Ten-Year Period of Marriage and the Percent Deviations from the Standardized Mean for the First and the Second Cohorts, by Husband's Occupation

Occupation	First Cohort		Second Cohort	
	Number of Births	Percent Deviation	Number of Births	Percent Deviation
Self-Employed Farmers	2.68	16.5	2.33	18.5
Professional and Clerical Workers	1.58	−31.4	1.22	−37.9
Non-Self-Employed Agricultural Workers	2.56	11.1	2.25	14.5
Skilled and Unskilled Workers	2.29	− 0.7	1.97	0.3
Sales and Service Workers	2.41	− 2.7	1.87	− 4.9
Standardized Mean	2.30		1.96	
Standard Deviation	.3827		.3925	
Chi-squared (4 df)	75.2		73.7	

cohort, particularly in the extreme categories. Ranking the groups by levels of late fertility, the professionals and clerical workers are identifiable as the group with lowest fertility; considerably above them but still a little below the average are the skilled and unskilled workers, followed by sales and service workers who represent for all practical purposes the average level of late fertility; next the agricultural employees have a distinctly high level of fertility and the self-employed farmers rank highest of all.

The differentials apparent in the second decade of marriage are reflected in differentials in the completed fertility of the earliest marriage cohort. The main characteristics are low fertility of professional and clerical workers, 17 percent below the mean of 6.4 children, and the fairly high level of fertility of farmers, 11 percent above the mean. The total number of children ever born to all other groups lie within a narrow range of 6.1 to 6.5 births.

6.8.3 EFFECT OF ADJUSTMENTS FOR AGE AT MARRIAGE

The low fertility group of wives of professional and clerical workers have a high mean age at marriage, and the high fertility group of wives of agricultural workers have a low mean age at marriage. Hence the effect of adjusting for age at marriage is to reduce the differentials by bringing the fertility of these groups closer to the mean.

For instance, consider the early fertility of the middle cohort – the only cohort with statistically significant differentials before adjustment. When age at marriage is controlled the chi-squared for differentials by husband's occupation is reduced from 22.7 to 15.1, reflecting an upward displacement of the fertility of the professional and clerical group from 9 percent below the mean to 5 percent below the mean when standardized for age at marriage.

The adjustment of age at marriage has a more pronounced effect on differentials in late fertility, particularly for the second cohort. The averaged effect for the two cohorts is to halve the chi-squared values. The adjusted means for professional and clerical workers in the first and second cohorts are increased from 31 percent and 38 percent below the mean to 22 percent and 21 percent below the mean, respectively. The adjusted means for agricultural workers are reduced from 11 percent and 15 percent above the mean to 7 percent and 4 percent above the mean, respectively. However the high mean fertility of self-employed farmers is not attributable to the distribution of age at marriage, and remains some 15 percent above the mean after adjustment for age at marriage.

In general substantial differentials in late and completed fertility by husband's occupation remain after age at marriage is adjusted.

6.8.4 EFFECT OF OTHER CONTROLS

We have noted that differentials in early marital fertility by husband's occupation are slight. The effect of further controls by associated background variables is to erode any differentials remaining after adjustment by age at marriage to levels below statistical significance. Thus there is no evidence of an independent effect of husband's occupation on fertility in early marriage.

A priori we would also expect an erosion of the more substantial differentials in late fertility between occupation groups, given the obvious associations between occupation and other socio-economic indicators such as education and standard of living. This reduction does indeed take place. The effects of more important controls are summarized for the first two cohorts in Table 6.8.2.

The pattern is very similar for the two cohorts. Differentials remaining after the control of age at marriage are largely accounted for by the compositional effects of associated variables. For the first cohort there is no evidence of a net effect of occupation after all other factors are controlled, the effect having a non-significant chi-squared of 6.9 on four degrees of freedom. For the second cohort this residual effect is somewhat larger, with a chi-squared of 14.3. For both cohorts, the controls of age at marriage and husband's education lead to the greatest reductions in differentials. The higher fertility of agricultural workers is attributable to their low mean age at marriage. The low fertility of wives of professional and clerical workers is largely attributable to high age at marriage and the high educational level of the couple. The high fertility of farmers is gradually reduced by successive controls for other factors. One slight difference between the two cohorts concerns the control of the standard of living index at the last step. For the first cohort this control increases the adjusted mean for professional and clerical workers from 18 percent below the mean to 11 percent below the mean and reduces chi-squared from 16.2 to 6.9. For the second cohort the same control has little effect. Some effect of husband's occupation remains after all the controls, principally in the low adjusted fertility of wives of professional and clerical workers (15 percent below the mean) and the high adjusted fertility of wives of self-employed farmers (13 percent above the mean).

Table 6.8.2 Differentials in Fertility in Second Decade of Marriage, by Husband's Occupation, Expressed as Percentage Deviations from the Standardized Mean, Adjusted for Selected Controls

Occupation	Step*				
	2	3	4	8	9
		First Cohort			
Farmers	16.5	13.3	10.3	8.1	7.0
Professional and Clerical	−31.4	−22.2	−22.0	−18.3	−10.7
Agricultural Workers	11.1	6.8	7.5	6.8	5.1
Skilled and Unskilled	− 0.7	− 1.3	2.7	2.4	1.0
Sales and Service	− 2.7	− 0.6	− 3.6	− 1.7	− 1.9
Standardized Mean	2.31	2.32	2.33	2.34	2.35
Standard Deviation	.166	.120	.115	.095	.062
Chi-squared (4 df)	75.2	40.7	30.2	16.2	6.9
		Second Cohort			
Farmers	18.5	16.3	15.0	12.5	12.6
Professional and Clerical	−37.9	−20.8	−21.9	−16.9	−15.5
Agricultural Workers	14.5	3.5	− 5.3	− 6.8	− 5.5
Skilled and Unskilled Manual	0.3	− 3.0	1.5	2.0	1.5
Sales and Service	− 4.9	− 1.8	− 2.4	− 2.0	− 3.0
Standardized Mean	1.96	1.96	1.96	1.96	1.96
Standard Deviation	.200	1.20	.119	.097	.092
Chi-squared (4 df)	73.7	31.8	31.5	17.8	14.3

*The Step numbers indicate the following controls:
Step 2: Years since First Marriage
Step 3: Years Since First Marriage, Age at Marriage
Step 4: Years Since First Marriage, Age at Marriage, Zone
Step 8: Years Since First Marriage, Age at Marriage, Zone, Race/Religion, Residence, Respondent's Education, Work Status.
Step 9: Years Since First Marriage, Age at Marriage, Zone, Race/Religion, Residence, Respondent's Education, Work Status, Husband's Education.

6.9 STANDARD OF LIVING INDEX

6.9.1 CONSTRUCTION OF THE INDEX

The standard of living index is constructed by summing the scores for sixteen variables obtained from the household schedule. The index takes values 0-25 and is based on the following scoring system.

Variable	*Category*	*Score*
Nature of Water Supply	Private Pipe or Pump	2
	Private Well	1
	Common or other Source	0
Toilet Facilities	Flush or Water Seal	2
	Bucket or Cesspit	1
	None	0
Source of Lighting	Electricity or Petromax	2
	Kerosene	0
Construction of Walls	Cement and Stone, Brick or Cabook	1
	Other	0
Construction of Roof	Tile or Asbestos	2
	Metal Sheet	1
	Other	0
Ownership of Motorized Vehicle		3
Bicycle		1
Sewing Machine		1
Radio		1
Clock		1
Refrigerator		2
Telephone		2
Tape Recorder		2

The weighting of the variables is subjective and thus no attempt has been made to assign weights by more objective means such as a principal component analysis.

6.9.2 REGRESSION OF FERTILITY ON STANDARD OF LIVING INDEX

The raw regression coefficients of the standard of living index (which measure the increase in mean fertility per unit increase in the index) are presented in Table 6.9.1, for each cohort, measure and step of the regression. The figures in brackets are the F statistics from the regression, and are similar to the chi-squared values in the other tables, with one degree of freedom. By looking down the column for each regression the effect of controls for other variables on the regression coefficient can be assessed.

The coefficients for the early fertility of the first cohort are effectively zero, indicating no relationship between the index and fertility. However the other regressions are all negative, indicating that couples who score high on the index have lower fertility. The size of the effect is generally small, and never exceeds 0.1 of a birth per unit increase of the index.

Certain aspects of the table are worthy of comment. Firstly, a surprising feature is the significant effect of the standard of living index for the early fertility of the second cohort. This is partially attributable to the positive association between standard of living and age at marriage, but is not affected by controls for other factors. The corresponding effects for the third cohort are smaller and barely significant after age at marriage is controlled.

Secondly, the relationship between standard of living and late fertility is significant for both the first and second cohorts, and partly accounted for by the higher age at marriage and educational level of respondents who score high on the index. The residual effect after all other variables are controlled is marginally significant for the first cohort, and somewhat more significant for the second cohort. However the estimated values of the coefficients are both close to −0.03, which is clearly small in substantive terms. Hence the conclusion is that the impact of standard of living, as measured by this index, on fertility is modest after controls for education and age at marriage are imposed.

6.10 SUMMARY OF CONCLUSIONS

We conclude this section by summarizing the main substantive conclusions of the analysis. Note that estate workers are not included here, and results for this group appear in the next section.

(1) Age at marriage has an important influence on the marital fertility of all three cohorts in the study. The effect is significantly non-linear, with an increasingly negative effect on marital fertility as age at marriage increases. A residual effect of age at marriage persists after all socio-economic factors in the study have been controlled, indicating that its influence cannot be attributed solely to the higher socio-economic status of women who marry late. On the other hand, many of the socio-economic differentials can be traced in part to variations in the distribution of age at marriage between the various subgroups.

(2) Differentials in fertility in the first ten years of marriage are generally small and statistically insignificant. The only variable to show an effect is work status: women who work after marriage report slightly lower levels of early marital fertility than other groups.

(3) By the second decade of marriage considerable differentials in fertility emerge. Furthermore, the pattern of differentials by region, ethnic group, work status is markedly different for the first cohort (married 20 or more years) and the second cohort (married 10-19 years). In contrast the pattern of differentials by respondent's education, husband's education and occupation, and standard of living is broadly similar for both cohorts.

(4) For the first cohort, women in Zones 1 and 2 had on average 2 births in the second decade of marriage, compared with 2.4 births for Zones 5 and 6 and 2.8 births for Zones 3 and 4. Reductions in fertility between the first and second cohort are limited to four of the six zones, namely Zones 1, 2, 3 and 6. Consequently, for the second cohort the relative fertility for Zones 4 and 5 rises to 40 percent and 20 percent above the mean, respectively. These differentials are largely attributable to differences in the distribution of age at marriage, racial composition, urbanity and socio-economic factors between the zones.

(5) Important ethnic differentials are also evident in the second decade of marriage. For the first cohort, Sinhalese and Tamil Christians have lower fertility than average, and other groups have rather similar levels. The decline in fertility between the first and second cohort is restricted to Sinhalese women, and as a result in the second cohort the Tamil Hindu (mainly Sri Lanka Tamil) and Sri Lanka Moor groups have fertility levels of 20 percent and nearly 40 percent above the mean, respectively. Again, age at marriage appears to have played a considerable role in this process. A considerable increase in age at marriage has accompanied the reduction in Sinhalese marital fertility, whereas the increase in age at marriage of other groups, from somewhat lower levels, does not appear to have been translated into

Table 6.9.1 Standard of Living Index: Coefficients and Chi-Squareds

		Marriage Cohort					
		20+		10-19		0-9	
		Mean = 5.0 sd = 3.9		Mean = 5.0 sd = 4.2		Mean = 5.4 sd = 4.0	
Measure	*Step*	Coefficient	Chi-Squared (1 df)	Coefficient	Chi-Squared (1 df)	Coefficient	Chi-Squared (1 df)
BM0-9	2 MSFM	−.003	(0.1)	−.045	(32.8)	−.025	(7.1)
	3 AGFM	−.001	(0.0)	−.031	(14.4)	−.010	(1.0)
	4 ZONE	−.000	(0.0)	−.032	(13.9)	−.011	(1.1)
	5 RACE	−.001	(0.0)	−.032	(14.6)	−.015	(2.1)
	6 TPRS	−.002	(0.1)	−.034	(15.4)	−.021	(3.6)
	7 REDUC	−.001	(0.0)	−.034	(12.7)	−.024	(4.3)
	8 WSTAT	−.003	(0.1)	−.035	(13.9)	−.023	(3.9)
	9 HEDUC	−.001	(0.1)	−.039	(15.3)	−.024	(3.8)
	10 HOCCUP	−.000	(0.0)	−.039	(15.1)	−.025	(3.9)
BM10-19	2 MSFM	−.068	(53.2)	−.092	(83.4)		
	3 AGFM	−.047	(24.9)	−.049	(23.2)		
	4 ZONE	−.043	(21.1)	−.044	(17.8)		
	5 RACE	−.043	(20.8)	−.045	(18.6)		
	6 TPRS	−.041	(18.6)	−.043	(16.1)		
	7 REDUC	−.031	(9.5)	−.033	(8.3)		
	8 WSTAT	−.035	(11.4)	−.036	(9.7)		
	9 HEDUC	−.028	(6.6)	−.036	(8.9)		
	10 HOCCUP	−.026	(5.5)	−.035	(8.2)		
NCEB	2 MSFM	−.088	(28.6)				
	3 AGFM	−.061	(13.6)				
	4 ZONE	−.051	(8.7)				
	5 RACE	−.052	(9.5)				
	6 TPRS	−.051	(8.7)				
	7 REDUC	−.038	(4.5)				
	8 WSTAT	−.049	(7.1)				
	9 HEDUC	−.036	(3.5)				
	10 HOCCUP	−.033	(2.9)				

an equivalent decline in childbearing. Adjustment for socio-economic factors further erodes the observed differentials.

(6) Urban/rural differentials are small and in the expected direction. The fertility of migrants from rural to urban areas appears to be more similar to urban than to rural women.

(7) An intriguing pattern of differentials by the respondent's work status emerges from the analysis. For the first cohort, women working before marriage have a slightly lower fertility than average. This differential is attributable to the higher than average age at marriage of these women. For the second cohort, work after marriage has a negative relationship with fertility. Women who work before and after marriage have a high socio-economic status and age at marriage, which account for their low fertility. However, for women who work after marriage but not before, the low fertility is apparently achieved *despite* their low socio-economic status and age at marriage, since the effect of controlling these variables is to further reduce the adjusted mean for this group.

(8) Large differentials in fertility by education of husband or wife emerge in the second decade of marriage, and for the first cohort increase beyond the nineteenth year of marriage. For example, mean parity in the second decade of marriage ranges from 20 percent above the mean for women whose husbands have no schooling to about half the average value for wives of university educated men, for both the first two cohorts. As expected, these differentials

are largely attributable to age at marriage, although significant residual effects persist after age at marriage is controlled. There is no clear evidence of a closer association between fertility and respondent's education than between fertility and husband's education, or vice-versa. Both variables appear necessary to capture the educational dimension.

(9) Large variations in fertility by husband's occupation are also evident, with wives of professional and clerical workers having particularly low values and wives of self-employed farmers having noticeably higher than average values. These effects are greatly attenuated by controls for age at marriage, education and standard of living.

(10) The impact of the standard of living index on fertility is statistically significant for the second decade of marriage, although the substantive effect does not appear to be great, particularly after controls for age at marriage and education are applied.

7 The Estate Workers

The women living in the tea and rubber estates of Sri Lanka are of particular interest to demographers, because they combine low age at marriage and socio-economic status, high infant and child mortality (Meegama, 1979) and low reported contraceptive use with low fertility. Because of the unusual nature of this group, and suspected inaccuracies in the reporting of births which have been uncovered in analyses of the quality of the data, it was decided to treat them separately for the present analysis.

The scope of an analysis of cohort fertility of this group is strictly limited by the sample size. The (weighted) sample of estate workers was limited to about 200 women in each of the three marriage cohorts. Regressions of early, late and completed fertility on background variables for each cohort did not reveal statistically significant differentials, but this result is largely the result of the limited sample sizes and cannot be used to infer homogeneity for the group with regard to fertility. Hence the analysis is limited to a comparison of the characteristics of the estate workers to those of the main sample. The data for this comparison are given in Table 7.1.

In certain respects the estate workers do form a homogeneous group. They cultivate the tea and rubber estates which are concentrated in Zone 6. They are of Indian Tamil origin, and embrace the Hindu religion. Over 80 percent of the women work before and after marriage, a characteristic which particularly distinguishes them from the rest of the population, in which only one in ten of women have this work pattern.

Other figures in Table 7.1 reflect the low age at marriage and socio-economic status of this group. The mean age at marriage of marriage cohorts is 1 to 2 years less than the main sample, although as noted in Section 6.2, this comparison does not take into account differing age structures for the two groups. The percentage distributions of respondent's and husband's education reveal an increase in education over the three cohorts, but the education of estate workers remains considerably lower than that prevalent in the rest of the country. A high proportion of husbands have agricultural occupations, as one might expect. Finally the estate workers score consistently lower on the standard of living index than the rest of the population.

Table 7.1 Characteristics of Estate Workers, Compared with Main Sample

	Marriage Cohort					
	20+		10-19		0-9	
Characteristic	Estate Workers	Main Sample	Estate Workers	Main Sample	Estate Workers	Main Sample
Sample Size	217	1915	204	1961	221	2293
			Means			
Marital Fertility						
BM0-9	3.14	3.50	3.05	3.35	2.78	3.57
BM10-19	1.94	2.40	1.99	1.98	–	–
NCEB	5.48	6.37	–	–	–	–
Standard of Living	2.8	5.0	2.8	5.0	2.9	5.4
Age at Marriage	15.8	16.9	16.9	19.4	20.0	21.0
			Percent Distributions (Columns)			
Respondent's Education						
None	69.3	33.8	48.7	16.9	43.2	10.2
Primary	26.8	45.4	43.6	43.4	47.3	33.3
Secondary or Higher	3.9	20.8	7.7	39.7	9.5	56.5
Husband's Education						
None	21.5	11.2	10.2	7.9	3.4	5.0
Primary	51.0	47.8	71.8	41.6	70.0	32.0
Secondary or Higher	27.5	40.9	18.0	50.5	27.4	63.0
Husband's Occupation						
Agricultural	64.7	46.8	78.9	35.8	80.9	35.2
Non-Agricultural	35.3	53.2	21.1	64.2	19.1	64.8
Work Status						
Worked Before and After	82.4	7.1	86.5	11.7	79.3	12.1
Worked After Not Before	11.8	14.5	9.0	12.0	9.0	4.9
Worked Before Not After	2.0	5.5	1.3	10.3	6.8	12.1
Never Worked	3.8	73.0	3.2	66.0	4.9	70.9

The measures of cohort fertility confirm the low fertility of the respondents on the estates. The number of children ever born for the first cohort is 5.5, compared with 6.4 for the rest of the sample. A particularly striking feature of the data is the fertility of the estate group in the first decade of marriage, which is lower than the rest of the sample for all three cohorts, and a remarkable 25 percent lower for the most recent cohort. This pattern is in distinct contrast with other differentials noted in this study, which are mainly evident in later periods of marriage. A comparison across cohorts does not suggest omissions for the older cohorts of estate workers, and if correctly reported the low fertility in early marriage would suggest a distinctive pattern of fertility control and/or spacing. Also the high incidence of work after marriage of women on the estates, and the negative influence of this factor on marital fertility noted for the rest of the sample in Section 6.6, makes it tempting to conclude that participation in the labour force is an important negative influence on fertility for estate workers as well.

The fertility of estate women in the second decade since marriage is lower than other women for the first cohort, but the same as other women for the second cohort, suggesting that the fertility of the rest of the population may have declined to levels similar to those found in the estates. Certainly there is little evidence of a parallel decline for estate workers, although again the small sample size precludes even a qualitative assessment of that question.

In summary, the data in Table 7.1 confirm the characteristics of estate workers noted in earlier studies. A more detailed study is required to attempt to account for the low fertility of this group, and in particular to investigate the mechanisms involved.

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APPENDIX

TABLES: ADJUSTED MEANS FROM STEPWISE REGRESSIONS

TABLE 1.1

MEAN FERTILITY BY MARRIAGE DURATION, MARRIAGE COHORT AND ZONE

STEP= 1 VARIABLES ENTERED :
ZONE

	(A) ADJUSTED MEANS			(B) %CHANGES FROM STANDARDIZED MEAN			
MEASURE GROUP	20+	10-19	0-9	GROUP	20+	10-19	0-9
BM0-9							
ZONE1	3.588	3.375	3.646	ZONE1	-.34	.50	-.53
ZONE2	3.423	3.197	3.563	ZONE2	-4.92	-4.82	-.06
ZONE3	3.688	3.622	3.607	ZONE3	2.43	7.84	1.19
ZONE4	3.705	3.700	3.597	ZONE4	2.92	10.17	.91
ZONE5	3.897	3.220	3.674	ZONE5	8.24	-4.13	3.06
ZONE6	3.649	3.358	3.530	ZONE6	1.36	-.02	-.98
MEAN	3.608	3.362	3.569	STD.MEAN	3.60	3.36	3.56
SD	.142	.189	.048	SD	3.93	5.63	1.34
CHI-SQ (5DF)	10.6	26.2	1.3	CHI-SQ (5DF)	10.6	26.2	1.3
BM10-19							
ZONE1	1.936	1.617		ZONE1	-18.74	-17.99	
ZONE2	2.016	1.534		ZONE2	-15.33	-22.21	
ZONE3	2.760	2.324		ZONE3	15.95	17.84	
ZONE4	2.878	2.791		ZONE4	20.89	41.51	
ZONE5	2.330	2.364		ZONE5	-2.11	19.86	
ZONE6	2.561	2.049		ZONE6	7.57	3.89	
MEAN	2.395	1.972		STD.MEAN	2.38	1.97	
SD	.354	.438		SD	14.87	22.22	
CHI-SQ (5DF)	87.3	90.6		CHI-SQ (5DF)	87.3	90.6	
NCEB							
ZONE1	5.759			ZONE1	-9.23		
ZONE2	5.703			ZONE2	-10.10		
ZONE3	7.109			ZONE3	12.06		
ZONE4	7.088			ZONE4	11.72		
ZONE5	6.028			ZONE5	-4.99		
ZONE6	6.656			ZONE6	4.92		
MEAN	6.370			STD.MEAN	6.34		
SD	.588			SD	9.27		
CHI-SQ (5DF)	84.6			CHI-SQ (5DF)	84.6		

TABLE 1.2

MEAN FERTILITY BY MARRIAGE DURATION, MARRIAGE COHORT AND ZONE

STEP= 2 VARIABLES ENTERED :
ZONE YSFM

	(A) ADJUSTED MEANS			(B) %CHANGES FROM STANDARDIZED MEAN			
MEASURE GROUP	20+	10-19	0-9	GROUP	20+	10-19	0-9
BM0-9							
ZONE1	3.695	3.379	3.556	ZONE1	2.50	.62	-.22
ZONE2	3.529	3.206	3.574	ZONE2	-2.09	-4.54	.31
ZONE3	3.794	3.615	3.615	ZONE3	5.26	7.63	1.44
ZONE4	3.577	3.703	3.616	ZONE4	-.76	10.27	1.49
ZONE5	3.386	3.223	3.657	ZONE5	-6.08	-4.04	2.62
ZONE6	3.633	3.350	3.509	ZONE6	.78	-.24	-1.52
MEAN	3.608	3.362	3.569	STD.MEAN	3.60	3.36	3.56
SD	.129	.187	.048	SD	3.57	5.56	1.34
CHI-SQ (5DF)	10.7	24.9	1.7	CHI-SQ (5DF)	10.7	24.9	1.7
BM10-19							
ZONE1	1.979	1.611		ZONE1	-16.94	-18.31	
ZONE2	2.035	1.540		ZONE2	-14.58	-21.91	
ZONE3	2.768	2.323		ZONE3	16.19	17.77	
ZONE4	2.879	2.791		ZONE4	20.83	41.53	
ZONE5	2.344	2.360		ZONE5	-1.62	19.67	
ZONE6	2.532	2.046		ZONE6	6.26	3.75	
MEAN	2.395	1.972		STD.MEAN	2.38	1.97	
SD	.340	.438		SD	14.26	22.20	
CHI-SQ (5DF)	79.1	89.3		CHI-SQ (5DF)	79.1	89.3	
NCEB							
ZONE1	5.854			ZONE1	-7.78		
ZONE2	5.745			ZONE2	-9.50		
ZONE3	7.126			ZONE3	12.25		
ZONE4	7.090			ZONE4	11.68		
ZONE5	6.057			ZONE5	-4.59		
ZONE6	6.594			ZONE6	3.87		
MEAN	6.370			STD.MEAN	6.35		
SD	.560			SD	8.83		
CHI-SQ (5DF)	75.7			CHI-SQ (5DF)	75.7		

TABLE 1.3

MEAN FERTILITY BY MARRIAGE DURATION, MARRIAGE COHORT AND ZONE

STEP= 3 VARIABLES ENTERED :
ZONE YSFM AGFM

	(A) ADJUSTED MEANS			(B) %CHANGES FROM STANDARDIZED MEAN			
MEASURE GROUP	20+	10-19	0-9	GROUP	20+	10-19	0-9
BM0-9							
ZONE1	3.693	3.369	3.523	ZONE1	2.43	.32	-1.07
ZONE2	3.518	3.249	3.691	ZONE2	-2.40	-3.25	3.62
ZONE3	3.786	3.575	3.539	ZONE3	4.98	6.46	-.64
ZONE4	3.644	3.666	3.520	ZONE4	1.09	9.14	-1.17
ZONE5	3.403	3.184	3.583	ZONE5	-5.60	-5.19	.59
ZONE6	3.632	3.346	3.474	ZONE6	.75	-.35	-2.47
MEAN	3.608	3.362	3.569	STD.MEAN	3.60	3.36	3.56
SD	.123	.170	.069	SD	3.40	5.08	1.93
CHI-SQ (5DF)	10.5	17.3	4.0	CHI-SQ (5DF)	10.5	17.3	4.0
BM10-19							
ZONE1	2.116	1.676		ZONE1	-11.30	-15.01	
ZONE2	2.160	1.783		ZONE2	-9.47	-9.54	
ZONE3	2.669	2.166		ZONE3	11.88	9.87	
ZONE4	2.686	2.471		ZONE4	12.55	25.32	
ZONE5	2.262	2.233		ZONE5	-5.17	13.28	
ZONE6	2.499	1.968		ZONE6	4.73	-.20	
MEAN	2.396	1.972		STD.MEAN	2.39	1.97	
SD	.231	.271		SD	9.69	13.77	
CHI-SQ (5DF)	37.4	24.9		CHI-SQ (5DF)	37.4	24.9	
NCEB							
ZONE1	6.031			ZONE1	-5.07		
ZONE2	5.901			ZONE2	-7.10		
ZONE3	6.994			ZONE3	10.10		
ZONE4	6.869			ZONE4	8.13		
ZONE5	5.959			ZONE5	-6.20		
ZONE6	6.561			ZONE6	3.12		
MEAN	6.370			STD.MEAN	6.36		
SD	.442			SD	6.96		
CHI-SQ (5DF)	47.4			CHI-SQ (5DF)	47.4		

TABLE 1.4

MEAN FERTILITY BY MARRIAGE DURATION, MARRIAGE COHORT AND ZONE

STEP= 4 VARIABLES ENTERED :
ZONE YSFM AGFM RACE

	(A) ADJUSTED MEANS			(B) %CHANGES FROM STANDARDIZED MEAN			
MEASURE GROUP	20+	10-19	0-9	GROUP	20+	10-19	0-9
BM0-9							
ZONE1	3.702	3.356	3.489	ZONE1	2.66	-.08	-2.09
ZONE2	3.488	3.232	3.714	ZONE2	-3.28	-3.78	4.21
ZONE3	3.734	3.550	3.549	ZONE3	3.57	5.70	-.43
ZONE4	3.786	3.731	3.379	ZONE4	4.97	11.08	-5.19
ZONE5	3.702	3.384	3.469	ZONE5	2.68	.76	-2.66
ZONE6	3.589	3.320	3.515	ZONE6	-.47	-1.16	-1.37
MEAN	3.608	3.362	3.569	STD.MEAN	3.61	3.36	3.56
SD	.099	.165	.102	SD	2.76	4.92	2.85
CHI-SQ (5DF)	6.7	20.7	5.0	CHI-SQ (5DF)	6.7	20.7	5.0
BM10-19							
ZONE1	2.157	1.639		ZONE1	-9.67	-16.88	
ZONE2	2.150	1.819		ZONE2	-9.93	-7.74	
ZONE3	2.686	2.197		ZONE3	12.45	11.44	
ZONE4	2.777	2.327		ZONE4	16.30	18.01	
ZONE5	2.345	2.095		ZONE5	-1.77	6.25	
ZONE6	2.460	1.988		ZONE6	3.03	.81	
MEAN	2.396	1.972		STD.MEAN	2.39	1.97	
SD	.240	.230		SD	10.06	11.66	
CHI-SQ (5DF)	36.6	17.1		CHI-SQ (5DF)	36.6	17.1	
NCEB							
ZONE1	6.086			ZONE1	-4.25		
ZONE2	5.866			ZONE2	-7.70		
ZONE3	6.971			ZONE3	9.68		
ZONE4	7.096			ZONE4	11.65		
ZONE5	6.313			ZONE5	-.67		
ZONE6	6.466			ZONE6	1.74		
MEAN	6.370			STD.MEAN	6.36		
SD	.443			SD	6.97		
CHI-SQ (5DF)	40.8			CHI-SQ (5DF)	40.8		

TABLE 1.5

MEAN FERTILITY BY MARRIAGE DURATION, MARRIAGE COHORT AND ZONE

STEP= 5 VARIABLES ENTERED :
ZONE YSFM AGFM RACE TPRES

	(A) ADJUSTED MEANS			(B) %CHANGES FROM STANDARDIZED MEAN			
MEASURE GROUP	20+	10-19	0-9	GROUP	20+	10-19	0-9
BM0-9							
ZONE1	3.639	3.339	3.410	ZONE1	.93	-.57	-4.34
ZONE2	3.492	3.231	3.720	ZONE2	-3.13	-3.79	4.34
ZONE3	3.739	3.554	3.566	ZONE3	3.71	5.81	.03
ZONE4	3.795	3.735	3.374	ZONE4	5.27	11.22	-5.37
ZONE5	3.706	3.378	3.480	ZONE5	2.80	.56	-2.40
ZONE6	3.591	3.322	3.520	ZONE6	-.39	-1.08	-1.26
MEAN	3.608	3.362	3.569	STD.MEAN	3.61	3.36	3.56
SD	.100	.169	.113	SD	2.77	5.02	3.17
CHI-SQ (5DF)	6.4	20.9	7.1	CHI-SQ (5DF)	6.4	20.9	7.1
BM10-19							
ZONE1	2.293	1.860		ZONE1	-4.04	-6.12	
ZONE2	2.154	1.831		ZONE2	-9.87	-7.09	
ZONE3	2.667	2.149		ZONE3	11.18	9.04	
ZONE4	2.795	2.322		ZONE4	16.97	17.84	
ZONE5	2.355	2.081		ZONE5	-1.47	5.61	
ZONE6	2.442	1.956		ZONE6	2.17	-.78	
MEAN	2.395	1.972		STD.MEAN	2.39	1.97	
SD	.217	.173		SD	9.10	8.78	
CHI-SQ (5DF)	28.0	13.3		CHI-SQ (5DF)	28.0	13.3	
NCEB							
ZONE1	6.333			ZONE1	-.41		
ZONE2	5.872			ZONE2	-7.66		
ZONE3	6.921			ZONE3	8.83		
ZONE4	7.128			ZONE4	12.08		
ZONE5	6.329			ZONE5	-.48		
ZONE6	6.434			ZONE6	1.16		
MEAN	6.370			STD.MEAN	6.36		
SD	.414			SD	6.50		
CHI-SQ (5DF)	34.6			CHI-SQ (5DF)	34.6		

TABLE 1.6

MEAN FERTILITY BY MARRIAGE DURATION, MARRIAGE COHORT AND ZONE

STEP= 6 VARIABLES ENTERED :
ZONE YSFM AGFM RACE TPRES R EDUC

	(A) ADJUSTED MEANS			(B) %CHANGES FROM STANDARDIZED MEAN			
MEASURE GROUP	20+	10-19	0-9	GROUP	20+	10-19	0-9
BM0-9							
ZONE1	3.652	3.329	3.404	ZONE1	1.29	-.87	-4.52
ZONE2	3.500	3.231	3.732	ZONE2	-2.91	-3.81	4.68
ZONE3	3.734	3.548	3.559	ZONE3	3.57	5.64	-.17
ZONE4	3.783	3.735	3.365	ZONE4	4.93	11.20	-5.60
ZONE5	3.728	3.391	3.472	ZONE5	3.41	.96	-2.61
ZONE6	3.581	3.325	3.517	ZONE6	-.68	-1.00	-1.35
MEAN	3.608	3.362	3.569	STD.MEAN	3.61	3.36	3.56
SD	.098	.168	.119	SD	2.71	5.00	3.34
CHI-SQ (5DF)	5.9	20.3	7.9	CHI-SQ (5DF)	5.9	20.3	7.9
BM10-19							
ZONE1	2.328	1.871		ZONE1	-2.63	-5.06	
ZONE2	2.168	1.824		ZONE2	-9.31	-7.47	
ZONE3	2.632	2.132		ZONE3	10.12	8.20	
ZONE4	2.767	2.331		ZONE4	15.77	18.29	
ZONE5	2.414	2.149		ZONE5	1.00	9.06	
ZONE6	2.427	1.949		ZONE6	1.51	-1.14	
MEAN	2.395	1.972		STD.MEAN	2.39	1.97	
SD	.196	.178		SD	8.19	9.01	
CHI-SQ (5DF)	22.2	12.8		CHI-SQ (5DF)	22.2	12.8	
NCEB							
ZONE1	6.386			ZONE1	.39		
ZONE2	5.899			ZONE2	-7.26		
ZONE3	6.885			ZONE3	8.25		
ZONE4	7.081			ZONE4	11.33		
ZONE5	6.430			ZONE5	1.09		
ZONE6	6.403			ZONE6	.66		
MEAN	6.370			STD.MEAN	6.36		
SD	.382			SD	6.00		
CHI-SQ (5DF)	28.9			CHI-SQ (5DF)	28.9		

TABLE 1.7

MEAN FERTILITY BY MARRIAGE DURATION, MARRIAGE COHORT AND ZONE

STEP= 7 VARIABLES ENTERED :
ZONE YSFM AGFM RACE TPRES R EDUC W STAT

	(A) ADJUSTED MEANS			(B) %CHANGES FROM STANDARDIZED MEAN			
MEASURE GROUP	20+	10-19	0-9	GROUP	20+	10-19	0-9
BM0-9							
ZONE1	3.662	3.327	3.390	ZONE1	1.55	-.93	-4.92
ZONE2	3.518	3.238	3.739	ZONE2	-2.44	-3.59	4.88
ZONE3	3.720	3.539	3.559	ZONE3	3.17	5.37	-.16
ZONE4	3.754	3.705	3.337	ZONE4	4.12	10.30	-6.40
ZONE5	3.711	3.376	3.460	ZONE5	2.91	.51	-2.95
ZONE6	3.580	3.332	3.522	ZONE6	-.72	-.79	-1.22
MEAN	3.608	3.362	3.569	STD.MEAN	3.61	3.36	3.57
SD	.083	.166	.130	SD	2.31	4.65	3.65
CHI-SQ (5DF)	4.4	17.3	9.0	CHI-SQ (5DF)	4.4	17.3	9.0
BM10-19							
ZONE1	2.335	1.863		ZONE1	-2.35	-5.47	
ZONE2	2.180	1.839		ZONE2	-8.82	-6.70	
ZONE3	2.622	2.111		ZONE3	9.70	7.11	
ZONE4	2.748	2.309		ZONE4	14.96	17.18	
ZONE5	2.402	2.153		ZONE5	.48	9.26	
ZONE6	2.426	1.949		ZONE6	1.47	-1.09	
MEAN	2.396	1.972		STD.MEAN	2.39	1.97	
SD	.186	.169		SD	7.79	8.55	
CHI-SQ (5DF)	19.7	10.8		CHI-SQ (5DF)	19.7	10.8	
NCEB							
ZONE1	6.406			ZONE1	.71		
ZONE2	5.935			ZONE2	-6.69		
ZONE3	6.855			ZONE3	7.77		
ZONE4	7.021			ZONE4	10.37		
ZONE5	6.393			ZONE5	.49		
ZONE6	6.401			ZONE6	.62		
MEAN	6.370			STD.MEAN	6.36		
SD	.353			SD	5.54		
CHI-SQ (5DF)	24.5			CHI-SQ (5DF)	24.5		

TABLE 1.8

MEAN FERTILITY BY MARRIAGE DURATION, MARRIAGE COHORT AND ZONE

STEP= 8 VARIABLES ENTERED :
ZONE YSFM AGFM RACE TPRES R EDUC W STAT H EDUC

	(A) ADJUSTED MEANS			(B) %CHANGES FROM STANDARDIZED MEAN			
MEASURE GROUP	20+	10-19	0-9	GROUP	20+	10-19	0-9
BM0-9							
ZONE1	3.669	3.328	3.385	ZONE1	1.76	-.91	-5.08
ZONE2	3.519	3.232	3.723	ZONE2	-2.42	-3.76	4.41
ZONE3	3.720	3.541	3.572	ZONE3	3.16	5.43	.19
ZONE4	3.761	3.700	3.353	ZONE4	4.31	10.15	-5.97
ZONE5	3.707	3.377	3.460	ZONE5	2.80	.56	-2.95
ZONE6	3.578	3.337	3.530	ZONE6	-.78	-.64	-1.00
MEAN	3.608	3.362	3.569	STD.MEAN	3.61	3.36	3.57
SD	.086	.156	.124	SD	2.35	4.63	3.48
CHI-SQ (5DF)	4.5	17.0	7.8	CHI-SQ (5DF)	4.5	17.0	7.8
BM10-19							
ZONE1	2.324	1.875		ZONE1	-2.78	-4.89	
ZONE2	2.182	1.821		ZONE2	-8.71	-7.59	
ZONE3	2.620	2.112		ZONE3	9.62	7.13	
ZONE4	2.723	2.297		ZONE4	13.90	16.52	
ZONE5	2.390	2.150		ZONE5	.01	9.07	
ZONE6	2.433	1.967		ZONE6	1.81	-.22	
MEAN	2.395	1.972		STD.MEAN	2.39	1.97	
SD	.180	.165		SD	7.54	8.37	
CHI-SQ (5DF)	18.5	10.4		CHI-SQ (5DF)	18.5	10.4	
NCEB							
ZONE1	6.402			ZONE1	.64		
ZONE2	5.939			ZONE2	-6.63		
ZONE3	6.851			ZONE3	7.70		
ZONE4	6.994			ZONE4	9.96		
ZONE5	6.373			ZONE5	.18		
ZONE6	6.409			ZONE6	.76		
MEAN	6.370			STD.MEAN	6.36		
SD	.345			SD	5.43		
CHI-SQ (5DF)	23.6			CHI-SQ (5DF)	23.6		

TABLE 1.9

MEAN FERTILITY BY MARRIAGE DURATION, MARRIAGE COHORT AND ZONE

STEP= 9 VARIABLES ENTERED :
ZONE YSFM AGFM RACE TPRES R EDUC W STAT H EDUC HOCCUP

	(A) ADJUSTED MEANS			(B) %CHANGES FROM STANDARDIZED MEAN			
MEASURE GROUP	20+	10-19	0-9	GROUP	20+	10-19	0-9
BM0-9							
ZONE1	3.682	3.349	3.396	ZONE1	2.10	-.27	-4.74
ZONE2	3.545	3.252	3.741	ZONE2	-1.72	-3.16	4.93
ZONE3	3.686	3.608	3.540	ZONE3	2.21	4.46	-.71
ZONE4	3.751	3.695	3.367	ZONE4	4.01	10.01	-5.55
ZONE5	3.688	3.363	3.479	ZONE5	2.25	.15	-2.42
ZONE6	3.575	3.333	3.617	ZONE6	-.88	-.76	-1.34
MEAN	3.608	3.362	3.569	STD.MEAN	3.61	3.36	3.56
SD	.072	.146	.121	SD	1.98	4.33	3.41
CHI-SQ (5DF)	2.9	14.5	8.3	CHI-SQ (5DF)	2.9	14.5	8.3
BM10-19							
ZONE1	2.340	1.920		ZONE1	-2.11	-2.57	
ZONE2	2.206	1.844		ZONE2	-7.76	-6.39	
ZONE3	2.593	2.048		ZONE3	8.44	3.94	
ZONE4	2.712	2.315		ZONE4	13.42	17.50	
ZONE5	2.373	2.120		ZONE5	-.73	7.60	
ZONE6	2.429	1.967		ZONE6	1.60	-.16	
MEAN	2.396	1.972		STD.MEAN	2.39	1.97	
SD	.167	.153		SD	6.97	7.76	
CHI-SQ (5DF)	15.2	8.6		CHI-SQ (5DF)	15.2	8.6	
NCEB							
ZONE1	6.430			ZONE1	1.07		
ZONE2	6.000			ZONE2	-5.70		
ZONE3	6.777			ZONE3	6.51		
ZONE4	6.967			ZONE4	9.51		
ZONE5	6.324			ZONE5	-.60		
ZONE6	6.402			ZONE6	.63		
MEAN	6.370			STD.MEAN	6.36		
SD	.313			SD	4.92		
CHI-SQ (5DF)	14.8			CHI-SQ (5DF)	14.8		

TABLE 1.10

MEAN FERTILITY BY MARRIAGE DURATION, MARRIAGE COHORT AND ZONE

STEP= 10 VARIABLES ENTERED :
ZONE YSFM AGFM RACE TPRES R EDUC W STAT H EDUC HOCCUP ST LIV

	(A) ADJUSTED MEANS			(B) %CHANGES FROM STANDARDIZED MEAN			
MEASURE GROUP	20+	10-19	0-9	GROUP	20+	10-19	0-9
BM0-9							
ZONE1	3.686	3.387	3.426	ZONE1	2.17	.86	-3.90
ZONE2	3.546	3.262	3.747	ZONE2	-1.70	-2.86	5.11
ZONE3	3.685	3.499	3.532	ZONE3	2.18	4.18	-.92
ZONE4	3.749	3.680	3.352	ZONE4	3.96	9.59	-5.97
ZONE5	3.686	3.320	3.451	ZONE5	2.21	-1.15	-3.19
ZONE6	3.575	3.332	3.517	ZONE6	-.88	-.77	-1.32
MEAN	3.608	3.362	3.569	STD.MEAN	3.61	3.36	3.56
SD	.071	.140	.124	SD	1.97	4.16	3.47
CHI-SQ (5DF)	2.9	13.9	8.3	CHI-SQ (5DF)	2.9	13.9	8.3
BM10-19							
ZONE1	2.378	1.971		ZONE1	-.55	.04	
ZONE2	2.214	1.858		ZONE2	-7.40	-5.68	
ZONE3	2.580	2.037		ZONE3	7.91	3.42	
ZONE4	2.687	2.286		ZONE4	12.35	16.06	
ZONE5	2.361	2.064		ZONE5	-1.67	4.79	
ZONE6	2.430	1.966		ZONE6	1.61	-.21	
MEAN	2.395	1.972		STD.MEAN	2.39	1.97	
SD	.155	.132		SD	6.46	6.69	
CHI-SQ (5DF)	13.5	7.1		CHI-SQ (5DF)	13.5	7.1	
NCEB							
ZONE1	6.476			ZONE1	1.77		
ZONE2	6.010			ZONE2	-5.54		
ZONE3	6.762			ZONE3	6.27		
ZONE4	6.937			ZONE4	9.03		
ZONE5	6.298			ZONE5	-1.02		
ZONE6	6.403			ZONE6	.64		
MEAN	6.370			STD.MEAN	6.36		
SD	.302			SD	4.75		
CHI-SQ (5DF)	17.3			CHI-SQ (5DF)	17.3		

TABLE 2.1

MEAN FERTILITY BY MARRIAGE DURATION, MARRIAGE COHORT AND RACE

STEP= 1 VARIABLES ENTERED :
RACE

	(A) ADJUSTED MEANS			(B) %CHANGES FROM STANDARDIZED MEAN			
MEASURE GROUP	20+	10-19	0-9	GROUP	20+	10-19	0-9
BM0-9							
SHLA BUD	3.546	3.371	3.513	SHLA BUD	1.96	.92	-.82
SHLA CHN	3.480	3.150	3.660	SHLA CHN	.06	-5.71	3.33
TAML HDU	3.149	3.211	3.551	TAML HDU	-9.47	-3.86	.25
TAML CHN	3.512	3.513	3.887	TAML CHN	.98	5.17	9.73
MOOR	3.681	3.671	3.980	MOOR	5.82	9.92	12.37
MEAN	3.502	3.363	3.566	STD.MEAN	3.48	3.34	3.54
SD	.176	.192	.185	SD	5.07	5.75	5.21
CHI-SQ (4DF)	18.0	12.3	11.9	CHI-SQ (4DF)	18.0	12.3	11.9
BM10-19							
SHLA BUD	2.433	1.876		SHLA BUD	2.32	-5.05	
SHLA CHN	1.734	1.486		SHLA CHN	-27.05	-24.80	
TAML HDU	2.403	2.442		TAML HDU	1.07	23.61	
TAML CHN	2.190	2.156		TAML CHN	-7.90	9.13	
MOOR	2.550	2.706		MOOR	7.25	36.97	
MEAN	2.398	1.988		STD.MEAN	2.38	1.98	
SD	.288	.427		SD	12.13	21.59	
CHI-SQ (4DF)	21.2	52.7		CHI-SQ (4DF)	21.2	52.7	
NCEB							
SHLA BUD	6.453			SHLA BUD	2.02		
SHLA CHN	6.481			SHLA CHN	-13.35		
TAML HDU	6.013			TAML HDU	-4.93		
TAML CHN	6.154			TAML CHN	-2.71		
MOOR	6.876			MOOR	8.70		
MEAN	6.374			STD.MEAN	6.33		
SD	.464			SD	7.33		
CHI-SQ (4DF)	21.1			CHI-SQ (4DF)	21.1		

TABLE 2.2

MEAN FERTILITY BY MARRIAGE DURATION, MARRIAGE COHORT AND RACE

STEP= 2 VARIABLES ENTERED :
RACE YSFM

	(A) ADJUSTED MEANS			(B) %CHANGES FROM STANDARDIZED MEAN			
MEASURE GROUP	20+	10-19	0-9	GROUP	20+	10-19	0-9
BM0-9							
SHLA BUD	3.546	3.369	3.509	SHLA BUD	1.96	.87	-.94
SHLA CHN	3.479	3.150	3.708	SHLA CHN	.04	-5.69	4.69
TAML HDU	3.147	3.212	3.550	TAML HDU	-9.53	-3.84	.22
TAML CHN	3.511	3.526	3.884	TAML CHN	.94	5.57	9.65
MOOR	3.683	3.683	3.989	MOOR	5.89	10.27	12.62
MEAN	3.502	3.363	3.566	STD.MEAN	3.48	3.34	3.54
SD	.177	.197	.186	SD	5.10	5.90	5.25
CHI-SQ (4DF)	18.2	12.8	12.8	CHI-SQ (4DF)	18.2	12.8	12.8
BM10-19							
SHLA BUD	2.430	1.876		SHLA BUD	2.20	-5.07	
SHLA CHN	1.743	1.493		SHLA CHN	-26.67	-24.45	
TAML HDU	2.435	2.438		TAML HDU	2.40	23.38	
TAML CHN	2.211	2.154		TAML CHN	-7.01	9.01	
MOOR	2.512	2.715		MOOR	5.67	37.43	
MEAN	2.398	1.988		STD.MEAN	2.38	1.98	
SD	.280	.426		SD	11.78	21.57	
CHI-SQ (4DF)	19.9	52.7		CHI-SQ (4DF)	19.9	52.7	
NCEB							
SHLA BUD	6.447			SHLA BUD	1.92		
SHLA CHN	6.499			SHLA CHN	-13.06		
TAML HDU	6.077			TAML HDU	-3.92		
TAML CHN	6.197			TAML CHN	-2.03		
MOOR	6.800			MOOR	7.50		
MEAN	6.374			STD.MEAN	6.33		
SD	.431			SD	6.81		
CHI-SQ (4DF)	17.6			CHI-SQ (4DF)	17.6		

TABLE 2.3

MEAN FERTILITY BY MARRIAGE DURATION, MARRIAGE COHORT AND RACE

STEP= 3 VARIABLES ENTERED :
RACE YSFM AGFM

	(A) ADJUSTED MEANS			(B) %CHANGES FROM STANDARDIZED MEAN			
MEASURE GROUP	20+	10-19	0-9	GROUP	20+	10-19	0-9
BM0-9							
SHLA BUD	3.538	3.380	3.525	SHLA BUD	1.72	1.20	-.45
SHLA CHN	3.491	3.193	3.740	SHLA CHN	.36	-4.41	5.62
TAML HDU	3.165	3.167	3.479	TAML HDU	-9.01	-5.20	-1.75
TAML CHN	3.514	3.502	3.821	TAML CHN	1.04	4.85	7.90
MOOR	3.729	3.621	3.926	MOOR	7.22	8.42	10.86
MEAN	3.502	3.363	3.566	STD.MEAN	3.48	3.34	3.54
SD	.182	.175	.171	SD	5.24	5.25	4.83
CHI-SQ (4DF)	17.4	11.2	12.9	CHI-SQ (4DF)	17.4	11.2	12.9
BM10-19							
SHLA BUD	2.460	1.928		SHLA BUD	3.44	-2.37	
SHLA CHN	1.832	1.678		SHLA CHN	-22.97	-15.02	
TAML HDU	2.317	2.277		TAML HDU	-2.59	15.29	
TAML CHN	2.150	2.098		TAML CHN	-9.60	6.22	
MOOR	2.365	2.319		MOOR	-.55	17.42	
MEAN	2.398	1.988		STD.MEAN	2.38	1.98	
SD	.221	.236		SD	9.28	11.95	
CHI-SQ (4DF)	17.5	15.1		CHI-SQ (4DF)	17.5	15.1	
NCEB							
SHLA BUD	6.484			SHLA BUD	2.49		
SHLA CHN	5.621			SHLA CHN	-11.16		
TAML HDU	5.929			TAML HDU	-6.29		
TAML CHN	6.118			TAML CHN	-3.29		
MOOR	6.623			MOOR	4.69		
MEAN	6.374			STD.MEAN	6.33		
SD	.365			SD	5.77		
CHI-SQ (4DF)	18.0			CHI-SQ (4DF)	18.0		

TABLE 2.4

MEAN FERTILITY BY MARRIAGE DURATION, MARRIAGE COHORT AND RACE

STEP= 4 VARIABLES ENTERED :
RACE YSFM AGFM ZONE

	(A) ADJUSTED MEANS			(B) %CHANGES FROM STANDARDIZED MEAN			
MEASURE GROUP	20+	10-19	0-9	GROUP	20+	10-19	0-9
BM0-9							
SHLA BUD	3.560	3.399	3.505	SHLA BUD	2.35	1.78	-1.05
SHLA CHN	3.494	3.252	3.630	SHLA CHN	.47	-2.64	2.49
TAML HDU	3.124	3.081	3.609	TAML HDU	-10.18	-7.76	1.88
TAML CHN	3.482	3.477	3.984	TAML CHN	.11	4.12	12.47
MOOR	3.580	3.536	3.959	MOOR	2.92	5.86	11.77
MEAN	3.502	3.363	3.566	STD.MEAN	3.48	3.34	3.54
SD	.166	.164	.196	SD	4.78	4.93	5.53
CHI-SQ (4DF)	13.9	15.0	14.8	CHI-SQ (4DF)	13.9	15.0	14.8
BM10-19							
SHLA BUD	2.463	1.954		SHLA BUD	3.54	-1.08	
SHLA CHN	1.908	1.699		SHLA CHN	-19.80	-13.99	
TAML HDU	2.338	2.163		TAML HDU	-1.72	9.50	
TAML CHN	2.215	1.923		TAML CHN	-6.88	-2.65	
MOOR	2.230	2.290		MOOR	-6.24	15.97	
MEAN	2.398	1.988		STD.MEAN	2.38	1.97	
SD	.184	.205		SD	7.75	10.36	
CHI-SQ (4DF)	13.0	9.3		CHI-SQ (4DF)	13.0	9.3	
NCEB							
SHLA BUD	6.505			SHLA BUD	2.81		
SHLA CHN	5.709			SHLA CHN	-9.77		
TAML HDU	5.966			TAML HDU	-5.70		
TAML CHN	6.202			TAML CHN	-1.97		
MOOR	6.262			MOOR	-1.02		
MEAN	6.374			STD.MEAN	6.33		
SD	.271			SD	4.28		
CHI-SQ (4DF)	10.5			CHI-SQ (4DF)	10.5		

TABLE 2.5

MEAN FERTILITY BY MARRIAGE DURATION, MARRIAGE COHORT AND RACE

STEP= 5 VARIABLES ENTERED :
RACE YSFM AGFM ZONE TPRES

	(A) ADJUSTED MEANS			(B) %CHANGES FROM STANDARDIZED MEAN			
MEASURE GROUP	20+	10-19	0-9	GROUP	20+	10-19	0-9
BM0-9							
SHLA BUD	3.564	3.403	3.512	SHLA BUD	2.46	1.90	-.86
SHLA CHN	3.488	3.236	3.599	SHLA CHN	.28	-3.10	1.59
TAML HDU	3.114	3.078	3.598	TAML HDU	-10.47	-7.84	1.58
TAML CHN	3.472	3.427	3.963	TAML CHN	-.17	2.60	11.59
MOOR	3.569	3.524	3.941	MOOR	2.61	5.50	11.26
MEAN	3.502	3.363	3.566	STD.MEAN	3.48	3.34	3.54
SD	.168	.158	.188	SD	4.84	4.72	5.30
CHI-SQ (4DF)	14.3	14.3	12.7	CHI-SQ (4DF)	14.3	14.3	12.7
BM10-19							
SHLA BUD	2.460	1.943		SHLA BUD	3.40	-1.60	
SHLA CHN	1.926	1.746		SHLA CHN	-19.02	-11.57	
TAML HDU	2.338	2.176		TAML HDU	-1.71	10.21	
TAML CHN	2.248	1.976		TAML CHN	-6.51	.07	
MOOR	2.240	2.319		MOOR	-5.82	17.41	
MEAN	2.398	1.988		STD.MEAN	2.38	1.97	
SD	.177	.198		SD	7.43	10.02	
CHI-SQ (4DF)	11.5	9.3		CHI-SQ (4DF)	11.5	9.3	
NCEB							
SHLA BUD	6.498			SHLA BUD	2.71		
SHLA CHN	5.740			SHLA CHN	-9.27		
TAML HDU	5.968			TAML HDU	-5.67		
TAML CHN	6.261			TAML CHN	-1.04		
MOOR	6.281			MOOR	-.72		
MEAN	6.374			STD.MEAN	6.33		
SD	.265			SD	4.19		
CHI-SQ (4DF)	9.8			CHI-SQ (4DF)	9.8		

TABLE 2.6

MEAN FERTILITY BY MARRIAGE DURATION, MARRIAGE COHORT AND RACE

STEP= 6 VARIABLES ENTERED :
RACE YSFM AGFM ZONE TPRES R EDUC

	(A) ADJUSTED MEANS			(B) %CHANGES FROM STANDARDIZED MEAN			
MEASURE GROUP	20+	10-19	0-9	GROUP	20+	10-19	0-9
BM0-9							
SHLA BUD	3.564	3.402	3.513	SHLA BUD	2.46	1.87	-.82
SHLA CHN	3.529	3.258	3.620	SHLA CHN	1.46	-2.45	2.20
TAML HDU	3.113	3.078	3.594	TAML HDU	-10.51	-7.84	1.45
TAML CHN	3.488	3.461	3.947	TAML CHN	.28	3.64	11.42
MOOR	3.535	3.507	3.919	MOOR	1.63	5.01	10.65
MEAN	3.502	3.363	3.566	STD.MEAN	3.48	3.34	3.54
SD	.168	.156	.179	SD	4.84	4.68	5.05
CHI-SQ (4DF)	13.8	13.7	11.6	CHI-SQ (4DF)	13.8	13.7	11.6
BM10-19							
SHLA BUD	2.458	1.948		SHLA BUD	3.32	-1.36	
SHLA CHN	2.041	1.834		SHLA CHN	-14.21	-7.10	
TAML HDU	2.338	2.150		TAML HDU	-1.74	8.89	
TAML CHN	2.309	1.997		TAML CHN	-2.96	1.16	
MOOR	2.155	2.241		MOOR	-9.42	13.47	
MEAN	2.398	1.988		STD.MEAN	2.38	1.97	
SD	.146	.145		SD	6.14	7.33	
CHI-SQ (4DF)	9.8	5.1		CHI-SQ (4DF)	9.8	5.1	
NCEB							
SHLA BUD	6.498			SHLA BUD	2.69		
SHLA CHN	5.921			SHLA CHN	-6.43		
TAML HDU	5.963			TAML HDU	-5.76		
TAML CHN	6.342			TAML CHN	.23		
MOOR	6.142			MOOR	-2.94		
MEAN	6.374			STD.MEAN	6.33		
SD	.220			SD	3.48		
CHI-SQ (4DF)	8.1			CHI-SQ (4DF)	8.1		

TABLE 2.7

MEAN FERTILITY BY MARRIAGE DURATION, MARRIAGE COHORT AND RACE

STEP= 7 VARIABLES ENTERED :
RACE YSFM AGFM ZONE TPRES R EDUC W STAT

	(A) ADJUSTED MEANS			(B) %CHANGES FROM STANDARDIZED MEAN			
MEASURE GROUP	20+	10-19	0-9	GROUP	20+	10-19	0-9
BM0-9							
SHLA BUD	3.563	3.400	3.510	SHLA BUD	2.43	1.80	-.92
SHLA CHN	3.530	3.267	3.608	SHLA CHN	1.49	-2.17	1.86
TAML HDU	3.124	3.089	3.610	TAML HDU	-10.18	-7.50	1.91
TAML CHN	3.501	3.473	3.961	TAML CHN	.66	4.00	11.82
MOOR	3.520	3.601	3.935	MOOR	1.21	4.82	11.09
MEAN	3.502	3.363	3.566	STD.MEAN	3.48	3.34	3.54
SD	.163	.162	.186	SD	4.69	4.54	5.25
CHI-SQ (4DF)	12.9	12.7	12.3	CHI-SQ (4DF)	12.9	12.7	12.3
BM10-19							
SHLA BUD	2.458	1.954		SHLA BUD	3.29	-1.06	
SHLA CHN	2.044	1.807		SHLA CHN	-14.08	-8.47	
TAML HDU	2.345	2.146		TAML HDU	-1.43	8.66	
TAML CHN	2.318	1.984		TAML CHN	-2.60	.46	
MOOR	2.145	2.214		MOOR	-9.84	12.10	
MEAN	2.398	1.988		STD.MEAN	2.38	1.97	
SD	.148	.144		SD	6.22	7.31	
CHI-SQ (4DF)	10.0	4.7		CHI-SQ (4DF)	10.0	4.7	
NCEB							
SHLA BUD	6.496			SHLA BUD	2.66		
SHLA CHN	5.923			SHLA CHN	-6.39		
TAML HDU	5.988			TAML HDU	-5.37		
TAML CHN	6.370			TAML CHN	.67		
MOOR	6.111			MOOR	-3.42		
MEAN	6.374			STD.MEAN	6.33		
SD	.221			SD	3.49		
CHI-SQ (4DF)	8.1			CHI-SQ (4DF)	8.1		

TABLE 2.8

MEAN FERTILITY BY MARRIAGE DURATION, MARRIAGE COHORT AND RACE

STEP= 8 VARIABLES ENTERED :
RACE YSFM AGFM ZONE TPRES R EDUC W STAT H EDUC

	(A) ADJUSTED MEANS			(B) %CHANGES FROM STANDARDIZED MEAN			
MEASURE GROUP	20+	10-19	0-9	GROUP	20+	10-19	0-9
BM0-9							
SHLA BUD	3.563	3.396	3.506	SHLA BUD	2.42	1.70	-1.02
SHLA CHN	3.532	3.277	3.607	SHLA CHN	1.55	-1.88	1.82
TAML HDU	3.128	3.098	3.626	TAML HDU	-10.07	-7.23	2.35
TAML CHN	3.498	3.481	3.975	TAML CHN	.58	4.24	12.22
MOOR	3.516	3.512	3.940	MOOR	1.09	5.15	11.23
MEAN	3.502	3.363	3.566	STD.MEAN	3.48	3.34	3.54
SD	.161	.151	.190	SD	4.63	4.53	5.36
CHI-SQ (4DF)	12.4	12.4	12.4	CHI-SQ (4DF)	12.4	12.4	12.4
BM10-19							
SHLA BUD	2.448	1.944		SHLA BUD	2.92	-1.56	
SHLA CHN	2.016	1.817		SHLA CHN	-15.27	-7.97	
TAML HDU	2.392	2.185		TAML HDU	.53	10.63	
TAML CHN	2.373	2.004		TAML CHN	-.25	1.47	
MOOR	2.161	2.233		MOOR	-9.17	13.10	
MEAN	2.398	1.988		STD.MEAN	2.38	1.97	
SD	.163	.154		SD	6.87	7.79	
CHI-SQ (4DF)	10.1	5.7		CHI-SQ (4DF)	10.1	5.7	
NCEB							
SHLA BUD	6.485			SHLA BUD	2.49		
SHLA CHN	5.893			SHLA CHN	-6.87		
TAML HDU	6.046			TAML HDU	-4.45		
TAML CHN	6.432			TAML CHN	1.66		
MOOR	6.127			MOOR	-3.17		
MEAN	6.374			STD.MEAN	6.33		
SD	.227			SD	3.59		
CHI-SQ (4DF)	7.3			CHI-SQ (4DF)	7.3		

TABLE 2.9

MEAN FERTILITY BY MARRIAGE DURATION, MARRIAGE COHORT AND RACE

STEP= 9 VARIABLES ENTERED :
RACE YSFM AGFM ZONE TPRES R EDUC W STAT H EDUC HOCCUP

	(A) ADJUSTED MEANS			(B) %CHANGES FROM STANDARDIZED MEAN			
MEASURE GROUP	20+	10-19	0-9	GROUP	20+	10-19	0-9
BM0-9							
SHLA BUD	3.556	3.395	3.504	SHLA BUD	2.23	1.65	-1.08
SHLA CHN	3.515	3.290	3.609	SHLA CHN	1.07	-1.49	1.88
TAML HDU	3.150	3.097	3.628	TAML HDU	-9.44	-7.28	2.42
TAML CHN	3.510	3.494	4.006	TAML CHN	.90	4.62	13.08
MOOR	3.555	3.515	3.947	MOOR	2.22	5.25	11.42
MEAN	3.502	3.363	3.566	STD.MEAN	3.48	3.34	3.54
SD	.155	.153	.199	SD	4.45	4.59	5.63
CHI-SQ (4DF)	11.7	12.5	13.0	CHI-SQ (4DF)	11.7	12.5	13.0
BM10-19							
SHLA BUD	2.444	1.930		SHLA BUD	2.72	-2.26	
SHLA CHN	1.989	1.844		SHLA CHN	-16.39	-6.59	
TAML HDU	2.407	2.214		TAML HDU	1.20	12.11	
TAML CHN	2.381	2.044		TAML CHN	.11	3.53	
MOOR	2.199	2.292		MOOR	-7.58	16.07	
MEAN	2.398	1.988		STD.MEAN	2.38	1.97	
SD	.170	.168		SD	7.15	8.50	
CHI-SQ (4DF)	9.6	7.3		CHI-SQ (4DF)	9.6	7.3	
NCEB							
SHLA BUD	6.470			SHLA BUD	2.26		
SHLA CHN	5.841			SHLA CHN	-7.69		
TAML HDU	6.091			TAML HDU	-3.73		
TAML CHN	6.457			TAML CHN	2.05		
MOOR	6.228			MOOR	-1.57		
MEAN	6.374			STD.MEAN	6.33		
SD	.236			SD	3.73		
CHI-SQ (4DF)	6.6			CHI-SQ (4DF)	6.6		

TABLE 2.10

MEAN FERTILITY BY MARRIAGE DURATION, MARRIAGE COHORT AND RACE

STEP= 10 VARIABLES ENTERED :
RACE YSFM AGFM ZONE TPRES R EDUC W STAT H EDUC HOCCUP ST LIV

	(A) ADJUSTED MEANS			(B) %CHANGES FROM STANDARDIZED MEAN			
MEASURE GROUP	20+	10-19	0-9	GROUP	20+	10-19	0-9
BM0-9							
SHLA BUD	3.556	3.394	3.503	SHLA BUD	2.23	1.63	-1.12
SHLA CHN	3.513	3.274	3.589	SHLA CHN	1.00	-1.97	1.31
TAML HDU	3.149	3.093	3.630	TAML HDU	-9.46	-7.40	2.47
TAML CHN	3.509	3.521	4.012	TAML CHN	.88	5.42	13.24
MOOR	3.557	3.535	3.973	MOOR	2.28	5.85	12.16
MEAN	3.502	3.363	3.566	STD.MEAN	3.48	3.34	3.54
SD	.155	.165	.209	SD	4.46	4.95	5.91
CHI-SQ (4DF)	11.7	14.0	14.2	CHI-SQ (4DF)	11.7	14.0	14.2
BM10-19							
SHLA BUD	2.446	1.933		SHLA BUD	2.81	-2.13	
SHLA CHN	1.960	1.810		SHLA CHN	-17.61	-8.32	
TAML HDU	2.399	2.201		TAML HDU	.85	11.45	
TAML CHN	2.372	2.083		TAML CHN	-.30	5.46	
MOOR	2.216	2.304		MOOR	-6.82	16.68	
MEAN	2.398	1.988		STD.MEAN	2.38	1.97	
SD	.177	.178		SD	7.44	9.01	
CHI-SQ (4DF)	10.0	7.5		CHI-SQ (4DF)	10.0	7.5	
NCEB							
SHLA BUD	6.472			SHLA BUD	2.30		
SHLA CHN	5.806			SHLA CHN	-8.23		
TAML HDU	6.081			TAML HDU	-3.89		
TAML CHN	6.445			TAML CHN	1.87		
MOOR	6.249			MOOR	-1.23		
MEAN	6.374			STD.MEAN	6.33		
SD	.247			SD	3.91		
CHI-SQ (4DF)	7.0			CHI-SQ (4DF)	7.0		

TABLE 3.1

MEAN FERTILITY BY MARRIAGE DURATION, MARRIAGE COHORT AND TPRES

STEP= 1 VARIABLES ENTERED .
TPRES

	(A) ADJUSTED MEANS			(B) %CHANGES FROM STANDARDIZED MEAN			
MEASURE GROUP	20+	10-19	0-9	GROUP	20+	10-19	0-9
BM0-9							
RURAL	3.497	3.377	3.531	RURAL	-.10	.73	-.80
RUR MIG	3.406	3.189	3.616	RUR MIG	-2.68	-4.88	1.57
URB MIG	3.583	3.363	3.719	URB MIG	2.37	.33	4.49
URBAN	3.586	3.338	3.666	URBAN	2.45	-.42	3.00
MEAN	3.502	3.354	3.566	STD.MEAN	3.50	3.35	3.56
SD	.074	.075	.069	SD	2.11	2.24	1.95
CHI-SQ (3DF)	1.6	3.2	2.6	CHI-SQ (3DF)	1.6	3.2	2.6
BM10-19							
RURAL	2.495	2.069		RURAL	4.77	4.25	
RUR MIG	1.915	1.519		RUR MIG	-19.59	-23.45	
URB MIG	2.202	1.877		URB MIG	-7.53	-5.43	
URBAN	2.089	1.844		URBAN	-12.29	-7.09	
MEAN	2.398	1.982		STD.MEAN	2.38	1.98	
SD	.211	.198		SD	8.86	9.95	
CHI-SQ (3DF)	40.0	18.1		CHI-SQ (3DF)	40.0	18.1	
NCEB							
RURAL	6.513			RURAL	2.59		
RUR MIG	5.584			RUR MIG	-12.03		
URB MIG	6.298			URB MIG	-.79		
URBAN	5.927			URBAN	-6.63		
MEAN	6.374			STD.MEAN	6.35		
SD	.355			SD	5.59		
CHI-SQ (3DF)	22.5			CHI-SQ (3DF)	22.5		

TABLE 3.2

MEAN FERTILITY BY MARRIAGE DURATION, MARRIAGE COHORT AND TPRES

STEP= 2 VARIABLES ENTERED .
TPRES YSFM

	(A) ADJUSTED MEANS			(B) %CHANGES FROM STANDARDIZED MEAN			
MEASURE GROUP	20+	10-19	0-9	GROUP	20+	10-19	0-9
BM0-9							
RURAL	3.497	3.365	3.529	RURAL	-.09	.39	-.86
RUR MIG	3.405	3.175	3.636	RUR MIG	-2.72	-5.28	2.15
URB MIG	3.582	3.379	3.654	URB MIG	2.34	.79	2.67
URBAN	3.585	3.414	3.690	URBAN	2.43	1.86	3.68
MEAN	3.502	3.354	3.566	STD.MEAN	3.50	3.35	3.56
SD	.074	.093	.060	SD	2.11	2.78	1.69
CHI-SQ (3DF)	1.6	3.4	2.8	CHI-SQ (3DF)	1.6	3.4	2.8
BM10-19							
RURAL	2.486	2.067		RURAL	4.35	4.15	
RUR MIG	1.952	1.519		RUR MIG	-18.09	-23.47	
URB MIG	2.233	1.897		URB MIG	-6.27	-4.43	
URBAN	2.114	1.850		URBAN	-11.26	-6.80	
MEAN	2.398	1.982		STD.MEAN	2.38	1.98	
SD	.195	.199		SD	8.18	10.01	
CHI-SQ (3DF)	25.9	17.8		CHI-SQ (3DF)	25.9	17.8	
NCEB							
RURAL	6.495			RURAL	2.27		
RUR MIG	5.661			RUR MIG	-10.86		
URB MIG	6.363			URB MIG	.19		
URBAN	5.981			URBAN	-5.82		
MEAN	6.374			STD.MEAN	6.35		
SD	.328			SD	5.16		
CHI-SQ (3DF)	17.8			CHI-SQ (3DF)	17.8		

TABLE 3.3

MEAN FERTILITY BY MARRIAGE DURATION, MARRIAGE COHORT AND TPRES

STEP= 3 VARIABLES ENTERED :
TPRES YSFM AGFM

	(A) ADJUSTED MEANS			(B) %CHANGES FROM STANDARDIZED MEAN			
MEASURE GROUP	20+	10-19	0-9	GROUP	20+	10-19	0-9
BM0-9							
RURAL	3.498	3.363	3.518	RURAL	-.07	.33	-1.19
RUR MIG	3.404	3.194	3.758	RUR MIG	-2.75	-4.72	5.56
URB MIG	3.558	3.439	3.709	URB MIG	1.66	2.59	4.17
URBAN	3.591	3.389	3.668	URBAN	2.61	1.12	2.75
MEAN	3.502	3.354	3.566	STD.MEAN	3.50	3.35	3.56
SD	.071	.092	.090	SD	2.04	2.75	2.52
CHI-SQ (3DF)	1.6	2.9	4.9	CHI-SQ (3DF)	1.6	2.9	4.9
BM10-19							
RURAL	2.465	2.052		RURAL	3.30	3.42	
RUR MIG	2.043	1.592		RUR MIG	-14.37	-19.78	
URB MIG	2.370	2.016		URB MIG	-.65	1.60	
URBAN	2.160	1.840		URBAN	-9.47	-7.26	
MEAN	2.398	1.982		STD.MEAN	2.39	1.98	
SD	.167	.182		SD	6.99	9.18	
CHI-SQ (3DF)	15.8	12.9		CHI-SQ (3DF)	15.8	12.9	
NCEB							
RURAL	6.467			RURAL	1.76		
RUR MIG	5.780			RUR MIG	-9.04		
URB MIG	6.534			URB MIG	2.82		
URBAN	6.043			URBAN	-4.91		
MEAN	6.374			STD.MEAN	6.35		
SD	.309			SD	4.87		
CHI-SQ (3DF)	12.3			CHI-SQ (3DF)	12.3		

TABLE 3.4

MEAN FERTILITY BY MARRIAGE DURATION, MARRIAGE COHORT AND TPRES

STEP= 4 VARIABLES ENTERED :
TPRES YSFM AGFM ZONE

	(A) ADJUSTED MEANS			(B) %CHANGES FROM STANDARDIZED MEAN			
MEASURE GROUP	20+	10-19	0-9	GROUP	20+	10-19	0-9
BM0-9							
RURAL	3.494	3.337	3.508	RURAL	-.17	-.43	-1.43
RUR MIG	3.434	3.219	3.699	RUR MIG	-1.88	-3.95	3.95
URB MIG	3.514	3.681	3.814	URB MIG	.39	9.84	7.19
URBAN	3.610	3.435	3.709	URBAN	3.14	2.49	4.22
MEAN	3.502	3.354	3.566	STD.MEAN	3.50	3.35	3.56
SD	.063	.170	.111	SD	1.81	5.07	3.11
CHI-SQ (3DF)	1.7	7.9	6.0	CHI-SQ (3DF)	1.7	7.9	6.0
BM10-19							
RURAL	2.447	2.047		RURAL	2.44	3.25	
RUR MIG	2.057	1.727		RUR MIG	-13.92	-12.89	
URB MIG	2.404	1.923		URB MIG	.60	-3.01	
URBAN	2.274	1.798		URBAN	-4.84	-9.30	
MEAN	2.398	1.982		STD.MEAN	2.39	1.98	
SD	.152	.122		SD	6.36	6.16	
CHI-SQ (3DF)	12.5	6.4		CHI-SQ (3DF)	12.5	6.4	
NCEB							
RURAL	6.454			RURAL	1.52		
RUR MIG	5.803			RUR MIG	-8.72		
URB MIG	6.442			URB MIG	1.33		
URBAN	6.163			URBAN	-3.06		
MEAN	6.374			STD.MEAN	6.36		
SD	.265			SD	4.17		
CHI-SQ (3DF)	7.7			CHI-SQ (3DF)	7.7		

TABLE 3.5

MEAN FERTILITY BY MARRIAGE DURATION, MARRIAGE COHORT AND TPRES

STEP= 5 VARIABLES ENTERED :
TPRES YSFM AGFM ZONE RACE

	(A) ADJUSTED MEANS			(B) %CHANGES FROM STANDARDIZED MEAN			
MEASURE GROUP	20+	10-19	0-9	GROUP	20+	10-19	0-9
BM0-9							
RURAL	3.495	3.338	3.523	RURAL	-.17	-.39	-1.05
RUR MIG	3.425	3.224	3.676	RUR MIG	-2.15	-3.79	3.24
URB MIG	3.499	3.674	3.811	URB MIG	-.04	9.64	7.06
URBAN	3.622	3.426	3.643	URBAN	3.48	2.23	2.33
MEAN	3.502	3.354	3.566	STD.MEAN	3.50	3.35	3.56
SD	.071	.166	.103	SD	2.03	4.94	2.89
CHI-SQ (3DF)	2.0	7.2	4.0	CHI-SQ (3DF)	2.0	7.2	4.0
BM10-19							
RURAL	2.437	2.048		RURAL	1.90	3.31	
RUR MIG	2.082	1.738		RUR MIG	-12.94	-12.33	
URB MIG	2.460	1.960		URB MIG	2.46	-1.13	
URBAN	2.322	1.768		URBAN	-2.90	-10.83	
MEAN	2.398	1.982		STD.MEAN	2.39	1.98	
SD	.148	.130		SD	6.18	6.55	
CHI-SQ (3DF)	7.2	6.3		CHI-SQ (3DF)	7.2	6.3	
NCEB							
RURAL	6.442			RURAL	1.29		
RUR MIG	5.822			RUR MIG	-8.45		
URB MIG	6.489			URB MIG	2.04		
URBAN	6.227			URBAN	-2.08		
MEAN	6.374			STD.MEAN	6.36		
SD	.263			SD	4.14		
CHI-SQ (3DF)	7.0			CHI-SQ (3DF)	7.0		

TABLE 3.6

MEAN FERTILITY BY MARRIAGE DURATION, MARRIAGE COHORT AND TPRES

STEP= 6 VARIABLES ENTERED :
TPRES YSFM AGFM ZONE RACE R EDUC

	(A) ADJUSTED MEANS			(B) %CHANGES FROM STANDARDIZED MEAN			
MEASURE GROUP	20+	10-19	0-9	GROUP	20+	10-19	0-9
BM0-9							
RURAL	3.493	3.333	3.518	RURAL	-.21	-.55	-1.16
RUR MIG	3.421	3.241	3.676	RUR MIG	-2.29	-3.27	3.26
URB MIG	3.496	3.675	3.817	URB MIG	-.14	9.68	7.24
URBAN	3.637	3.446	3.665	URBAN	3.89	2.84	2.95
MEAN	3.502	3.354	3.566	STD.MEAN	3.50	3.35	3.56
SD	.078	.162	.106	SD	2.24	4.84	2.97
CHI-SQ (3DF)	2.5	7.2	4.5	CHI-SQ (3DF)	2.5	7.2	4.5
BM10-19							
RURAL	2.424	2.033		RURAL	1.30	2.56	
RUR MIG	2.117	1.749		RUR MIG	-11.54	-11.80	
URB MIG	2.475	2.020		URB MIG	3.41	1.92	
URBAN	2.383	1.830		URBAN	-.43	-7.70	
MEAN	2.398	1.982		STD.MEAN	2.39	1.98	
SD	.138	.122		SD	5.78	6.17	
CHI-SQ (3DF)	5.8	4.7		CHI-SQ (3DF)	5.8	4.7	
NCEB							
RURAL	6.426			RURAL	.99		
RUR MIG	5.860			RUR MIG	-7.90		
URB MIG	6.521			URB MIG	2.49		
URBAN	6.315			URBAN	-.75		
MEAN	6.374			STD.MEAN	6.36		
SD	.254			SD	3.98		
CHI-SQ (3DF)	6.2			CHI-SQ (3DF)	6.2		

TABLE 3.7

MEAN FERTILITY BY MARRIAGE DURATION, MARRIAGE COHORT AND TPRES

STEP= 7 VARIABLES ENTERED :
TPRES YSFM AGFM ZONE RACE R EDUC W STAT

	(A) ADJUSTED MEANS			(B) %CHANGES FROM STANDARDIZED MEAN			
MEASURE GROUP	20+	10-19	0-9	GROUP	20+	10-19	0-9
BM0-9							
RURAL	3.494	3.333	3.519	RURAL	-.19	-.52	-1.13
RUR MIG	3.414	3.244	3.665	RUR MIG	-2.47	-3.20	2.96
URB MIG	3.500	3.680	3.810	URB MIG	-.03	9.81	7.05
URBAN	3.634	3.437	3.668	URBAN	3.82	2.56	3.06
MEAN	3.502	3.354	3.566	STD.MEAN	3.50	3.35	3.56
SD	.079	.163	.103	SD	2.26	4.86	2.89
CHI-SQ (3DF)	2.5	7.0	4.2	CHI-SQ (3DF)	2.5	7.0	4.2
BM10-19							
RURAL	2.425	2.032		RURAL	1.32	2.53	
RUR MIG	2.113	1.757		RUR MIG	-11.69	-11.38	
URB MIG	2.477	2.058		URB MIG	3.53	3.81	
URBAN	2.381	1.813		URBAN	-.50	-8.54	
MEAN	2.398	1.982		STD.MEAN	2.39	1.98	
SD	.140	.132		SD	5.86	6.65	
CHI-SQ (3DF)	6.0	4.8		CHI-SQ (3DF)	6.0	4.8	
NCEB							
RURAL	6.427			RURAL	1.02		
RUR MIG	5.846			RUR MIG	-8.11		
URB MIG	6.530			URB MIG	2.63		
URBAN	6.310			URBAN	-.83		
MEAN	6.374			STD.MEAN	6.36		
SD	.261			SD	4.11		
CHI-SQ (3DF)	6.5			CHI-SQ (3DF)	6.5		

TABLE 3.8

MEAN FERTILITY BY MARRIAGE DURATION, MARRIAGE COHORT AND TPRES

STEP= 8 VARIABLES ENTERED :
TPRES YSFM AGFM ZONE RACE R EDUC W STAT H EDUC

	(A) ADJUSTED MEANS			(B) %CHANGES FROM STANDARDIZED MEAN			
MEASURE GROUP	20+	10-19	0-9	GROUP	20+	10-19	0-9
BM0-9							
RURAL	3.494	3.332	3.515	RURAL	-.19	-.57	-1.23
RUR MIG	3.412	3.249	3.676	RUR MIG	-2.52	-3.05	3.27
URB MIG	3.512	3.684	3.833	URB MIG	.33	9.95	7.70
URBAN	3.631	3.440	3.674	URBAN	3.72	2.67	3.24
MEAN	3.502	3.354	3.566	STD.MEAN	3.50	3.35	3.56
SD	.078	.164	.112	SD	2.23	4.88	3.16
CHI-SQ (3DF)	2.5	7.1	4.9	CHI-SQ (3DF)	2.5	7.1	4.9
BM10-19							
RURAL	2.417	2.035		RURAL	.93	2.66	
RUR MIG	2.134	1.749		RUR MIG	-10.89	-11.79	
URB MIG	2.501	2.059		URB MIG	4.47	3.87	
URBAN	2.418	1.802		URBAN	1.00	-9.11	
MEAN	2.398	1.982		STD.MEAN	2.39	1.98	
SD	.139	.137		SD	5.82	6.94	
CHI-SQ (3DF)	5.6	5.1		CHI-SQ (3DF)	5.6	5.1	
NCEB							
RURAL	6.417			RURAL	.84		
RUR MIG	5.870			RUR MIG	-7.76		
URB MIG	6.571			URB MIG	3.26		
URBAN	6.362			URBAN	-.19		
MEAN	6.374			STD.MEAN	6.36		
SD	.262			SD	4.12		
CHI-SQ (3DF)	6.1			CHI-SQ (3DF)	6.1		

TABLE 3.9

MEAN FERTILITY BY MARRIAGE DURATION, MARRIAGE COHORT AND TPRES

STEP= 9 VARIABLES ENTERED :
TPRES YSFM AGFM ZONE RACE R EDUC W STAT H EDUC HOCCUP

	(A) ADJUSTED MEANS			(B) %CHANGES FROM STANDARDIZED MEAN			
MEASURE GROUP	20+	10-19	0-9	GROUP	20+	10-19	0-9
BM0-9							
RURAL	3.485	3.323	3.514	RURAL	-.49	-.83	-1.28
RUR MIG	3.444	3.281	3.690	RUR MIG	-1.67	-2.09	3.68
URB MIG	3.540	3.690	3.836	URB MIG	1.08	10.13	7.78
URBAN	3.668	3.470	3.674	URBAN	4.73	3.56	3.24
MEAN	3.502	3.354	3.566	STD.MEAN	3.60	3.35	3.56
SD	.084	.160	.114	SD	2.41	4.78	3.21
CHI-SQ (3DF)	2.9	7.3	5.1	CHI-SQ (3DF)	2.9	7.3	5.1
BM10-19							
RURAL	2.406	2.031		RURAL	.40	2.44	
RUR MIG	2.169	1.775		RUR MIG	-9.48	-10.45	
URB MIG	2.533	2.041		URB MIG	5.71	2.99	
URBAN	2.466	1.817		URBAN	2.87	-8.33	
MEAN	2.398	1.982		STD.MEAN	2.40	1.98	
SD	.137	.121		SD	5.72	6.10	
CHI-SQ (3DF)	5.2	4.0		CHI-SQ (3DF)	5.2	4.0	
NCEB							
RURAL	6.392			RURAL	.37		
RUR MIG	5.958			RUR MIG	-6.44		
URB MIG	6.651			URB MIG	4.44		
URBAN	6.456			URBAN	1.37		
MEAN	6.374			STD.MEAN	6.37		
SD	.253			SD	3.97		
CHI-SQ (3DF)	5.2			CHI-SQ (3DF)	5.2		

TABLE 3.10

MEAN FERTILITY BY MARRIAGE DURATION, MARRIAGE COHORT AND TPRES

STEP= 10 VARIABLES ENTERED :
TPRES YSFM AGFM ZONE RACE R EDUC W STAT H EDUC HOCCUP ST LIV

	(A) ADJUSTED MEANS			(B) %CHANGES FROM STANDARDIZED MEAN			
MEASURE GROUP	20+	10-19	0-9	GROUP	20+	10-19	0-9
BM0-9							
RURAL	3.485	3.322	3.507	RURAL	-.50	-.87	-1.46
RUR MIG	3.445	3.217	3.704	RUR MIG	-1.63	-4.00	4.09
URB MIG	3.541	3.728	3.863	URB MIG	1.11	11.25	8.28
URBAN	3.669	3.511	3.697	URBAN	4.76	4.77	3.88
MEAN	3.502	3.354	3.566	STD.MEAN	3.50	3.35	3.56
SD	.085	.195	.123	SD	2.41	5.81	3.46
CHI-SQ (3DF)	2.9	8.8	6.1	CHI-SQ (3DF)	2.9	8.8	6.1
BM10-19							
RURAL	2.401	2.015		RURAL	.18	1.66	
RUR MIG	2.189	1.811		RUR MIG	-8.67	-8.62	
URB MIG	2.544	2.090		URB MIG	6.16	5.48	
URBAN	2.481	1.869		URBAN	3.49	-5.66	
MEAN	2.398	1.982		STD.MEAN	2.40	1.98	
SD	.134	.111		SD	5.59	5.62	
CHI-SQ (3DF)	4.9	2.6		CHI-SQ (3DF)	4.9	2.6	
NCEB							
RURAL	6.386			RURAL	.27		
RUR MIG	5.982			RUR MIG	-6.08		
URB MIG	6.664			URB MIG	4.63		
URBAN	6.474			URBAN	1.65		
MEAN	6.374			STD.MEAN	6.37		
SD	.249			SD	3.91		
CHI-SQ (3DF)	5.0			CHI-SQ (3DF)	5.0		

TABLE 4.1

MEAN FERTILITY BY MARRIAGE DURATION, MARRIAGE COHORT AND R EDUC

STEP= 1 VARIABLES ENTERED :
R EDUC

	(A) ADJUSTED MEANS			(B) %CHANGES FROM STANDARDIZED MEAN			
MEASURE GROUP	20+	10-19	0-9	GROUP	20+	10-19	0-9
BM0-9							
NO SCH	3.585	3.457	3.720	NO SCH	3.25	2.88	4.11
PRIMARY	3.455	3.427	3.531	PRIMARY	-.48	1.99	-1.17
SECOND	3.477	3.359	3.551	SECOND	.16	-.04	-.62
HIGH	3.591	3.265	3.685	HIGH	3.44	-2.85	3.12
UNIV	2.837	2.582	3.233	UNIV	-18.28	-23.17	-9.51
MEAN	3.502	3.363	3.566	STD.MEAN	3.47	3.36	3.57
SD	.281	.325	.172	SD	8.10	9.67	4.81
CHI-SQ (4DF)	6.3	30.4	8.6	CHI-SQ (4DF)	6.3	30.4	8.6
BM10-19							
NO SCH	2.722	2.470		NO SCH	24.57	26.24	
PRIMARY	2.404	2.171		PRIMARY	10.04	11.00	
SECOND	1.948	1.648		SECOND	-10.84	-15.74	
HIGH	1.491	1.362		HIGH	-31.78	-30.40	
UNIV	.918	1.060		UNIV	-57.97	-45.81	
MEAN	2.398	1.966		STD.MEAN	2.18	1.96	
SD	.642	.516		SD	29.40	26.39	
CHI-SQ (4DF)	90.6	94.1		CHI-SQ (4DF)	90.6	94.1	
NCEB							
NO SCH	6.922			NO SCH	14.33		
PRIMARY	6.326			PRIMARY	4.50		
SECOND	5.709			SECOND	-5.70		
HIGH	5.266			HIGH	-13.02		
UNIV	3.756			UNIV	-37.96		
MEAN	6.374			STD.MEAN	6.05		
SD	1.077			SD	17.79		
CHI-SQ (4DF)	69.5			CHI-SQ (4DF)	69.5		

TABLE 4.2

MEAN FERTILITY BY MARRIAGE DURATION, MARRIAGE COHORT AND R EDUC

STEP= 2 VARIABLES ENTERED :
R EDUC YSFM

	(A) ADJUSTED MEANS			(B) %CHANGES FROM STANDARDIZED MEAN			
MEASURE GROUP	20+	10-19	0-9	GROUP	20+	10-19	0-9
BM0-9							
NO SCH	3.587	3.446	3.794	NO SCH	3.38	2.54	5.80
PRIMARY	3.455	3.424	3.561	PRIMARY	-.43	1.90	-.71
SECOND	3.474	3.362	3.521	SECOND	.10	.04	-1.81
HIGH	3.583	3.285	3.641	HIGH	3.25	-2.25	1.54
UNIV	2.826	2.596	3.229	UNIV	-18.55	-22.74	-9.97
MEAN	3.502	3.363	3.566	STD.MEAN	3.47	3.36	3.59
SD	.285	.318	.186	SD	8.20	9.47	5.17
CHI-SQ (4DF)	6.4	28.6	9.9	CHI-SQ (4DF)	6.4	28.6	9.9
BM10-19							
NO SCH	2.688	2.456		NO SCH	21.80	25.54	
PRIMARY	2.402	2.170		PRIMARY	8.84	10.95	
SECOND	1.997	1.652		SECOND	-9.54	-15.53	
HIGH	1.594	1.374		HIGH	-27.79	-29.77	
UNIV	1.059	1.074		UNIV	-52.02	-45.12	
MEAN	2.398	1.966		STD.MEAN	2.21	1.96	
SD	.578	.507		SD	26.20	25.90	
CHI-SQ (4DF)	70.5	90.3		CHI-SQ (4DF)	70.5	90.3	
NCEB							
NO SCH	6.849			NO SCH	12.22		
PRIMARY	6.322			PRIMARY	3.59		
SECOND	5.815			SECOND	-4.72		
HIGH	5.492			HIGH	-10.01		
UNIV	4.064			UNIV	-33.41		
MEAN	6.374			STD.MEAN	6.10		
SD	.942			SD	15.44		
CHI-SQ (4DF)	49.5			CHI-SQ (4DF)	49.5		

TABLE 4.3

MEAN FERTILITY BY MARRIAGE DURATION, MARRIAGE COHORT AND R EDUC

STEP= 3 VARIABLES ENTERED :
R EDUC YSFM AGFM

	(A) ADJUSTED MEANS			(B) %CHANGES FROM STANDARDIZED MEAN			
MEASURE GROUP	20+	10-19	0-9	GROUP	20+	10-19	0-9
BM0-9							
NO SCH	3.613	3.420	3.745	NO SCH	4.13	1.75	4.81
PRIMARY	3.440	3.395	3.522	PRIMARY	-.86	1.01	-1.44
SECOND	3.454	3.341	3.519	SECOND	-.45	-.61	-1.51
HIGH	3.611	3.353	3.663	HIGH	4.06	-.25	2.52
UNIV	2.904	2.991	3.479	UNIV	-16.30	-11.03	-2.62
MEAN	3.502	3.363	3.566	STD.MEAN	3.47	3.36	3.57
SD	.261	.157	.101	SD	7.52	4.68	2.83
CHI-SQ (4DF)	8.1	6.2	6.8	CHI-SQ (4DF)	8.1	6.2	6.8
BM10-19							
NO SCH	2.618	2.285		NO SCH	14.92	16.50	
PRIMARY	2.384	2.067		PRIMARY	4.66	5.37	
SECOND	2.104	1.703		SECOND	-7.62	-13.19	
HIGH	1.970	1.702		HIGH	-13.50	-13.24	
UNIV	1.637	1.848		UNIV	-28.11	-5.77	
MEAN	2.398	1.966		STD.MEAN	2.28	1.96	
SD	.338	.226		SD	14.83	11.51	
CHI-SQ (4DF)	31.0	27.1		CHI-SQ (4DF)	31.0	27.1	
NCEB							
NO SCH	6.767			NO SCH	9.26		
PRIMARY	6.292			PRIMARY	1.59		
SECOND	5.948			SECOND	-3.97		
HIGH	5.983			HIGH	-3.40		
UNIV	4.848			UNIV	-21.74		
MEAN	6.374			STD.MEAN	6.19		
SD	.633			SD	10.21		
CHI-SQ (4DF)	26.6			CHI-SQ (4DF)	26.6		

TABLE 4.4

MEAN FERTILITY BY MARRIAGE DURATION, MARRIAGE COHORT AND R EDUC

STEP= 4 VARIABLES ENTERED :
R EDUC YSFM AGFM ZONE

	(A) ADJUSTED MEANS			(B) %CHANGES FROM STANDARDIZED MEAN			
MEASURE GROUP	20+	10-19	0-9	GROUP	20+	10-19	0-9
BM0-9							
NO SCH	3.596	3.399	3.685	NO SCH	3.91	1.24	3.01
PRIMARY	3.441	3.406	3.587	PRIMARY	-.55	1.44	.26
SECOND	3.515	3.371	3.524	SECOND	1.56	.40	-1.50
HIGH	3.415	3.247	3.645	HIGH	-1.30	-3.29	1.88
UNIV	2.842	2.963	3.248	UNIV	-17.89	-11.76	-9.21
MEAN	3.502	3.363	3.566	STD.MEAN	3.46	3.36	3.58
SD	.268	.167	.155	SD	7.73	4.98	4.33
CHI-SQ (4DF)	6.8	6.9	6.4	CHI-SQ (4DF)	6.8	6.9	6.4
BM10-19							
NO SCH	2.605	2.207		NO SCH	14.13	12.79	
PRIMARY	2.377	2.086		PRIMARY	4.14	6.63	
SECOND	2.151	1.743		SECOND	-5.74	-10.91	
HIGH	1.887	1.625		HIGH	-17.35	-16.98	
UNIV	1.782	1.838		UNIV	-21.91	-6.07	
MEAN	2.398	1.966		STD.MEAN	2.28	1.96	
SD	.304	.216		SD	13.33	11.04	
CHI-SQ (4DF)	24.2	24.3		CHI-SQ (4DF)	24.2	24.3	
NCEB							
NO SCH	6.735			NO SCH	8.73		
PRIMARY	6.285			PRIMARY	1.47		
SECOND	6.055			SECOND	-2.24		
HIGH	5.745			HIGH	-7.25		
UNIV	4.974			UNIV	-19.70		
MEAN	6.374			STD.MEAN	6.19		
SD	.589			SD	9.51		
CHI-SQ (4DF)	19.9			CHI-SQ (4DF)	19.9		

TABLE 4.5

MEAN FERTILITY BY MARRIAGE DURATION, MARRIAGE COHORT AND R EDUC

STEP= 5 VARIABLES ENTERED :
R EDUC YSFM AGFM ZONE RACE

	(A) ADJUSTED MEANS			(B) %CHANGES FROM STANDARDIZED MEAN			
MEASURE GROUP	20+	10-19	0-9	GROUP	20+	10-19	0-9
BM0-9							
NO SCH	3.594	3.392	3.674	NO SCH	3.75	1.02	2.75
PRIMARY	3.441	3.402	3.578	PRIMARY	-.66	1.33	.08
SECOND	3.516	3.379	3.536	SECOND	1.52	.65	-1.09
HIGH	3.435	3.251	3.643	HIGH	-.84	-3.17	1.90
UNIV	2.873	2.966	3.251	UNIV	-17.05	-11.67	-9.06
MEAN	3.502	3.363	3.566	STD.MEAN	3.46	3.36	3.58
SD	.256	.165	.151	SD	7.39	4.93	4.21
CHI-SQ (4DF)	6.3	6.6	5.7	CHI-SQ (4DF)	6.3	6.6	5.7
BM10-19							
NO SCH	2.606	2.183		NO SCH	13.89	11.56	
PRIMARY	2.370	2.079		PRIMARY	3.56	6.26	
SECOND	2.163	1.769		SECOND	-5.47	-10.11	
HIGH	1.912	1.650		HIGH	-16.46	-15.69	
UNIV	1.849	1.864		UNIV	-19.17	-5.27	
MEAN	2.398	1.966		STD.MEAN	2.29	1.96	
SD	.283	.198		SD	12.35	10.14	
CHI-SQ (4DF)	21.6	20.0		CHI-SQ (4DF)	21.6	20.0	
NCEB							
NO SCH	6.732			NO SCH	8.50		
PRIMARY	6.276			PRIMARY	1.15		
SECOND	6.074			SECOND	-2.11		
HIGH	5.791			HIGH	-6.66		
UNIV	5.092			UNIV	-17.92		
MEAN	6.374			STD.MEAN	6.20		
SD	.545			SD	8.78		
CHI-SQ (4DF)	17.7			CHI-SQ (4DF)	17.7		

TABLE 4.6

MEAN FERTILITY BY MARRIAGE DURATION, MARRIAGE COHORT AND R EDUC

STEP= 6 VARIABLES ENTERED :
R EDUC YSFM AGFM ZONE RACE TPRES

	(A) ADJUSTED MEANS			(B) %CHANGES FROM STANDARDIZED MEAN			
MEASURE GROUP	20+	10-19	0-9	GROUP	20+	10-19	0-9
BM0-9							
NO SCH	3.697	3.400	3.690	NO SCH	3.93	1.29	3.13
PRIMARY	3.441	3.408	3.582	PRIMARY	-.57	1.53	.12
SECOND	3.512	3.368	3.532	SECOND	1.46	.34	-1.28
HIGH	3.430	3.229	3.639	HIGH	-.91	-3.79	1.71
UNIV	2.835	2.983	3.241	UNIV	-18.10	-11.14	-9.40
MEAN	3.502	3.363	3.566	STD.MEAN	3.46	3.36	3.58
SD	.271	.161	.157	SD	7.82	4.79	4.38
CHI-SQ (4DF)	6.7	6.6	6.2	CHI-SQ (4DF)	6.7	6.6	6.2
BM10-19							
NO SCH	2.604	2.176		NO SCH	13.66	11.16	
PRIMARY	2.366	2.076		PRIMARY	3.25	6.04	
SECOND	2.174	1.763		SECOND	-5.13	-9.93	
HIGH	1.939	1.666		HIGH	-15.38	-14.90	
UNIV	1.829	1.869		UNIV	-20.17	-4.52	
MEAN	2.398	1.966		STD.MEAN	2.29	1.96	
SD	.281	.190		SD	12.28	9.72	
CHI-SQ (4DF)	20.3	18.3		CHI-SQ (4DF)	20.3	18.3	
NCEB							
NO SCH	6.728			NO SCH	8.32		
PRIMARY	6.269			PRIMARY	.93		
SECOND	6.095			SECOND	-1.86		
HIGH	5.844			HIGH	-5.91		
UNIV	5.062			UNIV	-18.49		
MEAN	6.374			STD.MEAN	6.21		
SD	.550			SD	8.86		
CHI-SQ (4DF)	16.8			CHI-SQ (4DF)	16.8		

TABLE 4.7

MEAN FERTILITY BY MARRIAGE DURATION, MARRIAGE COHORT AND R EDUC

STEP= 7 VARIABLES ENTERED :
R EDUC YSFM AGFM ZONE RACE TPRES WSTAT

	(A) ADJUSTED MEANS			(B) %CHANGES FROM STANDARDIZED MEAN			
MEASURE GROUP	20+	10-19	0-9	GROUP	20+	10-19	0-9
BM0-9							
NO SCH	3.611	3.406	3.704	NO SCH	4.26	1.47	3.57
PRIMARY	3.434	3.401	3.571	PRIMARY	-.87	1.34	-.15
SECOND	3.495	3.362	3.517	SECOND	.90	-.13	-1.67
HIGH	3.440	3.227	3.654	HIGH	-.69	-3.85	2.17
UNIV	2.994	3.127	3.309	UNIV	-13.56	-6.83	-7.47
MEAN	3.502	3.363	3.566	STD.MEAN	3.46	3.36	3.58
SD	.210	.109	.137	SD	6.07	3.25	3.84
CHI-SQ (4DF)	6.5	3.4	5.8	CHI-SQ (4DF)	6.5	3.4	5.8
BM10-19							
NO SCH	2.613	2.186		NO SCH	13.97	11.72	
PRIMARY	2.361	2.085		PRIMARY	2.97	6.59	
SECOND	2.163	1.736		SECOND	-5.68	-11.34	
HIGH	1.948	1.645		HIGH	-15.04	-15.89	
UNIV	1.926	1.946		UNIV	-16.00	-.54	
MEAN	2.398	1.966		STD.MEAN	2.29	1.96	
SD	.259	.204		SD	11.32	10.43	
CHI-SQ (4DF)	21.0	24.1		CHI-SQ (4DF)	21.0	24.1	
NCEB							
NO SCH	6.757			NO SCH	8.70		
PRIMARY	6.254			PRIMARY	.59		
SECOND	6.061			SECOND	-2.51		
HIGH	5.866			HIGH	-5.65		
UNIV	5.393			UNIV	-13.25		
MEAN	6.374			STD.MEAN	6.22		
SD	.449			SD	7.21		
CHI-SQ (4DF)	18.0			CHI-SQ (4DF)	18.0		

TABLE 4.8

MEAN FERTILITY BY MARRIAGE DURATION, MARRIAGE COHORT AND R EDUC

STEP= 8 VARIABLES ENTERED :
R EDUC YSFM AGFM ZONE RACE TPRES WSTAT H EDUC

	(A) ADJUSTED MEANS			(B) %CHANGES FROM STANDARDIZED MEAN			
MEASURE GROUP	20+	10-19	0-9	GROUP	20+	10-19	0-9
BM0-9							
NO SCH	3.606	3.390	3.708	NO SCH	3.65	.99	3.81
PRIMARY	3.428	3.390	3.551	PRIMARY	-1.47	.97	-.58
SECOND	3.501	3.353	3.493	SECOND	.65	-.14	-2.22
HIGH	3.521	3.272	3.701	HIGH	1.21	-2.55	3.63
UNIV	3.201	3.216	3.412	UNIV	-8.00	-4.22	-4.47
MEAN	3.502	3.363	3.566	STD.MEAN	3.48	3.36	3.57
SD	.138	.069	.116	SD	3.95	2.07	3.25
CHI-SQ (4DF)	5.4	1.1	6.5	CHI-SQ (4DF)	5.4	1.1	6.5
BM10-19							
NO SCH	2.572	2.190		NO SCH	9.34	11.78	
PRIMARY	2.338	2.063		PRIMARY	-.59	5.28	
SECOND	2.231	1.726		SECOND	-5.13	-11.94	
HIGH	2.290	1.736		HIGH	-2.65	-11.42	
UNIV	2.475	2.048		UNIV	5.22	4.52	
MEAN	2.398	1.966		STD.MEAN	2.35	1.96	
SD	.125	.188		SD	5.30	9.58	
CHI-SQ (4DF)	10.4	24.0		CHI-SQ (4DF)	10.4	24.0	
NCEB							
NO SCH	6.700			NO SCH	6.34		
PRIMARY	6.222			PRIMARY	-1.25		
SECOND	6.155			SECOND	-2.32		
HIGH	6.340			HIGH	.63		
UNIV	6.210			UNIV	-1.44		
MEAN	6.374			STD.MEAN	6.30		
SD	.197			SD	3.12		
CHI-SQ (4DF)	11.3			CHI-SQ (4DF)	11.3		

TABLE 4.9

MEAN FERTILITY BY MARRIAGE DURATION, MARRIAGE COHORT AND R EDUC

STEP= 9 VARIABLES ENTERED :
R EDUC YSFM AGFM ZONE RACE TPRES WSTAT H EDUC HOCCUP

	(A) ADJUSTED MEANS			(B) %CHANGES FROM STANDARDIZED MEAN			
MEASURE GROUP	20+	10-19	0-9	GROUP	20+	10-19	0-9
BM0-9							
NO SCH	3.595	3.381	3.735	NO SCH	3.14	.69	4.49
PRIMARY	3.427	3.381	3.547	PRIMARY	-1.68	.67	-.77
SECOND	3.517	3.360	3.493	SECOND	.89	.04	-2.29
HIGH	3.557	3.303	3.692	HIGH	2.05	-1.65	3.28
UNIV	3.231	3.244	3.416	UNIV	-7.31	-3.39	-4.45
MEAN	3.502	3.363	3.566	STD.MEAN	3.49	3.36	3.57
SD	.130	.053	.120	SD	3.72	1.58	3.36
CHI-SQ (4DF)	5.0	.5	6.9	CHI-SQ (4DF)	5.0	.5	6.9
BM10-19							
NO SCH	2.557	2.167		NO SCH	8.21	10.51	
PRIMARY	2.337	2.046		PRIMARY	-1.08	4.34	
SECOND	2.252	1.744		SECOND	-4.67	-11.07	
HIGH	2.343	1.795		HIGH	-.85	-8.48	
UNIV	2.543	2.085		UNIV	7.63	6.33	
MEAN	2.398	1.966		STD.MEAN	2.36	1.96	
SD	.122	.167		SD	5.14	8.53	
CHI-SQ (4DF)	8.8	19.9		CHI-SQ (4DF)	8.8	19.9	
NCEB							
NO SCH	6.668			NO SCH	5.50		
PRIMARY	6.221			PRIMARY	-1.58		
SECOND	6.199			SECOND	-1.92		
HIGH	6.438			HIGH	1.86		
UNIV	6.316			UNIV	-.07		
MEAN	6.374			STD.MEAN	6.32		
SD	.172			SD	2.72		
CHI-SQ (4DF)	9.5			CHI-SQ (4DF)	9.5		

TABLE 4.10

MEAN FERTILITY BY MARRIAGE DURATION, MARRIAGE COHORT AND R EDUC

STEP= 10 VARIABLES ENTERED :
R EDUC YSFM AGFM ZONE RACE TPRES WSTAT H EDUC HOCCUP ST LIV

	(A) ADJUSTED MEANS			(B) %CHANGES FROM STANDARDIZED MEAN			
MEASURE GROUP	20+	10-19	0-9	GROUP	20+	10-19	0-9
BM0-9							
NO SCH	3.594	3.351	3.706	NO SCH	3.07	-.25	3.85
PRIMARY	3.427	3.367	3.532	PRIMARY	-1.71	.24	-1.02
SECOND	3.518	3.372	3.496	SECOND	.89	.38	-2.01
HIGH	3.564	3.357	3.715	HIGH	2.22	-.08	4.12
UNIV	3.240	3.323	3.462	UNIV	-7.07	-1.08	-2.99
MEAN	3.502	3.363	3.566	STD.MEAN	3.49	3.36	3.57
SD	.127	.017	.107	SD	3.65	.51	3.00
CHI-SQ (4DF)	5.0	.1	6.5	CHI-SQ (4DF)	5.0	.1	6.5
BM10-19							
NO SCH	2.541	2.128		NO SCH	6.85	8.42	
PRIMARY	2.335	2.025		PRIMARY	-1.81	3.18	
SECOND	2.269	1.760		SECOND	-4.60	-10.32	
HIGH	2.438	1.883		HIGH	2.52	-4.05	
UNIV	2.668	2.182		UNIV	12.16	11.18	
MEAN	2.398	1.966		STD.MEAN	2.38	1.96	
SD	.143	.156		SD	6.00	7.94	
CHI-SQ (4DF)	7.9	11.4		CHI-SQ (4DF)	7.9	11.4	
NCEB							
NO SCH	6.650			NO SCH	4.89		
PRIMARY	6.218			PRIMARY	-1.91		
SECOND	6.219			SECOND	-1.90		
HIGH	6.553			HIGH	3.37		
UNIV	6.465			UNIV	1.98		
MEAN	6.374			STD.MEAN	6.34		
SD	.175			SD	2.76		
CHI-SQ (4DF)	8.9			CHI-SQ (4DF)	8.9		

TABLE 5.1

MEAN FERTILITY BY MARRIAGE DURATION, MARRIAGE COHORT AND WSTAT

STEP= 1 VARIABLES ENTERED :
WSTAT

	(A) ADJUSTED MEANS			(B) %CHANGES FROM STANDARDIZED MEAN			
MEASURE GROUP	20+	10-19	0-9	GROUP	20+	10-19	0-9
BM0-9							
NEVER	3.562	3.450	3.598	NEVER	2.17	2.34	3.35
BEF&AFT	3.209	2.894	3.233	BEF&AFT	-7.97	-14.14	-7.13
ONLY BEF	3.341	3.336	3.299	ONLY BEF	-4.18	-1.05	-5.23
ONLY AFT	3.400	3.368	3.107	ONLY AFT	-2.47	-.09	-10.74
MEAN	3.502	3.363	3.494	STD.MEAN	3.49	3.37	3.48
SD	.127	.216	.180	SD	3.64	6.42	5.18
CHI-SQ (3DF)	9.3	29.8	27.0	CHI-SQ (3DF)	9.3	29.8	27.0
BM10-19							
NEVER	2.444	2.115		NEVER	3.33	5.91	
BEF&AFT	2.099	1.653		BEF&AFT	-11.28	-17.21	
ONLY BEF	2.014	1.868		ONLY BEF	-14.88	-6.45	
ONLY AFT	2.454	1.665		ONLY AFT	3.72	-16.63	
MEAN	2.398	1.981		STD.MEAN	2.37	2.00	
SD	.199	.188		SD	8.40	9.40	
CHI-SQ (3DF)	13.9	23.8		CHI-SQ (3DF)	13.9	23.8	
NCEB							
NEVER	6.490			NEVER	2.82		
BEF&AFT	5.631			BEF&AFT	-10.79		
ONLY BEF	5.708			ONLY BEF	-9.58		
ONLY AFT	6.402			ONLY AFT	1.42		
MEAN	6.374			STD.MEAN	6.31		
SD	.390			SD	6.18		
CHI-SQ (3DF)	19.6			CHI-SQ (3DF)	19.6		

TABLE 5.2

MEAN FERTILITY BY MARRIAGE DURATION, MARRIAGE COHORT AND WSTAT

STEP= 2 VARIABLES ENTERED :
WSTAT YSFM

	(A) ADJUSTED MEANS			(B) %CHANGES FROM STANDARDIZED MEAN			
MEASURE GROUP	20+	10-19	0-9	GROUP	20+	10-19	0-9
BM0-9							
NEVER	3.562	3.447	3.532	NEVER	2.18	2.27	1.74
BEF&AFT	3.207	2.911	3.160	BEF&AFT	-8.00	-13.64	-8.99
ONLY BEF	3.338	3.351	3.768	ONLY BEF	-4.26	-.60	8.55
ONLY AFT	3.402	3.351	3.084	ONLY AFT	-2.42	-.60	-11.18
MEAN	3.502	3.363	3.494	STD.MEAN	3.49	3.37	3.47
SD	.128	.208	.279	SD	3.66	6.17	8.02
CHI-SQ (3DF)	9.6	27.6	22.8	CHI-SQ (3DF)	9.6	27.6	22.8
BM10-19							
NEVER	2.443	2.110		NEVER	3.05	5.70	
BEF&AFT	2.126	1.672		BEF&AFT	-10.35	-16.25	
ONLY BEF	2.076	1.880		ONLY BEF	-12.46	-5.83	
ONLY AFT	2.424	1.660		ONLY AFT	2.23	-16.85	
MEAN	2.398	1.981		STD.MEAN	2.37	2.00	
SD	.168	.184		SD	7.07	9.20	
CHI-SQ (3DF)	10.6	22.5		CHI-SQ (3DF)	10.6	22.5	
NCEB							
NEVER	6.488			NEVER	2.61		
BEF&AFT	5.686			BEF&AFT	-10.07		
ONLY BEF	5.835			ONLY BEF	-7.72		
ONLY AFT	6.340			ONLY AFT	.27		
MEAN	6.374			STD.MEAN	6.32		
SD	.335			SD	5.30		
CHI-SQ (3DF)	15.7			CHI-SQ (3DF)	15.7		

TABLE 5.3

MEAN FERTILITY BY MARRIAGE DURATION, MARRIAGE COHORT AND WSTAT

STEP= 3 VARIABLES ENTERED :
WSTAT YSFM AGFM

	(A) ADJUSTED MEANS			(B) %CHANGES FROM STANDARDIZED MEAN			
MEASURE GROUP	20+	10-19	0-9	GROUP	20+	10-19	0-9
BM0-9							
NEVER	3.558	3.426	3.501	NEVER	1.98	1.66	.96
BEF&AFT	3.205	3.052	3.322	BEF&AFT	-8.12	-9.42	-4.19
ONLY BEF	3.394	3.397	3.801	ONLY BEF	-2.71	.82	9.62
ONLY AFT	3.404	3.291	3.054	ONLY AFT	-2.42	-2.35	-11.94
MEAN	3.502	3.363	3.494	STD.MEAN	3.49	3.37	3.47
SD	.125	.147	.272	SD	3.58	4.36	7.84
CHI-SQ (3DF)	9.8	13.8	17.5	CHI-SQ (3DF)	9.8	13.8	17.5
BM10-19							
NEVER	2.442	2.051		NEVER	2.56	2.89	
BEF&AFT	2.144	1.959		BEF&AFT	-9.94	-1.74	
ONLY BEF	2.222	2.087		ONLY BEF	-6.68	4.69	
ONLY AFT	2.366	1.527		ONLY AFT	-.62	-23.37	
MEAN	2.398	1.981		STD.MEAN	2.38	1.99	
SD	.117	.223		SD	4.91	11.21	
CHI-SQ (3DF)	6.6	19.8		CHI-SQ (3DF)	6.6	19.8	
NCEB							
NEVER	6.484			NEVER	2.33		
BEF&AFT	5.710			BEF&AFT	-9.89		
ONLY BEF	6.047			ONLY BEF	-4.57		
ONLY AFT	6.265			ONLY AFT	-1.12		
MEAN	6.374			STD.MEAN	6.34		
SD	.286			SD	4.51		
CHI-SQ (3DF)	12.7			CHI-SQ (3DF)	12.7		

TABLE 5.4

MEAN FERTILITY BY MARRIAGE DURATION, MARRIAGE COHORT AND WSTAT

STEP= 4 VARIABLES ENTERED :
WSTAT YSFM AGFM ZONE

	(A) ADJUSTED MEANS			(B) %CHANGES FROM STANDARDIZED MEAN			
MEASURE GROUP	20+	10-19	0-9	GROUP	20+	10-19	0-9
BM0-9							
NEVER	3.544	3.414	3.507	NEVER	1.72	1.35	.99
BEF&AFT	3.220	3.078	3.349	BEF&AFT	-7.58	-8.61	-3.54
ONLY BEF	3.348	3.413	3.712	ONLY BEF	-3.90	1.31	6.89
ONLY AFT	3.484	3.317	3.120	ONLY AFT	.01	-1.53	-10.15
MEAN	3.502	3.363	3.494	STD.MEAN	3.48	3.37	3.47
SD	.125	.137	.217	SD	3.60	4.06	6.24
CHI-SQ (3DF)	6.4	9.7	11.1	CHI-SQ (3DF)	6.4	9.7	11.1
BM10-19							
NEVER	2.414	2.044		NEVER	1.14	2.54	
BEF&AFT	2.315	1.954		BEF&AFT	-3.00	-1.96	
ONLY BEF	2.246	2.139		ONLY BEF	-5.89	7.34	
ONLY AFT	2.413	1.528		ONLY AFT	1.10	-23.33	
MEAN	2.398	1.981		STD.MEAN	2.39	1.99	
SD	.071	.234		SD	2.97	11.72	
CHI-SQ (3DF)	1.4	20.6		CHI-SQ (3DF)	1.4	20.6	
NCEB							
NEVER	6.442			NEVER	1.62		
BEF&AFT	5.925			BEF&AFT	-6.54		
ONLY BEF	6.023			ONLY BEF	-4.99		
ONLY AFT	6.382			ONLY AFT	.68		
MEAN	6.374			STD.MEAN	6.34		
SD	.223			SD	3.52		
CHI-SQ (3DF)	5.4			CHI-SQ (3DF)	5.4		

TABLE 5.5

MEAN FERTILITY BY MARRIAGE DURATION, MARRIAGE COHORT AND WSTAT

STEP= 5 VARIABLES ENTERED :
WSTAT YSFM AGFM ZONE RACE

	(A) ADJUSTED MEANS			(B) %CHANGES FROM STANDARDIZED MEAN			
MEASURE GROUP	20+	10-19	0-9	GROUP	20+	10-19	0-9
BM0-9							
NEVER	3.540	3.411	3.505	NEVER	1.58	1.28	.97
BEF&AFT	3.243	3.100	3.357	BEF&AFT	-6.95	-7.95	-3.28
ONLY BEF	3.360	3.406	3.725	ONLY BEF	-3.59	1.09	7.32
ONLY AFT	3.486	3.316	3.101	ONLY AFT	.01	-1.55	-10.67
MEAN	3.502	3.363	3.494	STD.MEAN	3.49	3.37	3.47
SD	.115	.126	.227	SD	3.30	3.73	6.54
CHI-SQ (3DF)	5.4	8.4	12.2	CHI-SQ (3DF)	5.4	8.4	12.2
BM10-19							
NEVER	2.414	2.036		NEVER	1.13	2.19	
BEF&AFT	2.300	1.975		BEF&AFT	-3.68	-.88	
ONLY BEF	2.271	2.165		ONLY BEF	-4.90	8.66	
ONLY AFT	2.411	1.528		ONLY AFT	.97	-23.31	
MEAN	2.398	1.981		STD.MEAN	2.39	1.99	
SD	.065	.240		SD	2.70	12.03	
CHI-SQ (3DF)	1.3	20.5		CHI-SQ (3DF)	1.3	20.5	
NCEB							
NEVER	6.439			NEVER	1.54		
BEF&AFT	5.925			BEF&AFT	-6.57		
ONLY BEF	6.068			ONLY BEF	-4.31		
ONLY AFT	6.378			ONLY AFT	.57		
MEAN	6.374			STD.MEAN	6.34		
SD	.213			SD	3.36		
CHI-SQ (3DF)	5.0			CHI-SQ (3DF)	5.0		

TABLE 5.6

MEAN FERTILITY BY MARRIAGE DURATION, MARRIAGE COHORT AND WSTAT

STEP= 6 VARIABLES ENTERED :
WSTAT YSFM AGFM ZONE RACE TPRES

	(A) ADJUSTED MEANS			(B) %CHANGES FROM STANDARDIZED MEAN			
MEASURE GROUP	20+	10-19	0-9	GROUP	20+	10-19	0-9
BM0-9							
NEVER	3.540	3.411	3.502	NEVER	1.58	1.28	.88
BEF&AFT	3.238	3.111	3.359	BEF&AFT	-7.09	-7.62	-3.25
ONLY BEF	3.361	3.401	3.730	ONLY BEF	-3.55	.97	7.45
ONLY AFT	3.490	3.309	3.116	ONLY AFT	.13	-1.76	-10.24
MEAN	3.502	3.363	3.494	STD.MEAN	3.49	3.37	3.47
SD	.117	.120	.223	SD	3.37	3.57	6.42
CHI-SQ (3DF)	5.5	7.8	11.7	CHI-SQ (3DF)	5.5	7.8	11.7
BM10-19							
NEVER	2.416	2.037		NEVER	1.20	2.25	
BEF&AFT	2.283	1.979		BEF&AFT	-4.36	-.66	
ONLY BEF	2.277	2.165		ONLY BEF	-4.60	8.17	
ONLY AFT	2.408	1.524		ONLY AFT	.88	-23.52	
MEAN	2.398	1.981		STD.MEAN	2.39	1.99	
SD	.066	.240		SD	2.76	12.02	
CHI-SQ (3DF)	1.4	20.7		CHI-SQ (3DF)	1.4	20.7	
NCEB							
NEVER	6.442			NEVER	1.59		
BEF&AFT	5.896			BEF&AFT	-7.02		
ONLY BEF	6.081			ONLY BEF	-4.11		
ONLY AFT	6.373			ONLY AFT	.50		
MEAN	6.374			STD.MEAN	6.34		
SD	.221			SD	3.48		
CHI-SQ (3DF)	5.4			CHI-SQ (3DF)	5.4		

TABLE 5.7

MEAN FERTILITY BY MARRIAGE DURATION, MARRIAGE COHORT AND WSTAT

STEP= 7 VARIABLES ENTERED :
WSTAT YSFM AGFM ZONE RACE TPRES R EDUC

	(A) ADJUSTED MEANS			(B) %CHANGES FROM STANDARDIZED MEAN			
MEASURE GROUP	20+	10-19	0-9	GROUP	20+	10-19	0-9
BM0-9							
NEVER	3.541	3.405	3.499	NEVER	1.61	1.12	.80
BEF&AFT	3.241	3.160	3.377	BEF&AFT	-6.99	-6.16	-2.71
ONLY BEF	3.349	3.389	3.734	ONLY BEF	-3.90	.64	7.56
ONLY AFT	3.490	3.304	3.112	ONLY AFT	.15	-1.88	-10.35
MEAN	3.502	3.363	3.494	STD.MEAN	3.48	3.37	3.47
SD	.118	.097	.224	SD	3.38	2.88	6.46
CHI-SQ (3DF)	5.3	4.6	11.1	CHI-SQ (3DF)	5.3	4.6	11.1
BM10-19							
NEVER	2.425	2.044		NEVER	1.62	2.52	
BEF&AFT	2.241	1.969		BEF&AFT	-6.08	-1.24	
ONLY BEF	2.270	2.171		ONLY BEF	-4.87	8.91	
ONLY AFT	2.388	1.485		ONLY AFT	.07	-25.54	
MEAN	2.398	1.981		STD.MEAN	2.39	1.99	
SD	.077	.260		SD	3.23	13.04	
CHI-SQ (3DF)	2.1	24.1		CHI-SQ (3DF)	2.1	24.1	
NCEB							
NEVER	6.456			NEVER	1.85		
BEF&AFT	5.837			BEF&AFT	-7.92		
ONLY BEF	6.053			ONLY BEF	-4.51		
ONLY AFT	6.345			ONLY AFT	.09		
MEAN	6.374			STD.MEAN	6.34		
SD	.243			SD	3.84		
CHI-SQ (3DF)	6.5			CHI-SQ (3DF)	6.5		

TABLE 5.8

MEAN FERTILITY BY MARRIAGE DURATION, MARRIAGE COHORT AND WSTAT

STEP= 8 VARIABLES ENTERED :
WSTAT YSFM AGFM ZONE RACE TPRES R EDUC H EDUC

	(A) ADJUSTED MEANS			(B) %CHANGES FROM STANDARDIZED MEAN			
MEASURE GROUP	20+	10-19	0-9	GROUP	20+	10-19	0-9
BM0-9							
NEVER	3.541	3.406	3.495	NEVER	1.63	1.13	.69
BEF&AFT	3.245	3.164	3.402	BEF&AFT	-6.88	-6.06	-1.99
ONLY BEF	3.343	3.390	3.728	ONLY BEF	-4.06	.67	7.40
ONLY AFT	3.486	3.298	3.116	ONLY AFT	.05	-2.09	-10.23
MEAN	3.502	3.363	3.494	STD.MEAN	3.48	3.37	3.47
SD	.117	.096	.219	SD	3.35	2.86	6.32
CHI-SQ (3DF)	5.2	4.6	10.6	CHI-SQ (3DF)	5.2	4.6	10.6
BM10-19							
NEVER	2.432	2.044		NEVER	1.96	2.52	
BEF&AFT	2.227	1.978		BEF&AFT	-6.61	-.77	
ONLY BEF	2.246	2.163		ONLY BEF	-5.86	8.51	
ONLY AFT	2.367	1.482		ONLY AFT	-.76	-25.66	
MEAN	2.398	1.981		STD.MEAN	2.39	1.99	
SD	.085	.260		SD	3.56	13.03	
CHI-SQ (3DF)	2.8	24.0		CHI-SQ (3DF)	2.8	24.0	
NCEB							
NEVER	6.466			NEVER	2.02		
BEF&AFT	5.821			BEF&AFT	-8.15		
ONLY BEF	6.016			ONLY BEF	-5.07		
ONLY AFT	6.315			ONLY AFT	-.36		
MEAN	6.374			STD.MEAN	6.34		
SD	.251			SD	3.97		
CHI-SQ (3DF)	7.4			CHI-SQ (3DF)	7.4		

TABLE 5.9

MEAN FERTILITY BY MARRIAGE DURATION, MARRIAGE COHORT AND WSTAT

STEP= 9 VARIABLES ENTERED
WSTAT YSFM AGFM ZONE RACE TPRES R EDUC H EDUC HOCCUP

	(A) ADJUSTED MEANS			(B) %CHANGES FROM STANDARDIZED MEAN			
MEASURE GROUP	20+	10-19	0-9	GROUP	20+	10-19	0-9
BM0-9							
NEVER	3.536	3.403	3.487	NEVER	1.45	1.06	.45
BEF&AFT	3.264	3.160	3.430	BEF&AFT	-6.37	-6.15	-1.20
ONLY BEF	3.357	3.399	3.738	ONLY BEF	-3.68	.94	7.68
ONLY AFT	3.499	3.308	3.137	ONLY AFT	.38	-1.76	-9.65
MEAN	3.502	3.363	3.494	STD.MEAN	3.49	3.37	3.47
SD	.109	.098	.214	SD	3.14	2.92	6.16
CHI-SQ (3DF)	4.2	4.4	10.1	CHI-SQ (3DF)	4.2	4.4	10.1
BM10-19							
NEVER	2.430	2.031		NEVER	1.88	1.96	
BEF&AFT	2.228	2.007		BEF&AFT	-6.60	.76	
ONLY BEF	2.255	2.165		ONLY BEF	-5.46	8.67	
ONLY AFT	2.371	1.524		ONLY AFT	-.60	-23.51	
MEAN	2.398	1.981		STD.MEAN	2.39	1.99	
SD	.083	.243		SD	3.47	12.20	
CHI-SQ (3DF)	2.5	20.0		CHI-SQ (3DF)	2.5	20.0	
NCEB							
NEVER	6.459			NEVER	1.89		
BEF&AFT	5.844			BEF&AFT	-7.81		
ONLY BEF	6.043			ONLY BEF	-4.67		
ONLY AFT	6.330			ONLY AFT	-.15		
MEAN	6.374			STD.MEAN	6.34		
SD	.240			SD	3.79		
CHI-SQ (3DF)	6.3			CHI-SQ (3DF)	6.3		

TABLE 5.10

MEAN FERTILITY BY MARRIAGE DURATION, MARRIAGE COHORT AND WSTAT

STEP= 10 VARIABLES ENTERED :
WSTAT YSFM AGFM ZONE RACE TPRES R EDUC H EDUC HOCCUP ST LIV

	(A) ADJUSTED MEANS			(B) %CHANGES FROM STANDARDIZED MEAN			
MEASURE GROUP	20+	10-19	0-9	GROUP	20+	10-19	0-9
BM0-9							
NEVER	3.537	3.409	3.492	NEVER	1.47	1.21	.61
BEF&AFT	3.262	3.149	3.428	BEF&AFT	-6.41	-6.51	-1.25
ONLY BEF	3.356	3.391	3.720	ONLY BEF	-3.70	.69	7.17
ONLY AFT	3.496	3.294	3.117	ONLY AFT	.31	-2.19	-10.21
MEAN	3.502	3.363	3.494	STD.MEAN	3.49	3.37	3.47
SD	.110	.103	.216	SD	3.15	3.06	6.21
CHI-SQ (3DF)	4.2	5.1	10.1	CHI-SQ (3DF)	4.2	5.1	10.1
BM10-19							
NEVER	2.440	2.038		NEVER	2.28	2.26	
BEF&AFT	2.207	1.989		BEF&AFT	-7.50	-.17	
ONLY BEF	2.244	2.154		ONLY BEF	-5.92	8.09	
ONLY AFT	2.337	1.514		ONLY AFT	-2.05	-24.02	
MEAN	2.398	1.981		STD.MEAN	2.39	1.99	
SD	.090	.244		SD	3.78	12.24	
CHI-SQ (3DF)	3.5	20.8		CHI-SQ (3DF)	3.5	20.8	
NCEB							
NEVER	6.470			NEVER	2.07		
BEF&AFT	5.819			BEF&AFT	-8.21		
ONLY BEF	6.030			ONLY BEF	-4.87		
ONLY AFT	6.289			ONLY AFT	-.80		
MEAN	6.374			STD.MEAN	6.34		
SD	.248			SD	3.91		
CHI-SQ (3DF)	7.1			CHI-SQ (3DF)	7.1		

TABLE 6.1

MEAN FERTILITY BY MARRIAGE DURATION, MARRIAGE COHORT AND H EDUC

STEP= 1 VARIABLES ENTERED :
H EDUC

	(A) ADJUSTED MEANS			(B) %CHANGES FROM STANDARDIZED MEAN			
MEASURE GROUP	20+	10-19	0-9	GROUP	20+	10-19	0-9
BM0-9							
NO SCHL	3.505	3.429	3.471	NO SCHL	.50	2.20	-2.54
PRIMARY	3.530	3.408	3.517	PRIMARY	1.21	1.58	-1.23
SECOND	3.479	3.405	3.642	SECOND	-.27	1.48	2.26
HIGH	3.601	3.197	3.661	HIGH	3.23	-4.71	2.80
UNIV	2.996	2.940	3.267	UNIV	-14.10	-12.37	-8.26
MEAN	3.502	3.363	3.566	STD.MEAN	3.49	3.36	3.56
SD	.217	.188	.142	SD	6.22	5.60	3.99
CHI-SQ (4DF)	6.9	13.7	8.8	CHI-SQ (4DF)	6.9	13.7	8.8
BM10-19							
NO SCHL	2.743	2.320		NO SCHL	20.79	19.32	
PRIMARY	2.537	2.100		PRIMARY	11.75	7.98	
SECOND	2.331	2.046		SECOND	2.66	5.25	
HIGH	1.574	1.317		HIGH	-30.67	-32.27	
UNIV	.998	1.144		UNIV	-56.04	-41.18	
MEAN	2.398	1.971		STD.MEAN	2.27	1.94	
SD	.652	.466		SD	28.73	23.95	
CHI-SQ (4DF)	95.6	56.7		CHI-SQ (4DF)	95.6	56.7	
NCEB							
NO SCHL	6.888			NO SCHL	11.39		
PRIMARY	6.612			PRIMARY	6.94		
SECOND	6.216			SECOND	.52		
HIGH	5.301			HIGH	-14.27		
UNIV	4.096			UNIV	-33.77		
MEAN	6.374			STD.MEAN	6.18		
SD	1.017			SD	16.44		
CHI-SQ (4DF)	70.1			CHI-SQ (4DF)	70.1		

TABLE 6.2

MEAN FERTILITY BY MARRIAGE DURATION, MARRIAGE COHORT AND H EDUC

STEP= 2 VARIABLES ENTERED :
H EDUC YSFM

	(A) ADJUSTED MEANS			(B) %CHANGES FROM STANDARDIZED MEAN			
MEASURE GROUP	20+	10-19	0-9	GROUP	20+	10-19	0-9
BM0-9							
NO SCHL	3.508	3.430	3.500	NO SCHL	.59	2.22	-1.88
PRIMARY	3.530	3.398	3.548	PRIMARY	1.24	1.25	-.53
SECOND	3.479	3.409	3.637	SECOND	-.24	1.57	1.97
HIGH	3.596	3.221	3.620	HIGH	3.12	-4.03	1.49
UNIV	2.989	2.947	3.237	UNIV	-14.29	-12.18	-9.25
MEAN	3.502	3.363	3.566	STD.MEAN	3.49	3.36	3.57
SD	.219	.183	.144	SD	6.29	5.45	4.05
CHI-SQ (4DF)	7.0	12.4	8.3	CHI-SQ (4DF)	7.0	12.4	8.3
BM10-19							
NO SCHL	2.701	2.330		NO SCHL	18.40	19.80	
PRIMARY	2.535	2.090		PRIMARY	11.15	7.42	
SECOND	2.326	2.048		SECOND	2.00	5.30	
HIGH	1.647	1.341		HIGH	-27.78	-31.04	
UNIV	1.114	1.149		UNIV	-51.15	-40.95	
MEAN	2.398	1.971		STD.MEAN	2.28	1.95	
SD	.595	.461		SD	26.10	23.68	
CHI-SQ (4DF)	79.4	54.3		CHI-SQ (4DF)	79.4	54.3	
NCEB							
NO SCHL	6.797			NO SCHL	9.53		
PRIMARY	6.607			PRIMARY	6.48		
SECOND	6.206			SECOND	.00		
HIGH	5.459			HIGH	-12.03		
UNIV	4.347			UNIV	-29.95		
MEAN	6.374			STD.MEAN	6.21		
SD	.895			SD	14.42		
CHI-SQ (4DF)	54.6			CHI-SQ (4DF)	54.6		

TABLE 6.3

MEAN FERTILITY BY MARRIAGE DURATION, MARRIAGE COHORT AND H EDUC

STEP= 3 VARIABLES ENTERED :
H EDUC YSFM AGFM

	(A) ADJUSTED MEANS			(B) %CHANGES FROM STANDARDIZED MEAN			
MEASURE GROUP	20+	10-19	0-9	GROUP	20+	10-19	0-9
BM0-9							
NO SCHL	3.520	3.422	3.428	NO SCHL	1.03	1.82	-3.61
PRIMARY	3.535	3.360	3.504	PRIMARY	1.44	-.01	-1.48
SECOND	3.473	3.404	3.632	SECOND	-.34	1.32	2.13
HIGH	3.574	3.310	3.647	HIGH	2.56	-1.48	2.55
UNIV	2.983	3.122	3.416	UNIV	-14.38	-7.10	-3.95
MEAN	3.502	3.363	3.566	STD.MEAN	3.48	3.36	3.56
SD	.219	.108	.098	SD	6.29	3.22	2.76
CHI-SQ (4DF)	7.0	4.0	4.8	CHI-SQ (4DF)	7.0	4.0	4.8
BM10-19							
NO SCHL	2.606	2.146		NO SCHL	12.69	9.61	
PRIMARY	2.486	1.975		PRIMARY	7.49	.86	
SECOND	2.374	2.084		SECOND	2.64	6.44	
HIGH	1.818	1.596		HIGH	-21.39	-18.48	
UNIV	1.460	1.612		UNIV	-36.86	-17.69	
MEAN	2.398	1.971		STD.MEAN	2.31	1.96	
SD	.437	.234		SD	18.92	11.96	
CHI-SQ (4DF)	39.8	15.4		CHI-SQ (4DF)	39.8	15.4	
NCEB							
NO SCHL	6.680			NO SCHL	6.96		
PRIMARY	6.546			PRIMARY	4.81		
SECOND	6.264			SECOND	.30		
HIGH	5.671			HIGH	-9.21		
UNIV	4.790			UNIV	-23.31		
MEAN	6.374			STD.MEAN	6.25		
SD	.693			SD	11.10		
CHI-SQ (4DF)	29.8			CHI-SQ (4DF)	29.8		

TABLE 6.4

MEAN FERTILITY BY MARRIAGE DURATION, MARRIAGE COHORT AND H EDUC

STEP= 4 VARIABLES ENTERED :
H EDUC YSFM AGFM ZONE

	(A) ADJUSTED MEANS			(B) %CHANGES FROM STANDARDIZED MEAN			
MEASURE GROUP	20+	10-19	0-9	GROUP	20+	10-19	0-9
BM0-9							
NO SCHL	3.494	3.455	3.464	NO SCHL	.11	2.86	-2.84
PRIMARY	3.518	3.362	3.542	PRIMARY	.80	.09	-.67
SECOND	3.501	3.415	3.645	SECOND	.31	1.69	2.22
HIGH	3.571	3.266	3.597	HIGH	2.31	-2.77	.87
UNIV	3.058	3.070	3.303	UNIV	-12.38	-8.59	-7.36
MEAN	3.502	3.363	3.566	STD.MEAN	3.49	3.36	3.57
SD	.187	.137	.120	SD	5.36	4.08	3.36
CHI-SQ (4DF)	5.4	7.2	10.3	CHI-SQ (4DF)	5.4	7.2	10.3
BM10-19							
NO SCHL	2.547	2.070		NO SCHL	9.60	5.67	
PRIMARY	2.473	1.959		PRIMARY	6.40	.02	
SECOND	2.394	2.113		SECOND	3.01	7.86	
HIGH	1.852	1.605		HIGH	-20.30	-18.10	
UNIV	1.622	1.635		UNIV	-30.23	-16.54	
MEAN	2.398	1.971		STD.MEAN	2.32	1.96	
SD	.370	.216		SD	15.93	11.01	
CHI-SQ (4DF)	30.4	17.7		CHI-SQ (4DF)	30.4	17.7	
NCEB							
NO SCHL	6.551			NO SCHL	4.43		
PRIMARY	6.500			PRIMARY	3.62		
SECOND	6.336			SECOND	1.01		
HIGH	5.772			HIGH	-7.99		
UNIV	5.076			UNIV	-19.08		
MEAN	6.374			STD.MEAN	6.27		
SD	.559			SD	8.91		
CHI-SQ (4DF)	19.4			CHI-SQ (4DF)	19.4		

TABLE 6.5

MEAN FERTILITY BY MARRIAGE DURATION, MARRIAGE COHORT AND H EDUC

STEP= 5 VARIABLES ENTERED :
H EDUC YSFM AGFM ZONE RACE

	(A) ADJUSTED MEANS			(B) %CHANGES FROM STANDARDIZED MEAN			
MEASURE GROUP	20+	10-19	0-9	GROUP	20+	10-19	0-9
BM0-9							
NO SCHL	3.606	3.470	3.497	NO SCHL	.37	3.31	-1.98
PRIMARY	3.512	3.363	3.544	PRIMARY	.53	-.18	-.66
SECOND	3.498	3.414	3.650	SECOND	.13	1.63	2.30
HIGH	3.597	3.279	3.579	HIGH	2.97	-2.39	.32
UNIV	3.103	3.096	3.289	UNIV	-11.19	-7.83	-7.80
MEAN	3.502	3.363	3.566	STD.MEAN	3.49	3.36	3.57
SD	.174	.130	.122	SD	4.98	3.86	3.42
CHI-SQ (4DF)	4.6	6.3	11.1	CHI-SQ (4DF)	4.6	6.3	11.1
BM10-19							
NO SCHL	2.547	2.056		NO SCHL	9.46	4.96	
PRIMARY	2.468	1.963		PRIMARY	6.09	-.30	
SECOND	2.398	2.123		SECOND	3.07	8.34	
HIGH	1.866	1.599		HIGH	-19.82	-18.39	
UNIV	1.645	1.650		UNIV	-29.28	-15.81	
MEAN	2.398	1.971		STD.MEAN	2.33	1.96	
SD	.360	.213		SD	15.49	10.89	
CHI-SQ (4DF)	28.2	17.9		CHI-SQ (4DF)	28.2	17.9	
NCEB							
NO SCHL	6.561			NO SCHL	4.51		
PRIMARY	6.488			PRIMARY	3.34		
SECOND	6.338			SECOND	.95		
HIGH	5.808			HIGH	-7.48		
UNIV	5.147			UNIV	-18.02		
MEAN	6.374			STD.MEAN	6.28		
SD	.531			SD	8.45		
CHI-SQ (4DF)	17.0			CHI-SQ (4DF)	17.0		

TABLE 6.6

MEAN FERTILITY BY MARRIAGE DURATION, MARRIAGE COHORT AND H EDUC

STEP= 6 VARIABLES ENTERED :
H EDUC YSFM AGFM ZONE RACE TPRES

	(A) ADJUSTED MEANS			(B) %CHANGES FROM STANDARDIZED MEAN			
MEASURE GROUP	20+	10-19	0-9	GROUP	20+	10-19	0-9
BM0-9							
NO SCHL	3.511	3.475	3.521	NO SCHL	.54	3.48	-1.38
PRIMARY	3.514	3.361	3.553	PRIMARY	.62	.06	-.49
SECOND	3.497	3.409	3.652	SECOND	.14	1.50	2.29
HIGH	3.685	3.270	3.565	HIGH	2.68	-2.63	-.14
UNIV	3.092	3.079	3.261	UNIV	-11.45	-8.31	-8.65
MEAN	3.502	3.363	3.566	STD.MEAN	3.49	3.36	3.57
SD	.177	.137	.132	SD	5.06	4.08	3.69
CHI-SQ (4DF)	4.7	6.7	8.0	CHI-SQ (4DF)	4.7	6.7	8.0
BM10-19							
NO SCHL	2.539	2.043		NO SCHL	9.07	4.25	
PRIMARY	2.466	1.941		PRIMARY	5.95	-.99	
SECOND	2.400	2.131		SECOND	3.10	8.69	
HIGH	1.879	1.615		HIGH	-19.30	-17.62	
UNIV	1.649	1.684		UNIV	-29.15	-14.08	
MEAN	2.398	1.971		STD.MEAN	2.33	1.96	
SD	.365	.201		SD	15.27	10.25	
CHI-SQ (4DF)	26.6	17.2		CHI-SQ (4DF)	26.6	17.2	
NCEB							
NO SCHL	6.545			NO SCHL	4.19		
PRIMARY	6.484			PRIMARY	3.22		
SECOND	6.343			SECOND	.98		
HIGH	5.839			HIGH	-7.05		
UNIV	5.159			UNIV	-17.87		
MEAN	6.374			STD.MEAN	6.28		
SD	.521			SD	8.29		
CHI-SQ (4DF)	15.8			CHI-SQ (4DF)	15.8		

TABLE 6.7

MEAN FERTILITY BY MARRIAGE DURATION, MARRIAGE COHORT AND H EDUC

STEP= 7 VARIABLES ENTERED :
H EDUC YSFM AGFM ZONE RACE TPRES R EDUC

	(A) ADJUSTED MEANS			(B) %CHANGES FROM STANDARDIZED MEAN			
MEASURE GROUP	20+	10-19	0-9	GROUP	20+	10-19	0-9
BM0-9							
NO SCHL	3.488	3.457	3.484	NO SCHL	-.25	2.87	-2.40
PRIMARY	3.510	3.344	3.546	PRIMARY	.39	-.51	-.64
SECOND	3.502	3.406	3.666	SECOND	.15	1.31	2.73
HIGH	3.601	3.309	3.555	HIGH	2.99	-1.55	-.41
UNIV	3.159	3.197	3.267	UNIV	-9.65	-4.86	-8.46
MEAN	3.502	3.363	3.566	STD.MEAN	3.50	3.36	3.57
SD	.152	.089	.132	SD	4.34	2.63	3.70
CHI-SQ (4DF)	3.3	2.7	8.0	CHI-SQ (4DF)	3.3	2.7	8.0
BM10-19							
NO SCHL	2.484	1.950		NO SCHL	6.17	-.81	
PRIMARY	2.448	1.893		PRIMARY	4.63	-3.72	
SECOND	2.428	2.156		SECOND	3.78	9.69	
HIGH	1.952	1.744		HIGH	-16.59	-11.27	
UNIV	1.717	1.791		UNIV	-26.61	-8.90	
MEAN	2.398	1.971		STD.MEAN	2.34	1.97	
SD	.313	.144		SD	13.37	7.34	
CHI-SQ (4DF)	15.8	14.0		CHI-SQ (4DF)	15.8	14.0	
NCEB							
NO SCHL	6.463			NO SCHL	2.44		
PRIMARY	6.459			PRIMARY	2.53		
SECOND	6.384			SECOND	1.34		
HIGH	5.938			HIGH	-5.74		
UNIV	5.292			UNIV	-15.99		
MEAN	6.374			STD.MEAN	6.30		
SD	.460			SD	7.14		
CHI-SQ (4DF)	8.6			CHI-SQ (4DF)	8.6		

TABLE 6.8

MEAN FERTILITY BY MARRIAGE DURATION, MARRIAGE COHORT AND H EDUC

STEP= 8 VARIABLES ENTERED :
H EDUC YSFM AGFM ZONE RACE TPRES R EDUC WSTA

	(A) ADJUSTED MEANS			(B) %CHANGES FROM STANDARDIZED MEAN			
MEASURE GROUP	20+	10-19	0-9	GROUP	20+	10-19	0-9
BM0-9							
NO SCHL	3.503	3.467	3.487	NO SCHL	.26	3.16	-2.32
PRIMARY	3.515	3.344	3.551	PRIMARY	.61	-.49	-.51
SECOND	3.493	3.402	3.662	SECOND	-.01	1.23	2.58
HIGH	3.584	3.305	3.550	HIGH	2.59	-1.65	-.55
UNIV	3.148	3.203	3.278	UNIV	-9.90	-4.68	-8.17
MEAN	3.502	3.363	3.566	STD.MEAN	3.49	3.36	3.57
SD	.154	.089	.127	SD	4.40	2.65	3.56
CHI-SQ (4DF)	3.2	2.0	7.2	CHI-SQ (4DF)	3.2	2.0	7.2
BM10-19							
NO SCHL	2.497	1.999		NO SCHL	6.84	1.76	
PRIMARY	2.452	1.900		PRIMARY	4.91	-3.31	
SECOND	2.421	2.148		SECOND	3.58	9.33	
HIGH	1.937	1.722		HIGH	-17.10	-12.33	
UNIV	1.705	1.759		UNIV	-27.06	-10.47	
MEAN	2.398	1.971		STD.MEAN	2.34	1.96	
SD	.321	.157		SD	13.73	7.97	
CHI-SQ (4DF)	16.5	13.8		CHI-SQ (4DF)	16.5	13.8	
NCEB							
NO SCHL	6.489			NO SCHL	3.11		
PRIMARY	6.469			PRIMARY	2.80		
SECOND	6.365			SECOND	1.13		
HIGH	5.900			HIGH	-6.25		
UNIV	5.265			UNIV	-16.34		
MEAN	6.374			STD.MEAN	6.29		
SD	.468			SD	7.44		
CHI-SQ (4DF)	9.6			CHI-SQ (4DF)	9.5		

TABLE 6.9

MEAN FERTILITY BY MARRIAGE DURATION, MARRIAGE COHORT AND H EDUC

STEP= 9 VARIABLES ENTERED :
H EDUC YSFM AGFM ZONE RACE TPRES R EDUC WSTA HOCCUP

	(A) ADJUSTED MEANS			(B) %CHANGES FROM STANDARDIZED MEAN			
MEASURE GROUP	20+	10-19	0-9	GROUP	20+	10-19	0-9
BM0-9							
NO SCHL	3.488	3.437	3.490	NO SCHL	-.50	2.19	-2.19
PRIMARY	3.501	3.318	3.549	PRIMARY	-.11	-1.35	-.55
SECOND	3.496	3.401	3.654	SECOND	-.29	1.11	2.39
HIGH	3.662	3.374	3.544	HIGH	4.48	.30	-.68
UNIV	3.280	3.329	3.330	UNIV	-6.42	-1.04	-6.68
MEAN	3.502	3.363	3.566	STD.MEAN	3.50	3.36	3.57
SD	.121	.044	.106	SD	3.46	1.32	2.97
CHI-SQ (4DF)	2.7	1.8	8.0	CHI-SQ (4DF)	2.7	1.8	8.0
BM10-19							
NO SCHL	2.471	1.961		NO SCHL	4.99	-.49	
PRIMARY	2.432	1.862		PRIMARY	3.32	-5.48	
SECOND	2.425	2.136		SECOND	3.04	8.41	
HIGH	2.049	1.858		HIGH	-12.94	-5.69	
UNIV	1.894	1.939		UNIV	-19.52	-1.60	
MEAN	2.398	1.971		STD.MEAN	2.35	1.97	
SD	.236	.101		SD	10.04	5.12	
CHI-SQ (4DF)	7.2	10.4		CHI-SQ (4DF)	7.2	10.4	
NCEB							
NO SCHL	6.440			NO SCHL	1.84		
PRIMARY	6.430			PRIMARY	1.68		
SECOND	6.374			SECOND	.79		
HIGH	6.113			HIGH	-3.33		
UNIV	5.609			UNIV	-11.31		
MEAN	6.374			STD.MEAN	6.32		
SD	.316			SD	4.99		
CHI-SQ (4DF)	3.2			CHI-SQ (4DF)	3.2		

TABLE 6.10

MEAN FERTILITY BY MARRIAGE DURATION, MARRIAGE COHORT AND H EDUC

STEP= 10 VARIABLES ENTERED :
H EDUC YSFM AGFM ZONE RACE TPRES R EDUC WSTA HOCCUP ST LIV

	(A) ADJUSTED MEANS			(B) %CHANGES FROM STANDARDIZED MEAN			
MEASURE GROUP	20+	10-19	0-9	GROUP	20+	10-19	0-9
BM0-9							
NO SCHL	3.485	3.398	3.465	NO SCHL	-.59	.93	-2.78
PRIMARY	3.500	3.294	3.527	PRIMARY	-.15	-2.14	-1.05
SECOND	3.496	3.408	3.654	SECOND	-.28	1.25	2.53
HIGH	3.665	3.431	3.568	HIGH	4.55	1.90	.11
UNIV	3.285	3.421	3.382	UNIV	-6.28	1.62	-5.11
MEAN	3.502	3.363	3.566	STD.MEAN	3.51	3.37	3.56
SD	.121	.049	.092	SD	3.44	1.46	2.58
CHI-SQ (4DF)	2.7	2.6	6.4	CHI-SQ (4DF)	2.7	2.6	6.4
BM10-19							
NO SCHL	2.503	1.901		NO SCHL	5.44	-3.69	
PRIMARY	2.349	1.829		PRIMARY	-1.02	-7.33	
SECOND	2.505	2.146		SECOND	5.54	8.70	
HIGH	2.159	1.937		HIGH	-9.05	-1.88	
UNIV	2.031	2.073		UNIV	-14.42	5.01	
MEAN	2.398	1.971		STD.MEAN	2.37	1.97	
SD	.188	.116		SD	7.93	5.86	
CHI-SQ (4DF)	5.5	12.4		CHI-SQ (4DF)	5.5	12.4	
NCEB							
NO SCHL	6.399			NO SCHL	1.04		
PRIMARY	6.418			PRIMARY	1.33		
SECOND	6.390			SECOND	.90		
HIGH	6.165			HIGH	-2.65		
UNIV	5.694			UNIV	-10.10		
MEAN	6.374			STD.MEAN	6.33		
SD	.276			SD	4.35		
CHI-SQ (4DF)	2.4			CHI-SQ (4DF)	2.4		

TABLE 7.1

MEAN FERTILITY BY MARRIAGE DURATION, MARRIAGE COHORT AND HOCCUP

STEP= 1 VARIABLES ENTERED :
HOCCUP

	(A) ADJUSTED MEANS			(B) %CHANGES FROM STANDARDIZED MEAN			
MEASURE GROUP	20+	10-19	0-9	GROUP	20+	10-19	0-9
BM0-9							
FARMER	3.601	3.545	3.621	FARMER	4.50	6.35	2.46
PRO&CLER	3.279	3.027	3.299	PRO&CLER	-4.83	-9.19	-6.67
AG WRKE	3.441	3.417	3.586	AG WRKE	-.12	2.52	1.45
R SK&UNS	3.427	3.328	3.539	R SK&UNS	-.55	-.14	.12
K SLE&SV	3.569	3.383	3.751	K SLE&SV	3.57	1.50	6.12
MEAN	3.502	3.363	3.566	STD.MEAN	3.45	3.33	3.53
SD	.115	.172	.148	SD	3.33	5.16	4.19
CHI-SQ (4DF)	10.8	24.3	12.6	CHI-SQ (4DF)	10.8	24.3	12.6
BM10-19							
FARMER	2.717	2.334		FARMER	18.25	18.77	
PRO&CLER	1.624	1.204		PRO&CLER	-33.68	-38.73	
AG WRKE	2.572	2.245		AG WRKE	11.95	14.26	
R SK&UNS	2.261	1.974		R SK&UNS	-1.60	.44	
K SLE&SV	2.235	1.867		K SLE&SV	-2.73	-5.00	
MEAN	2.398	1.972		STD.MEAN	2.30	1.97	
SD	.412	.399		SD	17.93	20.30	
CHI-SQ (4DF)	90.6	76.6		CHI-SQ (4DF)	90.6	76.6	
NCEB							
FARMER	6.944			FARMER	12.27		
PRO&CLER	4.995			PRO&CLER	-19.25		
AG WRKE	6.520			AG WRKE	5.42		
R SK&UNS	6.133			R SK&UNS	-.84		
K SLE&SV	6.111			K SLE&SV	-1.20		
MEAN	6.374			STD.MEAN	6.19		
SD	.649			SD	10.49		
CHI-SQ (4DF)	77.4			CHI-SQ (4DF)	77.4		

TABLE 7.2

MEAN FERTILITY BY MARRIAGE DURATION, MARRIAGE COHORT AND HOCCUP

STEP= 2 VARIABLES ENTERED :
HOCCUP YSFM

	(A) ADJUSTED MEANS			(B) %CHANGES FROM STANDARDIZED MEAN			
MEASURE GROUP	20+	10-19.	0-9	GROUP	20+	10-19	0-9
BM0-9							
FARMER	3.604	3.536	3.636	FARMER	4.60	6.09	2.88
PRO&CLER	3.274	3.037	3.305	PRO&CLER	-4.96	-8.88	-6.50
AG WRKE	3.443	3.419	3.600	AG WRKE	-.07	2.58	1.86
R SK&UNS	3.424	3.327	3.525	R SK&UNS	-.60	-.17	-.26
K SLE&SV	3.568	3.390	3.740	K SLE&SV	3.57	1.72	5.80
MEAN	3.502	3.363	3.566	STD.MEAN	3.45	3.33	3.53
SD	.117	.167	.146	SD	3.40	5.00	4.12
CHI-SQ (4DF)	10.8	22.7	12.4	CHI-SQ (4DF)	10.8	22.7	12.4
BM10-19							
FARMER	2.685	2.328		FARMER	16.53	18.48	
PRO&CLER	1.580	1.220		PRO&CLER	-31.41	-37.92	
AG WRKE	2.559	2.250		AG WRKE	11.07	14.50	
R SK&UNS	2.287	1.970		R SK&UNS	-.74	.26	
K SLE&SV	2.242	1.869		K SLE&SV	-2.69	-4.91	
MEAN	2.398	1.972		STD.MEAN	2.30	1.96	
SD	.383	.393		SD	16.61	19.98	
CHI-SQ (4DF)	75.2	73.7		CHI-SQ (4DF)	75.2	73.7	
NCEB							
FARMER	6.875			FARMER	10.92		
PRO&CLER	5.115			PRO&CLER	-17.48		
AG WRKE	6.491			AG WRKE	4.73		
R SK&UNS	6.188			R SK&UNS	-.16		
K SLE&SV	6.126			K SLE&SV	-1.17		
MEAN	6.374			STD.MEAN	6.20		
SD	.586			SD	9.45		
CHI-SQ (4DF)	60.7			CHI-SQ (4DF)	60.7		

TABLE 7.3

MEAN FERTILITY BY MARRIAGE DURATION, MARRIAGE COHORT AND HOCCUP

STEP= 3 VARIABLES ENTERED :
HOCCUP YSFM AGFM

	(A) ADJUSTED MEANS			(B) %CHANGES FROM STANDARDIZED MEAN			
MEASURE GROUP	20+	10-19	0-9	GROUP	20+	10-19	0-9
BM0-9							
FARMER	3.610	3.530	3.608	FARMER	4.84	5.96	2.19
PRO&CLER	3.264	3.162	3.423	PRO&CLER	-5.20	-5.10	-3.07
AG WRKE	3.463	3.369	3.546	AG WRKE	.56	1.11	.41
R SK&UNS	3.420	3.281	3.499	R SK&UNS	-.67	-1.52	-.92
K SLE&SV	3.562	3.416	3.760	K SLE&SV	3.14	2.52	6.47
MEAN	3.502	3.363	3.566	STD.MEAN	3.44	3.33	3.53
SD	.119	.124	.114	SD	3.45	3.73	3.22
CHI-SQ (4DF)	9.7	15.1	8.2	CHI-SQ (4DF)	9.7	15.1	8.2
BM10-19							
FARMER	2.630	2.280		FARMER	13.29	16.34	
PRO&CLER	1.805	1.552		PRO&CLER	-22.24	-20.83	
AG WRKE	2.478	2.030		AG WRKE	6.77	3.54	
R SK&UNS	2.290	1.902		R SK&UNS	-1.32	-2.95	
K SLE&SV	2.308	1.925		K SLE&SV	-.57	-1.80	
MEAN	2.398	1.972		STD.MEAN	2.32	1.96	
SD	.278	.235		SD	11.96	11.99	
CHI-SQ (4DF)	40.7	31.8		CHI-SQ (4DF)	40.7	31.8	
NCEB							
FARMER	6.807			FARMER	9.44		
PRO&CLER	5.400			PRO&CLER	-13.19		
AG WRKE	6.395			AG WRKE	2.83		
R SK&UNS	6.191			R SK&UNS	-.46		
K SLE&SV	6.204			K SLE&SV	-.25		
MEAN	6.374			STD.MEAN	6.22		
SD	.458			SD	7.36		
CHI-SQ (4DF)	38.7			CHI-SQ (4DF)	38.7		

TABLE 7.4

MEAN FERTILITY BY MARRIAGE DURATION, MARRIAGE COHORT AND HOCCUP

STEP= 4 VARIABLES ENTERED :
HOCCUP YSFM AGFM ZONE

	(A) ADJUSTED MEANS			(B) %CHANGES FROM STANDARDIZED MEAN			
MEASURE GROUP	20+	10-19	0-9	GROUP	20+	10-19	0-9
BM0-9							
FARMER	3.629	3.495	3.629	FARMER	5.39	4.92	2.82
PRO&CLER	3.270	3.112	3.421	PRO&CLER	-5.06	-6.60	-3.10
AG WRKE	3.417	3.438	3.383	AG WRKE	-.79	3.19	-4.17
R SK&UNS	3.476	3.328	3.543	R SK&UNS	.92	-.11	.38
K SLE&SV	3.441	3.384	3.724	K SLE&SV	-.09	1.58	5.50
MEAN	3.502	3.363	3.566	STD.MEAN	3.44	3.33	3.53
SD	.115	.132	.127	SD	3.35	3.97	3.60
CHI-SQ (4DF)	9.1	12.6	9.0	CHI-SQ (4DF)	9.1	12.6	9.0
BM10-19							
FARMER	2.566	2.252		FARMER	10.26	15.04	
PRO&CLER	1.816	1.529		PRO&CLER	-21.96	-21.87	
AG WRKE	2.503	1.855		AG WRKE	7.51	-5.26	
R SK&UNS	2.390	1.986		R SK&UNS	2.66	1.47	
K SLE&SV	2.244	1.910		K SLE&SV	-3.60	-2.44	
MEAN	2.398	1.972		STD.MEAN	2.33	1.96	
SD	.267	.233		SD	11.48	11.88	
CHI-SQ (4DF)	30.2	31.5		CHI-SQ (4DF)	30.2	31.5	
NCEB							
FARMER	6.739			FARMER	8.18		
PRO&CLER	5.468			PRO&CLER	-12.23		
AG WRKE	6.430			AG WRKE	3.22		
R SK&UNS	6.337			R SK&UNS	1.73		
K SLE&SV	6.033			K SLE&SV	-3.15		
MEAN	6.374			STD.MEAN	6.23		
SD	.430			SD	6.91		
CHI-SQ (4DF)	29.6			CHI-SQ (4DF)	29.6		

TABLE 7.5

MEAN FERTILITY BY MARRIAGE DURATION, MARRIAGE COHORT AND HOCCUP

STEP= 5 VARIABLES ENTERED :
HOCCUP YSFM AGFM ZONE RACE

	(A) ADJUSTED MEANS			(B) %CHANGES FROM STANDARDIZED MEAN			
MEASURE GROUP	20+	10-19	0-9	GROUP	20+	10-19	0-9
BM0-9							
FARMER	3.624	3.504	3.661	FARMER	5.20	5.18	3.68
PRO&CLER	3.288	3.130	3.392	PRO&CLER	-4.54	-6.04	-3.94
AG WRKE	3.437	3.447	3.366	AG WRKE	-.23	3.48	-4.68
R SK&UNS	3.476	3.324	3.551	R SK&UNS	.92	-.23	.57
K SLE&SV	3.430	3.359	3.694	K SLE&SV	-.43	.81	4.62
MEAN	3.502	3.363	3.566	STD.MEAN	3.44	3.33	3.53
SD	.107	.128	.135	SD	3.12	3.85	3.81
CHI-SQ (4DF)	7.7	11.8	10.6	CHI-SQ (4DF)	7.7	11.8	10.6
BM10-19							
FARMER	2.554	2.264		FARMER	9.67	15.65	
PRO&CLER	1.822	1.530		PRO&CLER	-21.78	-21.82	
AG WRKE	2.509	1.822		AG WRKE	7.75	-6.90	
R SK&UNS	2.393	2.001		R SK&UNS	2.75	2.25	
K SLE&SV	2.268	1.878		K SLE&SV	-3.06	-4.05	
MEAN	2.398	1.972		STD.MEAN	2.33	1.96	
SD	.264	.239		SD	11.32	12.21	
CHI-SQ (4DF)	28.3	32.6		CHI-SQ (4DF)	28.3	32.6	
NCEB							
FARMER	6.721			FARMER	7.86		
PRO&CLER	5.486			PRO&CLER	-11.95		
AG WRKE	6.454			AG WRKE	3.58		
R SK&UNS	6.343			R SK&UNS	1.79		
K SLE&SV	6.036			K SLE&SV	-3.14		
MEAN	6.374			STD.MEAN	6.23		
SD	.422			SD	6.78		
CHI-SQ (4DF)	27.3			CHI-SQ (4DF)	27.3		

TABLE 7.6

MEAN FERTILITY BY MARRIAGE DURATION, MARRIAGE COHORT AND HOCCUP

STEP= 6 VARIABLES ENTERED :
HOCCUP YSFM AGFM ZONE RACE TPRES

	(A) ADJUSTED MEANS			(B) %CHANGES FROM STANDARDIZED MEAN			
MEASURE GROUP	20+	10-19	0-9	GROUP	20+	10-19	0-9
BM0-9							
FARMER	3.632	3.511	3.678	FARMER	5.52	5.38	4.14
PRO&CLER	3.267	3.122	3.364	PRO&CLER	-5.09	-6.31	-4.76
AG WRKE	3.452	3.462	3.390	AG WRKE	.29	3.91	-4.02
R SK&UNS	3.470	3.315	3.548	R SK&UNS	.82	-.50	.44
K SLE&SV	3.420	3.363	3.685	K SLE&SV	-.66	.95	4.33
MEAN	3.502	3.363	3.566	STD.MEAN	3.44	3.33	3.53
SD	.117	.136	.137	SD	3.39	4.07	3.87
CHI-SQ (4DF)	8.6	12.7	11.1	CHI-SQ (4DF)	8.6	12.7	11.1
BM10-19							
FARMER	2.548	2.244		FARMER	9.37	14.72	
PRO&CLER	1.823	1.548		PRO&CLER	-21.76	-20.86	
AG WRKE	2.506	1.789		AG WRKE	7.56	-8.55	
R SK&UNS	2.394	2.012		R SK&UNS	2.74	2.86	
K SLE&SV	2.272	1.889		K SLE&SV	-2.48	-3.47	
MEAN	2.398	1.972		STD.MEAN	2.33	1.96	
SD	.261	.231		SD	11.21	11.82	
CHI-SQ (4DF)	26.1	30.1		CHI-SQ (4DF)	26.1	30.1	
NCEB							
FARMER	6.712			FARMER	7.69		
PRO&CLER	5.488			PRO&CLER	-11.94		
AG WRKE	6.449			AG WRKE	3.48		
R SK&UNS	6.343			R SK&UNS	1.78		
K SLE&SV	6.058			K SLE&SV	-2.80		
MEAN	6.374			STD.MEAN	6.23		
SD	.417			SD	6.70		
CHI-SQ (4DF)	25.0			CHI-SQ (4DF)	25.0		

TABLE 7.7

MEAN FERTILITY BY MARRIAGE DURATION, MARRIAGE COHORT AND HOCCUP

STEP= 7 VARIABLES ENTERED :
HOCCUP YSFM AGFM ZONE RACE TPRES R EDUC

	(A) ADJUSTED MEANS			(B) %CHANGES FROM STANDARDIZED MEAN			
MEASURE GROUP	20+	10-19	0-9	GROUP	20+	10-19	0-9
BM0-9							
FARMER	3.630	3.502	3.677	FARMER	5.39	5.13	4.12
PRO&CLER	3.295	3.172	3.387	PRO&CLER	-4.32	-4.79	-4.08
AG WRKE	3.441	3.451	3.372	AG WRKE	-.10	3.59	-4.50
R SK&UNS	3.468	3.306	3.543	R SK&UNS	.69	-.75	.32
K SLE&SV	3.425	3.362	3.686	K SLE&SV	-.56	.91	4.38
MEAN	3.502	3.363	3.566	STD.MEAN	3.44	3.33	3.53
SD	.107	.115	.135	SD	3.11	3.47	3.82
CHI-SQ (4DF)	7.3	8.7	10.6	CHI-SQ (4DF)	7.3	8.7	10.6
BM10-19							
FARMER	2.535	2.222		FARMER	8.53	13.64	
PRO&CLER	1.919	1.614		PRO&CLER	-17.87	-17.47	
AG WRKE	2.463	1.766		AG WRKE	5.45	-9.70	
R SK&UNS	2.386	1.997		R SK&UNS	2.12	2.12	
K SLE&SV	2.298	1.914		K SLE&SV	-1.62	-2.13	
MEAN	2.398	1.972		STD.MEAN	2.34	1.96	
SD	.216	.207		SD	9.24	10.56	
CHI-SQ (4DF)	16.1	21.6		CHI-SQ (4DF)	16.1	21.6	
NCEB							
FARMER	6.694			FARMER	7.25		
PRO&CLER	5.623			PRO&CLER	-9.92		
AG WRKE	6.385			AG WRKE	2.30		
R SK&UNS	6.333			R SK&UNS	1.47		
K SLE&SV	6.097			K SLE&SV	-2.31		
MEAN	6.374			STD.MEAN	6.24		
SD	.357			SD	5.72		
CHI-SQ (4DF)	17.6			CHI-SQ (4DF)	17.6		

TABLE 7.8

MEAN FERTILITY BY MARRIAGE DURATION, MARRIAGE COHORT AND HOCCUP

STEP= 8 VARIABLES ENTERED :
HOCCUP YSFM AGFM ZONE RACE TPRES R EDUC WSTAT

	(A) ADJUSTED MEANS			(B) %CHANGES FROM STANDARDIZED MEAN			
MEASURE GROUP	20+	10-19	0-9	GROUP	20+	10-19	0-9
BM0-9							
FARMER	3.617	3.491	3.678	FARMER	5.04	4.80	4.17
PRO&CLER	3.283	3.169	3.401	PRO&CLER	-4.67	-4.88	-3.69
AG WRKE	3.478	3.478	3.391	AG WRKE	.99	4.39	-3.98
R SK&UNS	3.473	3.309	3.532	R SK&UNS	.86	-.69	.03
K SLE&SV	3.422	3.364	3.683	K SLE&SV	-.62	.97	4.28
MEAN	3.502	3.363	3.566	STD.MEAN	3.44	3.33	3.53
SD	.108	.119	.127	SD	3.12	3.56	3.61
CHI-SQ (4DF)	6.4	8.5	9.5	CHI-SQ (4DF)	6.4	8.5	9.5
BM10-19							
FARMER	2.525	2.200		FARMER	8.09	12.52	
PRO&CLER	1.909	1.625		PRO&CLER	-18.29	-16.92	
AG WRKE	2.494	1.822		AG WRKE	6.77	-6.84	
R SK&UNS	2.391	1.995		R SK&UNS	2.35	2.01	
K SLE&SV	2.295	1.916		K SLE&SV	-1.73	-2.02	
MEAN	2.398	1.972		STD.MEAN	2.34	1.96	
SD	.222	.190		SD	9.51	9.72	
CHI-SQ (4DF)	16.2	17.8		CHI-SQ (4DF)	16.2	17.8	
NCEB							
FARMER	6.664			FARMER	6.79		
PRO&CLER	5.593			PRO&CLER	-10.37		
AG WRKE	6.471			AG WRKE	3.69		
R SK&UNS	6.347			R SK&UNS	1.70		
K SLE&SV	6.090			K SLE&SV	-2.41		
MEAN	6.374			STD.MEAN	6.24		
SD	.370			SD	5.93		
CHI-SQ (4DF)	17.2			CHI-SQ (4DF)	17.2		

TABLE 7.9

MEAN FERTILITY BY MARRIAGE DURATION, MARRIAGE COHORT AND HOCCUP

STEP= 9 VARIABLES ENTERED :
HOCCUP YSFM AGFM ZONE RACE TPRES R EDUC WSTAT H EDUC

	(A) ADJUSTED MEANS			(B) %CHANGES FROM STANDARDIZED MEAN			
MEASURE GROUP	20+	10-19	0-9	GROUP	20+	10-19	0-9
BM0-9							
FARMER	3.617	3.494	3.667	FARMER	5.04	4.87	3.91
PRO&CLER	3.286	3.171	3.484	PRO&CLER	-4.61	-4.81	-1.27
AG WRKE	3.481	3.482	3.386	AG WRKE	1.10	4.52	-4.05
R SK&UNS	3.476	3.308	3.512	R SK&UNS	.92	-.71	-.48
K SLE&SV	3.414	3.357	3.669	K SLE&SV	-.85	.77	3.95
MEAN	3.502	3.363	3.566	STD.MEAN	3.44	3.33	3.53
SD	.108	.119	.110	SD	3.13	3.58	3.11
CHI-SQ (4DF)	5.9	7.6	6.9	CHI-SQ (4DF)	5.9	7.6	6.9
BM10-19							
FARMER	2.509	2.202		FARMER	6.95	12.63	
PRO&CLER	2.094	1.652		PRO&CLER	-10.72	-16.53	
AG WRKE	2.466	1.847		AG WRKE	5.10	-6.54	
R SK&UNS	2.370	1.985		R SK&UNS	1.03	1.51	
K SLE&SV	2.301	1.898		K SLE&SV	-1.93	-2.95	
MEAN	2.398	1.972		STD.MEAN	2.35	1.96	
SD	.146	.180		SD	6.23	9.19	
CHI-SQ (4DF)	6.9	14.3		CHI-SQ (4DF)	6.9	14.3	
NCEB							
FARMER	6.646			FARMER	6.30		
PRO&CLER	5.810			PRO&CLER	-7.07		
AG WRKE	6.437			AG WRKE	2.96		
R SK&UNS	6.325			R SK&UNS	1.17		
K SLE&SV	6.091			K SLE&SV	-2.58		
MEAN	6.374			STD.MEAN	6.25		
SD	.288			SD	4.61		
CHI-SQ (4DF)	10.9			CHI-SQ (4DF)	10.9		

TABLE 7.10

MEAN FERTILITY BY MARRIAGE DURATION, MARRIAGE COHORT AND HOCCUP

STEP= 10 VARIABLES ENTERED :
HOCCUP YSFM AGFM ZONE RACE TPRES R EDUC WSTAT H EDUC ST LIV

	(A) ADJUSTED MEANS			(B) %CHANGES FROM STANDARDIZED MEAN			
MEASURE GROUP	20+	10-19	0-9	GROUP	20+	10-19	0-9
BM0-9							
FARMER	3.617	3.493	3.657	FARMER	5.04	4.88	3.65
PRO&CLER	3.288	3.208	3.512	PRO&CLER	-4.53	-3.69	-.45
AG WRKE	3.480	3.466	3.364	AG WRKE	1.06	3.73	-4.65
R SK&UNS	3.475	3.291	3.502	R SK&UNS	.90	-1.22	-.73
K SLE&SV	3.415	3.375	3.689	K SLE&SV	-.82	1.33	4.56
MEAN	3.502	3.363	3.566	STD.MEAN	3.44	3.33	3.53
SD	.107	.105	.117	SD	3.10	3.15	3.33
CHI-SQ (4DF)	5.8	7.1	7.4	CHI-SQ (4DF)	5.8	7.1	7.4
BM10-19							
FARMER	2.507	2.202		FARMER	6.78	12.62	
PRO&CLER	2.130	1.707		PRO&CLER	-9.28	-12.67	
AG WRKE	2.451	1.810		AG WRKE	4.38	-7.43	
R SK&UNS	2.359	1.962		R SK&UNS	.47	.35	
K SLE&SV	2.318	1.919		K SLE&SV	-1.26	-1.83	
MEAN	2.398	1.972		STD.MEAN	2.35	1.95	
SD	.130	.166		SD	5.53	8.51	
CHI-SQ (4DF)	5.9	13.3		CHI-SQ (4DF)	5.9	13.3	
NCEB							
FARMER	6.644			FARMER	6.22		
PRO&CLER	5.853			PRO&CLER	-6.43		
AG WRKE	6.420			AG WRKE	2.64		
R SK&UNS	6.312			R SK&UNS	.92		
K SLE&SV	6.112			K SLE&SV	-2.28		
MEAN	6.374			STD.MEAN	6.25		
SD	.269			SD	4.31		
CHI-SQ (4DF)	10.0			CHI-SQ (4DF)	10.0		

TABLE 8

PERCENTILES OF CHI-SQUARED DISTRIBUTION

Degrees of Freedom	Probability of a Greater Value				
	.100	.050	.025	.010	.005
1	2.71	3.84	5.02	6.63	7.88
2	4.61	5.99	7.38	9.21	10.60
3	6.25	7.81	9.35	11.34	12.84
4	7.78	9.49	11.14	13.28	14.86
5	9.24	11.07	12.83	15.09	16.75