Scientific Reports

NUMBER 57 SEPTEMBER 1984

SUSHEELA SINGH

Guyana, Jamaica and Trinidad and Tobago: Socio-Economic Differentials in Cumulative Fertility

INTERNATIONAL STATISTICAL INSTITUTE
Permanent Office. Director: E. Lunenberg
428 Prinses Beatrixlaan, PO Box 950
2270 AZ Voorburg
Netherlands

WORLD FERTILITY SURVEY
Project Director: Halvor Gille
35–37 Grosvenor Gardens
London SW1W 0BS
United Kingdom

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.
This publication is part of the WFS Publications Programme which includes the WFS Basic Documentation, Occasional Papers and auxiliary publications. For further information on the WFS, write to the Information Office, International Statistical Institute, 428 Prinses Beatrixlaan, Voorburg, The Hague, Netherlands.

L'Enquête Mondiale sur la Fécondité (EMF) est un programme international de recherche dont le but est d'évaluer l'état actuel de la fécondité humaine dans le monde. Afin d'atteindre cet objectif, des enquêtes par sondage sur la fécondité sont mises en oeuvre et financées dans le plus grand nombre de pays possible, Ces études, élaborées et réalisées de façon scientifique, fournissent des données représentatives au niveau national et comparables au niveau international.
L'Institut International de Statistique avec l'appui des Nations Unies, a été chargé de la réalisation de ce projet en collaboration avec l'Union Internationale pour l'Etude Scientifique de la Population. Le financement est principalement assuré par le Fonds des Nations Unies pour les Activités en matière de Population et l'Agence pour le Développement International des Etats-Unis.
Cette publication fait partie du programme de publications de l'EMF, qui comprend la Documentation de base, les Documents Non-Périodiques et des publications auxiliaires. Pour tout renseignement complémentaire, s'adresser au Bureau d'Information, Institut International de Statistique, 428 Prinses Beatrixlaan, Voorburg, La Haye, Pays-Bas.

La Encuesta Mundial de Fecundidad (EMF) es un programa internacional de investigación cuyo propósito es determinar el estado actual de la fecundidad humana en el mundo. Para lograr este objetivo, se están promoviendo y financiando encuestas de fecundidad por muestreo en el mayor número posible de países. Estas encuestas son diseñadas y realizadas científicamente, nacionalmente representativas y comparables a nivel internacional.
El proyecto está a cargo del Instituto Internacional de Estadística en cooperación con la Unión Internacional para el Estudio Científico de la Población y con la colaboración de las Naciones Unidas. Es financiado principalmente por el Fondo de las Naciones Unidas para Actividades de Población y por la Agencia para el Desarrollo Internacional de los Estados Unidos.
Esta publicación ha sido editada por el Programa de Publicaciones de la EMF, el que incluye Documentación Básica, Publicaciones Ocasionales y publicaciones auxiliares. Puede obtenerse mayor información sobre la EMF escribiendo a la Oficina de Información, Instituto Internacional de Estadística, 428 Prinses Beatrixlaan, Voorburg-La Haya, Países Bajos.

Scientific Reports

Guyana, Jamaica and Trinidad and Tobago: Socio-Economic Differentials in Cumulative Fertility

SUSHEELA SINGH
WFS Central Staff

The recommended citation for this publication is:

Singh, Susheela (1984). Guyana, Jamaica and Trinidad and Tobago: Socio-Economic Differentials in Cumulative Fertility. *WFS Scientific Reports* no 57. Voorburg, Netherlands: International Statistical Institute.

Printed in Great Britain at the Alden Press
Oxford London and Northampton

Contents

PREFACE 7

ACKNOWLEDGEMENTS 8

1 INTRODUCTION 9

1.1 The Caribbean fertility surveys 9
1.2 Recent fertility trends 10
1.3 Fertility differentials in first country reports 10

2 DEMOGRAPHIC AND STATISTICAL FRAMEWORK FOR THE ANALYSIS 12

2.1 The basic set of tables 12
2.2 Association between background variables 14
2.3 Statistical methodology 15

3 GUYANA: SOCIO-ECONOMIC DIFFERENTIALS IN FERTILITY 18

3.1 Introduction 18
3.2 Age at entry into the first union 18
3.3 Residence background 19
3.4 Religion 20
3.5 Respondent's education 21
3.6 Respondent's occupation 24
3.7 Pattern of work 27
3.8 Partner's education 29
3.9 Partner's occupation 31
3.10 Conclusions 33

4 JAMAICA: SOCIO-ECONOMIC DIFFERENTIALS IN FERTILITY 37

4.1 Introduction 37
4.2 Age at entry into the first union 37
4.3 Residence status 38
4.4 Religion 40
4.5 Respondent's education 41
4.6 Resident's occupation 43
4.7 Employment before the first birth 47
4.8 Partner's education 48
4.9 Partner's occupation 49
4.10 Conclusions 51

5 TRINIDAD AND TOBAGO: SOCIO-ECONOMIC DIFFERENTIALS IN FERTILITY 54

5.1 Introduction 54
5.2 Age at entry into the first union 54
5.3 Residence status 55
5.4 Religion 57
5.5 Respondent's education 58
5.6 Respondent's occupation 61
5.7 Pattern of work 63
5.8 Partner's education 65
5.9 Partner's occupation 67
5.10 Conclusions 69

6 COMPARISON OF FINDINGS FROM THE THREE SURVEYS 73

REFERENCES 77

APPENDIX A – DETAILED TABLES 78

TABLES

1 Fertility trends from the three Caribbean surveys, during ten-year period before survey 10

2 Mean parity of women who entered their first union 10–19 years before the survey, by four background variables 11

3 Mean fertility by union duration, union cohort and respondent's education for Jamaica 13

4 Mean number of children ever born, by cohort and measure 18

5 Effect of age at entering first union on number of births in successive ten-year union duration periods 18

6 Effects of residence status (childhood/current place of residence) on early fertility (B0–9) 19

7 Effects of residence status (childhood/current place of residence) on late fertility (B10–19) and completed fertility (NCEB) 20

8 Guyana, Indians: effects of religion on early fertility (B0–9), late fertility (B10–19) and completed fertility (NCEB) 21

9 Effects of respondent's education on early fertility (B0–9) 22

10 Effects of respondent's education on late fertility (B10–19) and completed fertility (NCEB) 22

11 Effects of respondent's occupation on early fertility (B0–9) 25

12 Effects of respondent's occupation on late fertility (B10–19) and completed fertility (NCEB) 25

13 Fertility declines within respondents' occupational groups (in number of children) 26

14 Effects of pattern of work on early fertility (B0–9) 27

15 Effects of pattern of work on late fertility (B10–19) and completed fertility (NCEB) 28

16 Fertility declines within pattern of work groups (in number of children) 29

17 Effects of partner's education on early fertility (B0–9) 30

18 Effects of partner's education on late fertility (B10–19) and completed fertility (NCEB) 31

19 Effects of partner's occupation on early fertility (B0–9) 32

20 Effects of partner's occupation on late fertility (B10–19) and completed fertility (NCEB) 32

21 Cumulative percentage of total variance explained by independent variables, Indians and non-Indians, Guyana 33

22 Mean number of children ever born, by cohort and measure 37

23 Effect of age at entering first union on number of births in successive ten-year union duration periods 37

24 Effects of residential background (childhood/current place of residence) on early fertility (B0–9) 38

25 Effects of residential background (childhood/current place of residence) on late fertility (B10–19) and completed fertility (NCEB) 38

26 Fertility differentials according to health regions: unadjusted differentials, and differentials after adjusting for AGFU and RESID (step 3) 39

27 Effects of religion on early fertility (B0–9) 40

28 Effects of religion on late fertility (B10–19) and completed fertility (NCEB) 41

29 Effects of respondent's education on early fertility (B0–9) 42

30 Effects of respondent's education on late fertility (B10–19) and completed fertility (NCEB) 42

31 Fertility differentials for more detailed grouping of respondent's occupation: unadjusted differentials, and differentials after adjusting for AGFU, RESID, RELIG, REDUC, PARTNERS and CURSTAT (step 7) 44

32 Effects of respondent's occupation on early fertility (B0–9) 45

33 Effects of respondent's occupation on late fertility (B10–19) 46

34 Effects of partner's education on early fertility (B0–9) 48

35 Effects of partner's education on late fertility (B10–19) and completed fertility (NCEB) 49

36 Effects of partner's occupation on early fertility (B0–9) 50

37 Effects of partner's occupation on late fertility (B10–19) and completed fertility (NCEB) 50

38 Cumulative percentage of total variance explained by independent variable 51

39 Mean number of children ever born, by cohort and measure 54

40 Effect of age at entering first union on number of births in successive ten-year union duration periods 54

41 Effects of residence status (childhood/current place of residence) on early fertility (B0–9) 55

42 Effects of residence status (childhood/current place of residence) on late fertility (B10–19) and completed fertility (NCEB) 56

43 Effects of respondent's religion on early fertility (B0–9), late fertility (B10–19) and completed fertility (NCEB) for Indians 58

44 Effects of respondent's education on early fertility (B0–9) 59

45 Effects of respondent's education on late fertility (B10–19) and completed fertility (NCEB) 60

46 Effects of respondent's occupation on early fertility (B0–9) 61

47 Effects of respondent's occupation on late fertility (B10–19) and completed fertility (NCEB) 62

48 Effects of pattern of work on early fertility (B0–9) 64

49 Effects of pattern of work on late fertility (B10–19) and completed fertility (NCEB) 65

50 Effects of partner's education on early fertility (B0–9) 66

51 Effects of partner's education on late fertility (B10–19) and completed fertility (NCEB) 66

52 Effects of partner's occupation on early fertility (B0–9) 68

53 Effects of partner's occupation on late fertility (B10–19) and completed fertility (NCEB) 69

54 Cumulative percentage of total variance explained by independent variables, Indians and non-Indians 70

A1 Percentiles of chi-squared distribution 78

A2 Guyana–non-Indians: association of background variables, shown as percentage distribution 79

A3 Guyana–Indians: association of background variables, shown as percentage distribution 80

A4 Jamaica: association of background variables, shown as percentage distribution 81

A5 Trinidad and Tobago–non-Indians: association of background variables, shown as percentage distribution 82

A6 Trinidad and Tobago–Indians: association of background variables, shown as percentage distribution 83

A7 Guyana: average proportion of fertile pregnancies which are foetal losses, per woman, by duration cohort and by education and occupation subgroup, for non-Indians and Indians 84

A8 Guyana: average number of months of breastfeeding the penultimate child (based on women with two or more children), by duration cohort and by education and occupation subgroup, for non-Indians and Indians 84

A9 Guyana: proportion who ever used any method of contraception, by duration cohort and by education and occupation subgroup, for non-Indians and Indians 84

A10 Guyana: proportion who are currently using contraception, by duration cohort and by education and occupation subgroup, for non-Indians and Indians 84

A11 Guyana: mean length of the first birth interval (months), by duration cohort and by education and occupation subgroup, for non-Indians and Indians 85

A12 Guyana: mean age at first union, by duration cohort and by education and occupation subgroup, for non-Indians and Indians 85

A13 Guyana: percentage of time since first union that was spent in union, by duration cohort and by education and occupation subgroup, for non-Indians and Indians 85

A14 Guyana: percentage currently in union, by duration cohort and by education and occupation subgroup, for non-Indians and Indians 85

A15 Guyana: average number of partners, by duration cohort and by education and occupation subgroup, for non-Indians and Indians 86

A16 Guyana: percentage in the state of secondary sterility, by duration cohort and by education and occupation subgroup, for non-Indians and Indians 86

A17 Jamaica: Unadjusted fertility differentials according to parish of current residence 86

A18 Jamaica: unadjusted fertility differentials according to parish of current residence groups, by duration cohort 87

A19 Trinidad and Tobago: average proportion of fertile pregnancies which are foetal losses, per woman, by duration cohort and by education and occupation subgroup, for non-Indians and Indians 87

A20 Trinidad and Tobago: average number of months of breastfeeding the penultimate child, by duration cohort and by education and occupation subgroup, for non-Indians and Indians (limited to women with two or more children) 87

A21 Trinidad and Tobago: proportion who ever used any method of contraception, by duration cohort and by education and occupation subgroup, for non-Indians and Indians 88

A22 Trinidad and Tobago: proportion currently using contraception, by duration cohort and by education and occupation subgroup, for non-Indians and Indians 88

A23 Trinidad and Tobago: average length of first birth interval (months), by duration cohort and by education and occupation subgroup, for non-Indians and Indians 88

A24 Trinidad and Tobago: average age at the first union, by duration cohort and by education and occupation subgroup, for non-Indians and Indians 88

A25 Trinidad and Tobago: proportion of time since first union that was spent in unions, by duration cohort and by education and occupation subgroup, for non-Indians and Indians 89

A26 Trinidad and Tobago: proportion currently in union, by duration cohort and by education and occupation subgroup, for non-Indians and Indians 89

A27 Trinidad and Tobago: average number of partners per woman, by duration cohort and by education and occupation subgroup, for non-Indians and Indians 89

A28 Trinidad and Tobago: percentage in the state of secondary sterility, by duration cohort and by education and occupation subgroup, for non-Indians and Indians 89

Preface

The policy of WFS is to encourage and to support, where possible, further detailed analysis of the survey data following the publication of the First Country Report. The national meetings, as in the case of other participating countries, held in the three English-speaking Caribbean countries – Guyana, Jamaica and Trinidad and Tobago – and the two regional seminars provided the forum for identifying the topics and for preparing project proposals for such analyses. After a careful review of the proposals, the countries approved the choice of five topics: contraception, infant and child mortality, union patterns and fertility, fertility preferences and socio-economic differentials in fertility. It was also decided that work on the first three topics would be undertaken by experienced researchers in the region while the last two would be done by the two Caribbean nationals working with WFS. The programme was supported by WFS through the funds made available for second-stage analysis.

With the emphasis on country-specific analysis, the Caribbean programme was expected to produce an analytical report on each of the five topics for each of the three countries, which would have resulted in fifteen national reports. However, in view of the similarity of the questionnaires used in the three countries, it was decided to organize the research in such a way that each researcher would carry out the analysis on all three countries, using similar or the same methodology and to publish one single report on each topic. This approach also had the advantage of allowing comparisons within a single report, for a given topic, and indeed the authors were requested to prepare a short comparative chapter in addition to the main chapters on individual countries.

All the papers have gone through two stages of review and revision. The first stage was a regional seminar, held at the University of the West Indies, St Augustine, Trinidad, in September 1982, where representatives from each country were invited, and the papers were presented. External reviewers commented on each paper: contraception (Halvor Gille), union patterns (Yves Charbit and Basia Beckles), infant and child mortality (Richard Lobdell), fertility preferences (Michael Vlassoff) and socio-economic differentials in fertility (Barbara Boland). The papers were revised following these reviewers' suggestions, and the second stage was to have a further evaluation of the revised draft reports, mainly done by assigned WFS staff members, but in two cases by external reviewers. A final version, in all cases involving substantial rewriting and condensation, then followed.

This report, prepared by Susheela Singh, is one of the five reports and essentially follows the methodology proposed in the WFS 'Illustrative Analysis' on fertility differentials, which has already been published as *WFS Scientific Reports* no 13. Gwendolyn Harvey-McCloggan of the Ministry of Health, Guyana, contributed to the chapter on Guyana during a one-month assignment in London. The report also benefited from the evaluations by the assigned reviewers, Barbara Boland and Roderick Little. Comments by Richard Lobdell and by the participants of the regional seminar and the Jamaican National Meeting contributed to the final revision. I wish to thank all of them for their invaluable contribution.

I also wish to congratulate Susheela Singh who not only volunteered to undertake this study along with her numerous other duties at WFS, but also successfully completed the report with her customary efficiency and promptness. We hope that this report, along with the other four, will provide valuable insights, leading to better understanding of the demographic situation in the three countries and that it will be of use to the national policy-makers. In conclusion, I wish to thank the national survey directors and their staff for their continued support and most valuable collaboration.

HALVOR GILLE
Project Director

Acknowledgements

Acknowledgement is gladly made to Gwendolyn Harvey-McCloggan for her assistance in preparing section 3.

1 Introduction

The study of fertility in these three Caribbean countries, Guyana, Jamaica and Trinidad and Tobago, is especially interesting because of their heterogeneity: residential distribution, labour force, educational, ethnic and religious composition all show a high degree of diversity. Moreover the 20 year period before these surveys took place, from the 1950s to the 1970s, saw substantial changes in the social, economic and political status of these countries. Political independence was achieved in the first half of this period, in all three countries, bringing some degree of economic change in itself. Trinidad and Tobago has seen the most rapid rate of economic growth of the three countries, due to its petroleum resources. Educational attainment has greatly increased during this period, particularly from the 1960s onwards, as secondary schooling has been made available to a much larger proportion of the population. Internal migration has also continued and the proportion of the population living in urban areas is rising. In addition, the very high rate of emigration, first to the United Kingdom, then to the United States and Canada, has raised the level of awareness of the consumption gap between their own country and the developed world, and at the same time has increased knowledge of the life style in developed countries, including fertility restriction through contraception.

The overall demographic result of these changes has been declining fertility, most spectacularly in Trinidad and Tobago, but also substantial in Guyana and Jamaica. These fertility declines have directly resulted from increases in use of contraception, since the age at first union has either declined (Jamaica) or, where increases occurred, they were not very large. These trends are described in the First Country Report for each country, and in the data evaluation reports (Balkaran 1982, Hunte 1983 and Singh 1982).

This report will analyse socio-economic differentials in cumulative fertility. The simplest approach would be to relate the total number of children ever born at the time of the interview to demographic and socio-economic variables. This was done in the first country reports, by cross-tabulating children ever born against a few background variables. This approach would be sufficient in populations where fertility has remained more or less stable for a long period, and where differentials may also be assumed to be fairly stable, and it has the advantage of being unaffected by any errors in the reporting of dates of births. Fortunately such errors are not at all common in Guyana and Trinidad and Tobago, and occur mainly among older women in the Jamaican survey. This simple approach is inappropriate, however, where fertility decline is in process, since there is no reason to expect that fertility would decline at the same rate among all socio-economic groups. It is therefore necessary to analyse changes in the pattern of differentials between cohorts, which is equivalent to the analysis of trends in differentials, or differentials in trends. As explained later, union cohorts rather than birth cohorts are compared in this study.

A basic problem in analysis of the kind attempted here is the high degree of correlation between the measured socio-economic variables. This problem is handled by using stepwise multiple regression, in which the variables are ordered in a logical time-related manner. In addition to the analysis of the most acceptable or logical order, the approach taken here enables the reader to assess the impact of the association of variables on the differentials for any particular variable of interest. The present study essentially replicates the methodology used in the illustrative analysis on socio-economic differentials in fertility (Little and Perera 1981). The unit of analysis used here is the individual woman.

This study concentrates on differentials according to socio-economic factors: other than using them as control variables, little attention is paid to the three demographic variables which measure exposure, i.e. age at the first union, the number of partners and the union history. A separate study is being carried out on union and partnership variables and their effect on fertility (Harewood, forthcoming), however, and it was felt that that area would be adequately covered by that study. Similarly, although brief attention is paid to other proximate demographic variables which intervene between socio-economic factors and fertility, the most important of these variables, voluntary contraception, is comprehensively dealt with by another study (Abdulah and Harewood, 1984).

1.1 THE CARIBBEAN FERTILITY SURVEYS

Interviews were carried out from May to September 1975 in Guyana, from November 1975 to January 1976, in Jamaica, and from March to July 1977 in Trinidad and Tobago. Nationally representative samples of households were used except in Guyana, where the Amerindian population was excluded. Information on households was first obtained, and then the detailed individual questionnaire was administered to each woman aged 15–49, excluding only those who were aged 15–19 and still attending school full time. The response rate for households and the number of women interviewed are shown below for all three countries:

Country	Household response rate	Individual response rate	Total women	Ever-in-union women
Guyana	94.7	95.6	4642	3616
Jamaica	92.9	93.8	3096	2765
Trinidad and Tobago	92.2	97.2	4359	3482

The Caribbean questionnaire was very similar to the WFS core questionnaire (see the First Country Reports, Volume I in each case, for full questionnaires). In this analysis we use data from the pregnancy history, which collected dates of birth for each child, and the date of completing each non-live pregnancy, in a chronological order, beginning with the first one. The socio-economic characteristics come from several sections of the questionnaire, the respondent's background, the work history, the partner's background and the union and partner's history.

As mentioned above, the quality of data in the pregnancy histories was very good, with all three surveys having 90 per cent or more birth dates reported as calendar dates. In the case of Jamaica, evaluation of the data suggested that there were some errors in reporting for older women (40 +), and for some subgroups (the less educated, and currently common law women), partly in shifting births during their early reproductive years to a later date and, to a lesser degree, by omission of early births. In all surveys some heaping of women at age 50 in the household interview occurred, and this may have contributed to the apparently low fertility of some subgroups of older women, if there was a tendency on the part of the interviewers selectively to report high fertility women as 50 years old. These data problems are brought into the discussion where relevant.

1.2 RECENT FERTILITY TRENDS

A summary table is shown here (table 1) to place the study of differentials in the perspective of fertility decline. Trinidad and Tobago had the largest decline, two children or about 37 per cent, in approximately a ten-year period, followed by Guyana, with a decline of 1.8 children, or 26 per cent, and Jamaica with a decline of about 1.0 child or 16 per cent. Crude birth rates from the vital statistics collected by the national registration system support the trends observed in the surveys: fairly large percentage declines occurred during this period, from 42 to 28 in Guyana (1960 to 1974); from 42 to 29 in Jamaica (1960 to 1976); and from 42 to 25 in Trinidad and Tobago (late 1950s to 1977). Most of the decline in fertility occurred within unions, although among the two Indian subpopulations, the rise in age at the first union made a substantial contribution to overall fertility decline (Balkaran 1982 and Hunte 1983).

1.3 FERTILITY DIFFERENTIALS IN FIRST COUNTRY REPORTS

Socio-economic differentials in fertility were briefly discussed in the First Country Reports. The basic patterns – declines in fertility as education increased, lower fertility among urban, than among rural residents, lower fertility among Anglicans and Catholics (or all Christians, in the case of Indians), and lower fertility among women in high status jobs – are observed in all three surveys (table 2).

The contribution of the present analysis is to look at socio-economic differentials in a more systematic manner, with a more useful categorization of variables, than achieved in the First Country Reports, but more importantly to do so for cohorts of women at different stages of their reproductive life, using multivariate analysis to control for associated demographic or other socio-economic variables.

The analysis of fertility differentials for three separate countries using a common methodology should allow for some comparative interpretation of the results. The possibilities are enhanced with the separate treatment of non-Indians and Indians in Guyana and Trinidad and Tobago, which produces five populations, in a statistical sense. This report will, therefore, include a short, final chapter on interesting comparative results. The rest of the report will consist of a chapter on methodology, and one chapter on each country's results. It is hoped that this report on fertility differentials among socio-economic subgroups will prove useful to population planners within the countries.

Table 1 Fertility trends from the three Caribbean surveys, during ten-year period before survey

Age group	Guyana		Jamaica		Trinidad and Tobago	
	1960–64	1970–74	1960–64	1970–74	1962–66	1972–76
15–19	168	108	178	162	117	79
20–24	362	287	286	265	292	125
25–29	321	249	299	245	336	174
30–34	280	194	252	196	216	118
35–39	178	117	191	123	137	80
40–44	(54)	54	(55)	60	(40)	32
45–49	(10)	10	(12)	12	(11)	11
TFR	6.87	5.10	6.37	5.32	5.42	3.42

Sources: Guyana: Table 14, Balkaran (1982)
Jamaica: Table 24, Singh (1982)
Trinidad and Tobago: Table 4.19, Hunte (1983)

Table 2 Mean parity of women who entered their first union 10–19 years before the survey, by four background variables

Education	< 4 yr primary	4 + yr primary	Secondary or higher
Guyana	5.3	4.7	3.7
Jamaica	4.4	4.5	2.7
Trinidad and Tobago	4.3[a]	3.4[a]	2.4

Residence	Urban	Rural
Guyana	4.1	4.8
Jamaica	3.8	4.6
Trinidad and Tobago	3.2	4.0

Religion	Roman Catholic	Anglican	Hindu	Muslim	Others
Guyana	4.0	4.1	5.1	4.9	4.5
Jamaica	3.6	4.0	–	–	4.3
Trinidad and Tobago	3.3	3.0	4.2	3.7	3.7

Most recent occupation	Prof, tech, admin.	Clerical	Sales	Agric. worker	Household worker	Other service	Craftsmen	No occupation
Guyana	3.4	3.5	5.1	5.7	4.8	3.9	3.8	4.9
Jamaica	2.5	3.3		4.0[b]	4.6		3.7	5.4
Trinidad and Tobago	2.5	2.1	3.6	4.2	3.8		2.6	4.1

[a] < 7 years primary and 7 + years primary, in Trinidad and Tobago.
[b] Self-employed independent, which includes some agricultural.
Source: Table 2.2.5 of each country's First Report, vol. II

2 Demographic and Statistical Framework for the Analysis

2.1 THE BASIC SET OF TABLES

As the illustrative analysis of fertility differentials by Little and Perera (1981) states, a fundamental choice in the analysis of the data has to be made between birth cohorts or marriage cohorts. One attractive choice is to use three birth cohorts, eg women aged 40 +, representing a cohort of completed fertility, women aged 30–39, and a young cohort aged 15–29. In this study 'marriage' cohorts, ie cohorts based on duration since entering the first union, seemed more appropriate, however. The 15–19 age group was not completely covered, since girls attending school were excluded from the survey, and all background variables were not obtained for the never-in-union women who were interviewed, limiting the possibilities of an analysis based on all women. Moreover, the evaluation of the JFS data showed that the age at first entry had declined by about 1.5 years, from the oldest age group to the youngest, while in the case of Guyana and Trinidad and Tobago the age at entry rose, from older women to younger, especially among the Indian subgroups. Use of duration cohorts would eliminate the differential selection bias which would exist among birth cohorts. All women ever in a union are included in this study – no selection on the basis of continuity of union occurs, but women who have never been in a union are, by the nature of the union cohorts being studied, excluded from the whole analysis. Duration is counted from the date of entry into the first union up to the time of interview, with only one adjustment. This adjustment was necessary because the data, especially for Jamaica, suffer from the problem of a fairly high proportion of first births apparently preceding the date of entering the first union. In these cases the date of first entry was redefined, for our purposes, to be nine months before the date of the first birth, and duration was counted from this point.

Three union-duration cohorts were chosen to cover the whole sample. The cohort of women who entered their first union 20 or more years before the survey can be considered to have essentially completed childbearing. The second cohort of women, those with a union duration of 10–19 years, are in the middle of their reproductive years, and entered their first union approximately between 1955 and 1965. Their fertility may begin to reflect change, considering the changing socio-economic and political conditions and rising contraceptive use since their entry into unions. Women who have been in a union for less than ten years form the third cohort. This group would have benefitted from the rapid rise in secondary education, and their entry into unions coincided with increasing acceptance of the idea of family limitation. We will be loosely referring to the 20 + duration cohort as the oldest, the 10–19 cohort as the younger and the 0–9 cohort as youngest. This approximate equivalence with age is borne out by the mean age of the duration cohorts:

Group	Mean age of duration cohort		
	0–9	10–19	20 +
Guyana			
non-Indians	23.1	33.0	43.0
Indians	23.2	31.8	42.0
Jamaica	22.5	32.2	42.8
Trinidad and Tobago			
non-Indians	23.8	33.0	43.0
Indians	24.3	32.6	42.1

Having chosen the cohorts, the next step is to segment fertility according to stage of family formation, to permit analysis of differentials at different stages of the reproductive lifetime. Duration periods are the most natural choice, following from the selection of duration cohorts as the subgroups for analysis. Two broad groups were chosen: early fertility was captured by births within the first ten-year period of being in a union, and late fertility by births in the second ten-year period, the tenth to the nineteenth year after entering the first union. Although five-year duration periods could have been used, this would increase sampling error without greatly improving understanding of the trends in differentials. A second reason for not using too fine divisions is that detailed evaluation of the data suggested that, especially in Jamaica, older age groups probably had some displacement of births away from their early reproductive years, implying that, at least for some subgroups, the birth history dates should not be accepted as sufficiently accurate to allow very fine subdivisions in the analysis.

Having established the basic demographic framework for the analysis, the analyst then faces the problem of differing exposure among cohorts to both early and late fertility, as defined above. The solution used by Little and Perera (1981) was also used here. As they point out, for the earliest cohort, women in a union for 20 or more years, there is no difficulty, since they have complete exposure for both the 0–9 and the 10–19 duration periods. The second cohort has complete exposure in the 0–9 period, but exposure varies within the 10–19 year period, while the 0–9 cohort has varying exposure in the 0–9 period itself. For groups with incomplete exposure, Little and Perera (1981) estimated the number of children women would have during the whole ten-year period as a direct function of their fertility within the part of the period that they actually experienced. Women with only one year or less exposure are excluded from the analysis, however, because of the great variability at very short durations. For example in the case of the cohort 0–9, at duration 0.9,

$$\text{Estimated births (B0–9)} = 120 \times \text{actual births/months of duration}$$

The estimation procedure requires weighting for length of exposure to compensate for the inflation. This weighting procedure is likely slightly to overestimate fertility for incomplete exposure periods, however, with the result that actual fertility trends will be somewhat stronger than the results shown here. The procedure is described in detail by Little and Perera (1981). In the case of Trinidad and Tobago, the weight incorporates both sample weights and the relevant duration exposure weights, but in Guyana and Jamaica, which used self-weighted samples, weighting is necessary only for duration of exposure. These weights were scaled so that they sum approximately to the number of observations in the subgroups.

Format of results

The layout of table 3 shows the basic structure in which the analysis was carried out. The three columns represent the three union duration cohorts, women who entered their first union more than 20 years, 10–19 years and 0–9 years, before the survey. The panels represent three fertility measures, births in the first decade of being in a union (B0–9), births in the second decade of being in a union (B10–19) and the number of children ever born (NCEB), for the 20 + cohort only.

Because we are dealing with ten-year duration periods, this demographic framework is inadequate for a full study of trends, but is appropriate for the analysis of differentials, which is the purpose of this study. Table 3 shows an example from the results of the Jamaican analysis, differentials for education subgroups. The columns show differentials between educational groups for each fertility measure (B0–9, B10–19, NCEB) for duration cohorts, while the rows show trends in fertility for each educational group across time for the first and second decades of being in a union. The table therefore permits the study of trends in differentials or equivalently, differentials in trends. In other words, this approach enables us to address questions such as whether subgroups maintained the same relative position, all changing equally, or whether they changed at different rates, resulting in new patterns of differentials over time.

Equivalent tables for each background variable are the foundation of this study. However, because of space limitations these detailed tables are not presented in this report – instead summary tables extracting the most interesting results are used. The detailed tables may be obtained from the World Fertility Survey as Technical Paper no 1995.

To make these differentials easy to interpret, Little and

Table 3 Mean fertility by union duration, union cohort and respondent's education for Jamaica

(A) Adjusted means				(B) % change from standardized means			
Measure group	20 +	10–19	0–9	Group	20 +	10–19	0–9
B0–9							
PRIM5	3.031	3.008	3.350	PRIM5	− 0.8	− 2.2	7.0
PRIM67	3.219	3.484	3.334	PRIM67	5.3	13.3	6.6
PRIM8	3.099	3.293	3.363	PRIM8	1.4	7.1	7.4
Secondary	2.845	2.317	2.374	Secondary	− 6.9	−24.7	−24.2
Mean	3.097	3.164	3.016	Std. mean	3.056	3.075	3.132
SD	0.135	0.443	0.422	SD	4.4	14.4	13.5
Chi-sq.	2.9 −	49.5*	82.7*	Chi-sq.	2.9 −	49.5*	82.7*
B10–19							
PRIM5	2.408	2.102		PRIM5	17.3	12.5	
PRIM67	2.629	2.566		PRIM67	28.1	37.4	
PRIM8	2.250	1.959		PRIM8	9.6	4.9	
Secondary	0.897	0.870		Secondary	−56.3	−53.4	
Mean	2.299	2.001		Std. mean	2.053	1.868	
SD	0.677	0.622		SD	33.0	33.3	
Chi-sq.	46.8*	54.3*		Chi-sq.	46.8*	54.3*	
NCEB							
PRIM5	6.079			PRIM5	10.0		
PRIM67	6.444			PRIM67	16.6		
PRIM8	5.721			PRIM8	3.5		
Secondary	3.937			Secondary	−28.8		
Mean	5.905			Std. mean	5.528		
SD	0.963			SD	17.4		
Chi-sq.	29.3*			Chi-sq.	29.3*		

NOTE: *Chi-square value is significant at the 5 per cent level.

Perera (1981) reduced them to per cent differences from standardized means. This analytical aid is also used here. Standardized means are calculated by combining actual fertility with the assumption of the (in this case, educational) composition of the total population. Standardization enables us to make comparisons across cohorts or columns, having adjusted for the effects of changes in the distribution of education. The means for each educational subgroup are then expressed as per cent deviations from the standardized mean for that cohort and measure (right hand section of table 3). It is these per cent deviations that are mainly used in the report, when discussing results. The absolute mean number of children can be obtained simply by applying the per cent difference to the standard mean, however, and the betas from the regression are the differences between these actual means and the mean for the omitted category.

Births during the first decade of being in union (B0–9) may be taken as an example. The secondary educated group among the earliest cohort (20 + duration) was 6.9 per cent below the standardized mean, but for the 10–19 and 0–9 cohorts this group was 24 per cent below the mean, showing that it had experienced greater fertility decline than other education subgroups.

The chi-square values shown in table 3 are rough measures of statistical significance. Little and Perera (1981) describe how the value is derived and its limitations:

> Statistical significance for the effects of a factor of variable A, adjusted for the effects of other factors and/or variables B, is gauged from the chi-squared value:
>
> $$\chi^2(A/B) = \frac{SS(A + B) - SS(B)}{\text{residual mean square}}$$
>
> 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.

While this measure of significance has some problems, it is still a useful indicator of broad levels of significance, and will only be used as such here. However the chi-square value is sensitive not only to the size of fertility differentials, but to the number of individuals in each category: thus large absolute differences in mean fertility may not yield a significant chi-square statistic if the deviant categories have only a small proportion of the total number of women in the cohort. As a result the discussion of the results concentrates on the size of differentials rather than on significance of chi-square values. Nevertheless, chi-square values are presented in text tables and table A1 gives significance levels for these values.

2.2 ASSOCIATION BETWEEN BACKGROUND VARIABLES

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

residence status (RESID)
respondent's education (REDUC)
respondent's religion (RELIG)
current union status (CURSTAT)
respondent's most recent occupation (ROCCUP)
whether respondent worked before first birth (WORKBEF) or pattern of work (PATWORK)
partner's education (PEDUC)
partner's occupation (POCCUP)

In addition two demographic variables were controlled in the analysis, the age at first union and number of partners. Although income was obtained in Jamaica and Trinidad and Tobago, it was not considered here, because it was only obtained for about 60 per cent of the sample (for married and common law women). All of these variables have significant associations with fertility, before other variables are controlled. Definition of the categories of each variable will be given when the results are discussed.

Most of these variables are interrelated. Women who live in urban areas are more likely to be better educated, and better educated women are more likely to hold higher status occupations, to work before the first birth, to enter unions with better educated men who also hold higher status, better-paid jobs. Therefore fertility differentials for any given background variable are clearly not entirely due to differences between categories of that variable. For example, residence differentials may be largely due to differences in education and occupation between different residential categories. Fertility differentials across any variable must therefore be considered within the context of inter-variable associations.

Appendix tables A2–A6 present all two-way associations among the eight background variables for the five populations. Reading along a row gives the percentage distribution of the category in that row over each variable. For instance, in the case of Jamaica, row 1 shows that, of women born and still living in rural areas, 18 per cent have less than 6 years of primary education, 26 per cent have 6 to 7 years of primary education, 44 per cent have complete primary education and 12 per cent have secondary education, compared to row 3 (urban born, currently urban residents), where the percentages are 8, 12, 30 and 50, respectively, indicating a much higher level of educational achievement in the latter group.

Residence status is especially strongly related to education and occupation, as expected. The urban-born, currently urban residents had the highest educational achievement (both for respondents and partners): in Jamaica, where the differentials were strongest, 50 per cent of respondents and 44 per cent of partners had secondary or higher education, compared to 12 and 11 per cent respectively, for rural/rural residents. Particularly in Jamaica and among the two Indian subpopulations, urban/urban residents also had a higher proportion in professional and clerical jobs than the other two residence groups: in Jamaica it was 33 per cent compared to 21 per cent for the rural/urban group (the migrant group, born in rural, but currently living in urban or vice versa), and 10 per cent for the rural/rural group. The rural/rural group is, as expected, the only one with a substantial proportion in agricultural occupations. Among Jamaicans and Trinidadian non-Indians, residence status is not strongly related to current union status or the proportion who work before the first birth, however. But in the case of religion, the urban/urban group does have a larger than average proportion of Catholics/Anglicans, and a lower proportion of Other Protestants, or non-Christians (Hindu and Muslims) than the other two residence groups. Among both Indian sub-

populations the urban/urban group also differs noticeably in pattern of work and current union status, from other residence groups.

Respondent's and partner's education is related to several other variables. The lower primary groups are relatively homogeneous, however, while the complete primary educated group is intermediate and the secondary groups are concentrated among urban/urban residents, among the Catholic/Anglican group, among women in professional or clerical jobs, among women who worked before the first birth, and among currently married and visiting women. The secondary educated are also more likely to have secondary-educated partners, and partners in professional, clerical, sales and service occupations. The converse also holds true – that the least educated are most likely to have rural/rural residence, to have partners who are less educated, and who work in agricultural and manual labouring jobs.

Among Jamaicans and the two non-Indian subpopulations, Catholics and Anglicans stand out as somewhat higher status than other Christian groups – they are more likely to be urban/urban residents, to be highly educated, to hold professional/clerical jobs, and to have higher educated partners who also hold professional/clerical jobs. In the case of the Indian subpopulations, the Christian group is in a parallel situation, relative to Muslims and Hindus.

People in the never-worked category are more common among rural/rural residents, while manual, professional and clerical workers are less common, compared to the distribution among other residence groups. The agricultural workers, are, as expected, almost totally concentrated among rural/rural residents. Professional/clerical workers are the highest educated and never-workers have a slightly higher than average level of education, presumably because young women are more likely to be unemployed and also more likely to educated. Professional/clerical workers are more likely to have worked before the first birth: in Jamaica 77 per cent did so, compared to about 50 per cent of the other occupational groups; this group also has a higher proportion married than other working groups, although among Jamaicans the agricultural group has an almost equally high proportion married – 47 per cent; while among the two Indian subpopulations never-workers have the highest proportion married. The professional/clerical group is also more likely to have higher-educated partners who have jobs of the same level as themselves.

The likelihood of working before the first birth does not vary among most subgroups, the two significant exceptions being within occupational groups, as mentioned above, and in addition, secondary-educated women or women with secondary-educated partners have a higher proportion working before the first birth, than other education groups.

Current union status has a few distinct interrelationships with other variables. Currently visiting women are slightly better educated, mainly because they are younger. Common law women are generally of a lower social status than other union types: they have lower education, as do their partners and they are least likely to have professional/clerical jobs themselves or to have partners with such jobs, and most likely to work in sales or services, and to have partners who are either skilled or unskilled manual workers.

Partner's education is higher among urban/urban residents, among the Catholic/Anglican group, among better educated respondents, and among respondents who held professional/clerical jobs and who worked before the first birth. Higher status occupations for partners have similar associations, and are also related to higher educational achievement among partners.

2.3 STATISTICAL METHODOLOGY

Adjustment by regression

The unadjusted crosstabulation of differentials, of the type shown in table 3 is only the first step in the analysis of differentials. To evaluate the true effect of any given background variable, other related variables must also be considered, including both demographic and socio-economic variables. Several approaches were considered, but that used in the illustrative analysis by Little and Perera (1981) was chosen because it is straightforward and easy to understand. This was an important advantage because this report is addressed not only to other researchers but to the governments of the countries being studied.

The solution adopted here is to use multiple linear regression to adjust the fertility means of each set of socio-economic subgroups for two demographic variables – age at entry into the first union, and the number of partners – and for all other socio-economic background variables. This is done separately for each cohort and measure in the triangular array. Since duration cohorts are treated separately, duration is effectively also controlled. Age at first entry is represented by two continuous variables, the actual age and the square of this age, while other background variables are represented by sets of dummy variables, as described in the next section.

A decision must be taken about which variables should be controlled by inclusion in the regression equation, as the effects of a particular variable are being studied. One common approach is to include all variables of interest in a single regression, interpreting the coefficients of each variable within the single equation. This means that the effects of each variable are considered only after adjusting for all other relevant variables. This approach is inappropriate if there is high multicollinearity between variables, as there is here, since the effects of variables entered late in the equation may be largely taken up by the earlier variables. A second approach is to establish a causal order and consider the effects of each background variable by controlling causally prior variables only, leaving causally posterior variables uncontrolled. Little and Perera (1981) describe this approach as follows:

> For example, if Y is the regressand variable and three regressor variables have the causal ordering
>
> $$X1 - X2 - X3 - Y$$
>
> then the total effect of X1 is unadjusted, the total effect of X2 is adjusted for X1, and the total effect of X3 is adjusted for X1 and X2. The idea of the method is strongly related to recursive path analysis.

This approach has many advantages, but is dependent on the establishment of a causal order. It is partially applied here, since a preferred order is chosen. However it is not

clear that the chosen causal order is the only possible one, and as a result the statistical approach actually used is a modification of the second one described above. This model was also used by Little and Perera (1981) in their analysis of differentials for Sri Lanka.

The unadjusted effects of each socio-economic factor are first calculated, then all other factors are added according to a predetermined sequence, one at a time. In this way the effect of a variable after controlling for all causally prior variable is calculated, but it is not the only set of differentials that is considered. Consideration of differentials after controlling for causally posterior variables is also intuitively appealing, since in one sense these variables intervene between the factor under consideration and the dependent variable, fertility. It is also useful to look at the final effect of a given variable after all other variables are controlled, as a measure of its effect, independent of all other prior and posterior variables. The procedure for calculating adjusted means from the results of multiple regression, is described by Little and Perera (1981).

Order of adjustment

As discussed in the previous section, differentials were obtained by adding each variable in a predetermined order, in a sequence of regressions, with variables added using a stepwise regression program. The order of inclusion was determined as follows:

1 The first variable introduced was the variable being studied. This is done to see what the unadjusted effect of each variable would be, in the hypothetical situation that no preceding variables had any effect. Thus in studying the education differentials, the dummy variables representing education were introduced first. The result of this first step is therefore equivalent to the simple unadjusted crosstabulation of means by categories of the variable being studied.
2 Other variables were added according to their position in the following sequence:
   age at entry into the first union
   residence status
   respondent's religion
   respondent's education
   number of partners
   current union status
   respondent's occupation
   whether worked before the first birth or pattern of work
   partner's education
   partner's occupation

The causal order chosen is justified on the basis that two factors, residence and religion, are the earliest in the time sequence, while education naturally follows as the next in terms of time. Because of the nature of the residence variable, however, it is possible that education may have some effect on residence: the residence variable is constructed by combining place of birth with current place of residence. The two groups of movers (urban-born/currently-rural and rural-born/currently-urban) are combined in the case of Jamaica and Guyana, and treated separately in Trinidad and Tobago because the urban-born/currently-rural group numbered as much as nine per cent of the Trinidadian population. It is in the case of the migrant groups that education may affect residence status, by increasing the likelihood of internal migration. The respondent's employment characteristics are considered as probably preceding the partner in time sequence, since about half of women work before their first birth. However this is clearly an area of uncertainty in the causal order. Age at entry is controlled earliest in the sequence, since in this study of differentials among ever-married women, non-exposure cannot be properly evaluated and for the most part, will not be considered in detail. For the same reason, the number of partners and current union status are also controlled after the three formative childhood variables, and before the adult variables of work and partner's characteristics, but no detailed discussion of these factors is given. No data were collected about the respondent's employment before the first union, and although an assumption is made here, placing this factor before the partner's characteristics, the time sequence is again unknown. Despite the need to make some assumptions about causal order, the order finally chosen is intuitively plausible, and does allow us to analyse the effects of association between variables on fertility differentials.

While current union status was entered as a rough measure of socio-economic type, no attempt was made to treat groups with different types of union history. This was not done for several reasons: sample size precluded separate treatment of each group, especially since further breakdown by cohorts was intended; but in addition union status may be considered more as a measure of exposure, intervening between socio-economic status and fertility, than as a basic social-status variable in its own right. In this regard, it should be noted that the range of percent of time spent within unions among pattern of union subgroups was usually 10 to 15 per cent and only occasionally was as high as 20 per cent. The currently single group, who are taken care of by the current union status variable was the only group with higher than 20 per cent of time lost. As the analysis of unions, partners and fertility (Harewood, forthcoming) shows, these variables are very important as intervening variables, but we leave this aspect of the analysis to that report.

The variable 'worked before the first birth' was used for Jamaica, which was the first country to be analysed. This was later expanded to a four-category pattern of work variable for Guyana and Trinidad and Tobago, but the new variable can be collapsed to be equivalent to the two groups, did and did not work before the first birth, to be comparable with Jamaica. The work status data (employed by someone else; self-employed; never worked) were not used because the vast majority (over 90 per cent) of ever-working women were employed by someone else. Duration, or years since the first union, was not entered as a separate variable, as done by Little and Perera, because experimentation showed that it had little effect, as expected, since it is only a refinement of the marital duration control, and generally has little effect on the differentials. Although the analysis included all of these variables, the discussions in the text will concentrate only on variables which have a noticeable effect on the differentials for any particular set of socio-economic subgroups. Thus text tables present only selected steps of the whole regression procedure.

The additivity assumption

The regression model used here excludes all interactions between independent variables, and employs a strictly additive model. For example, in the case of religion differentials, no terms for an interaction between religion and residence or religion and education were included. This is equivalent to expecting religion differentials to be the same within all levels of the adjusted variables, such as the three levels of residence or the four levels of education, in the case of Jamaica.

Interactions were extensively tested, for each cohort and fertility measure, using ANOVA in SPSS, and using the Generalized Linear Interactive Model (GLIM) package. They proved to be extremely small and in almost all cases were not significant. Thus the decision to use a purely additive model does no great injustice to the data since the effects of any interaction are small.

Two important qualifications on the use of an additive model must be made, however. Little and Perera point out that the use of duration cohorts

> 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.

Furthermore, in the case of Guyana and Trinidad and Tobago, separate analysis of Indians and non-Indians also takes account of this second important source of interaction.

3 Guyana: Socio-Economic Differentials in Fertility

3.1 INTRODUCTION

Guyana has had a decline in current fertility during the 10-year period before the survey, as mentioned in section 1. The union cohort measures reflect this decline, but the size of the decline is not as large as was found for current measures of fertility. The gap is due partly to the use of actual cohort fertility rather than synthetic current fertility rates, but also to the difference between measuring fertility in relation to all women and ever-in-union women which is the base population used in this study. The basic trends in fertility for the three duration cohorts for each ethnic group are:

Table 4 Mean number of children ever born, by cohort and measure

	Duration cohort		
	0–9	10–19	20 +
Non-Indians			
B0–9	2.983	3.270	3.551
B10–19		2.144	2.494
NCEB			6.556
Indians			
B0–9	3.870	3.982	3.919
B10–19		1.914	2.693
NCEB			7.118

The non-Indian population had a larger decline in fertility during the first ten years of being in union (0.57 child) versus a decline of only 0.35 child in late fertility. The reverse is true for Indians, who experienced almost no change in early fertility, from the 20 + cohort to the 0–9 cohort, but whose decline in late fertility was substantial, 0.78 child. The Indian population apparently uses contraception in terms of stopping childbearing, rather than for spacing births, and the reverse is more common among non-Indians.

In this chapter the differentials for each background variable are discussed in turn. A description of the categories used for each background variable is first given, then the differentials are discussed. The unadjusted differentials and differentials after adjustment for causally prior variables are the focus of the discussion. The results discussed here are summary tables extracted from the detailed step-by-step regression tables. Differentials according to current union status are not discussed here, partly because of space limitations, but also because it is treated as an exposure variable in this analysis. Nevertheless, the detailed tables for these differentials are presented in WFS Technical Paper no 1995, since some readers are interested in this variable, on its own merit, and as an indicator of social status. The explanatory power of the regression model and the role of intermediate variables, other than initial exposure to conception, are discussed separately, at the end of the chapter.

3.2 AGE AT ENTRY INTO THE FIRST UNION

In Guyana the age at first union has risen among Indians, from 16.1 years (45–49 year old women) to 17.5 years (25–29 year olds), but has remained more or less static, at roughly 18.0 years, for non-Indians (Balkaran 1982, p. 18). The small size of these changes means that their effect on fertility would not be large. The first coefficient in each equation presented in table 5 is for the effects of age at first union, while the second is for the quadratic term, the square of the age at first union. These coefficients are for step 4 of the regression, after residence status, religion and respondent's education had been controlled. They show that increasing age at first union generally has a positive effect on early fertility, except at very high ages at entry. The only exception is current fertility of the

Table 5 Effect of age at entering first union on number of births in successive ten-year union duration periods

	Cohort		
Fertility measure	0–9	10–19	20 +
A Indians			
B0–9	−0.161 + 0.005(AGFU − 17.92)	0.471 − 0.029(AGFU − 17.01)	0.885 − 0.049(AGFU − 15.74)
B10–19		−0.402 + 0.015(AGFU − 16.82)	0.021 − 0.007(AGFU − 15.74)
NCEB			0.604 − 0.043(AGFU − 15.74)
B Non-Indians			
B0–9	0.346 − 0.017(AGFU − 17.75)	0.468 − 0.024(AGFU − 18.51)	0.352 − 0.023(AGFU − 17.24)
B10–19		0.118 − 0.011(AGFU − 18.68)	0.161 − 0.017(AGFU − 17.24)
NCEB			0.350 − 0.035(AGFU − 17.24)

two younger cohorts of Indian women. The effect of increasing age at first union on late fertility is also positive, for non-Indians, except for quite high ages at entry, of 27 or over. Among Indians, however, the effect is negative for the 10–19 cohort, varying from −0.4 to −0.2 child, over the normal range of age at entry. The effect is also negative, though small, for the 20 + cohort, at any age of entry above 19 years. When analysing socio-economic differentials we should expect the control for age at entry to have a larger effect on fertility among Indians than among non-Indians.

3.3 RESIDENCE BACKGROUND

Current place of residence (urban and rural) and the type of place of birth (urban and rural) were combined to form a joint variable. This variable should measure the effects of the place of childhood formation (assuming that most women either grew up in the place of birth or were influenced by their parents' connection with the place of birth), as well as the effects of the place of current residence on fertility behaviour. Although the combined variable should have four categories, these were reduced to three by combining the small proportion of urban-born women who currently lived in rural areas (4.3 per cent), with the much larger rural/urban group. The small proportion of foreign-born women were grouped with urban/urban women, under the assumption that they would be a very westernized group. The three categories form a continuum from the least modernized (rural/rural or RUR/RUR) to the intermediate, mobile group (rural/urban, or RUR/URB), and then to the most modern group (urban/urban, or URB/URB).

Unadjusted differentials

Differentials in early fertility are substantial and significant for all three cohorts of non-Indians, but increase in significance and size from the oldest to the youngest cohorts. This increase in size of differentials also occurs among Indians and is even sharper for them. In general the expected pattern of highest fertility among rural/rural women, followed by rural/urban women and lowest among urban/urban women, is observed for both ethnic groups and for most cohorts. The size of differentials in late and completed fertility is also large, although the level of statistical significance is lower among Indians, due to their small proportion urban.

The amount of decline varied among residence groups. The URB/URB group had the largest decline: for B0–9 this was about 1.0 child, while the other two residence groups fell by only 0.3–0.5 child; and for B10–19, the URB/URB group declined by 0.7 child, compared to 0.1–0.2 child for the other residence groups; Decline in early fertility was relatively low for Indians: rural/rural women showed almost no change but the rural/urban group declined by 0.3 child and the urban/urban group by about 0.5 child. Substantial declines occurred in late fertility for Indians, however: overall it dropped by 0.8 child, and the urban/urban group had the largest decline, of 1.2 children, followed by the other two groups with declines of 0.6–0.8 child.

Adjusted differentials

When age at first union (AGFU) and religion are held constant, residence differentials for all groups of non-Indians remain unaffected. However adjustment for the age at first union has a larger effect on the Indian population,

Table 6 Effects of residence status (childhood/current place of residence) on early fertility (B0–9)

Measure and cohort	Non-Indians				Measure and cohort	Indians			
	Adjusted up to variable (% diff. from std. mean)					Adjusted up to variable (% diff. from std. mean)			
	Unadjusted	AGFU	Relig	Reduc		Unadjusted	AGFU	Relig	Reduc
B0–9, cohort 0–9					*B0–9, cohort 0–9*				
RUR/RUR	11.5	10.4	9.4	7.3	RUR/RUR	4.7	4.5	4.2	4.1
RUR/URB	0.1	0.6	0.8	2.2	RUR/URB	−13.3	−12.0	−10.9	−10.8
URB/URB	−13.3	−12.7	−11.8	−10.8	URB/URB	−30.6	−30.3	−29.6	−28.8
Std. mean	2.994	2.993	2.992	2.990	Std. mean	3.892	3.891	3.890	3.890
Chi-sq. (2 df)	20.4*	17.7*	14.2*	10.1*	Chi-sq. (2 df)	35.6*	33.1*	29.0*	27.3*
B0–9, cohort 10–19					*B 0–9, cohort 10–19*				
RUR/RUR	9.1	10.4	10.6	8.6	RUR/RUR	2.5	1.8	1.6	1.4
RUR/URB	1.8	1.2	1.7	1.8	RUR/URB	− 9.3	− 8.0	− 7.4	− 6.4
URB/URB	−12.5	−13.4	−14.1	−11.9	URB/URB	−12.3	− 5.6	− 4.2	− 4.1
Std. mean	3.267	3.267	3.266	3.267	Std. mean	3.975	3.978	3.978	3.979
Chi-sq. (2 df)	13.2*	15.7*	16.1*	10.4*	Chi-sq. (2 df)	8.7*	4.3	3.3	2.5
B0–9, cohort 20 +					*B0–9, cohort 20 +*				
RUR/RUR	6.9	6.8	6.1	6.0	RUR/RUR	2.6	2.7	2.5	2.7
RUR/URB	− 7.8	− 7.7	− 7.6	− 7.2	RUR/URB	− 6.6	− 7.0	− 6.7	− 6.7
URB/URB	0.5	0.4	1.1	0.7	URB/URB	−19.1	−18.6	−17.2	−19.2
Std. mean	3.532	3.532	3.534	3.534	Std. mean	3.912	3.912	3.912	3.912
Chi-sq. (2 df)	6.7*	6.5*	5.8	5.3	Chi-sq. (2 df)	10.2*	9.8*	8.1*	9.3*

NOTE: *Chi-square value is significant at the 5 per cent level.

Table 7 Effects of residence status (childhood/current place of residence) on late fertility (B10–19) and completed fertility (NCEB)

Measure and cohort	Non-Indians				Measure and cohort	Indians			
	Adjusted up to variable (% diff. from std. mean)					Adjusted up to variable (% diff. from std. mean)			
	Unadjusted	AGFU	Relig	Reduc		Unadjusted	AGFU	Relig	Reduc
B10–19, cohort 10–19					*B10–19, cohort 10–19*				
RUR/RUR	27.8	26.7	25.4	21.1	RUR/RUR	5.7	5.0	4.9	4.4
RUR/URB	2.6	3.1	2.1	1.9	RUR/URB	− 15.5	− 16.8	− 16.5	− 13.7
URB/URB	− 35.1	− 34.4	− 31.8	− 26.6	URB/URB	38.4	− 26.9	− 26.6	− 25.7
Std. mean	2.147	2.146	2.146	2.146	Std. mean	1.911	1.912	1.912	1.912
Chi-sq. (2 df)	24.7*	23.1*	19.2*	12.0*	Chi-sq. (2 df)	8.0*	5.3	4.9	3.5
B10–19, cohort 20 +					*B10–19, cohort 20 +*				
RUR/RUR	19.9	19.2	19.2	17.5	RUR/RUR	4.0	3.4	2.8	2.5
RUR/URB	− 6.5	− 6.5	− 6.4	− 5.4	RUR/URB	18.7	− 15.8	− 14.4	− 13.3
URB/URB	− 16.1	− 15.2	− 15.4	− 14.5	URB/URB	− 11.9	− 9.4	− 5.7	− 4.0
Std. mean	2.452	2.453	2.453	2.457	Std. mean	2.681	2.683	2.684	2.685
Chi-sq. (2 df)	17.0*	15.6*	14.8*	11.9*	Chi-sq. (2 df)	7.4*	5.0	3.7	2.9
NCEB, cohort 20 +					*NCEB, cohort 20 +*				
RUR/RUR	13.3	12.8	12.3	11.4	RUR/RUR	3.0	2.6	2.2	2.1
RUR/URB	− 7.4	− 7.4	− 7.4	− 6.6	RUR/URB	− 10.9	− 9.2	− 8.3	− 7.7
URB/URB	− 7.4	− 6.8	− 6.3	− 6.1	URB/URB	− 15.1	− 13.3	− 10.4	− 9.8
Std. mean	6.483	6.486	6.489	6.493	Std. mean	7.099	7.101	7.103	7.104
Chi-sq. (2 df)	16.9*	15.5*	13.8*	11.4*	Chi-sq. (2 df)	10.6*	7.7*	5.2	4.4

NOTE: *Chi-square value is significant at the 5 per cent level.

particularly on the urban/urban group who begin the first union later than other groups. Controlling religion has a small but uniform effect on all groups of Indians, narrowing residence differences, because low-fertility Christians are concentrated in urban areas.

The effect of controlling education varies by cohort and by ethnicity. Changes in the size of differentials are generally larger for non-Indians, suggesting that their educational attainment varies more by residence than does that of Indians. A further possibility is that education works more through delaying the age at entry, already controlled, for Indians, but has a greater effect on fertility within unions for non-Indians. In the case of fertility during the first ten years of being in a union, education makes less of a difference to residence differentials than it does for fertility in the second ten years, for both ethnic groups. The effect of controlling education on completed fertility of the longest duration cohort is small for both ethnic groups.

Controlling current union status has a noticeable effect on the youngest non-Indian cohort (0–9 duration), mainly because the URB/URB group has a union status distribution (higher proportion visiting and single) that is more conducive to low fertility, than the other two groups. Residence differentials in early fertility persist for the 10–19 cohort, however, even after current union status is controlled. In the case of Indians, also, controlling exposure variables (number of partners and current union status) reduces differences for the 0–9 cohort substantially, although differentials are still large, even after these exposure variables are controlled.

In conclusion, we note that residence differentials are larger for non-Indians, especially in late fertility. However, the most recent cohort of Indians also has sizeable differentials, and the URB/URB group in particular is notable for its low fertility, which is approximately the same as that of non-Indians. A further unusual finding is that the group of movers RUR/URB among Indians has much lower fertility in the second decade of being in a union than do the corresponding group of non-Indians, relatively, and even in absolute levels of fertility.

3.4 RELIGION

Different religious groups were used for the two ethnic subgroups: for non-Indians three subgroups were used – Anglican, Roman Catholic and all others – and for Indians the groups were Christian, Hindu and Muslim. The 'all others' group for non-Indians was largely Other Protestants, who form 45 per cent of the non-Indian population, but it was not possible to break down this group further, since they were coded as a single group at the interview. Among Indians the 'Christian' group was not divided because the total proportion of Christians was only 13.4 per cent.

Unadjusted differentials

Differentials in fertility according to religion vary between the two ethnic groups. Among non-Indians, religion has very little effect on fertility, hence no table is shown for this group. For all cohorts there is, however, a consistent pattern in absolute fertility levels, Other Christians having the highest fertility, followed by Anglicans and finally with Roman Catholics usually having the lowest fertility. Among Indians, however, religion differentials are larger and statistically significant in most cases. For all measures and all cohorts, Christian women have the lowest, or almost the lowest, fertility among Indians. Muslims had the highest early fertility for two out of three cohorts, but the situation changed for late fertility: Hindus had the highest fertility at this later stage of childbearing.

Table 8 Guyana, Indians: effects of religion on early fertility (B0–9), late fertility (B10–19) and completed fertility (NCEB)

Measure and cohort	Indians				Measure and cohort	Indians			
	Adjusted up to variable (% diff. from std. mean)					Adjusted up to variable (% diff. from std. mean)			
	Unadjusted	AGFU	Resid	Reduc		Unadjusted	AGFU	Resid	Reduc
B0–9, cohort 0–9					*B10–19, cohort 10–19*				
Christian	−15.6	−13.5	−9.2	−8.4	Christian	− 8.1	− 4.0	− 0.5	8.0
Hindu	1.6	1.1	−0.1	−0.3	Hindu	5.0	2.8	2.1	0.3
Muslim	5.2	5.5	7.0	7.0	Muslim	−12.1	− 7.1	− 7.0	−6.5
Std. mean	3.890	3.887	3.879	3.878	Std. mean	1.918	1.917	1.917	1.918
Chi-sq. (2 df)	14.6*	11.2*	7.2*	6.5*	Chi-sq. (2 df)	3.0	1.0	1.1	0.8
B0–9, cohort 10–19					*B10–19, cohort 20 +*				
Christian	− 9.7	− 8.4	−7.3	−5.9	Christian	−16.5	−13.5	−11.4	−8.3
Hindu	2.7	1.5	1.3	0.9	Hindu	6.2	5.1	4.6	4.0
Muslim	− 2.7	0.6	0.7	0.9	Muslim	−10.5	− 8.6	− 8.4	−8.5
Std. mean	3.977	3.976	3.976	3.977	Std. mean	2.677	2.680	2.681	2.682
Chi-sq. (2 df)	6.1*	3.5	2.5	1.6	Chi-sq. (2 df)	9.5*	6.2*	4.8	3.4
B0–9, cohort 20 +					*NCEB, cohort 20 +*				
Christian	− 6.9	− 7.6	−4.2	−4.9	Christian	−12.9	−11.3	− 8.9	−7.7
Hindu	0.7	1.2	0.6	1.1	Hindu	3.9	3.3	2.9	2.8
Muslim	2.4	1.2	0.9	−0.4	Muslim	− 4.6	− 3.8	− 3.9	−4.4
Std. mean	3.918	3.916	3.917	3.915	Std. mean	7.093	7.096	7.099	7.099
Chi-sq. (2 df)	2.1	2.5	0.7	1.0	Chi-sq. (2 df)	10.3*	7.6*	5.0	4.2

NOTE: *Chi-square value is significant at the 5 per cent level.

Interestingly, Christian Indian women have higher early fertility than any of the three Christian non-Indian groups: the 0–9 cohort has 3.3 births, compared to 2.7–3.1 for non-Indians, and the 10–19 cohort has 3.6, compared to 3.1–3.4 for non-Indian religious groups. In late fertility, however, Christian Indian women have fertility equal to or lower than that of any of the three groups of non-Indian Christians. In the case of completed fertility, also, Christian Indians have lower fertility than non-Indian Anglicans and Other Christians, but higher than Roman Catholics.

Adjusted differentials

In the case of non-Indians, controlling the age at first union does not reduce differentials greatly, but the next control, for residence, has a large effect on all groups and measures, mainly due to the more urban residence of the low fertility Catholic and Anglican groups.

Among Indians, controlling the age at entering the first union does have a large effect, noticeably reducing differentials among all cohorts and stages of childbearing. The control for residence also further narrowed differentials for all groups, mainly because the low fertility Christian group is concentrated in urban areas.

Religion is clearly no important determinant of fertility among non-Indians, and among Indians its effect is mainly due to the association between Christianity, high age at entering the first union and urban residence.

3.5 RESPONDENT'S EDUCATION

The creation of educational subgroups was straightforward: since this is a continuous variable, the only factors to be taken into consideration were the distribution by educational attainment and the advantage of using the natural split into primary and secondary or higher education. In the case of non-Indian respondents the four categories used were: less than 7 years' primary education; 8 years' primary (ie complete primary); incomplete secondary (some years of secondary education but no certificate or examination passed); and complete secondary (some certificate or examination passed, including the university educated as well). For Indian respondents this grouping was modified slightly – in the case of the youngest cohort (0–9 years' duration) the distribution by educational attainment allowed us to use the four categories as above and also to add a fifth group, by splitting the less than 7 years' into less than 5 years' and 6–7 years' primary. This was not possible for non-Indians, among whom only 3.8 per cent had less than 5 years' primary education. For older Indian cohorts (10–19 and 20 + duration) the same breakdown was used as for the 0–9 Indian cohort, except that the two secondary groups were combined, due to the very small size of the complete secondary group (only 2.5 per cent and 0.2 per cent for the 10–19 and 20 + cohorts, respectively, had achieved this level).

Unadjusted differentials

Education differentials are substantial among both ethnic groups and for all cohort measures. Moreover these differentials have increased over time, from women married long ago to the most recently married. Among non-Indians and the youngest cohort of Indians, where the complete secondary group is treated separately, this group stands out as having distinctly lower fertility than women in other education categories: 20–30 per cent below the standard mean for early fertility, and 40–56 per cent below the mean for late and completed fertility.

In general, as education increases, fertility declines, with only a few exceptions. Among non-Indians the only

Table 9 Effects of respondent's education on early fertility (B0–9)

Measure and cohort	Non-Indians				Measure and cohort	Indians			
	Adjusted up to variable (% diff. from std. mean)					Adjusted up to variable (% diff. from std. mean)			
	Unadjusted	AGFU	RESID	ROCCUP		Unadjusted	AGFU	RESID	ROCCUP
B0–9, cohort 0–9					*B0–9, cohort 0–9*				
PRIM7	11.9	13.5	12.5	9.9	PRIM5	2.4	1.8	0.1	0.6
PRIM8	7.2	5.6	4.7	2.5	PRIM67	2.2	1.5	1.0	1.4
INC.SEC	0.6	1.0	2.1	− 3.8	PRIM8	− 12.7	− 8.9	− 6.7	− 2.6
COM.SEC	− 27.4	− 27.0	− 25.9	− 21.9	INC.SEC	9.0	7.2	8.3	5.9
					COM.SEC	− 21.4	− 18.7	− 16.3	− 23.1
Std. mean	3.129	3.122	3.106	3.068	Std. mean	3.872	3.875	3.856	3.890
Chi-sq. (3 df)	45.2*	43.5*	39.3*	22.1*	Chi-sq. (4 df)	31.6*	18.6*	16.0*	15.7*
B0–9, cohort 10–19					*B0–9, cohort 10–19*				
PRIM7	10.5	11.3	7.5	7.4	PRIM5	5.3	4.9	4.4	3.4
PRIM8	6.1	4.5	3.1	1.5	PRIM67	5.0	4.8	4.4	3.7
INC.SEC	− 1.7	− 0.4	1.5	1.5	PRIM8	− 2.8	− 3.3	− 3.5	− 1.1
COM.SEC	− 20.1	− 20.0	− 16.5	− 13.4	INC.SEC	− 10.3	− 9.2	− 8.1	− 7.6
					COM.SEC				
Std. mean	3.192	3.203	3.226	3.238	Std. mean	3.902	3.911	3.921	3.919
Chi-sq. (3 df)	14.2*	13.3*	7.5	3.6	Chi-sq. (3 df)	8.2*	7.5	6.4	3.6
B0–9, cohort 20 +					*B 0–9, cohort 20 +*				
PRIM7	4.3	2.6	0.8	1.3	PRIM5	− 1.6	− 0.4	− 3.8	− 3.3
PRIM8	3.6	2.8	2.6	2.2	PRIM67	10.3	11.0	9.2	9.7
INC.SEC	11.2	10.7	11.1	9.7	PRIM8	13.5	11.5	9.6	8.5
COM.SEC	− 30.4	− 26.2	− 24.5	− 22.0	INC.SEC	− 18.1	− 19.2	− 12.1	− 12.6
					COM.SEC				
Std. mean	3.451	3.479	3.499	3.501	Std. mean	3.776	3.755	3.848	3.838
Chi-sq. (3 df)	8.3*	7.1	6.6	4.1	Chi-sq. (3 df)	14.1*	11.8*	12.8*	11.3*

NOTE: * Chi-square value is significant at the 5 per cent level.

Table 10 Effects of respondent's education on late fertility (B10–19) and completed fertility (NCEB)

Measure and cohort	Non-Indians				Measure and cohort	Indians			
	Adjusted up to variable (% diff. from std. mean)					Adjusted up to variable (% diff. from std. mean)			
	Unadjusted	AGFU	RESID	ROCCUP		Unadjusted	AGFU	RESID	ROCCUP
B10–19, cohort 10–19					*B10–19, cohort 10–19*				
PRIM7	38.3	31.2	19.4	17.9	PRIM5	30.4	25.8	23.4	19.2
PRIM8	16.0	13.8	8.6	9.8	PRIM67	3.2	4.5	3.3	0.8
INC.SEC	− 14.3	− 13.0	− 6.8	− 5.9	PRIM8	− 29.0	− 21.5	− 22.7	− 20.2
COM.SEC	− 47.5	− 37.8	− 25.7	− 28.0	INC.SEC	− 21.4	− 22.0	− 17.1	− 10.9
					COM.SEC				
Std. mean	1.942	1.973	2.034	2.031	Std. mean	1.841	1.832	1.854	1.881
Chi-sq. (3 df)	20.4*	13.6*	5.2	3.6	Chi-sq. (3 df)	23.9*	15.5*	14.3*	9.0*
B10–19, cohort 20 +					*B10–19, cohort 20 +*				
PRIM7	25.5	19.5	12.1	6.4	PRIM5	19.3	14.2	11.5	6.4
PRIM8	7.7	5.7	3.1	0.5	PRIM67	13.1	11.4	9.7	7.1
INC.SEC	7.9	6.3	11.2	9.8	PRIM8	2.0	2.3	1.3	2.9
COM.SEC	− 55.7	− 42.6	− 38.0	− 24.5	INC.SEC	− 38.5	− 30.8	− 25.2	− 17.3
					COM.SEC				
Std. mean	2.255	2.310	2.380	2.444	Std. mean	2.364	2.430	2.475	2.548
Chi-sq. (3 df)	16.2*	9.6*	6.6	2.3	Chi-sq. (3 df)	8.4*	4.8	3.3	1.1
NCEB, cohort 20 +					*NCEB, cohort 20 +*				
PRIM7	14.9	10.6	6.3	3.7	PRIM5	10.8	8.3	5.7	3.2
PRIM8	4.8	3.3	2.0	0.5	PRIM67	10.4	9.7	8.3	6.6
INC.SEC	9.6	8.5	10.9	10.4	PRIM8	9.4	8.7	7.4	7.0
COM.SEC	− 41.6	− 32.1	− 29.1	− 22.5	INC.SEC	− 29.9	− 25.8	− 20.4	− 15.4
					COM.SEC				
Std. mean	6.163	6.274	6.381	6.472	Std. mean	6.488	6.584	6.704	6.818
Chi-sq. (3 df)	19.0*	10.9*	8.4*	4.3	Chi-sq. (3 df)	8.1*	6.1	4.1	2.9

NOTE: * Chi-square value is significant at the 5 per cent level.

exception is found among the oldest, 20 + duration cohort, where the incomplete secondary group has slightly higher fertility than primary-educated women. Among Indians a few exceptions are found: in the case of late fertility of the 10–19 cohort, women with eight years of primary education have slightly lower fertility than women with some secondary education. A similar case is found for the youngest cohort's early fertility: women with incomplete secondary education have the highest fertility, 9 per cent above the standard mean, even higher than all three primary groups. Among women in the 20 + cohort, a curvilinear pattern is also found: those with the least schooling (5 or fewer years of primary schooling) have lower fertility than women with 6–7 and 8 years of primary education. These exceptions to the expected pattern of monotonic decline as education rises are probably due to the temporary effects of a rise in education reducing traditional practices (breast-feeding and abstinence, especially among Indians) and improving health and therefore fecundability) of women, for both ethnic groups. The existence of the curvilinear relationship mainly in early fertility and among older cohorts supports this hypothesis.

For both ethnic groups, declines in fertility over time are evident for most education groups, with a few exceptions. For both non-Indians and Indians, the late fertility of the highest educated group remains approximately the same from the 20 + cohort to the 10–19 cohort. Among Indians, however, two groups, the PRIM5 and the secondary-educated, have seen increases in early fertility. These increases in fertility may be explained by declines in traditional, fertility-restraining behaviour, improved health and medical facilities, in combination with a lag in beginning to use contraception. In the case of the secondary educated, a further factor may be the catching up effect associated with a later age at first union: women who marry later often have higher fertility early in their union, to make up for their late start. The two ethnic groups vary also in which education group had the largest declines. Among Indians, unexpectedly, fertility declines have been greatest among women with eight years' primary education, 1.1 child in B10–19 (late fertility) and 0.9 child in B0–9 (early fertility). Among non-Indians, in both early and late fertility, declines are greatest among women with incomplete secondary education, who started out at relatively high levels, from 3.8 births (20 + cohort), declining to 3.1 children (0–9 cohort), for early fertility, and from 2.4 to 1.7 children for late fertility (B10–19). It appears that attainment of complete primary education brings a greater relative change in status among Indian women, while an equivalent effect for non-Indians is not achieved until complete secondary education is attained. This may well depend on the meaning of education for the women's status within their own ethnic group – the effect of education may be relative to the average level reached by each ethnic group.

In late fertility (B10–19) differences between education categories increase greatly, compared to early fertility, especially among non-Indians. This is not surprising, since during this period possibly more rational decisions on childbearing are made after the economic realities of those born in the first decade become evident. The higher age at first union of these better educated women also pushes them further into the age where secondary sterility may set in, which would contribute to the range in fertility between education groups. For example, among non-Indians the range in absolute number of children is from 2.8 to 1.0 child (20 + cohort) and from 2.7 to 1.0 child (10–19 cohort). These large differentials in late fertility are carried through to completed fertility where the absolute difference between women completing secondary education and the 7-year primary group is 3.4 children.

Adjusted differentials

In the case of early fertility, the age at entering the first union makes an important contribution to differentials for the 0–9 cohort of Indians, but this factor is much less important for the two older cohorts of Indians. Since the rise in age at entry into first union is relatively recent, this difference between cohorts may be expected. For the early fertility of the 0–9 cohort of Indians, the only other factor having a sizeable impact on education differences is partner's education.

Among non-Indians the control for the age at entering unions produces only small reductions in early fertility differentials for the 0–9 and 10–19 cohorts, and has no effect on the 20 + cohort. The controls with the greatest effect on educational differentials for non-Indians, cohort 0–9, is respondent's occupation. Of lesser importance are the controls for pattern of work and residence. Residence has a much stronger impact on education differentials in early fertility for the older, 10–19 cohort, than for the younger, 0–9 cohort, suggesting that educational attainment is now more uniform across residential areas than it used to be.

Adjustment for age at entering the first union reduces differentials in late and complete fertility substantially, for both ethnic groups and both duration cohorts. This is understandable since late-marrying women usually have children at a faster rate early in their union, to catch up, but by the second decade of being in a union this higher social status, late-marrying group then restricts its fertility. In the case of the youngest cohort of Indians, though, late-marrying women have fewer children even in the first ten years of being in a union, as noted above.

Subsequent controls for residence, religion, number of partners and current union status each reduce education differentials by small but significant amounts. Even after controlling for respondent's occupation, however, the highest educated group continued to have substantially less than the average fertility, for all cohort measures, for both ethnic groups. The least educated group (of the 10–19 cohort only) also maintained much higher than average fertility, even after all variables up to respondent's occupation had been controlled. In both cases, education seems to have a strong effect independent of the other measured characteristics.

One important general conclusion is that educational differentials have widened and their significance has increased over time, for both Indians and non-Indians. It is interesting to note that, as the proportion of educated women rose from the older to younger cohorts, the relative differential of educated groups did not decline for non-Indians, and stayed at quite a high level for Indians. A further point is that much of the differentials among education subgroups work through delayed age at first

union, but more so for Indians than for non-Indians. The effect of controlling residence is greater among non-Indians, and has a stronger effect on the 10–19 and 20 + cohorts than on the 0–9 cohort, suggesting that residence is having less influence on educational attainment in recent times. Respondent's occupation is an important means through which education influences fertility, but this is mainly found among non-Indians and the youngest cohort of Indians.

3.6 RESPONDENT'S OCCUPATION

Respondents who had ever worked were categorized according to their most recent job. As a beneficial result of earlier experience with Jamaican data, a slightly different set of groups was used for non-Indians in Guyana – professional (PROFESS); clerical + white collar sales (white collar sales = shop clerks, code 326 in the detailed coding scheme), abbreviated as CLER + SS; blue collar sales + services, abbreviated as SS + SERV (blue collar sales = all other sales, the bulk being street vendors and market women); skilled and unskilled manual workers (MANUAL); agricultural + never worked (AGR + N.W). Previously, in Jamaica, the sales group had not been split but the division was suggested at the national meeting in Kingston, and testing proved it was a useful division. The proportion of non-Indians working in agriculture was very small (4.8 per cent) so this group was combined with never workers, under the assumption that they would be most similar.

In the case of Indians, the occupational distribution of the youngest cohort, 0–9 duration, made it feasible to use the same five groups as for non-Indians. For the two older cohorts, however, modifications were necessary: the proportion who had professional jobs was too small to constitute a separate group (1.3 and 0.6 percent for the 10–19 and 20 + cohorts respectively), so this group was combined with the clerical + white collar and abbreviated as PROF + CLER + SS. On the other hand the percent in agricultural jobs was large enough to form a separate group (10.2 and 27 per cent for the 10–19 and 20 + cohorts respectively), so the agricultural + never worked were split into two groups.

Ranking on occupation is used here partly as an indicator of social status, and partly as a measure of the impact of employment on fertility behaviour. Since this measure is simply based on the most recent occupation, we cannot argue for any precision in the impact of work at any particular stage of reproduction. To the extent that higher status jobs are more career-oriented, better paid and more likely to provide continuous work, women in such jobs would be expected to have lower fertility. In addition, full-time employment away from the home, because of the demands it creates on the woman's time – more true of professional, clerical and white collar, and manual jobs – should have the effect of reducing fertility, compared to occupations that are part time or at the home, which is more true of blue collar sales and services jobs, and agricultural jobs. By this logic we would expect women who have never worked to have the highest level of fertility. It has been shown, however, that these expected relationships may vary, depending on the costs and benefits of children, in particular groups or areas (Mason and Palan 1981).

Unadjusted differentials

Tables 11 and 12 show that among non-Indians there is some support for the hypothesis of an inverse relationship between type of occupation and fertility. Generally speaking, professional women had the lowest fertility, followed by clerical + white collar sales (CLER + SS), then by manual, next by blue collar sales + services (SS + SERV), and finally by agricultural + never workers (AGR + N.W) who usually had the highest fertility. With only one exception the PROFESS group consistently had the lowest fertility – from a range of 17–27 per cent below the mean in early fertility (B0–9) to a range of 20–51 per cent below in late fertility. This is equivalent to 0.4–0.8 child less than the overall mean in early fertility and 0.6–1.3 child less than the mean in late fertility.

Also agreeing with theoretical expectations, among non-Indians, the AGR + N.W group usually has higher fertility than all other groups. However, it is interesting to note that in early fertility (B0–9) of the youngest, 0–9 duration cohort, the AGR + N.W group has slightly lower fertility than the SS + SERV group, while for the 10–19 cohort, these two groups and the MANUAL group all have about the same level of fertility. Also in the case of late fertility, (B10–19) of the 10–19 cohort, both of these groups (AGR + N.W and SS + SERV) have approximately the same level of fertility, 11 per cent above the standard mean. In these cases part of the hypothesis breaks down, and the implication is that for women in lower status sales or service jobs, or in manual work, childbearing was no more costly or disadvantageous than it was for agricultural workers or women who had never worked.

Among Indian women, differentials show a much weaker and less consistent relationship between occupation and fertility and the patterns are markedly dissimilar from non-Indian women, even for the youngest cohort of Indians, for whom we used the same occupational categories as for non-Indians. One expectation is borne out, however – the agricultural group generally has highest fertility, in most cases higher than the group of women who had never worked. The patterns among occupation groups vary among cohort measures, however. Among the oldest cohort, women in union 20 or more years, differentials in early fertility are negligible. However, substantial differentials exist for the late fertility of this cohort, and they have the same pattern as observed for the 10–19 cohort: the highest status group of workers (professional, clerical and white collar sales) and manual workers had the lowest fertility, while the lower status sales and services, and agricultural workers had higher fertility than never workers. The implication is that for women in these occupations high fertility was more rational (possibly because children could contribute to the family's income) than it was for the group of women who had never worked.

In contrast the pattern for the youngest cohort, 0–9 duration, is quite different. In this case, all working groups (other than agricultural) have roughly the same level of fertility – the range is from 13.4 per cent below the mean (SS + SERV) to 19.1 per cent below (MANUAL). Clearly

Table 11 Effects of respondent's occupation on early fertility (B0–9)

Measure and cohort	Non-Indians				Measure and cohort	Indians			
	Adjusted up to variable (% diff. from std. mean)					Adjusted up to variable (% diff. from std. mean)			
	Unadjusted	RESID	REDUC	CURSTAT		Unadjusted	AGFU	RESID	REDUC
B0–9, cohort 0–9					*B0–9, cohort 0–9*				
PROFESS	−17.3	−16.7	− 2.8	− 6.8	PROFESS	−15.8	− 8.6	− 4.4	13.5
CLER + SS	−19.1	−18.4	−13.1	−10.9	CLER + SS	−17.6	−16.3	− 9.0	− 4.6
SS + SERV	11.7	12.3	8.2	9.5	SS + SERV	−13.4	−14.6	−14.2	−14.3
MANUAL	− 8.4	− 8.3	− 7.8	− 6.7	MANUAL	−19.1	−16.6	−14.4	−13.5
AGR + N.W	5.8	4.4	2.2	0.0	AGR + N.W	6.4	6.0	4.9	3.8
Std. mean	3.053	3.053	3.025	3.027	Std. mean	3.876	3.866	3.860	3.841
Chi-sq. (4 df)	34.4*	29.5*	11.4*	10.1*	Chi-sq. (4 df)	33.5*	26.7*	16.8*	15.2*
B0–9, cohort 10–19					*B0–9, cohort 10–19*				
PROFESS	−27.2	−26.1	−20.9	−18.0	PROFESS + CLER + SS	−12.6	−10.5	− 9.4	− 6.6
CLER + SS	− 3.9	− 0.4	0.2	2.4	SS + SERV	− 1.1	− 1.2	− 0.4	1.2
SS + SERV	4.9	3.0	2.5	5.2	MANUAL	−11.8	−10.7	−10.1	− 9.2
MANUAL	− 8.7	− 5.4	− 5.9	− 5.5	AGRIC	5.9	4.5	3.7	2.9
AGR + N.W	6.9	5.6	4.6	− 0.7	NEV.WOR	2.2	2.1	1.9	1.7
Std. mean	3.285	3.286	3.283	3.269	Std. mean	3.980	3.980	3.980	3.981
Chi-sq. (4 df)	16.9*	12.4*	6.2	5.8	Chi-sq. (4 df)	9.9*	7.4	5.7	3.8
B0–9, cohort 20 +					*B0–9, cohort 20 +*				
PROFESS	−21.4	−15.6	− 4.7	− 4.9	PROFESS + CLER + SS	4.5	1.9	4.5	3.5
CLER + SS	− 5.2	− 4.6	− 4.8	− 4.7	SS + SERV	− 4.0	− 1.7	− 1.1	0.8
SS + SERV	− 5.7	− 5.5	− 6.9	− 6.1	MANUAL	− 5.4	− 7.2	− 6.1	− 4.9
MANUAL	4.7	3.6	3.4	3.0	AGRIC	− 2.2	− 2.0	− 3.7	− 1.6
AGR + N.W	13.6	11.8	10.8	10.2	NEV.WOR	1.3	1.3	1.0	0.1
Std. mean	3.536	3.544	3.562	3.559	Std. mean	3.956	3.943	3.954	3.930
Chi-sq. (4 df)	15.6*	10.6*	9.3	7.1	Chi-sq. (4 df)	2.2	1.5	1.9	0.7

NOTE: *Chi-square value is significant at the 5 per cent level.

Table 12 Effects of respondent's occupation on late fertility (B10–19) and completed fertility (NCEB)

Measure and cohort	Non-Indians				Measure and cohort	Indians			
	Adjusted up to variable (% diff. from std. mean)					Adjusted up to variable (% diff. from std. mean)			
	Unadjusted	AGFU	RESID	REDUC		Unadjusted	AGFU	RESID	REDUC
B10–19, cohort 10–19					*B10–19, cohort 10–19*				
PROFESS	−29.4	−21.1	−13.8	1.9	PROF + CLER + SS	−36.1	−27.8	−22.7	−18.9
CLER + SS	−25.5	−28.0	−18.3	−14.0	SS + SERV	8.7	4.8	7.0	2.0
SS + SERV	11.6	8.9	5.2	2.0	MANUAL	−24.6	−20.3	−18.4	−14.2
MANUAL	− 4.3	− 1.4	5.5	4.6	AGRIC	33.6	27.7	24.9	23.0
AGR + N.W	11.3	12.9	6.7	4.1	NEV.WOR	− 1.0	− 0.6	− 1.5	− 0.9
Std. mean	2.142	2.147	2.142	2.144	Std. mean	1.902	1.905	1.907	1.909
Chi-sq. (4 df)	10.2*	9.4	3.6	1.5	Chi-sq. (4 df)	15.1*	9.4	7.6	4.9
B10–19, cohort 20 +					*B10–19, cohort 20 +*				
PROFESS	−51.1	−39.6	−37.1	−22.3	PROF + CLER + SS	−15.4	−10.7	− 9.4	− 3.6
CLER + SS	−22.3	−19.9	−16.9	−16.0	SS + SERV	11.5	8.3	9.1	8.5
SS + SERV	6.3	4.2	6.8	4.7	MANUAL	−14.5	−11.6	− 9.1	− 8.7
MANUAL	5.1	3.0	5.3	4.7	AGRIC	12.2	11.2	9.8	8.4
AGR + N.W	17.6	16.4	9.9	8.4	NEV.WOR	− 1.3	− 1.4	− 1.8	− 2.3
Std. mean	2.385	2.407	2.402	2.422	Std. mean	2.600	2.614	2.618	2.628
Chi-sq. (4 df)	15.0*	10.7*	7.5	3.6	Chi-sq. (4 df)	8.9	5.9	5.0	3.6
NCEB, cohort 20 +					*NCEB, cohort 20 +*				
PROFESS	−34.0	−25.4	−23.1	−10.9	PROF + CLER + SS	− 4.5	− 2.6	− 0.8	1.5
CLER + SS	−13.1	−11.4	− 9.8	− 9.5	SS + SERV	4.3	3.2	3.8	4.1
SS + SERV	1.4	− 0.1	1.6	− 0.2	MANUAL	−12.9	−11.7	−10.3	− 9.7
MANUAL	3.4	1.8	2.8	2.6	AGRIC	5.6	5.1	3.7	3.7
AGR + N.W	13.9	13.0	9.1	8.0	NEV.WOR	− 0.2	− 0.2	− 0.5	− 0.9
Std. mean	6.397	6.441	6.434	6.475	Std. mean	7.014	7.029	7.043	7.043
Chi-sq. (4 df)	17.1*	12.5*	7.6	4.0	Chi-sq. (4 df)	5.7	4.3	3.2	3.2

NOTE: *Chi-square value is significant at the 5 per cent level.

the relationship between occupation and fertility has gone through a rapid evolution from cohort to cohort, as the proportion working increased and occupational distribution changed. Occupation or employment itself had only a small effect on fertility for the oldest, 20 + duration cohort, but this effect increased for the 10–19 cohort, to the point where two occupation groups were substantially below the mean for both early and late fertility. This effect has further evolved to the situation where any employment, other than agricultural, has a substantial negative effect on fertility. This whole pattern and the recent relationship, is quite different from that found among non-Indians, for whom a more stable pattern was observed over time, and for whom only PROFESS and CLER + SS consistently have fertility much below the mean.

In early fertility, declines over time are evident for three of the five occupational groups of non-Indians – CLER + SS, MANUAL and AGR + N.W (see table 13 below). The MANUAL and CLER + SS group experienced the greatest declines. From an initial level of high fertility (5 per cent above the mean) the manual group declined to 8 per cent below the mean for the 0–9 cohort – in absolute terms a decline of 0.9 child. The CLER + SS group also declined by 0.9 child, thus moving from the second lowest to the lowest fertility group, for the most recent cohort (0–9 duration). The SS + SERV group remained at about the same absolute level of fertility, and its relative fertility therefore increased. In late fertility (B10–19) all groups excepting only the PROFESS experienced declines (ranging from 0.1 to 0.5 child from the 20 + to the 10–19 duration cohort), each maintaining its relative position from the first to the second cohort. The small change seen by the professional group is probably due to their fertility already being low; the minimal decline of the SS + SERV group, however, in the face of declines for other groups, may well be due to a different structure of cost of children for this group, because of the marginal nature of their work, and because a high proportion do not work full time or away from home.

Among Indians the overall decline in early fertility is much less than among non-Indians – 0.1 child compared to 0.6 child for non-Indians – but a few groups do have substantial declines (table 13).

In late fertility Indians experienced much greater fertility declines than non-Indians. The PROF + CLER + SS had the largest decline, 1.0 child, compared to an increase of 0.3 child for non-Indians. The smallest decline occurred among the agricultural group (0.4 child) whereas never workers, and the SS + SERV and MANUAL groups, had about the same substantial decline of 0.7–0.8 child. Apparently among Indians some factors other than occupation are causing the fertility decline, affecting all occupation groups, excepting only agricultural workers, to much the same extent.

Adjusted differentials

The control for age at entry into first union (AGFU) has little effect on occupation differentials in early fertility for non-Indians of all cohorts. In the case of the youngest of Indian women, 0–9 duration, however, this is not the case: the control reduces the low fertility professional group from 16 per cent below the mean to 9 per cent below the mean, and slightly changed all other groups.

In the case of late and completed fertility, controlling for age at first union results in a substantial reduction of occupation differentials for both cohorts (10–19 and 20 + duration) of non-Indians. This change is mainly seen among late-marrying professional women. This adjustment displaces the professional group from the lowest level of fertility (before adjustment) in favour of the CLER + SS group, who then have fertility 28 per cent below the mean, compared to 21 per cent below the mean for the professional group: if it were not for the lower age at entry of professional workers, the CLER + SS group would have the lowest level of fertility. In the case of late fertility for Indian women, for both cohorts, the effect of this control is quite large as well.

In view of the relation between occupation and other socio-economic variables, eg residence and education, it is expected that the control for these variables might reduce occupation differentials substantially. Among non-Indians, controlling residence affects the two older cohorts to a noticeable degree, but has little influence on the youngest duration cohort. Apparently the occupational distribution varies less by area of residence in recent times than it did some time ago, for this ethnic group. Among Indians, however, the opposite pattern is found. The control makes little change in occupation differentials in fertility for the oldest duration cohort, but the effect on recent fertility experience – the early fertility of the youngest cohort and the late fertility of the 10–19 duration cohort – is more substantial. The strongest effect is seen in the professional, clerical and white collar sales group,

Table 13 Fertility declines within respondents' occupational groups (in number of children)

	Non-Indians			Indians		
	Early fertility		Late fertility	Early fertility		Late fertility
	20 + to 10–19	10–19 to 0–9	20 + to 10–19	20 + to 10–19	10–19 to 0–9	20 + to 10–19
(1) PROFESS	−0.4	+0.2	+0.3	−0.6	−0.3	−1.0
(2) CLER + SS	−0.2	−0.7	−0.3			
(3) SS + SERV	+0.1	0.0	−0.1	+0.2	−0.6	−0.8
(4) MANUAL	−0.7	−0.2	−0.5	−0.2	−0.4	−0.8
(5) AGRIC	−0.5	−0.3	−0.4	+0.3	0.0	−0.4
(6) NEV. WOR				+0.1	+0.1	−0.7
Overall	−0.3	−0.3	−0.4	+0.1	−0.1	−0.8

who are more concentrated in urban areas. Even after this control was applied, however, large occupation differentials in fertility remained.

For all groups of non-Indians, and for the youngest cohort of Indians, the control for education drastically reduces occupation differentials; the group most affected was professional workers, whose negative differential, relative to the standard mean, is greatly reduced and even reversed in two cases, after education was controlled. Some occupation groups are not as strongly affected by this control; the CLER + SS group maintains its low fertility regardless of education, among non-Indians, while among Indians the SS + SERV and MANUAL groups remained much the same as they were before the control. The hypothesis that strong motivation for upward social mobility, among those who are of an intermediate social status, will result in fertility restriction, may apply to these groups.

It is interesting to note that for the groups where current union status is meaningful – B0–9 of the 0–9 cohort, and B10–19 of the 10–19 cohort, among non-Indians – controlling union status would raise the fertility of the CLER + SS, SS + SERV and MANUAL groups, but would reduce the other two groups. The higher proportions of the professional and AGR + N.W groups who are married, compared to the higher proportion in common law or visiting unions among the other three working groups, account for this difference.

3.7 PATTERN OF WORK

This variable is constructed from the limited data on timing of work – employment before the first birth and most recent employment after the first birth (which may be current work) – with the intention of obtaining a measure of the extent of exposure to the labour force. Employment early in life is felt to be an important aspect of work, in regard to women's status and possibly their attitude to childbearing, because introduction to an alternative role to childbearing and marriage at an early stage is more likely to encourage some proportion of women to choose this as one major role in life, competing with childbearing, than if it came later, after they had already started childbearing. One disadvantage of the variable, however, is that it is measured in relation to fertility: delays in childbearing may occur for any reason, thereby increasing the chances of work before the first birth, or work at this stage may itself persuade women to delay childbearing. The latter hypothesis seems more likely, but a small proportion of cases will fall into the first type and make the effect of work on fertility appear somewhat larger than it is in fact.

Four groups were obtained – women who worked both before the first birth and who are also currently working (BEF + NOW); those who worked before the first birth, and may have worked after that birth, but are not currently working (BEF/B + S); those who worked only sometime after the first birth (SINCE); and those who have never worked (NEV. WOR). Childless women are treated as if they would eventually have children, thus childless current workers are in the first group; the group of women who have worked sometime are in the second group and never workers in the fourth group. The third group is predicted to have one of the highest levels of fertility because they are likely to have joined the labour force as a result of the economic need generated by their high fertility. Never workers (who form the fourth group) may also be a high

Table 14 Effects of pattern of work on early fertility (B0–9)

Measure and cohort	Non-Indians				Measure and cohort	Indians			
	Adjusted up to variable (% diff. from std. mean)					Adjusted up to variable (% diff. from std. mean)			
	Unadjusted	RESID	REDUC	CURSTAT		Unadjusted	AGFU	RESID	REDUC
B0–9, cohort 0–9					*B0–9, cohort 0–9*				
BEF + NOW	− 29.9	− 30.2	− 25.3	− 22.5	BEF + NOW	− 33.6	− 31.2	− 27.8	− 24.1
BEF/B + S	7.0	6.7	5.1	1.9	BEF/B + S	0.4	1.6	4.5	5.3
SINCE	26.0	26.8	24.5	27.1	SINCE	− 5.5	− 6.3	− 6.7	− 5.4
NEV.WOR	4.3	4.2	2.4	− 0.2	NEV.WOR	7.9	7.5	6.3	5.0
Std. mean	3.007	3.008	3.006	3.008	Std. mean	3.825	3.824	3.825	3.833
Chi-sq. (3 df)	81.0*	76.3*	50.9*	47.6*	Chi-sq. (3 df)	50.1*	42.0*	32.6*	22.5*
B0–9, cohort 10–19					*B0–9, cohort 10–19*				
BEF + NOW	− 13.4	− 11.4	− 9.3	− 5.5	BEF + NOW	− 11.9	− 11.7	− 12.0	− 11.2
BEF/B + S	1.4	1.2	1.4	− 0.4	BEF/B + S	− 7.2	− 5.0	− 3.6	− 3.2
SINCE	8.2	6.1	5.0	9.6	SINCE	2.1	1.0	1.4	1.5
NEV.WOR	6.7	6.4	4.8	− 1.6	NEV.WOR	3.3	3.0	2.7	2.4
Std. mean	3.255	3.259	3.260	3.254	Std. mean	3.950	3.956	3.958	3.959
Chi-sq. (3 df)	12.0*	8.1*	4.9	4.5	Chi-sq. (3 df)	8.0*	6.5	5.9	5.0
B0–9, cohort 20 +					*B0–9, cohort 20 +*				
BEF + NOW	− 17.7	− 16.8	− 16.2	− 15.4	BEF + NOW	− 7.5	− 8.1	− 8.8	− 7.2
BEF/B + S	− 1.6	− 0.5	− 0.5	− 1.1	BEF/B + S	− 16.7	− 15.2	− 15.3	− 12.5
SINCE	10.4	8.9	8.5	9.0	SINCE	8.1	8.2	8.8	8.9
NEV.WOR	13.0	12.0	11.7	11.0	NEV.WOR	2.8	2.5	2.5	1.5
Std. mean	3.562	3.564	3.564	3.560	Std. mean	3.923	3.919	3.918	3.907
Chi-sq. (3 df)	27.3*	22.9*	20.8*	18.4*	Chi-sq. (3 df)	21.4*	19.5*	21.0*	15.3*

NOTE: *Chi-square value is significant at the 5 per cent level.

Table 15 Effects of pattern of work on late fertility (B10–19) and completed fertility (NCEB)

Measure and cohort	Non-Indians				Measure and cohort	Indians			
	Adjusted up to variable (% diff. from std. mean)					Adjusted up to variable (% diff. from std. mean)			
	Unadjusted	AGFU	RESID	REDUC		Unadjusted	AGFU	RESID	REDUC
B10–19, cohort 10–19					*B10–19, cohort 10–19*				
BEF + NOW	−10.4	− 5.9	− 3.3	1.3	BEF + NOW	−21.2	−14.8	−14.3	−16.4
BEF/B + S	−11.4	− 9.1	− 9.4	−10.8	BEF/B + S	38.8	39.9	43.8	42.0
SINCE	22.9	13.1	11.9	10.0	SINCE	− 7.9	−13.4	−11.9	−11.1
NEV.WOR	4.2	5.0	3.3	1.2	NEV.WOR	− 2.4	− 2.2	− 3.6	− 3.0
Std. mean	2.142	2.150	2.151	2.155	Std. mean	1.942	1.950	1.953	1.950
Chi-sq. (3 df)	7.7	3.0	2.5	2.2	Chi-sq. (3 df)	10.9*	11.5*	13.2*	11.9*
B10–19, cohort 20 +					*B10–19, cohort 20 +*				
BEF + NOW	− 5.9	− 3.5	− 2.8	− 1.3	BEF + NOW	22.7	22.2	22.0	23.1
BEF/B + S	− 0.8	− 0.2	1.7	1.2	BEF/B + S	− 4.0	− 3.9	− 4.2	− 2.7
SINCE	3.6	− 0.7	− 0.3	− 1.3	SINCE	1.2	0.1	0.8	− 6.4
NEV.WOR	4.5	4.7	1.7	1.4	NEV.WOR	− 3.7	− 3.4	− 3.5	− 1.8
Std. mean	2.497	2.506	2.500	2.501	Std. mean	2.655	2.660	2.658	2.686
Chi-sq. (3 df)	1.3	0.5	0.2	0.1	Chi-sq. (3 df)	9.3*	8.9*	8.7*	8.5*
NCEB, cohort 20 +					*NCEB, cohort 20 +*				
BEF + NOW	−12.6	−10.8	−10.4	− 9.5	BEF + NOW	6.9	6.4	5.9	6.3
BEF/B + S	− 0.2	0.3	1.7	1.5	BEF/B + S	− 7.8	− 7.2	− 7.4	− 6.6
SINCE	7.7	4.6	4.6	4.0	SINCE	4.4	3.8	4.4	4.4
NEV.WOR	7.9	8.1	6.0	5.8	NEV.WOR	− 0.9	− 0.7	− 0.8	− 1.0
Std. mean	6.563	6.580	6.571	6.572	Std. mean	7.065	7.072	7.068	7.063
Chi-sq. (3 df)	12.3*	8.4*	7.3	5.7	Chi-sq. (3 df)	6.3	5.2	5.4	5.1

NOTE: *Chi-square value is significant at the 5 per cent level.

fertility group because of the lack of any competition for their time. The first and second groups are expected to have relatively lower fertility, partly because employment before the first birth and current work indicate a stronger link with the labour force. For non-Indians, the distribution across these four groups is 28, 26, 21 and 25 per cent respectively, while for Indians it is 11, 13, 18 and 58 per cent.

Unadjusted differentials

Among non-Indians the expected pattern of fertility differences is observed fairly consistently – in general the SINCE and NEV. WOR groups have the highest, and often similar, levels of fertility. In recent experience, however, the SINCE group had substantially higher fertility than never workers. This is unlikely to be a bias due to treatment of childless women, because it occurs in both early and late fertility. Among non-Indians, the never-worked group is of a higher social status than the SINCE group – in terms of educational attainment, both of the respondent and partner – and more of them are currently married than are those in the SINCE group. who have higher proportions in common law unions. These characteristics could have been instrumental in their having an earlier decline than the SINCE group, reversing earlier differentials.

Among all three cohorts of Indians, the early fertility (B0–9) pattern approximates the expected situation, with the two groups which worked before the first birth having lower fertility in most cases. During the second decade of childbearing and in completed fertility, however, one or the other of the two 'before' groups has substantially higher fertility than most other groups. One possibility is that, among these older cohorts of Indian women, a fairly continuous work history identifies not women who are in modern sector jobs (of whom there are few, for these two cohorts), but women in agricultural jobs, who do work most of their life. Work participation by Indian women in agricultural work has fallen rapidly in the last 30 years, partly because of mechanization, but agricultural work would have affected a substantial proportion of these two cohorts. There are reasons for expecting families in agricultural work to have high fertility. Work on the land for women provides little competition with childbearing. Moreover, children can be productive from a young age in the agricultural setting or, if not, their net costs are lower than would be the case for non-agricultural work or in urban areas.

Among non-Indians, although all pattern of work groups had some net decline in early fertility, it was notable that the group who had never worked had as large a decline during the past 20 years as the group that was expected to have the lowest fertility, those who worked before the first birth and at the time of interview (see table 16). Among Indians the BEF + NOW group had a particularly large decline in early fertility (1.1 child), followed by a substantial drop in late fertility also. The Indian group who work less continuously (BEF/B + S) stood out as one which had increases in both early and late fertility, in contrast with the SINCE group who had substantial declines, while the opposite trend is predicted for both. The SINCE group has a lower socio-economic profile – higher proportion working in blue collar sales and services, and lower proportion in professional and clerical and white collar sales – compared to the BEF/B + S group, who have a slightly higher proportion in agriculture, however. The reasons for this unexpected pattern are unclear. One possibility is that the differences in union status may

Table 16 Fertility declines within pattern of work groups (in number of children)

	Non-Indians			Indians		
	Early fertility		Late fertility	Early fertility		Late fertility
	20 + to 10–19	10–19 to 0–9	20 + to 10–19	20 + to 10–19	10–19 to 0–9	20 + to 10–19
BEF + NOW	−0.1	−0.7	−0.4	−0.2	−0.9	−0.7
BEF/B + S	−0.3	0.0	−0.6	+0.4	+0.2	+0.1
SINCE	−0.4	+0.2	+0.1	−0.2	−0.4	−0.9
NEV.WOR	−0.5	−0.3	−0.4	0.0	−0.1	−0.7
Overall	−0.6		−0.4	−0.1		−0.8

contribute to the observed pattern – BEF/B + S have higher proportions married than the SINCE group, who have much higher proportions single and in common law unions.

Adjusted differentials

The adjustment for age at entering the first union has little effect on differentials in early fertility for the non-Indian group, and only small effects among Indians. The effect of this control is stronger on late fertility, however, for both cohorts of non-Indians, and for the younger cohort of Indians, showing that the BEF + NOW group did have a later than average age at first birth, while the SINCE group had an earlier than average age.

In early fertility of cohort 0–9 for both ethnic groups and the 10–19 cohort of non-Indians, the controls for residence, respondent's education and current union status each substantially reduces the differentials by pattern of work categories. In comparison, differentials for older cohorts remain unchanged. In the case of this youngest cohort, among Indians both residence and education have a noticeable effect, showing that the two groups who worked before are more urban and more educated, while the never worked group is the opposite. Residence is less powerful among non-Indians, but education has similarly strong effects as for Indians. In both ethnic groups all other controls reduce differentials in this cohort measure only by small amounts, and they remain significant up to the introduction of the last control, indicating that pattern of work has a strong independent effect for this youngest cohort. Unexpectedly, differentials in early fertility for the 10–19 duration cohort of both Indians and non-Indians are not as large as is true for the oldest cohort, 20 + duration. Whether this is a random fluctuation or a historical trend is unclear.

In the case of late fertility, controlling the age at first union reduces fertility differences substantially, for the 10–19 duration cohort, of both ethnic groups, but has relatively less effect on the older cohort, 20 + duration. The same patterns are found as for early fertility; the BEF + NOW group has a higher average age at first union, and the SINCE group a lower average age. Holding as constant the area of residence has relatively little effect on either ethnic group and, somewhat unexpectedly, the control for respondent's education also has little noticeable effect in most cases. One exception is the SINCE group's late fertility, for the 20 + duration cohort, who clearly have much worse than the average level of education. In general, however, pattern of work differentials in late fertility seem to be quite independent of residence or education.

3.8 PARTNER'S EDUCATION

For both Indians and non-Indians the same groups were used – this was the five-category breakdown that was used for the 0–9 cohort of Indian respondents: less than 5 years' primary (PRIM5); 6–7 years' primary (PRIM67), 8 years' primary (PRIM8); incomplete secondary (INC.SEC) and complete secondary (COM.SEC) education. This was possible in the case of non-Indians because partners were on the average less educated than their spouses – 11.4 per cent of partners had less than 5 years' primary schooling, compared to 3.8 per cent of their spouses. This may be partly due to age differences, since partners are older than respondents, on average. However we do not have the age of partners to test this possibility. In the case of Indians, partners were, on the average, better educated than their spouses; thus it was possible to have two secondary groups for all three cohorts – 12 per cent of all partners were in the completed secondary group, compared to only 7.5 per cent of Indian women.

Unadjusted differentials

Fertility did not consistently decline as education of partners increased, for all cohort measures. In all cohorts of both Indians and non-Indians, however, women whose partners had completed secondary education had the lowest fertility. Highest fertility, however, occurred not among the lowest education group, but among partners with 6–7 years' primary schooling, and in one case (the youngest cohort of Indian women) the incomplete secondary group had the highest fertility. It is interesting to note that the least educated group of partners (less than 5 years' primary schooling) also had lower fertility than the PRIM8 group in all three cohorts of non-Indians' early fertility, and in two cohorts of Indians' early fertility as well. This curvilinear pattern is even more frequent for partner's education than it was for respondent's education: apparently women's education is more likely to be immediately reflected in lower fertility than their partner's education. The same reasons suggested earlier to account for this type of relationship among women may also apply here.

Table 17 Effects of partner's education on early fertility (B0–9)

Measure and cohort	Non-Indians				Measure and cohort	Indians			
	Adjusted up to variable (% diff. from std. mean)					Adjusted up to variable (% diff. from std. mean)			
	Unadjusted	AGFU	RESID	REDUC		Unadjusted	AGFU	RESID	REDUC
B0–9, cohort 0–9					*B0–9, cohort 0–9*				
PRIM5	7.8	7.6	6.0	3.7	PRIM5	− 3.0	− 3.3	− 4.9	− 5.6
PRIM67	7.6	9.1	9.7	5.1	PRIM67	5.7	5.1	3.7	3.4
PRIM8	14.2	13.6	12.8	10.6	PRIM8	− 2.4	− 1.6	− 1.9	− 1.4
INC.SEC	− 13.7	− 13.6	− 12.3	− 12.9	INC.SEC	10.2	8.6	10.0	7.0
COM.SEC	− 18.0	− 17.8	− 17.2	− 9.4	COM.SEC	− 13.7	− 11.0	− 5.7	− 0.3
Std. mean	3.105	3.104	3.098	3.067	Std. mean	3.883	3.878	3.853	3.843
Chi-sq. (4 df)	41.2*	39.9*	34.8*	17.2*	Chi-sq. (4 df)	20.4*	13.6*	10.2*	5.3
B0–9, cohort 10–19					*B0–9, cohort 10–19*				
PRIM5	7.9	6.8	5.7	4.4	PRIM5	2.2	2.1	1.7	− 0.4
PRIM67	13.7	15.9	11.3	9.3	PRIM67	7.2	5.6	5.0	3.7
PRIM8	8.8	8.2	7.3	6.6	PRIM8	0.8	0.5	0.0	0.4
INC.SEC	− 8.7	− 9.1	− 8.1	− 9.0	INC.SEC	− 6.3	− 6.3	− 4.7	− 2.7
COM.SEC	− 17.4	− 16.5	− 13.1	− 9.3	COM.SEC	− 14.4	− 10.1	− 9.1	− 4.5
Std. mean	3.208	3.209	3.218	3.223	Std. mean	3.929	3.938	3.946	3.963
Chi-sq. (4 df)	21.0*	20.6	12.4*	7.7	Chi-sq. (4 df)	11.1*	6.5	4.7	1.7
B0–9, cohort 20 +					*B0–9, cohort 20 +*				
PRIM5	0.3	− 1.6	− 1.9	− 1.5	PRIM5	− 0.9	1.0	− 0.9	− 0.2
PRIM67	13.6	11.9	10.1	10.7	PRIM67	9.0	8.3	6.5	6.2
PRIM8	2.0	1.4	1.5	0.7	PRIM8	− 0.4	− 1.2	− 1.3	− 1.8
INC.SEC	1.6	1.0	1.2	− 0.2	INC.SEC	− 5.8	− 6.1	− 3.1	− 3.6
COM.SEC	− 12.3	− 8.7	− 7.9	− 5.8	COM.SEC	− 9.2	− 10.5	− 5.7	− 5.1
Std. mean	3.455	3.478	3.486	3.494	Std. mean	3.856	3.845	3.881	3.879
Chi-sq. (4 df)	6.6	4.8	3.4	3.3	Chi-sq. (4 df)	8.0	7.0	4.0	3.5

NOTE: * Chi-square value is significant at the 5 per cent level.

Differentials in early fertility are large for both ethnic groups, increasing in size from older to younger cohorts, in both cases. Over all cohorts the primary groups among non-Indians have a positive difference from the standard mean, ranging from 0.3 per cent to 14.2 per cent. Among Indians the direction of differences in primary groups is mixed but, among both Indians and non-Indians, the secondary groups are negative with one significant exception, the INC.SEC group of the 0–9 duration cohort.

Comparison of cohorts' early and late fertility reveals some interesting patterns. The oldest cohort of both non-Indians and Indians had relatively small differentials in early fertility, but differential fertility control became very apparent in the second decade of being in a union, when the education groups ranged from 39.6 per cent above the mean (PRIM67) to 39.9 per cent below the mean (COM.SEC) for non-Indians, the range being from + 16.9 per cent to − 26.6 per cent for Indians. Similarly, although the younger (10–19) duration cohort had moderately strong differentials even in early fertility, the range of differentials also saw large increases at the stage of late fertility. It appears that the more educated groups exercise fertility control not so much by spacing children early in marriage, although this had increased over time, but more so by spacing or stopping childbearing after achieving the desired number, in the second decade of being in a union.

Adjusted differentials

The effect of controlling the age at first union is substantially to reduce differentials in late fertility and completed fertility for both older cohorts and both ethnic groups. The education group most changed is the complete secondary group, whose fertility is increased under the control, because it has a higher than average age at entry into the first union. One of the most dramatic changes is seen in the case of B10–19 of the 10–19 duration cohort of Indians, where the complete secondary group drops from 62.4 per cent below the standard mean to 48.2 per cent below the mean. The effect of this control on early fertility is not as large, nor is it uniform – the 0–9 and 10–19 cohorts of non-Indians and the 20 + cohort of Indians are relatively unaffected, compared to other cohorts.

The effect of controlling residence is especially large for late fertility (even more so among non-Indians than Indians), and for the early fertility of Indians. The more urban residential distribution of the better educated explains part of their lower fertility. As has been frequently seen before, however, differentiation (and therefore the effect of the control) becomes more evident in late fertility than in childbearing early in the union, when most groups have more similar levels of fertility.

Among non-Indians, residence, respondent's education and union status all substantially reduce differentials by partner's education. The control for respondent's education has the greatest impact on differentials in the most recent cohort, 0–9 duration, of non-Indians. Even after respondent's education was controlled, however, non-Indians had noticeable differentials in early fertility (a range of about 10 per cent above and below the standard mean) and much larger differentials remained in late fertility. Partner's education apparently has a large effect independent of the tendency of partners to marry women of similar education.

The effect of controlling respondent's education for Indians is even stronger, for the two younger cohorts'

Table 18 Effects of partner's education on late fertility (B10–19) and completed fertility (NCEB)

Measure and cohort	Non-Indians				Measure and cohort	Indians			
	Adjusted up to variable (% diff. from std. mean)					Adjusted up to variable (% diff. from std. mean)			
	Unadjusted	AGFU	RESID	REDUC		Unadjusted	AGFU	RESID	REDUC
B10–19, cohort 10–19					*B10–19, cohort 10–19*				
PRIM5	− 5.4	− 9.9	− 12.5	− 14.7	PRIM5	22.9	19.2	17.6	12.9
PRIM67	44.8	45.9	31.3	26.4	PRIM67	15.3	12.9	11.3	8.9
PRIM8	16.5	16.5	14.4	13.8	PRIM8	2.3	− 2.6	− 4.3	0.7
INC.SEC	− 3.3	− 6.8	− 4.0	− 2.6	INC.SEC	− 23.2	− 16.1	− 12.4	− 8.3
COM.SEC	− 44.5	− 39.3	− 29.6	− 26.2	COM.SEC	− 62.4	− 48.2	− 42.7	− 40.6
Std. mean	2.067	2.067	2.085	2.092	Std. mean	1.785	1.814	1.827	1.840
Chi-sq. (4 df)	26.0*	24.0*	12.8*	9.5*	Chi-sq. (4 df)	22.7*	14.3*	11.4*	6.4
B10–19, cohort 20 +					*B10–19, cohort 20 +*				
PRIM5	21.2	15.5	12.1	10.6	PRIM5	0.6	− 2.5	− 3.9	− 6.7
PRIM67	39.6	34.5	26.8	25.8	PRIM67	16.9	16.0	14.9	12.4
PRIM8	− 0.9	− 2.2	− 3.1	− 4.1	PRIM8	− 2.5	− 2.9	− 2.5	− 2.8
INC.SEC	9.2	7.4	10.2	8.0	INC.SEC	− 5.2	− 5.1	− 2.9	− 0.4
COM.SEC	− 39.9	− 30.1	− 25.5	− 20.5	COM.SEC	− 26.6	− 17.0	− 14.8	− 5.3
Std. mean	2.318	2.359	2.396	2.412	Std. mean	2.602	2.630	2.645	2.681
Chi-sq. (4 df)	25.7*	18.1*	12.2*	10.1*	Chi-sq. (4 df)	12.0*	10.0*	9.1	7.8
NCEB, cohort 20 +					*NCEB, cohort 20 +*				
PRIM5	14.1	9.8	8.1	7.5	PRIM5	1.0	− 0.2	− 1.6	− 2.9
PRIM67	24.7	20.9	16.4	16.3	PRIM67	13.3	12.5	11.2	9.7
PRIM8	0.9	− 0.2	− 0.6	− 1.3	PRIM8	− 0.9	− 1.4	− 1.3	− 1.7
INC. SEC	4.6	3.3	4.7	3.1	INC.SEC	− 9.8	− 9.8	− 7.6	− 6.5
COM.SEC	− 26.5	− 19.2	− 16.6	− 13.6	COM.SEC	− 17.1	− 11.6	− 8.6	− 2.9
Std. mean	6.226	6.309	6.363	6.388	Std. mean	6.908	6.947	6.991	7.043
Chi-sq. (4 df)	24.4*	15.6*	10.3*	8.7	Chi-sq. (4 df)	17.6	15.0*	11.8*	9.7*

NOTE: *Chi-square value is significant at the 5 per cent level.

early fertility, and for both cohorts' late fertility, again with some of the largest changes occurring for the complete secondary group. But in the case of late and completed fertility, the effect is more uniform, affecting most education groups. Unlike the situation among non-Indians, only small differences remain after the respondent's education had been controlled, in all cases. Partner's education is apparently more closely related to respondent's education, among Indians and therefore has little independent effect on fertility, with the exception of one cohort-measure only (B10–19 of cohort 10–19).

As other variables were controlled, differentials in early fertility for Indians were reduced to very low levels; non-Indian differentials were also reduced, but after all controls some differences still remained. In late fertility, however, for both cohorts of non-Indians and the 10–19 cohort of Indians, substantial differences still remained after all factors were controlled. Partner's education does have some influence independent of other characteristics of the respondent.

3.9 PARTNER'S OCCUPATION

Partner's occupation is categorized into four groups, identically for Indians and non-Indians: agricultural (self-employed and employees combined) (AGRIC); manual, skilled and unskilled (MANUAL); sales and services (SS + SERV); and professional and clerical (PROF/CL). The small number of those who have never worked are combined with the agricultural group. The combination of skilled and unskilled manual results in a very large group, 40–50 per cent for all cohorts, but this was unavoidable, since not only is the proportion classed as unskilled quite small – 8 per cent for non-Indians and 11 per cent for Indians, but the basis for this division is not clear cut. The agricultural group was substantial for Indians, 36 per cent, and for comparability this group was maintained among non-Indians as well, although its proportion was only 7 per cent. The proportion in the two higher status occupational groups, professional + clerical and sales + services, was 21 per cent and 23 per cent for non-Indians and 12 per cent and 13 per cent for Indians, respectively.

Unadjusted differentials

Fertility levels according to partner's occupation grouping follows roughly the pattern of lower fertility among women whose partners are in the higher status jobs through to higher fertility among women with partners in agricultural jobs. This pattern is similar to that seen in women's occupation groups, particularly among non-Indians. For both ethnic groups and for almost all cohort-measures, the PROF/CL group has the lowest fertility and the agricultural group has the highest fertility. The fertility level of the two occupation groups of intermediate status is in most cases not far from the standard mean. Differentials for both Indians and non-Indians are larger for the more recent period, showing that as fertility decline sets in, occupation groups declined at different rates. Moreover, differentials in late fertility are much larger than those in early fertility – for example among non-Indians the PROF/CL group is reduced to 43 per cent below the mean, compared to 16 per cent below the mean in early fertility, and the AGRIC group increases to 43 per cent above the mean, compared to 17 per cent above. Absolute differences

Table 19 Effects of partner's occupation on early fertility (B0–9)

Measure and cohort	Non-Indians				Measure and cohort	Indians			
	Adjusted up to variable (% diff. from std. mean)					Adjusted up to variable (% diff. from std. mean)			
	Unadjusted	AGFU	RESID	REDUC		Unadjusted	AGFU	RESID	REDUC
B0–9, cohort 0–9					*B0–9, cohort 0–9*				
PROF + CL	−17.7	−18.5	−17.0	−12.4	PROF + CL	−17.8	−15.4	−10.3	− 6.8
SS + SERV	− 8.2	− 7.9	− 7.2	− 7.3	SS + SERV	− 6.3	− 3.2	− 0.4	− 1.3
AGRIC	20.0	18.8	14.3	12.7	AGRIC	11.0	9.9	6.6	6.8
MANUAL	8.4	8.8	8.4	6.8	MANUAL	− 2.6	− 3.3	− 2.8	− 3.6
Std. mean	3.027	3.026	3.020	3.014	Std. mean	3.909	3.906	3.894	3.891
Chi-sq. (3 df)	28.0*	28.9	23.5*	14.2*	Chi-sq. (3 df)	29.1*	21.7*	8.9*	7.0*
B0–9, cohort 10–19					*B0–9, cohort 10–19*				
PROF + CL	−15.5	14.5	−11.3	− 8.2	PROF + CL	−17.7	−14.6	−13.6	−11.5
SS + SERV	4.1	3.8	4.5	4.6	SS + SERV	− 2.9	− 2.7	− 1.8	− 0.9
AGRIC	17.2	18.5	12.0	8.6	AGRIC	7.0	6.4	5.8	5.4
MANUAL	2.3	1.9	1.0	0.2	MANUAL	− 0.1	− 0.6	− 0.6	− 1.2
Std. mean	3.279	3.276	3.279	3.277	Std. mean	3.996	3.994	3.993	3.992
Chi-sq. (3 df)	14.7*	13.4	7.0	3.7	Chi-sq. (3 df)	18.6*	13.4*	10.6*	8.0*
B0–9, cohort 20 +					*B0–9, cohort 20 +*				
PROF + CL	− 6.4	− 3.6	− 1.7	0.4	PROF + CL	− 0.6	− 0.9	3.4	3.6
SS + SERV	3.3	3.2	3.6	3.5	SS + SERV	4.7	5.6	6.3	6.4
AGRIC	− 0.4	− 0.9	− 5.9	− 6.7	AGRIC	3.0	3.2	1.2	2.3
MANUAL	1.2	0.1	− 0.2	− 0.9	MANUAL	− 4.1	− 4.4	− 4.1	− 5.2
Std. mean	3.536	3.547	3.560	3.569	Std. mean	3.905	3.904	3.917	3.913
Chi-sq. (3 df)	1.4	0.6	1.1	1.2	Chi-sq. (3 df)	3.8	4.5	3.7	5.3

NOTE: *Chi-square value is significant at the 5 per cent level.

in early fertility between the lowest fertility group (professional and clerical) and the highest fertility group (agricultural) are approximately the same for the two ethnic groups; in the two younger cohorts it is about 1.1 children but much narrower in the oldest, 20 + duration cohort (0.3 child). The groups experiencing the greatest declines in early and late fertility for both ethnic groups are PROF/CL and the SS + SERV. These are two higher status groups, and their characteristics are conducive to their greater fertility decline – they are more urban, better

Table 20 Effects of partner's occupation on late fertility (B10–19) and completed fertility (NCEB)

Measure and cohort	Non-Indians				Measure and cohort	Indians			
	Adjusted up to variable (% diff. from std. mean)					Adjusted up to variable (% diff. from std. mean)			
	Unadjusted	AGFU	RESID	REDUC		Unadjusted	AGFU	RESID	REDUC
B10–19, cohort 10–19					*B10–19, cohort 10–19*				
PROF + CL	−42.9	−36.6	−28.0	−25.7	PROF + CL	−38.0	−29.3	−24.8	−20.0
SS + SERV	− 0.3	− 0.7	4.1	6.0	SS + SERV	−19.6	−15.8	−13.8	−14.1
AGRIC	43.3	38.7	21.8	19.1	AGRIC	19.2	17.5	15.5	13.7
MANUAL	12.2	10.4	6.9	5.4	MANUAL	0.3	− 1.9	− 2.1	− 1.8
Std. mean	2.158	2.154	2.160	2.161	Std. mean	1.907	1.911	1.912	1.913
Chi-sq. (3 df)	26.8*	19.2*	8.7*	6.5	Chi-sq. (3 df)	17.1*	11.8*	8.5	6.1
B10–19, cohort 20 +					*B10–19, cohort 20 +*				
PROF + CL	−15.7	− 6.2	− 2.3	2.1	PROF + CL	−15.8	− 9.3	− 7.3	− 2.6
SS + SERV	1.7	0.2	2.0	1.9	SS + SERV	− 2.2	− 3.6	− 3.0	− 2.1
AGRIC	31.3	29.5	16.3	12.8	AGRIC	9.5	8.3	6.9	5.1
MANUAL	1.6	− 1.4	− 2.1	− 3.4	MANUAL	− 3.1	− 3.5	− 3.1	− 3.1
Std. mean	2.434	2.457	2.480	2.494	Std. mean	2.654	2.663	2.668	2.677
Chi-sq. (3 df)	8.9*	6.6	2.0	1.7	Chi-sq. (3 df)	7.0	4.8	3.1	1.7
NCEB, cohort 20 +					*NCEB, cohort 20 +*				
PROF + CL	−12.4	− 5.3	− 2.4	0.8	PROF + CL	− 8.1	− 4.1	− 1.4	1.5
SS + SERV	1.8	0.7	1.8	1.7	SS + SERV	2.7	2.1	2.7	3.0
AGRIC	13.9	12.6	3.7	1.7	AGRIC	7.4	6.7	5.3	4.7
MANUAL	2.5	0.2	− 0.4	− 1.3	MANUAL	− 5.1	− 5.5	− 5.2	− 5.6
Std. mean	6.453	6.499	6.541	6.566	Std. mean	7.044	7.059	7.075	7.086
Chi-sq. (3 df)	6.8	3.2	0.4	0.3	Chi-sq. (3 df)	11.4*	9.4*	6.6	6.4

NOTE: *Chi-square value is significant at the 5 per cent level.

educated and have a higher proportion of their spouses with education above the average.

Adjusted differentials

The control for age at first union affects the two ethnic groups differently, in the case of early fertility; the adjustment has only small effects among non-Indians, while for Indians substantial reductions occur in the two youngest cohorts. The effect of this control shows that the low fertility groups (PROF/CL and SS + SERV) had an average age at first union above the mean, while the AGRIC and MANUAL groups were below the mean age. In late fertility, however, controlling the age at first union has much the same effect on both ethnic groups, substantially reducing differentials of all groups.

In early fertility, B0–9, the adjustment for residence has moderate effects on all three cohorts of non-Indians, especially on the mainly rural agricultural group. Among Indians the effect is much greater for the youngest cohort, however, with only small effects on the two older cohorts. This change may well have resulted from the recent fertility decline. The effect of residence on late fertility is especially large among non-Indians – again, much of the high fertility of agricultural workers is attributed to their more rural residence. For Indians' late fertility, however, this relationship is not so strong, and differentials among occupation groups are to a great extent independent of area of residence.

Controlling respondent's education had little effect on the early fertility differentials of the oldest cohort for both ethnic groups, partly because differences were already very small even before the control. The effect increased from the 20 + to the 10–19 and further to the 0–9 cohort, however, as differentials themselves increased in size. In the case of late fertility, education has a somewhat larger effect on these occupation differentials among Indians than among non-Indians, unlike the situation in regard to the effect of residence. It seems that partner's occupational status is more strongly related to the education of the spouse among Indians than among non-Indians, as was found for partners' education also. Differentials in late fertility of the younger (10–19 duration) cohort persist, after all other variables are controlled, for both ethnic groups, suggesting that the occupation of the partner does have some limited independent effect on fertility.

3.10 CONCLUSIONS

Explanation of variance in cumulative fertility

We are mainly interested in the analysis of the regression results in the form of actual fertility means; however a table summarizing the cumulative explanation of variance is of some interest (table 21). The variables are listed in the logical order of time, excepting only that age at first union (AGFU) is placed first, to permit the isolation of the contribution of this known means of fertility restriction from other possible intervening variables through which the independent socio-economic variables affect fertility. The ordering of variables clearly affects the amount of variance explained by individual variables, because of the high degree of association between variables, though the total variance explained remains unaffected by ordering.

Table 21 Cumulative percentage of total variance explained by independent variables, Indians and non-Indians, Guyana

Variable added	Duration cohort/fertility measure					
	0–9	10–19		20 +		
	B0–9	B0–9	B10–19	B0–9	B10–19	NCEB
A Indians						
AGFU	0.022	0.045	0.051	0.036	0.024	0.018
RESID	0.059	0.051	0.060	0.052	0.033	0.031
RELIG	0.067	0.055	0.061	0.053	0.041	0.040
REDUC	0.085	0.063	0.084	0.075	0.044	0.045
PARTNERS	0.108	0.072	0.088	0.101	0.051	0.066
CURSTAT	0.199	0.123	0.127	0.106	0.056	0.073
ROCCUP	0.204	0.127	0.136	0.110	0.066	0.083
PATWORK	0.222	0.136	0.151	0.132	0.082	0.091
PEDUC	0.227	0.141	0.165	0.138	0.095	0.106
POCCUP	0.231	0.153	0.170	0.148	0.097	0.115
B Non-Indians						
AGFU	0.019	0.032	0.049	0.020	0.054	0.070
RESID	0.038	0.062	0.100	0.034	0.086	0.101
RELIG	0.044	0.065	0.105	0.037	0.089	0.104
REDUC	0.086	0.080	0.116	0.052	0.102	0.121
PARTNERS	0.093	0.091	0.116	0.052	0.113	0.124
CURSTAT	0.164	0.126	0.134	0.062	0.122	0.136
ROCCUP	0.175	0.137	0.136	0.077	0.129	0.144
PATWORK	0.225	0.143	0.146	0.109	0.130	0.152
PEDUC	0.232	0.157	0.162	0.113	0.149	0.169
POCCUP	0.235	0.160	0.169	0.119	0.152	0.171

The total variance explained by the nine variables shown here increased from older to younger cohorts, largely due to the increasing contribution of current union status (CURSTAT). This variable is in fact most relevant to recent fertility experience, B10–19 of the 10–19 cohort and especially B0–9 of the 0–9 cohort, where the contribution is largest, for both Indians and non-Indians. Explanation of variation and actual fertility differentials was larger for non-Indians than for Indians, among the 20 + cohort of women, presumably because the oldest non-Indian group is less homogeneous, in terms of education, occupation, pattern of work and current union status than older Indians. Explanation for the two more recent cohorts is approximately the same for both ethnic groups, however, suggesting that the Indian cohorts have increased in heterogeneity over time.

Using the added percentage of variance explained by variables as a measure of importance, we can make a few generalizations across cohorts and ethnic groups. The contribution of residence has declined among non-Indians, from older to younger cohorts, but increased from the two older Indian cohorts to the youngest cohort. Although religion differentials, as shown earlier, are larger among Indians, the percentage of variance explained by religion is much the same for both ethnic groups, since the two earlier variables, AGFU and residence, absorb much of the unadjusted differences by religion found among Indians. Education has increased in importance from older to younger cohorts for both ethnic groups, presumably as a result of increasing modernization. But it is likely that, especially in the case of older non-Indians, education had worked through a later age at first union, whereas for the recent cohort this factor is relatively unimportant, but respondent's education affects marital fertility directly and has a higher percentage of variance explained than it did for earlier cohorts. Respondent's occupation, coming after all the prior controls for education, age at first union, residence and union status, has only a small added effect, and this has not changed much over time, for either ethnic group. Pattern of work is an important variable, however, with significant added contributions to variance explained, even coming after all the prior variables, and it increases in importance over time, particularly for non-Indians. Both partners' education and occupation make small contributions to variance explained, even after all the other variables are entered, and these remain more or less stable over time.

Socio-economic status, intermediate variables and fertility

Models for analysing the relationship between socio-economic variables and fertility or between intermediate variables and fertility exist, but a single model relating all three sets of variables at the individual level is only now being developed (Hobcraft and Little 1983). While we do not intend to provide an exhaustive analysis of intermediate variables here, it is interesting to have a brief look at the few measures of intermediate variables that are available. We do this for two illustrative socio-economic variables, the respondent's education and her occupation, with the same categories that were used in the regression analysis.

The results are shown in appendix tables A7 to A16, each table dealing with one variable, for both Indians and non-Indians. A few of these factors change little, or do so randomly among education and occupation subgroups, which suggests that they cannot explain much of the fertility difference between these subgroups: average foetal loss per women (table A7) for both ethnic groups; average number of partners among Indians (table A15); the percentage of time spent in union or proportion currently in union (table A13 and A14); and the percentage of women in secondary sterility for most cases of both ethnic groups (table A16, with definition). In some instances the small variations in these measures contradict expectations, eg when the low fertility professional 0–9 cohort of Indians have a high proportion in union, or when the high fertility never workers and agricultural workers have the highest proportion in secondary sterility.

Breastfeeding patterns also generally operate against observed differentials: among older cohorts, particularly of Indians, the education and occupation subgroups with high fertility had the longest mean breastfeeding durations, although we expect a higher average duration of breastfeeding to lengthen birth intervals and to reduce completed fertility. This pattern is common to many countries, and it is usually accompanied by higher contraception among high social status groups, giving them relatively low fertility despite their low breastfeeding duration. In the case of the 0–9 cohorts, the duration had declined, and differences in breastfeeding are too small to have much effect on fertility. The proportion who ever used and who are currently using contraception are shown in appendix tables A9 and A10. Ever-use shows stronger differentials than current use, but both measures usually agree with observed fertility patterns, with high fertility groups having lowest use, and low fertility groups, higher use, but several cases of non-congruency also occur, and it is not clear that even the congruent differentials are large enough to explain the observed fertility differences, particularly for the two older cohorts, of both ethnic backgrounds. The problem of relating the measure 'current use at one point of time' to cumulative fertility is severe, however, and it is difficult to draw any strong conclusions from these data. We need a more continuous record of contraceptive use, and other important intermediate variables, for a period of time, eg for the last 5 years, to study this question properly.

Another measure of exposure, the age at the first union, and a quasi-measure of use in the first birth interval, the length of the first birth interval, both show that low fertility groups are characterized by both a later age at beginning the first union, for both ethnic groups, and among non-Indians by contraceptive use after the first union, to delay the first birth. We cannot tell whether these means are consciously used to control completed family size, but data on fertility preferences should throw some light on this issue. It is interesting to note that, on these two measures, the INC.SEC group is much more similar to primary educated groups, than to the COM.SEC, for the two younger non-Indian groups, and the 0–9 Indian cohort (the other cohorts of Indians do not have a sufficiently high proportion educated to split them into two groups), while for the 20 + cohort of non-Indians it is about the same as PRIM8, completed primary. These results tie in with the finding that the fertility of the INC.SEC group is also moving closer to that of the primary-educated.

Among non-Indians the average number of partners varies substantially among subgroups, but two patterns are observed: while low fertility groups usually have a lower average number of partners, high fertility groups split into two types. The blue collar sales + services usually have the highest mean number of partners, while the AGR + N.W, who are also high fertility, have one of the lowest average number of partners, which coincides with their high proportion of time spent in unions. In the light of this pattern of variations, the argument that, in a situation of high contraceptive use and fertility control, women with more partners will tend to have higher fertility because they and their partners want some children in every union, yields a plausible interpretation of the observed fertility differentials for the blue collar sales and services group, while the high fertility of the AGR + N.W group occurs in spite of their more stable union history, because of other factors discussed earlier.

Summary of findings on differentials

The overall decline of fertility within unions for each ethnic group is about one child. In the case of non-Indians the greater part of the decline occurs in early fertility, while among Indians most of the decline is in late fertility.

Differentials by residence subgroups have increased over time, from older to younger cohorts, with the urban/urban group having the greatest decline of the three residence subgroups. The expected pattern, of lowest fertility among the urban/urban, next highest for rural/urban and highest for rural/rural, is generally met. Age at entry into the first union, religion and, to a lesser extent, education, together cancel out most of the residence differences, among Indians. Among non-Indians, education is the strongest intervening variable, and union status also has a noticeable effect on the 0–9 cohort of non-Indians. Residence differentials are most persistent for older non-Indians and the youngest cohort of Indians, among whom the urban/urban group has very low fertility, as low as for the comparable non-Indian group.

Education differentials also increased in size, over time, despite the rise in the proportions educated from older to younger cohorts. In general the expected negative relationship, fertility declining as education rises, is observed. In a few instances, however, a curvilinear relationship is found, especially among the oldest cohorts, and we speculate that improved fecundability (better health, shorter breastfeeding) accompanied by a lag in the use of contraception, could explain this finding. Not all groups had declines over time. The highest educated group of both Indians and non-Indians saw no decline in late fertility, and among Indians only, some education groups actually had increases in early fertility, perhaps for similar reasons to those given to explain the curvilinear relationship between education and fertility. The control for age at first union generally had stronger effects among Indians, but was important in the case of both ethnic groups' late and completed fertility. Among non-Indians, residence has a larger impact for the two older cohorts, compared to the youngest, suggesting that at least for this ethnic group, educational attainment is now more uniform across residence areas than it used to be. The respondent's occupation is an important means through which education influences fertility, particularly among non-Indians and the youngest cohort of Indians. Respondent's education does have some independent effect, as is seen in the persistence of differentials, after all factors up to respondent's occupation were controlled, especially for the youngest cohorts and the late fertility of the two older cohorts, of both ethnic groups.

Occupation was not an important determinant of fertility among older Indian women, but it has increased in importance over time, to the point where it is a highly significant cause of variation in fertility among the youngest, 0–9 duration cohort. In contrast, large differentials existed even for the oldest cohort of non-Indians. Secondly, the patterns of differentials follow predictions that higher-status occupations will have lower fertility, among non-Indians, but the pattern is different for Indians, especially for the youngest group, among whom any employment in non-agricultural work is associated with low fertility. The control for age at first union has a stronger effect on differentials among Indians than among non-Indians. Residence has the reverse effect on the two ethnic groups, over time: among non-Indians its influence decreased, moving towards greater occupational homogeneity across residence areas, while among Indians, in contrast, differentiation increased from older to younger cohorts. For all groups of non-Indians, and the youngest cohort of Indians, control for respondent's education has an especially strong effect on the professional group, but the fertility of other occupational groups seems to be largely independent of educational attainment. In the case of the middle-class group, clerical and white collar sales, it is likely that their low fertility is partly determined by the motivation for upward mobility, in combination with relatively low income and social status.

The results on pattern of work differentials more or less fit the expected pattern for non-Indians, and the early fertility of Indians. Two interesting discrepancies are observed, however. The SINCE pattern of work group has much higher fertility and less of a decline than never workers, among non-Indians in the recent ten-year period. We speculate that the somewhat higher social status of never workers may account for their greater decline. Secondly, the group expected to have low fertility, BEF + NOW, had the highest level for Indians' late fertility. We suggest that the greater proportion working in agricultural jobs for these two older cohorts, compared to the youngest cohort or to non-Indians, within this pattern of work group, may account for this unusual finding. The youngest cohort of both ethnic groups had significant differentials, even after all other variables had been controlled. For this cohort, residence was the variable causing the largest reduction in differentials among Indians, but respondent's education did so among non-Indians. Late fertility differentials were largely independent of any other factors, in the case of both ethnic groups.

Analysis of partner's education showed that its relationship with fertility was more frequently curvilinear than was found for respondent's education. The PRIM67 group usually had the highest level of fertility, higher than the least education. It is nevertheless true that the complete secondary group consistently had the lowest level of fertility, and all primary groups are consistently above the standard mean number of children ever born. Both ethnic groups had increases in the size and significance of dif-

ferentials from early to late fertility, for both partners and respondents – in Guyana education is apparently a stronger determinant of late than of early fertility – control of fertility early in the childbearing period (spacing) seems to be less common that control later on (stopping).

Unexpectedly, it was found that the group of Indians whose partners had incomplete secondary education among the youngest cohort had the highest fertility for that cohort. It is interesting that the same group, for the respondent's education, also had unusually high fertility. It appears that as secondary education becomes widespread, simply having some years of secondary schooling without obtaining any certificates now has less effect on fertility, and presumably on status and income, than it used to do before. This change has occurred only among Indians, however, not among non-Indians.

Age at entry into union is an important means through which the low late fertility of women whose partners had the highest level of education is achieved, for both ethnic groups. We also find that the more urban residential distribution of the better educated is relevant for the late fertility differentials especially. Interestingly, although controlling respondent's education had large effects on partner's education differentials for both ethnic groups, substantial differences remained for non-Indians even after this control, but less so among Indians.

Differentials according to partner's occupation roughly fit the expected pattern, with an inverse relationship between the status of the occupation and the level of fertility, for both ethnic groups. Differentials are generally not highly significant, but they do increase from older to younger cohorts, and are larger for recent fertility experience. For both ethnic groups the occupations with largest declines are PROF/CL and the SS + SERV. It is important to note that the SS + SERV is on the average a much higher status group among men than among women, for whom street vendors and domestics constitute the bulk of this occupation group.

The control for AGFU has a strong effect on all cohorts of Indians, but among non-Indians it mainly affects late and completed fertility. The control for residence has an especially strong effect on differentials of the youngest cohort of Indians, because of the overlap between agricultural employment and the residence group who are born and currently living in rural areas, but residence alone does not account for differentials by occupation among the two older Indian cohorts. As was observed for partner's education, the control for respondent's education has a stronger effect on younger than on older cohorts' occupation differentials, possibly due to the rising education of women.

The increase in differentials from older to younger cohorts, which is in fact an increase over time, is observed for most factors, and coincides with the national decline in fertility in the ten years before the 1975 survey. This pattern is probably not unusual, since groups decline at different rates. What may be unusual, however, is the finding that it is not always the higher status groups which have the largest declines. This is especially true among Indians, where the amount of decline is frequently similar across socio-economic groups, especially in late fertility. This suggests that the influences that are causing such declines are more general in the society than socio-economic status, although this is a contributory element. There is relatively little evidence as yet to suggest that as educational attainment rises the relationship of education and fertility will weaken; the implication of these findings is that improvements in education affect fertility behaviour through means other than just occupation, employment and income. Although cases of stabilization and then narrowing of differentials are rare at this stage of the fertility transition, it is to be expected that this will occur in future, if other societies' patterns are followed (Rosero *et al* 1982).

upwardly mobile and this could motivate them to have lower fertility.

Tables 24 and 25 summarize differentials in fertility according to residence status, before adjusting for other socio-economic variables, and at various stages of adjustment. The first table deals with births in the 0–9 duration period (early fertility) while table 25 does the same for births in the 10–19 year period, and for total children ever born. Differentials are shown as percentage deviations from standardized fertility means, and are taken from the appendix tables, which also show the absolute fertility differentials. While the use of percentage deviations facilitates the analysis of changes in differentials, absolute fertility differences will also be brought in to give a more complete picture.

Unadjusted differentials

For all fertility measures, and for all cohorts, the differentials follow the expected pattern, the rural/rural group having highest fertility, higher than the standardized mean, the rural/urban group having the next lower level, less than the mean, and the urban/urban group having the lowest level of fertility, substantially below the mean. All these differentials are statistically significant, but the effect of residence is much larger for fertility at duration 10–19 than it is for the first 10 years of being in a union. The later fertility of the URB/URB group is 34–37 per cent lower than the mean, compared to a difference of 10–15 per cent below the mean for early fertility. The fertility decline which occurred at duration 10–19 took place mainly among the traditional rural/rural group, with the other two groups having only small declines, resulting in a narrowing of differentials from the 20+ cohort to the 10–19 cohort.

Adjusted differentials

Adjustment for the age at first union (the second column in both tables) has practically no effect on residence differentials in early fertility. In the case of later fertility for both duration cohorts, however, the effect is more noticeable and the urban/urban group, with its older age at entering the first union, sees the largest changes. Even after this control, however, the remaining differentials are still large. The effect of residence status on fertility is, therefore, largely independent of age at entering the first union.

Although education does not necessarily precede residence status in the time sequence of factors, the two are

Table 26 Fertility differentials according to health regions:[a] unadjusted differentials, and differentials after adjusting for AGFU and RESID (step 3)

Measure group	Unadjusted differentials			Measure group	Differentials adjusted for AGFU, RESID		
	Cohort				Cohort		
	20+	10–19	0–9		20+	10–19	0–9
B0–9				*B0–9*			
S.E.	2.789	2.876	2.732	S.E.	2.842	2.790	2.851
N.E.	3.407	3.175	3.367	N.E.	3.364	2.992	3.217
West	3.492	3.406	3.107	West	3.471	3.213	3.006
South	2.951	3.382	3.172	South	2.934	3.199	3.145
Mean	3.097	3.164	3.016				
Chi-sq.	22.2*	19.3*	20.2*	Chi-sq.	13.4*	8.8*	5.2–
B10–19				*B10–19*			
S.E.	1.685	1.489		S.E.	2.118	1.632	
N.E.	2.370	2.329		N.E.	2.154	2.202	
West	2.492	2.460		West	2.238	2.376	
South	2.704	2.196		South	2.583	2.126	
Mean	2.299	2.002					
Chi-sq.	40.1*	36.8*		Chi-sq.	8.2*	11.7*	
NCEB				*NCEB*			
S.E.	4.772			S.E.	5.466		
N.E.	6.324			N.E.	5.941		
West	6.366			West	5.991		
South	6.412			South	6.228		
Mean	5.905						
Chi-sq.	37.4*			Chi-sq.	4.4–		

[a] S.E. = Kingston, St Andrew and St Thomas; N.E. = Portland, St Mary and St Ann; West = Trelawny, St James, Hanover, Westmoreland, St Elizabeth; South = Manchester, Clarendon, St Catherine.
NOTE: *Statistically significant chi-square value.

highly related, and much of the effect of residence may work through its association with better provision of educational facilities and the resultant differences in educational attainment. This is in fact found to be true, since residence differentials are markedly reduced when education is controlled, in most cases. This is especially true of fertility at duration 0–9 for the two youngest cohorts, where the differential of the better educated urban/urban group is cancelled out by this control. Indeed for these two cohorts a reversal occurs and the RUR/URB group has slightly lower fertility than the URB/URB group, a situation which continues even after all variables are controlled (column 5, table 24). This finding supports the earlier hypothesis that there will be higher motivation for fertility reduction among the RUR/URB or migrant group. Early fertility (B0–9) for the oldest cohort, 20 + duration, is relatively unaffected by adjustment for education, however; this is understandable since educational differentials for this cohort are extremely small at the early duration stage. Adjustment for education does substantially reduce residence differentials in later fertility (B10–19) and NCEB (number of children ever born), but the remaining differentials are still quite large: the URB/URB group still has 17–24 per cent lower fertility than the mean and the RUR/RUR group has 11–16 per cent higher fertility than the mean, and the differentials are still statistically significant.

Adjustment for respondent's occupation, shown only for measures of later fertility (table 25), indicates that part of the effect of residence status operates through its association with work. Differentials are reduced by this control since the URB/URB and RUR/URB groups have higher proportions working in the low fertility professional/clerical and manual occupations, than the RUR/RUR group. Even after adjustment for respondent's occupation, however, the residence differentials in late and completed fertility are still substantial, and remain statistically significant.

Residence status is clearly a strong determinant of fertility, as seen from the size of the unadjusted differentials. A good part of its effect is felt through differential education and occupational composition within residence groups, but these variables themselves are partly dependent on residence status and therefore do not detract from its primary explanatory power.

Differentials by region of current residence

At the national meeting in January 1982, planners expressed interest in fertility differentials for regions within the country. Using the four health regions (see table 26 for definitions), we examined this variable. Unadjusted differentials (table 26) between regions are substantial and statistically significant for all cohorts and measures. These differences are drastically reduced, however, once the residence variable was controlled, showing that the two variables are largely duplicating each other (table 26, right hand panel). The effect of controlling AGFU was very slight, and it is residence that accounts for most of the change. This suggests that the residence variable used in the analysis would be sufficient on its own, as a measure of the effect of place of residence. It is hoped, however, that presentation of these regional differentials and differentials for parishes (appendix table A17) would meet the need of planners.

4.4 RELIGION

There are many reasons for expecting the religion of the respondent to be related to her fertility, the two most important being any effect of doctrine, and the possibility that religion may be a proxy for other class or status variables, such as education and occupation. Religion was obtained in much finer detail than used in the analysis here. Substantive considerations, as well as the sample size of religious groups, dictated the use of a four-category variable, collapsed from the nine recorded categories. Anglicans and Roman Catholics were combined, because of the small sample size of each, and the fact that they are more similar to each other than the rest of the groups, which are largely Protestant or fundamentalist. The Church of God denomination was kept as a separate group simply because of its size, forming nearly 25 per cent of the sample. The group 'none' (those who practised no religion) was also maintained as a separate group, because it was interesting to see whether in this society this relatively unusual behaviour was in any way related to fertility. The fourth and last category consists of all other Protestant denominations, Baptists, Methodists, Moravians, Presbyterians, Congregationalists and all other Protestants. The results are shown in tables 27 and 28.

Table 27 Effects of religion on early fertility (B0–9)

Measure and cohort	Adjusted up to variable (% diff. from std. mean)			
	Unadjusted	Residence	Education	All variables
B0–9, cohort 0–9				
RC/Anglican	−12.1	−9.1	−6.2	−4.4
Church of God	10.2	8.6	5.9	5.6
None	0.4	−0.4	−1.0	−2.4
Other Protestant	0.7	0.3	0.3	−0.1
Std. mean	3.018	3.018	3.017	3.016
Chi-sq. (3 df)	18.1*	10.9*	5.0	3.6
B0–9, cohort 10–19				
RC/Anglican	−6.6	−5.0	−2.3	−1.3
Church of God	4.5	3.9	1.8	1.0
None	8.7	8.1	8.4	7.3
Other Protestant	−0.4	−0.8	−1.0	−0.8
Std. mean	3.159	3.160	3.160	3.160
Chi-sq. (3 df)	6.8	4.8	2.7	1.9
B0–9, cohort 20 +				
RC/Anglican	−5.2	−2.4	−2.5	0.0
Church of God	11.2	10.2	10.4	8.0
None	2.9	3.2	4.5	7.0
Other Protestant	−2.9	−3.7	−3.9	−4.3
Std. mean	3.106	3.107	3.108	3.110
Chi-sq. (3 df)	8.7*	7.2	7.5	5.9

NOTE: *Chi-square value significant at the 5 per cent level.

Table 28 Effects of religion on late fertility (B10–19) and completed fertility (NCEB)

Measure and cohort	Adjusted up to variable (% diff. from std. mean)			
	Unadjusted	Residence	Education	All variables
B10–19, cohort 10–19				
RC/Anglican	− 24.9	− 16.5	− 10.9	− 9.3
Church of God	6.5	3.7	− 1.0	− 1.1
None	13.5	13.1	9.4	6.1
Other Protestant	5.6	3.4	3.9	3.6
Std. mean	1.997	1.996	1.997	1.998
Chi-sq. (3 df)	14.9*	6.7	3.7	1.8
B10–19, cohort 20 +				
RC/Anglican	− 17.5	− 7.5	− 4.7	− 2.9
Church of God	20.4	14.5	12.5	12.1
None	− 8.5	− 11.0	− 10.8	− 12.8
Other Protestant	0.3	− 1.3	− 1.6	− 1.9
Std. mean	2.294	2.298	2.297	2.297
Chi-sq. (3 df)	18.0*	7.1	5.0	4.6
NCEB, cohort 20 +				
RC/Anglican	− 11.6	− 5.0	− 3.9	− 1.3
Church of God	18.8	15.3	14.3	12.8
None	− 1.2	− 2.6	− 2.0	− 0.9
Other Protestant	− 2.8	− 3.9	− 4.0	− 4.6
Std. mean	5.917	5.918	5.918	5.921
Chi-sq. (3 df)	24.9*	14.4*	12.3*	10.3*

NOTE: *Chi-square value significant at the 5 per cent level.

Unadjusted differentials

Differentials in early fertility (births during the first ten years of being in a union) are not very large, although statistically significant for two cohorts, the 0–9 and 20 + cohorts. The general trend is that the Catholic/Anglican group has somewhat less fertility than the mean, while the Church of God group has higher fertility. In two cohorts the groups none and other protestants are close to the mean, but in the case of the 10–19 duration cohort, the group none has noticeably higher fertility than the other protestants group, and is higher even than the Church of God group. Differentials in late fertility are substantially larger than those in early fertility. But the pattern observed in early fertility is maintained for late fertility, including that of the 10–19 cohort which is different from the other two cohorts. The reason for the change in the fertility of the group of those who practised no religion relative to other groups, from the 20 + cohorts, to the 10–19 cohort and then back to the same relative position for the 0–9 cohort, is unclear. It is possible that, with the rapid changes in popularity of religious sects, that the composition of the none group has changed over time.

Adjusted differentials

Adjustment for correlated variables rapidly reduces the size of these differentials. Since the low fertility Catholic/Anglican group is more likely to be of urban/urban residential status, when residence is controlled, its differentials are substantially reduced. For example, in the case of late fertility (B10–19) for the 20 + cohort the differential of the Catholic/Anglican group was reduced from 17.5 per cent below the mean to only 7.5 per cent below the mean. Control for respondent's education, which is also highly associated with urban residence, and with the Catholic/Anglican group, further reduced differentials for all cohorts, although differentials of a moderate size still remained, in the case of late and completed fertility.

These results suggest that religious persuasion is not one of the more important determinants of differentials in Jamaica. To the extent that religious differentials are found, they largely reflect differences in social status, captured in residential status and in education.

4.5 RESPONDENT'S EDUCATION

Grouping into education categories was determined largely by sample size, and was used in order to see whether the expectation of a monotonic decline of fertility with increasing education holds true in Jamaica, or whether there is some threshold in the effect of schooling on fertility. It is clear that the secondary or higher educated group formed a natural category, since we expect this high level of education to have significant influence on fertility. With less certainty, complete primary education (8 years of education or PRIM8) was also used to define a category. This is a very large group, about 42 per cent of the total sample. The group with less than complete primary education was further divided into two groups, those with 5 years or less of primary education, or no education at all (PRIM5), and those with 6 or 7 years of primary education (PRIM67). While it would have been desirable to separate out women with no education, this was not possible since they are only about 2 per cent of the whole sample. The results are shown in tables 29 and 30.

Unadjusted differentials

Fertility differentials across the education groups are substantial for all measures and subgroups, excepting only the early fertility (B0–9) of the oldest cohort, women in a union for 20 or more years. As expected, the secondary or higher group has substantially lower fertility than all other groups. Even at the stage of early fertility (B0–9), for the two more recent cohorts, 0–9 and 10–19 duration, this group has about 25 per cent less fertility than the standardized mean, and in absolute terms, about one child less than most other groups. Over time the secondary group has seen a decline of about 0.5 child from the oldest cohort (20 +) to the next cohort, (10–19), but no further decline to the youngest cohort. Differentials are much larger for later fertility (births at duration 10–19), where for both the 10–19 and 20 + cohorts, the secondary group has slightly less than half the mean, or in absolute terms, less than one child, compared to 2–2.5 children among other education subgroups. There has been little absolute decline in the secondary + group from the early cohort (20 +) to the recent cohort (10–19), however, while small declines occurred among all three primary groups.

Table 29 Effects of respondent's education on early fertility (B0–9)

Measure and cohort	Adjusted up to variable (% diff. from std. mean)				
	Unadjusted	AGFU	RESID	ROCCUP	All variables
B0–9, cohort 0–9					
PRIM5	7.0	9.6	9.6	5.1	4.3
PRIM67	6.6	5.4	4.7	3.7	3.7
PRIM8	7.4	7.0	6.9	4.1	2.4
SEC +	−24.2	−24.2	−23.1	−14.2	−10.4
Std. mean	3.132	3.136	3.130	3.084	3.068
Chi-sq. (3 df)	79.9*	77.9*	64.3	20.4*	8.4*
B0–9, cohort 10–19					
PRIM5	− 2.2	− 1.0	− 2.1	− 6.3	− 7.9
PRIM67	13.3	13.7	13.2	8.8	6.8
PRIM8	7.1	6.2	6.0	5.2	3.8
SEC +	−24.7	−24.2	−22.7	−14.2	− 8.4
Std. mean	3.075	3.079	3.084	3.109	3.127
Chi-sq. (3 df)	49.5*	42.8*	36.1*	14.9*	9.1*
B0–9, cohort 20 +					
PRIM5	− 0.8	− 0.3	− 3.0	− 4.6	− 5.3
PRIM67	5.3	5.7	4.1	3.1	1.1
PRIM8	1.4	1.5	0.4	0.5	− 2.1
SEC +	− 6.9	− 7.9	− 2.4	− 0.6	6.5
Std. mean	3.056	3.049	3.085	3.101	3.138
Chi-sq. (3 df)	2.9	2.8	2.5	1.9	1.9

NOTE: *Chi-square value significant at the 5 per cent level.

Table 30 Effects of respondent's education on late fertility (B10–19) and completed fertility (NCEB)

Measure and cohort	Adjusted up to variable (% diff. from std. mean)				
	Unadjusted	AGFU	RESID	ROCCUP	All variables
B10–19, cohort 10–19					
PRIM5	12.5	15.3	10.4	7.1	7.0
PRIM67	37.4	33.8	29.4	21.4	20.1
PRIM8	4.9	2.8	1.8	− 0.9	− 2.0
SEC +	−53.4	−48.0	−38.5	−23.4	−20.1
Std. mean	1.868	1.880	1.902	1.938	1.946
Chi-sq. (3 df)	54.3*	42.8*	27.0*	6.2	5.1
B10–19, cohort 20 +					
PRIM5	17.3	10.8	4.3	− 0.5	− 1.6
PRIM67	28.1	23.2	19.4	13.1	11.7
PRIM8	9.6	7.3	4.7	2.5	1.5
SEC +	−56.3	−43.0	−30.2	−17.0	−12.9
Std. mean	2.053	2.108	2.164	2.224	2.240
Chi-sq. (3 df)	46.8*	24.8*	14.6*	5.5	4.1
NCEB, cohort 20 +					
PRIM5	10.0	6.8	1.7	− 2.3	− 3.2
PRIM67	16.6	14.1	11.4	7.4	5.7
PRIM8	3.5	2.4	0.6	0.0	− 1.7
SEC +	−28.8	−22.3	−12.9	− 5.4	0.1
Std. mean	5.528	5.607	5.724	5.832	5.889
Chi-sq. (3 df)	29.3*	16.3*	8.8*	3.8	3.1

NOTE: *Chi-square value significant at the 5 per cent level.

Differentials among the three primary groups also show some interesting results. In all cases except the early fertility of the youngest cohort, the PRIM5 group has lower fertility than the PRIM67 group, producing a curvilinear relationship between education and fertility. This difference, in absolute terms, varies from 0.2 to 0.4 child, and in percentage terms, from 5 to 10 per cent in most cases, except for the late fertility (B10–19) of the 10–19 cohort, where it is as large as 25 per cent. At least two plausible explanations for this unexpected differential come to mind. In the first case it is possible that the PRIM5 group may be suffering from some omission of births, under the hypothesis that the less educated place less importance on dates, and may therefore omit some events completely, or perhaps they are more likely to have had children who died in infancy, who are more frequently forgotten in the interview situation. The detailed evaluation of Jamaican Fertility Survey data suggested that women of lesser education probably had some omission of births; also, that older women (who are more likely to be less educated) suffered from a selectivity bias, since in the household interview some women aged 49 (or close to this) were heaped on age 50 and excluded from the sample of individual women. If these were on average more fertile women than those interviewed, this could have affected the relationship between education and fertility. On the other hand, it is likely that the somewhat better educated primary groups benefited more from health service improvements, which caused an overall rise in fertility between the late 1940s and the early 1960s. At least part of this differential is probably true, therefore, especially since it is consistently observed for two duration cohorts, at both the early and late fertility stages. The other two primary groups, PRIM67 and PRIM8 and the secondary educated show the expected pattern of monotonically decreasing fertility, as education increases. Having complete primary education makes little difference at the early fertility stage, but the differential increases at the stage of later fertility (B10–19), where the PRIM8 group has 20 and 35 per cent less fertility than the PRIM67 group, for the 20 + and 10–19 cohorts respectively. This means that in the case of late fertility, the PRIM8 group has had a relative and absolute decline in the recent period, unlike the PRIM67 group. Apparently having complete primary education, as opposed to incomplete primary education, does make some difference in the total number of children a woman will have.

Adjusted differentials

Adjustment for the age at first union has almost no effect on education differentials at duration 0–9 years, ie for early fertility. This means that the large differential in early fertility between the secondary or higher group and less educated groups is not due to differences in the age at entry, even though the secondary group did marry later, on average. Differentials in late fertility (B10–19) are noticeably reduced, however, when age at the first union is controlled. This is to be expected, since the fertility of the secondary group may be more affected, involuntarily, as their higher age at entry places them further into the ages where secondary sterility sets in, by the time they reach duration 10–19.

A more important variable to be controlled is residence status, which is correlated with education, and normally precedes it causally. This control reduces the education differentials in all groups and measures, but the effect on later fertility is stronger than that on early fertility. For example, while the differential for B10–19 for the secondary group drops from −48 per cent and −43 per cent to −38.5 per cent and −30.2 per cent, for the duration cohorts 10–19 and 20 + respectively, the declines in B0–9 are much smaller, from −24 to −23 per cent, for the two more recent cohorts. Apparently the observed differentials in early fertility are largely independent of residence status, but at the later stage of childbearing, fertility restriction among education subgroups is partly dependent on the differential residence status of these education subgroups. It is important to note, however, that even after controlling causally prior variables, including religion, substantial and statistically significant educational differentials still remain for most groups. The only exception to this generalization is the early fertility of the 20 + cohort, for which even unadjusted differentials were small. The relatively weaker relationships observed for the 20 + cohort show that educational differentials in fertility have increased in size over time.

We also applied further controls, for factors that logically follow education, and through which education may affect fertility. By step 7, when the respondent's occupation is controlled (as, by this time, are number of partners and current union status), differentials are greatly reduced, but at least for the two younger cohorts' early fertility, and in both older cohorts' later fertility, they are still substantial. This reduction in differentials is to be expected, since education is directly related to occupation, increasing the likelihood of working, and working at higher status and higher paid jobs, thereby increasing the opportunity cost of having many children. The maintenance of some educational fertility differentials, even after controlling occupation, suggests that education would have some independent effect on fertility even if it did not result in employment in higher status jobs. This is further supported by the fact that some moderately large differentials persist even after all variables, including the partner's education and occupation, were controlled. The independent effect of respondent's education, persisting beyond all controls, is most prominent in the case of the late fertility of the younger cohort, 10–19 duration.

4.6 RESPONDENT'S OCCUPATION

Occupation is treated here more as an index of the woman's social status in terms of work, than as a measure of the effect of employment at any particular stage of the woman's life. The most recent occupation, which is the measure used here, may be a current job or the woman may have stopped working 10 years ago, or she may have worked only before the first birth. There is therefore no attempt directly to link timing or intensity of work to fertility. However, in addition to reflecting education and social status, type of occupation does reflect the degree of commitment to work, to some extent, and the demands in terms of time, opportunity cost and place of work, all of which can influence fertility decisions.

The occupation groups chosen were as follows. (1) Professional and clerical: these two were combined despite the difference between them in strictly status terms,

because the group professional covers a wide range, spanning jobs with the status of clerical occupations; in addition the group clerical itself not only covers a wide range, from accounting, computing and telecommunications to the more ordinary clerical jobs, but such jobs generally require some training beyond formal schooling, and are regarded as modern sector, status-giving jobs (abbreviated as PROF + CL). (2) Sales and services: these two groups were combined because the greater proportion of these jobs are usually of a lower status than the first group – a large proportion of workers in the sales group are street vendors, while the bulk of the services group are in personal services occupations (abbreviated as SS + SERV). (3) Self-employed farmers and agricultural workers constitute slightly under 7 per cent of the total sample, which is too small to allow for separate treatment. Also we expect that they form a natural group, since the common factor of working in agriculture may be expected to override the possible status differentials between the two groups (abbreviated as AGRIC). (4) The groups skilled and unskilled manual workers were combined: these again form a natural group, since the gradation from skilled to unskilled is by no means distinct. Moreover, these occupations have in common the fact that they are not usually career oriented, nor do they require much, if any formal training, and they usually entail work away from the home, payment in cash and employment by others than family members (abbreviated as MANUAL). (5) The fifth group are the women who had never worked: in Jamaica these women form only 16 per cent of the sample, a much smaller proportion than in many developing countries. This group is treated on its own, in order to see whether work of any kind would make

Table 31 Fertility differentials for more detailed grouping of respondent's occupation: unadjusted differentials, and differentials after adjusting for AGFU, RESID, RELIG, REDUC, PARTNERS and CURSTAT (step 7)

Measure group	Unadjusted means			Measure group	Means adjusted up to step 7		
	Duration cohort				Duration cohort		
	20 +	10–19	0–9		20 +	10–19	0–9
B0–9				*B0–9*			
Professional	3.059	2.229	2.053	Professional	3.071	2.579	2.429
Clerical	2.594	2.455	2.367	Clerical	2.644	2.698	2.729
W.C. sales	3.297	2.986	2.442	W.C. sales	3.235	2.922	2.580
B.C. sales	3.277	3.478	3.488	B.C. sales	3.307	3.591	3.228
Services	3.077	3.286	3.322	Services	3.127	3.275	3.275
Manual	2.765	3.040	3.222	Manual	2.880	2.993	2.921
Agricultural	3.320	3.849	3.284	Agricultural	3.277	3.691	3.168
Never worked	3.291	3.734	3.525	Never worked	3.032	3.536	3.166
Mean	3.097	3.164	3.016				
Chi-sq.	12.4 –	69.4*	102.1*	Chi-sq.	5.7 –	23.2*	23.0*
B10–19				*B10–19*			
Professional	1.118	0.806		Professional	1.811	1.572	
Clerical	0.906	1.087		Clerical	1.501	1.617	
W.C. sales	1.719	1.411		W.C. sales	1.765	1.493	
B.C. sales	2.531	2.159		B.C. sales	2.419	2.233	
Services	2.392	2.170		Services	2.346	1.999	
Manual	2.044	2.012		Manual	2.122	2.019	
Agricultural	2.850	2.497		Agricultural	2.583	2.202	
Never worked	2.945	2.803		Never worked	2.840	2.655	
Mean	2.299	2.001					
Chi-sq.	63.6*	67.8*		Chi-sq.	20.7*	17.7*	
NCEB				*NCEB*			
Professional	4.269			Professional	5.073		
Clerical	3.570			Clerical	4.341		
W.C. sales	5.277			W.C. sales	5.341		
B.C. sales	6.219			B.C. sales	6.060		
Services	5.913			Services	5.923		
Manual	5.234			Manual	5.540		
Agricultural	7.064			Agricultural	6.642		
Never worked	6.969			Never worked	6.552		
Mean	5.905						
Chi-sq.	58.9*			Chi-sq.	15.7*		

NOTE: * Statistically significant chi-square value.

a difference in fertility, compared to no work at all (abbreviated as NEV.WOR).

White collar sales workers

Participants at the national meeting in Jamaica (January, 1982) suggested that the sales and services group should have been separated, and perhaps even professional and clerical should not have been combined. At that late stage in the analysis it was not possible to change the groupings described above, but the suggested alternative groups are examined here, separately, to see how much difference would result. Unadjusted differentials for a more detailed occupational breakdown are shown in table 31. These results indicate that the combination of clerical and professional is reasonable, since in all cases they have the two lowest, and often similar, levels of fertility. The sales group was split into two – a blue collar group (mainly street vendors) and a white collar group, which includes the large number of shop clerks (code 3850). The white collar sales group in most cases does have lower fertility than either blue collar sales or services. White collar sales also has, however, a distinctly higher level of fertility than the professional/clerical group, and blue collar sales is often higher than services. The argument for treating all sales occupations separately from service occupations is therefore not totally supported by the data, although a separation into white collar sales and other sales + services would have been useful. The group actually used here, sales + services is dominated by the higher fertility services women, who number three to four times the sales group: this means that white collar sales workers are unfortunately not adequately treated here, but the blue collar sales and services group is fairly represented. The occupation control for other variables would not be much affected, and it is hoped that table 31, which also gives differentials for the more detailed groups, unadjusted and after controlling for all causally prior variables, would meet the need for information on sales employees expressed by participants at the national meeting.

Unadjusted differentials

These differentials are very large and statistically significant in all cases, except the early fertility (B0–9) of the 20 + cohort. This exception also existed in the case of education differentials: apparently there was relatively little variation according to the respondent's characteristics, especially in early fertility, before fertility decline began. A summary of the results of the regression analysis of respondent's occupation is shown in tables 32 and 33.

Clearly differentials in early fertility have increased over time, from a moderate level for the 20 + cohort, to a

Table 32 Effects of respondent's occupation on early fertility (B0–9)

Measure and cohort	Adjusted up to variable (% diff. from std. mean)					
	Unadjusted	AGFU	RESID	REDUC	WORKBEF	All variables
B0–9, cohort 0–9						
PROF + CL	−27.7	−27.6	−25.9	−16.5	−12.9	−10.3
SS + SERV	3.0	3.1	2.7	0.4	3.3	2.9
MANUAL	4.4	4.2	7.4	4.8	4.0	3.1
AGRIC	6.4	7.6	2.4	− 1.7	− 5.5	− 8.3
NEV.WOR	13.7	13.2	11.7	12.2	2.8	2.9
Std. mean	3.087	3.089	3.081	3.050	3.046	3.036
Chi-sq. (4 df)	78.8*	72.0*	62.1*	26.0*	11.6*	7.5
B0–9, cohort 10–19						
PROF + CL	−26.6	−26.4	−25.4	−18.1	−16.5	−12.9
SS + SERV	1.7	1.9	1.9	0.4	1.1	0.3
MANUAL	− 4.5	− 4.9	− 4.3	− 6.6	− 6.0	− 6.5
AGRIC	20.8	19.6	18.3	17.1	15.9	13.2
NEV.WOR	18.3	18.3	17.5	15.8	12.7	12.8
Std. mean	3.184	3.138	3.184	3.191	3.183	3.186
Chi-sq. (4 df)	63.4*	58.2*	48.5*	27.3*	19.8*	14.5*
B0–9, cohort 20 +						
PROF + CL	− 7.7	− 8.5	− 5.6	− 4.9	− 6.7	− 4.2
SS + SERV	2.3	2.4	1.9	1.4	3.6	4.5
MANUAL	−10.0	− 9.9	− 7.9	− 7.2	− 5.6	− 5.1
AGRIC	8.1	8.7	4.8	6.0	6.9	2.5
NEV.WOR	6.7	6.8	5.0	4.6	− 1.3	− 5.0
Std. mean	3.071	3.068	3.082	3.082	3.063	3.072
Chi-sq. (4 df)	8.9	9.3	4.4	3.9	4.0	3.9

NOTE: *Chi-square value significant at the 5 per cent level.

Table 33 Effects of respondent's occupation on late fertility (B10–19)

Measure and cohort	Adjusted up to variable (% diff. from std. mean)				
	Unadjusted	AGFU	RESID	REDUC	All variables
B10–19, cohort 10–19					
PROF + CL	−52.8	−51.8	−38.9	−23.2	−18.4
SS + SERV	2.4	− 0.9	0.0	− 3.3	− 4.7
MANUAL	0.8	0.2	3.7	0.6	− 0.3
AGRIC	25.0	26.8	18.4	10.3	8.0
NEV.WORK	37.6	35.2	30.1	28.3	29.1
Std. mean	1.993	1.995	1.996	2.011	2.017
Chi-sq. (4 df)	54.6*	44.4*	27.4*	13.4*	10.9*
B10–19, cohort 20 +					
PROF + CL	−53.5	−43.4	−36.0	−25.4	−21.4
SS + SERV	5.0	3.8	2.6	0.4	− 0.4
MANUAL	− 6.9	− 9.4	− 4.8	− 6.0	− 6.4
AGRIC	30.5	25.9	16.3	14.8	10.4
NEV.WOR	35.9	32.7	28.0	26.7	24.7
Std. mean	2.184	2.208	2.231	2.256	2.268
Chi-sq. (4 df)	56.4*	41.5*	24.3*	16.5*	11.0*
NCEB, cohort 20 +					
PROF + CL	−30.9	−25.8	−20.8	−16.7	−14.4
SS + SERV	2.7	2.0	1.2	− 0.4	1.5
MANUAL	− 8.5	− 9.7	− 6.2	− 5.7	− 4.3
AGRIC	24.0	21.4	14.6	14.9	10.4
NEV.WOR	22.4	21.0	17.6	17.0	10.1
Std. mean	5.699	5.734	5.780	5.804	5.812
Chi-sq. (4 df)	49.3*	39.9*	21.2*	17.4*	7.3

NOTE: *Chi-square value significant at the 5 per cent level.

substantial level for both the 10–19 and 0–9 cohort, and some minor changes in relative fertility among the subgroups also arose. The professional and clerical group consistently has lower fertility than the overall mean – about 27 per cent lower than the mean, for the two most recent cohorts, the 0–9 and 10–19 duration cohorts. This is equivalent to almost one child less than the overall mean of about three children. The group of never workers consistently had higher fertility than the mean, increasing from only 4.7 per cent for the 20 + cohort, to 18 per cent for the 10–19 cohort, and declining slightly to 14 per cent for the 0–9 cohort. Some change occurred in the relative position of other groups. The agricultural group, in particular, had only 6–8 per cent more fertility than the mean, in two cohorts, but 21 per cent more in one cohort. The small size of this group, 6.7 per cent of the total sample, may have caused greater random fluctuation in the fertility of this group. The two other groups, SS + SERV and MANUAL are generally quite close to the overall mean. It is interesting to note that for the most recent cohort, differentiation in early fertility between the three working groups, sales and services, agricultural and manual workers, and never workers is relatively small: in absolute terms, these differences are only 0.2–0.3 child.

Differentials are much larger for late fertility, however. For both the 20+ and 10–19 duration cohorts, the PROF + CL group has slightly less than half the group means, ie this group has about one child in this 10-year duration period, compared to 2–3 children for other groups. Those who have never worked now have fertility distinctly higher than the mean (36–38 per cent above the mean) and higher than two other working groups, SS + SERV and MANUAL groups. Never workers are only marginally different from agricultural workers, however, with 2.97 and 2.87 children, and 2.74 and 2.49, respectively, for the 20 + and 10–19 cohorts. Differential fertility control among occupation groups therefore largely comes into effect late in the reproductive period.

These unadjusted differentials clearly are dependent on several factors, most importantly residence and education, which should be controlled before the true effect of occupation can be measured.

Adjusted differentials

Adjustment for the age at first union has the, by now, recognized effects: the influence of this variable on differentials in early fertility is negligible, but the effect on later fertility is somewhat larger, especially for the 20 + duration cohort. The reduction in the differentials reflect the slightly higher age at entry of the PROF + CL group, and the younger age at entry of never workers and agricultural employees.

Controlling residence status has only a small effect on early fertility (B0–9) for the two recent cohorts, the 0–9 and 10–19 duration cohorts, showing that for these groups

the effect of occupation is almost independent of residence status. For all other measures – early fertility for the 20 + cohort and late fertility for both the 20 + and 10–19 cohorts – controlling residence status has a somewhat greater effect, reducing differentials. For example, after controlling residence the PROF + CL group has only 36–39 per cent fewer children in the 10–19 year duration period, compared to a difference of 43–52 per cent when only age at first union had been controlled. The narrowing of differentials suggests that the rural residential background of agricultural workers alone explains a good part of their higher than average fertility: the differential declines, for example, from 26–27 per cent above the mean for late fertility (after age at entry had been controlled) to 16–18 per cent above the mean when residence is controlled. Occupational differentials are still statistically significant even after controlling residence, however, except for the early fertility of the 20 + cohort.

Further adjustment for education substantially reduces the relatively large differential of the PROF + CL group. This is true for all measures and groups. For example, in the case of early fertility for the 0–9 cohort, the professional and clerical group had 26 per cent less fertility than the mean, after residence had been adjusted, but the difference is reduced to 16 per cent after education was controlled. It is striking, however, that all other groups are much less affected: never workers and agricultural workers who have substantially higher fertility than the mean, had only small reductions in their differential, with the added education control. While never workers in the recent cohort (0–9 duration) are well educated, never workers among the two older cohorts and agricultural workers in all three groups have lower educational achievement than the average, and we would expect the education control to have a greater effect on their relative fertility. This result implies that even the better educated women in agriculture or among never workers have relatively high fertility. The slight changes in the fertility differentials among SS + SERV and MANUAL workers is more or less in keeping with their slightly lower than average educational attainment. Occupational differentials are still substantial and significant even after education was controlled, in all cases, with the sole exception of early fertility of the 20 + cohort, which had narrow differentials even before adjustment for other factors.

The effect of controlling for whether the women worked before the first birth is presented for early fertility only, since this is a variable which may have a larger effect on fertility in the early years of being in a union, but is less important later in the reproductive period. Comparison of columns 4 and 5 in table 32 does show a substantial reduction in occupational differentials in early fertility for the 0–9 cohort, where those who worked before have an average of 0.84 of a child less than those who did not. The effect of this control on the 10–19 cohort is smaller, which may be expected since the differential between those who worked before and those who did not is only 0.46 child for this group.

When the remaining factors, partner's education and occupation, which are highly correlated with the respondent's occupation, are controlled occupational differentials still remain substantial in all group measures, except early fertility of two cohorts (0–9 and 20 + duration).

In conclusion it is important to note that even after all causally prior factors had been controlled (ie up to education), substantial differentials continued to exist for five out of the total of six group measures, although a significant proportion of occupational differentials was explained by the more urban residence and higher education of low-fertility occupation groups.

4.7 EMPLOYMENT BEFORE THE FIRST BIRTH

As mentioned in section 4.6, this factor is especially interesting in regard to fertility during the first ten years of being in a union. The expectation is that employment at this point, early in the woman's life, is likely to cause her to postpone the first birth, given she was already in a union, and exposed to conception. The possibility of the reverse causality – that the age at having the first birth is delayed for some independent reason, increasing the probability of employment prior to the first birth – cannot be denied. In the situation of Jamaica, we expect the first hypothesis, of employment influencing the decision to begin childbearing, to be more influential, but in interpreting the results both hypotheses must be borne in mind. A further possibility is that the type of person who works before the first birth may have other characteristics that result in lower fertility, and the fact that they worked before the birth is not directly related to the decision to control fertility. This last hypothesis can be partly tested, however, by controlling other measured characteristics of the respondent.

The unadjusted differential between those who work before the first birth and those who do not has, in fact, increased over time:

	Early fertility for cohort		
	20 +	10–19	0–9
Worked	2.90	2.92	2.62
Did not work	3.30	3.38	3.46

The difference has roughly doubled from earlier cohorts to the most recent cohort. It is important to note that this increased differential has come about largely through an increase in the fertility of those who did not work before the first birth. This would seem to have important implications in the situation of increasingly high unemployment. Controlling for all causally prior variables, including residence, religion and education, and the correlated variable, occupation, has almost no effect on the differential for the 0–9 and the 20 + cohorts, and only a slight effect on that of the 10–19 cohort. Employment before the first birth clearly has a strong independent effect on fertility, especially for the youngest cohort of women. The persistence of this differential does suggest that policy to increase employment among young women is a potentially useful means of fertility reduction. The effect of this variable may be gauged by the case of the oldest cohort which, although it had the smallest differentials in early fertility, nevertheless had an adjusted differential of one child in completed fertility, and a differential of about 0.5 child after causally prior variables were controlled.

Table 34 Effects of partner's education on early fertility (B0–9)

Measure and cohort	Adjusted up to variable (% diff. from std. mean)				
	Unadjusted	RESID	REDUC	ROCCUP	All variables
B0–9, cohort 0–9					
PRIM5	1.0	1.7	− 0.3	1.8	0.7
PRIM67	3.1	2.5	− 1.2	− 7.9	− 9.3
PRIM8	10.4	9.7	7.9	6.9	6.5
SEC +	−27.1	−25.8	−17.6	−13.4	−10.9
Std. mean	3.101	3.097	3.066	3.050	3.039
Chi-sq. (3 df)	94.0*	75.2*	29.6*	19.7*	15.4*
B0–9, cohort 10–19					
PRIM5	11.3	11.5	10.1	8.9	8.3
PRIM67	10.5	9.2	7.5	6.5	5.4
PRIM8	3.8	3.5	1.8	1.2	1.6
SEC +	−25.0	−23.7	−17.4	−14.3	−14.0
Std. mean	3.111	3.116	3.129	3.135	3.136
Chi-sq. (3 df)	45.8*	37.9*	16.6*	10.9*	9.0*
B0–9, cohort 20 +					
PRIM5	9.5	7.7	8.5	8.8	7.3
PRIM67	7.1	4.9	6.2	4.6	4.4
PRIM8	3.5	3.3	4.2	3.8	4.3
SEC +	−20.7	−17.5	−20.8	−19.4	−19.1
Std. mean	2.974	2.995	2.977	2.984	2.989
Chi-sq. (3 df)	11.2*	7.2	7.6	7.0	5.9

NOTE: *Chi-square value significant at the 5 per cent level.

4.8 PARTNER'S EDUCATION

The same education subgroups were used for the analysis of differentials by education of the most recent partner, as were used in studying the effects of the respondent's education. These were 5 years of primary education or less, 6–7 years of primary education, complete primary education (8 years) and those with some secondary or higher education. The proportion of partners in these groups are approximately 18, 12, 50 and 20 per cent, which is equivalent to a slightly lower level of educational achievement among men than among women, for whom these percentages were 14, 22, 42 and 22. The results are shown in tables 34 and 35.

Unadjusted differentials

Differentials according to partner's education are in the same general direction as for respondent's education: women whose partners have secondary or higher education have substantially lower fertility than the mean, in the region of 20–27 per cent less for early fertility, and 44–46 per cent less for late fertility. These differentials are similar to those for women who themselves have secondary education. As in the case of respondent's education, fertility decline at duration 10–19 (from the 20 + to the 10–19 cohort) occurred mainly among the three primary groups, with a much smaller decline for the secondary group.

There are some slight differences in the differentials among the primary groups. For example, while fertility had a curvilinear relationship with respondent's education, both for early and late fertility, there is a monotonic decline in early fertility for the two older cohorts (10–19 and 20 +) as partner's education increases, although the curvilinear relationship does still exist for early fertility of the 0–9 cohort, and also in the case of late fertility, especially for the 20 + duration cohort. The fact that this curvilinear relationship appears only for some measures and cohorts, and not for others, argues that the relationship is an artifact of misreporting by women of lesser education.

A further important conclusion emerges from differentials by partner's education. While the differentials according to respondent's education for early fertility of the oldest cohort (20 + duration) were very small and statistically insignificant, the comparable differentials according to partner's education are much larger, and are statistically significant. The secondary or higher education group has 21 per cent less fertility than the mean, while the least educated group has fertility 10 per cent higher than the mean. By comparison, the differences according to respondent's education for the same groups were much smaller:

Level attained	B0–9: differentials according to –	
	Partner's education	Respondent's education
PRIM5	9.5	−0.8
PRIM67	7.1	5.3
PRIM8	3.5	1.4
SECONDARY	−20.7	−6.9

Table 35 Effects of partner's education on late fertility (B10–19) and completed fertility (NCEB)

Measure and cohort	Adjusted up to variable (% diff. from std. mean)				
	Unadjusted	RESID	REDUC	ROCCUP	All variables
B10–19, cohort 10–19					
PRIM5	16.7	12.4	5.6	2.5	2.8
PRIM67	21.4	13.0	7.1	5.0	4.6
PRIM8	7.0	5.1	2.5	1.3	1.7
SEC +	−43.4	−30.4	−14.7	− 8.1	− 9.0
Std. mean	1.922	1.946	1.973	1.984	1.983
Chi-sq. (3 df)	31.4*	13.8*	2.6	0.8	0.8
B10–19, cohort 20 +					
PRIM5	18.1	10.0	6.2	4.2	3.5
PRIM67	35.9	25.4	20.7	19.2	19.0
PRIM8	4.0	2.8	0.4	0.1	0.8
SEC +	−45.6	−29.9	−18.1	−14.8	−15.5
Std. mean	2.095	2.163	2.209	2.225	2.223
Chi-sq. (3 df)	34.7*	15.3*	7.9*	6.4	6.1
NCEB, cohort 20 +					
PRIM5	16.4	11.3	9.5	8.3	7.1
PRIM67	19.7	13.3	12.4	11.2	11.0
PRIM8	2.8	2.2	1.8	1.2	1.8
SEC +	−32.3	−22.6	−19.6	−16.7	−16.8
Std. mean	5.509	5.625	5.660	5.692	5.697
Chi-sq. (3 df)	32.0*	14.6*	9.5*	7.4	6.2

NOTE: *Chi-square value significant at the 5 per cent level.

It appears that characteristics of the partner are a more important source of variation in early fertility among the oldest cohort, while the respondent's education has a somewhat larger effect on early fertility for the two more recent cohorts, and on the more recent fertility of older cohorts. The importance of partner's education in the case of early fertility of the 20 + cohort is seen in the persistence of differentials even after controlling residence, respondent's education and occupation (see the first panel of table 34).

Adjusted differentials

In the case of measures and cohorts other than the early fertility of the 20 + cohort, controlling additional factors does greatly reduce differentials. Differentials in early fertility among the 0–9 and 10–19 cohorts decline only slightly after residence is controlled, but decline much more after respondent's education is controlled. However, even after respondent's education and all other variables are additionally controlled, the remaining differentials according to partner's education are still moderately large.

This is not true for late fertility (B10–19) of the younger, 10–19 duration cohort, however, where controlling factors up to the respondent's occupation reduce differentials to a very narrow range. In contrast, differences for the 20 + cohort's late fertility remain substantial even after all other variables were controlled, including the partner's occupation. The conclusion to be drawn from these results is that partner's education was a more important variable in the past (that is, for the oldest cohort), and its effect has declined in the recent period. Most of the effect of partner's education on recent fertility depends on area of residence of the couple, and on the high association with the woman's characteristics, most of all her education and occupation.

4.9 PARTNER'S OCCUPATION

Partner's occupation is categorized much the same as the respondent's occupation: three groups are exactly the same, professional and clerical (PROF + CLER), sales and services (SS + SERV) and skilled or unskilled manual (MANUAL). The never worked group, which constitutes about 20 per cent of female respondents, is essentially non-existent among their partners. The group called 'Agricultural +' in the tables (abbreviated as AGRIC +) is a catch-all group and contains, in addition to self-employed farmers and agricultural workers, a few other small groups: cases where the respondent does not know if the partner works or what is his occupation or where no information was given. These small groups number 169 women or 5.8 per cent of the sample. Because the group was too small to be treated independently, it was put together with the agricultural group as the most similar group in terms of status. If the respondent does not know whether the partner worked, or his occupation, it is likely that the occupation is low status, perhaps sporadic, with periods of unemployment. The distribution of partners within these groups is far from even – the proportion of PROF + CL or SS + SERV is about the same, 14 per cent each, while

Table 36 Effects of partner's occupation on early fertility (B0–9)

Measure and cohort	Adjusted up to variable (% diff. from std. mean)				
	Unadjusted	RESID	REDUC	ROCCUP	All variables
B0–9, cohort 0–9					
PROF + CL	−21.5	−18.3	−10.8	−5.8	1.5
SS + SERV	− 8.6	− 7.5	− 6.0	−6.6	− 5.7
MANUAL	4.6	4.9	3.1	1.8	− 3.9
AGRIC +	8.8	5.8	3.9	4.0	0.1
Std. mean	3.059	3.046	3.034	3.030	3.028
Chi-sq. (3 df)	40.0*	27.2*	9.4*	4.5	2.3
B0–9, cohort 10–19					
PROF + CL	−15.8	−11.8	− 7.3	−4.7	0.1
SS + SERV	−11.0	− 8.8	− 8.3	−9.5	− 9.4
MANUAL	4.8	3.7	3.0	4.0	3.0
AGRIC +	6.5	5.1	3.5	0.7	− 0.1
Std. mean	3.149	3.152	3.153	3.152	3.154
Chi-sq. (3 df)	23.8*	16.7*	7.9*	6.9	5.0
B0–9, cohort 20 +					
PROF + CL	− 5.4	− 3.6	− 2.6	−0.6	4.4
SS + SERV	− 2.7	− 2.0	− 2.2	−4.0	− 3.2
MANUAL	− 4.8	− 4.5	− 4.8	−4.6	− 5.8
AGRIC +	14.3	12.3	12.3	11.6	10.8
Std. mean	3.019	3.030	3.032	3.040	3.051
Chi-sq. (3 df)	21.0*	13.1*	13.1*	11.3*	11.6*

NOTE: *Chi-square value significant at the 5 per cent level.

Table 37 Effects of partner's occupation on late fertility (B10–19) and completed fertility (NCEB)

Measure and cohort	Adjusted up to variable (% diff. from std. mean)				
	Unadjusted	RESID	REDUC	ROCCUP	All variables
B10–19, cohort 10–19					
PROF + CL	−29.0	−15.5	− 5.3	1.1	4.2
SS + SERV	−18.8	−15.4	−11.9	−12.2	−12.4
MANUAL	7.9	7.2	4.6	4.0	3.3
AGRIC +	12.5	4.1	1.2	− 1.1	− 1.3
Std. mean	1.975	1.984	1.991	1.994	1.995
Chi-sq. (3 df)	18.6*	7.3	2.6	2.2	2.3
B10–19, cohort 20 +					
PROF + CL	−25.0	−11.7	− 2.3	5.4	8.7
SS + SERV	−17.1	−11.4	−10.7	− 9.3	− 9.1
MANUAL	− 1.4	− 0.9	− 3.5	− 3.6	− 4.1
AGRIC +	27.0	15.2	14.5	9.6	8.3
Std. mean	2.182	2.234	2.247	2.273	2.281
Chi-sq. (3 df)	36.3*	9.7*	8.8*	5.0	4.8
NCEB, cohort 20 +					
PROF + CL	−15.8	− 7.6	− 3.0	1.3	5.5
SS + SERV	− 9.0	− 6.1	− 6.0	− 5.7	− 5.1
MANUAL	− 4.2	− 3.8	− 4.8	− 4.5	− 5.3
AGRIC +	22.5	15.4	14.7	11.5	10.2
Std. mean	5.650	5.736	5.757	5.801	5.825
Chi-sq. (3 df)	46.3*	17.5*	16.8*	10.6*	10.1*

NOTE: *Chi-square value significant at the 5 per cent level.

the AGRIC + group has 19 per cent, and the majority of partners (53 per cent) are manual workers, either skilled or unskilled. The results are presented in tables 36 and 37.

Unadjusted differentials

These differentials are in the expected direction – for all cohorts and measures the PROF + CLER group has the lowest fertility, with sales and services having the next higher level, followed by manual workers and finally by the AGRIC + group, which has the highest fertility (see first column of tables 36 and 37). Differentials in early fertility (B0–9) increased from the oldest cohort (20 + duration) to the youngest. In the case of the 20 + cohort the only large differential was that of the AGRIC + group, while the other three groups were quite similar, and close to the mean. Among the 10–19 duration cohort, however, two groups, the PROF + CL and the SS + SERV had 16 and 11 per cent less fertility than the mean, with the differential for the PROF + CL group increasing further to − 22 per cent, for the 0–9 cohort. Meanwhile two other groups, agricultural and manual workers, had similar levels and were slightly above the mean.

Differentials in later fertility (B10–19) were also substantial and the pattern was similar to those in early fertility (B0–9) for recent cohorts: for the two cohorts, 10–19 and 20 + duration, the PROF + CL group had 25–29 per cent less fertility than the mean, while sales and services had 17–19 per cent less. The Manual group stayed close to the mean: though its position relative to the mean increased over time, its absolute level stayed about the same. The AGRIC + group had a substantial drop in relative fertility, from 27 per cent above the mean for the 20 + cohort to only 13 per cent above the mean for the 10–19 cohort. This group also had the largest absolute decline as well, from 2.77 children to 2.22 compared to declines of only 0.2 child for the professional and clerical and sales and services groups, and practically no change for manual workers.

Adjusted differentials

As may be expected, the effect of partner's occupation on fertility is largely due to other preceding factors. Controlling for residence status alone reduces all differentials substantially. Reductions are largest for late fertility – eg the difference of − 25 per cent for the PROF + CLER group of the 20 + cohort drops to − 12 per cent – but are relatively small for B0–9, the measure of early fertility.

When the further control for respondent's education is introduced, however, the effect on differentials in early fertility is very large, for the 0–9 and the 10–19 cohorts, especially in the case of the professional and clerical group. Interestingly, the early fertility of the 20 + cohort is unaffected, and in fact continues to be substantial and statistically significant even after respondent's occupation and all other variables are controlled. This is largely due to the persistent high fertility of the AGRIC + group of partners.

With the exception of the oldest cohort (early fertility and completed fertility), no other cohort/measure has even moderately large differentials once the respondent's occupation is controlled. Clearly, if we accept the postulated causal order, we must conclude that fertility differentials observed according to partner's occupation are almost wholly due to its high correlation with other causally prior factors, especially residence, and the education and occupation of the woman.

In conclusion, it would seem that, at least for the oldest cohort, partner's occupation does have some independent effect. This situation is similar to that for partner's education, where all differentials, except those for the oldest cohort, were insignificant by the time respondent's occupation and other causally prior variables were controlled. These findings further confirm the relationship found for partner's education, that the partner's characteristics were more strongly related to fertility for the oldest cohort, than women's characteristics, and the reverse is found for the two younger cohorts.

4.10 CONCLUSIONS

In this section we summarize the results of the analysis. One measure of the overall effect of all socio-economic factors included in the model, the percentage of variance explained, is presented. Recognizing that coverage of the intermediate variables through which socio-economic factors affect fertility is not part of the model, we also briefly look at a few of these variables to indicate the strength of the relationship between these two sets of factors.

Explanation of variance in fertility

Our primary concern in this paper has been to study actual fertility differentials, but the contribution of each socio-economic characteristic to the explanation of variance in fertility is presented here (table 38) since it is a useful summary index of the relative importance of these variables. The total variance explained is low (10–18 per cent), but not atypical of social science research using the individual as the unit of analysis. The youngest cohort (0–9 years duration) has slightly higher amounts of variance explained than other cohorts, especially if B0–9 is compared across cohorts; as fertility decline sets in, variation according to socio-economic status increases and accounts for a greater proportion of the existing variation among individuals.

The declining importance of religion, residence and partner's occupation, from the oldest to the most recent

Table 38 Cumulative percentage of total variance explained by independent variable

Variable added	Duration cohort					
	0–9	10–19		20 +		
	B0–9	B0–9	B10–19	B0–9	B10–19	NCEB
AGFU	0.014	0.018	0.026	0.001	0.049	0.029
RESID	0.029	0.029	0.058	0.016	0.090	0.072
RELIG	0.037	0.034	0.065	0.024	0.098	0.089
REDUC	0.081	0.069	0.092	0.027	0.112	0.096
PARTNERS	0.082	0.073	0.097	0.035	0.116	0.097
CURSTAT	0.109	0.085	0.104	0.058	0.122	0.113
ROCCUP	0.132	0.112	0.119	0.063	0.142	0.132
WORKBEF	0.158	0.116	0.119	0.075	0.142	0.135
PEDUC	0.170	0.127	0.120	0.082	0.149	0.144
POCCUP	0.172	0.133	0.122	0.095	0.154	0.155

cohort, is seen in the changing percentage of variance explained by these factors. In contrast the respondent's education, occupation and her employment before the first birth, make an increasingly larger contribution to explaining fertility variation, for the younger cohorts.

Socio-economic status, intermediate variables and fertility

We will briefly examine variation in the intermediate variables through which the socio-economic variables may affect fertility. In our causal model these would be intervening variables, coming between the independent socio-economic variables and the dependent variable, fertility. The intention is to give some idea of the relative importance of these variables, which are clearly very important, given the low overall explanatory power of the socio-economic factors alone.

A comprehensive approach to measuring these variables is not taken here, although the Bongaarts model and the Davis–Blake framework are available if an exhaustive analysis of these variables was required. Instead we look at variation in a few intermediate variables, according to social status, measured by two of the more important background variables, respondent's education and occupation. Some measures for exposure to pregnancy (age at first union, number of partners and current union status) have already been included in the detailed analysis, and are not considered again. The variables chosen are exposure to pregnancy after entry into the first union, ie the proportion of time after the first union, which is spent within unions; breastfeeding of the penultimate child, as an indicator of variation in length of postpartum non-susceptibility; the average number of foetal losses, which would include spontaneous losses and induced abortions, since these were not recorded separately, and use of contraception, measured in two ways, indirectly by delay in the age at first birth, and directly, by the proportion who have ever-used contraception. These measures are presented in appendix table A17.

Three of these four measures work against the observed fertility differentials – in other words they contribute to higher fertility for higher status groups, rather than to their lower observed fertility. Breastfeeding is distinctly lower for secondary or higher educated women and for professional/clerical women. Other educational and occupational groups have similar durations, except for the oldest cohort, where breastfeeding steadily declines as status increases. Among the two earlier cohorts (10–19 and 20 + duration), the average number of foetal losses is higher for lower status groups and exposure within union is lower for them, although the trend for the youngest cohort is irregular. Both tendencies should give lower status women somewhat lower fertility than higher status women, all other things being equal. Variations in these two factors is relatively small, however, so they should not be expected to contribute greatly to differentials in fertility.

The fourth factor, contraceptive use, is definitely higher for higher status women, however, and it is also likely that these women would be more efficient users. Ever-use is a crude measure, and it is used here because no data on the history of use is available. The length of the first birth interval is an index of use before the birth and as shown in appendix table A18, it is also higher for higher status groups. Moreover, examination of ever-use according to number of children alive shows that higher status groups have higher use rates at low parities than lower status women. Using the cross-sectional data as an indication of the true cohort pattern of use, we can conclude that higher status women generally start using at an earlier stage in their reproductive years than do other groups. The differential in use is apparently large enough to overcome the effect of the opposing intermediate variables, and to produce the lower fertility observed for the higher status groups.

Main findings on fertility differentials

Analysis of age-specific fertility rates elsewhere (Singh 1982) has confirmed that at the national level a decline in current fertility is under way (the amount being slightly over one child in the 1965–1975 period). However, when duration cohorts are used, an overall decline in cumulative fertility is evident only for fertility in the 10–19 duration period. The decline in late fertility, occurring from the 20 + cohort to the 10–19 cohort, characterized mainly lower-status socio-economic groups, with the result that the range of differentials narrowed somewhat. Even so, the higher-status groups, which already had substantially lower fertility for the 20 + cohort, maintained their position of having the lowest fertility for the more recent 10–19 cohort.

Nevertheless some socio-economic subgroups did have declines in early fertility: the group who were born and now resided in urban areas, the secondary educated, professional and clerical workers, those who worked before the first birth, and women whose partners were in professional or clerical jobs. This was balanced by fertility increases among some, usually lower status, groups resulting in a net effect of no change over time. As a result, differentials have generally increased in size, from the early to the more recent period, especially for fertility during the first ten years of being in a union. Fertility during the second decade of being in a union had large differentials for many variables, even for the 20 + cohort, and these established differences persisted for the 10–19 cohort.

The analysis also shows that the partner's achieved characteristics (education and occupation) and the respondent's more ascribed characteristics, such as residence and religion, had a greater effect on fertility of the earliest cohort, compared to women's achieved characteristics. The situation is reversed for recent fertility, however, especially for B0–9 for the 0–9 cohort and B10–19 for the 10–19 cohort. The group of women's characteristics, education, occupation and employment before the first birth, have become relatively more important determinants of the fertility of the two more recent cohorts. Moreover, although the unadjusted differentials by partner's education and occupation are substantial, for the recent cohorts these are greatly reduced, if not cancelled out, when the early formative characteristics are controlled. In contrast women's characteristics have larger independent effects remaining after the causally prior variables are controlled.

In general the expected pattern of differentials, of higher fertility for low social status groups, and lower fertility for higher status groups is found. One important

exception is that a curvilinear relationshp between education and fertility is found for most measures, in the case of respondent's education, and in several instances for partner's education also. Generally the least educated group (5 or fewer years of primary schooling) has somewhat lower fertility than the next higher educated group (6 or 7 years' primary schooling), but from this level monotonous decline usually sets in. Although part of the explanation may be omission of births by the group having least education, this is unlikely to be the full reason – a further possibility is that better educated women benefited more from the improvements in health and fecundity which occurred in Jamaica between the 1940s and early 1960s, and which was accompanied by a rise in fertility.

The respondent's occupation has some of the strongest differentials of all the factors discussed; it is highly associated with other variables, and accounts for an important part of residence differentials in late fertility, respondent's education differentials of all levels, and fertility differentials according to partner's education and occupation. These occupation differentials remain substantial in almost all cases, after all the other variables were controlled. The respondent's education was the only other equally strong variable, for which differentials also persisted for almost all levels of fertility, after other factors were controlled. In Jamaica, employment before the first birth was also a very important variable, especially for fertility early in the union, and differentials were relatively unaffected by other factors. Three of the women's achieved characteristics therefore had strong and, to a great extent, independent relationships with fertility.

The advantage of this analysis lies in quantifying fertility differentials among subgroups of the population and, to some extent, changes in differentials, over time. Such information can be used to help in determining which subgroups should receive more attention in policy measures to control population, both in the direct sense, by isolating high-fertility groups, and indirectly, by describing the characteristics associated with low fertility.

5 Trinidad and Tobago: Socio-Economic Differentials in Fertility

5.1 INTRODUCTION

Trinidad and Tobago has experienced the largest and earliest fertility decline of the three countries studied here, beginning some 20 years or so before the survey in 1977, that is, in the 1950s. This trend is seen in the large declines in cumulative fertility among duration cohorts also, in spite of the exclusion of the effect of rising age at first union, which is unavoidable when analysing duration cohorts of ever-in-union women. Both ethnic groups have had large declines in both early fertility (ie births in the first ten years of being in a union) and in late fertility (births in the second decade of being in a union):

Table 39 Mean number of children ever born, by cohort and measure

Measure	Cohort		
	0–9	10–19	20 +
Non-Indians			
B0–9	2.137	2.594	3.345
B10–19		1.371	
NCEB			5.649
Indians			
B0–9	2.872	3.331	3.850
B10–19		1.233	2.095
NCEB			6.487

As mentioned in section 2, Indians and non-Indians are analysed separately in this report, with the intention of avoiding problems of interaction between ethnicity and other variables in their effect on fertility. This has the unfortunate drawback of not treating the country as a unit, but this is preferable to using an averaged population mean whose interpretation would be difficult. Users who want national-level data should use the joint results for the two ethnic subgroups to come to an understanding of the overall situation, bearing in mind that Indians constitute about 35 per cent of the total population.

In this section the differentials for each background variable are discussed in turn. A description of the categories used for each background variable is first given, then the differentials are discussed. Differentials before adjustment and the effects of adjustment for causally prior variables are the focus of the discussion. The results discussed here are summary tables extracted from the detailed step-by-step regression tables. Differentials according to current union status are not discussed here, but tables for these differentials are presented elsewhere (WFS Technical Paper no 1995), since some readers are interested in this variable, on its own merit and as an indicator of social status. The explanatory power of the regression model and the role of intermediate variables, other than initial exposure to conception, are discussed separately, in section 5.10.

5.2 AGE AT ENTRY INTO THE FIRST UNION

Age at first union is one mechanism through which fertility may be influenced. Delays in the average age at beginning the first union may not be directly motivated by the wish to reduce fertility, but even though other factors may be responsible for these delays (difficulty of housing in urban areas, employment, education beyond high school and so on), the indirect effect can be to reduce fertility in the long run.

Linear and quadratic terms were used to measure the relationship between age at first union and fertility. A summary of the results is shown in table 40. Effects are shown for step 4 of the regression, when residence status, religion and education, the logically prior variables, had been controlled. One of the equations in table 40 may be explained as an example. The regression of births at the 0–9 duration period for the 0–9 cohort of non-Indians is:

Table 40 Effect of age at entering first union on number of births in successive ten-year union duration periods

Fertility measure	Cohort		
	0–9	10–19	20 +
A Non-Indians			
B0–9	0.161 − 0.008(AGFU − 18.21)	−0.110 + 0.003(AGFU − 18.28)	0.387 − 0.022(AGFU − 17.14)
B10–19		−0.191 + 0.006(AGFU − 18.07)	−0.022 − 0.006(AGFU − 17.14)
NCEB			0.153 − 0.018(AGFU − 16.94)
B Indians			
B0–9	0.138 − 0.009(AGFU − 18.75)	0.340 − 0.022(AGFU − 17.71)	0.528 − 0.031(AGFU − 15.76)
B10–19		0.281 − 0.003(AGFU − 17.43)	0.238 − 0.021(AGFU − 15.76)
NCEB			0.489 − 0.041(AGFU − 15.62)

4 Jamaica: Socio-Economic Differentials in Fertility

4.1 INTRODUCTION

As shown in section 1, Jamaica has had a decline in current fertility during the ten-year period before the survey. As is often found, however, cohort measures in fertility do not yet fully reflect this decline. In this analysis, the gap is due not only to a time difference but also to the difference between measuring fertility in relation to all women and ever-in-union women. The synthetic current fertility measure, based on all women, shows a much larger decline than is seen here, from older to younger duration cohorts:

Table 22 Mean number of children ever born, by cohort and measure

Measure	Duration cohort		
	0–9	10–19	20 +
B0–9	3.016	3.164	3.097
B10–19		2.001	2.299
NCEB			5.905

The first row of means shows that fertility during the first ten years of being in a union has changed little over time (ie across cohorts). However, evidence of some decline in fertility during the second decade of being in a union can be seen, with the earliest cohort having 2.3 children and the more recent cohort 2.0 children. The method of adjustment for differential exposure would cause an under-estimation of the decline in fertility, however, so that the actual declines would be somewhat larger than those observed from these measures.

In this chapter the differentials for each background variable are discussed in turn. A description for the categories used for each background variable is first given, then the differentials after adjustment for all causally prior variables are the focus of the discussion. The results discussed here are summary tables extracted from the detailed step-by-step regression tables. Differentials according to current union status are not discussed here, partly because of space limitations, but also because it is treated as an exposure variable in this analysis. Nevertheless, the detailed tables for these differentials are presented elsewhere (WFS Technical Paper no 1995). Some readers are interested in this variable, on its own merit and as an indicator of social status. The explanatory power of the regression model and the role of intermediate variables, other than initial exposure to conception, are discussed separately, at the end of section 4.

4.2 AGE AT ENTRY INTO THE FIRST UNION

Age at first union has not contributed to the decline in fertility in Jamaica. On the contrary, the reported age at first union has declined by about 1.5 years from the oldest to the youngest age cohort of women. A decline was also observed for the duration cohorts, although it was smaller because the age at entry was adjusted for pre-union births (0.3–0.4 year). This reduction demonstrates that older women were more likely to report high ages at first union and were also more likely to report having births before the first union. The adjusted mean age at first union for the 20 + cohort is 17.28, for the 10–19 cohort, 17.37 and for the 0–9 cohort, 17.05 years.

Linear and quadratic terms were used to measure the relationship between age at first union and fertility. This was done because we expect the effect of age at first union on fertility to be positive at low ages of first union, and negative at high ages. A summary of the results is shown in table 23. Effects are shown for step 4 of the regression, when residence status, religion and education, factors which are known to influence the age at first union, had been controlled. One of the equations in table 23 may be explained as an example. The regression of births at the 0–9 duration period for the 0–9 cohort is:

$$B0\text{–}9 = 0.211\,(AGFU - 17.05) - 0.006\,(AGFU - 17.05)^2 + \text{other terms},$$

where the mean age at first union is 17.05 and the other terms do not involve age at union. The effect of age at first union is defined as the derivative of this equation, with respect to AGFU:

Table 23 Effect of age at entering first union on number of births in successive ten-year union duration periods

Measure	Duration cohort		
	0–9	10–19	20 +
B0–9	0.211 − 0.012 (AGFU − 17.05)	0.298 − 0.016 (AGFU − 17.37)	0.093 − 0.004 (AGFU − 17.28)
B10–19		0.044 − 0.006 (AGFU − 17.37)	0.076 − 0.002 (AGFU − 17.28)
NCEB			0.156 + 0.001 (AGFU − 17.28)

$$\frac{B0-9}{(AGFU)} = 0.211 - 2(0.006)(AGFU - 17.05)$$

$$= 0.211 - 0.012(AGFU - 17.05).$$

Application of this relationship to a few real situations would soon show that its effect on fertility is negligible. Consequently, as shown later, addition of the age at entry variable in the regression model for background variable has almost no effect except for two measures, births at duration period 10–19, and children ever born, for the 20 + duration cohort, where it has a noticeable effect on the differentials for two background variables, residence status and education.

Table 24 Effects of residential background (childhood/current place of residence) on early fertility (B0–9)

Measure and cohort	Adjusted up to variable (% diff. from std. mean)			
	Unadjusted	AGFU	REDUC	All variables
B0–9, cohort 0–9				
RUR/RUR	7.5	7.4	4.2	5.0
RUR/URB	− 5.4	− 5.1	− 5.2	−6.1
URB/URB	−11.8	−12.2	− 1.3	−1.3
Std. mean	3.046	3.046	3.029	3.029
Chi-sq. (2 df)	20.5*	20.1*	5.9	7.0*
B0–9, cohort 10–19				
RUR/RUR	5.7	5.6	3.2	0.2
RUR/URB	− 3.9	− 4.1	− 3.7	−1.1
URB/URB	− 9.5	− 8.4	− 1.6	2.3
Std. mean	3.170	3.170	3.170	3.166
Chi-sq. (2 df)	11.3*	10.3*	3.4	0.2
B0–9, cohort 20 +				
RUR/RUR	6.7	7.1	7.0	2.4
RUR/URB	3.3	− 3.7	− 3.8	0.1
URB/URB	−14.7	−15.0	−14.2	−8.4
Std. mean	3.047	3.044	3.046	3.076
Chi-sq. (2 df)	11.3*	12.1*	10.2*	1.7

NOTE: *Chi-square value significant at the 5 per cent level.

4.3 RESIDENCE STATUS

The First Country Report cross-tabulated current place of residence (categorized as rural and urban) by fertility, and found some differentials. We use a modified residence variable here: the place of birth (urban and rural) was combined with the current place of residence (urban and rural). Although this should logically produce four groups, three are actually used, because the 'urban to rural' group, which is very small, was combined with the larger 'rural to urban' group, into a single migrant group (rural/urban or RUR/URB). Clearly we do not capture all migrants, because a small proportion may move back to the type of area they were born in, after living for a period in the alternative type of area. The other two groups are the rural/rural (RUR/RUR) and the urban/urban (URB/URB) ie both are non-migrant groups, born and currently living in the same kind of place. The small number of foreign-born respondents were classified as urban/urban, because they were considered to be a very westernized group. The three groups represent a continuum from the most modern (urban/urban) to the least modern (rural/rural). The rural/urban or migrant group deserves special attention, since it is theoretically predicted that migrants would be highly

Table 25 Effects of residential background (childhood/current place of residence) on late fertility (B10–19) and completed fertility (NCEB)

Measure and cohort	Adjusted up to variable (% diff. from std. mean)				
	Unadjusted	AGFU	REDUC	ROCCUP	All variables
B10–19, cohort 10–19					
RUR/RUR	17.4	17.5	11.3	9.6	9.4
RUR/URB	− 9.8	−11.1	− 8.7	− 7.6	− 7.7
URB/URB	−34.2	−31.6	−16.5	−13.3	−12.4
Std. mean	1.999	2.002	2.004	2.003	2.003
Chi-sq. (2 df)	28.9*	28.2*	10.1*	6.2*	5.1
B10–19, cohort 20 +					
RUR/RUR	21.3	18.5	15.7	12.3	9.1
RUR/URB	−13.8	−12.0	−11.5	− 8.6	− 5.5
URB/URB	−37.4	−32.6	−24.2	−20.2	−16.9
Std. mean	2.190	2.204	2.220	2.236	2.250
Chi-sq. (2 df)	47.4*	35.5*	23.0*	13.1*	6.0*
NCEB, cohort 20 +					
RUR/RUR	14.8	13.4	12.1	8.9	5.9
RUR/URB	− 9.7	− 8.7	− 8.5	− 5.8	− 2.8
URB/URB	−25.7	−23.6	−19.6	−15.8	−12.8
Std. mean	5.700	5.719	5.739	5.779	5.817
Chi-sq. (2 df)	46.9*	37.8*	27.6*	14.2*	6.0*

NOTE: *Chi-square value significant at the 5 per cent level.

$$B0\text{–}9 = 0.161\,(AGFU - 18.2) - 0.004\,(AGFU - 18.2)^2 + \text{other terms},$$

where the mean age at first union is 18.2 years and the other terms do not involve age at union. The effect of age at first union is defined as the derivative of this equation, with respect to AGFU:

$$\frac{(B0\text{–}9)}{(AGFU)} = 0.161 - 2(0.004)(AGFU - 18.2) = 0.161 - 0.008\,(AGFU - 18.2).$$

Age at the first union has risen in Trinidad and Tobago, even for the selected population being analysed here, ever-in-union women. The effect of age at the first union on fertility in the general population is therefore likely to be even higher than that shown here. Among non-Indians, the average age at entry rose from about 17.1 years for the oldest cohort (20 +) to 18.3 years for the 10–19 cohort, but no further rise occurred from this group to the most recent cohort, 0–9 years' duration (see table 40). The mean age had a larger increase among Indians, from the lower level of 15.8 years (20 + cohort) to 17.7 years (10–19 cohort) and then to 18.8 years (0–9 cohort). These increases in themselves could have some small effects in reducing fertility from older to younger cohorts.

Within cohort measures, however, the usual finding that an increasing age at first union is associated with a small catching up effect – a higher rate of childbearing than the mean among late-age-at-entry women – is supported in all groups of Indians, and in three out of six cases for non-Indians (table 40). Only in one group (the late fertility, B10–19 of the 20 + cohort) is there a clear reduction in fertility with any increase in the age at entry, a decrease of 0.028 child for every year added to the age at entry. This is only a small effect, however, as are all the positive increases as well, mainly because the distribution of women by age at entry is heavily clustered around the mean. As will be shown later, however, a few higher social status subgroups do have substantially higher ages at entry, which contribute to their lower fertility.

5.3 RESIDENCE STATUS

In Trinidad and Tobago both the current place of residence and the place of birth were obtained. We expect type of place of current residence to be related to fertility, in the sense that urban residence coincides with higher costs of children and lower direct benefits. In addition, the place of birth can be expected to have some relationship with fertility, to the extent that preferences for children are influenced by the conditions experienced while growing up. These two variables were combined to form a single one, with four categories: those who were born in rural and now live in rural areas (rural/rural or RUR/RUR); those who were born in rural but now live in urban areas (rural/urban or RUR/URB); born in urban and living in rural areas (urban/rural or URB/RUR); and born in urban and living in urban areas (urban/urban or URB/URB). The URB/RUR group in Trinidad and Tobago was large enough to stand on its own, probably because of the recent pattern of moving out from the city of Port of Spain to live in suburban areas, some of which are still classified as rural – 11 per cent of non-Indians and 6 per cent of Indians were in this group. While we expect a fertility continuum from

Table 41 Effects of residence status (childhood/current place of residence) on early fertility (B0–9)

Measure and cohort	Non-Indians				Measure and cohort	Indians			
	Adjusted up to variable (% diff. from std. mean)					Adjusted up to variable (% diff. from std. mean)			
	Unadjusted	AGFU	REDUC	ROCCUP		Unadjusted	RELIG	REDUC	ROCCUP
B0–9, cohort 0–9					*B0–9, cohort 0–9*				
RUR/RUR	12.6	12.0	8.8	5.9	RUR/RUR	8.2	5.6	5.0	3.2
RUR/URB	– 2.4	– 2.5	– 4.3	– 1.9	RUR/URB	– 2.6	– 1.1	– 2.0	1.2
URB/RUR	5.1	5.9	5.9	3.5	URB/RUR	13.2	14.5	11.5	1.4
URB/URB	– 6.3	– 6.1	– 2.9	– 2.6	URB/URB	– 21.0	– 17.1	– 13.3	– 10.4
Std. mean	2.150	2.150	2.145	2.143	Std. mean	2.877	2.878	2.875	2.877
Chi-sq. (3 df)	8.1*	7.6	4.2	1.7	Chi-sq. (3 df)	19.7*	11.9*	7.5	3.3
B0–9, cohort 10–19					*B0–9, cohort 10–19*				
RUR/RUR	22.3	21.2	15.0	11.7	RUR/RUR	5.7	5.5	3.1	2.7
RUR/URB	– 0.3	0.0	– 2.5	– 2.9	RUR/URB	6.3	6.4	7.2	6.7
URB/RUR	9.6	9.9	8.8	5.2	URB/RUR	– 2.1	– 1.8	– 2.9	– 0.2
URB/URB	– 14.8	– 14.4	– 8.6	– 5.4	URB/URB	– 23.6	– 23.1	– 18.1	– 17.2
Std. mean	2.600	2.600	2.599	2.598	Std. mean	3.325	3.325	3.326	3.325
Chi-sq. (3 df)	29.9*	27.7*	11.8*	6.2	Chi-sq. (3 df)	26.9*	24.7*	15.4*	12.9*
B0–9, cohort 20 +					*B0–9, cohort 20 +*				
RUR/RUR	12.7	12.5	11.5	8.9	RUR/RUR	– 0.3	– 1.2	– 0.7	– 0.5
RUR/URB	– 2.7	– 3.3	– 4.9	– 1.7	RUR/URB	– 6.6	– 8.2	– 8.4	– 7.5
URB/RUR	– 4.4	– 4.0	– 3.0	– 4.9	URB/RUR	– 1.9	– 1.7	– 2.3	– 1.9
URB/URB	– 3.4	– 2.9	– 1.2	– 2.0	URB/URB	11.9	16.4	15.6	13.7
Std. mean	3.321	3.322	3.327	3.329	Std. mean	3.871	3.878	3.877	3.874
Chi-sq. (3 df)	8.5*	7.8*	7.1	3.9	Chi-sq. (3 df)	6.9	11.4*	10.7*	8.0*

NOTE: *Chi-square value is significant at the 5 per cent level.

Table 42 Effects of residence status (childhood/current place of residence) on late fertility (B10–19) and completed fertility (NCEB)

Measure and cohort	Non-Indians				Measure and cohort	Indians			
	Adjusted up to variable (% diff. from std. mean)					Adjusted up to variable (% diff. from std. mean)			
	Unadjusted	AGFU	REDUC	ROCCUP		Unadjusted	RELIG	REDUC	ROCCUP
B10–19, cohort 10–19					*B10–19, cohort 10–19*				
RUR/RUR	40.6	37.5	30.8	27.3	RUR/RUR	− 2.1	− 4.9	− 9.7	− 9.1
RUR/URB	− 6.0	− 3.7	− 8.2	− 10.2	RUR/URB	− 6.8	− 7.4	− 5.7	− 6.5
URB/RUR	2.3	3.5	3.4	8.5	URB/RUR	39.0	41.8	38.8	41.6
URB/URB	− 17.7	− 18.4	− 10.9	− 8.7	URB/URB	2.7	9.9	20.3	19.0
Std. mean	1.361	1.359	1.365	1.365	Std. mean	1.229	1.228	1.226	1.226
Chi-sq. (3 df)	17.0*	15.1*	9.2*	7.9*	Chi-sq. (3 df)	2.9	3.8	5.0	5.2
B10–19, cohort 20 +					*B10–19, cohort 20 +*				
RUR/RUR	31.1	21.1	15.5	13.0	RUR/RUR	9.3	7.6	6.7	6.1
RUR/URB	− 11.2	− 13.8	− 16.5	− 14.8	RUR/URB	− 6.6	− 6.9	− 6.3	− 7.1
URB/RUR	21.8	21.9	20.8	17.4	URB/RUR	− 4.8	− 7.4	− 6.8	− 8.3
URB/URB	− 13.8	− 6.0	− 0.4	0.5	URB/URB	− 11.3	− 5.9	− 4.7	− 1.5
Std. mean	1.825	1.842	1.853	1.856	Std. mean	2.092	2.096	2.096	2.098
Chi-sq. (3 df)	22.4*	13.3*	11.1*	7.7	Chi-sq. (3 df)	3.9	2.6	2.0	1.9
NCEB, cohort 20 +					*NCEB, cohort 20 +*				
RUR/RUR	20.2	14.9	11.6	9.1	RUR/RUR	4.7	3.0	2.9	2.8
RUR/URB	− 6.4	− 7.9	− 10.0	− 7.3	RUR/URB	− 7.3	− 8.3	− 8.2	− 8.3
URB/RUR	7.2	7.5	6.9	4.4	URB/RUR	− 2.5	− 5.4	− 5.2	− 4.5
URB/URB	− 7.7	− 3.5	0.2	0.0	URB/URB	0.3	7.2	7.4	7.6
Std. mean	5.578	5.607	5.630	5.633	Std. mean	6.499	6.515	6.515	6.516
Chi-sq. (3 df)	21.6*	12.8*	10.9*	5.7	Chi-sq. (3 df)	4.5	5.7	5.5	5.5

NOTE: * Chi-square value is significant at the 5 per cent level.

RUR/RUR (the highest fertility) to RUR/URB, to URB/URB (with the lowest fertility), it is difficult to predict the fertility of the in-between group, URB/RUR. Because of their current place of residence, we expect them to have higher fertility than the URB/URB group, and perhaps higher than the RUR/URB group as well. In classifying place of birth as rural or urban, we decided to treat immigrants from the small islands (codes 901–912 = Antigua, Barbuda, Barbados, Dominica, Grenada, Jamaica, Montserrat, St Lucia, St Kitts, Nevis, Anguilla, St Vincent, Foreign Caribbean Territories, Guyana and British Honduras) as rural and other foreign-born immigrants as being of urban origins. This decision is based on the general pattern observed in the island (Harewood, forthcoming). Of women born in Trinidad, those from Port of Spain, San Fernando, Arima Borough, Diego Martin, St Ann's, Tacarigua and Arima were classified as being of urban origin.

Tables 41 and 42 summarize differentials according to residence status for Indians and non-Indians, before adjusting for other variables, and after adjustment for some other factors. The first table deals with B0–9, births in the first 10 years of being in union (early fertility) and the second with B10–19, births in the second decade of unionship (late fertility) and with NCEB (completed fertility) for the 20 + cohort only. Differentials are shown as percentage deviations from standardized fertility means.

Unadjusted differentials

Among non-Indians the rural/rural group have consistently had the highest fertility, as expected, while the URB/URB group has had the lowest, or close to the lowest level of fertility, followed, generally, by the upwardly mobile rural/urban group, and then by the URB/RUR group, who usually had higher fertility than the URB/URB or the RUR/URB groups, but substantially less than the RUR/RUR group. An overall decline in fertility occurred, shared by all groups, but in the case of early fertility, the decline began first with the URB/URB group. This caused a widening of the range of fertility levels, from 0.5 child (3.2 to 3.7 children, the 20 + cohort), to 1.0 child (2.2 to 3.2 children, the 10–19 cohort). Then in the most recent period, as other groups also declined, the range of differences narrowed to 0.4 child (2.0 to 2.4 children for the 0–9 cohort). This homogenizing trend has not yet spread to fertility in the second decade of being in a union – substantial differences still exist, even for the recent experience of the 10–19 cohort, with RUR/RUR being much higher and URB/URB much lower than the standardized mean. Again, in the case of late fertility, all groups experienced some fertility decline, but the URB/RUR group had the largest reduction, from a very high level of 22 per cent above the mean to only 2 per cent above the mean, in absolute terms from 2.2 to 1.4 children.

In the case of the Indian population, very little variation was observed among residence subgroups for the oldest cohort, 20 + duration women – indeed the URB/URB group unexpectedly had the highest level of early fertility, 4.3 children in the first 10 years, which was 12 per cent above the mean. This may have been caused by a combination of less traditional behaviour (eg shorter breastfeeding, less abstinence) by urban-born, urban-resident women, and better health and medical conditions in urban areas. Substantial differences were observed only in the case of early fertility of the 0–9 and 10–19 cohorts, and differences here were in the same direction as for non-Indians: the URB/URB group had the lowest level of fertility – 21–24 per cent below the mean, while the

RUR/RUR group, which is in any case the bulk of the Indian population, had slightly higher fertility than the mean (6–8 per cent more). The unusually high fertility of the urban/rural group, for late fertility of the 10–19 cohort, may be due to random variation, given the small size of this group.

Adjusted differentials

Controlling for the age at first union had very little effect on non-Indian residential differentials in early fertility for the 0–9 and 10–19 cohorts, but did significantly reduce differences in late fertility. In the case of the Indian group this control left differentials for all cohorts unaffected. Among Indians, however, controlling for religion does raise the fertility of the URB/URB group and lower that of the RUR/RUR group, mainly because the URB/URB group has a larger proportion of low-fertility Christians than does the RUR/RUR group. In contrast, this control has little effect on residence differences among non-Indians.

The additional control for education has an especially strong effect on early fertility (B0–9) for the two younger cohorts, women with 0–9 and 10–19 duration, for both non-Indians and Indians. It is interesting to note that, in the case of the oldest cohort of non-Indians, controlling education did not cause a large reduction in differentials. Presumably this is partly because the effect of educational differences by type of place of residence was already taken out in the control for age at first union. In contrast, controlling education causes a larger reduction in the early fertility differentials of the 10–19 cohort than of the 0–9 cohort, especially among non-Indians. This is at least partly due to the lower coincidence of high educational attainment with urban residence for the younger, more recent cohort, than was true of the older, 10–19 years duration cohort. Even after education is controlled, substantial differences remain for all groups of non-Indians, except for the early fertility of the 0–9 cohort. In the case of Indians, substantial differences remain in early fertility for all three cohorts, and also in the late fertility of the 10–19 duration cohort.

The final control shown in these summary tables is for the respondent's most recent occupation (ROCCUP). By this stage, current union status would have also been controlled, so that some of the change will be due to this factor, not occupation. We expect employment itself and work in higher status occupations to be more prominent among women currently living in urban areas, and since these characteristics are associated with low fertility, this control should further reduce the residence differentials, raising urban fertility and lowering rural fertility. This is what generally results after controlling ROCCUP, for non-Indians, but this effect is much smaller among Indians. Interestingly, the strong positive relationship between urban/urban residence and fertility, observed for the 20 + cohort of Indians, remains even after all these controls have been made. In contrast, a substantial negative relationship was observed for the two younger cohorts (0–9 and 10–19 duration) and this also largely survives all controls – the URB/URB group still has 10 per cent and 17 per cent less fertility than the standard mean, for the 0–9 and 10–19 cohorts, respectively, after all controls up to ROCCUP were applied.

It should be noted that the rural/urban group which is characterized as upwardly mobile, and therefore expected to have lower than average fertility, did not have significantly less early fertility than the mean, but its late and completed fertility was consistently below the mean, sometimes substantially so, for both Indians and non-Indians. Moreover, this differential persisted, and sometimes increased, even after other variables were controlled.

5.4 RELIGION

Different subgroups were defined for the two ethnic groups – among non-Indians three subgroups were defined – Anglican, Roman Catholic and all others. Anglican and Roman Catholic were treated separately (even though doctrinally they are closer than other groups) because they form a substantial proportion of the population (24 per cent and 52 per cent respectively), unlike the case of Jamaica, where they were grouped together, because both were small groups. The all others group consisted mainly of Protestant sects, and was not further subdivided because there was no reason to expect significant differences in fertility among these sects. Four religious subgroups were defined for Indians: Anglican plus Roman Catholic (12 per cent), other Christian (16 per cent), Hindu (56 per cent), and Muslim (14 per cent). Since differentials by religion were minimal for non-Indians, the summary of differentials is shown only for the Indian population, in table 43.

Unadjusted differentials

Among non-Indians, religion has very little influence on fertility. This is especially true for the oldest cohort (20 + duration), where early, late and completed fertility vary only slightly between religious groups. Differentials are slightly larger, for other cohorts but usually lie within about 5 per cent above and below the standard mean. Differentials for these two cohorts, however, are in the expected direction, with Anglicans having lowest fertility, and the all others category having highest fertility.

In the case of Indians, religion has a more important influence on fertility, and differentials have even increased from older to younger cohorts, in most cases. Generally the higher status Christian groups have lower fertility, with the Anglican plus Roman Catholic group (ANG + RC) having slightly lower fertility than the other Christians group (OTH.CHR). Hindus have the highest fertility, which may be expected, given their higher likelihood of rural residence and lower educational attainment. The Muslim group has an intermediate level of early fertility (B0–9), but unexpectedly has one of the lowest levels of late fertility (B10–19).

Evidently, all groups had a large absolute decline in late fertility, varying from 0.8 child (Hindus) to 1.1 children (ANG + RC). All subgroups also had large declines in early fertility, but the OTH.CHR group had the largest fall of all (1.5 children).

Adjusted differentials

Among non-Indians, substantial differences according to religion, before adjusting for any other variables, had only

Table 43 Effects of respondent's religion on early fertility (B0–9), late fertility (B10–19) and completed fertility (NCEB) for Indians

Measure and cohort	Indians				Measure and cohort	Indians			
	Adjusted up to variable (% diff. from std. mean)					Adjusted up to variable (% diff. from std. mean)			
	Unadjusted	AGFU	RESID	REDUC		Unadjusted	AGFU	RESID	REDUC
B0–9, cohort 0–9					*B10–19, cohort 10–19*				
ANG&RC	− 16.8	− 18.6	− 13.0	− 9.8	ANG&RC	− 34.5	− 34.6	− 38.0	− 23.6
OTH.CHR	− 14.8	− 12.9	− 13.3	− 9.2	OTH.CHR	− 9.6	− 6.8	− 6.0	2.7
HINDU	6.6	6.3	5.2	3.6	HINDU	15.4	14.5	15.1	9.8
MUSLIM	3.5	4.4	4.3	3.5	MUSLIM	− 22.6	− 21.8	− 22.4	− 23.1
Std. mean	2.904	2.904	2.897	2.891	Std. mean	1.219	1.220	1.220	1.228
Chi-sq. (3 df)	15.6*	15.4*	10.1*	4.8	Chi-sq. (3 df)	7.9*	7.2	7.9*	4.7
B0–9, cohort 10–19					*B10–19, cohort 20 +*				
ANG&RC	− 12.1	− 10.8	− 5.2	− 1.6	ANG&RC	− 7.8	− 7.1	− 6.0	− 4.1
OTH.CHR	− 9.6	− 8.7	− 11.6	− 7.2	OTH.CHR	− 3.4	0.9	2.0	4.7
HINDU	4.9	4.2	4.0	1.8	HINDU	6.0	4.2	3.5	1.9
MUSLIM	0.7	1.3	0.7	1.7	MUSLIM	− 14.3	− 12.2	− 11.9	− 9.7
Std. mean	3.318	3.320	3.320	3.326	Std. mean	2.085	2.086	2.087	2.089
Chi-sq. (3 df)	9.3*	7.2	6.5	2.0	Chi-sq. (3 df)	2.8	1.7	1.4	0.9
B0–9, cohort 20 +					*NCEB, cohort 20 +*				
ANG&RC	− 18.2	− 18.6	− 24.4	− 24.5	ANG&RC	− 18.0	− 17.2	− 20.0	− 19.5
OTH.CHR	2.8	2.2	2.2	2.1	OTH.CHR	− 1.9	0.3	0.8	2.2
HINDU	3.0	3.2	4.4	4.3	HINDU	6.0	5.0	5.3	4.6
MUSLIM	− 0.4	− 0.1	0.1	0.6	MUSLIM	− 7.3	− 6.3	− 6.1	− 5.0
Std. mean	3.836	3.836	3.831	3.831	Std. mean	6.448	6.454	6.450	6.452
Chi-sq. (3 df)	7.7	8.0*	12.7*	12.6*	Chi-sq. (3 df)	9.8*	7.8*	9.1*	7.9*

NOTE: *Chi-square value is significant at the 5 per cent level.

been observed for early fertility of the two younger cohorts. Differentials for the 10–19 cohort became unimportant once residence was controlled, but those for the 0–9 cohort persisted until current union status was controlled.

In the case of Indians, controlling for age at first union had only a small effect on religion differentials. The further control for residence had a stronger effect, however. Differentials were reduced for the early fertility of the 0–9 and 10–19 duration cohorts, because the low fertility Christian groups were mainly in urban areas, which had lower fertility in the recent period. Differentials increased for the 20 + cohort, however, (B0–9 and completed fertility), because urban residents of this older cohort actually had higher fertility than rural women. The further control for education greatly reduced differentials for the two younger cohorts (0–9 and 10–19 duration), given the higher educational attainment of the ANG + RC and OTH.CHR groups. Differentials in the early fertility of the 20 + cohort and late fertility of the 10–19 cohorts persisted in spite of controls for education, union status and employment variables and partner's education, however. While the persistence of low fertility among the ANG + RC and to some extent the other Christians group may be expected, because these groups are likely to be more westernized and more directed towards social mobility, the persistent low level of late fertility among the Muslim group was not predicted. It is unclear whether some difference in the effect of this religion on life-style (as compared to Hinduism) is responsible, or whether the Muslim group differs in some socio-economic factor which is not included in the model.

5.5 RESPONDENT'S EDUCATION

Given that education is a continuous variable, obtaining categories was straightforward. It was important that categories reflect the primary–secondary distinction, and the actual sample distribution by education, and at the same time that comparability between ethnic groups be maintained. The primary-educated population was split into three groups, partly because the bulk of the population, in the two older cohorts especially, had only attained this level of education, but also because a finer split would enable us to test for the existence of some minimum threshold level before education causes fertility to decline. Secondary-educated women were divided into two groups – those who had not passed any examination, nor obtained any certificate, and those who had obtained some qualification (ranging from O-levels to a university degree). This grouping was used because slightly over half of secondary-educated women fell into each group, for both non-Indians and Indians. In the case of the 20 + duration cohort of Indians, only, the two secondary groups were combined, due to the small number of women in the groups. Differentials are summarized in two tables 44 and 45.

Unadjusted differentials

Large, significant differentials exist for all groups of both non-Indians and Indians. Differentials for the oldest cohort, especially among Indians, are somewhat smaller, however. Differentials increased in size from older to younger cohorts, in both ethnic groups. For example in the case of

Table 44 Effects of respondent's education on early fertility (B0–9)

Measure and cohort	Non-Indians				Measure and cohort	Indians			
	Adjusted up to variable (% diff. from std. mean)					Adjusted up to variable (% diff. from std. mean)			
	Unadjusted	RESID	CURSTAT	ROCCUP		Unadjusted	RESID	CURSTAT	ROCCUP
B0–9, cohort 0–9					*B0–9, cohort 0–9*				
PRIM6	43.0	45.7	28.7	16.5	PRIM6	0.7	1.3	− 3.8	− 2.9
PRIM78	28.7	28.4	30.4	24.9	PRIM78	16.6	14.4	14.1	12.5
PRIM9	13.7	13.5	13.0	10.6	PRIM9	0.4	− 0.4	2.5	2.0
INC.SEC	− 5.9	− 6.1	− 1.0	5.4	INC.SEC	− 10.9	− 11.4	− 8.8	− 7.8
COM.SEC	− 27.3	− 28.0	− 28.0	− 15.4	COM.SEC	− 36.1	− 29.8	− 20.8	− 19.7
Std. mean	2.137	2.142	2.120	2.052	Std. mean	2.951	2.948	2.884	2.889
Chi-sq. (4 df)	65.3*	62.0*	55.2*	17.0*	Chi-sq. (4 df)	42.7*	28.4*	16.9*	10.5*
B0–9, cohort 10–19					*B0–9, cohort 10–19*				
PRIM6	44.1	36.6	32.4	28.0	PRIM6	15.0	13.8	15.1	14.1
PRIM78	29.2	28.0	28.5	26.7	PRIM78	8.5	6.1	5.4	4.7
PRIM9	13.6	11.8	13.4	14.6	PRIM9	− 7.0	− 6.0	− 6.1	− 6.2
INC.SEC	− 7.9	− 4.6	− 3.5	− 2.9	INC.SEC	− 25.1	− 23.1	− 25.0	− 24.5
COM.SEC	− 24.5	− 18.2	− 23.2	− 21.6	COM.SEC	− 34.6	− 28.6	− 29.3	− 24.4
Std. mean	2.402	2.394	2.400	2.398	Std. mean	3.222	3.239	3.236	3.245
Chi-sq. (4 df)	60.4*	36.6*	38.3*	23.8*	Chi-sq. (4 df)	41.5*	29.2*	29.8*	21.6*
B0–9, cohort 20 +					*B0–9, cohort 10–19*				
PRIM6	15.6	13.8	14.5	12.6	PRIM6	− 0.7	0.0	0.0	− 0.4
PRIM78	21.6	20.0	19.9	18.7	PRIM78	10.8	10.5	12.2	12.6
PRIM9	5.0	4.0	4.1	2.9	PRIM9	7.5	6.1	4.0	4.6
INC.SEC	15.4	17.5	17.7	18.4	INC.SEC }	− 22.7	− 21.8	− 21.3	− 21.8
COM.SEC	− 13.0	− 10.0	− 11.3	− 5.8	COM.SEC }				
Std. mean	2.988	3.004	3.002	3.015	Std. mean	3.793	3.784	3.782	3.787
Chi-sq. (4 df)	14.8*	11.8*	12.3*	8.7	Chi-sq. (3 df)	8.4*	7.0	7.5	8.0*

NOTE: *Chi-square value is significant at the 5 per cent level.

B0–9, the complete secondary educated non-Indian group fell from 13 per cent below the mean (20 + cohort) to 27 per cent below the mean (0–9 cohort). This trend towards increasing differentials is presumably a result of differential rates of decline by education subgroups, over time. For example, again looking at non-Indians, the two secondary-educated groups had the largest declines over time, 1.4 and 1.0 child, for incomplete and complete secondary, respectively. The primary groups had declines of only 0.4, 0.9 and 0.7 child, by comparison. Among Indians the situation was not as extreme, with relatively less variation in the amount of decline: again for B0–9, the declines were 0.8, 0.8 and 1.1 for the primary groups, and slightly less than one child for the secondary groups. Indians have had a more uniform decline in early fertility across education subgroups than non-Indians.

Ethnic differences are also observed in the relative subgroup declines in late fertility, B10–19, from cohort 20 + to the 10–19 cohort. Non-Indians had smaller declines for two primary groups (about 0.2 child for PRIM6 and PRIM9), no change for the incomplete secondary, and larger declines for PRIM78 (0.6 child) and the complete secondary (0.5 child). This meant that some differentials increased greatly from the older to the younger cohort. For example, the PRIM6 group was 81 per cent greater than the mean, compared to 64 per cent before, and the COM.SEC group was 66 per cent below the mean, compared to 37 per cent below, before. The decline in B10–19 for Indians was larger for the primary groups (0.7, 0.8 and 0.9 child) than it was for secondary groups (about 0.3 child). With these declines, the PRIM9 group had the lowest late fertility for the 10–19 cohort, among Indians rather than the better-educated secondary groups.

While education is having an increasingly large effect on fertility for the younger cohorts, it is interesting to note that differentials were sizeable even for the oldest, 20 + cohort, as seen in its complete fertility. Among Indians the range was from 4.4 to 6.7 children, while among non-Indians it was even larger, from 3.5 to 6.6 children, probably because the splitting of secondary into two groups among non-Indians isolates the very low fertility complete secondary group.

A monotonic decline in fertility as education increased was observed for most measures and cohorts, for both Indians and non-Indians. Exceptions were found in the cases of early fertility for the 20 + cohort, for both Indians and non-Indians, and the early fertility of the youngest (0–9 duration) Indian cohort, where fertility increased from the least educated (PRIM6) to the next higher group (PRIM78) and only started declining from the PRIM9 group.

In general, therefore, attainment of even 7 to 8 years of primary education is associated with lower fertility, and a threshold, if it exists, would be under 6 years' primary schooling. The few cases of a rise followed by a decline, as education increased, may result from a combination of factors: better use of medical services (or improved health in general) as education rose, could cause an increase in fecundity. In addition, the discontinuation of traditional behaviour such as long breastfeeding, combined with a lag

Table 45 Effects of respondent's education on late fertility (B10–19) and completed fertility (NCEB)

Measure and cohort	Non-Indians				Measure and cohort	Indians			
	Adjusted up to variable (% diff. from std. mean)					Adjusted up to variable (% diff. from std. mean)			
	Unadjusted	AGFU	RESID	ROCCUP		Unadjusted	AGFU	RESID	ROCCUP
B10–19, cohort 10–19					*B10–19, cohort 10–19*				
PRIM6	81.3	71.7	63.7	55.6	PRIM6	36.8	35.7	38.0	23.7
PRIM78	37.2	37.5	37.0	37.6	PRIM78	1.8	1.3	4.9	− 0.5
PRIM9	8.2	8.3	6.8	12.2	PRIM9	− 35.5	− 34.7	− 37.3	− 26.5
INC.SEC	− 0.8	− 5.6	− 1.7	− 0.3	INC.SEC	− 23.2	− 26.0	− 29.0	− 22.1
COM.SEC	− 65.6	− 49.1	− 46.3	− 60.3	COM.SEC	− 24.5	− 18.3	− 26.4	5.6
Std. mean	1.246	1.239	1.242	1.250	Std. mean	1.148	1.152	1.142	1.186
Chi-sq. (4 df)	49.0*	33.4*	27.0*	20.4*	Chi-sq. (4 df)	16.6*	15.6*	16.7*	6.8
B10–19, cohort 20 +					*B10–19, cohort 20 +*				
PRIM6	64.4	53.7	50.7	42.4	PRIM6	23.0	17.8	16.4	12.3
PRIM78	51.2	41.2	41.6	35.8	PRIM78	5.6	5.7	6.3	3.9
PRIM9	7.5	3.5	5.5	5.2	PRIM9	− 11.4	− 7.7	− 6.6	− 6.7
INC.SEC	− 19.1	− 10.2	− 9.9	− 7.3	INC.SEC	− 35.0	− 30.5	− 30.0	− 19.3
COM.SEC	− 37.4	− 18.1	− 23.4	− 11.4	COM.SEC				
Std. mean	1.501	1.543	1.546	1.573	Std. mean	1.852	1.897	1.909	1.957
Chi-sq. (4 df)	45.9*	25.0*	23.2*	12.0*	Chi-sq. (3 df)	10.0*	6.1	5.3	2.7
NCEB, cohort 20 +					*NCEB, cohort 20 +*				
PRIM6	38.3	32.9	31.3	27.5	PRIM6	11.1	8.2	7.6	5.9
PRIM78	36.3	31.1	30.9	27.3	PRIM78	8.4	8.3	8.7	9.6
PRIM9	5.5	3.4	4.5	3.8	PRIM9	− 3.1	− 1.0	− 0.7	− 2.2
INC.SEC	0.1	4.4	4.7	6.8	INC.SEC	− 27.4	− 24.9	− 24.6	− 20.6
COM.SEC	− 25.8	− 15.2	− 17.4	− 10.7	COM.SEC				
Std. mean	4.777	4.853	4.862	4.914	Std. mean	6.051	6.136	6.152	6.212
Chi-sq. (4 df)	49.1*	29.0*	27.0*	14.6*	Chi-sq. (3 df)	9.4*	6.4	6.1	4.4

NOTE: *Chi-square value is significant at the 5 per cent level.

in starting contraceptive use, could have contributed to this rise in fecundity and fertility among less-educated women. For better-educated women, contraception could have cancelled out these potential increases in fertility.

Interestingly, the relative effect of the INC.SEC level of education on fertility has declined over time: in the case of B0–9, for Indians, this group was 25 per cent below the mean for the 10–19 cohort, but only 11 per cent below for the 0–9 cohort. Among non-Indians, the relative difference in early fertility was stable but small – 8 per cent and 6 per cent less than the mean, respectively; but in late fertility, a decline in the relative effect was also observed – INC.SEC rose from 19 per cent below the mean to only 1 per cent below the mean. Meanwhile the COM.SEC group had a large and sometimes increasing, negative differential. It is possible that as the level of educational attainment in the society as a whole rose, that the relative advantages coming from an incomplete secondary education (income, occupation, social status) fell, because the proportion with complete secondary education increased greatly. This lessening of advantages for the INC.SEC group may have contributed to their higher relative fertility.

Adjusted differentials

Controlling the age at first union (AGFU) had relatively little effect on educational differentials in early fertility, for both Indians and non-Indians, and is therefore not shown in table 44. The effect of this control was larger for late fertility, however, particularly for the oldest, 20 + cohort, and this is reflected in the completed fertility of this cohort as well. Even after this factor was controlled, however, differentials were still large.

Controlling residence has different effects for the two ethnic groups. In the case of non-Indians this control has little effect on the fertility of the youngest or oldest cohorts (0–9 and 20 + duration) but a stronger effect on the fertility of the 10–19 duration cohort – a larger proportion of its primary education groups were rural, as compared to the secondary-educated.

This is probably due to the earlier expansion of secondary schooling in urban areas, while, with more widespread availability by the time the 0–9 cohort were in school, residence makes little difference in educational attendance and attainment. In the case of the Indian group, a control for residence has little effect on the 20 + cohort, and unexpectedly increases differentials in late fertility of the 10–19 cohort. However, controlling residence does moderately reduce differentials in B0–9 (early fertility) for the 0–9 and 10–19 cohorts.

Controlling religion has practically no effect for non-Indians. Among Indians, however, since a larger proportion of the higher educated groups belong to the lower-fertility Christian religious groups, this control does cause some reduction in differences – in B0–9 for the 0–9 and 10–19 cohorts and in B10–19 for the 10–19 cohort.

Controlling for the number of partners has little effect on education differentials among both Indians and non-Indians. A further exposure control, for the current union status, does reduce differentials in B0–9 for the 0–9 duration cohort, however, for both Indians and non-Indians. The union status distribution of women of lesser education

was favourable to high fertility, with a higher proportion common law and a lower proportion visiting, than the better educated groups.

The final relevant control for education differentials was the respondent's occupation. We expect that occupation will be one means through which education influences fertility: higher education is usually associated with employment in higher status jobs, which in itself may result in lower fertility, relative to low level jobs. The effect of this control, for non-Indians, was largest in the case of B0–9 of the youngest cohort, while the effect on the two older cohorts was comparatively small.

Among Indians, more of the educational differentials were explained by variables prior to occupation (mainly age at first union, residence and religion), rather than by occupation. The control for ROCCUP did noticeably reduce educational differentials in late fertility, however. For both ethnic groups these reductions occurred because better educated women were more likely to work in higher status, career-type jobs, away from the home, which increased the conflict between the dual demands of work and childrearing on their time.

Even after controlling occupation, all groups and measures for both non-Indians and Indians still had substantial educational differentials, arguing that the effect of education independent of all preceding (RESID, RELIG) and intervening (AGFU, PARTNERS, CURSTAT, ROCCUP) variables, is significant. Among Indians however, the effect of the preceding variables was more important than for non-Indians, and in general differentials were not as large.

5.6 RESPONDENT'S OCCUPATION

The current or most recent occupation was used in creating this variable, so no strict interpretation in terms of time is possible. Instead this variable ranks women in a more general sense, in terms of social status, and classifies them according to the probable degree of work/childrearing conflict experienced during their life. For example, women in higher status jobs (professional, clerical and white collar sales jobs) or in full-time, away from the home jobs (all higher status and manual jobs) are likely to have experienced more conflict between their work and child-rearing, as well as having a higher opportunity cost to their time, compared to lower status, frequently part-time or seasonal, and at home jobs (blue collar sales, services and agricultural jobs) and those who have never worked. We expect fertility to be lower where there is more conflict in demands on the woman's time, and where her time has a higher opportunity cost. Five occupational categories were used, but the categories differed slightly between the two older Indian cohorts and other groups, because of their occupational distribution. In the case of non-Indians and the youngest cohort of Indian women, the categories were professional (PROFESS), clerical and white collar sales (CLER + SS), blue collar sales and services (SS + SERV), skilled and unskilled manual (MANUAL), and agricultural and never worked (AGR + N.W). White collar sales, which includes all sales occupations excepting only code 452, street vendors, market vendors, etc., is likely to be closer in status and skills to clerical, while blue collar sales is more similar to service workers, the bulk of whom are

Table 46 Effects of respondent's occupation on early fertility (B0–9)

Measure and cohort	Non-Indians				Measure and cohort	Indians			
	Adjusted up to variable (% diff. from std. mean)					Adjusted up to variable (% diff. from std. mean)			
	Unadjusted	RESID	REDUC	PATWORK		Unadjusted	AGFU	RESID	REDUC
B0–9, cohort 0–9					*B0–9, cohort 0–9*				
PROFESS	−23.8	−24.4	−12.1	− 7.7	PROFESS	−32.6	−26.1	−23.6	− 1.2
CLER + SS	−28.8	−29.2	−22.6	−11.9	CLER + SS	−31.4	−31.3	−29.4	−20.8
SS + SERV	24.4	25.1	17.8	19.2	SS + SERV	− 8.2	− 8.6	− 6.8	− 9.8
MANUAL	− 2.0	− 0.7	− 3.4	− 3.6	MANUAL	−25.0	−25.2	−23.4	−25.2
AGR + N.W	12.5	11.4	9.9	− 5.6	AGR + N.W	13.4	13.1	11.9	9.4
Std. mean	2.212	2.213	2.193	2.169	Std. mean	2.987	2.980	2.970	2.933
Chi-sq. (4 df)	81.2*	76.6*	32.3*	17.1*	Chi-sq. (4 df)	61.6*	52.7*	39.7*	23.2*
B0–9, cohort 10–19					*B0–9, cohort 10–19*				
PROFESS	−18.4	−14.2	2.7	7.0	PROF + CL + SS	−23.7	−22.4	−18.0	− 6.4
CLER + SS	−19.5	−14.9	− 6.9	− 4.5	SS + SERV	4.4	3.7	8.4	3.1
SS + SERV	6.9	3.6	− 2.0	− 0.6	MANUAL	− 3.2	− 1.6	− 0.2	− 0.5
MANUAL	−15.0	−13.6	−18.2	−15.3	AGRIC	1.0	0.1	− 3.7	− 8.1
AGR + N.W	31.7	27.9	22.0	13.6	NEV.WOR	7.2	6.8	4.7	2.8
Std. mean	2.618	2.619	2.622	2.611	Std. mean	3.287	3.288	3.298	3.316
Chi-sq. (4 df)	58.0*	37.0*	23.7*	6.4	Chi-sq. (4 df)	22.0*	18.5*	12.5*	2.8
B0–9, cohort 20 +					*B0–9, cohort 20 +*				
PROFESS	−20.0	−17.2	−11.9	− 8.4	PROF + CL + SS	5.0	5.2	1.7	5.1
CLER + SS	− 3.4	− 1.9	1.7	5.1	SS + SERV	3.5	3.5	2.7	4.3
SS + SERV	− 4.1	− 4.7	− 6.7	− 6.6	MANUAL	− 9.2	− 9.5	− 9.0	− 6.8
MANUAL	4.1	3.4	0.2	1.7	AGRIC	0.8	1.6	3.2	1.7
AGR + N.W	14.9	13.4	11.8	5.3	NEV.WOR	− 1.0	− 1.1	− 0.2	− 1.7
Std. mean	3.307	3.317	3.336	3.359	Std. mean	3.859	3.857	3.836	3.858
Chi-sq. (4 df)	18.1*	13.6*	10.5*	4.0	Chi-sq. (4 df)	1.7	2.0	1.5	1.6

NOTE: *Chi-square value is significant at the 5 per cent level.

Table 47 Effects of respondent's occupation on late fertility (B10–19) and completed fertility (NCEB)

Measure and cohort	Non-Indians				Measure and cohort	Indians			
	Adjusted up to variable (% diff. from std. mean)					Adjusted up to variable (% diff. from std. mean)			
	Unadjusted	AGFU	RESID	REDUC		Unadjusted	AGFU	RESID	REDUC
B10–19, cohort 10–19					*B10–19, cohort 10–19*				
PROFESS	− 28.6	− 12.3	− 11.7	32.2	PROF + CL + SS	− 44.2	− 42.1	− 46.0	− 32.3
CLER + SS	− 37.6	− 31.6	− 27.5	− 15.6	SS + SERV	45.0	46.0	45.0	35.4
SS + SERV	19.9	13.3	12.1	0.7	MANUAL	− 21.3	− 20.4	− 19.5	− 11.9
MANUAL	− 2.8	− 1.4	− 0.4	− 8.8	AGRIC	40.5	39.1	41.4	27.7
AGR + N.W	30.8	24.4	20.6	8.6	NEV.WOR	2.0	1.1	2.1	0.7
Std. mean	1.371	1.372	1.371	1.372	Std. mean	1.216	1.217	1.214	1.219
Chi-sq. (4 df)	25.1*	13.5*	9.8*	5.8	Chi-sq. (4 df)	13.7*	12.9*	13.6*	5.6
B10–19, cohort 20 +					*B10–19, cohort 20 +*				
PROFESS	− 42.6	− 27.4	− 30.7	− 12.2	PROF + CL + SS	− 38.7	− 34.7	− 34.5	− 28.6
CLER + SS	− 31.7	− 24.0	− 22.4	− 12.8	SS + SERV	− 0.9	− 0.6	− 0.7	− 4.7
SS + SERV	8.5	2.7	7.5	0.4	MANUAL	11.0	9.1	9.8	9.4
MANUAL	14.8	12.5	12.4	6.8	AGRIC	30.3	26.1	24.3	19.1
AGR + N.W	32.5	26.3	20.0	14.3	NEV.WOR	6.7	6.2	6.4	6.1
Std. mean	1.765	1.791	1.794	1.826	Std. mean	1.960	1.975	1.978	2.000
Chi-sq. (4 df)	33.3*	18.1*	14.3*	3.9	Chi-sq. (4 df)	11.4*	8.8	7.7	5.1
NCEB, cohort 20 +					*NCEB, cohort 20 +*				
PROFESS	− 30.8	− 22.2	− 23.2	− 11.1	PROF + CL + SS	− 11.9	− 9.9	− 11.5	− 6.5
CLER + SS	− 16.4	− 12.5	− 11.4	− 4.6	SS + SERV	− 1.4	− 1.0	− 1.4	− 2.4
SS + SERV	2.4	− 0.7	1.2	− 3.0	MANUAL	− 0.6	− 1.7	− 1.0	0.9
MANUAL	10.3	9.3	9.1	3.7	AGRIC	12.3	10.1	9.8	6.0
AGR + N.W	21.3	18.0	15.0	11.2	NEV.WOR	2.5	2.3	2.8	1.7
Std. mean	5.462	5.510	5.517	5.589	Std. mean	6.324	6.352	6.343	6.402
Chi-sq. (4 df)	37.1*	22.9*	18.2*	6.4	Chi-sq. (4 df)	5.3	3.6	3.7	1.3

NOTE: *Chi-square value is significant at the 5 per cent level.

domestics. Agricultural workers are a very small proportion of the non-Indian and the younger Indian population, and were therefore grouped with never workers, since their jobs and childbearing would be very low, while that of the never workers would be zero. In the case of the two older Indian cohorts, the proportion in agricultural jobs was large enough to justify its being treated independently, and the proportion in professional jobs was too small to stand on its own, and it was therefore combined with the closest group, clerical and white collar sales.

Unadjusted differentials

The expected pattern, that of professionals having lowest fertility, followed by CLER + SS, MANUAL, SS + SERV and AGR + N.W, in that order, was met quite closely by most groups and measures (see tables 46 and 47). Where the never workers are combined with agricultural workers, this combined group generally has the highest fertility, as expected; however, where the two are treated separately (older Indian cohorts) it is interesting to note that agricultural workers have much higher late fertility than never workers, a differential that is plausible, because of lower net cost or even net benefits of children in the setting of agricultural production. Although professional workers are usually one of the lowest fertility groups, they are occasionally equalled or surpassed by the CLER + SS group. It is possible that the CLER + SS, a middle class group, has stronger aspirations for upward mobility that results in even stricter control of fertility, than is true of professional women, who have already attained a higher status. In most cases, the lower status SS + SERV group has one of the highest levels of fertility, as predicted, although the 20 + duration cohort of both ethnic groups is an exception.

The absolute size of declines in early fertility was large (1.0 to 1.6 children) for a few occupation groups for both non-Indians and Indians – professional, clerical and white collar sales, and manual workers. Trends for other occupation groups differed, however. Among Indians the never worked and agricultural group has less than half the decline of non-Indians, and the reverse situation was observed for the blue collar sales and services group. Apparently employment even in these low status jobs is correlated with fertility reduction for Indians, unlike the situation for non-Indians:

Occupation group	Early fertility		Late fertility	
	Non-Indians	Indians	Non-Indians	Indians
PROFESS	1.0	2.0	0.0	0.5[a]
CLER + SS	1.6		0.4	
SS + SERV	0.4	1.3	0.3	0.2
MANUAL	1.3	1.3	0.7	1.2
AGR + N.W	1.3	0.4–0.5[b]	0.5	0.8–0.9[b]

[a] Professional, clerical and white collar sales combined, because of small sample size.
[b] Agricultural and never worked split into two groups, hence the range.

There is correspondence for Indians and non-Indians, however, in the case of late fertility, with the very small decline of the low-status sales and services group.

Employment itself and the type of occupation made some difference in even completed fertility for the oldest cohort: among non-Indians the range was 4.2 to 6.6 children with AGR + N.W having the highest fertility, while among Indians it was 5.6 to 7.1 children, with the group of women who had never worked having highest fertility. The range for Indians may appear narrower (1.5 versus 2.4 children) because of the combination of the professionals (whose average could have been lower than the joint total) with CLER + SS.

Adjusted differentials

Controlling the age at first union (AGFU) has relatively little effect on occupation differentials in early fertility, for both non-Indians and Indians. Differentials do narrow somewhat, since higher status occupational groups had a higher age at entry on the average, but the overall effect is small. However, differentials in late fertility, among non-Indians, were more severely reduced, for both the 20 + and 10–19 cohorts: professional women moved from 43 per cent below the mean to 27 per cent below, and from 29 per cent to 12 per cent below, respectively. All other occupational groups also had noticeable changes when AGFU was controlled. In contrast, among Indians the control for AGFU reduced differentials only slightly.

We expect that controlling residence should reduce occupation differentials somewhat, because the two variables are related: agricultural workers and never workers are more likely to be in the rural/rural group, while PROFESS and CLER + SS are more heavily concentrated in the urban/urban category. Small effects are in fact observed, the percentage changes being slightly larger for the two older cohorts, compared to the youngest cohort, especially so for non-Indians. This is a reflection of what was seen earlier in the analysis of residence differentials themselves, of declines in the significance of residence over time, more so among non-Indians. In addition the relatively small amount of change suggests that the effect of occupation on fertility is, to an important degree, independent of where the job is held.

The next control, for the respondent's education, has a larger and more widespread effect in reducing differentials. We expect this result because of the close link between occupation and education. The most dramatic changes occur among the professional group, while the more comprehensive effect, covering most occupation groups, is seen in late rather than early fertility. The oldest cohort, 20 + duration, is less influenced by controlling education than the two younger cohorts, for both ethnic groups. Perhaps the link between education and occupation has become stronger over time.

Controlling exposure variables, the number of partners and current union status, has a stronger effect on occupation differentials for Indians than for non-Indians. The next control, for the pattern of work, does have large effects among non-Indians, however, since it is strongly related to occupation.

In summary, it appears that occupation has some effect independent of its correlates, residence, education and the age at beginning the first union, particularly for the youngest cohort of each ethnic group, but also for the early fertility of the two older non-Indian cohorts. In general, occupation was a less important determinant among Indian women, compared to non-Indians, but it has increased in significance, from older to younger cohorts. This increasing significance over time is also true for early fertility differentials among non-Indians.

5.7 PATTERN OF WORK

This variable attempts to measure continuity or intensity of employment, with the limited data available (employment before the first birth, employment after the first birth and current employment). Four groups were isolated, as in the case of Guyana, with an implied ranking in terms of continuity of work, and therefore of their relationship with fertility. Women who both worked before the first birth and who are also currently employed (BEF + NOW), are hypothesized to have the most continuous work history. Those who either worked only before, or who worked both before and since the first birth, but who are not currently working (BEF/B + S) are ranked second in terms of continuity. Women who worked only since the first birth from the third group (SINCE). They are ranked third and they are expected to have the highest fertility because they are likely to have joined the labour force after their high fertility made it economically necessary. Never workers from the fourth group (NEV.WOR), and are predicted to be a high fertility group as well. Childless women are in groups 1, 2, and 4, on the assumption that most will go on to have a child, and if they have worked at all, they can be considered to have worked before the first birth. For non-Indians, the distribution across these four groups is 33, 25, 23 and 19 per cent respectively, while for Indians it is 13, 15, 17 and 55 per cent.

Unadjusted differentials

Although the expected ranking – BEF + NOW, BEF/B + S, SINCE and NEV.WOR, in the order of lowest to highest fertility – is frequently approximated, there are some exceptions. In a few cases SINCE has lower fertility than the BEF/B + S group, while in a few other cases SINCE has higher fertility than NEV.WOR. The second situation is not wholly unexpected, since the group of never workers are a heterogeneous group, possibly of a higher than average social status, while the SINCE group is characterized by low educational attainment, higher proportions common law and high proportions in the low status blue collar sales and services jobs, compared to other pattern of work groups. The first situation, where BEF/B + S has higher fertility than the SINCE group, occurs on two occasions, among Indians, and has some similarity with a third unusual case, where the BEF + NOW group has the highest fertility for the oldest cohort of Indians, in two cases. It is possible that we are capturing an ethnic difference in the type of pattern of work – differentials of the same kind were also found between Indians and non-Indians in Guyana. We speculated in the case of Guyana that the very recent history of high employment of Indian women as agricultural workers, in a fairly continuous pattern of work, may explain the high fertility of either of the two groups who worked before the first birth, and the same reasoning may apply to Trinidad and Tobago as well, at least for the oldest cohort.

Table 48 Effects of pattern of work on early fertility (B0–9)

Measure and cohort	Non-Indians				Measure and cohort	Indians			
	Adjusted up to variable (% diff. from std. mean)					Adjusted up to variable (% diff. from std. mean)			
	Unadjusted	RESID	REDUC	ROCCUP		Unadjusted	AGFU	RESID	REDUC
B0–9, cohort 0–9					*B0–9, cohort 0–9*				
BEF + NOW	− 38.8	− 41.2	− 37.2	− 30.7	BEF + NOW	− 41.0	− 38.7	− 36.3	− 28.9
BEF/B + S	9.1	8.8	7.0	1.7	BEF/B + S	− 2.2	− 2.4	0.7	1.8
SINCE	36.9	40.3	36.8	31.0	SINCE	− 14.4	− 15.2	− 14.1	− 13.5
NEV.WOR	12.3	13.0	12.2	14.6	NEV.WOR	14.0	13.8	12.0	9.8
Std. mean	2.204	2.209	2.202	2.193	Std. mean	2.962	2.960	2.959	2.948
Chi-sq. (3 df)	149.5*	148.6*	113.5*	69.2*	Chi-sq. (3 df)	65.0*	53.8*	41.8*	23.7*
B0–9, cohort 10–19					*B0–9, cohort 10–19*				
BEF + NOW	− 32.6	− 29.3	− 26.6	− 19.1	BEF + NOW	− 23.9	− 23.2	− 18.1	− 10.4
BEF/B + S	5.6	5.2	4.3	4.5	BEF/B + S	3.6	3.6	2.7	2.1
SINCE	15.5	12.7	11.7	15.8	SINCE	− 12.2	− 11.1	− 6.7	− 6.3
NEV.WOR	31.1	29.0	26.8	8.8	NEV.WOR	7.7	7.2	5.1	3.4
Std. mean	2.602	2.604	2.603	2.579	Std. mean	3.272	3.274	3.290	3.302
Chi-sq. (3 df)	92.2*	66.7*	47.6*	24.1*	Chi-sq. (3 df)	21.1*	18.3*	9.3*	3.5
B0–9, cohort 20 +					*B0–9 cohort 20 +*				
BEF + NOW	− 19.6	− 18.8	− 17.7	− 14.8	BEF + NOW	− 12.3	− 11.6	− 11.8	− 11.0
BEF/B + S	2.9	3.0	2.2	3.0	BEF/B + S	− 9.0	− 8.4	8.8	− 3.3
SINCE	10.3	10.3	9.8	12.9	SINCE	11.2	11.1	10.3	9.4
NEV.WOR	18.1	16.6	16.3	6.8	NEV.WOR	1.7	1.4	1.9	0.4
Std. mean	3.258	3.261	3.265	3.272	Std. mean	3.755	3.759	3.760	3.780
Chi-sq. (3 df)	34.1*	29.1*	25.0*	17.0*	Chi-sq. (3 df)	8.5*	7.9*	7.1	5.2

NOTE: *Chi-square value is significant at the 5 per cent level.

The absolute size of differentials between these groups is quite large, and increases over time. In the case of Indians, the range in early fertility was 0.9 child for the 20 + cohort (from 3.3 to 4.2 children), increasing to 1.7 child for the 0–9 cohort (from 1.7 to 3.4 children). Among non-Indians the comparable figures are 1.2 (from 2.6 to 3.8 children) and 1.7 (from 1.3 to 3.0 children). The amount of decline from older to younger cohorts varies among pattern of work groups:

Decline in fertility for:

	Non-Indians		Indians	
	Early fertility	Late fertility	Early fertility	Late fertility
BEF + NOW	1.3	0.5	1.6	1.7
BEF/B + S	0.9	0.3	0.5	0.9
SINCE	0.6	0.6	1.6*	0.3
NEV.WOR	1.4*	0.3	0.4	0.9

The BEF + NOW group has consistently had one of the largest declines, among the four groups. As a result their relative fertility has declined substantially over time. Among Indians these declines are especially large, partly because this group started out with higher fertility than non-Indians. The two other cases of especially large fertility declines (asterisked in the table above) have seen substantial decline in their relative fertility, as a result. Other pattern of work groups have had a more mixed experience, with either late or early fertility falling noticeably, but not both.

Pattern of work has had a stronger and more long lived effect on fertility among non-Indians than among Indians. This is seen in differentials in completed fertility (20 + cohort) where the range for non-Indians is 2.1 children (from 4.3 for the BEF + NOW group, to 6.4 for never workers), compared to a much smaller range of only 0.6 child, among Indians. Also, while large, significant differences existed for all group measures of non-Indians, only early fertility and the recent late fertility (ie, of the 10–19 cohort) showed substantial differentials among Indians.

Adjusted differentials

The first control, for the age at first union, slightly affects early fertility for all three cohorts of Indians, but has larger effects on late fertility for both ethnic groups. Generally the BEF + NOW and BEF/B + S groups have a higher age at entry than the other groups, and this control raises their fertility, and reduces the level for other groups. The next control, for residence, reduces differentials to a small extent, but does so consistently, for most measures and both ethnic groups. The oldest cohort, 20 + duration, is the least affected of the three cohorts, after residence is controlled.

Controlling education is expected to reduce the pattern of work differentials, because the BEF + NOW group is likely to be better educated, and the SINCE group, worse educated than the average. This control does indeed reduce differentials noticeably, for most groups, but the effect on differentials in late fertility is somewhat larger. Even in late fertility, however, this effect is not very large, and apart from the BEF + NOW group, other groups changed very little. After this control all non-Indian group measures except one (late fertility, 20 + cohort) still had substantial

Table 49 Effects of pattern of work on late fertility (B10–19) and completed fertility (NCEB)

Measure and cohort	Non-Indians				Measure and cohort	Indians			
	Adjusted up to variable (% diff. from std. mean)					Adjusted up to variable (% diff. from std. mean)			
	Unadjusted	AGFU	RESID	REDUC		Unadjusted	AGFU	RESID	REDUC
B10–19, cohort 10–19					*B10–19, cohort 10–19*				
BEF + NOW	− 37.1	− 25.6	− 23.3	− 14.9	BEF + NOW	− 38.2	− 33.6	− 36.8	− 22.2
BEF/B + S	19.7	21.6	20.8	16.9	BEF/B + S	− 7.3	− 8.9	− 8.3	− 11.7
SINCE	3.7	− 10.2	− 10.6	− 13.4	SINCE	42.6	46.3	46.4	48.7
NEV.WOR	34.7	28.4	26.0	19.8	NEV.WOR	− 0.6	− 2.2	− 1.7	− 4.6
Std. mean	1.384	1.391	1.390	1.390	Std. mean	1.248	1.254	1.252	1.262
Chi-sq. (3 df)	26.8*	18.0*	15.5*	9.3*	Chi-sq. (3 df)	7.7	7.9*	8.3*	7.3
B10–19, cohort 20 +					*B10–19, cohort 20 +*				
BEF + NOW	− 23.4	− 17.7	− 16.4	− 12.1	BEF + NOW	17.0	28.4	26.2	23.5
BEF/B + S	6.0	10.4	11.4	9.0	BEF/B + S	− 3.9	− 6.7	− 8.1	− 6.5
SINCE	12.0	3.5	4.6	3.2	SINCE	− 4.4	− 8.3	− 7.2	− 9.2
NEV.WOR	18.7	13.3	8.4	5.8	NEV.WOR	− 1.4	− 2.0	− 1.4	− 0.6
Std. mean	1.809	1.833	1.836	1.844	Std. mean	2.121	2.141	2.133	2.136
Chi-sq. (3 df)	14.8*	8.3*	6.7	3.6	Chi-sq. (3 df)	1.4	3.9	3.2	3.1
NCEB, cohort 20 +					*NCEB, cohort 20 +*				
BEF + NOW	− 22.2	− 19.3	− 18.2	− 15.6	BEF + NOW	3.2	8.7	7.5	6.1
BEF/B + S	6.6	8.8	9.0	7.3	BEF/B + S	− 5.8	− 6.9	− 7.8	− 3.7
SINCE	11.3	6.9	7.4	6.5	SINCE	1.7	− 0.3	− 0.3	− 1.5
NEV.WOR	16.8	14.0	11.2	10.1	NEV.WOR	0.3	0.0	0.5	0.1
Std. mean	5.481	5.521	5.528	5.543	Std. mean	6.463	6.492	6.482	6.503
Chi-sq. (3 df)	34.1*	24.4*	20.8*	14.7*	Chi-sq. (3 df)	0.7	1.5	1.4	0.7

NOTE: *Chi-square value is significant at the 5 per cent level.

differentials, but this was true for only the recent experience among Indians – the early fertility of the 0–9 years cohort, and late fertility of the 10–19 cohort. This situation lends support to the argument that the Indian population is changing and moving towards the non-Indian pattern of higher and more varied involvement in the labour force, and a stronger relationship between employment and fertility behaviour.

5.8 PARTNER'S EDUCATION

It is of some interest to see what the relationship of partner's education and fertility is, especially in comparison with the women's education. For all cohorts but one, the same categories which were used for non-Indian respondent's education were used here. Thus, for the two younger cohorts of Indians (0–9 and 10–19 duration) and for all cohorts of non-Indians, the five-category breakdown was used: less than 6 years' primary, 7–8 years' primary, 9 years' primary, incomplete secondary and complete secondary. In the case of the oldest cohort of Indians (20 + duration), however, the proportion of partners in the two secondary groups (8 per cent altogether) was too small to allow splitting into two groups, as was true for Indian women of this cohort as well.

Unadjusted differentials

Just as in the case of respondent's education, differentials according to the partner's education are large and significant, for all cohorts and measures of both ethnic groups. Moreover, these differentials generally become more significant from the older to the younger cohorts, and usually also increase in size. The actual range of differences increased in the case of early fertility, from 0.8 child (2.9 to 3.7) to 1.6 child (1.4 to 3.0) for non-Indians, and among Indians the increase in range was quite large as well, from 0.9 child (3.2 to 4.1) to 1.4 children (1.9 to 3.3). For late fertility, B10–19, the range of fertility levels did not change, but remained at the same, already high level of the 20 + cohort, to the 10–19 cohort (a range of 1.4 for non-Indians and 1.1 for Indians).

Education subgroups also varied in the amount of change over time. In early fertility, the highest-educated, COM.SEC group had the largest decline, for both Indians and non-Indians, and for almost all groups non-Indians had slightly larger declines than did Indians. The reverse situation occurs for late fertility, where Indians had larger declines than did non-Indians, for all education subgroups. Interestingly, the amount of decline in late fertility is slightly larger among worse educated women for both ethnic groups, presumably as a means of catching up with their smaller declines in early fertility. These differences suggest that Indians as a whole are tending to use stopping more than spacing (ie controlling late more than early fertility) and that in both ethnic groups the women of lesser education exhibit this pattern to a slightly greater extent than the better educated.

The question of the uniformity of the pattern of differentials, and whether any threshold level of education must be reached before decline sets in, is also of interest. The type of exceptions to the pattern of monotonic decline is similar to those that occurred in the case of respondent's education. In a few instances the PRIM78 or PRIM9 group had higher fertility than less-

Table 50 Effects of partner's education on early fertility (B0–9)

Measure and cohort	Non-Indians				Measure and cohort	Indians			
	Adjusted up to variable (% diff. from std. mean)					Adjusted up to variable (% diff. from std. mean)			
	Unadjusted	AGFU	RESID	REDUC		Unadjusted	AGFU	RESID	REDUC
B0–9, cohort 0–9					*B0–9, cohort 0–9*				
PRIM6	27.5	27.6	26.8	17.8	PRIM6	6.3	5.2	3.9	0.4
PRIM78	35.7	36.1	36.1	31.2	PRIM78	2.6	2.4	1.8	− 1.3
PRIM9	− 0.8	− 0.7	− 1.2	− 3.9	PRIM9	10.6	10.3	9.9	9.2
INC.SEC	1.7	1.2	1.9	5.3	INC.SEC	− 9.4	− 9.4	− 7.7	− 3.8
COM.SEC	− 35.6	− 35.7	− 35.1	− 26.3	COM.SEC	− 35.7	− 32.4	− 29.3	− 19.5
Std. mean	2.232	2.233	2.231	2.211	Std. mean	2.969	2.958	2.954	2.907
Chi-sq. (4 df)	81.4*	79.2*	75.9*	42.3*	Chi-sq. (4 df)	46.0*	36.6*	28.5*	11.2*
B0–9, cohort 10–19					*B0–9, cohort 10–19*				
PRIM6	29.5	27.7	26.0	18.1	PRIM6	17.0	17.7	16.1	11.3
PRIM78	26.0	26.1	23.0	15.3	PRIM78	10.5	9.8	9.3	6.8
PRIM9	6.6	5.5	4.6	3.2	PRIM9	− 2.5	− 2.6	− 3.0	− 3.0
INC.SEC	− 18.4	− 18.5	− 15.3	− 11.5	INC.SEC	− 18.4	− 17.5	− 15.0	− 11.5
COM.SEC	− 25.7	− 23.0	− 21.4	− 13.8	COM.SEC	− 26.0	− 26.8	− 23.8	− 14.0
Std. mean	2.581	2.582	2.583	2.588	Std. mean	3.273	3.273	3.279	3.296
Chi-sq. (4 df)	63.0*	56.0*	40.9*	13.6*	Chi-sq. (4 df)	41.3*	40.7*	32.0*	11.3*
B0–9, cohort 20 +					*B0–9, cohort 20 +*				
PRIM6	14.0	12.9	12.6	8.0	PRIM6	11.4	12.6	13.7	13.3
PRIM78	9.1	8.4	8.2	4.5	PRIM78	− 7.1	− 6.9	− 6.4	− 7.2
PRIM9	0.2	− 0.4	− 1.1	− 2.9	PRIM9	4.7	5.1	5.2	2.4
INC.SEC	− 9.7	− 10.3	− 9.0	− 9.3	INC.SEC	− 12.6	− 14.6	− 16.3	− 11.3
COM.SEC	− 4.5	− 1.8	− 1.5	6.2	COM.SEC				
Std. mean	3.266	3.276	3.280	3.320	Std. mean	3.718	3.700	3.684	3.712
Chi-sq. (4 df)	10.2*	8.8	7.8	5.4	Chi-sq (3 df)	12.2*	13.8*	14.9*	11.3*

NOTE: *Chi-square value is significant at the 5 per cent level.

Table 51 Effects of partner's education on late fertility (B10–19) and completed fertility (NCEB)

Measure and cohort	Non-Indians				Measure and cohort	Indians			
	Adjusted up to variable (% diff. from std. mean)					Adjusted up to variable (% diff. from std. mean)			
	Unadjusted	AGFU	RESID	REDUC		Unadjusted	AGFU	RESID	REDUC
B10–19, cohort 10–19					*B10–19, cohort 10–19*				
PRIM6	24.1	19.8	20.0	1.0	PRIM6	32.9	32.6	34.4	22.7
PRIM78	51.2	50.7	45.8	31.1	PRIM78	9.0	8.3	8.8	0.9
PRIM9	15.4	12.3	11.3	9.9	PRIM9	2.5	1.9	2.2	6.4
INC.SEC	− 17.6	− 23.6	− 19.5	− 14.8	INC.SEC	− 28.3	− 26.2	− 30.5	− 16.7
COM.SEC	− 55.5	− 42.8	− 41.4	− 25.3	COM.SEC	− 58.7	− 57.4	− 58.5	− 47.2
Std. mean	1.299	1.308	1.312	1.333	Std. mean	1.171	1.173	1.170	1.190
Chi-sq. (4 df)	39.3*	32.0*	24.0*	8.0	Chi-sq. (4 df)	14.1*	13.2*	13.9*	5.4
B10–19, cohort 20 +					*B10–19, cohort 20 +*				
PRIM6	38.4	28.2	25.8	14.2	PRIM6	23.6	19.0	16.9	12.8
PRIM78	45.0	36.9	37.2	25.2	PRIM78	9.7	10.5	10.4	8.9
PRIM9	4.4	− 0.1	0.4	− 3.6	PRIM9	0.1	− 1.3	− 1.6	− 0.8
INC.SEC	− 22.5	− 20.4	− 20.3	− 13.4	INC.SEC	− 32.2	− 26.1	− 23.5	− 19.2
COM.SEC	− 34.5	− 18.8	− 18.9	− 5.1	COM.SEC				
Std. mean	1.698	1.741	1.744	1.797	Std. mean	1.926	1.955	1.969	1.994
Chi-sq. (4 df)	39.6*	22.8*	21.6*	8.1	Chi-sq. (3 df)	11.0*	7.6	6.0	3.1
NCEB, cohort 20 +					*NCEB, cohort 20 +*				
PRIM6	30.2	24.3	23.3	14.6	PRIM6	19.9	17.9	17.5	15.0
PRIM78	23.2	18.9	19.0	10.4	PRIM78	0.1	0.5	0.8	− 0.3
PRIM9	0.6	− 1.8	− 2.0	− 5.1	PRIM9	2.5	1.9	1.9	0.8
INC.SEC	− 13.7	− 12.7	− 11.9	− 8.5	INC.SEC	− 24.2	− 21.5	− 21.3	− 16.3
COM.SEC	− 17.9	− 9.1	− 9.2	2.7	COM.SEC				
Std. mean	5.314	5.397	5.403	5.539	Std. mean	6.071	6.108	6.118	6.186
Chi-sq. (4 df)	41.6*	25.8*	24.0*	10.1*	Chi-sq. (3 df)	23.0*	17.8*	16.2*	9.6*

NOTE: *Chi-square value is significant at the 5 per cent level.

educated groups. We expect that, apart from sampling error variation and the possibility of some under-reporting by the groups of least education, this unexpected rise in fertility may be due to the improved health and lower practice of traditional fertility-restraining behaviour as education rises, combined with a lag in beginning to use contraception to counteract the resulting fertility increase. Other than these and a few other minor exceptions, the differentials conform to the predicted pattern of monotonic decline as education rises.

A few interesting points emerge from the comparison of differentials according to the respondent's and partner's education. In general the two least-educated groups of non-Indian women (8 or fewer years of primary education) have higher fertility than women whose partners have the equivalent educational attainment. Among Indians, women who themselves completed primary education in almost all cases had lower fertility than the group where their partners had the equivalent level of education. In these instances it appears that the effect of the women's educational attainments overrides that of their partners.

A question frequently raised is whether, as the proportion educated in a population rises, high education will continue to have as strong a negative relationship with fertility. One argument for expecting the relationship to weaken is based on the fact that, as the proportion educated rises, the educated become a less select, elite group, and may in fact be holding lower level jobs on the average than they would have done in earlier times. On the other hand, their motivation to achieve upward mobility may continue to be as strong, in spite of less encouraging conditions in the labour market. The evidence in the case of Trinidad is that the negative differentials for the group with complete secondary education have in fact increased in size, as the proportion educated rose. This is seen in the following table:

Percentage differential from standard mean for complete secondary group

	20 + cohort	10–19 cohort	0–9 cohort
Non-Indians			
B0–9	– 4.5	– 25.7	– 35.6
B10–19	– 34.5	– 55.5	na
Indians			
B0–9	– 12.6	– 26.0	– 35.7
B10–19	– 32.2	– 58.7	na

A similar trend is observed according to respondent's education as well. In contrast the incomplete secondary educated group (attended secondary school, but no certificate) have in most cases had increasingly higher relative fertility over time, however, in the case of both partner's and respondent's education. This finding suggests that this group probably experienced a relative decline in status and income, as their total proportion and the proportion with complete secondary education rose in the society.

Adjusted differentials

Differentials according to partner's education are not uniformly affected when age at first union is controlled. Two cases whose differentials are substantially reduced are the late fertility of the 10–19 and 20 + cohorts of non-Indians, while, in contrast, the late fertility of the Indian groups are relatively unaffected. The only other case of substantial reduction in significance is the early fertility of the youngest Indian cohort, where the only important effect of the control is to raise the low fertility of the higher-educated group, who marry at a higher average age.

The control for residence affects the 10–19 cohort more than other cohorts, especially for non-Indians but to some extent for Indians also. It appears that educational attainment was not highly related to residential background in the earlier periods, presumably because equal if low attainment was achieved for urban and rural residents. When provision of educational facilities increased, however, this probably occurred more in urban areas at first (hence the stronger effect of controlling residence for the 10–19 cohort). Now the provision of facilities has evened out at least for non-Indians, among whom the control for residence had little effect on fertility differentials according to partner's education for the most recent 0–9 years duration cohort. The effect of the residence control still persists among the most recent Indian cohort, however.

The control for respondent's education is in one sense trivial, because this variable is highly related to partner's education. Since we consider that the woman's education precedes the partner's in time, however, it is still relevant to see what the effect of the partner's education would be, net of the effect of the respondent's education. The effects of controlling the woman's education is uniformly strong for the two younger cohorts (0–9 and 10–19 duration) for both ethnic groups, and has a substantial effect on the late fertility of non-Indians, 20 + cohort. Apparently partner's education had a larger effect independent of women's education among the older cohort than it does for the two more recent cohorts. In general, differentials are nearly halved by the control of the group of formative factors, up to the respondent's education.

There are nevertheless some instances where differentials according to partner's education continue to be large, even after all these variables were controlled: the late fertility of both non-Indians and Indians and the early fertility of the youngest non-Indian cohort show the largest remaining differentials. Clearly the education of the partner has some independent effect even in terms of recent fertility behaviour.

5.9 PARTNER'S OCCUPATION

As was done for Guyana and Jamaica, partner's occupation is categorized into four groups, identically for Indians and non-Indians: agricultural (self-employed and labourers combined), manual (skilled and unskilled), sales and services, and professional and clerical. (The small number of never workers are combined with the agricultural group.) The combination of skilled and unskilled manual results in a very large group, about 50 per cent for all cohorts, but this was unavoidable, since not only is the proportion classed as unskilled quite small – 8 per cent for non-Indians and 11 per cent for Indians, but the basis for division into skilled and unskilled is not clear cut. The agricultural group was substantial for Indians (17 per cent), and for com-

Table 52 Effects of partner's occupation on early fertility (B0–9)

Measure and cohort	Non-Indians				Measure and cohort	Indians			
	Adjusted up to variable (% diff. from std. mean)					Adjusted up to variable (% diff. from std. mean)			
	Unadjusted	AGFU	RESID	REDUC		Unadjusted	AGFU	RESID	REDUC
B0–9, cohort 0–9					*B0–9, cohort 0–9*				
PROF + CL	− 22.9	− 22.6	− 22.1	− 15.3	PROF + CL	− 21.8	− 18.3	− 16.6	− 9.9
SS + SERV	− 7.3	− 7.4	− 6.5	− 4.7	SS + SERV	− 13.2	− 13.6	− 10.5	− 10.3
AGRIC	20.3	21.1	17.5	13.1	AGRIC	20.2	18.2	15.6	11.6
MANUAL	11.6	11.4	11.1	7.7	MANUAL	4.9	4.5	3.8	2.7
Std. mean	2.170	2.170	2.167	2.159	Std. mean	2.916	2.910	2.905	2.893
Chi-sq. (3 df)	38.5*	36.7*	33.0*	14.6*	Chi-sq. (3 df)	28.8*	20.8*	14.7*	6.5
B0–9, cohort 10–19					*B0–9, cohort 10–19*				
PROF + CL	− 17.2	− 14.2	− 10.7	− 3.9	PROF + CL	− 20.6	− 19.7	− 16.9	− 7.6
SS + SERV	0.4	0.8	2.1	2.8	SS + SERV	− 0.6	− 0.8	− 1.8	0.1
AGRIC	22.6	21.3	10.9	5.0	AGRIC	15.2	15.2	11.7	6.6
MANUAL	6.0	4.5	3.2	0.3	MANUAL	2.6	2.3	2.7	0.6
Std. mean	2.587	2.587	2.589	2.591	Std. mean	3.309	3.310	3.314	3.321
Chi-sq. (3 df)	17.5*	11.9*	5.6	0.9	Chi-sq. (3 df)	23.7*	21.3*	14.0*	2.7
B0–9, cohort 20 +					*B0–9, cohort 20 +*				
PROF + CL	− 4.6	− 3.1	− 2.6	1.5	PROF + CL	1.1	0.5	− 0.7	0.6
SS + SERV	− 9.0	− 8.9	− 7.9	− 6.9	SS + SERV	− 0.5	− 0.7	− 1.4	− 2.5
AGRIC	17.5	17.1	15.6	14.9	AGRIC	− 0.7	0.3	0.8	0.2
MANUAL	4.0	3.3	2.8	0.7	MANUAL	0.1	0.1	0.5	0.6
Std. mean	3.316	3.319	3.322	3.331	Std. mean	3.851	3.846	3.841	3.844
Chi-sq. (3 df)	7.1	5.8	4.5	3.2	Chi-sq. (3 df)	0.1	0.0	0.1	0.2

NOTE: *Chi-square value is significant at the 5 per cent level.

parability the agricultural group was maintained among non-Indians as well, although the proportion was only 4 per cent. The proportion in the two higher status occupational groups, professional and clerical, and sales and services was 24 per cent and 19 per cent for non-Indians and 18 per cent and 15 per cent for Indians.

Unadjusted differentials

The range of differentials according to the partner's occupation is somewhat narrower than that for partner's education, especially in early fertility. This is probably due to the nature of the categories of occupation: each group contains jobs of a fairly wide range of income and status levels, more so than do education groups. The professional/clerical group (PROF + CL) is the only one that is more or less uniformly of high status and income, and which would therefore be expected to have low fertility. The agricultural group (AGRIC) is expected to have higher fertility than other groups because of the usual arguments of the lower costs and higher benefits of children in rural areas and in the agricultural mode of production. The other two groups, sales and services (SS + SERV) and MANUAL are the most heterogenous, and it would be difficult to predict their fertility.

The PROF + CL group is, in fact, either the lowest fertility group or one of the two lowest groups, in all cases where differentials are important. The negative differentials of this group increased over time as it experienced substantial decline, in addition to starting out with one of the lowest levels. The agricultural group generally had the highest level of fertility among non-Indians, where they are only a small proportion. Among Indians the agricultural group also generally had higher fertility than other occupational groups.

The SS + SERV group among partners is quite different from the equivalent category for women. Generally men hold higher status jobs in sales and services, as compared to the high proportion of women who are market vendors or domestics, in these categories. As a result this more or less white collar group has lower fertility than manual and agricultural workers in almost all cases.

Even with fertility decline, the range between groups has remained high – in the case of non-Indians it is static, at 0.9 in early fertility – ranging from 3.0 to 3.9 for the 20 + cohort and from 1.7 to 2.6 children for the recent 0–9 cohort. Also for late fertility, the range stayed constant at 1.5 children, levels ranging from 1.3 to 2.8 for the 20 + cohort, and from 0.8 to 2.3 children for the 10–19 cohort. Among Indians, practically no differences in early fertility existed among the oldest, 20 + cohort, but as occupational groups declined at different rates, the range between groups increased to 1.2 children for the 10–19 cohort (2.6 to 3.8), and stayed the same for the 0–9 cohort (2.3 to 3.5). Among Indians the range in late fertility (B10–19) narrowed as declines set in – from 1.3 for the 20 + cohort (1.4 to 2.7 children) to 0.8 for the 10–19 cohort (0.7 to 1.5 child).

Adjusted differentials

The control for age at the first union has minor effects on most early fertility differentials, and moderate effects in two cases as well. This control has a much larger influence on late fertility differentials, among non-Indians but much less effect on Indians. The main effect of this control is on

Table 53 Effects of partner's occupation on late fertility (B10–19) and completed fertility (NCEB)

Measure and cohort	Non-Indians				Measure and cohort	Indians			
	Adjusted up to variable (% diff. from std. mean)					Adjusted up to variable (% diff. from std. mean)			
	Unadjusted	AGFU	RESID	REDUC		Unadjusted	AGFU	RESID	REDUC
B10–19, cohort 10–19					*B10–19, cohort 10–19*				
PROF + CL	−44.4	−33.8	−28.6	−15.1	PROF + CL	−42.3	−39.4	−41.1	−21.7
SS + SERV	− 6.4	− 7.2	− 4.9	− 5.9	SS + SERV	22.5	22.9	25.5	22.3
AGRIC	67.1	58.7	45.4	35.5	AGRIC	14.1	12.6	14.7	2.5
MANUAL	17.6	13.7	11.5	6.4	MANUAL	3.9	3.3	2.4	0.5
Std. mean	1.350	1.355	1.358	1.364	Std. mean	1.208	1.210	1.209	1.221
Chi-sq. (3 df)	29.2*	18.2*	11.1*	4.2	Chi-sq. (3 df)	7.9*	6.8	7.5	2.7
B10–19, cohort 20 +					*B10–19, cohort 20 +*				
PROF + CL	−26.2	−16.1	−14.9	− 4.0	PROF + CL	−18.6	−14.3	−13.1	−11.9
SS + SERV	−21.1	−19.8	−18.2	−15.5	SS + SERV	−30.2	−34.0	−33.1	−30.7
AGRIC	57.2	43.2	35.9	25.7	AGRIC	36.2	33.6	32.4	30.1
MANUAL	15.4	11.3	10.7	5.5	MANUAL	3.4	3.9	3.6	3.2
Std. mean	1.812	1.823	1.827	1.841	Std. mean	1.995	1.999	2.003	2.010
Chi-sq. (3 df)	28.7*	14.9*	11.7*	4.5	Chi-sq. (3 df)	20.2*	18.6*	16.6*	13.6*
NCEB, cohort 20 +					*NCEB, cohort 20 +*				
PROF + CL	−15.2	− 9.6	− 8.8	− 1.0	PROF + CL	− 6.6	− 4.4	− 4.1	− 2.3
SS + SERV	−11.5	−11.1	−10.0	− 8.3	SS + SERV	−10.5	−12.3	−11.9	−11.5
AGRIC	42.1	34.6	30.8	26.0	AGRIC	14.9	13.6	13.0	11.2
MANUAL	7.9	5.8	5.3	1.5	MANUAL	0.5	0.7	0.8	0.6
Std. mean	5.549	5.570	5.578	5.610	Std. mean	6.362	6.370	6.374	6.390
Chi-sq. (3 df)	29.9*	17.2*	13.6*	6.6	Chi-sq. (3 df)	10.3*	9.1*	8.0*	5.9

NOTE: *Chi-square value is significant at the 5 per cent level.

the late-marrying PROF + CL group and the early-marrying agricultural groups. The further control, for residence, has a moderate effect on the early fertility of all groups, and again, in the case of late fertility, a somewhat larger effect on non-Indians than Indians. Because of the concentration of the AGRIC group in the rural/rural residence category, we expect the residence control to have a uniformly strong effect, but this is only noticeable among non-Indians.

The final control shown on the text tables 52 and 53 is for the respondent's education. This control has a very strong effect on all fertility measures, but late fertility differentials remain quite large, even after this control. The effect of this factor works mainly through highly educated respondents having PROF + CL partners, and partly through the higher likelihood of women of lower education having partners in the AGRIC occupations. Differentials for the other two groups are relatively unaffected.

5.10 CONCLUSIONS

Explanation of variance in cumulative fertility

We are mainly interested in the analysis of the regression results in the form of actual fertility means; however a table summarizing the explanation of cumulative variance is of some interest (table 54). Variables are ordered by their sequence in time, approximately, excepting only that age at first union (AGFU) is placed first, to permit the isolation of the contribution of this known means of fertility restriction from other possible intervening variables through which the independent socio-economic variables affect fertility. The ordering of variables clearly affects the amount of variance explained by individual variables, because of the high degree of multi-collinearity between variables, though the total variance explained would remain unaffected.

The total variance explained by the nine variables shown here increased from older to younger cohorts, largely due to the increasing contribution of current union status (CURSTAT). This variable is in fact most relevant to recent fertility experience, B10–19 of the 10–19 cohort and especially B0–9 of the 0–9 cohort, where the contribution is largest, for both Indians and non-Indians. Explanation of variation and actual fertility differentials, as discussed earlier, is larger for non-Indians than for Indians, presumably because the non-Indian group is less homogeneous, in terms of education, occupation, pattern of work and current union status. This differential narrowed from the earliest to the most recent cohort, however.

Using the added percentage of variance explained by variables as a measure of importance, we can make a few generalizations. The contribution of the residence factor has declined among non-Indians, from older to younger cohorts, but increased from the 20 + Indian cohort to the two younger cohorts. Another difference between the two ethnic groups is that religion makes a small but stable contribution for Indians, but is negligible among non-Indians. Education and occupation have increased in importance from older to younger cohorts for Indians, presumably as a result of increasing modernization of this group over time. Education made a large contribution even for the oldest non-Indian cohort, and remained at a high level for recent cohorts, but the contribution of occupation has increased over time for this ethnic group also. The pattern of work made only a minimal contribution to explained variance among Indians, but was a large con-

Table 54 Cumulative percentage of total variance explained by independent variables, Indians and non-Indians

Added variable	Duration cohort					
	0–9	10–19		20 +		
	B0–9	B0–9	B10–19	B0–9	B10–19	NCEB
A Indians						
AGFU	0.02532	0.01373	0.00450	0.01193	0.03704	0.03144
Residence	0.05019	0.06421	0.01189	0.02671	0.04401	0.04162
Religion	0.06489	0.07718	0.03079	0.05535	0.04749	0.06274
R's education	0.09829	0.12625	0.06315	0.07091	0.05900	0.07402
No. partners	0.10789	0.12655	0.07338	0.07169	0.05905	0.07993
Current union status	0.22209	0.15407	0.08129	0.10554	0.06811	0.09886
R's occupation	0.24044	0.15724	0.09177	0.11099	0.08082	0.10338
Work pattern	0.24675	0.16174	0.10714	0.12082	0.08964	0.10485
P's education	0.25699	0.18317	0.11991	0.15198	0.09303	0.12484
B Non-Indians						
AGFU	0.00365	0.02186	0.06134	0.01019	0.07062	0.06232
Residence	0.01018	0.05979	0.08621	0.02419	0.09339	0.08367
Religion	0.01431	0.06325	0.08858	0.02619	0.09529	0.08418
R's education	0.06574	0.11277	0.13376	0.04755	0.13484	0.12898
No. partners	0.06705	0.12800	0.13399	0.06031	0.13524	0.13185
Current union status	0.17686	0.16947	0.16430	0.07112	0.14138	0.14289
R's occupation	0.20160	0.19368	0.17209	0.08458	0.14759	0.15104
Work pattern	0.25927	0.22660	0.19024	0.11502	0.15786	0.17082
P's education	0.27214	0.23852	0.19849	0.12035	0.16726	0.18154

tributor among non-Indians, especially for their early fertility.

Socio-economic status, intermediate variables and fertility

Models for analysing the relationship between socio-economic variables and fertility, or between intermediate variables and fertility, do exist, but a single model relating all three sets of variables at the individual level is only now being developed (Hobcraft and Little 1983). While we do not intend to do an exhaustive analysis of intermediate variables here, it is interesting to have a brief look at the few measures of intermediate variables that are available. We do this for two illustrative socio-economic variables, the respondent's education and her occupation, with the same categories that were used in the regression analysis.

The results are shown in appendix tables A19 to A28, each table dealing with one variable, for both Indians and non-Indians. A few of these factors change little or do so randomly, among education and occupation subgroups, which suggests that they cannot explain much of the fertility difference between these subgroups: average foetal loss per woman (table A19) for both ethnic groups; average number of partners among Indians (table A27); the percentage of time spent in union or proportion currently in union, for most cases of both ethnic groups (tables A25 and A26); and the percentage of women in secondary sterility (table A28). In some instances the small variations in these measures contradict expectations, eg when the low fertility professional 0–9 cohort of Indians have a high proportion in union, or when the high fertility never workers and agricultural workers have the highest proportion in secondary sterility.

Breastfeeding patterns generally operate against observed differentials also – at least for older cohorts of both ethnic groups, where the education and occupation subgroups with high fertility had the longest mean breastfeeding durations, although we expect a higher average duration of breastfeeding to lengthen birth intervals and to reduce completed fertility. This pattern is common to many countries, and it is usually accompanied by higher contraception among high social status groups, giving them relatively low fertility despite their low breastfeeding duration. In the case of the 0–9 cohorts, the duration had declined, and differences in breastfeeding are too small to have much effect on fertility. The proportion who ever used and who are currently using contraception are shown in appendix tables A21 and A22. Ever-use varies little for the two younger cohorts of Indians and non-Indians, though the small differences do generally bear out the prediction of higher fertility among groups with low use. The two cohorts of 20 + years duration agree more strongly with the expected relationship. Nor do current use data strongly support expectations. There are a few instances where the expected pattern of high use among low fertility groups is met, eg among younger Indian women (0–9 and 10–19 cohorts) and the 0–9 cohort of non-Indians the professional (or the combined professional, clerical and white collar sales group, for Indians) group does have noticeably higher use than other groups; high fertility groups such as the least educated, the blue collar sales and service workers, or agricultural workers, do usually have one of the lowest rates of current use. The problem of relating the measure 'current use at one point of time' to cumulative fertility is severe, however, and it is difficult to draw any strong conclusions from these data. We need

a more continuous record of contraceptive use and other important intermediate variables, for a period of time, eg for the last five years, to study this question properly.

Another measure of exposure, the age at first union, and an indirect measure of use in the first birth interval, the length of the first birth interval, both show that low fertility groups are characterized by both a later age at beginning the first union and contraceptive use after the first union, to delay the first birth. We cannot tell whether these means are consciously used to control completed family size, but data on fertility preferences should throw some light on this issue. It is interesting to note that, for these two measures, the incomplete secondary group is much more similar to primary educated groups, than to the complete secondary group, for the two younger non-Indian groups, and the 0–9 Indian cohort (the other cohorts of Indians do not have sufficient educated to split them into two groups), while for the 20 + cohort of non-Indians it is intermediate between PRIM9 and COM.SEC. These results tie in with the finding that the fertility of the incomplete secondary group is also moving closer to that of the primary-educated.

Among non-Indians the average number of partners varies substantially among subgroups, and also do so in the expected direction: generally high fertility groups have a higher average number of partners than low fertility groups. In the light of this pattern of variations, the argument that in a situation of high contraceptive use and fertility control, women with more partners will tend to have higher fertility because they and their partners want some children in every union, yields a plausible interpretation of the observed fertility differentials (Lightbourne and Singh 1982).

Summary of findings on differentials

The analysis presented has thrown up some interesting results. As mentioned before, substantial fertility decline was experienced in the 20-year period preceding the 1977 survey. Indian women had larger declines in late fertility than non-Indians, and the reverse was true of early fertility. A similar pattern characterized the less well educated, as opposed to the better educated. In both these cases it appears that Indians in general and the less educated of both groups, tend to use stopping more as a means of fertility control, rather than spacing.

Residence does not have a particularly strong relationship with fertility in Trinidad, partly because even rural areas have good communication and transportation links with urban areas, in this small country. Among Indians, however, it increased in importance from the older cohort to younger cohorts; in contrast, among non-Indians, differentials have become smaller over time, evidence of the start of a homogenizing trend, as fertility reaches a low level. Women who were born in and live in urban areas do generally have less than average fertility, and the rural/rural group has above average fertility. Although the upwardly mobile group who were born in rural areas and moved to urban areas did not have especially lower early fertility than other groups, its late and completed fertility was consistently below the mean, for all cohorts of Indians and non-Indians, and persisted after controls were applied. The controls for education brought out the interesting point that educational attainment became less strongly related to residential status, over time, ie from the 10–19 to the 0–9 cohort. The control for respondent's occupation reduces residence differentials to a greater extent among non-Indians than Indians, showing that residence and occupation are more strongly related for the former ethnic group.

Differentials in fertility for religious groups are not at all significant among non-Indians. Among Indians, however, religion differentials are substantial and significant in several cases and even increased somewhat from older to younger cohorts. In general this is due to the lower fertility of the two Christian groups, although the Muslim group has quite low late fertility also. The more urban residential status and higher education of either the respondent or partner among Christian groups, explained most of these religion differentials among Indians. One interesting differential that persisted after all controls was that of a low level of late fertility for Muslims, and we do not know what reasons underlie this differential.

Among the factors measured here, education has one of the strongest relationships with fertility. Differentials are generally large, for all cohort measures and for both ethnic groups, and their relative size (ie percentage difference from the standard mean) increase over time, from older to younger cohorts. The complete secondary educated group tended to have the largest decline in early fertility, especially so among non-Indians, while Indian respondents had a more homogeneous level of decline across education subgroups. The group with incomplete secondary education had higher relative fertility from older to younger cohorts, for both ethnic groups. One possible explanation is that, as the proportion educated increased over time in the population, simply attending secondary school without obtaining any qualifications yields fewer opportunities or is associated with lower social mobility aspirations, in recent times than it did before (for the 20 + cohort). In contrast, the complete secondary group has as low relative fertility as in earlier times, or even lower than before. This is true for both Indians and non-Indians, partner's and respondent's education, and in late and early fertility.

There is some indication that women's education has a slightly larger effect than partner's education, eg the least well educated group of women have higher relative fertility than the least well educated group of partners, who would have spouses of a mixed range of educational levels. Also, complete primary educated Indian women have lower fertility than do women whose partners have complete primary education.

It is interesting to note that the results do not support the existence of any minimum threshold level of education before fertility decline sets in: fertility declines monotonically in most cases, from the PRIM6 group onwards, with only a few unusual cases of a slight rise before decline sets in. If there is any such threshold level, it would have to be under 6 years of primary schooling, but this total PRIM6 group is very small among non-Indians (less than 10 per cent) and is quite small for recent cohorts of Indians as well.

Among Indians, educational differentials were affected more by variables preceding occupation, mainly age at first union and residence, but while these factors made some

contribution to non-Indian differentials, the woman's occupation was a more important intervening variable. Even after control of exposure variables – age at first union, current union status and number of partners – and early background variables (residence and religion) and the respondent's occupation (which does not logically precede education, but is an intervening variable), differentials were still substantial for all groups and measures, for both non-Indians and Indians, proving that education has a fairly consistent and strong effect independent of other related variables.

In general, differentials according to the respondent's occupation, especially for early fertility, are not as large for Indians as they are for non-Indians; nevertheless, the importance of this variable increased from older to younger Indian cohorts, as it also did in the case of the early fertility of non-Indians. The expected pattern, that of high status groups (professional, clerical and white collar sales) having the lowest level of fertility, and manual being intermediate, while blue collar sales and services, never workers and agricultural workers had the highest levels of fertility, was met quite closely by most cohorts of both ethnic groups.

Groups varied in the amount of decline experienced, also. Among non-Indians, blue collar sales and services stood out for their small fertility decline, especially in early fertility. The clerical and white collar sales group had larger than average early fertility decline, resulting in its fertility falling below that of the professional group. Among Indians, agricultural workers and never workers had very low declines in early fertility, while all three working groups, including even the blue collar sales and services group, had twice as large declines.

Controls for the age at first union has some effect on the late fertility of non-Indians, but little effect on their early fertility, or on the fertility of Indians. The control for residence status has a somewhat larger effect on the two older cohorts, especially among non-Indians. The control for respondent's education, as expected, greatly reduces occupational differentials, for both ethnic groups, with a much stronger effect on late, than on early fertility. Even after controlling exposure variables, the early fertility differentials remain substantial (the only exceptions being the older cohorts of Indians), demonstrating that occupation does have some independent influence on early fertility, especially for the younger cohorts of both ethnic groups.

The expected relationship between pattern of work and fertility is in most cases approximated by the data, but one unusual discrepancy was found. Among older Indian cohorts, the two groups who worked before the first birth tended to have higher fertility than other groups, possibly because agricultural employment, which is fairly continuous and associated with high fertility, is common among these patterns of work groups.

This variable is more important among non-Indians than among Indians: large differentials, beginning even with the oldest cohort, characterize all groups of non-Indians, while only early fertility and recent late fertility differentials are substantial among Indians, and these are smaller. All non-Indian groups had differentials that persisted even after respondent's education was controlled but only the recent Indian fertility measures did so. This suggests that the pattern of fertility differentials among Indians is moving closer to that of non-Indians, over time.

As in the case of the respondent's education, differentials according to partner's education are also large and significant for all cohorts and measures of both ethnic groups. However there are a few indications that the effect of woman's education is more strongly related to her fertility that the partner's education, as mentioned earlier. In addition, there is evidence of the weakening of the relationship between residence and education, for non-Indians, but the reverse among Indians, for both respondent's and partner's education. The results also indicate that partner's education had a stronger effect independent of respondent's education for the oldest cohort, but this is lessened among younger women.

Differentials according to the occupation of the partner fit the expected pattern, but the range of differentials is narrower than that caused by partner's education. There is also a reduction in the range from the oldest to the younger 10–19 cohort, in late fertility, supporting arguments about homogenization in the society as fertility declines to a low level. Most of the effect of controlling other factors is felt through the highest status group, professional and clerical workers. After all factors up to respondent's education are controlled, large differentials still remained, for late fertility, but not in early fertility.

It is interesting to find in the case of Trinidad and Tobago, with a total fertility rate as low as 3.2 in 1976, that differentials for most socio-economic characteristics have not only remained large but even increased in many instances. There are few cases of narrowing of differences over time, the most striking case being residence differentials: the decreasing importance of this factor is even seen when its effect on other variables is considered – there is now less variation in education and occupation across residence groups than existed before. These generalizations do not apply as strongly to Indians as they do to non-Indians, however, residence is still a significant factor in determining fertility among Indians. A further interesting ethnic difference is that in general, differentiation in fertility was not very evident for the oldest Indian cohort, whereas it already was strong among the oldest non-Indian cohort. Although these results show substantial declines for many subgroups, there are still some groups with much higher than average fertility – the least educated and the low status blue collar sales and service workers among women – who may need more attention from family planning workers if the national goal of reducing fertility is to be attained.

6 Comparison of Findings from the Three Surveys

The analysis of these three Caribbean countries within one report affords an unusual opportunity for attempting a synthesis of the results. These case studies of socio-economic differentials are most interesting because of their heterogeneity and because all three countries have experienced substantial fertility decline in the recent past. The separate treatment of ethnic subgroups in Guyana and Trinidad and Tobago means that the analysis covers five subpopulations, further enriching the comparison.

The relative amount of decline in early as compared with late fertility differs among subpopulations – non-Indians of Guyana and Trinidad and Tobago had proportionally more of their fertility decline occurring in early fertility, ie within the first decade of having entered a union. In contrast, two subpopulations, Jamaicans and Guyana Indians, had had almost no decline in early fertility, up to the time of the survey, and both Indian subgroups and Jamaicans had the greater part of their decline in late fertility. This difference indicates that spacing of births was more common among Guyanese and Trinidadian non-Indians, but stopping was more typical of the three other subpopulations.

The age at entry into the first union generally was not an important intervening cause of differences in early fertility, except among Guyanese Indians, who do have some increase in the age at entry, over time. This factor is more important, however, as a determinant of fertility differentials in the second decade of being in union, for all the subpopulations. It is nevertheless true that the age at first union must be viewed as an intervening demographic variable, determined to a great extent by the background variables themselves.

One question of interest is whether the size and pattern of differentials are stable over time, and if they change, then the pattern of change is of interest. One generalization that can be made from these three countries, or the five populations, is that over time, differentials in early fertility have increased in significance and in size. In contrast, for both Jamaica and Trinidad and Tobago, differentials in late fertility were already large even for the oldest 20 + cohort, and they usually remained equally large and significant for the younger, 10–19 years duration cohort. Only in Guyana did differentials in late fertility also increase, in many cases. There are a few exceptions to this pattern, but broadly speaking, it is true that differentials in fertility of the first ten years of being in union increased, as fertility decline set in. In some cases, even though no general early fertility decline had begun, such as in Jamaica, Guyana Indians and Trinidad and Tobago Indians, particular groups experienced declines, and differentials in early fertility became more significant and often widened. The interpretation of these changes is that before fertility decline began, fertility control was usually practised mainly during the second decade of being in union, and among a minority of the total population. As fertility decline began, differentials started to emerge even in early fertility, continued in late fertility and, combined with other changes in the society, such as rising education, and urbanization, affected a larger proportion of the population.

The only noticeable exception to these generalizations is seen in the case of Trinidad and Tobago non-Indians, where residence differentials in early fertility first increased, from the 20 + cohort to the 10–19 cohort, then decreased substantially to the youngest, 0–9 cohort. This may well be an indication of future trends for all factors, that as fertility drops to a low level (Trinidad and Tobago's was 3.4 in 1972–76), heterogeneity will inevitably decrease, and the socio-economic differentials will narrow.

While differentials overall tended to increase or at least hold steady, the pattern did occasionally change, as some subgroups changed at different rates. The case of education is especially interesting because of the extremely rapid recent increase in educational attainment at the secondary level. Apparently the Jamaican educational system differs from the other two, since the increase in incomplete secondary education has not been as large, but all three have had increases in complete secondary education. In Trinidad and Tobago, for both non-Indians and Indians, the negative effect of incomplete secondary education – attending secondary school, but obtaining no certificate – has declined over time, looking at both women's and their partners' educations. That is, their fertility used to be substantially below the mean, but this is less true now. In contrast, the complete secondary educated group – those who obtained some certificate or qualification – in most cases had increasingly larger negative differentials over time. In addition, there is some evidence among Guyana and Trinidad Indians of a decline in the relative size of the negative impact of even women's completed secondary education on marital fertility, both early and late; and among partner's education, this is true at least for early fertility. This pattern is not observed among Guyana non-Indians, however. Among Jamaicans, where only one secondary group was treated, because the incomplete secondary group is small, we find that the secondary group has had increasing or stable negative differentials, relative to the standard mean.

Both aspects of secondary education trends are interesting; it is important to note that in most cases the complete secondary educated group or the total secondary group, in the case of Jamaica and some Indian cohorts, has continued to have as large negative differentials, or even increased over time, even though the proportion of the population in this group has increased tremendously. The hypothesis that as the proportion educated rises their elite status, in the form of better income and job opportunities, will decline and that their fertility will rise relative to other groups, is disproved by this evidence. On the other hand this is precisely what seems to be happening to the incomplete secondary educated group, at least in the four popu-

lations for which we treated this group separately. This group had relatively low fertility among older cohorts, but as their proportion in the population increased, this is no longer as true for the recent cohort.

On a separate point, the results concerning education throw some light on the question of whether some minimum threshold level of education must be reached before fertility declines. Under this hypothesis, fertility would remain constant, (eg at primary levels) and only begin to decline at the secondary level if the threshold occurred at the point of having some secondary education. The data generally do not support this hypothesis since fertility either declines monotonically as education rises, or has a curvilinear relationship, but a plateau effect, which would indicate the existence of a threshold, is rarely found. The only possibility is that the threshold lies within the lowest education group, that is below 5 or 6 years of primary schooling. This is a small group, however, and any effect within it would not be important in terms of overall fertility.

But the results do show many cases of an unusual pattern, a curvilinear relationship between education and fertility; as education increases, fertility increases, up to a certain point. This is frequently the middle of the three primary groups. Then fertility decline sets in above this level of education, as education continues to rise. Looking at the respondent's education this pattern is particularly common in Jamaica (five out of the six cohort measures have a curvilinear relationship), while in the other two countries, it exists mainly for the early fertility of the oldest cohort. In the case of partner's education, curvilinearity is somewhat more common. It is found in late fertility (both cohorts) and early fertility (0–9 cohort only) for Jamaica and Trinidad and Tobago non-Indians; and for all measures among Guyana non-Indians and in a few instances among the two Indian populations, although usually not as strong as it is among non-Indians.

This curvilinear pattern demands some explanation, given the frequency with which it occurs. One possibility in the case of Jamaica, suggested by the data evaluation, is that there was some under-reporting of early births by the less well educated Jamaican women. It is true, however, that such women breastfed for longer durations, especially for the older cohorts. This contributes to longer birth intervals for the group, and consequently lower overall fertility. A further hypothesis often suggested is that while there was an overall increase in fertility (observed in many sources of data) the better educated may have disproportionately benefitted, if they were better able to take advantage of improvements in public health, disease control (including eradication of malaria and control of venereal disease). It is also likely that, in spite of their increased fecundity, the middle or complete primary group did not begin to use contraception as quickly as did the secondary-educated, with the result that their fertility was higher than less well educated groups, producing a curvilinear relationship.

Another fairly common trend among all subpopulations, excluding only Guyana Indians, is that the blue collar sales (market and street vendors and hucksters) and service workers have had increasingly higher fertility relative to other groups, over time. Occasionally this group even exceeds the never worked and agricultural group, in recent fertility experience, while it did not do so before. In contrast, the clerical and white collar sales group has had increasingly larger negative differentials in many cases and has dropped to a lower level than the professional group in one instance. We suggest that never workers are of a higher social status than the blue collar sales and services group, and this could explain their earlier decline in fertility. On the other hand, the clerical and white collar sales group may have stronger aspirations for social mobility, in combination with low income, which could explain their greater decline than the professional group, who have already attained a high social status.

The two Indian subgroups are apparently at an earlier stage of fertility transition, in terms of level of fertility, and in terms of the size and pattern of differentials, compared to non-Indians. However, their recent fertility declines have been accompanied by differentials of increased size and of growing similarity to non-Indian patterns. Older cohorts especially generally had smaller and less significant differentials than their non-Indian counterparts. The oldest cohort of Trinidadian Indians is a particularly homogeneous group – only the partner's education had substantial differentials for all three measures, early, late and completed fertility. In the case of other variables for this oldest cohort, only one or two measures showed differentials of any noticeable size. Among Guyana Indians, the 10–19 cohort has almost as small differentials, as does the 20 + cohort, except for the two partner's variables, where some increase in differentials occurred, from the older 20 + cohort to the younger and more recent 10–19 years duration cohort. At the same time, large increases in the size of differentials occurred from the 20 + to the 0–9 cohorts for both Indian populations, but more so among Trinidadian Indians.

From the earlier discussion it is clear that employment characteristics of the woman has quite different effects on the two ethnic groups, especially in Guyana. Ethnic differences were strongest for the oldest cohort, where occupation had little effect on Indians' early fertility, but even for this cohort occupational differentials in late fertility were larger. In addition, in the case of early fertility, differentials increased in size from older to younger cohorts. Interestingly, among the youngest Indian cohort, in both Guyana and Trinidad and Tobago, all occupation groups had substantially lower fertility than the average, while among non-Indians, only the two highest status occupation groups had large negative differentials, and one occupation group (SS + SERV) was above the standard mean. Although the overall proportion of women who had at some time worked is lower for Indians, employment apparently has a stronger effect on fertility for this ethnic group, regardless of the type of occupation.

The results of this analysis suggests that the relative importance of the different socio-economic characteristics changed from older to younger cohorts – it is generally true that the respondent's employment variables (occupation and pattern of work) only became substantially significant for the most recent cohort, 0–9 duration, although significance usually increased somewhat from the 20 + to the 10–19 cohort. The partner's achieved characteristics, his education and occupation, were more important for the two oldest cohorts, but the strongest differentials for the youngest cohort generally occur for the respondent's three achieved characteristics, her education, occupation and pattern of work. The one exception to this pattern of

change is found among Trinidad and Tobago non-Indians, for whom the women's variables were important determinants even for the oldest 20 + cohort, and increased further in significance for the younger cohorts. Since fertility decline began earlier for this group than for any of the others, this may explain the different pattern found for their oldest cohort.

The relationship between variables was also one focus of this analysis, and it is interesting to look for similarities or patterns across the subpopulations in this respect. In analysing residence differentials we find that education is an important correlate of residence, in explaining residence differentials, in Guyana and in Jamaica, where the relationship is stronger for younger than for older cohorts. In Trinidad and Tobago, however, the link between education and residence has declined over time, with increasingly similar educational composition across residence areas, especially among non-Indians. This could well be the direction in which the other two countries will move also. The respondent's occupation is strongly related to residence, and helps to account for an important part of residence differentials in Jamaica (especially late fertility) and among Trinidad and Tobago's non-Indians. This link is not important in Guyana, and not very important among Indians in Trinidad and Tobago.

The results on education differentials suggest that while residence accounts for an important part of these education differentials for the two Indian subpopulations and is even increasing from older to younger, more recent cohorts, the effect is less general for other groups. For example, in Jamaica it affects late fertility differentials mainly, and for the two non-Indian groups this relationship is weakening from older to younger cohorts. The occupation of the respondent is more strongly related to education, however, among non-Indians than among Indians, and has a particularly large effect in reducing education differentials in Jamaica.

Looking at differentials according to respondent's occupation, we find that the link between residence and occupation has weakened over time (that is from older to younger cohorts) for both groups of non-Indians, and to a lesser extent for Trinidad and Tobago's Indians, but not among Guyana's Indians. This link is still relevant for Jamaica's late fertility and has not changed much over time. The relationship between occupation and the respondent's education is quite strong, especially among non-Indians, the youngest cohort of Indians, and for all groups in Jamaica, and has even increased moderately over time. Neither residence nor the respondent's education has strong relationships with the pattern of work – to a great extent pattern of work differentials are independent of all other factors.

Differentials by the partner's education are not heavily affected by residence, in Jamaica and most groups in Trinidad and Tobago, where the relationship between these two factors has even declined over time, among non-Indians. Residence is still strongly related to partner's education for some groups of both non-Indians and Indians in Guyana, and for the youngest cohort of Indians in Trinidad and Tobago. The greater relevance of residence in these cases reflects greater variation in the educational attainment of partners according to residential background. The respondent's education has a much stronger and more uniform relationship with their partner's education, explaining a large proportion of partner's education differentials for most cohort measures of all five subpopulations. This relationship has increased from the oldest to the younger cohorts, in Jamaica and in both ethnic groups of Trinidad and Tobago. A similarly strong relationship is found between the respondent's education and her partner's occupation, and in all three countries this relationship is stronger for the two younger cohorts than for the oldest cohort, reflecting the increasing relevance of women's education to their fertility behaviour, as their educational attainment rose.

The extent to which differentials persist after other factors are held constant is another interesting aspect of the results. The only factor for which differentials persist in almost all fertility measures, for all cohorts in all five subpopulations, is the respondent's education. In the case of all other factors only some measures or cohorts or populations continued to have substantial differentials after the relevant variables were controlled. Residence differentials remained large mainly for late fertility measures, for all five populations, but in most cases of early fertility, age at first union, religion, respondent's education and occupation accounted for most of the residence differentials. Differentials according to the respondent's occupation remained large in almost every case for Jamaica, but did so only for the more recent fertility experience (the youngest cohort's early fertility and the 10–19 cohort's late fertility), for both ethnic groups in Trinidad and Tobago and for Guyana Indians. In other cases, especially Guyana non-Indians and Trinidad and Tobago's earlier fertility experience, it was the control for respondent's education which largely reduced occupation differentials. Pattern of work differentials remained strong for most groups among Trinidad and Tobago's non-Indians, but for other subpopulations only the early fertility of the youngest cohort was especially noted for its large differentials, after other factors were controlled; and in both ethnic groups of Guyana, and Trinidad and Tobago's Indians, some late fertility differentials also persisted after other factors were controlled. The partner's characteristics were weakest in Jamaica, with differentials remaining after controls only for some fertility measures of the oldest cohort. Among Trinidadians, only differentials in late fertility remained substantial after controls, and this was largely true of Guyana also, although for partner's education some moderate early fertility differentials also remained for both countries.

Differences in a few important intermediate variables for two of the background variables, the respondent's education and her occupation, are presented for each country. While socio-economic differentials in fertility are of interest in themselves, these factors must work through the intermediate demographic variables, such as exposure to pregnancy, breastfeeding and contraception, in order to affect fertility.

We do find some consistencies across populations in these variables. For example, a higher age at first union, a longer first birth interval and higher current contraceptive use help to explain the low fertility of the higher social status groups. But there are cases where contraceptive use does not vary substantially or uniformly in the expected manner. Yet this should have been one of the most important means of explaining the observed fertility differentials. The problem may lie with the way use is

measured – at one point in time (current use) or without any time reference (ever-use). It is possible that either the effectiveness or continuity of use is higher among higher social status groups, or abortion, which is not measured in these surveys, is more frequently used by these high status, low-fertility groups. Breastfeeding duration actually works against the observed differentials: breastfeeding is longer for lower social status groups, at least among the two older cohorts, for whom breastfeeding still varied substantially. This means that the period of amenorrhoea is longer, birth intervals should be longer and cumulative fertility lower, for these low status, high-fertility groups. The lower fertility of high status groups suggests that they compensate for shorter breastfeeding by higher/more efficient contraceptive use or abortion.

This analysis has some results that can be used in government policy. If assumptions about trends in given socio-economic characteristics are made, exact predictions of fertility levels can be derived, since the required relationships for each socio-economic factor can be obtained from the results of the regression analysis. In a more general sense, the results give the direction and the relative size of the effects that socio-economic factors have on fertility: the effect of achieved characteristics, which can be influenced by government policy, can be compared to the effect of ascribed or inherited characteristics, to give some idea of the possibilities of influencing fertility by manipulating public policy. On the other hand, these results also indicate that socio-economic variables have only limited effect on the number of children women will have: for example, among Indians, even secondary educated or professional workers of the youngest or most recent cohort still have at least three children on average, during the first ten years after entering their first union. From this point of view, the results show that for those countries with goals of reducing population growth, a strong effort is needed on all fronts, including socio-economic development, improvement of the status of women and family planning availability, to narrow the gap between the actual and the socially-desirable level of fertility.

References

Abdulah, Norma and Jack Harewood (1984). Contraceptive Use and Fertility in the Commonwealth Caribbean. *WFS Scientific Reports* no 60.

Balkaran, S. (1982). Evaluation of the Guyana Fertility Survey 1975. *WFS Scientific Reports* no 26.

Guyana, Statistics Bureau, Ministry of Economic Development (1979). *Guyana Fertility Survey, 1975 – Country Report.* Two volumes.

Harewood, J. (forthcoming). Unions and Partners in the Commonwealth Caribbean. *WFS Scientific Reports.*

Hobcraft, J. and R. Little (1983). Fertility Exposure Analysis: a New Method for Assessing the Contribution of Proximate Determinants of Fertility Differentials. WFS Technical Paper no 2076, March 1983. Presented at the PAA Meeting, Pittsburgh, April 1983.

Hunte, D. (1983). Evaluation of the Trinidad and Tobago Fertility Survey 1977. *WFS Scientific Reports* no 44.

Jamaica, Department of Statistics (1979). *Jamaica Fertility Survey, 1975/76 – Country Report.* Two volumes.

Lightbourne, R. and S. Singh (1982). Fertility, Union Status and Partners in the WFS Guyana and Jamaica Surveys, 1975–76. *Population Studies 36(2).*

Little, R. and S. Perera (1981). Illustrative Analysis: Socio-Economic Differentials in Cumulative Fertility in Sri Lanka – A Marriage Cohort Approach. *WFS Scientific Reports* no 12.

Mason, K.O. and V.T. Palan (1981). Female Employment and Fertility in Peninsular Malaysia: The Maternal Role Incompatibility Hypothesis Reconsidered. *Demography 18(4).*

Rosero, L., M. Gomez and V. Rodriguez (1982). *Determinantes de la Fecundidad en Costa Rica: Análisis Longitudinal de Tres Encuestas.* Direccion General de Estadística y Censos, Costa Rica.

Singh, S. (1982). Evaluation of the Jamaica Fertility Survey 1975–76. *WFS Scientific Reports* no 34.

Trinidad and Tobago, Central Statistical Office (1981). *Trinidad and Tobago Fertility Survey, 1977 – Country Report.* Two volumes.

Appendix A-Detailed Tables

Table A1 Percentiles of chi-squared distribution

Degrees of freedom	Probability of a greater value				
	0.100	0.050	0.025	0.010	0.005
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

Table A2 Guyana—non-Indians: association of background variables, shown as percentage distribution

Variable and category	Number of respondents	Per cent	Residence			Religion			Education					Current union status				Respondent's occupation					Pattern of work				Partner's education					Partner's occupation				Variable and category
			1	2	3	1	2	3	1	2	3	4	5	1	2	3	4	1	2	3	4	5	1	2	3	4	1	2	3	4	5	1	2	3	4	
Residence[a]																																				Residence[a]
(1) Rural/rural	605	100				13	35	52	6	21	35	27	11	45	20	21	14	5	11	33	9	42	23	24	23	30	14	18	35	17	16	13	19	15	53	(1) Rural/rural
(2) Rural/urban[b]	563	100				22	34	44	3	14	37	25	21	44	20	23	13	10	19	40	10	21	30	30	20	20	11	8	40	21	20	23	24	3	50	(2) Rural/urban[b]
(3) Urban/urban	518	100				34	27	39	1	11	28	38	22	41	11	34	14	7	25	30	15	23	32	24	20	24	10	7	29	25	29	27	25	1	47	(3) Urban/urban
Religion																																				Religion
(1) Anglican	379	100	21	32	47				5	12	29	34	20	40	18	28	14	8	24	25	14	29	32	24	20	24	11	7	29	30	23	24	23	6	47	(1) Anglican
(2) Roman Catholic	548	100	39	35	26				3	17	37	26	17	43	20	24	13	7	18	36	10	29	27	28	30	25	11	12	37	17	23	22	23	5	50	(2) Roman Catholic
(3) Others	761	100	42	32	26				4	16	33	31	16	45	16	25	14	8	15	38	10	29	27	26	23	24	12	13	37	19	19	18	22	8	52	(3) Others
Respondent's education																																				Respondent's education
(1) Prim. < 5	64	100	59	31	10	31	24	45						33	44	11	12	2	6	45	3	44	25	25	23	27	27	23	31	17	2	11	6	25	58	(1) Prim. < 5
(2) Prim. 67	259	100	49	30	21	16	37	47						39	28	17	16	0	8	51	9	32	21	26	31	22	19	27	37	10	7	9	20	13	58	(2) Prim. 67
(3) Prim. 8	562	100	37	37	26	20	36	44						50	19	18	13	3	14	40	15	28	27	29	23	21	10	11	57	13	9	17	20	6	57	(3) Prim. 8
(4) Sec. inc.	505	100	32	28	40	25	28	47						34	15	39	12	3	19	31	11	36	17	27	21	35	11	7	21	37	24	20	29	4	47	(4) Sec. inc.
(5) Sec. com.	298	100	23	39	38	26	32	42						52	5	29	14	31	35	10	8	16	57	19	9	15	5	4	16	17	58	41	24	2	33	(5) Sec. com.
Current union status																																				Current union status
(1) Married	730	100	37	34	29	21	32	47	3	14	39	23	21					11	16	26	12	35	26	28	16	30	5	13	42	16	24	23	24	8	45	(1) Married
(2) Common law	296	100	42	38	20	23	36	41	9	25	36	25	5					2	14	47	9	28	21	32	28	19	14	15	45	19	7	9	15	10	66	(2) Common law
(3) Visiting	435	100	30	30	40	25	31	44	2	10	23	45	20					6	23	35	9	27	33	18	24	25	15	5	21	30	29	25	25	3	47	(3) Visiting
(4) Single	227	100	37	31	32	23	31	46	3	18	33	28	18					8	21	41	12	18	36	25	26	13	22	12	27	21	28	19	24	6	51	(4) Single
Respondent's occupation																																				Respondent's occupation
(1) Professional	127	100	25	46	29	23	30	47	1	1	14	12	72	62	3	20	15						65	24	11	0	6	5	23	13	53	45	23	1	31	(1) Professional
(2) Clerical + SS[c]	304	100	22	35	43	30	32	38	1	7	25	32	34	38	14	33	15						42	34	24	0	6	5	23	27	39	35	25	1	39	(2) Clerical + SS[c]
(3) SS and Services[d]	575	100	34	39	27	16	34	50	5	23	39	28	5	33	24	27	16						27	40	33	0	18	11	45	16	10	13	21	6	60	(3) SS and services[d]
(4) Manual	187	100	31	29	40	28	30	42	1	13	46	28	12	50	14	21	15						40	32	28	0	9	12	36	22	21	21	22	4	53	(4) Manual
(5) Agriculture and never worked	495	100	51	24	25	22	33	45	6	16	32	36	10	51	17	24	8						7	3	7	83	9	17	33	25	16	14	23	11	52	(5) Agric. + never worked
Pattern of work[e]																																				Pattern of work[e]
(1) Before and now	475	100	29	36	35	26	31	43	3	11	32	18	36	40	13	30	17	18	27	32	16	7					10	8	33	17	32	30	23	5	42	(1) Before and now
(2) Bef. + since/bef. only	438	100	32	39	29	21	35	44	4	15	37	31	13	47	22	18	13	7	24	53	13	3					11	10	39	20	20	19	22	5	54	(2) Bef. + since/bef. only
(3) Since only	359	100	39	32	29	21	30	49	4	23	36	29	8	32	23	29	16	4	20	52	15	9					17	13	37	20	13	16	20	8	56	(3) Since only
(4) Never worked	416	100	44	27	29	22	33	45	4	14	29	42	11	54	13	26	7	0	0	0	0	100					9	15	31	27	18	16	25	6	53	(4) Never worked
Partner's education																																				Partner's education
(1) Prim. < 5	193	100	44	30	26	21	32	47	9	25	30	28	8	19	21	35	25	4	10	54	9	23	25	24	32	19						9	17	9	65	(1) Prim. < 5
(2) Prim. 67	191	100	57	24	19	14	34	52	8	36	32	18	6	52	23	10	15	3	8	33	12	44	21	24	22	31						7	16	18	59	(2) Prim. 67
(3) Prim. 8	590	100	36	39	25	18	34	48	3	17	54	18	8	52	23	15	10	5	12	44	11	28	26	29	25	22						12	20	6	62	(3) Prim. 8
(4) Sec. inc.	353	100	29	34	37	32	27	41	3	8	21	54	14	33	16	37	14	4	23	26	12	35	22	25	20	33						17	31	3	49	(4) Sec. inc.
(5) Sec. com.	361	100	27	31	42	24	36	40	0	5	14	33	48	48	6	35	11	19	33	16	11	21	42	24	13	21						52	26	1	21	(5) Sec. com.
Partner's occupation																																				Partner's occupation
(1) Profess. & clerical	349	100	23	37	40	27	35	38	2	7	27	29	35	47	8	32	13	16	30	22	12	20	41	24	16	19	5	4	20	17	54					(1) Profess. & clerical
(2) Sales and services	383	100	31	35	34	22	33	45	1	13	29	38	19	46	11	29	14	7	20	32	11	30	28	25	19	28	9	8	30	29	24					(2) Sales and services
(3) Agricultural	109	100	80	14	6	20	27	53	16	30	32	18	4	50	28	10	12	1	4	31	7	57	23	21	30	26	17	34	35	9	5					(3) Agricultural
(4) Manual	847	100	38	34	28	21	32	47	4	18	38	28	12	39	23	24	14	5	14	40	11	30	23	27	24	26	15	13	43	20	9					(4) Manual

[a] Place of birth/current residence.
[b] This category also includes the small proportion who moved from urban to rural areas.
[c] SS = White collar sales.
[d] SS = Blue collar sales.
[e] Relative to the date of the first union.

Table A3 Guyana–Indians: association of background variables, shown as percentage distribution

Variable and category	Number of respondents	Per cent	Residence			Religion			Education					Current union status				Respondent's occupation					Pattern of work				Partner's education					Partners occupation				Variable and category
			1	2	3	1	2	3	1	2	3	4	5	1	2	3	4	1	2	3	4	5	1	2	3	4	1	2	3	4	5	1	2	3	4	
Residence[a]																																				Residence[a]
(1) Rural/rural	1547	100				10	72	18	31	31	14	19	5	83	7	1	9	6	12	5	15	62	10	12	17	61	30	28	21	13	8	8	11	42	39	(1) Rural/rural
(2) Rural/urban[b]	254	100				23	55	22	23	28	17	23	9	75	11	5	9	19	21	9	5	46	16	19	20	45	19	16	23	21	21	22	21	13	44	(2) Rural/urban
(3) Urban/urban	127	100				35	42	23	15	33	15	25	12	71	13	9	7	25	15	10	5	45	15	21	19	45	15	14	15	22	34	32	21	6	41	(3) Urban/urban
Religion																																				Religion
(1) Christian	258	100	60	23	17				16	24	28	22	10	73	12	4	11	21	14	9	7	49	17	17	18	48	17	18	24	16	25	23	17	20	40	(1) Christian
(2) Hindu	1304	100	85	11	4				33	31	11	20	5	82	8	2	8	5	13	6	15	61	10	12	17	61	31	27	20	14	8	9	11	41	39	(2) Hindu
(3) Muslim	366	100	77	15	8				22	33	18	20	7	85	6	1	8	15	14	5	10	56	9	16	19	56	24	21	24	15	16	14	17	27	42	(3) Muslim
Respondent's education																																				Respondent's education
(1) Prim. < 5	559	100	87	10	3	8	78	14						75	11	2	12	2	22	5	24	47	14	17	22	47	44	29	18	7	2	4	13	49	34	(1) Prim. < 5
(2) Prim. 67	588	100	81	12	7	10	69	21						82	9	2	7	4	14	6	12	64	6	9	21	64	31	31	24	9	5	8	10	35	47	(2) Prim. 67
(3) Prim. 8	285	100	78	15	7	25	52	23						81	5	1	13	16	11	10	7	56	12	9	24	55	17	22	35	12	14	16	18	27	39	(3) Prim. 8
(4) Sec. inc.	382	100	76	16	8	15	66	19						87	5	3	5	10	7	6	3	74	7	13	6	74	15	17	13	37	18	13	14	29	44	(4) Sec. inc.
(5) Sec. com.	144	100	67	20	13	22	55	23						92	0	3	5	53	1	5	2	39	33	23	5	39	1	6	13	13	67	49	14	16	21	(5) Sec. com.
Current union status																																				Current union status
(1) Married	1571	100	82	12	6	12	68	20	27	31	15	21	7					9	9	6	12	64	9	13	15	63	26	26	21	14	13	11	13	36	40	(1) Married
(2) Common law	150	100	71	19	10	20	66	14	43	35	10	13	0					4	30	7	16	43	10	20	27	43	32	21	20	21	6	15	11	33	41	(2) Common law
(3) Visiting	37	100	38	32	30	30	60	11	22	32	8	30	8					22	40	8	8	22	30	19	30	21	38	8	24	14	16	22	16	8	54	(3) Visiting
(4) Single	170	100	82	13	5	17	65	18	39	24	21	12	4					12	31	8	15	34	25	10	32	33	38	24	19	11	8	11	17	37	35	(4) Single
Respondent's occupation																																				Respondent's occupation
(1) Prof + cler + SS[c]	178	100	56	18	26	31	38	31	6	14	26	20	34	80	3	5	12						36	34	30	0	7	12	18	14	49	38	23	11	28	(1) Prof + cler + SS[c]
(2) SS and services[d]	261	100	72	21	7	14	67	19	47	30	11	11	1	57	17	6	20						22	28	50	0	38	20	25	13	4	7	16	30	47	(2) SS and services[d]
(3) Manual	117	100	68	21	11	19	65	16	21	28	25	21	5	77	9	3	11						25	32	43	0	24	20	23	19	14	14	19	13	54	(3) Manual
(4) Agriculture	243	100	92	5	3	8	77	15	56	30	9	4	1	78	10	1	11						25	34	41	0	42	36	14	7	1	2	6	62	30	(4) Agriculture
(5) Never worked	1129	100	85	10	5	11	71	18	23	34	14	25	4	88	6	1	5						0	0	0	100	26	26	22	16	10	11	11	37	41	(5) Never worked
Pattern of work[e]																																				Pattern of work[e]
(1) Before and now	213	100	72	19	9	21	64	15	36	17	16	13	18	67	8	5	20	30	27	14	29	0					27	21	16	12	24	22	15	32	31	(1) Before and now
(2) Bef. + since/bef. only[f]	254	100	71	19	10	17	60	23	39	20	11	20	10	79	12	3	6	24	28	15	33	0					27	19	19	17	18	11	14	31	44	(2) Bef. + since/bef. only
(3) Since only	338	100	78	15	7	14	65	21	36	36	20	6	2	69	12	3	16	16	39	15	30	0					34	29	22	9	6	9	16	35	40	(3) Since only
(4) Never worked	1123	100	85	10	5	11	71	18	23	34	14	25	4	88	6	1	5	0	0	0	0	100					26	26	22	16	10	11	11	37	41	(4) Never worked
Partner's education																																				Partner's education
(1) Prim. < 5	533	100	87	9	4	8	75	17	46	34	9	11	0	76	9	3	12	2	19	5	19	55	11	13	22	54						2	12	51	35	(1) Prim. < 5
(2) Prim. 67	482	100	88	8	4	10	74	16	34	38	13	13	2	84	7	1	9	5	11	5	18	61	9	10	20	61						4	8	43	45	(2) Prim. 67
(3) Prim. 8	406	100	81	14	5	15	64	21	25	35	24	12	4	82	8	2	8	8	16	7	8	61	9	12	18	61						8	18	29	45	(3) Prim. 8
(4) Sec. inc.	282	100	71	19	10	15	66	19	14	18	13	50	5	81	11	2	6	9	12	8	6	65	9	15	11	65						11	14	26	49	(4) Sec. inc.
(5) Sec. com.	225	100	57	24	19	29	44	27	5	12	18	31	34	87	4	3	6	39	5	7	1	48	23	20	9	48						58	17	6	19	(5) Sec. com.
Partner's occupation																																				Partner's occupation
(1) Profess. & clerical	225	100	57	25	18	26	52	22	11	21	21	22	25	78	10	4	8	30	8	7	2	53	20	13	13	54	6	8	15	13	58					(1) Profess. & clerical
(2) Sales and services	250	100	68	22	10	17	57	26	28	24	20	22	6	79	7	2	12	17	17	9	6	51	13	15	22	50	24	16	29	16	15					(2) Sales and services
(3) Agricultural	686	100	94	5	1	8	78	14	40	30	11	16	3	83	7	1	9	3	11	2	22	62	10	11	17	62	40	30	17	11	2					(3) Agricultural
(4) Manual	767	100	79	14	7	14	66	20	25	36	14	22	3	82	8	2	8	7	16	8	9	60	9	14	18	59	24	28	24	18	6					(4) Manual

[a] Place of birth/current residence.
[b] This category also includes the small proportion who moved from urban to rural areas.
[c] SS = White collar sales.
[d] SS = Blue collar sales.
[e] Relative to the date of the first union.

Table A4 Jamaica: association of background variables, shown as percentage distribution

Background variable	Number of respondents	Per cent	Residence status			Respondent's education				Religion				Respondent's occupation					Worked before		Current union status				Partner's education				Partner's occupation				Background variable
			1	2[a]	3	1	2	3	4	1	2	3	4	1	2	3	4	5	No	Yes	1	2	3	4	1	2	3	4	1	2	3	4	
Residence status[a]																																Residence status[a]
(1) Rural/rural	1355	100				18	26	44	12	13	23	8	56	10	47	12	9	22	53	47	33	27	22	18	21	16	52	11	8	10	40	42	(1) Rural/rural
(2) Rural/urban[b]	1016	100				11	21	44	24	22	21	7	50	21	49	1	19	10	43	57	30	33	20	17	18	9	49	24	17	18	10	55	(2) Rural/urban[b]
(3) Urban/urban	395	100				8	12	30	50	43	15	8	34	33	30	1	21	15	47	53	31	23	30	16	12	4	40	44	29	16	10	45	(3) Urban/urban
Respondent's education																																Respondent's education
(1) Prim. < 6	388	100	64	28	8					13	27	14	46	4	55	16	13	12	42	58	36	34	12	18	36	15	46	4	4	11	42	43	(1) Prim. < 6
(2) Prim. 67	607	100	57	35	8					16	26	9	49	2	56	10	15	17	53	47	27	36	18	19	24	19	50	7	5	12	29	54	(2) Prim. 67
(3) Prim. 8	1156	100	51	39	10					18	21	5	56	11	49	5	18	17	55	45	30	31	21	18	16	12	61	11	11	13	24	52	(3) Prim. 8
(4) Sec/higher	615	100	27	41	32					35	12	7	46	53	21	1	8	16	36	64	38	12	36	14	7	3	27	63	36	18	12	35	(4) Sec/higher
Religion																																Religion
(1) Anglican and Catholic	576	100	31	39	29	9	17	37	37					28	39	3	16	14	47	53	36	23	23	18	13	9	43	35	22	18	18	42	(1) Anglican and Catholic
(2) Church of God	577	100	54	36	10	18	28	41	13					10	52	7	14	17	51	49	29	31	23	17	21	15	51	12	9	12	29	50	(2) Church of God
(3) None	208	100	51	33	16	26	25	29	20					8	50	7	14	21	52	48	12	48	24	16	25	10	49	16	11	13	26	50	(3) None
(4) Other Protestant sects and others	1405	100	54	36	10	13	21	46	20					17	44	8	14	16	47	53	34	27	22	17	19	12	50	19	14	13	26	47	(4) Other Protestant sects and others
Respondent's occupation																																Respondent's occupation
(1) Prof/T/A/clerical[c]	479	100	28	45	27	3	3	26	68	34	12	3	51						23	77	50	10	25	15	7	3	29	61	45	15	10	30	(1) Prof/T/A/clerical[c]
(2) Sales/Services	1253	100	51	39	10	17	27	45	10	18	24	8	50						41	59	27	35	20	18	21	14	54	11	7	15	23	55	(2) Sales/services
(3) Agricultural	184	100	91	7	2	33	31	34	2	8	21	8	63						49	51	47	32	11	10	35	20	43	2	2	3	71	24	(3) Agricultural
(4) Skilled and unskilled	400	100	30	49	21	13	22	52	12	22	21	7	50						49	51	26	32	23	19	20	11	54	15	9	14	16	61	(4) Skilled and unskilled
(5) Never worked	450	100	65	22	13	10	23	43	24	18	22	10	51						100	0	26	26	28	20	17	11	53	18	10	13	35	42	(5) Never worked
Worked before first birth																																Worked before first birth
(1) No	1427	100	53	33	14	12	24	47	17	20	22	8	50	8	38	7	15	32			28	30	33	19	20	13	53	15	10	13	27	50	(1) No
(2) Yes	1339	100	45	40	15	16	20	37	27	21	20	7	52	26	52	7	14	1			35	27	22	16	18	10	45	27	18	15	22	45	(2) Yes
Current union status																																Current union status
(1) Married	883	100	51	35	14	16	19	39	26	24	19	3	54	27	38	10	12	13	43	57					17	14	44	24	19	15	28	39	(1) Married
(2) Common law	789	100	46	43	11	17	28	46	9	17	22	13	48	6	56	7	16	15	50	50					20	16	55	9	6	12	23	59	(2) Common law
(3) Visiting	614	100	48	33	19	7	18	39	36	22	21	8	49	20	42	3	15	20	50	50					13	5	48	34	19	15	19	47	(3) Visiting
(4) Single	480	100	52	35	13	15	23	44	18	22	21	7	50	15	47	4	16	18	53	47					25	9	50	16	13	14	29	44	(4) Single
Partner's education																																Partner's education
(1) Prim. < 6	513	100	56	35	10	27	28	36	9	15	24	10	51	6	50	13	16	15	51	49	29	31	16	23					5	10	41	44	(1) Prim. < 6
(2) Prim. 67	323	100	66	29	5	18	35	41	6	16	26	7	51	4	56	11	13	16	54	46	39	38	10	13					5	9	34	52	(2) Prim. 67
(3) Prim. 8	1356	100	52	37	11	13	23	52	12	18	22	8	52	10	50	6	16	18	52	48	29	32	22	18					8	15	22	55	(3) Prim. 8
(4) Sec/higher	574	100	27	43	30	2	8	22	68	35	12	6	47	51	23	1	11	14	34	66	37	13	36	14					44	17	10	29	(4) Sec/higher
Partner's occupation																																Partner's occupation
(1) Prof/T/A/clerical	394	100	27	44	29	4	8	32	56	32	14	5	49	55	24	1	9	12	34	66	41	13	30	16	6	4	26	64					(1) Prof/T/A/clerical
(2) Sales and services	381	100	34	49	17	11	19	41	19	28	18	7	47	19	49	2	15	15	45	55	34	24	24	18	14	8	53	25					(2) Sales and services
(3) Agricultural[d]	685	100	80	14	6	23	26	40	11	15	24	8	53	7	42	19	9	23	54	46	36	26	17	21	31	16	44	9					(3) Agricultural[d]
(4) Skilled and unskilled	1306	100	44	43	14	13	25	46	16	19	22	8	51	11	53	3	19	14	51	49	26	36	22	16	17	13	57	13					(4) Skilled and unskilled

[a] Place of birth/current residence.
[b] This category also includes the small proportion who moved from urban to rural areas.
[c] Professional/Technical/Administrative/Clerical.
[d] The agricultural group includes all not stated cases as well.

Table A5 Trinidad and Tobago—non-Indians: association of background variables, shown as percentage distribution

Background variable	Number of respondents	Per cent	Residence				Religion			Respondent's education					Current union status				Respondent's occupation					Pattern of work				Partner's education					Partner's occupation				Background variable
			1	2	3	4	1	2	3	1	2	3	4	5	1	2	3	4	1	2	3	4	5	1	2	3	4	1	2	3	4	5	1	2	3	4	
Residence[a]																																					Residence[a]
(1) Rural/rural	429	100					22	43	35	12	26	36	13	13	43	18	27	12	6	16	31	13	34	29	22	24	25	13	18	46	10	13	13	14	9	64	(1) Rural/rural
(2) Rural/urban	667	100					25	46	29	8	22	36	18	16	37	19	30	15	8	22	36	15	19	17	32	25	26	11	15	41	17	16	21	20	2	57	(2) Rural/urban
(3) Urban/rural	225	100					19	66	15	12	16	29	21	22	46	19	23	12	12	26	22	11	29	22	32	25	21	13	14	29	21	23	28	15	9	48	(3) Urban/rural
(4) Urban/urban	783	100					25	58	17	3	13	26	32	26	43	16	29	12	13	32	22	18	15	15	42	25	18	5	10	31	24	30	32	22	2	44	(4) Urban/urban
Religion																																					Religion
(1) Anglican	497	100	19	33	9	39				5	19	34	25	17	36	18	35	11	10	23	26	20	21	37	21	22	20	7	13	40	19	21	23	20	3	54	(1) Anglican
(2) Roman Catholic	1094	100	17	28	14	41				8	17	29	25	21	40	20	27	13	10	29	27	13	21	33	26	22	19	9	12	34	21	24	26	20	4	50	(2) Roman Catholic
(3) All others	514	100	29	38	7	26				10	23	35	15	17	48	12	24	16	9	17	33	17	24	31	24	24	21	12	18	41	12	17	21	17	5	57	(3) All others
Respondent's education																																					Respondent's education
(1) Prim. 6	165	100	32	34	17	17	15	54	31						46	29	12	13	1	2	47	14	36	21	27	29	23	27	32	35	4	2	7	14	12	67	(1) Prim. 6
(2) Prim. 78	400	100	27	37	9	26	24	47	29						40	23	25	12	0	8	44	20	28	18	25	34	23	18	29	37	9	7	10	15	6	69	(2) Prim. 78
(3) Prim. 9	661	100	23	37	10	30	25	48	27						36	20	30	14	3	17	37	21	22	28	26	26	20	8	11	53	18	10	17	19	5	59	(3) Prim. 9
(4) Sec. inc.	469	100	12	25	10	53	26	57	17						38	15	35	12	8	34	18	15	25	33	25	18	24	4	9	32	32	23	26	25	3	46	(4) Sec. inc.
(5) Sec. com.	410	100	14	25	12	49	21	57	22						53	8	26	13	34	49	5	4	8	62	21	9	8	2	2	17	20	59	51	19	4	26	(5) Sec. com.
Current union status																																					Current union status
(1) Married	870	100	21	28	12	39	21	51	28	9	18	27	21	25					14	26	23	13	24	21	33	29	17	10	16	32	17	25	29	18	4	49	(1) Married
(2) Common law	372	100	21	33	12	34	24	59	17	13	24	36	19	8					4	15	40	18	23	19	19	26	36	13	20	45	15	7	11	18	6	65	(2) Common law
(3) Visiting	593	100	19	33	9	39	29	50	21	4	17	40	28	18					7	26	29	19	19	18	39	21	22	5	8	40	20	27	23	21	4	52	(3) Visiting
(4) Single	270	100	19	36	10	35	20	51	29	8	18	33	20	21					10	28	30	13	19	16	44	17	23	12	11	35	23	19	23	23	7	47	(4) Single
Respondent's occupation																																					Respondent's occupation
(1) Professional	203	100	13	25	14	48	25	51	24	1	1	11	18	69	61	7	19	13						66	19	15	0	1	2	17	20	60	56	19	2	23	(1) Professional
(2) Clerical & w.c. sales[b]	515	100	13	28	11	48	22	61	17	1	6	22	31	40	44	11	30	15						52	34	14	0	4	6	26	27	37	40	23	2	35	(2) Clerical & w.c. sales[b]
(3) Services & b.c. sales[c]	596	100	22	41	8	29	21	50	29	13	29	41	14	3	33	25	29	13						28	34	38	0	14	18	46	14	8	11	18	4	67	(3) Services & b.c. sales[c]
(4) Manual	329	100	17	31	8	44	30	44	26	7	25	42	22	4	35	20	34	11						36	28	36	0	11	16	48	17	8	16	17	2	65	(4) Manual
(5) Agric. + never worked	462	100	32	28	14	26	23	51	26	13	24	31	25	7	45	19	25	11						3	3	6	88	12	21	38	15	14	16	18	8	58	(5) Agric. + never worked
Pattern of work[d]																																					Pattern of work[d]
(1) Before and now	704	100	13	30	10	47	26	51	23	5	10	27	22	36	40	10	33	17	19	38	24	17	2					7	7	31	21	34	35	22	3	40	(1) Before and now
(2) Bef. + since/bef. only	518	100	19	32	11	38	21	56	23	9	19	33	23	16	48	19	24	9	7	34	39	18	2					9	16	37	17	21	25	16	4	55	(2) Bef. + since/bef. only
(3) Since only	474	100	23	37	10	30	23	51	26	10	29	36	17	8	31	28	28	13	6	15	48	25	6					13	16	44	18	9	14	20	3	63	(3) Since only
(4) Never worked	409	100	30	29	12	29	24	50	26	9	22	33	28	8	46	17	27	10	0	0	0	0	100					9	20	40	16	15	17	19	5	59	(4) Never worked
Partner's education																																					Partner's education
(1) Prim. 6	197	100	28	36	15	21	18	51	31	23	37	27	9	4	43	24	17	16	1	10	43	18	28	24	24	32	20						4	16	8	72	(1) Prim. 6
(2) Prim. 78	291	100	27	34	10	29	22	46	32	18	39	26	14	3	49	25	15	11	2	10	37	18	33	18	28	27	27						6	12	8	74	(2) Prim. 78
(3) Prim. 9	778	100	26	35	8	31	26	47	27	8	19	45	19	9	36	22	30	12	5	17	35	20	23	28	24	27	21						12	18	3	67	(3) Prim. 9
(4) Sec. inc.	390	100	11	29	12	48	24	60	16	2	9	30	38	21	39	14	31	16	10	36	21	15	18	39	22	22	17						26	27	2	45	(4) Sec. inc.
(5) Sec. com.	450	100	12	24	12	52	24	57	19	1	6	15	24	54	47	6	35	12	27	43	11	5	14	52	25	9	14						65	20	2	13	(5) Sec. com.
Partner's occupation																																					Partner's occupation
(1) Prof/clerical	509	100	11	28	12	49	22	56	22	2	8	22	25	42	50	8	28	14	23	40	13	10	14	48	26	13	13	1	3	18	20	58					(1) Prof/clerical
(2) Sales/services	405	100	15	33	9	43	25	54	21	6	14	32	29	19	37	17	30	16	10	29	27	14	20	38	20	23	19	8	9	35	26	22					(2) Sales/services
(3) Agricultural	82	100	45	14	25	16	18	48	34	23	26	33	7	11	41	27	20	12	4	14	26	7	49	28	26	19	27	21	28	28	9	14					(3) Agricultural
(4) Manual	1110	100	25	34	10	31	24	50	26	10	25	35	20	10	39	22	28	11	4	17	36	19	24	25	26	27	22	13	19	47	16	5					(4) Manual

[a] Place of birth/current residence.
[b] w.c. = white collar.
[c] b.c. = blue collar.
[d] Relative to the date of the first union.

Table A6 Irinidad and Tobago—Indians: association of background variables, shown as percentage distribution

Background variable	Number of respondents	Per cent	Residence				Religion				Respondent's education					Current union status				Respondent's occupation					Pattern of work				Partner's education					Partner's occupation				Background variable
			1	2	3	4	1	2	3	4	1	2	3	4	5	1	2	3	4	1	2	3	4	5	1	2	3	4	1	2	3	4	5	1	2	3	4	
Residence[a]																																						Residence[a]
(1) Rural/rural	638	100					7	15	64	14	38	25	23	8	6	75	12	6	7	11	10	11	5	63	10	12	15	63	30	20	34	8	8	13	10	24	53	(1) Rural/rural
(2) Rural/urban	398	100					10	18	56	16	33	25	23	11	8	74	12	6	8	17	11	6	10	56	10	16	18	56	22	18	34	11	15	20	19	10	51	(2) Rural/urban
(3) Urban/rural	86	100					14	17	57	12	36	22	27	4	11	66	24	2	8	21	12	9	7	51	13	13	23	51	24	22	30	13	11	17	14	20	49	(3) Urban/rural
(4) Urban/urban	254	100					28	15	44	13	25	16	28	13	18	71	12	10	7	35	18	2	11	34	23	21	22	34	14	17	29	17	23	29	18	6	47	(4) Urban/urban
Religion																																						Religion
(1) Anglican and Catholic	167	100	26	24	7	43					25	15	32	12	16	54	23	16	7	27	17	7	15	34	23	26	18	33	14	12	37	19	18	26	18	11	45	(1) Anglican and Catholic
(2) Other Protestants	220	100	44	32	7	17					23	21	27	14	15	75	11	6	8	27	12	6	6	50	16	16	18	50	13	18	31	16	22	27	15	10	48	(2) Other Protestants
(3) Hindu	793	100	51	29	6	14					41	25	22	7	5	75	12	6	7	12	12	10	6	60	9	13	18	60	31	22	32	7	8	13	14	21	52	(3) Hindu
(4) Muslim	197	100	46	32	5	17					25	29	23	12	11	82	7	5	6	22	6	3	10	59	13	13	14	60	18	16	35	14	17	21	14	9	56	(4) Muslim
Respondent's education																																						Respondent's education
(1) Prim. < 6	468	100	51	28	7	13	9	11	69	11						68	19	5	8	3	15	17	7	58	7	10	26	57	46	22	27	4	1	7	10	27	56	(1) Prim. < 6
(2) Prim. 78	322	100	50	31	6	13	7	14	61	18						76	13	4	7	7	11	7	10	65	5	15	15	65	22	29	35	9	5	13	13	19	55	(2) Prim. 78
(3) Prim. 9	334	100	45	27	7	21	16	18	52	14						75	10	7	8	18	11	2	10	59	9	18	14	59	12	14	49	13	12	19	18	11	52	(3) Prim. 9
(4) Sec. inc.	129	100	39	32	3	26	16	23	43	18						82	5	6	7	35	10	2	6	47	20	20	13	47	5	11	28	32	24	26	18	6	50	(4) Sec. inc.
(5) Sec. com.	124	100	30	26	8	36	21	26	35	18						73	3	21	3	81	1	0	1	17	54	23	6	17	2	3	14	14	67	60	19	0	21	(5) Sec. com.
Current union status																																						Current union status
(1) Married	1010	100	47	29	6	18	9	16	59	16	31	24	25	11	9					17	9	6	6	62	10	13	15	62	23	19	34	11	13	19	14	16	51	(1) Married
(2) Common law	174	100	43	28	12	17	22	14	56	8	50	25	19	4	2					8	17	18	15	42	10	24	24	42	33	23	32	8	4	9	14	23	54	(2) Common Law
(3) Visiting	93	100	45	26	2	27	28	14	47	11	25	12	25	9	28					40	28	4	11	17	41	19	23	17	10	11	31	14	34	29	22	9	40	(3) Visiting
(4) Single	100	100	44	30	7	19	12	18	58	12	40	22	26	8	4					18	18	14	10	40	15	16	29	40	37	15	31	8	9	14	13	17	56	(4) Single
Respondent's occupation																																						Respondent's occupation
(1) Prof/cler/w.c. sales[b]	243	100	28	28	8	36	19	24	40	17	6	10	24	19	41	72	5	16	7						44	36	20	0	6	8	21	24	41	45	26	1	28	(1) Prof/cler/w.c. sales[b]
(2) Services & b.c. sales[c]	158	100	38	27	6	29	18	17	58	7	46	21	24	8	1	54	19	16	11						13	34	53	0	24	22	37	11	6	6	14	13	67	(2) Services & b.c. sales[c]
(3) Agricultural	111	100	64	23	7	6	11	11	73	5	71	21	6	2	0	55	28	4	13						24	24	52	0	49	19	27	4	1	4	8	48	40	(3) Agricultural
(4) Manual	109	100	32	35	6	27	23	12	47	18	31	29	31	7	2	58	24	9	9						18	37	45	0	24	23	37	10	6	14	12	14	60	(4) Manual
(5) Never worked	756	100	53	30	6	11	7	14	63	16	35	28	26	8	3	83	10	2	5						0	0	0	100	26	21	37	8	8	14	12	18	56	(5) Never worked
Pattern of work[d]																																						Pattern of work
(1) Before and now	173	100	36	23	7	34	22	20	43	15	19	10	17	15	39	60	10	22	8	62	12	15	11	0					17	8	19	20	36	39	19	12	30	(1) Before and now
(2) Bef. + since/bef. only	208	100	38	31	5	26	21	17	49	12	22	23	29	12	14	64	20	8	8	42	26	13	19	0					18	19	32	13	18	20	17	13	50	(2) Bef. + since/Bef. only
(3) Since only	241	100	39	30	8	23	12	17	60	11	50	20	20	7	3	62	17	9	12	21	35	24	20	0					28	20	33	13	6	12	17	19	52	(3) Since only
(4) Never worked	756	100	53	30	6	11	7	14	63	16	35	28	26	8	3	83	10	2	5	0	0	0	0	100					26	21	37	8	8	14	12	18	56	(4) Never worked
Partner's education																																						Partner's education
(1) Prim. < 6	335	100	57	26	6	11	7	9	73	11	64	21	12	2	1	69	17	3	11	5	11	16	8	60	9	11	20	60						3	13	33	51	(1) Prim. < 6
(2) Prim. 78	262	100	49	27	7	17	8	15	65	12	39	35	18	6	2	75	15	4	6	8	13	8	9	62	5	15	18	62						5	9	22	64	(2) Prim. 78
(3) Prim. 9	457	100	48	30	6	16	14	15	56	15	27	25	36	8	4	75	12	6	7	11	13	6	9	61	7	15	18	60						15	15	11	59	(3) Prim. 9
(4) Sec. inc.	150	100	35	29	7	29	21	23	37	19	12	20	28	28	12	77	10	8	5	40	12	3	7	38	23	18	21	38						29	23	4	44	(4) Sec. inc.
(5) Sec. com.	175	100	28	34	5	33	17	27	37	19	3	9	22	18	48	73	4	18	5	56	5	1	4	34	36	21	8	35						64	17	2	18	(5) Sec. com.
Partner's occupation																																						Partner's occupation
(1) Prof./clerical	245	100	33	31	6	30	18	24	41	17	13	17	26	14	30	77	6	11	6	45	4	2	6	43	28	17	12	43	5	5	28	17	45					(1) Prof./clerical
(2) Sales and services	200	100	32	39	6	23	16	16	55	13	25	22	30	11	12	71	12	10	7	32	11	4	7	46	17	17	20	46	22	12	34	17	15					(2) Sales and services
(3) Agricultural	228	100	69	18	7	6	8	9	75	8	55	26	16	3	0	72	18	3	7	1	9	23	7	60	9	11	20	60	49	25	22	3	1					(3) Agricultural
(4) Manual	704	100	48	29	6	17	11	15	58	16	37	25	25	9	4	74	13	5	8	10	15	6	9	60	7	15	18	60	24	24	38	9	5					(4) Manual

[a] Place of birth/current residence.
[b] w.c. = white collar.
[c] b.c. = blue collar.
[d] Relative to the date of the first union.

Table A7 Guyana: average proportion of fertile pregnancies which are foetal losses, per woman, by duration cohort and by education and occupation subgroup, for non-Indians and Indians

Social status/ ethnic group	Duration cohort		
	0–9	10–19	20 +
A Non-Indians			
Education			
Prim. 67	0.12(75)	0.15(106)	0.16(142)
Prim. 8	0.09(98)	0.14(222)	0.16(242)
Sec. inc.	0.11(380)	0.13(88)	0.12(37)
Sec. com.	0.10(220)	0.19(58)	0.26(20)
Occupation			
Professional	0.11(68)	0.16(41)	0.25(18)
W.C. sales & clerical[a]	0.11(188)	0.18(82)	0.23(34)
B.C. sales & services[a]	0.11(189)	0.15(182)	0.17(204)
Manual	0.13(65)	0.13(55)	0.17(67)
Agric. + never worked	0.10(261)	0.12(114)	0.12(117)
B Indians			
Education			
Prim. 5	0.11(103)	0.11(165)	0.14(291)
Prim. 67	0.13(172)	0.13(247)	0.12(169)
Prim. 8	0.14(76)	0.12(136)	0.15(73)
Sec. inc.	0.11(337)	0.10(50)	0.12(11)
Sec. com.	0.11(98)		
Occupation[b]			
Prof./cler./w.c. sales	0.09(41)	0.10(24)	0.35(7)
B.C. sales & services	0.17(61)	0.15(102)	0.14(134)
Manual	0.15(70)	0.14(41)	0.16(27)
Agricultural	0.28(49)	0.11(61)	0.13(149)
Never worked	0.09(564)	0.11(367)	0.12(222)

Table A8 Guyana: average number of months of breastfeeding the penultimate child (based on women with two or more children), by duration cohort and by education and occupation subgroup, for non-Indians and Indians

Social status/ ethnic group	Duration cohort		
	0–9	10–19	20 +
A Non-Indians			
Education			
Prim. 67	7.4(40)	8.9(92)	9.5(128)
Prim. 8	6.9(63)	7.6(192)	8.6(210)
Sec. inc.	6.4(145)	5.6(73)	7.1(36)
Sec. com.	5.6(61)	5.0(46)	6.9(14)
Occupation			
Professional	5.3(29)	6.7(33)	6.2(13)
W.C. sales & clerical[a]	6.1(67)	6.7(69)	8.9(26)
B.C. sales & services[a]	6.6(91)	7.7(160)	9.0(178)
Manual	7.0(28)	4.8(47)	8.3(64)
Agric. + never worked	6.8(94)	8.2(94)	8.8(106)
B Indians			
Education			
Prim. 5	10.3(61)	11.8(153)	12.3(265)
Prim. 67	7.4(123)	10.5(235)	12.2(156)
Prim. 8	7.6(52)	8.6(121)	12.6(69)
Sec. inc.	7.8(162)	8.1(43)	7.5(11)
Sec. com.	3.5(33)		
Occupation[b]			
Prof./cler./w.c. sales	3.8(16)	8.9(20)	3.3(6)
B.C. sales & services	6.1(28)	9.7(91)	12.3(122)
Manual	8.2(33)	11.8(38)	9.1(21)
Agricultural	4.2(28)	12.3(59)	12.2(136)
Never worked	8.3(326)	9.9(341)	12.5(212)

[a]W.C. = White collar; B.C. = blue collar.
[b]Occupational codes for the 0–9 cohort are the same as for non-Indians.

Table A9 Guyana: proportion who ever used any method of contraception, by duration cohort and by education and occupation subgroup, for non-Indians and Indians

Social status/ ethnic group	Duration cohort		
	0–9	10–19	20 +
A Non-Indians			
Education			
Prim. 67	0.49(75)	0.54(106)	0.53(142)
Prim. 8	0.56(98)	0.67(222)	0.53(242)
Sec. inc.	0.53(380)	0.83(88)	0.70(37)
Sec. com.	0.77(220)	0.90(58)	0.65(20)
Occupation			
Professional	0.81(68)	0.78(41)	0.56(18)
W.C. sales & clerical[a]	0.73(188)	0.85(82)	0.65(34)
B.C. sales & services[a]	0.55(189)	0.66(182)	0.52(204)
Manual	0.66(65)	0.75(55)	0.69(67)
Agric. + never worked	0.48(261)	0.58(114)	0.52(117)
B Indians			
Education			
Prim. 5	0.29(103)	0.52(165)	0.37(291)
Prim. 67	0.40(172)	0.60(247)	0.46(169)
Prim. 8	0.53(76)	0.57(136)	0.60(73)
Sec. inc.	0.41(337)	0.74(50)	0.82(11)
Sec. com.	0.65(98)		
Occupation[b]			
Prof./cler./w.c. sales	0.73(41)	0.75(24)	1.00(7)
B.C. sales & services	0.62(61)	0.55(102)	0.42(134)
Manual	0.36(70)	0.61(41)	0.52(27)
Agricultural	0.61(49)	0.46(61)	0.37(149)
Never worked	0.38(564)	0.60(367)	0.47(222)

Table A10 Guyana: proportion who are currently using contraception, by duration cohort and by education and occupation subgroup, for non-Indians and Indians

Social status/ ethnic group	Duration cohort		
	0–9	10–19	20 +
A Non-Indians			
Education			
Prim. 67	0.15(75)	0.24(106)	0.20(142)
Prim. 8	0.28(98)	0.28(222)	0.21(242)
Sec. inc.	0.16(380)	0.34(88)	0.27(37)
Sec. com.	0.42(220)	0.47(58)	0.30(20)
Occupation			
Professional	0.41(68)	0.41(41)	0.06(18)
W.C. sales & clerical[a]	0.34(188)	0.30(82)	0.24(34)
B.C. sales & services[a]	0.17(189)	0.30(182)	0.20(204)
Manual	0.26(65)	0.33(55)	0.28(67)
Agric. + never worked	0.11(261)	0.25(114)	0.22(117)
B Indians			
Education			
Prim. 5	0.17(103)	0.39(165)	0.29(291)
Prim. 67	0.18(172)	0.46(247)	0.32(169)
Prim. 8	0.28(76)	0.38(136)	0.38(73)
Sec. inc.	0.20(337)	0.50(50)	0.36(11)
Sec. com.	0.40(98)		
Occupation[b]			
Prof./cler./w.c. sales	0.46(41)	0.29(24)	0.43(7)
B.C. sales & services	0.34(61)	0.38(102)	0.29(134)
Manual	0.09(70)	0.46(41)	0.30(27)
Agricultural	0.27(49)	0.33(61)	0.30(149)
Never worked	0.21(564)	0.46(367)	0.36(222)

Table A11 Guyana: mean length of the first birth interval (months), by duration cohort and by education and occupation subgroup, for non-Indians and Indians

Social status/ ethnic group	Duration cohort		
	0–9	10–19	20 +
A Non-Indians			
Education			
Prim. 67	22.2(63)	27.6(100)	24.6(140)
Prim. 8	23.0(84)	24.3(210)	25.4(230)
Sec. inc.	23.1(272)	26.4(84)	27.2(37)
Sec. com.	28.3(135)	29.7(54)	38.1(19)
Occupation			
Professional	26.7(47)	27.3(37)	35.6(18)
W.C. sales & clerical[a]	24.3(121)	27.7(78)	26.0(32)
B.C. sales & services[a]	23.1(152)	23.0(175)	25.0(196)
Manual	27.1(50)	32.1(51)	32.1(66)
Agric. + never worked	23.7(182)	26.7(107)	22.2(113)
B Indians			
Education			
Prim. 5	18.8(92)	23.4(160)	32.4(282)
Prim. 67	16.9(149)	21.8(240)	25.4(165)
Prim. 8	18.2(62)	18.6(128)	24.5(72)
Sec. inc.	17.0(256)	24.9(47)	23.4(11)
Sec. com.	18.4(71)		
Occupation[b]			
Prof./cler./w.c. sales	20.1(32)	23.0(22)	18.0(6)
B.C. sales & services	20.1(45)	20.2(97)	29.2(130)
Manual	19.9(55)	22.3(40)	25.4(27)
Agricultural	17.0(41)	22.8(59)	31.0(147)
Never worked	16.8(457)	22.0(354)	28.1(216)

Table A12 Guyana: mean age at first union, by duration cohort and by education and occupation subgroup, for non-Indians and Indians

Social status/ ethnic group	Duration cohort		
	0–9	10–19	20 +
A Non-Indians			
Education			
Prim. 67	17.5(75)	17.9(106)	16.7(142)
Prim. 8	19.8(98)	18.6(222)	17.3(242)
Sec. inc.	16.7(380)	17.8(88)	17.4(37)
Sec. com.	19.1(220)	20.3(58)	19.4(20)
Occupation			
Professional	20.4(68)	19.9(41)	19.0(18)
W.C. sales & clerical[a]	18.6(188)	18.5(82)	17.8(34)
B.C. sales & services[a]	17.2(189)	17.9(182)	17.0(204)
Manual	18.1(65)	18.9(55)	17.1(67)
Agric. + never worked	17.0(261)	18.7(114)	17.2(117)
B Indians			
Education			
Prim. 5	18.0(103)	16.4(165)	15.3(291)
Prim. 67	17.6(172)	17.1(247)	16.0(169)
Prim. 8	20.8(76)	17.7(136)	16.6(73)
Sec. inc.	17.1(337)	16.8(50)	17.8(11)
Sec. com.	19.6(98)		
Occupation[b]			
Prof./cler./w.c. sales	21.3(41)	18.7(24)	18.7(7)
B.C. sales & services	18.8(61)	16.9(102)	15.3(134)
Manual	17.9(70)	17.6(41)	16.6(27)
Agricultural	19.2(49)	16.2(61)	15.7(149)
Never worked	17.6(564)	17.0(367)	15.9(222)

[a]W.C. = White collar; B.C. = blue collar.
[b]Occupational codes for the 0–9 cohort are the same as for non-Indians.

Table A13 Guyana: percentage of time since first union that was spent in union, by duration cohort and by education and occupation subgroup, for non-Indians and Indians

Social status/ ethnic group	Duration cohort		
	0–9	10–19	20 +
A Non-Indians			
Education			
Prim. 67	0.86(75)	0.90(106)	0.86(142)
Prim. 8	0.89(98)	0.89(222)	0.89(242)
Sec. inc.	0.89(380)	0.87(88)	0.88(37)
Sec. com.	0.89(220)	0.90(58)	0.83(20)
Occupation			
Professional	0.92(68)	0.86(41)	0.80(18)
W.C. sales & clerical[a]	0.87(188)	0.90(82)	0.86(34)
B.C. sales & services[a]	0.88(189)	0.86(182)	0.84(204)
Manual	0.84(65)	0.89(55)	0.92(67)
Agric. + never worked	0.92(261)	0.95(144)	0.93(117)
B Indians			
Education			
Prim. 5	0.93(103)	0.94(165)	0.93(291)
Prim. 67	0.94(172)	0.95(247)	0.96(169)
Prim. 8	0.94(76)	0.92(136)	0.94(73)
Sec. inc.	0.97(337)	0.95(50)	0.92(11)
Sec. com.	0.98(98)		
Occupation[b]			
Prof./cler./w.c. sales	0.96(41)	0.87(24)	0.90(7)
B.C. sales & services	0.95(61)	0.89(102)	0.89(134)
Manual	0.87(70)	0.90(41)	0.94(27)
Agricultural	0.95(49)	0.93(61)	0.95(149)
Never worked	0.97(564)	0.96(367)	0.96(222)

Table A14 Guyana: percentage currently in union, by duration cohort and by education and occupation subgroup, for non-Indians and Indians

Social status/ ethnic group	Duration cohort		
	0–9	10–19	20 +
A Non-Indians			
Education			
Prim. 67	0.89(75)	0.87(106)	0.81(142)
Prim. 8	0.88(98)	0.90(222)	0.83(242)
Sec. inc.	0.87(380)	0.90(88)	0.89(37)
Sec. com.	0.86(220)	0.88(58)	0.85(20)
Occupation			
Professional	0.91(68)	0.80(41)	0.72(18)
W.C. sales & clerical[a]	0.85(188)	0.85(82)	0.82(34)
B.C. sales & services[a]	0.86(189)	0.87(182)	0.79(204)
Manual	0.82(65)	0.89(55)	0.85(67)
Agric. + never worked	0.90(261)	0.97(114)	0.92(117)
B Indians			
Education			
Prim. 5	0.91(103)	0.96(165)	0.82(291)
Prim. 67	0.92(172)	0.94(247)	0.93(169)
Prim. 8	0.91(76)	0.88(136)	0.82(73)
Sec. inc.	0.95(337)	0.92(50)	0.91(11)
Sec. com.	0.97(98)		
Occupation[b]			
Prof./cler./w.c. sales	0.95(41)	0.71(24)	0.86(7)
B.C. sales & services	0.92(61)	0.89(102)	0.74(134)
Manual	0.81(70)	0.93(41)	0.93(27)
Agricultural	0.84(49)	0.90(61)	0.87(149)
Never worked	0.96(564)	0.96(367)	0.92(222)

Table A15 Guyana: average number of partners, by duration cohort and by education and occupation subgroup, for non-Indians and Indians

Social status/ ethnic group	Duration cohort		
	0–9	10–19	20 +
A Non-Indians			
Education			
Prim. 67	1.5(75)	1.9(106)	2.0(142)
Prim. 8	1.5(98)	1.7(222)	1.9(242)
Sec. inc.	1.5(380)	2.0(88)	1.7(37)
Sec. com.	1.4(220)	1.6(58)	1.7(20)
Occupation			
Professional	1.3(68)	1.4(41)	1.7(18)
W.C. sales & clerical[a]	1.6(188)	1.8(82)	1.9(34)
B.C. sales & services[a]	1.6(189)	2.0(182)	2.2(204)
Manual	1.4(65)	1.9(55)	1.7(67)
Agric. + never worked	1.4(261)	1.5(114)	1.6(117)
B Indians			
Education			
Prim. 5	1.1(103)	1.2(165)	1.3(291)
Prim. 67	1.1(172)	1.2(247)	1.2(169)
Prim. 8	1.1(76)	1.1(136)	1.1(73)
Sec. inc.	1.0(337)	1.1(50)	1.4(11)
Sec. com.	1.0(98)		
Occupation[b]			
Prof. & clerical	1.0(41)	1.3(24)	1.6(7)
Sales & services	1.1(61)	1.4(102)	1.4(134)
Manual	1.3(70)	1.4(41)	1.3(27)
Agricultural	1.1(49)	1.3(61)	1.2(149)
Never worked	1.0(564)	1.1(367)	1.2(222)

[a]W.C. = White collar; B.C. = blue collar.
[b]Occupational codes for the 0–9 cohort are the same as for non-Indians.

Table A16 Guyana: percentage in the state of secondary sterility,[a] by duration cohort and by education and occupation subgroup, for non-Indians and Indians

Social status/ ethnic group	Duration cohort		
	0–9	10–19	20 +
A Non-Indians			
Education			
Prim. 67	0.00(75)	0.14(106)	0.18(142)
Prim. 8	0.03(98)	0.08(222)	0.26(242)
Sec. inc.	0.01(380)	0.05(88)	0.16(37)
Sec. com.	0.02(220)	0.02(58)	0.25(20)
Occupation			
Professional	0.03(68)	0.02(41)	0.39(18)
W.C. sales & clerical[b]	0.02(188)	0.04(82)	0.26(34)
B.C. sales & services[b]	0.00(189)	0.05(182)	0.21(204)
Manual	0.00(65)	0.09(55)	0.15(67)
Agric. + never worked	0.02(261)	0.17(114)	0.27(117)
B Indians			
Education			
Prim. 5	0.02(103)	0.10(165)	0.34(291)
Prim. 67	0.03(172)	0.12(247)	0.40(169)
Prim. 8	0.05(76)	0.18(136)	0.25(73)
Sec. inc.	0.01(337)	0.08(50)	0.09(11)
Sec. com.	0.07(98)		
Occupation[c]			
Prof./cler./w.c. sales	0.05(41)	0.08(24)	0.00(7)
B.C. sales & services	0.03(61)	0.14(102)	0.28(134)
Manual	0.01(70)	0.15(41)	0.30(27)
Agricultural	0.04(49)	0.13(61)	0.36(149)
Never worked	0.02(564)	0.12(367)	0.37(222)

[a]Women who have been continuously in union over the past five years, have never used contraception and have not had a birth in the last five years.
[b]W.C. = White collar; B.C. = blue collar.
[c]Occupational codes for the 0–9 cohort are the same as for non-Indians.

Table A17 Jamaica: unadjusted fertility differentials according to parish of current residence (number of women in brackets)

Parish of current residence	Cohort 0–9	Cohort 10–19		Cohort 20 +		
	B0–9	B0–9	B10–19	B0–9	B10–19	NCEB
Kingston	2.91(65)	3.41(41)	1.42(40)	2.40(35)	1.17(35)	3.69(35)
St Andrew	2.67(342)	2.79(268)	1.48(259)	2.79(180)	1.57(180)	4.63(175)
St Thomas	3.10(23)	2.95(22)	1.71(24)	3.53(17)	3.94(17)	8.57(17)
Portland	3.06(34)	2.57(28)	1.65(30)	3.73(26)	2.19(26)	6.17(26)
St Mary	3.72(46)	3.52(50)	2.73(47)	3.08(36)	2.22(36)	6.03(35)
St Ann	3.27(61)	3.17(42)	2.36(47)	3.48(46)	2.59(46)	6.62(47)
Trelawny	3.25(18)	3.53(17)	1.83(15)	3.29(24)	2.21(24)	5.94(24)
St James	2.79(64)	3.36(58)	2.91(53)	3.71(41)	2.88(41)	7.03(40)
Hanover	3.31(23)	3.58(19)	2.35(18)	3.81(16)	3.00(16)	7.48(16)
Westmoreland	3.48(40)	3.39(36)	2.94(41)	3.26(61)	2.03(61)	5.56(61)
St Elizabeth	3.08(66)	3.36(45)	1.80(49)	3.60(45)	2.73(45)	6.67(45)
Manchester	3.32(80)	3.37(49)	2.18(48)	2.82(44)	2.39(44)	6.23(44)
Clarendon	2.98(84)	3.36(59)	2.23(59)	2.87(87)	3.18(87)	6.97(87)
St Catherine	3.19(183)	3.40(128)	2.19(124)	3.06(112)	2.46(112)	6.04(112)

Table A18 Jamaica: indicators of some intermediate demographic variables for education and occupation groups, by duration cohort

Social status group	Duration cohort 0–9	10–19	20 +
1. Proportion of time since first union that was spent within unions			
(a) Education			
Prim. 5	0.89(71)	0.82(121)	0.85(196)
Prim. 67	0.85(178)	0.84(205)	0.83(224)
Prim. 8	0.85(448)	0.84(416)	0.84(292)
Sec. +	0.89(437)	0.90(120)	0.87(58)
(b) Occupation			
Prof. & clerical	0.91(277)	0.86(136)	0.86(66)
Sales & services	0.85(444)	0.82(418)	0.83(391)
Manual	0.85(130)	0.86(151)	0.88(119)
Agricultural	0.86(26)	0.88(58)	0.82(100)
Never worked	0.86(257)	0.87(99)	0.87(94)
2. Average months of breastfeeding of penultimate child (women with 2 + children)			
(a) Education			
Prim. 5	10.2 (40)	11.5 (100)	14.3 (169)
Prim. 67	7.3 (93)	11.1 (189)	11.0 (196)
Prim. 8	7.8 (245)	10.3 (366)	10.0 (257)
Sec. +	6.3 (130)	5.1 (92)	6.5 (47)
(b) Occupation			
Prof. & clerical	5.9 (89)	4.7 (100)	4.7 (58)
Sales & services	7.8 (232)	10.6 (372)	11.1 (336)
Manual	7.7 (76)	11.4 (131)	10.1 (93)
Agricultural	8.6 (16)	9.9 (54)	14.0 (96)
Never worked	7.9 (95)	11.9 (90)	13.3 (86)
3. Average length of the first birth interval (months) (women with 1 + children)			
(a) Education			
Prim. 5	16.5 (60)	21.8 (110)	29.3 (188)
Prim. 67	19.0 (144)	21.1 (199)	22.8 (213)
Prim. 8	18.7 (385)	20.8 (398)	26.4 (278)
Sec. +	22.4 (288)	33.9 (114)	27.7 (51)
(b) Occupation			
Prof. & clerical	24.1 (181)	29.9 (128)	25.1 (61)
Sales & services	18.1 (361)	20.9 (398)	24.9 (371)
Manual	19.2 (113)	22.2 (143)	31.5 (111)
Agricultural	22.1 (22)	23.7 (57)	26.5 (97)
Never worked	19.3 (200)	21.5 (95)	25.3 (90)
4. Proportion ever used contraception			
(a) Education			
Prim. 5	0.62(71)	0.58(121)	0.43(196)
Prim. 67	0.58(178)	0.76(205)	0.46(224)
Prim. 8	0.65(448)	0.73(416)	0.58(292)
Sec. +	0.74(437)	0.80(120)	0.83(58)
(b) Occupation			
Prof. & clerical	0.82(277)	0.79(136)	0.77(66)
Sales & services	0.66(444)	0.76(418)	0.54(391)
Manual	0.70(130)	0.74(151)	0.54(119)
Agricultural	0.35(26)	0.52(58)	0.39(100)
Never worked	0.56(257)	0.58(99)	0.43(94)
5. Proportion currently using contraception			
(a) Education			
Prim. 5	0.23(71)	0.31(121)	0.39(127)
Prim. 67	0.22(178)	0.41(205)	0.38(141)
Prim. 8	0.29(448)	0.40(416)	0.41(200)
Sec. +	0.40(437)	0.48(120)	0.44(39)
(b) Occupation			
Prof. & clerical	0.47(277)	0.47(136)	0.29(66)
Sales & services	0.31(444)	0.42(418)	0.27(391)
Manual	0.31(130)	0.38(151)	0.28(119)
Agricultural	0.15(26)	0.26(58)	0.21(100)
Never worked	0.19(257)	0.34(99)	0.24(94)

Table A19 Trinidad and Tobago: average proportion of fertile pregnancies which are foetal losses per woman, by duration cohort and by education and occupation subgroup, for non-Indians and Indians

Social status/ ethnic group	Duration cohort 0–9	10–19	20 +
A Non-Indians			
Education			
Prim. 6	0.07(23)	0.14(48)	0.15(94)
Prim. 78	0.06(110)	0.15(121)	0.12(169)
Prim. 9	0.12(317)	0.16(194)	0.13(151)
Sec. inc.	0.12(260)	0.16(140)	0.15(69)
Sec. com.	0.11(267)	0.16(97)	0.13(46)
Occupation			
Professional	0.11(100)	0.18(60)	0.12(44)
W.C. sales & clerical[a]	0.15(295)	0.11(138)	0.16(81)
B.C. sales & services[a]	0.09(222)	0.17(196)	0.14(177)
Manual	0.08(147)	0.20(98)	0.13(84)
Agric. + never worked	0.10(212)	0.13(107)	0.12(143)
B Indians			
Education			
Prim. 6	0.18(54)	0.15(160)	0.17(255)
Prim. 78	0.10(131)	0.18(125)	0.13(66)
Prim. 9	0.10(190)	0.19(91)	0.11(53)
Sec. inc.	0.14(89)	0.09(48)	0.17(15)
Sec. com.	0.10(102)		
Occupation[b]			
Prof./cler./w.c. sales	0.10(41)	0.12(55)	0.22(27)
B.C. sales & services	0.14(120)	0.14(43)	0.15(48)
Manual	0.10(67)	0.18(44)	0.16(24)
Agricultural	0.23(41)	0.10(33)	0.18(67)
Never worked	0.09(297)	0.17(250)	0.14(221)

Table A20 Trinidad and Tobago: average number of months of breastfeeding the penultimate child, by duration cohort and by education and occupation subgroup, for non-Indians and Indians (limited to women with two or more children)

Social status/ ethnic group	Duration cohort 0–9	10–19	20 +
A Non-Indians			
Education			
Prim. 6	3.8(12)	7.1(40)	8.9(82)
Prim. 78	4.8(43)	5.6(100)	7.9(150)
Prim. 9	5.2(111)	6.4(162)	7.2(131)
Sec. inc.	4.4(82)	4.8(95)	4.3(61)
Sec. com.	3.6(63)	2.7(64)	2.1(43)
Occupation			
Professional	2.7(29)	3.7(46)	2.6(39)
W.C. sales & clerical[a]	3.8(75)	4.6(96)	4.7(73)
B.C. sales & services[a]	5.0(93)	5.5(161)	7.8(152)
Manual	4.7(55)	6.0(68)	7.4(76)
Agric. + never worked	5.8(59)	6.6(90)	8.0(127)
B Indians			
Education			
Prim. 6	4.8(26)	9.7(143)	11.7(229)
Prim. 78	5.3(77)	7.7(120)	8.3(65)
Prim. 9	5.7(88)	7.2(78)	9.2(49)
Sec. inc.	4.4(28)	3.2(40)	2.7(13)
Sec. com.	3.3(27)		
Occupation[b]			
Prof./cler./w.c. sales	2.0(17)	4.9(46)	5.3(23)
B.C. sales & services	3.5(27)	6.5(42)	10.2(46)
Manual	3.9(33)	7.1(35)	8.2(20)
Agricultural	4.9(16)	11.7(30)	12.5(62)
Never worked	5.9(155)	8.3(229)	10.6(205)

[a] W.C. = White collar; B.C. = blue collar.
[b] Codes for the 0–9 cohort are the same as for non-Indians.

Table A21 Trinidad and Tobago: proportion who ever used any method of contraception, by duration cohort and by education and occupation subgroup, for non-Indians and Indians

Social status/ ethnic group	Duration cohort		
	0–9	10–19	20 +
A Non-Indians			
Education			
Prim. 6	0.79(23)	0.79(48)	0.57(94)
Prim. 78	0.79(110)	0.88(121)	0.73(169)
Prim. 9	0.79(317)	0.87(194)	0.72(151)
Sec. inc.	0.88(260)	0.89(140)	0.83(69)
Sec. com.	0.87(267)	0.85(97)	0.82(46)
Occupation			
Professional	0.89(100)	0.85(60)	0.81(44)
W.C. sales & clerical[a]	0.87(295)	0.88(138)	0.78(81)
B.C. sales & services[a]	0.83(222)	0.90(196)	0.72(177)
Manual	0.81(147)	0.87(98)	0.73(84)
Agric. + never worked	0.79(212)	0.81(107)	0.66(143)
B Indians			
Education			
Prim. 6	0.70(54)	0.75(160)	0.59(255)
Prim. 78	0.70(131)	0.85(125)	0.68(66)
Prim. 9	0.75(190)	0.86(91)	0.76(53)
Sec. inc.	0.76(89)	0.87(48)	0.64(15)
Sec. com.	0.77(102)		
Occupation[b]			
Prof./cler./w.c. sales	0.79(41)	0.86(55)	0.82(27)
B.C. sales & services	0.77(120)	0.87(43)	0.65(48)
Manual	0.74(67)	0.75(44)	0.57(24)
Agricultural	0.77(41)	0.77(33)	0.59(67)
Never worked	0.71(297)	0.81(250)	0.62(221)

Table A22 Trinidad and Tobago: proportion currently using contraception, by duration cohort, and by education and occupation subgroup, for non-Indians and Indians

Social status/ ethnic group	Duration cohort		
	0–9	10–19	20 +
A Non-Indians			
Education			
Prim. 6	0.31(23)	0.41(48)	0.34(94)
Prim. 78	0.48(110)	0.52(121)	0.38(169)
Prim. 9	0.44(317)	0.49(194)	0.35(151)
Sec. inc.	0.49(260)	0.62(140)	0.39(69)
Sec. com.	0.54(267)	0.54(97)	0.34(46)
Occupation			
Professional	0.56(100)	0.45(60)	0.38(44)
W.C. sales & clerical[a]	0.50(295)	0.61(138)	0.31(81)
B.C. sales & services[a]	0.40(222)	0.51(196)	0.38(177)
Manual	0.52(147)	0.56(98)	0.38(84)
Agric. + never worked	0.47(212)	0.49(107)	0.35(143)
B Indians			
Education			
Prim. 6	0.36(54)	0.44(160)	0.36(255)
Prim. 78	0.47(131)	0.61(125)	0.34(66)
Prim. 9	0.49(190)	0.54(91)	0.54(53)
Sec. inc.	0.43(89)	0.67(48)	0.38(15)
Sec. com.	0.50(102)		
Occupation[b]			
Prof./cler./w.c. sales	0.60(41)	0.61(55)	0.41(27)
B.C. sales & services	0.46(120)	0.62(43)	0.38(48)
Manual	0.41(67)	0.43(44)	0.28(24)
Agricultural	0.50(41)	0.43(33)	0.33(67)
Never worked	0.46(297)	0.54(250)	0.40(221)

[a]W.C. = White collar; B.C. = blue collar.
[b]Codes for the 0–9 cohort are the same as for non-Indians.

Table A23 Trinidad and Tobago: average length of first birth interval (months), by duration cohort and by education and occupation subgroup, for non-Indians and Indians

Social status/ ethnic group	Duration cohort		
	0–9	10–19	20 +
A Non-Indians			
Education			
Prim. 6	26.6(19)	31.1(47)	37.8(88)
Prim. 78	23.9(76)	31.8(111)	25.7(167)
Prim. 9	24.7(207)	34.0(182)	28.7(143)
Sec. inc.	30.2(159)	36.6(123)	33.2(68)
Sec. com.	31.4(127)	41.8(78)	34.3(45)
Occupation			
Professional	33.5(58)	39.1(51)	34.7(43)
W.C. sales & clerical[a]	30.9(136)	40.3(117)	27.7(77)
B.C. sales & services[a]	24.5(162)	33.6(184)	32.6(166)
Manual	29.0(108)	35.4(86)	26.6(83)
Agric. + never worked	24.2(126)	28.9(101)	30.1(139)
B Indians			
Education			
Prim. 6	19.8(43)	21.4(159)	28.7(240)
Prim. 78	16.2(112)	21.3(120)	24.1(65)
Prim. 9	19.8(145)	25.7(90)	31.5(50)
Sec. inc.	17.8(59)	32.9(49)	34.5(12)
Sec. com.	22.9(47)		
Occupation[b]			
Prof./cler./w.c. sales	22.7(22)	27.2(53)	34.2(25)
B.C. sales & services	20.3(64)	25.8(43)	28.8(47)
Manual	19.3(53)	27.0(41)	25.0(22)
Agricultural	23.1(31)	24.1(33)	26.6(63)
Never worked	17.4(236)	21.9(247)	28.6(210)

Table A24 Trinidad and Tobago: average age at the first union, by duration cohort, and by education and occupation subgroup, for non-Indians and Indians

Social status/ ethnic group	Duration cohort		
	0–9	10–19	20 +
A Non-Indians			
Education			
Prim. 6	19.0(23)	16.8(48)	16.3(94)
Prim. 78	17.0(110)	18.1(121)	16.4(169)
Prim. 9	18.0(317)	18.1(194)	17.0(151)
Sec. inc.	17.8(260)	17.6(140)	18.6(69)
Sec. com.	19.8(267)	20.6(97)	19.9(46)
Occupation			
Professional	21.6(100)	20.4(60)	19.4(44)
W.C. sales & clerical[a]	19.0(295)	19.4(138)	18.3(81)
B.C. sales & services[a]	17.7(222)	17.2(196)	16.6(177)
Manual	17.8(147)	18.4(98)	17.1(84)
Agric. + never worked	16.9(212)	17.5(107)	16.6(143)
B Indians			
Education			
Prim. 6	18.7(54)	17.2(160)	15.3(255)
Prim. 78	18.6(131)	17.7(125)	16.3(66)
Prim. 9	18.4(190)	18.1(91)	16.9(53)
Sec. inc.	18.9(89)	18.7(48)	16.6(15)
Sec. com.	20.8(102)		
Occupation[b]			
Prof./cler./w.c. sales	22.8(41)	19.0(55)	16.4(27)
B.C. sales & services	20.0(120)	17.9(43)	15.9(48)
Manual	18.3(67)	18.3(44)	15.7(24)
Agricultural	18.6(41)	17.1(33)	15.1(67)
Never worked	18.3(297)	17.4(250)	15.8(221)

Table A25 Trinidad and Tobago: proportion of time since first union that was spent in unions, by duration cohort and by education and occupation subgroup, for non-Indians and Indians

Social status/ ethnic group	Duration cohort		
	0–9	10–19	20 +
A Non-Indians			
Education			
Prim. 6	0.89(23)	0.92(48)	0.91(94)
Prim. 78	0.84(110)	0.93(121)	0.91(169)
Prim. 9	0.89(317)	0.89(194)	0.88(151)
Sec. inc.	0.92(260)	0.89(140)	0.90(69)
Sec. com.	0.91(267)	0.92(97)	0.92(46)
Occupation			
Professional	0.92(100)	0.89(60)	0.92(44)
W.C. sales & clerical[a]	0.91(295)	0.91(138)	0.89(81)
B.C. sales & services[a]	0.87(222)	0.89(196)	0.87(177)
Manual	0.90(147)	0.90(98)	0.88(84)
Agric. + never worked	0.92(212)	0.92(107)	0.95(143)
B Indians			
Education			
Prim. 6	0.98(54)	0.93(160)	0.95(255)
Prim. 78	0.95(131)	0.97(125)	0.94(66)
Prim. 9	0.95(190)	0.95(91)	0.95(53)
Sec. inc.	0.95(89)	0.95(48)	0.93(15)
Sec. com.	0.96(102)		
Occupation[b]			
Prof./cler./w.c. sales	0.96(41)	0.95(55)	0.94(27)
B.C. sales & services	0.93(120)	0.86(43)	0.91(48)
Manual	0.92(67)	0.89(44)	0.86(24)
Agricultural	0.98(41)	0.94(33)	0.94(67)
Never worked	0.97(297)	0.98(250)	0.97(221)

Table A26 Trinidad and Tobago: proportion currently in union, by duration cohort and by education and occupation subgroup, for non-Indians and Indians

Social status/ ethnic group	Duration cohort		
	0–9	10–19	20 +
A Non-Indians			
Education			
Prim. 6	0.91(23)	0.86(48)	0.86(94)
Prim. 78	0.84(110)	0.93(121)	0.86(169)
Prim. 9	0.88(317)	0.88(194)	0.82(151)
Sec. inc.	0.88(260)	0.92(140)	0.83(69)
Sec. com.	0.87(267)	0.87(97)	0.85(46)
Occupation			
Professional	0.88(100)	0.82(60)	0.88(44)
W.C. sales & clerical[a]	0.87(295)	0.89(138)	0.73(81)
B.C. sales & services[a]	0.86(222)	0.90(196)	0.84(177)
Manual	0.90(147)	0.90(98)	0.86(84)
Agric. + never worked	0.87(212)	0.91(107)	0.89(143)
B Indians			
Education			
Prim. 6	0.98(54)	0.91(160)	0.90(255)
Prim. 78	0.94(131)	0.95(125)	0.89(66)
Prim. 9	0.92(190)	0.94(91)	0.91(53)
Sec. inc.	0.95(89)	0.96(48)	0.81(15)
Sec. com.	0.97(102)		
Occupation[b]			
Prof./cler./w.c. sales	0.97(41)	0.93(55)	0.88(27)
B.C. sales & services	0.92(120)	0.89(43)	0.86(48)
Manual	0.91(67)	0.90(44)	0.81(24)
Agricultural	0.98(41)	0.88(33)	0.86(67)
Never worked	0.95(297)	0.95(250)	0.93(221)

Table A27 Trinidad and Tobago: average number of partners per woman, by duration cohort and by education and occupation subgroup, for non-Indians and Indians

Social status/ ethnic group	Duration cohort		
	0–9	10–19	20 +
A Non-Indians			
Education			
Prim. 6	1.8(23)	1.9(48)	2.1(94)
Prim. 78	1.8(110)	2.0(121)	2.0(169)
Prim. 9	1.6(317)	2.0(194)	2.0(151)
Sec. inc.	1.6(260)	1.9(140)	1.7(69)
Sec. com.	1.4(267)	1.5(97)	1.4(46)
Occupation			
Professional	1.3(100)	1.7(60)	1.6(44)
W.C. sales & clerical[a]	1.6(295)	1.7(138)	1.8(81)
B.C. sales & services[a]	1.8(222)	2.1(196)	2.2(177)
Manual	1.6(147)	2.0(98)	2.4(84)
Agric. + never worked	1.4(212)	1.8(107)	1.5(143)
B Indians			
Education			
Prim. 6	1.2(54)	1.3(160)	1.3(255)
Prim. 78	1.1(131)	1.2(125)	1.3(66)
Prim. 9	1.1(190)	1.1(91)	1.2(53)
Sec. inc.	1.1(89)	1.3(48)	1.2(15)
Sec. com.	1.1(102)		
Occupation[b]			
Prof./cler./w.c. sales	1.2(41)	1.2(55)	1.4(27)
B.C. sales & services	1.1(120)	1.5(43)	1.7(48)
Manual	1.2(67)	1.5(44)	1.8(24)
Agricultural	1.2(41)	1.5(33)	1.4(67)
Never worked	1.1(297)	1.1(250)	1.1(221)

Table A28 Trinidad and Tobago: percentage in the state of secondary sterility,[c] by duration cohort and by education and occupation subgroup, for non-Indians and Indians

Social status/ ethnic group	Duration cohort		
	0–9	10–19	20 +
A Non-Indians			
Education			
Prim. 6	0.00(23)	0.06(48)	0.23(94)
Prim. 78	0.00(110)	0.05(121)	0.13(169)
Prim. 9	0.01(317)	0.03(194)	0.14(151)
Sec. inc.	0.02(260)	0.03(140)	0.12(69)
Sec. com.	0.01(267)	0.07(97)	0.16(46)
Occupation			
Professional	0.01(100)	0.03(60)	0.17(44)
W.C. sales & clerical[a]	0.01(295)	0.04(138)	0.11(81)
B.C. sales & services[a]	0.01(222)	0.03(196)	0.13(177)
Manual	0.01(147)	0.05(98)	0.12(84)
Agric. + never worked	0.02(212)	0.07(107)	0.23(143)
B Indians			
Education			
Prim. 6	0.02(54)	0.13(160)	0.27(255)
Prim. 78	0.05(131)	0.08(125)	0.21(66)
Prim. 9	0.02(190)	0.07(91)	0.16(53)
Sec. inc.	0.03(89)	0.07(48)	0.30(15)
Sec. com.	0.03(102)		
Occupation[b]			
Prof./cler./w.c. sales	0.05(41)	0.03(55)	0.09(27)
B.C. sales & services	0.02(120)	0.03(43)	0.17(48)
Manual	0.04(67)	0.10(44)	0.17(24)
Agricultural	0.02(41)	0.07(33)	0.24(67)
Never worked	0.03(297)	0.12(250)	0.30(221)

[a]W.C. = White collar; B.C. = blue collar.
[b]Codes for the 0–9 cohort are the same as for non-Indians.
[c]Women who have been continuously in union over the past five years, have never used contraception and have not had a birth in the last five years.