329-76

INSTITUTE FOR RESEARCH ON POVERTY DISCUSSION PAPERS

RELATIVE ECONOMIC STATUS AND FERTILITY: EVIDENCE FROM A CROSS-SECTION

Maurice MacDonald and Ronald R. Rindfuss

UNIVERSITY OF WISCONSIN - MADISON

RELATIVE ECONOMIC STATUS AND FERTILITY: EVIDENCE FROM A CROSS-SECTION

Maurice MacDonald and Ronald R. Rindfuss

February 1976

The analysis reported here was supported in part by a National Institutes of Health Grant, No. HD07682; by a "Center for Population Research" Grant, No. HD05876, to the Center for Demography and Ecology from the Center for Population Research of the National Institute of Child Health and Human Development; and by funds granted to the Institute for Research on Poverty of the University of Wisconsin-Madison by the Department of Health, Education, and Welfare pursuant to the Economic Opportunity Act of 1964. The research assistance of Cheryl Knobelock and Robert T. McGee is gratefully acknowledged, as are the comments of colleagues who have read this paper. The opinions expressed are those of the authors.

ABSTRACT

Because fluctuations in fertility have important effects on our institutions, the ability to predict turning points in period fertility has great potential utility for policy makers. Richard Easterlin's relative income hypothesis has this ability, because it involves a lag between taste formation in parental households and the operation of current income constraints on consumption preferences for children. Moreover, empirical evidence from aggregate time-series data seems to support Easterlin. This paper uses micro data from the 1970 National Fertility Study to examine the behavioral components of his hypothesis. Based on a cross-section multiple regression analysis for once-married currently married women with once-married husbands who reported whether they felt financially better- or worse-off at the time of marriage than their parents when they were adolescents, we find no evidence to support the hypothesis that relative economic status influences fertility. Circumstantial evidence suggests that we may be reasonably confident about the validity of the survey measures of relative economic status. However, one cannot rule out the possibility that these measures are invalid, and we have ignored relative economic status effects on age at marriage.

RELATIVE ECONOMIC STATUS AND FERTILITY: EVIDENCE FROM A CROSS-SECTION

I. Introduction

American fertility trends since World War II have been dominated by two massive and influential changes: the "baby boom" of the late 1940s and of the 1950s, and the decline in fertility in the 1960s and early part of the 1970s. These fluctuations in period fertility rates have had important, and often disruptive, effects on such institutions as the economy, the educational system, and the marriage market. Yet these massive changes were unprecedented, unpredicted and pervasive (Rindfuss and Sweet, 1970); and, many demographers expect such changes in the future (Campbell, 1974; Lee, 1974; Sklar and Berkov, 1975).

One hypothesis advanced by Easterlin (1962, 1966, 1973) to explain these fluctuations involves the concept of relative economic status, that is, income relative to tastes. The hypothesis is that fertility is positively affected by the relative economic status of young men: the baby boom resulted from increases in the relative economic status of young men and the subsequent decline in relative economic status was accompanied by a decline in fertility.

Income here is perceived permanent income. As such, it represents a combination of period factors (i.e., depression, recessions, or periods of growth) and individual factors (i.e., educational attainment, ability, or family connections). Tastes are consumption preferences, which presumably are formed while the individual was in the parental household. It is assumed that tastes will

be affected by the consumption patterns the individual became accustomed to, which in turn are a function of the income of the parental family, the number of individuals this income must be divided among (see Ben-Porath, 1975), and period economic factors. Thus, in both cases period effects are operating, but the period effects operating on tastes occur some five to ten years prior to the period effects operating on perceived permanent income. (Some of the above concepts are elaborated more fully in Easterlin, 1969; and Easterlin 1975.)

Easterlin's formulation of the relative income hypothesis is but one of a family of relative income hypotheses. Such hypotheses typically differ with respect to the formation of tastes. For example, Freedman (1963) hypothesized that tastes are a function of one's income relative to the incomes of one's peers. Easterlin's variation has recieved considerable attention because it has the ability--because of the lag between taste formation and current income--to predict and explain turning points in period fertility. This ability to explain turning points has great potential utility for policy makers.

Most of the empirical work examining the relative economic status hypothesis exploits this lag in period effects (Easterlin, 1962; Easterlin, 1966; Easterlin, 1973; Lindert, 1974). This work has depended on highly aggregated data and does not closely examine the behavioral components of the relative economic status hypothesis. The present paper uses micro data to examine the relative income hypothesis. We examine the effect of relative income on fertility

in the early years of marriage; we do not, however, examine the effect of relative income on the timing of marriage itself.

II. Data

The data presented are from the 1970 National Fertility Study (NFS), a national probability sample of 6,752 ever-married women under 45 years of age residing in the United States. The 1970 NFS was directed by Norman B. Ryder and Charles F. Westoff. Included in the interview schedule were two questions designed to elicit the respondent's feelings about the couple's financial position when they were first married relative to their parents financial position when the wife (husband) was growing up--the comparison that Easterlin and others expect to be related to fertility. The two questions are:

Q.310A: When you first got married, did you feel that you were better or worse off financially than your parents were when you were an adolescent?

Q.310B: And how about your husband at that time? Do you think he felt he was better off financially than his parents were when he was an adolescent?

In order to remove a variety of potential ambiguities, certain groups of women have been eliminated from the analysis. All women married more than once will not be included because for these women, it is not clear how the phrase "first got married" would be interpreted. A similar potential ambiguity leads to the exclusion of women married to husbands who have been married

more than once. Postmarried women have been excluded because the full range of other predictor variables is not available. Finally, couples where either the husband or the wife was not living with both their mother and father when the wife (husband) was aged 14 were excluded. Thus, the sample consists of once-married, currently married women who were living with both parents at age 14 and are married to once-married husbands who were residing with both parents at age 14. There are 3,192 such women.

Usually we present results only for question 310A--the wife's relative financial feelings. This has been used because for most respondents (75 percent), the response is the same to both questions, and, because the responses about the wife's feelings are undoubtedly more valid than the responses about the husband's feelings, since both are provided by the wife. However, it should be noted that all the analyses reported have been rerun using husband's feelings rather than wife's feelings, and the results remain essentially unchanged.

III. Corroborating the Financial Feelings

The question dealing with the wife's financial feelings (question 310A) asks the respondent to perform a considerable number of tasks before she responds "better-off," "same," or "worse-off". She must define the time period that constitutes "first got married"; she must remember her financial situation and remember her feelings about that situation; she must define the time period that constitutes "adolescent"; she must remeber her parents financial situation then and remember her feelings about that situation; and finally, she must compare the

feelings about the two financial situations. (Responding about her husband is even more complex.) Given the complexity of this question, it is fair to ask whether it really measures what it purports to measure, that is, whether it is a valid indicator of relative economic status. Furthermore, the validity of the indicator might vary with elasped time. Unfortunately, we do not have outside indicators of either financial situation, nor do we have estimates of the reliability of these questions.

During the course of the interview schedule, the respondent was asked a number of questions that can be used to assess the face validity of the wife's response to the financial feelings question. We do not have outside indicators of these other questions either. Therefore, this section actually examines whether the responses to the financial feelings question are plausible, given the responses to other questions. Since the other questions are standard survey questions, if there were discrepancies we would tend to have more faith in them than in the financial feelings question.

All respondents were asked about their number of siblings. We expected that the larger the family of orientation, the smaller the amount of income available to each family member (for example, see Ben-Porath, 1975). Thus, we expect a larger percentage of those who came from larger families to feel they were financially better-off at marriage than of those who came from smaller families. Table 1 shows that this is the case for each of the four marriage cohorts examined. (For convenience of presentation, Table 1 only shows the percentage responding "better-off," rather than the entire

Table 1. Percentage of Respondents Who Felt They Were Better-Off Financially When First Married Than Their Parents Were When Respondent Was An Adolescent By Various Characteristics For Four Marriage Duration Groups.

	Marriage Duration: 0-4 years	5-9 years	10-14 years	15+ years
Total	47	47	47	48
Wife has 0-3 siblings	42	43	43	40
Wife has 4+ siblings	56	54	53	56
Husband was a student at marriage	29	29	23	30
Husband was not a student at marriage	51	49	49	50
Black	71	63	65	61
White[1]	45	46	46	47
	Number of Respondents in Base[2]			
Total	933	706	608	938
Wife has 0-3 siblings	588	453	357	495
Wife had 4+ siblings	343	251	249	442
Husband was a student at marriage	138	73	65	78
Husband was not a student at marriage	780	628	533	843
Black	90	67	49	79
White	842	639	559	859

[1] Includes a few other nonwhites.

[2] The 1970 National Fertility Study oversampled black woman. To adjust for this, a weighting system based on Current Population Reports was used in calculating statistics in this and subsequent tables. However, the numbers of women reported are unweighted.

distribution. If the entire distribution were shown, similar conclusions would be obtained.)

Similarly, we expect that when the husband was a student at the time of marriage the respondent would be less likely to respond "better-off" than when the husband was employed (including those who were in the armed forces). Table 1 shows that this is also the case. The difference between the two groups is sizable in each of the marriage duration groups.

It would also be expected that there would be racial differences in the proportion feeling better-off financially when first married. Given the greater growth in income among blacks than whites (Gwartney, 1970), and given the massive rural to urban migration among blacks (Meier and Rudwick, 1966), it is expected that blacks are more likely to respond "better-off" than whites. Table 1 shows that this is also the case.

All respondents were asked the husband's occupation at marriage and the husband's father's occupation when the husband was an adolescent. These occupations have been coded in the Duncan SEI scale (Duncan 1961; Featherman, Sobel & Dickens, 1975). For couples where the husband had an occupation at marriage--approximately 25 percent were either students or in the armed forces--it is possible to divide them into two groups: upwardly mobile and downwardly mobile. We would expect that the upwardly mobile group would be more likely to respond "better-off" than the downwardly mobile group. Table 2 shows that this is the case for each of the four marriage duration groups. There are, however, two disturbing features of Table 2.

Table 2. Percentage Distribution of Wife's Financial Feelings For Upwardly Mobile Couples and Downwardly Mobile Couples By Marriage Duration.

Wife's financial feelings	Marriage Duration: 0-4 years	5-9 years	10-14 years	15-19 years
	Upwardly Mobile Couples			
Better-off	57	54	53	53
Worse-off	26	29	32	29
Same	16	14	13	15
Other	1	3	2	3
TOTAL	100	100	100	100
Number of respondents	318	269	220	321
	Downwardly Mobile Couples			
Better-off	49	44	47	52
Worse-off	34	34	28	24
Same	16	20	21	21
Other	2	2	3	3
TOTAL	100	100	100	100
Number of respondents	221	173	137	207

Note: A couple is considered upwardly mobile if the Duncan score for the husband's father's occupation is less than the Duncan score for the husband's occupation at time of marriage. A couple is considered downwardly mobile if the Duncan score for the husband's father's occupation is greater than the Duncan score for husband's occupation at marriage.

The first is that among downwardly mobile couples the modal response is "better-off" rather than "worse-off," and the difference between the distributions for the downwardly mobile couples and the upwardly mobile couples is not as large as might be expected. It should be noted, however, that two separate influences on the respondent's income may combine, or act alone, to cause a "better-off" response: (1) the respondent's birth cohort may benefit from an upward trend in personal income due to aggregate economic growth; (2) in addition, the respondent may have a positive deviation from her cohort's trend, perhaps related to intergenerational social mobility (upward). The likelihood that both aggregate and personal influences are important obstructs analysis of the Easterlin item, because our data are restricted to personal characteristics. Since there has been substantial aggregate economic growth over the past two decades, it is not surprising that a larger share of downwardly mobile couples feel better-off when they were first married than when they were growing up.[1]

The second disturbing feature of Table 2 is that among downwardly mobile couples the proportion responding "worse-off" is substantially less among those who have been married the longest than among those who were recently married. This probably reflects a tendency to forget the "bad times" with the passage of time--although it would take longitudinal data to substantiate this hypothesis.

To further examine the relationship between mobility and the response to the financial feelings question, we used a measure of mobility, the Duncan score for husband's father's occupation and

the number of siblings the husband had, to try to predict the response to the financial feelings question for the various marriage duration groups. Although there are numerous other factors, such as the aforementioned aggregate growth, it was expected that these three variables would explain a sizable proportion of the variance in the response to the financial feelings question. However, in no case did these three explain more than 5 percent of the variance.

In summary, the evidence is mixed with respect to the validity of the financial feelings question. The expected relationship is found for such variables as number of siblings and race; yet there appears to be a tendency to forget the "bad times", and the ability to predict the response to the financial feelings question is limited. We conclude that the question appears to be sufficiently valid to warrant an examination of its effect on fertility, but the results must be interpreted with caution, particularly for the older cohorts.

IV. Effects on Early Marital Fertility

Easterlin and others have argued that relative economic status will have its greatest effect on the timing of marriage and the timing of fertility during the early years of marriage. When the comparison of income prospects with tastes is unfavorable, it is expected that marriage will also be delayed. Conversely, when the comparison is favorable, it is expected that marriage and the family building processes will begin comparatively early. Given the nature of our sample--a married sample--it is not possible to examine the effect of relative economic status on marriage formation.

However, because the 1970 NFS collected a detailed birth history, it is possible to examine the effect of relative economic status on fertility in the early years of marriage. Our principle dependent variable is the number of children born in the first three years of marriage. Three years was chosen because it allows sufficient time for those who want to have children early in marriage to have them, yet it also discriminates between those who want children early and those who don't. Also, because the survey questioned respondents about their attitudes toward economic status at the time of marriage, and since those attitudes may change as the couple moves through the life-cycle, it may not be appropriate to extend our fertility analysis beyond the early years of marriage. The sample proportions having zero, one, two, and three children in the first three years of marriage are 31, 46, 21, and 2, respectively.

To the extent that relative economic status affects age at marriage and fertility in the early years of marriage, then it also indirectly affects completed fertility. Fertility intentions are influenced both by age at marriage and by age at arrival at various parities (see Rindfuss and Bumpass, 1975); and contraceptive effectiveness is also affected by age at arrival at a given parity (Ryder, 1973). In the present sample, among women aged 35-44--women who have essentially completed their childbearing--the correlation between the number of births in the first three years of marriage and children ever born is 0.55.

Table 3 defines independent variables used in a multiple regression analysis of fertility during the first three years of marriage. The

Table 3. Independent Variables for a Multivariate Analysis of the Effect of Relative Economic Status on the Number of Births During the First Three Years of Marriage

Relative Economic Status Variables

BETW -- wife reported she was better-off than her parents.

WORSW -- wife reported she was worse-off than her parents.

SAMW -- wife reported her financial position was the same as her parents'.

BETH -- wife reported her husband was better-off than his parents.

WORSH -- wife reported her husband was worse-off than his parents.

SAMW -- wife reported her husband's financial position was the same as his parents'.

Background Status Variables

DHFO -- Duncan Socioeconomic Status Score for the husband's father's occupation.

WFB -- wife is living, or has lived, on a farm

WSIBS -- wife's number of siblings.

Other Variables

AAM -- wife's age at marriage

WED -- number of school years completed by the wife prior to marriage

BLK -- wife's race is black

PROT -- wife's religion is noncatholic

FMCHRT -- marriage duration is three to seven years.

SMCHRT -- marriage duration is eight to twelve years.

TMCHRT -- marriage duration is thirteen to seventeen years.

table also separates these fertility predictors into three groups: relative economic status variables, background status variables, and other variables. Presumably, the background status variables act together to influence the consumption perferences of the parental household, while the other variables either have weak and indirect effects on those preferences, or result from them. All of the independent variables are thought to have direct effects on the dependent variable.

The results of our analysis are displayed in Table 4. As indicated there, separate regressions were obtained for marriage duration subgroups. Besides accounting for the possibility that the accuracy of the responses to the questions about relative economic status may deteriorate as respondents become further removed from time of marriage, this procedure also controls for unmeasured periods effects. (To illustrate, the 3-7 year marriage duration subgroup consists of couples married between 1963 and 1967--a period of rapid social change and unprecedented economic growth. In contrast, the 13-17 year subgroup married during a comparatively stable period, 1953-1957.) Also, it should be restated that for each regression in Table 4, we examined a corresponding regression that substituted measures of the husband's relative economic status (BETH and WORSH) for the wife's measures. The results reported here do not differ from those obtained by these substitutions.

The analysis was designed to measure the direct effect of relative economic status on the number of births during the first three years of marriage. Three versions of a fertility equation were

Table 4. Standardized Coefficients for Regressors on Births in the First Three Years of Marriage

	Marriage Duration 3-7 Years; N=684. (Married between 1963 and 1967)		
	Version I	Version II	Version III
Relative Economic Status			
bETW		-0.039	-0.030
WRSW		-0.041	-0.051
Background Status Variables			
DHFO	-0.047	-0.046	
WFB	-0.035	-0.035	
WSIBS	+0.084*	+0.084	
Other Variables			
AAM	-0.172*	-0.173*	-0.171*
WED	-0.114*	-0.114*	-0.155*
BLK	+0.040	+0.041	+0.064
PROT	-0.236*	-0.234*	-0.236*
R^2	0.37	0.37	0.35

	Marriage Duration 8-12 Years; N=542. (Married between 1958 and 1962)		
	Version I	Version II	Version III
Relative Economic Status			
BETW		-0.001	-0.001
WRSW		-0.032	-0.045
Background Status Variables			
DHFO	+0.031	+0.032	
WFB	-0.022	+0.229	
WSIBS	+0.116	+0.112*	
Other Variables			
AAM	-0.042	-0.048	-0.029
WED	-0.099	-0.093*	-0.130*
BLK	+0.071	+0.068	-0.087*
PROT	-0.142*	-0.141*	-0.143*
R^2	0.26	0.26	0.24

Table 4. (cont.)

	Marriage Duration 13-17 Years; N=467. (Married between 1953 and 1957)		
	Version I	Version II	Version III
Relative Economic Status			
BETW		-0.050	-0.053
WRSW		-0.037	-0.055
Background Status Variables			
DHFO	+0.081	+0.081	
WFB	+0.025	+0.025	
WSIBS	+0.112*	+0.112*	
Other Variables			
AAM	-0.237*	-0.232*	-0.236*
WED	-0.047	-0.046	+0.051
BLK	+0.072	+0.070	+0.080
PROT	-0.178*	-0.178*	-0.188*
R^2	0.33	0.33	0.31

	Marriage Duration 17 or more Years; N=583. (Married Before 1953)		
	Version I	Version II	Version III
Relative Economic Status			
BETW		-0.074	-0.074
WRSW		-0.014	-0.016
Background Status Variables			
DHFO	-0.037	-0.038	
WFB	-0.025	-0.025	
WSIBS	-0.010	+0.001	
Other Variables			
AAM	-0.100*	-0.097*	-0.102*
WED	+0.031	+0.026	+0.011
BLK	-0.014	-0.010	-0.009
PROT	-0.142*	-0.146*	-0.144*
R^2	0.18	0.17	0.17

*--indicates the coefficient is significantly different from zero at the 0.05 level.

fitted. Version II includes all of the independent variables, for comparison with Version I, that omit the relative economic status indicators. Version III substitutes these indicators for the background variables. In Version III, it is presumed that any indirect effects of the background variables on fertility via the taste formation process will be captured by the coefficients for relative economic status, thereby tending to overestimate the direct effects of that status.

Neither Version II nor Version III provides any evidence whatsoever to support the hypothesis that relative economic status affects early marital fertility. None of the relative economic status coefficients are significantly different from zero, in any of the marriage duration subgroups. And Version II never adds to the explanatory power of Version I. Evidently there are no strong indirect effects of the background variables that get transmitted through relative economic status onto fertility, since the coefficients of the status indicators are the same in Versions II and III. Instead, the background variables seem to exert only direct effects on fertility--effects that get picked up by the other variables when the background variables are omitted, as often evidenced by the somewhat larger coefficients for the other variables in Version III.

The coefficients of the other variables do vary among marriage duration subgroups, implying that the structure of early marital fertility behavior has changed from period to period. Only the coefficient for the noncatholic dummy is consistently significant across all subgroups. The coefficients for wife's age at marriage

and education are significant in some subgroups but not in others. This suggests that existing knowledge of completed fertility differentials may provide inadequate clues about spacing patterns.

To complete the analysis of early marital fertility, we addressed the question of whether the effects of background and other variables might differ according to the wife's report of her or her husband's relative economic status. As demonstrated by Table 5, there is little, if any evidence of interactions between relative economic status and other fertility predictors. F-tests for the existence of separate regression structures by category of relative economic status consistently led us to reject the hypothesis of more than one structure.

V. Other Dependent Variables

Using the independent variables in Table 3, further regression analyses were performed to examine the possibility that relative economic status affects other fertility or fertility-related variables, including: 1) the number of live births; 2) desired family size;[2] 3) wanted fertility, which is the sum of the number of wanted births[3] that have occurred plus the additional number of children intended; 4) unwanted fertility; and 5) the number of planned births during the first three years of marriage, excluding those who had an unplanned birth during this period. For the first three dependent variables, the analysis was for all women and for a recent marriage duration group. For the fourth, the analysis was for all women. For the fifth, all women except those married less than three years comprised the analysis sample.

Table 5. Standardized Regression Coefficients for Regressors on Births in the First Three Years of Marriage, Stratified by Wife's Reports on Financial Feelings

	Better Off, for:		Worse Off, for:		Same, for:	
	Herself	Husband	Herself	Husband	Herself	Husband
Background Status Variables						
DHFO	+0.042	+0.025	-0.001	+0.013	-0.099	-0.068
WFB	+0.007	+0.002	-0.034	-0.037	-0.041	-0.043
RSIBS	+0.093*	+0.090*	+0.055	+0.047	+0.066	+0.053
Other Variables						
AAM	-0.127*	-0.127*	-0.197*	-0.205*	-0.084	-0.118
WED	-0.036	-0.058	-0.050	-0.010	-0.058	-0.014
BLK	+0.049	+0.051	+0.005	+0.001	+0.087	+0.073
PROT	-0.162*	-0.159*	-0.188*	-0.174*	-0.180*	-0.212*
FMCHRT	+0.029	+0.025	-0.058	-0.070	-0.012	-0.001
SMCHRT	+0.181*	+0.154*	+0.071	+0.111*	+0.100	+0.101
TMCHRT	+0.101*	+0.082*	+0.063	+0.083	+0.108	+0.136*
R^2	0.28	0.27	0.33	0.33	0.33	0.33
Unweighted N =	1123	1204	788	740	365	332

*--indicates the coefficient is significantly different from zero at the 0.05 level.

In no case did we find strong effects for wife's financial feelings, whether strength is measured in terms of additional variance explained, or in terms of the relative magnitude and statistical significance of standardized coefficients. Furthermore, even the rare instances of significant coefficients did not support the Easterlin fertility hypothesis. More often than not, the signs on these coefficients refute the hypothesis of a positive effect of greater relative income.

VI. Summary and Conclusion

Based on a cross-section multiple regression analysis for once-married currently married women with once-married husbands who reported whether they felt financially better- or worse-off at the time of marriage than their parents when respondents were adolescents, we find no evidence to support the hypothesis that relative economic status influences fertility. This finding conflicts with evidence from studies of highly aggregated time-series data. Although circumstantial evidence suggests that we may be reasonably confident about the validity of the survey measures of relative economic status, one cannot rule out the possibility that these measures are invalid. In addition, the conflict between our findings and others might be explained in part by the fact that we ignore relative economic status effects on age at marriage. Nevertheless, assuming the validity of our variables, this paper demonstrates that relative economic status had little effect on the early marital fertility of women under age 45 in 1970.

NOTES

[1]Also, it should be kept in mind that Duncan scores are a linear combination of income and education; changes in Duncan scores need not indicate income changes.

[2]Desired family size is measured by the response to the following question:

> Q221: Given the circumstances of your life, how many children <u>in all</u> would you really consider the most desirable for you and your husband?

[3]Measurement of wanted and unwanted fertility is discussed by Ryder and Westoff (1972).

References

Ben-Porath, Yoram. 1975. "First-Generation Effects on Second-Generation Fertility." Demography 12(3): 397-405.

Campbell, Arthur A. 1974. "Beyond the Demographic Transition." Demography 11(4): 549-561.

Easterlin, Richard A. 1962. "The American Baby Boom in Historical Perspective." National Bureau of Economic Research, Occasional Paper 79. New York. Out of Print.

Easterlin, Richard A. 1966. "On the Relation of Economic Factors to Recent and Projected Fertility Changes." Demography 3(1): 131-153.

Easterlin, Richard A. 1969. "Towards a Socioeconomic Theory of Fertility: A Survey of Recent Research on Economic Factors in American Fertility." In Fertility and Family Planning: A World View, edited by S.J. Behrman, Leslie Corsa, Jr., and Ronald Freedman, pp. 127-156. Ann Arbor: University of Michigan Press.

Easterlin, Richard A. 1973. "Relative Economic Status and the American Fertility Swing." In Family Economic Behavior, edited by Eleanor Bernert Sheldon, pp. 170-223. Philadelphis: J. B. Lippincott.

Easterlin, Richard A. 1975. "An Economic Framework for Fertility Analysis." Studies in Family Planning 6(3): 54-63.

Featherman, David L., Sobel, Michael, and Dickens, David. 1975. "A Manual for Coding Occupations and Industries into Detailed 1970 Categories and a Listing of 1970 Basis Duncan Socioeconomic and

NORC Prestige Scores." Center for Demography and Ecology Working Paper 75-1. University of Wisconsin-Madison.

Freedman, Deborah S. 1963. "The Relation of Economic Status to Fertility." American Economic Review 53 (3): 414-426.

Gwartney, James. 1970. "Changes in the Nonwhite/White Income Ratio--1939-67." American Economic Review 60(5): 872-883.

Lee, Ronald D. 1974. "Forecasting Births in Post-Transition Populations: Stochastic Renewal with Serially correlated Fertility." Journal of the American Statistical Association 69(347): 607-617.

Lindert, Peter H. 1974. "American Fertility Patterns Since the Civil War." Center for Demography and Ecology Working Paper 74-27. University of Wisconsin-Madison.

Meier, August, and Rudwick, Elliott M. 1966. From Plantation to Ghetto. New York: Helag & Wong.

Reiss, Albert J. 1961. Occupations and Social Status. New York: The Free Press.

Rindfuss, Ronald R. and Bumpass, Larry L. 1975. "Age and the Sociology of Fertility: How Old is Too Old?" Center for Demography and Ecology Working Paper 75-24. University of Wisconsin-Madison.

Rindfuss, Ronald R. and Sweet, James A. 1975. "The Pervasiveness of Postwar Fertility Trends in the United States." Center for Demography and Ecology Working Paper 72-25. University of Wisconsin-Madison.

Ryder, Norman B. and Westoff, Charles F. 1972. "Wanted and Unwanted Fertility in the United States: 1965 and 1970," in U.S.,

Commission on Population Growth and the American Future, Demographic and Social Aspects of Population Growth, ed. Charles F. Westoff and Robert Parke, Jr., volume I of Commission research reports (Washington, D.C.: U.S. Government Printing Office, 1973), pp. 467-487 (Y3. P81: 9/1).

Ryder, Norman B. 1973. "Contraceptive Failure in the United States." Family Planning Perspectives 5(3): 133-142.

Sklar, June and Beckov, Beth. 1975. "The American Birth Rate: Evidences of a Coming Rise." Science 189: 693-700.