# The Labor Supply Plans of Young Women

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## I. Introduction

In 1977, 14.3 percent of working non-white females were employed in professional jobs, and 28.6 percent were employed in sales or clerical positions. Only ten years earlier, the totals were 9.1 and 18.6 percent, respectively. Changes in the occupational distribution of white females have been similar to, but less dramatic than, the changes in the non-white female distribution. Both groups show movement toward professional, sales and clerical, and service (not private household) occupations and away from household service, operative, and farm labor positions.[1] Over the same period the non-white female labor force participation rate has only increased from 49.5 percent to 50.9 percent, but the white female participation rate has risen steadily from 40.1 percent to 48.1 percent.[2] Little empirical work has been devoted to looking at the shifting occupational distributions or to the determinants of the occupational choices of women.[3] The growing number of women in

the labor force and the importance of the occupational distribution of workers to studies of unemployment and manpower, and earnings and income distribution provide strong incentives to do research in this area.

This study is a beginning step in the process of finding the determinants of the occupational choices of women. The initial labor supply decisions of young single women are examined in an empirical model of occupational choice. The model characterizes the planning of a woman's initial occupation as interdependent with the planning of her education. Ordinary least-squares and logit techniques are used to estimate the two equations of the model. Separate models of labor supply plans are estimated for white and black single females, and the results from the two samples are compared.

In the next section the theoretical basis for the empirical model is outlined and the variables are introduced. Section III contains the results of the ordinary least-squares estimations, and the results of the logit estimations are presented in Section IV. The paper concludes with a short summary.

## II. A Framework for Studying Occupational and Educational Choice

The occupation decision is a complicated one for a young woman because the choice of an occupation is not independent from future schooling and family planning decisions. For example, for a woman to choose to become a medical doctor, she must consider the require-

[1] U.S. Department of Labor (21, pp. 75–81)

[2] *Ibid.*, pp. 33–37.

[3] Two excellent studies of female occupational choice are Mincer and Polachek (14) and Polachek (17). They argue that women who plan to be out of the labor force due to childbearing choose occupations in which their skills will depreciate at a very low rate, implying that their future earnings in these positions will be affected relatively less than in other occupations.

ment of going to medical school and the large amount of time she would spend studying and working instead of being with her future family. The many young women who plan to get married, and a few years later to drop out of the labor force to raise children, may choose a job that requires fewer years of education and that is more easily entered and exited.

Since this study focuses on the occupational and the educational choice relationship, a young woman is assumed to choose her family plans first; then with those tentative plans in mind, she simultaneously decides the occupation and education decisions.[4] After surveying all of the job possibilities and their respective education requirements, the woman chooses the most appealing job that she believes to be attainable. In the same decision-making process, she selects the education necessary for her to qualify for that job. The interdependence of the education and the occupation decisions suggests that a two equation model should be used when estimating the relationships. Planned occupation should be estimated as a function of variables that influence a woman's preferences for jobs, such as her socio-economic background and her educational aspirations. Her choice of education should also be estimated as a function of family background influences, and as a function of the job she desires. Note, however, that estimation of a set of two simultaneous equations by ordinary least-squares will result in biased coefficients in the structural equations.

Data for the estimations are taken from the National Longitudinal Surveys of Young Women, aged 14–24 in 1967. The sample was limited to black and white single women. The NLS provides information on the socioeco-

nomic backgrounds of approximately 5000 young women, and includes questions on occupational and educational plans. The dependent variables, denoted Occ and Educ, are the responses to the questions of what occupation they plan to have at age 35, and how many years of formal education they plan to obtain. Since the ordinary least-squares regression procedure requires continuous dependent variables, the Duncan Socioeconomic Index is used as a continuous measure for occupations. The Duncan Index of an occupation is an ordinal measure, running from 0 to 100, of the status of that occupation, and is based on the distribution of incomes and education levels of its participants.[5] "Housewife" does not have an index, and the samples for the OLS estimations include only those who plan to do market work.

Socioeconomic background factors served as the independent variables. Bowles and Nelson (3) show that a composite socioeconomic background variable comprised of measures of father's education, father's occupational status, and parents' income is significant in predicting the actual educational attainment and occupational status of their sample of males. Bowles (2) reports that father's education and occupational status are significant in predicting actual education level. The same variables are also used in the sociology literature on occupational success. Sewell and Hauser (20) include all three variables not only in their estimation of actual education and occupational status, but also in their models of college plans and occupational aspirations. Duncan, Featherman and Duncan (4) show father's education and occupational status affect actual education, occupational status, and college plans, and that father's occupational status influences occu-

pational status aspirations. Blau and Duncan (1) find that father's occupational status is a determinant of both actual education and actual occupational status. All of the aforementioned studies deal only with male samples. Leibowitz (10), however, states that father's education does influence educational achievement in her female sample, and Featherman and Hauser (5) find that father's socioeconomic status affects both education levels and occupational status in their female sample. Hence, father's education (FE), in number of years, and father's occupation (FO), as measured by a white collar job-blue collar job dummy variable, are included as independent variables in both of this study's simultaneous equations. The variables should reflect early inputs into human capital and attitude formation, and, as has been shown in these previous studies, are expected to be positive influences on educational and occupational plans.

If capital markets are imperfect in such a way that individuals borrowing to finance educational expenditures must pay different rates of interest based on their family's wealth, then the price of education will vary across individuals. Women from families with little wealth will face a higher price of education than women from families with high wealth, and therefore will demand less education. Indeed, Bowles (2) uses a family income variable as a proxy for wealth and finds it a significant predictor of education. Leibowitz (10) does not find family income to be significant in predicting education. A proxy for wealth (Wealth), yearly income per person in the household, is used in this study and is expected to positively affect educational plans.

Leibowitz (10) concludes that mother's education increases a young woman's educational attainment directly, and also increases it indirectly by raising the child's IQ. Sewell and Hauser (20) use mother's education to predict actual and planned job status, actual

education and college plans of males. Mother's education (ME) is expected in this study to influence positively both occupational and educational plans. The number of siblings of the young woman (SIB) is also included in the estimations, and is anticipated to negatively affect both occupational and educational plans. The greater the number of siblings, the lower the amounts of wealth and personal attention that are available per child, and Bowles (2), Leibowitz (10), Blau and Duncan (1), Featherman and Hauser (5), and others, all find a negative relationship between the number of siblings and either or both occupational status and educational attainment. Blau and Duncan (1) report that being from the South negatively affects occupational status and that this operates to a large extent through job availabilities; they further report that being from a rural area is negatively related to educational attainment. These findings provide a rationale for including South vs. non-South dummy variable (AREA) in the occupation equation, and an SMSA vs. non-SMSA dummy variable (SMSA) in the education equation. Finally, the National Longitudinal Surveys offer two additional variables that are used in this study, cultural exposure and attitude-toward-women-working. The cultural exposure variable (Culture) is an ordinal scale of exposure at age 14 to newspapers, magazines, and a library (0 (most exposure) to 3 (least exposure)), and is included in both structural equations as a proxy for family background inputs affecting the young woman's human capital and her preferences. The attitude-toward-women-working variable (Attitude) is an ordinal measure of the women's feelings about the propriety of women being in the labor force (3 (least favorable) to 15 (most favorable)), and is included in the estimating equation of occupational plans.

The two equation structural model is:
$$\text{Educ} = f(\text{Occ, FE, FO, Wealth, ME,}$$
$$\text{Sib, SMSA, Culture})$$

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[4]This is the first step in analyzing the labor supply decision, a next stage of study would be to present a more complicated model that would allow an interaction through time of the occupation, education, and family planning decisions.

[5]For further information about the Duncan Index, see Blau and Duncan (1, pp. 124–8); and Harrison (8, pp. 216–8).

Occ = g(Educ, FE, FO, ME, Sib, Area, Attitude);

and the reduced form equations are:

Educ = h(FE, FO, Wealth, ME, Sib, Area, SMSA, Culture, Attitude)

Occ = k(FE, FO, Wealth, ME, Sib, Area, SMSA, Culture, Attitude)

Although the exact form of the structural equations can be debated at length, this collection of variables does provide a more complete description of a young woman's background than is available in other studies of occupational choice, and the full effects of these variables on both occupation and educational plans can be traced through the reduced form equations.[6]

### III. Regression Results

#### Results from the Structural Equations

Column 1 of Tables 1 and 2 contain the significant coefficients from the estimation of planned occupation and planned education, respectively, by ordinary least-squares. The occupation results in Table 1 reveal the striking importance of planned education in the occupation decision. Planned education is significant at the .05 level for both subgroups; each additional year increases the socioeconomic index by 3.747 points for whites and 4.344 points for blacks. As expected, having a father who is a blue collar worker decreases the Duncan index of the planned job, and an increase in mother's education increases the index for white single women. The number of siblings significantly reduces the job expectations of white and black singles.

The only result that does not support our a priori hypotheses is the negative coefficient on

[6]A measure of ability, IQ, was available for part of the sample, but was omitted from this study due to research findings of Welch (22) and Griliches (7) that cast serious doubts on the appropriateness of IQ as a measure of ability. Rosen (18, p. 18) also comments on the current measures of ability, including IQ, "In sum, available measures of ability are nebulous at best."

TABLE 1. Occupation Equation Analysis For Single Women

| White Women Aged 14–24 | | |
| --- | --- | --- |
| | Structural (OLS) | Reduced Form (OLS) |
| Independent Variables* | | |
| Education | 3.747 | — |
| | (10.41) | |
| Father's Education | −.527 | — |
| | (−1.69) | |
| Father's Occupation | −3.261 | −4.403 |
| | (−1.92) | (−2.20) |
| Mother's Education | .980 | 1.644 |
| | (2.62) | (3.91) |
| Siblings | −.795 | −1.090 |
| | (−1.99) | (−2.29) |
| Culture | — | −5.406 |
| | | (−3.88) |
| $\overline{R}^2$ | .330 | .189 |
| F Statistic | 31.077 | 11.431 |
| Sample Size | 431 | 409 |

| Black Women Aged 14–24 | | |
| --- | --- | --- |
| Independent Variables* | | |
| Education | 4.344 | — |
| | (11.20) | |
| Siblings | −.821 | −.802 |
| | (−2.61) | (−2.02) |
| Culture | — | −4.876 |
| | | (−3.95) |
| $\overline{R}^2$ | .310 | .102 |
| F Statistic | 23.821 | 5.274 |
| Sample Size | 360 | 349 |

*Only coefficients significant at the .05 level are reported.
t-values are in parentheses.

the father's education variable. The negative sign is, however, consistent with the idea of role influences on young women. If a high father's education is coupled with a low mother's education, then a young woman may be influenced by the roles of breadwinner for the father and home-maker for the mother.[7] Re-estimating the occupation equation including both father's education and the difference

[7]See Laws (9) for a fuller explanation of the effect of roles in the occupational choices of women.

TABLE 2. Education Equation Analysis for Single Women

| White Women Aged 14–24 | | |
| --- | --- | --- |
| | Structural (OLS) | Reduced Form (OLS) |
| Independent Variables* | | |
| Education | .050 | — |
| | (9.16) | |
| Father's Education | .128 | — |
| | (3.23) | |
| Mother's Education | .138 | .183 |
| | (2.95) | (4.18) |
| Siblings | — | −.096 |
| | | (−1.97) |
| Culture | −.452 | −.455 |
| | (−3.00) | (−3.11) |
| SMSA | −.374 | — |
| | (−1.99) | |
| Wealth | — | .000** |
| | | (1.76) |
| $\overline{R}^2$ | .433 | .223 |
| F Statistic | 39.732 | 15.401 |
| Sample Size | 409 | 458 |

| Black Women Aged 14–24 | | |
| --- | --- | --- |
| Independent Variables* | | |
| Occupation | .058 | — |
| | (10.25) | |
| Mother's Education | .112 | .097 |
| | (2.28) | (2.09) |
| Culture | — | −.512 |
| | | (−4.56) |
| Area | — | .490 |
| | | (1.94) |
| $\overline{R}^2$ | .329 | .138 |
| F Statistic | 22.185 | 7.817 |
| Sample Size | 349 | 393 |

*Only coefficients significant at the .05 level are reported.
**Positive and less than .0005.
t-values are in parentheses.

between father's and mother's education yields a positive and insignificant coefficient on father's education, and a negative and significant coefficient on the education difference variable. One explanation for this result is that the greater the difference between the father's and the mother's education, the

stronger is the role of influence on a young white woman not to strive to be a career person.[8]

The education equation results listed in Table 2 reveal the strong influence of planned occupation on the education decision; coefficients are significant for both samples. The effect of father's education is significant for whites but not for blacks, but the coefficients on mother's education are significantly greater than zero for both races. The availability of reading materials in the home, as reflected in the culture variable, does positively influence the desired education level of white singles. The SMSA variable yields the puzzling result that single whites from an SMSA desire less education than those from a more rural area.

The picture of the occupational and educational choice process that emerges from these structural equations is that the choice is simultaneous, the occupation and the education variables exert strong influences on each other. The acquisition of education is motivated differently from within white families than from within black families. Young white women's education plans are heavily influenced by both parents, but the plans of young black women are only significantly responsive to changes in their mother's educations. Single white women's occupational choices may be subject to role influences in the home. Note that more coefficients in the white equations are significant than in the black equations, and by that criterion, the white singles' choice process conforms more to the theoretical hypotheses.[9]

[8]I thank John Raisian for his helpful comments on this point. When the same equation was run on the Black sample, coefficients on both father's education and the education difference terms were insignificant. The addition of the difference term lowered the $\overline{R}^2$s for both samples.
[9]The same structural equations were estimated by two-stage least-squares, and the results are available from the author upon request. Although the TSLS coefficients are consistent estimators, the $\overline{R}^2$ statistics are so

### Results from the Reduced Form Equations

Planned education and occupation appear only on the left-hand side of the reduced form equations, and the coefficients of the exogenous variables show their full effects on each of the two endogenous variables. For example, the structural equations for the white sample revealed that mother's education directly influences occupational choice, and that it directly influences educational choice. The full effect of mother's education on occupation is therefore its direct effect plus its indirect effect through its influence on education. Likewise, its full effect on education is its direct effect plus its indirect effect through helping to determine occupational plans.

The significant coefficients from the estimation of the reduced form occupation equation are listed in column 2 of Table 1. The coefficient for mother's education for the white sample does show its double influence on occupational choice; it is highly significant in the reduced form equation. Father's occupation has a strong effect on whites, but not on blacks, which points out again the apparent difference between races in parental influences. The number of siblings and the availability of reading material in the home influence occupational choice for both blacks and whites. As predicted, the fewer brothers and sisters a young woman has, the higher are her occupational plans. The cultural exposure variable's direct effect (from the structural occupation equation) is insignificant, hence much of its influence is indirect through increasing educational plans.

The education equation results, reported in

low for the reduced form equations (.1 to .22) that much information appears to have been lost by substituting the reduced form estimates of occupation and education plans, rather than the original data, into the structural equations. The TSLS results are, however, generally consistent with the OLS results, and support two main points brought out already: that the decision is a simultaneous one, and that the relationship of father's education to a single woman's education plans is more positive for Whites than for Blacks.

column 2 of Table 2, indicate that the major determinants of educational choice for white singles are wealth and the home environment influences of mother's education, number of siblings, and cultural exposure. Black singles are also influenced by their mother's education and by cultural exposure in the home. They are also positively influenced by being from the South. This regional difference for blacks could perhaps be reflecting a reaction on the part of blacks to greater discrimination in earnings in the South.[10] To qualify for well-paying occupations in the South, black women may feel they need more education than white women applying for the same position.

The structural and the reduced form equation results indicate that young white single women make an interdependent education and occupation planning decision. They base their plans on the role models they see in their families, on their family's wealth, and on their home environment as measured by the number of siblings, cultural exposure and mother's education. The significance of the home environment variables supports the contention of Leibowitz (10) and others that home inputs increase a young woman's human capital, and the early increase in human capital will later be transformed into higher achievements in the labor market. The transformation mechanism includes raising the labor supply plans of young women. Single black women go through a similar interdependent decision process, but the positive influences of father's education and family wealth do not exist as they do for whites.

## IV. Logit Results

### The Logit Technique

The regression technique mentioned in the previous section requires the dependent vari-

[10]Moore (15) finds greater earnings discrimination in the South than in the non-South.

able to be continuous, and so the Duncan Index was used as a proxy "occupation" variable. Occupations are, however, multi-dimensional activities, and arranging them into one continuous measure can be misleading. For example, the Duncan Index for both receptionists and electricians is 44, yet some women may have definite preferences for or against becoming a receptionist or an electrician. The discrete and multi-dimensional nature of jobs has made the choice of actual occupations very difficult to estimate until the recent development of logit analysis.[11] The logit technique enables researchers to estimate the probability that an individual will choose any certain occupation. The coefficients derived by this method are consistent and asymptotically normal estimates of the true parameters. The estimated functional form is derived from the cumulative logistic distribution function, which varies from zero to one. These properties are improvements over those of linear probability estimates which suffer from heteroscedastic error terms and the possibility that the predicted probabilities will fall outside of the unit interval.

The logistic distribution function is:

$$P_i = \frac{e^{X\beta_i}}{\sum_{n=1}^{Q} e^{X\beta_n}} \qquad \text{(IV-1)}$$

for $P_i$ equal to the probability that the $i^{th}$ of $Q$ total occupations is selected. $X$ represents the vector of explanatory variables, and $\beta$ represents the vector of coefficients associated with each occupation. The logit equations can be derived by choosing the first occupation as a benchmark group and setting the elements of $\beta_1$ equal to zero, dividing each of the other $P_i$ by $P_1$, then taking the natural logarithm of

[11]The Luce (11) and McFadden (12) (13) studies provide a link between consumer choice theory (as in the choice among occupations) and the empirical logit estimation technique. The estimation technique is explained in Nerlove and Press (16) and Wilson (23). Schmidt and Strauss (19) use logit analysis to predict occupations.

the expression. This procedure yields the logit equations:

$$\ln\left(\frac{P_i}{P_1}\right) = X\beta_i, \qquad \text{for } i = 2, \ldots, Q. \quad \text{(IV-2)}$$

Equations (IV-2) state that the log of the odds of choosing one occupation over another is a linear function of the explanatory variables. Asymptotic t-values on the individual $\beta_i$ coefficients are used to test the hypothesis that the explanatory variable significantly affects the logarithm of the odds that one specific occupational or educational category is selected instead of the benchmark category. These logit equations results will complement the more general results of the OLS regressions by focusing on the differences in characteristics that cause individuals to plan one specific occupational category over another specific occupational category.

Occupations are aggregated into five categories for the estimation:

> Category 1—professional and managerial
> Category 2—sales and clerical
> Category 3—craft and operative
> Category 4—service
> Category 5—housewife

Education levels are also divided into five categories:

> Category 1—less than a high school degree
> Category 2—a high school degree
> Category 3—a high school degree plus less than four years of college
> Category 4—a college degree
> Category 5—more than a college degree

Category 1 is the benchmark group for each estimation.

### Results of the Estimations

Table 3 contains the significant coefficients and their t-values from logit estimations of the reduced form equations. The left column

TABLE 3. Logit Equation Analysis for Single Women*

| Logarithm of the Odds | Constant | Father's Educ. | Father's Occ. | Mother's Educ. | Siblings | Culture | Area | SMSA |
|---|---|---|---|---|---|---|---|---|
| **A. OCCUPATION EQUATION—WHITE SAMPLE** | | | | | | | | |
| $P_2/P_1$ | — | — | .9381 (3.14) | -.2169 (-3.18) | — | — | — | — |
| $P_3/P_1$ | — | — | — | -.5464 (-3.45) | — | 1.1608 (2.38) | — | — |
| $P_4/P_1$ | — | — | .8645 (1.79) | -.2062 (-2.24) | .1930 (2.00) | 1.0374 (3.64) | — | — |
| $P_5/P_1$ | — | -.2317 (-2.04) | — | — | .3841 (3.00) | .6653 (1.71) | | |
| **B. OCCUPATION EQUATION—BLACK SAMPLE** | | | | | | | | |
| $P_2/P_1$ | -1.879 (-1.73) | — | 1.6908 (2.95) | — | — | — | — | — |
| $P_3/P_1$ | -4.148 (-1.80) | — | — | — | — | 1.1889 (3.35) | -1.4895 (-1.82) | — |
| $P_4/P_1$ | -3.110 (-2.13) | — | — | — | — | .6378 (3.01) | — | — |
| **C. EDUCATION EQUATION—WHITE SAMPLE** | | | | | | | | |
| $P_3/P_1$ | — | .3064 (2.09) | — | — | — | -.8999 (-1.97) | — | — |
| $P_4/P_1$ | — | .3229 (2.33) | — | .2889 (2.17) | — | — | — | — |
| $P_5/P_1$ | — | .2774 (1.91) | — | .3301 (2.25) | — | -1.5488 (-2.74) | — | — |
| **D. EDUCATION EQUATION—BLACK SAMPLE** | | | | | | | | |
| $P_4/P_1$ | — | — | — | — | — | -.9115 (-1.96) | — | -1.7718 (-1.79) |
| $P_5/P_1$ | — | — | — | — | — | -1.3136 (-2.67) | 1.9330 (1.76) | — |

*Only coefficients significant at the .05 level are reported.
Asymptotic t-values are in parentheses.
The variables in the equations are: Occ = f (FE, FO, Wealth, ME, Sib, Culture, Area, SMSA, Attitude); Educ = g (FE, FO, Wealth, ME, Sib, Culture, Area, SMSA, Attitude).

in Table 3 shows the dependent variables in the logit equations (IV-2), and the coefficients of the explanatory variables are listed in the other columns. Parts A and B record the occupation equation results for whites and blacks, respectively; and parts C and D contain the results for the education equation. Likelihood ratio tests reveal that the set of explanatory variables is significant at the .05 level in each equation for only the black group. The signs of the coefficients in the logit estimations are generally, but not totally, consistent with the decision process described by the OLS regressions. The different effects of the fathers in white and black families are illustrated in both the occupation and education results. A high father's education increases the probability of planning a professional job over planning to be a housewife, and increases the probability of choosing

some college or higher over the base category, less than a high school degree, for the white women. Having fathers with blue-collar employment increases the probability of choosing either a sales and clerical or a service job over a professional job in the white sample. Father's education is not significant in either of the equations for the black samples, and having a father who is in blue collar employment is only significant in increasing the probability of choosing a sales and clerical position over a professional job for the black women. The logit occupation equation results show that a high mother's education increases the probability of choosing a professional job over other market work and a college degree or more over less than a high school degree for white women, ceteris paribus. The effect of mother's education suggests an interdependence of the occupation and education decision. Those single white females with mothers who are highly educated have a higher probability of planning professional jobs and the appropriate corresponding higher levels of education than those with mothers with lower levels of education.

The results of the number of siblings and the cultural exposure to newspapers, magazines and libraries variables show that they also influence labor supply decisions among the dependent categories. Having many siblings increases the probability of choosing the service or the housewife category over the professional category for white women. A higher level of cultural exposure increases the probability of selecting professional over all but sales and clerical for whites, and over craft and operative and service categories for blacks. These increases in plans for professional jobs are accompanied by increased probabilities of choosing many of the higher level of education categories for both groups.

Two results are not consistent with the OLS predictions. The first is that the role

model hypothesis for white singles of breadwinner for father and homemaker for mother is not supported by the logit result of a high father's education, mother's education held constant, increasing the probability of choosing the professional over the housewife category. The second is that neither mother's education nor number of siblings is significant for the black sample in any of the logit equations.

The coefficients and the average characteristic values for blacks and whites in the samples were substituted into equations IV-1, and the probability that the average person in each sample would choose each of the categories was calculated. The probabilities are shown in Table 4. Just over 40% of average white women and just under 40% of average

TABLE 4. Probabilities for the Average Person in Each Sample*

| A. OCCUPATION | | |
|---|---|---|
| Category | White | Black |
| Professional, Managerial | 41.3 | 39.8 |
| Sales, Clerical | 43.7 | 37.8 |
| Craft, Operative | 1.2 | 5.5 |
| Service | 11.9 | 16.9 |
| Housewife | 1.9 | 0.0** |

| B. EDUCATION | | |
|---|---|---|
| Less than High School | 1.4 | 2.7 |
| High School Degree | 25.7 | 33.2 |
| Less than College Degree | 24.2 | 29.0 |
| College Degree | 38.7 | 29.3 |
| More than College Degree | 10.0 | 5.7 |

*All calculations assume the woman is in an SMSA in the non-South, with a father in a blue collar job. The average values used for the occupation equations are, for (Whites, Blacks): Father's education (11.48, 7.7), mother's education (11.57, 9.19), number of siblings (2.86, 5.44), attitude (9.45, 10.17), cultural exposure (.39, 1.25), and wealth (2545.66, 1069.64). The average values used for the education equation are, for (Whites, Blacks): father's education (11.55, 7.74), mother's education (11.59, 9.1), number of siblings (2.87, 5.41), attitude (9.42, 10.11), cultural exposure (.37, 1.28), and wealth (2921.15, 1254.46).

**The probability is positive and less than .05 percent.

black women would choose each the Professional and Managerial and the Sales and Clerical category.[12] In accordance with these job plans, very few women plan to obtain less than a high school education. A striking feature of the probabilities are the low percentages who would choose to be housewives. If only 1.9% of whites and almost no blacks actually become housewives, the trend toward women participating in the labor force will continue to be strong. The low percent for an average black single to choose to be a housewife reflects a breadwinner aspect of the female role in the black family. Considering the OLS and the logit results together, it appears that black mothers exert a strong influence on their daughter's job and education plans, and that these daughters expect to be labor market participants, although choosing better jobs than their mothers have taken.[13] The young women in the National Longitudinal Surveys were aged 14–24 in 1967, and are only now beginning to reach the age of 35, the age which the occupational plans question specifies. But since 1967, a strong shift of working women toward professional and sales and clerical jobs has indeed occurred, and the labor force participation rate of females has continued to increase.

## V. Conclusions

Several conclusions can be drawn from this study of the labor supply plans of young

[12]Although a large number of women chose occupations in Category 1, most chose professional jobs rather than managerial. In the raw data, only 11 out of 565 White women and only 9 out of 614 Black women chose managerial positions. The Bureau of Labor Statistics lists 6.2% of working White females and 2.8% of working Black females were in managerial positions in 1976, and to the extent that the plans of women are a guide to their future, these small percentages will continue for some time.

[13]See Freeman (6) for information on the recent labor market advances of Black women.

women. Young women choose their educations and their occupations simultaneously. Planned education is significant in the occupation decision, and planned occupation is significant in the education decision. The data indicate that those factors that tend to cause young women to select professional jobs also cause them to choose high levels of education. This interdependence implies that not only should studies of occupation-related variables include education, but also that studies of education should include occupation plans. For example, a woman's decision to drop out of high school may be a rational action based on her family and occupational plans. If her planned occupation does not reward further education, then she should stop her education at a low level. Similarly, studies of the labor force participation of a young woman need to take into account her market and non-market incentives to stay in or to quit school.

The occupational choice process appears to be different for white females than for black females. The mother exerts a positive influence on the plans of her daughter for women of both races, but the father's labor market activities are more correlated with the daughter's plans in the white family than in the black family. The white single group may be affected by the roles played in the household by their mothers and fathers; and both whites and blacks are influenced by their home environment as measured by the cultural exposure variable. Other socioeconomic background variables are important in the choices among occupations and among education levels, and in the entire choice process itself. Two of these are the influence of family assets on the plans to acquire education, and the effect of the number of siblings on both occupation and education plans. These results indicate that as family incomes increase and if the number of children in families continues to decrease, women will plan and prepare for high status occupations.

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