SOCIO-DEMOGRAPHIC ASSOCIATIONS WITH FERTILITY: A PROFILE OF CANADIAN WOMEN AT AGE 30

Carl F. Grindstaff
University of Western Ontario, London, Ontario, Canada

Résumé — Le but de cette étude est d'examiner les caractéristiques sociales, démographiques et économiques des femmes déjà mariées à l'âge de 30 ans au Canada en 1981, en relation avec leur niveau de fécondité. Les donées proviennent de la bande d'échantillon de deux pour cent d'utilisation publique (N=3,225) du recensement canadien de 1981. Et l'analyse bivariante et l'analyse multivariante indiquent que les variables économiques (niveau de l'éducation, niveau du revenu) expliquent la majeure partie de variation en fécondité chez ces femmes, alors que les facteurs culturels n'ont pas de relation importante avec les nombres d'enfants déjà nés. Alors que les données ne permettent pas une analyse causale systématique, il esemblerait que les enfants dans la famille réduisent la probabilité que les femmes adultes soient engagées dans les rôles économiques importants en dehors du foyer, contribuant ainsi à tout le niveau plus bas d'acquisition des variables économiques majeures d'éducation, de profession et de revenu. La gestation, quand elle est commencée tard dans la vie d'une femme a apparemment moins d'impact économique, particulièrement en termes d'acquisition éducationnelle et professionnelle. L'âge au mariage demeure un important prédicateur du nombre d'enfants déjà nés, mais non pas comme un facteur aussi influent que notre étude précédente l'a demontré. Les implications et les découvertes y sont discutées dans le contexte du coût élevé de la gestation.

Abstract—The purpose of this paper is to examine the social, demographic and economic characteristics of ever married women at age 30 in Canada in 1981, in relation to their level of fertility. The data are developed from the 1981 Census of Canada two per cent public use sample tape (N=3,225). Both bivariate and multivariate analyses indicate that economic variables (level of education, level of income) account for the most variation in fertility among these women, while cultural factors have no important relationship to numbers of children ever born. While the data do not allow for systematic causal analysis, it would also appear that children in the household reduce the probability of adult women being involved in important economic roles outside of the home, thus contributing to the overall lower level of attainment of the major economic variables of education, occupation and income. Childbearing when begun later in a woman's life apparently has less negative economic impact, especially in terms of educational and occupational attainment. Age at marriage remains an important predictor of numbers of children ever born, but not as influential a factor as previous studies have shown. Implications of the findings are discussed in the context of the high cost of childbearing.

Key Words — fertility, regression, women age 30, economic variables

Introduction

The trend in Canadian fertility has been downward for more than a century, with the exception of the baby-boom generation which brought a 20-year upturn within the overall linear decline. The total fertility rate has gone from over seven in the mid-1880s to under 1.7 one hundred years later in the 1980s (Grindstaff, 1985). This latter figure is below replacement, and this pattern has been the case for the past 15 years. During the past century, the number of children ever born to ever married women at age 35-39 has fallen from approximately seven to about 2.3 in 1981, and will undoubtedly be very near 2.0 in the next census tabulation of 1991. These period and cohort rates indicate that the Canadian population will cease to increase within the next generation or so, at least as far as fertility is the component of increase. There are both research and political questions in terms of just how far (and/or how long) fertility can decline, and the implications of these trends and patterns are much debated in the demographic literature (Easterlin, 1978; Ryder, 1979).

There are some basic questions that need to be raised. Do we want fertility to increase, and, if so, for what reasons? What factors differentiate women in their fertility outcomes? Is low fertility here to stay, or is there going to be a significant upward movement in the period or cohort rates in the next generation? As one

of the major proponents of the increasing fertility model, Easterlin (1978) has argued that fertility is cyclical, that it is based on past age structure and opportunity cost, and in the late 1980s and 1990s fertility will rise as more women will be in a traditional household setting. Norman Ryder (1979) is an eloquent spokesperson for the "low fertility is here to stay" position. He indicates that the changing roles of women, the efficacy and availability of contraception/abortion, and the opportunity for diverse economic and social choices on the part of women that competes effectively with childbearing, are factors that account for the current record-low rate of reproduction in North America. He goes further to document the decreasing bonds between parent and child, and indicates that all of these circumstances will be responsible for a continuation of the current patterns. It should be noted that Ryder does not indicate what he specifically defines as "low," outside of a reference to the two-child family and a significant proportion of childless women.

There is some recent literature in Canada which argues that a policy needs to be developed to encourage higher rates of fertility among Canadian women (Beaujot, 1986; Mathews, 1984; Romaniuc, 1984). These policies range from tax credits and direct financial payments to changes in the childrearing roles for men. While the debate on the need and the policies for more children in Canada will undoubtedly continue in the near future, there is not much at issue when it comes to the costs of bearing and raising children. For example, it has been estimated that a child raised to the age of 18 will cost parents over \$100,000 in various monetary outlays (Calhoun and Espenshade, 1988; Espenshade, 1980).

It is the purpose of this paper to document the "cost" of children in another way, focussing on the mothers. Is relatively high fertility associated with few alternative behaviours for women, especially in the economic realm? What is the association of having children on the one hand with socioeconomic outcome on the other? It is not possible using a cross-sectional data set to discuss causal connections in a systematic way. There is no way of sorting out the temporal order of economic and fertility variables given a single point in time and the cumulative nature of fertility. Thus, in the data employed in this paper, it is not possible to argue directly that having relatively large numbers of children "causes" women to work more or less or to have high or lower levels of educational achievement. It is also not legitimate in this context to indicate that a lack of formal education "causes" women to have large or small families. Rather, it is the intent of this research to document the association, the relationship, between fertility and socioeconomic and demographic variables. The primary focus is on the socioeconomic characteristics of women in conjunction with their level of childbearing. Given the range of literature on the subject, it is hypothesized that relatively higher levels of childbearing are significantly

Carl F. Grindstaff

associated with low levels of economic achievement, and that the association is linear in nature (Balakrishnan et al., 1979; Jayachandran, 1986).

Methods and Data

The data for this study are taken from the 1981 Census of Canada Public Use Sample Tape, two per cent individual file. This large data set (N=486,875) contains individual-level information on many social, demographic and economic variables, including statistics on number of children ever born. In this analysis, observations have been restricted to ever married women age 30 in 1981 (N=3,225). The inclusion of only females in this age group is dictated by four important considerations: (1) in economic terms, most women at this age are settled into an occupational and income pattern not likely to change radically in future years, and educational attainment is by and large complete; (2) for the average woman in Canada, age 30 represents a critical point in terms of career, job and promotion prospects (Grindstaff, 1984; Trovato and Grindstaff, 1986); (3) at this age, most Canadian females have completed their childbearing, and the issues of family roles and divisions of labour may be well-established (Gee, 1986); (4) the 1970s was a time when fertility fell to the lowest levels in Canadian history, while at the same time, women's participation in the labour force rose to an all-time high (Statistics Canada, 1984). Women at age 30 in 1981 would have begun their childbearing in the late 1960s and early 1970s, and their prime childbearing years were throughout the decade of the 1970s. In this context, the age 30 cohort would have participated fully in the "revolution" relating to childbearing and women working outside of the home. Thus, they are an ideal age cohort to study in terms of an association between fertility and economic factors.

In addition, women who are near the end of their childbearing years (only 20 per cent of all children born in Canada in 1981 were to women over the age of 30) may be in a more favourable position to be fully involved in the economic sphere outside of the household. Some of these women might be temporarily removed from the work force due to their maternal responsibilities, but this absence should have little impact on most socioeconomic factors unless the absence was for a period that extended beyond 18 months.

There may be, however, a significant problem in focusing on ever married women at age 30. Do women who begin childbearing later in life (after age 30, for example) differ in terms of personal characteristics from women who are relatively early in their onset of fertility? It has been argued that the women who do begin their childbearing after age 30 may be high achievers who have

postponed having children until they have completed advanced levels of education and obtained professional occupational situations (Grindstaff, 1984; Wilkie, 1981). Thus, at age 30, the fertility experience of a fair number of these women would have not yet begun, and any correlations between economic variables and fertility might be overstated. For purposes of comparison to help deal with this difficulty, additional data will be provided for women at age 35 from the 1981 census, controlling for the timing of children ever born (about 95 per cent of all women have completed their fertility by age 35). A particular emphasis will be placed on those women who began their childbearing after age 30.

The basic design of this paper is to provide a breakdown of the differences in the mean number of children ever born to women at age 30 across a whole series of socioeconomic-demographic correlates. Once the basic bivariate associations are developed, an OLS stepwise multiple regression analysis is performed to determine the amount of variance explained in the dependent variable (number of children ever born). Also, the level of education and the income of the women are treated as dependent variables, with fertility as one of the predictive factors. In addition, there will be a section comparing childless women to women with children in their families on a selected number of socioeconomic indices.

Descriptive Overview

Appendix 1 provides a series of bivariate relationships between mean number of children ever born to ever married women at age 30, and several demographic, cultural and economic variables. The 3,225 women reported had a mean number of 1.7 children, with the modal category being two children. Just over 16 per cent of the women were childless and approximately 20 per cent had three or more children.

Demographic Variables

Unfortunately, the census file does not have information on the age of the women at the birth of their first child. However, data are provided on age at first marriage, which is an excellent proxy variable for age at first birth (Balakrishnan et al., 1980; Henripin, 1972). It has been documented in numerous studies that the earlier the age at first marriage, the larger the number of children in the family (Grindstaff, 1984; Westoff and Ryder, 1971). The data provided in Appendix 1 indicate that women who married as teenagers average about 2.3

Carl F. Grindstaff

children at age 30, while those who were wed at age 20 or older averaged about 1.5 children by 30 years of age. The non-response category in this section is most likely women who were living in a common-law arrangement, and thus had no official date of marriage. Clearly, the older the age at marriage, the fewer the number of births to these women by age 30.

Marriage pattern refers to the type of union the women have had in the past. Women who in 1981 were in their first and only marriage had an average of 1.8 children compared to 1.4 for women who were in some other type of relationship, such as remarried or divorced. Overall, the younger the age of the husband, the fewer the number of children in the family, but where the husband is age 30 or older (more than 80 per cent of the cases), the mean number of children is about 1.8. Ever married women at age 30 who had changed residence at least once between 1976 and 1981 (70 per cent of the total) had significantly fewer children than non-movers, 1.6 and 2.0, respectively.

Cultural Factors

Appendix 1 shows that the cultural variables of ethnic origin, place of birth and religion have very little impact on the Canadian fertility experience in the 1980s. Native-born and Catholic women have more children on average than their foreign born and non-Catholic counterparts, but the differences are less than 0.10 of a child. There are some significantly different patterns between major religious groups and women professing no religion. No major ethnic, religious or foreign-born group of women has more than two or less than 1.4 children. It would appear that the historically important influence of cultural factors on Canadian fertility is no longer critical in terms of differentials.

Economic Variables

Among this group of women, educational level and occupational position are highly correlated with mean number of children. Women who have completed grade 11 or less have more than two children on average, compared to just over one child for women with at least some university schooling. Professional women in the occupational categories have about 1.3 offspring, while women in other than professional jobs have 1.8. Seventy per cent of these 30-year-old ever married women are employed, and those in the work force have nearly one child less than those women who were not employed outside of the home in the 18 months prior to the taking of the census in June 1981.

Appendix 1 also gives information on levels of income, and it is clear that earnings are significantly correlated with number of children in the family, and always in a negative way. Women with no income have more than twice as many children compared to women who earn more than \$20,000 per year. In terms of total family income, the groups who received under \$30,000 had more than two children in the home, while those people with a \$30,000 or more annual income had closer to one child. In general, the negative correlations between the economic variables and fertility range between 0.2 and 0.4, with all of the relationships significant at the 0.000 level. It should be emphasized that this is not a causal connection, but rather an association.

Multivariate Analysis

Table 1 shows a stepwise multiple regression analysis of the association between the demographic, cultural and economic variables and levels of fertility. In a general way, these data support the findings developed in the bivariate analysis. The women's income and education are the two major predictors of children ever born, while age at marriage ranks fourth among the variables that are significant. Most North American studies in fertility have shown that age at marriage (or age at first birth) is the major predictor of levels of childbearing (Balakrishnan et al., 1979; Henripin, 1972; Westoff and Ryder, 1971), However, there has recently been a series of articles indicating that age at first marriage or age at first birth may not be of as paramount importance in relationship to numbers of children ever born (Balakrishnan et al., 1988; Menken, 1985; Trussell and Menken, 1978). It is probable that in a society where relatively low levels of fertility are the norm, it does not take much for women who begin their childbearing late in life to catch up somewhat with those who had children at an early age. In this type of low fertility scenario, the age at marriage — and, by extension, the age at first birth — may not be as important predictors of family size as documented previously. However, women who begin their childbearing later in life may have already achieved certain credentials which serve them well in the economic sphere (Bloom, 1986). Thus, both numbers and the timing of children may be related to the high cost of childbearing. It is unlikely that early childbearers can "catch up" in economic terms (Grindstaff, 1987).

Women's income and educational attainment are the major predictors of children ever born, while family income does not enter the equation at a significant level. This may be an indication of the cost of childrening to women, while the men in the households experience relatively little change in their

TABLE 1. MULTIPLE REGRESSION RESULTS OF THE ASSOCIATION BETWEEN SELECTED DEMOGRAPHIC, CULTURAL AND ECONOMIC VARIABLES WITH CHILDREN EVER BORN, EVER MARRIED WOMEN 30 YEARS OF AGE, CANADA, 1981

<u>Variables</u>	Standardized <u>Betas</u>	Significance of T	Adjusted <u>R Square</u>
Women's Income	282	.0000	.1625
Women's Education	128	.0000	.1948
Marriage Pattern (only marriage; .other pattern)	156	.0000	. 2030
Age at First Marria	ge147	.0000	.2221
Migration (same dwelling; mover)	057	.0004	.2261
Husband's Education	052	.0046	. 2283
Women's Employment (not working; employed)	057	.0052	.2302
Age of Husband	.042	.0081	. 2318
Husband's Employment (not working; employed)	040	.0120	.2331

economic routine as a result of children in the family. Age at marriage remains a significant predictor of fertility levels, but is somewhat diminished in importance compared to other large-scale fertility data analyses.

In this regression, there are nine variables which are significantly related to numbers of children at the 0.05 level of significance, and over 23 per cent of the variance is explained. As noted in the previous section, no cultural variables are significant in the analysis. Overall, the economic factors of personal income and education (and, to a lesser extent, occupation), along with the demographic variables of age at first marriage and marriage pattern, account for the most

^{*}None of the other entered variables(occupation, ethnic origin, religion, place of birth, province of residence, family income) were significant at the .05 level. was closest with a T score of .067. Occupation(profession/other)

variation in the number of children in the family. While the causal direction cannot be determined, and while the economic and demographic independent variables explain variations in fertility (the dependent variable), it is also likely that children in the home take a good deal of time and effort, and they reduce the probability of women being involved in sustaining economic roles, thus contributing to an overall lower level of economic activity. The association operates in both directions.

In this context, the data on income and years of education are examined as dependent variables with all of the other factors as predictors. Type of occupation (professional) and number of children ever born were the major predictors, in that order of importance.

INCOME			<u>EDU</u>	CATION			
	Stan. <u>Beta</u>	_T_	Var. Expl.	Stan. <u>Beta</u>	_T_	Var. Expl.	
Prof. Occ.	. 3 4 3	.000	.183	. 371	.000	. 202	
Number of Children		.000	. 285	159	.000	. 241	

All of the other predictor variables used in the study only increased the variance explained in income to 0.296 and in education to 0.280. Clearly, the relationship between the fertility of women and economic outcome operates in both directions. It is not the primary purpose of this paper to untangle that complex interaction, but rather to document and discuss the relationships observed. However, the following data may provide some additional insight into these two patterns.

As discussed in the Methods and Data section, women who delay their childbearing until later in life (between age 30 and 35) may be women who are high achievers and thus well placed in the educational and occupational structure, with correspondingly high incomes. In the 1980s, late childbearing may be disproportionately occurring to economically successful women, and these women could well catch up to a significant degree in terms of number of children ever born. Table 2 provides information on ever married women age 35 in Canada in 1981, examining age at childbearing and selected economic variables.

About 63 per cent of these women (N=3,219) have either two or three children, and another 11 per cent are childless. Even though the data may be subject to some bias (see footnote in Table 2), it is likely that about 300 women began their fertility between the ages of 30 and 35, or about 10 per cent of the total

TABLE 2. NUMBER OF CHILDREN EVER BORN AND PRESENCE OF CHILDREN IN THE HOME BY AGE OF CHILDREN, BY SELECTED ECONOMIC VARIABLES, EVER MARRIED WOMEN, AGE 35, CANADA, 1981**

Number of Children Ever Born	Number of Women	Percent		
None	340	10.6		
One	486	15.1		
Two	1.316	40.9		
Three	704	21.9		
Four	249	7.7		
Five or More	124	3.8		
Total:	3,219	100.0		
Mean=2.15				
S.D.=1.28				Of All Women Employed
Presence of Children	Mean Level	Percent Prof.	Percent	Percent
In the Home	of Education	Occupation	Employed	<u>Fulltime</u>
No Children in the Home (N=372)		33.3%	85.5%	87.5%
Children 0-5 Years Only (N=297)		31.0%	64.3%	64.8%
Children 6-14 Years Only (N=1,712)		17.8%	70.3%	63.4%
Children Under and Over 5 (N=714)		16.3%	53.6%	51.1%
Children 15 Years and Over (N=101)	10.7 Years	15.8%	82.2%	78.2%
Total: (N=3,196)	11.8 Years	20.4%	68.2%	05.6%
	Family Income	Personal Income	Number of Ever B	
	THOOME	THOOME		J. 1.1
No Children in the Home	\$34.783	\$8,417	. 4	3
Children 0-5 Years Only	\$32,378	\$5.168	1.5	
Children 6-14 Years Only	\$28,698	\$5,053	2.3	
Children Under and Over 5	\$28,733	\$3,265	2.9	
Children 15 Years and Over	\$26,232	\$7,139	1.7	
Total:	\$29,484	\$5,122	2.1	5

^{**}The presence of children in the home is not the same variable as children ever born. For example, a woman may have had a baby, but the child is no longer in the household due to leaving home, divorce in the family, mortality, etc. As Table 2 shows, even though there are no children present in the home, that group of women had .48 children ever born. However, the number of cases in the census data where there is a difference between number of children ever born and presence of children in the home is small, about 10 percent of the total. This difference presents a minor problem in the analysis, but there should be no significant bias in the overall results.

number of women. In fact, about half of the women who were childless at age 30 had a child age 0 to 5 present in their home at age 35. Those women who began their childbearing in this relatively late age group had completed the highest level of schooling, 13.4 years, and were quite likely to be in a profes-

sional occupation, 31.7 per cent. However, level of income, the proportion of these women working, and full-time employment were about average. This suggests that, at least in the short run, employment and earnings are curtailed by the birth of a child and by the necessity to care for the baby. This observation is especially relevant where there is a preference to remain in the home caring for the infant or where there are no perceived acceptable alternatives for child care responsibility. The lower income and employment pattern is related to having a young child under the age of five in the household. In general, it would appear that the 10 per cent of ever married women age 35 who began their childbearing after age 30 are a select group in terms of educational attainment and occupational position. In terms of number of children ever born, this "select" group does not fully catch up to the levels of fertility found among the total cohort (1.56 children compared to the average 2.15), and the number of children in the family remains positively associated with an economic cost to women.

Childlessness

While it is instructive to examine factors associated with differential childbearing based on mean number of children, it may also be important to describe information comparing ever married women at age 30 with children to a comparable group of women who are childless. This section of the paper shows the association between the same demographic and economic characteristics for women with and women without children. Table 3 shows that ever married women without children are at a substantial economic advantage compared to women with children. About 16 per cent of the women have no children, and, on average, they have achieved 1.5 more years of education, are more likely to be in the work force, are nearly twice as likely to be in professional occupations, and earn at more than twice the rate of their childbearing counterparts. Clearly, in this comparison, having children is associated with a definite economic disadvantage for women. Interestingly enough, age at marriage is not a differentiating factor between childless and childbearing women.

Summary and Discussion

While there are some qualifications and nuances in the findings, it is reasonably certain that low levels of economic achievement of ever married women at age 30 in Canada in 1981 are associated with relatively high fertility. On the one hand, children in the household reduce the probability of adult women being

TABLE 3. A COMPARISON OF CHILDLESS AND CHILDBEARING WOMEN ON SELECTED DEMOGRAPHIC AND ECONOMIC VARIABLES, EVER MARRIED WOMEN, AGE 30, CANADA, 1981

Variable	Childless Women (N=532)	Childbearing Women (N=2,693)	<u>F</u> Test	<u>Sign.</u>	<u>Eta</u>
Years of Education	13.5 Yrs	12.0 Yrs	124.8	.000	.193
Professional Occupation	37.2%	19.2%	85.3	.000	.161
Employed	94.6%	64.0%	206.0	.000	. 245
Age at Marriag	e 20.4 Yrs	20.2 Yrs	. 6	. 448	.013
Age of Husband	32.5 Yrs	32.9 Yrs	4.2	.042	.036
Family Income	\$34,133	\$27,017	110.9	.000	.182
Women's Income	\$8,990	\$4,015	439.1	.000	.346

SOURCE: All data in Tables 1,2 and 3 are derived from the 1981 Census of Canada, Public Use Sample Tape, Individual File.

involved in important economic roles outside of the home, thus contributing to the overall lower level of attainment of the major economic variables of education, occupation and income. Children are a competing variable for the time and energy of women. On average, the ever married 30-year-old women who are well placed in the economic world are either childless or, when having children, have about one child fewer than the women who are at the bottom of the economic ladder. On the other hand, educational and employment activity limit the fertility alternative, at least in the early stages of adulthood. When women begin childbearing at a later age (30 or older), employment and income are somewhat curtailed.

Fertility in Canada decreased at a steady rate for the period of the 1960s and 1970s until it was well below replacement, with a total fertility rate of 1.7 and even lower, and completed family sizes approached the lowest level in history, just over two children per ever married woman. This low level of childbearing

has been sustained into the 1980s. This continuing pattern provides support for the Ryder (1979) position presented in the introduction to this paper. It is no accident that during this period of time, women have made substantial headway in terms of labour force participation and educational attainment and, to a lesser extent, income and occupation. In Ryder's view, it is likely that having fewer children frees many women for alternate forms of economic behaviour, while having more children restricts these alternatives. In this context, there is a "high cost" of childbearing, especially in terms of individual economic achievement. This is not to say that the role of mother is unimportant, only that it has a cost for the women involved (Keyfitz, 1986). The data examined for ever married women at age 35 indicate that childbearing later in life may not be as detrimental for economic outcome, but there is a negative impact, at least in the short run, on employment level and income.

There are some research studies that indicate Canada may need to develop policies that will stimulate fertility. The reasons provided for this need are related to such areas as economic growth and community, kinship and family survival (Beaujot, 1986). To date, there has been no evidence presented that rising fertility will in fact make a contribution to achieving these ends. What is clear from the data presented here is that higher levels of fertility are associated with women who are at an economic disadvantage. There is a competition for the scarcest of resources: her time, energy and commitment. If policies designed to increase childbearing among Canadian women are developed, they need to be constructed upon a platform that does not negatively affect the advancement of women in the economic sphere. The current evidence is that there is a high economic cost associated with women who have children and, even more to the point, raise them. It would seem probable that women in the future would not be willing to exchange a measure of economic independence and affluence in order to have larger families.

References

- Balakrishnan, T.R., G.E. Ebanks and C.F. Grindstaff. 1979. Patterns of Fertility in Canada. 1971. Ottawa: Statistics Canada.
- _____. 1980. A multivariate analysis of 1971 Canadian census fertility data. Canadian Studies in Population 7:81-98.
- ______, K. Rao, K. Krotki and E. Lapierre-Adamcyk. 1988. Age at first birth and lifetime fertility. Journal of Biosocial Science 20:167-174.
- Beaujot, R. 1986. Dwindling families. Policy Options Politiques (Vol. #):3-7.
- Bloom, D. 1986. The Labour Market Consequences of Delayed Childbearing. Paper presented at the annual meeting of the American Statistical Association, Chicago, August.
- Calhoun, C. and T. Espenshade. 1988. Childbearing and wives' foregone earnings. Population Studies 42:5-37.
- Easterlin, R. 1978. What will 1984 be like: Socio-economic implications of recent twists in the age structure. Demography 15:397-432.
- Gee, E. 1986. The life course of Canadian women: An historical and demographic analysis. Social Indicators Research 18:263-283.
- Grindstaff, C.F. 1984. Catching up: the fertility of women over 30 years of age: Canada in the 1970s and early 1980s. Canadian Studies in Population 11:95-109.
- ______. 1985. The baby bust revisited: Canada's continuing pattern of low fertility. Canadian Studies in Population 12:103-110.
- _____. 1988. Adolescent marriage and childbearing: The long term economic outcome: Canada in the 1980s. Adolescence 23:45-58.
- Henripin, J. 1972. Trends and Factors of Fertility in Canada. Ottawa: Statistics Canada.
- Jayachandran, J. 1986. Determinants of fertility in two Canadian populations: A causal modeling approach. Canadian Studies in Population 13:57-80.
- Keyfitz, N. 1986. The family that does not reproduce itself. In K. Davis, M.S. Bernstam and R. Ricardo-Campbell (eds.), Below Replacement Fertility in Industrial Societies: Causes, Consequences, Policies. New York: Population and Development Review.
- Mathews, G. 1984. Le Choc Demographique. Saint-Laurent, Quebec: Boreal Express.

- Menken, J. 1985. Age and fertility: How late can you wait? Demography 22:469-483.
- Romaniuc, A. 1984. Fertility in Canada: From Baby-Boom to Baby-Bust. Ottawa: Statistics Canada.
- Ryder, N. 1979. The future of American fertility. Social Problems 26:359-370.
- Statistics Canada. 1984. Women in the Work World. Ottawa: Ministry of Supply and Services.
- Trovato, F. and C.F. Grindstaff. 1986. Economic status: A census analysis of thirty year old immigrant women in Canada. Canadian Review of Sociology and Anthropology 23:569-587.
- Trussell, J. and J. Menken. 1978. Early childbearing and subsequent fertility. Family Planning Perspectives 10:209-218.
- Westoff, C. and N. Ryder. 1971. Reproduction in the United States, 1965. Princeton: Princeton University Press.
- Wilkie, J. 1981. The trend toward delayed parenthood. Journal of Marriage and the Family 43:583-591.

Received May, 1988; revised June, 1988

APPENDIX 1. MEAN NUMBER OF CHILDREN EVER BORN BY SELECTED DEMOGRAPHIC, CULTURAL AND ECONOMIC VARIABLES, EVER MARRIED WOMEN, AGE 30, CANADA, 1981

Number of Children	Number of Women	<u>Percent</u>
0	532	16.5
1	741	23.0
2	1,318	40.8
3	467	14.5
4	119	3.7
5 or More	48	1.5
Mean=1.71	N=3.225	100.0
S.D.=1.14	•	

DEMOGRAPHIC VARIABLES

Age at 1st Marr	iage <u>Mean N</u> i	umber of C	hildren	Number of Women
17 and under		2.64		206
18 or 19		2.11		655
20-22		1.86		1,208
23-25		1.31		635
26-30		. 84		329
Non Response	(Common Law)			192
F Test=163.0	Significance	e = . 0 0 0 0	R = 416	
Marriage Patter	<u>n</u>			
First and On	ly Marriage	1 70		2,592
Other Marria	ge Pattern	1 40		633
0 tile: 11 til	ge ractern	1.40		033
F Test = 58.9	Significance=	.000	Eta=.13	4
Husband's Age				
25 or Under		1.20		61
26-29		1.38		409
30-34		1.76		1.989
35-39		1.81		565
40 or Over		1.79		201
F Test=14.3	Significance=	.000	R=.10	00
Mobility				
Same Dwelling	.	1.99		954
Mover	9	1.59		2,271
		1.37		C, C1 I
F Test=82.9	Significance=	.000	Eta=.158	3

Socio-demographic Associations with Fertility

APPENDIX 1 CONTINUED

Province of Resi	dence				
Ontario All Other		1.73		1,122	
		1.68		2,103	
F Test=1.66	Significance=.19	7 Eta	1=.023		
	CULTURAL VA	RIABLES			
Ethnic Origin					
British		l.70		.232	
Other		l . 72	1	.993	
French		1.69		.,	928
Italian		2.03	4 4		98
Eastern E	urope	1.69			215
	t Europe	1.84			228
F Test=.90	Significance=.748	B Et	a=.006		
Place of Birth					
Canada		1.73	2	415	
Foreign Born		1.65	۷,	613	
Europe		1.70		612	
Asia	· .				348
	S 4===d==	1.60			112
AIIICA,	S.America, Car Isl	1.51	1.		96
F Test=2.20	Significance=.138	B Eta	026		*
<u>Religion</u>	•				
Catholic]	76	1.	547	
Other]	67		678	
Mainline	Protestant	1.73			1.284
No Relig	ion	1.41			239
F Test=5.32	Significance=.021	Et	a=.041		
	ECONOMIC VA	RIABLES			
Education			•		
Grade 8 or Le		. 27			
Grade 9.10 or				277	
Grade 12 or 1:		.98		973	
low 2 Variation	j Umjeranska	.65	1.	269	
l or 2 Years	university I	.40		266	
S OF 4 lears	University 1	. 20		332	
o rears or Mo	re University	.95		108	
F Test=56.62	Significance=.000	R = -	. 282		

Carl F. Grindstaff

APPENDIX 1 CONTINUED

Economic Variables	Mean Number of	Children Number o	Women
Husband's Education			
Grade 8 or Less Some High School Finish High School Some Post Secondar Some University University Degree	l 1.70 ry 1.74 1.46	333 546 366 1,066 343 571	
F Test=33.80 Sign	nificance=.000	R = 216	
Occupation			
Professional Other and None	1.26 1.84	716 2,509	
F Test=154.3 Sign	nificance=.000	Eta=.214	
Employment			
Working Not Working	1.48 2.22	2,227 998	
F Test=313.8 Sign	ificance=.000	Eta=.298	
Husband's Employment			
Working Not Working	1.69 2.11	3,031 194	
F Test * 25.8 Signi	ficance=.000	Eta = . 089	
Women's Income			
No Income \$1-4,999 \$5-9,999 \$10-19,999 \$20-29,999 \$30,000 or More	2.23 1.93 1.60 1.20 .86	917 779 524 788 193 24	
F Test=121.4 Sign	ificance=.000	R=397	
Family Income			
Under \$10,000 \$10-19,999 \$20-29,999 \$30-39,999 \$40,000 or More	2.17 2.01 1.81 1.50 1.19	223 689 1,076 759 478	
F Test=13.6 Signi	ficance=.000	R = 229	