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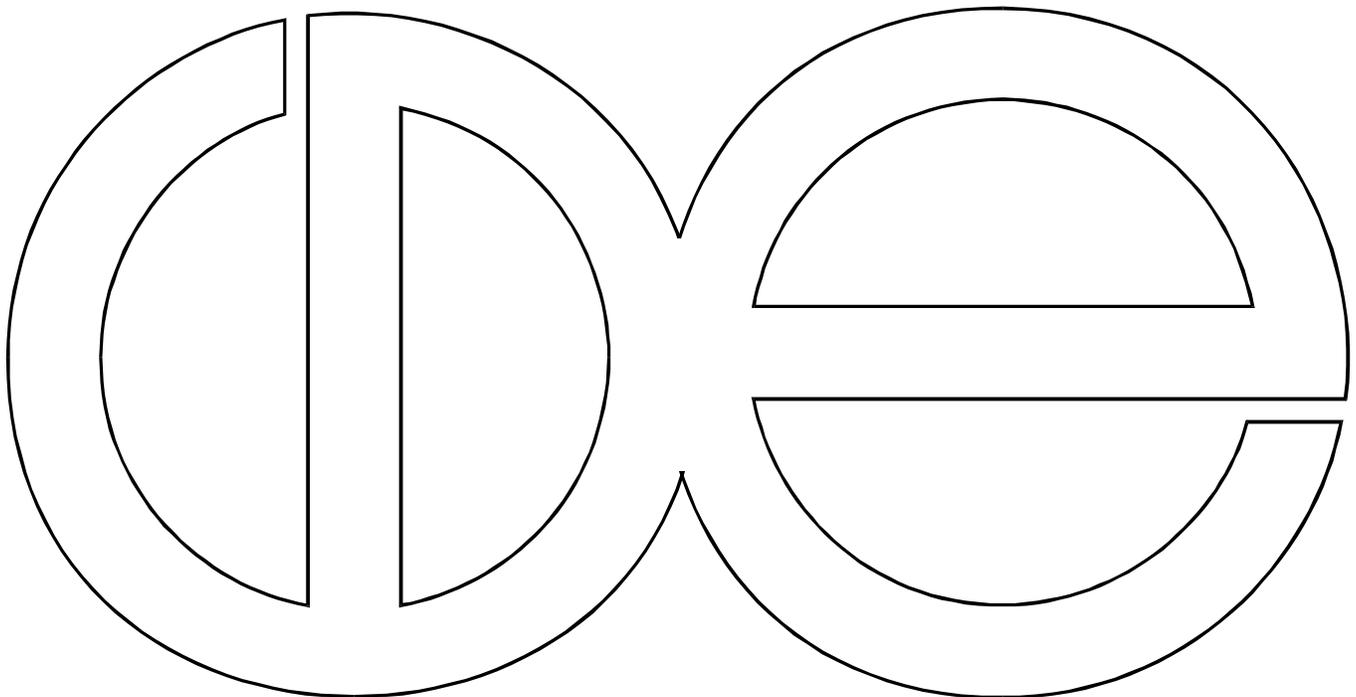
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Women at Work: A Study of the Factors

Influencing Women's Employment, 1972-1985

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CDE Working Paper No. 98-27

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INTRODUCTION

The 1970s ushered in many important changes in women's labor market experiences. As occurs in most periods of recession, the early 70s saw a fairly substantial rise in unemployment rates, especially among Black women. In addition, during this period, White women made the most meaningful gains on Black women in terms of overall labor force involvement and the percentage of White women employed.

The labor force participation rates of Black and White women began converging as early as the 1960s (Malveaux 1981; Farley 1985; Amott & Matthaei 1991). It took until the late 1970s, however, to eliminate racial differences in rates. With respect to the employment-population ratios, the racial difference for these groups of women exhibited a complete reversal over the same period such that, by the late 70s, the ratio for White women exceeded that for Black women. These changes in the employment patterns of Black women and White women represent an important break from historic trends.

The labor market involvement of men also varied over the 70s and 80s and, unlike the experiences of women, have received a great deal of attention in recent years, especially in light of the work of William J. Wilson (1978, 1987). This paper explores the labor market outcomes of Black and White women over the 1970s and 1980s and attempts to identify the factors associated with the specified changes. The subsequent analysis attempts to determine whether changes in labor force status may be linked to particular demographic sub segments

of the Black and White populations or whether changing familial situations among these two groups of women account for the aforementioned trends.

LITERATURE REVIEW

Historically, discrimination and demographics separated the labor market experiences of Black and White women. Low wages and residence in predominantly rural areas represented two of the factors which kept Black women in the labor force even after the end of the sharecropping system. Until recently, Black women's labor market involvement exceeded that of Whites in terms of both higher civilian labor force participation rates[1] and higher employment-population ratios.[2] In addition, among those in the labor force, the unemployment rate has been and continues to be higher for Blacks.

One period of increase in White women's labor force participation began during World War II. Participation among women had increased during the first world war as well, but at its conclusion, many women left industrial work and returned to household based activities. After the second world war, however, women not only remained in the labor force in larger numbers but the overall rates of participation for women began to increase. These increases in the rates of participation occurred among both Black and White women in the 1950s but the rates were much larger for Whites given their lower base of participation starting out.

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[1]The U.S. Department of Labor's Bureau of Labor Statistics defines the civilian unemployed as "all civilians without jobs, but available for work who had: made an effort to find a job in the past 4 weeks, were waiting to be recalled to a job for which they had been laid off or were waiting to be called to a new job within 30 days." Similarly, the Bureau's definition of the civilian employed includes all those "civilians with jobs and working or with jobs but [temporarily absent from said job i.e., due to illness, weather, etc.]" (1982:460). Individuals who fall into either of these categories are said to be involved in the "labor force." Calculating the labor force participation rates therefore involves dividing the number of persons involved in the labor force by the number of persons in the total population of working age (16-65).

[2]Based on the definitions given previously, the civilian employment-population ratios are therefore "the proportion of the civilian population that is employed" (Bureau of Labor Statistics 1982:460).

Eventually, as the labor force participation rates between these two groups of women converged, White women's employment-population ratios approached and then surpassed those of Black women (U.S. Dept. of Labor: Bureau of Labor Statistics 1988). This switch-over in the employment-population ratios of Black and White women represents an important milestone in women's labor market involvement and calls into question previous claims of increasing equality in Black-White economic outcomes since it occurred at a time of improving employment opportunities for White women and stagnating or even declining opportunities for Blacks.

In an attempt to demonstrate a widening of the economic gap between Blacks and Whites, Cotton (1989) noted the rising unemployment rates (especially among very young women) and the much lower rate of increase in labor force participation for Black women as opposed to White women. For example, his data showed that Black women increased their labor force participation by three percentage points between 1954 and 1975 but the comparative increase for Whites was as much as 12.5 percentage points. Additional data over the same time period suggests that the increase in labor force participation for Blacks came from increases in both unemployment and employment, while a majority of the increase for Whites was a function of greater numbers of employed women in the labor force (Farley 1984).

In a 1993 working paper, Wilson, Tienda and Wu[3] supported both Cotton's claims of a widening gap in economic outcomes for Blacks and Whites and the assertion that unemployment has been a special problem for a majority of Blacks. Wilson et al. focused on

changes by demographic composition (most notably education). On the other hand, changes by demographic characteristics accounted for only 43% of the increase among Non-blacks. These findings suggested that changes in the demographic composition of the Black female population played a more prominent role in the increasing propensity to enter the labor force than for White women. Specifically, changes in the education composition of Black women favored those subgroups most prone to enter the labor force; without these compositional changes the increase in labor force participation among Blacks would not have been as large.

Education, age, marital status, and fertility are only some of the variables thought significant for understanding changes in women's labor market outcomes. The present analysis focuses on these and several other variables in an attempt to assess the factors responsible for the changes in labor market status previously outlined. More specifically, I intend to outline the reasons for the convergence and subsequent switch-over in the proportions of women involved in paid employment, including identification of general labor market conditions and the effect of changes in particular characteristics associated with the two racial groups.

My model specification draws a distinction between what I refer to as "demographic" variables and "family structure" variables although, among the factors considered, all would traditionally be considered demographic characteristics. The basis for the distinction rests in the relationship of each variable to a woman's propensity to enter the labor force and obtain employment. The studies cited suggest that although both Black and White women experienced similar changes in labor market standing over the past several decades, changes were more profound for White women and occurred among White women with particular

family characteristics. In some respects, changes in the labor market standing of Black and White women are due to changes in the necessity and the preference women feel towards working; a fact which is also reflected to some extent in the demographic and family structure variables included in this analysis.

Demographic Variables:

Age: With respect to age, White women's labor market involvement traditionally followed a U-shaped trend. Most White women entered the labor force at young ages and maintained their level of involvement until marriage, at which point they dropped out. At later ages, after completing their child rearing, many women returned to the labor force, often in a part-time capacity. This trend was interrupted in the 1970s as women began to marry later and return to the labor force more quickly after the birth of a child. Unemployment rates did not change considerably over this period although they tended to be inversely associated with age such that young White women who entered the labor force were the least successful in finding paid employment.

The trends by age for Black women have traditionally been much different than those for Whites with Blacks exhibiting high rates of labor market involvement at all ages. The aforementioned problems of unemployment also tended to be exacerbated in the case of young Black women which in turn translated into greater nonparticipation on the part of these women (Farley and Allen 1989). These points suggest that over the 1970s and 80s, labor market involvement increased primarily for women in their mid 20s to early 40s regardless of racial background. At other ages, participation in the labor force remained relatively stable (in the case of older women) or declined (in the case of younger women). Not surprisingly,

however, labor studies which standardize by age still report Black-White differences in employment patterns (Farley 1984) which suggests the significance of other factors in determining labor market status.

Education: Educational attainment has also heavily influenced employment status, especially with recent changes in the significance of service sector jobs. A college degree evolved to represent the minimum entry-level requirement for an ever expanding number of occupations. The author of a recent text documented a peak in college enrollment among Black women in the mid 1970s. The overall trend "show(s) a narrowing of racial gaps [in college enrollment] in the 1970s with Black and White women at near parity in the mid 1970s. Since then, however, the enrollment of African Americans has fluctuated and the racial gap has increased" (Healey 1995:276). Based on this data, we may expect that a declining percentage of Black women were academically prepared for the changing labor market of the 1980s.

Several studies document the particular significance of a college degree for Black women in the early 70s. For example, Corcoran and Parrott (1992) found that throughout the mid to late 70s White women at every educational level increased their participation in paid employment whereas, among Blacks, employment increased only for women with some college and declined at other education levels. Among those women with a college education, Tienda, Donato and Cordero-Guzman (1992: 385) noted that in 1980 Blacks were 32% more likely to be employed than out of the labor force than comparably educated Whites but were also more likely to be unemployed. Over the 70s and 80s, therefore, it

appears that educational attainment had a generally positive impact on the labor force involvement among Black women.

Region: In addition to age and education, employment outcomes have consistently been found to differ by region. In general, the greatest racial disparities in labor market outcomes have been found in the Northeast and North Central regions of the country (Corcoran and Parrott 1992; Wilson, Tienda and Wu 1993). According to the authors of a recent study, the prospects for actually obtaining employment were greater for Blacks in the South and West (Cohn and Fossett 1995). These authors suggested that regional disparities deserve more systematic analysis in part because the patterns run counter to conventional expectations. Cohn and Fossett pointed out that Blacks moved to the North and Midwest during the Great Migration precisely because racial inequalities in occupation, education and income were generally lower there than in the South. Although the reasons for these disparities are not addressed in the present paper, region is considered as an important factor influencing labor market outcomes.

Central City Residence: The influence of central city residence on labor market position has also not been the same for Blacks and Whites. Corcoran and Parrott (1992) found that central city residence did not influence the employment status of young White women but led to substantial disadvantages for young Blacks. Young Black women living in the central cities of major metropolitan areas remained out of the labor force in larger numbers and among those entering the labor force, their unemployment rates were higher than those for most other groups. Some researchers blamed declines in manufacturing in these regions and population movements out of central cities as well as the combination of

poor education and training within central cities for these disparities between Blacks and

Whites (Wilson 1978; Nord, Phelps and Sheets 1988).

Family Structure Variables:

  Female Headship: Data collected on female household heads suggests that

throughout the 70s and 80s these women experienced some problems obtaining employment

once they entered the labor force. The Department of Labor found that, in 1974, the

"unemployment rate for women family heads with no other worker in the family was 7% and

with one or more other workers was 5.4%" (U.S. Department of Labor 1975). Increases in

the number of families headed by women, therefore, likely led to a growth in one segment of

the population experiencing unfavorable labor market outcomes.

  Evidence from Ross and Sawhill demonstrated the growth in female-headed

households. These authors noted in the mid 70s,

> Over the past decade, female-headed families with children have
> grown almost 10 times as fast as two-parent families. ... As a result,
> by the mid-1970s, one out of every seven children in the United
> States lived in a family where - whether because of death, divorce,
> separation or an out-of-wedlock birth - the father was absent
> (1975:1).

  Examining the period from 1960 to 1983, Farley showed that while the percentage of

husband-wife families declined significantly among both Blacks and Whites, Blacks were

responsible for a disproportionate share of the decline. His data indicated that "between 1960

and 1983, the proportion of all Black families headed by a woman rose from 20 to 42% ...

while the percentage for Whites went from 8 to 12%" (1985:22). The fact of this greater

increase in the number of female-headed households among Blacks and the subsequent greater

unemployment rates for females heading households may account for part of the larger

increase in Black women's unemployment rates compared with Whites.

Marital Status: As a related factor, marital status could also account for important

racial differences in employment status. Corcoran and Parrott identified married women as

one large segment of the White population responsible for the great "influx of White women

into the labor force" (1992:2). This claim was echoed in one text which asserted that, "The

largest [increases in labor force participation] have been for married women" (Reynolds,

Masters and Moser 1991). The authors of this text indicated that in 1947, the labor force

participation of married women stood at 22% but, by 1982, this rate had increased to 52%

(ibid.).

Although participation rates increased for married women of both racial groups, White

wives clearly accounted for most of the change. White wives' labor force involvement lagged

behind that of Blacks but it showed some increase at a time of stagnation for the latter. For

example, Jones found a steady rate of participation among Black wives with husband present

(at about 37%) from 1940 to 1950. The rate for White wives, in contrast, increased from

24.5% to 28.4% over the same period (Jones 1985).

Household Income: Additional household income also influences a woman's decision

of whether or not to enter the labor force. Neoclassical economics suggest that labor market

involvement depends heavily on the degree of supply and demand of workers and on rational

decision-making on the part of potential workers. Under neoclassical assumptions the supply

of labor may respond to average household income. Households in which income sufficiently

meets demands for goods and services are expected to contain fewer individuals in paid and/or full-time employment.

In some respects, American households conformed to these assumptions. Consistent with the aforementioned neoclassical economic assumptions, White women traditionally entered the labor force only if they remained single, had dependents or if their husband's income insufficiently supported the family; a trend apparently broken in the 70s and 80s. The standard assumptions did not hold up as well in the case of Black families, however. In 1970, Black median family income increased to 60% of that of Whites but it stagnated at that level throughout the 1970s and 1980s (Reynolds et. al. 1991). Although the comparatively lower median income levels for Blacks may have been responsible for some portion of Black women's greater labor market involvement it does not completely account for higher participation levels. In contrast to the rationalist assumptions, Black women have worked in larger numbers despite family circumstances. For example, Goldin (1990) found that Black women entered the labor force in larger numbers than White women across the income spectrum.

Presence of Small Children: Prior to the most recent changes in labor market involvement the presence of small children in a household reduced the likelihood of a White woman entering the labor force but did not similarly affect the employment of Black women (Sweet 1973; Sweet & Lowe 1974; Bumpass & Sweet 1977; Wallace 1980). However, as demonstrated in one study of the employment practices of new mothers, some degree of convergence occurred with respect to the trends in mothers' employment. The findings suggested an increase in the labor force involvement of White women immediately after the

birth of their youngest child (usually in the form of paid or unpaid leave) but constancy in the labor force involvement for similarly situated Black women (Yoon and Waite 1994).

As was the case for several of the previously referenced variables, the general trend with respect to the presence of children appears to be that of increasing labor market involvement on the part of particular subgroups of White women and stagnation or even decline in the levels of participation for the same subgroups of Black women. Coupled with the generally higher unemployment rates of Blacks, it is perhaps not surprising that increasing labor force participation on the part of all women has meant that a larger proportion of White women than of Black women actually obtain employment.

DATA AND METHODS

The current analysis examines changing labor market outcomes for Black and White women between 1970 and 1985. Specifically, I hope to address the question of how increasing labor force participation on the part of all women has induced a reversal in the trends associated with paid employment. Results from previous studies suggest that basic changes in economic conditions and family circumstances account for these changes. I intend to provide a more comprehensive analysis of these claims than has heretofore been accomplished. Based on the results reported from Lichter and Costanzo (1987), I expect to find that demographic and family characteristics do not have the same impact on the labor market outcomes of Blacks and Whites across the study period. I also expect greater persistence in the trends of labor market involvement for White women net of the proposed factors.

I derived the data for this study from March supplements of the Current Population Survey (CPS), 1970 through 1985 survey years.[5] Each year of data contained between 39,000 and 54,000 civilian working aged (16 to 65) women. Non-Hispanic Blacks accounted for approximately 11% of the women in each extract while the remaining 89% comprised data for non-Hispanic Whites. The estimated equations used unweighted samples. I made no attempt to test for biases related to the rotation system[6] utilized for the CPS; instead, I collapsed the data into bi-yearly sets and used more stringent significance criteria in interpreting effects.[7]

DEPENDENT VARIABLE: The dependent variable in this study differentiated between the three basic labor market categories; those of "employed," "unemployed" and "labor force nonparticipant." As such, the analysis utilized multinomial logistic regression techniques. For the purposes of this analysis, it was crucial that I be able to distinguish between those respondents involved in the labor market, either through employment or unemployment, and those refraining from participation. My specification of the dependent variable, therefore defines three purportedly mutually exclusive categories of labor market involvement. However, much recent debate among labor market scholars centers on the proper definitions of "unemployed" and "nonparticipant." In some cases, classification of respondents into one of these two categories is not particularly straightforward.

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[5]The Uniform series of March CPS files was created under the direction of Robert D. Mare, of the University of Wisconsin-Madison and Christopher Winship, of Northwestern University, with financial support from the National Science Foundation through grant SOC-7912648, "Social and Demographic Sources of Change in the Youth Labor Force."

[6] Since July 1953, the CPS has used a 4-8-4 sampling rotation. In this system, the enumerator interviews a particular household head for 4 consecutive months. For the next 8 months, that household is left out of the sample and then reinterviewed for another 4 months - one year after its original inclusion in the sample.

[7]See Clogg and Shockey (1985) for alternative methods of handling this rotational bias.

A specific example of this classification problem is as follows: an individual interested in working may spend time looking for a job but then give up the job search, if unsuccessful, in the belief that there are no available jobs. Labor market analysts define such individuals as "discouraged workers" and consider them nonparticipants, rather than unemployed, even though these people may be willing and able to work. Farley and Allen touched on another side of the issue by noting that "the unemployment rate would *decrease* if more stringent definitions [of job seeking] were used [and] ... *increase* were it to include measures of underemployment" (1989:211).[8] These problems with definition may mean that some women were mis-classified into particular labor market categories, but this classification scheme is generally appropriate for the purposes of this analysis since primary interest lies in paid employment.

Table A1[9] provides a breakdown of each category of the dependent variable by race and year. The data seem to support many of the studies cited earlier. Both groups of women experienced an increase in the percentage involved in the labor force and a decline in the percentage not participating. The percentage of employed White women increased more rapidly than for Blacks whereas the percentage of Whites unemployed increased much less rapidly.

To place the data into a more meaningful context, I used the raw data from Table A1 to calculate three standard employment statistics; reported in Table 1. Considering only the effect of race the statistics indicate, as expected based on the Bureau of Labor Statistics'

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[8] Underemployment is any situation in which "... [individuals] work less than they prefer to [or work at jobs that do not pay wages sufficient to support themselves]" (Blau and Ferber 1986:281).
[9] Tables referenced with the letter "A" (i.e., Table A1, Table A2) appear in the appendix.

findings, that Black women's employment-population ratios exceeded those of Whites in only the first period (1970-71) after which, White women's ratios outstripped those of Blacks. In addition, Black women's unemployment rates began the period at 1.73 times the rate of White women with that differential increasing to 2.35 by 1984-85. Increases in the rate of unemployment for Blacks appears to have quite clearly limited their ability to match, as a group, the increases in employment experienced by Whites despite overall increases in labor force participation for both groups of women.

Table 1: Race Differences in Basic Labor Force Measures 1970-1985[a]

	Employment - Population Ratios		Unemployment Rates		Labor Force Participation Rates	
	Blacks	Whites	Blacks	Whites	Blacks	Whites
70-71	48.02	45.26	10.11	5.84	53.42	48.07
72-73	46.71	47.05	11.50	5.70	52.78	49.89
74-75	46.41	48.39	12.48	7.15	53.02	52.12
76-77	47.45	50.53	14.17	7.71	55.28	54.75
78-79	50.41	53.99	13.15	6.25	58.04	57.59
80-81	50.30	56.77	14.13	5.96	58.57	60.36
82-83	48.23	56.88	17.71	7.66	58.61	61.60
84-85	52.53	59.76	14.86	6.31	61.69	63.79

Source: 1970-1985 Uniform CPS Files
a. Data Represent Percentages

INDEPENDENT VARIABLES: The CPS enumerates the following personal information for each respondent: RACE - for the purposes of this study only data for non-Hispanic Whites

and non-Hispanic Blacks were considered; AGE - which, for the following analysis, was subdivided into five categories: 16-19, 20-25, 26-44, 45-54 and 55-65; REGION - a four category breakdown of the census regions into Northeast, North Central, West and South; EDUC - the highest grade of school completed by each woman; also subdivided for the purposes of analysis into the following categories: less than a high school degree, high school graduate, 1-5 years of college and 6 or more years of college; TYPEFAM - classifies each woman's family as either male- or female- headed; and CENTCITY - whether or not each woman resides in a central city.

Two variables had to be reconstructed using additional information from the files since they are not specifically enumerated.[10] I restructured the CPS files in order to obtain the following information about other members of the household: OTHHINC - the total household income available, excluding each woman's personal income, with the following six categories (standardized to 1983 dollars): less than $10,000, $10,000 - $19,999, $20,000 - $29,999, $30,000 - $39,999, $40,000 - $49,999 and greater than or equal to $50,000; and PREKIDS - the number of pre-school aged children in the family. The final variable contains the following three categories: no children, one child and two or more children under age five. Table A2 provides a breakdown of each independent variable by race for the entire sample (ignoring year).

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[10] Due to evidence depicting a rapid increase in cohabitation beginning in the early 70s (Bumpass and Sweet 1989), I had originally attempted to identify the "primary male" associated with each woman (defined as either the woman's husband or cohabiting partner). However, my matching technique identified less than three percent of the entire sample (1970 to 1985 survey years) as cohabitors. Given the small size of this estimate and the subsequent unreliability of analyses using this information, the analyses did not include data on cohabitation.

HYPOTHESES: I examine three models in this analysis. The first model documents yearly

changes and racial differences in labor market status while the second and third models

contain additional demographic and family structure variables. I expect to find a progressive

diminution of the racial difference in labor market outcome with the introduction of additional

variables. In each model, the dependent variable contrasts labor force nonparticipation and

unemployment with employment in order to form the logit equations utilized in logistic

regression.

I began the analysis by fitting the Baseline model which defines a woman's

employment status as dependent on her race and the year in question. The model specification

follows:

BASELINE MODEL:[11]

P(Nonparticipant/Employed) =
$\beta + \beta_i\,Race + \beta_i\,Year + \beta_{ij}\,Race*Year + \varepsilon$ (1a)

and

P(Unemployed/Employed) =
$\beta + \beta_i\,Race + \beta_i\,Year + \beta_{ij}\,Race*Year + \varepsilon$ (1b)

This model should more formally depict the basic changes in labor market outcomes among

women over the study period including the more rapid decline in labor force nonparticipation

among Whites and the higher likelihood of unemployment for Blacks. It will also establish the

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[11] In this model and those that follow, Race is coded one if the respondent is Black and zero if White. The Year variable consists of eight dummy variables corresponding to the eight bi-yearly categories, e.g., 70-71 ... 84-85. The 1970-71 period is used as the excluded category in this and all subsequent analyses. In each of the models one category of each independent variable was chosen as the reference group and was excluded from parameter estimation using SAS's PROCEDURE CATMOD.

statistical significance of these trends with respect to differences by labor market standing and

by race.

As noted previously, changes in the general demographic characteristics of Black and

White women over the 1970s and 80s have been found to account for some, and in the case of

Blacks most, of the variation of trends in labor market outcomes. As such, inclusion of

demographic characteristics in the analysis should more fully buffer changes in the

participation and overall market outcomes for Blacks than for Whites. My model bears close

resemblance to Wilson et al.'s (1993) "Model 1" but contains some modifications. First, their

model differentiated between two types of unemployment (voluntary and involuntary) which

this analysis does not attempt. Second, aside from central city residence and race, the

demographic variables in their model incorporate disparate categories than those designated in

this study. The Demographic model as I define it is as follows:

DEMOGRAPHIC MODEL:[12]

$$P(\text{Nonparticipant/Employed}) =$$
$$\beta + \beta_i \, \text{Race} + \beta_i \, \text{Year} + \beta_i \, \text{Educ} + \beta_i \, \text{Age} + \beta_i \, \text{Region} +$$
$$\beta_i \, \text{Central City} + \beta_{ij} \, \text{Race*Year} + \beta_{ij} \, \text{Race*Educ} + \quad\quad (2a)$$
$$\beta_{ij} \, \text{Race*Age} + \beta_{ij} \, \text{Race*Region} + \beta_{ij} \, \text{Race*Central City} + \varepsilon.$$

and

$$P(\text{Unemployed/Employed}) =$$
$$\beta + \beta_i \, \text{Race} + \beta_i \, \text{Year} + \beta_i \, \text{Educ} + \beta_i \, \text{Age} + \beta_i \, \text{Region} +$$
$$\beta_i \, \text{Central City} + \beta_{ij} \, \text{Race*Year} + \beta_{ij} \, \text{Race*Educ} + \quad\quad (2b)$$
$$\beta_{ij} \, \text{Race*Age} + \beta_{ij} \, \text{Race*Region} + \beta_{ij} \, \text{Race*Central City} + \varepsilon.$$

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[12] In the Demographic model the variable Educ has four categories each represented by dummy variable coding. Similarly, Age consists of five dummy variables corresponding to the five age categories considered and Region is represented by four dummy variables. Central City is coded one if the respondent resided in a central city at the time of the interview.

Based on the previously cited literature, it is expected that inclusion of education in the

Demographic model will account for most of the increase in Black women's propensity to

enter the labor force and inclusion of age should temper the likelihood of unemployment since

it is among young women that unemployment is highest.

Demographic characteristics alone should not completely account for the trends

depicted in the basic labor market measures presented earlier, especially in the case of Whites.

Labor market outcomes for women have traditionally been linked to family background with

such factors as the number of children, marital status, household income and headship exerting

important influences on a woman's decision to enter the labor market. Since many authors

suggest that these latter variables exert a unique, and recently changing, influence on women's

decisions to enter the labor force, I also examine a third model which incorporates all of the

above demographic variables as well as those reflecting the woman's family (household)

structure. That model follows:

FAMILY STRUCTURE MODEL:[13]

$$
\begin{aligned}
\text{P(Nonparticipant/Employed)} =\ & \\
\beta + \beta_i\,\text{Race} + \beta_i\,\text{Year} + \beta_i\,\text{Educ} + \beta_i\,\text{Age} + \beta_i\,\text{Region} +\ & \\
\beta_i\,\text{Centcity} + \beta_i\,\text{Maritals} + \beta_i\,\text{Prekids} + \beta_i\,\text{Typefam} +\ & \\
\beta_i\,\text{Othhinc} + \beta_{ij}\,\text{Race*Year} + \beta_{ij}\,\text{Race*Educ} + \beta ij\,\text{Race*Age} +\ & \quad (3a) \\
\beta_{ij}\,\text{Race*Region} + \beta_{ij}\,\text{Race*Centcity} + \beta_{ij}\,\text{Race*Maritals} +\ & \\
\beta_{ij}\,\text{Race*Prekids} + \beta_{ij}\,\text{Race*Typefam} + \beta_{ij}\,\text{Race*Othhinc} + \varepsilon. &
\end{aligned}
$$

and

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[13] Under the Family Structure model, the demographic and year variables were coded as noted previously while the remaining family characteristic variables were coded as follows: Maritals utilized three dummy variables to represent the three marital statuses considered relevant to the analysis, Prekids was represented by three dummy variables, Typefam was coded one if the respondent resided in a female-headed household and Othhinc utilized six dummy variables for the income categories.

$$P(\text{Unemployed/Employed}) =$$
$$\beta + \beta_i \text{Race} + \beta_i \text{Year} + \beta_i \text{Educ} + \beta_i \text{Age} + \beta_i \text{Region} +$$
$$\beta_i \text{Centcity} + \beta_i \text{Maritals} + \beta_i \text{Prekids} + \beta_i \text{Typefam} +$$
$$\beta_i \text{Othhinc} + \beta_{ij} \text{Race*Year} + \beta_{ij} \text{Race*Educ} + \beta_{ij} \text{Race*Age} + \quad (3b)$$
$$\beta_{ij} \text{Race*Region} + \beta_{ij} \text{Race*Centcity} + \beta_{ij} \text{Race*Maritals} +$$
$$\beta_{ij} \text{Race*Prekids} + \beta_{ij} \text{Race*Typefam} + \beta_{ij} \text{Race*Othhinc} + \varepsilon.$$

Given the fact that Black and White women's labor market outcomes were shown to have converged with respect to most family characteristics over the period studied, I do not expect tremendous racial differences in the average effects of the family structure variables by labor market outcome.

Tienda et al. (1992) utilized a model similar to the Family Structure model in their analysis of the labor force activity of women. However, my specification allows for more meaningful comparisons of the effects the included variables exert in several respects. First, their model specifies age as a continuous variable. Although this may be a reasonable approach to take, by categorizing age it is possible to compare outcomes across particular age groups. Second, in their analysis, married women are contrasted with unmarried women. This ignores the differences between previously married and never married women. The latter group of women tend to be younger and to exhibit greater nonparticipation than previously married or currently married women. Finally, in their analysis, education is the only variable interacted with race. They include this interaction term in order to assess the returns to schooling experienced by particular race/ethnic groups but this ignores the important interactions race has with other variables. Although a full analysis of the influence of individual predictors may not have been their purpose, several of the conclusions drawn from their analysis prove incorrect when race is used as an interactive term.

ANALYSIS

My analysis began with a comparison of the predictors in each of the three models.

The test is χ^2 distributed with k(m-1) degrees of freedom[14] and represents a global test for the

significance of the predictor set. The χ^2 values were calculated from the following formula:

$$-2 \text{ Log Likelihood}(L_0) - [-2 \text{ Log Likelihood}(L_1)]$$

in which L_0 represents the likelihood function for the null model and L_1 represents that

function for the expanded model (DeMaris 1992). The null hypothesis for this test states that

all k(m-1) predictors equal zero in all (m-1) logit equations. A significant value for χ^2

indicates that at least one of the model's predictors significantly influences at least one of the

logits. Table 2 provides a summary of these tests. My results indicate that all of the models

contain at least one significant predictor and that prediction is best when based on the

Demographic model.

Further evidence from an R^2-type measure used in logistic regression supports this

claim of greater predictive capacity for the Demographic model. The R_L^2 values, calculated

from the following formula

$$R_L^2 = \frac{-2 \text{ Log Likelihood}(L_0) - [-2 \text{ Log Likelihood}(L_1)]}{-2 \text{ Log Likelihood}(L_0)}$$

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[14] For this test, k represents the number of predictors and m the number of levels of the dependent variable.

indicate a very poor fit for the Baseline model at R_L^2 equal to 0.0091, a slightly better fit for

the Demographic model (0.0558) but a less impressive fit for the Family Structure model

(0.0349). These values cannot be interpreted in the same manner as the standard R^2 values

from Ordinary Least Squares regression (i.e., as the proportion of variance explained by the

model) since the quantity "-2 log likelihood" is not actually interpretable. These values simply

provide evidence against the predictive efficacy of the model when they fall close to 0 and

infer perfect predictive capacity for values close to 1. The next step of the analysis required

examination of the effect for each individual predictor; this was carried out using a second test

of significance.

Table 2: Global χ^2 Test for the Significance of Predictor Set

Model	- 2 Log Likelihood	df	χ^2	p	R_L^2
Intercept	1,205,383.7	*****	*****	*****	*****
Baseline	1,194,437.5	4	10,946.2	0	0.0091
Demographic	1,138,143.4	20	56,294.1	0	0.0558
Family Structure	1,152766.1	20	41,671.4	0	0.0349

The second significance test was also χ^2 [with (m-1) degrees of freedom] and

examined the impact of each explanatory variable on the dependent variable. The test was

carried out separately for each model and produced significant χ^2 values for nearly every

variable. The one exception occurred under the Family Structure model in which the Black-

female household head interaction failed to attain significance. Based on the covariance

specification utilized in this analysis these results suggest that, for every variable except female

headship, significant racial differences existed with respect to at least one of the two logits.

Baseline Model: Tables 3 and 4 summarize the results from the estimation of the

three models under consideration.[15] Table 3 reports the odds of being a labor force

nonparticipant or unemployed versus employed, as estimated from the Baseline model. The

intercept terms indicate a clear racial difference for the 1970-71 period with Blacks less likely

than Whites to be nonparticipants, but nearly twice as likely as Whites to be unemployed.

Based on the data reported in Table A1, White women should have begun the period with

higher odds of nonparticipation than employment with those odds declining rapidly over the

study years. The same data suggests a similar decline in the odds of nonparticipation for

Blacks, but at a less rapid pace. The results from the logistic regression were consistent with

these expectations.

Racial differences in nonparticipation remained significant over the entire period with

White women experiencing more rapid declines, resulting in their having lower odds of

Table 3: Odds Ratios Calculated from the Baseline Model

Variables	Nonparticipant vs. Employed	Unemployed vs. Employed
White Intercept	1.1474[b]	0.0621[b]
Black Intercept	0.9701[bc]	0.1124[bc]
Year		
White 70-71[a]	*******	*******

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[15] Tables 3A and 4A of the appendix contain the maximum likelihood estimates upon which these ratios are based. The odds ratios are calculated in the following manner. For the intercepts, that for Whites is simply the exponentiated coefficient for the intercept term (i.e., $\exp(\beta)$) while for Blacks, the sum must be taken of the intercept and the race effect and then exponentiated (i.e., $\exp(\beta + \beta_i \text{Race})$). For each of the remaining variables, the coefficient of the main effect is added to the intercept term and then exponentiated (e.g., $\exp(\beta + \beta_i \text{Age})$ in the Baseline model) to obtain the odds ratio for Whites. For Blacks, the procedure is to add the intercept term, the coefficient for the race effect, the main effect for the specific variable and the coefficient of the main effect times the race effect (i.e., $\exp(\beta + \beta_i \text{Race} + \beta_i \text{Age} + \beta_{ij} \text{Race*Age})$). In every case, a coefficient was included in the sum only if it was statistically significant.

	72-73	1.0649[b]	0.0621
	74-75	0.9893[b]	0.0771[b]
	76-77	0.8953[b]	0.0835[b]
	78-79	0.7855[b]	0.0621
	80-81	0.6982[b]	0.0621
	82-83	0.6752[b]	0.0830[b]
	84-85	0.6060[b]	0.0674[b]
Black	70-71[a]	*******	*******
	72-73	1.0111[bc]	0.1336[bc]
	74-75	1.0756[bc]	0.1396[b]
	76-77	0.9425[bc]	0.1513[b]
	78-79	0.8324[bc]	0.1507[bc]
	80-81	0.8237[bc]	0.1613[bc]
	82-83	0.8582[bc]	0.2153[bc]
	84-85	0.7293[bc]	0.1746[bc]

Source: 1970-1985 Uniform CPS Files
a. Omitted Category
b. $p < 0.025$
c. Significant difference between Blacks and Whites at $p < 0.025$

nonparticipation than Blacks by the end of the study period. Contrasting the 1970-71 period

with 1984-85, the results show that by the latter White women were more likely to be

employed than nonparticipants. The odds of nonparticipation for Blacks also followed a

generally downward trend but in both 1974-75 and 1982-83 (two periods of recession) the

pattern was interrupted with slight increases in nonparticipation.

The odds related to unemployment do not display so neat a pattern; however, two

points stand out. First, in every year of the study period Black women's odds of

unemployment were over twice as large as those for Whites. In 1970-71, Black women's

odds of unemployment were 1.8 times larger ($0.1124/0.0621 = 1.81$), but by the end of the

study period the differential had grown even wider to 2.60 ($0.1746/0.0674 = 2.60$). Second,

unemployment increased for Black women during both recessions (1972-73 and 1982-1983)

but increased for Whites only during the second recession. In addition, the increase in odds for Blacks was much greater than that for Whites during the second recession. In general, both recessions hit Blacks harder than they did Whites, as evidenced by increases in the odds of both nonparticipation and unemployment for Black women during these years.

These results support the claim that White women's involvement in employment increased between 1970 and 1985. They also demonstrate a less rapid increase for Blacks and a more detrimental impact of economic recessions on Black women's labor market outcomes. However, since the estimates used to calculate the odds ratios for Table 3 were obtained from a saturated model, the data simply provide a more formal depiction of the trends noted in Table A1. Demographic and family characteristics variables were also considered as factors influencing women's labor market outcomes. The results are presented in Table 4.

Demographic Model: Demographic characteristics were next introduced to control for several of the key variables thought to influence a woman's labor market outcome. By specifying interactions of each variable with race, it should be clear what impact each factor had on Black and White women's labor market experiences. It was expected that demographic characteristics would have a greater influence on the trends in Black women's labor market standing.

Considering first the intercept values,[16] the data show that, for the first period of the study, by controlling for demographic characteristics the racial differences in unemployment were reduced to insignificance. This was not the case with respect to nonparticipation.

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[16] The intercept includes the following excluded categories: those White women who in 1970-71 were aged 55 or above, who had attained less than a high school degree and who lived in a central city in the northeastern region of the United States.

Although women represented by the intercept were equally likely to be unemployed, White women were significantly more likely than Black women to be nonparticipants. These findings were not, however, indicative of women's experiences throughout the study period.

In comparing the Baseline and Demographic models some important differences with respect to the yearly trends in nonparticipation emerge. The most obvious difference between Tables 3 and 4 is the tremendous increase in the odds of nonparticipation for both Blacks and Whites. Controlling for the influence of demographic characteristics caused the odds of nonparticipation to increase by a factor of three or more for a majority of the study years. In addition, although the magnitude of decline in nonparticipation across years was similar for Whites between the two models, evidence of an overall decline for Blacks disappeared in the Demographic model. The likelihood of nonparticipation was still highest during the two recessions, 1972-73 and 1984-85, but by the mid 1980s Black women were actually slightly more likely to be out of the labor force than they had been in 1970-71. These findings support the claim that some combination of demographic characteristics accounted for the increasing share of Black women entering the labor force between 1970 and 1985. As expected, among Whites, demographic characteristics played only a minor role in increasing participation. Contrary to the results for Blacks, the overall pattern of declining odds of nonparticipation remained in the case of Whites despite controls for demographic characteristics.

Based on the above, it is obvious that demographic characteristics did not play the same role in accounting for labor market patterns for Blacks as for Whites. Demographic background factors appear to have had a much more pronounced effect on the odds of nonparticipation for Blacks. The same held true with respect to unemployment. Comparing

the trend in the odds of unemployment between the Baseline and Demographic models, the results indicate that among Whites, demographic characteristics had a small but significant impact on their levels of unemployment. The odds of unemployment obtained from the Baseline model did decline appreciably for Whites[17] once demographic characteristics were included; they were appreciably less than those for Blacks. Inclusion of demographic variables reduced the odds of unemployment for Blacks, in most cases, by a factor of two. However, the overall pattern of greater odds of unemployment for Blacks did not change under the Demographic model.

The odds obtained for individual demographic variables largely support past research claims. Some very distinct patterns emerged with respect to the relationship between age and employment outcomes, the most obvious being the fact that young Black women were extremely unlikely to be employed compared to either older Black women or similarly aged white women. In fact, Black women between the ages 16 and 19 had substantially higher odds of nonparticipation and unemployment than any other subgroup of women; either Black or White. There were also other important differences by race in the relationship between age and labor market status. In the case of nonparticipation, White's women's odds were positively associated with age above age 20 but women aged 16-19 were, like Blacks, more likely than most older women to remain out of the labor force (only White women 55 or older had higher odds of nonparticipation than very young White women).

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[17]It should be noted that although a decrease in odds from 0.0621 to 0.0487 (the odds of unemployment for White women in 1970-71 for the Baseline and Demographic models respectively) is not large statistically, unemployment rates are comparatively small, therefore even a reduction as small as 0.0134 (0.0621-0.0487) is meaningful.

Black and White women age 26-44 had similar odds of nonparticipation. Black women aged 45-54 were most likely to be employed but for Whites, this likelihood was highest among 20 to 25 year olds. This latter point draws out an important distinction in Black and White women's experiences of nonparticipation. In general, White women at increasing ages were more likely than younger women to remain out of the labor force, but for Blacks, younger women were actually the most likely to refrain from participating.

One of the most relevant findings with respect to these age effects was the fact that White women age 16-44 had either much lower or equal odds of nonparticipation than similarly aged Blacks. In addition, the odds of unemployment were much lower for White women in these age groups. Given that the ratios obtained refer to average effects across study years, these results support the claim that as 16-44 year old women increasingly

Table 4: Odds Ratios Calculated for the Expanded Models

Variables	Race		Demographic Model		Family Structure Model	
			Nonparticipant vs. Employed	Unemployed vs. Employed	Nonparticipant vs. Employed	Unemployed vs. Employed
White Intercept			3.1118^b	0.0487^b	3.3059^b	0.0464^b
Black Intercept			2.0799^{bc}	0.0487^b	2.2608^{bc}	0.0464^b
Year	**Whites**	$70\text{-}71^a$	*******	*******	*******	*******
		72-73	2.9397^b	0.0487	3.1000^b	0.0464
		74-75	2.7580^b	0.0630^b	3.0036^b	0.0598^b
		76-77	2.5378^b	0.0693^b	2.8528^b	0.0658^b
		78-79	2.2354^b	0.0523^b	2.5348^b	0.0496^b
		80-81	2.0222^b	0.0543^b	2.4300^b	0.0518^b
		82-83	1.9961^b	0.0737^b	2.4685^b	0.0704^b
		84-85	1.8179^b	0.0615^b	2.2922^b	0.0588^b
	Blacks	$70\text{-}71^a$	*******	*******	*******	*******
		72-73	2.2589^{bc}	0.0575^{bc}	2.4677^{bc}	0.0464
		74-75	2.3826^{bc}	0.0630^b	2.6156^{bc}	0.0598^b
		76-77	2.3106^{bc}	0.0693^b	2.5715^{bc}	0.0658^b
		78-79	2.0809^{bc}	0.0719^{bc}	2.3122^{bc}	0.0659^{bc}
		80-81	2.2019^{bc}	0.0815^{bc}	2.5156^{bc}	0.0750^{bc}
		82-83	2.4361^{bc}	0.1121^{bc}	2.7724^{bc}	0.1022^{bc}
		84-85	2.2047^{bc}	0.0948^{bc}	2.5103^{bc}	0.0858^{bc}
Age	**Whites**	$55\text{-}65^a$	*******	*******	*******	*******
		45-54	1.5809^b	0.0610^b	1.3780^b	0.0614^b
		26-44	1.6325^b	0.0875^b	1.0773^b	0.0835^b
		20-25	1.3184^b	0.1408^b	0.9699^b	0.1432^b
		16-19	1.9005^b	0.1835^b	1.9490^b	0.2230^b
	Blacks	$55\text{-}65^a$	*******	*******	*******	*******

Category	Race	Subcategory				
		45-54	1.1507[bc]	0.0610[b]	1.2610[bc]	0.0614[b]
		26-44	1.6325[b]	0.1532[bc]	1.0431[bc]	0.1387[bc]
		20-25	2.1312[bc]	0.4035[bc]	1.6913[bc]	0.3363[bc]
		16-19	6.0496[bc]	0.6325[bc]	5.1172[bc]	0.5592[bc]
Education	**Whites**	< H.S. Grad[a]	*******	*******	*******	*******
		H.S. Grad	1.7049[b]	0.0281[b]	1.5732[b]	0.0268[b]
		College 1-5 Yrs.	1.3907[b]	0.0170[b]	1.2474[b]	0.0166[b]
		College 6+ Yrs.	0.5350[b]	0.0118[b]	0.4808[b]	0.0115[b]
	Blacks	< H.S. Grad[a]	*******	*******	*******	*******
		H.S. Grad	0.7899[bc]	0.0311[bc]	0.8685[bc]	0.0311[bc]
		College 1-5 Yrs.	0.5284[bc]	0.0170[b]	0.5883[bc]	0.0166[b]
		College 6+ Yrs.	0.2044[bc]	0.0052[bc]	0.2240[bc]	0.0053[bc]
Region	**Whites**	North Central[a]	*******	*******	*******	*******
		North East	3.3052[b]	0.0538[b]	3.6444[b]	0.0520[b]
		West	3.3578[b]	0.0532[b]	3.6620[b]	0.0502[b]
		South	3.3218[b]	0.0446[b]	3.7173[b]	0.0423[b]
	Blacks	North Central[a]	*******	*******	*******	*******
		North East	3.3052[b]	0.0325[bc]	2.3291[bc]	0.0306[bc]
		West	1.8040[bc]	0.0359[bc]	1.9394[bc]	0.0341[bc]
		South	1.5180[bc]	0.0303[bc]	1.6397[bc]	0.0287[bc]
Central City Residence	**Whites**	Non-Central City[a]	*******	*******	*******	*******
		Central City	2.6642[b]	0.0487	3.1421[b]	0.0464
	Blacks	Non-Central City[a]	*******	*******	*******	*******
		Central City	2.1665[bc]	0.0487	2.3936[bc]	0.0464

(Table 4 Continued)

Category	Race	Subcategory				
Marital Status	**Whites**	Currently Married[a]			*******	*******
		Ever Married			2.2919[b]	0.0601[b]
		Never Married			2.1153[b]	0.0404[b]
	Blacks	Currently Married[a]			*******	*******
		Ever Married			2.6290[bc]	0.0601[b]
		Never Married			3.3575[bc]	0.0625[bc]
Own Preschool Kids	**Whites**	0 Kids[a]			*******	*******
		1			9.4206[b]	0.0805[b]
		2 or more			17.9269[b]	0.0649[b]
	Blacks	0 Kids[a]			*******	*******
		1			3.3298[bc]	0.0709[b]
		2 or more			6.9192[bc]	0.0601[b]
Type of Family	**Whites**	Male Headed[a]			*******	*******
		Female Headed			2.3840[b]	0.0464
	Blacks	Male Headed[a]			*******	*******
		Female Headed			1.6304[b]	0.0464
Other Household Income	**Whites**	< $10,000			*******	*******
		$10-$19,999			3.1772[b]	0.0483[b]
		$20-$29,999			3.8702[b]	0.0447[b]
		$30-$39,999			4.6856[b]	0.0398[b]
		$40-$49,999			6.5923[b]	0.0400[b]
		>= $50,000			9.3549[b]	0.0431[b]
	Blacks	< $10,000			*******	*******
		$10-$19,999			1.8452[bc]	0.0427[bc]

$20-$29,999		1.7594[bc]	0.0447[b]
$30-$39,999		1.8060[bc]	0.0398[b]
$40-$49,999		2.1381[bc]	0.0360[bc]
>= $50,000		2.2193[bc]	0.0431[b]

Source: 1970-1985 Uniform CPS Files
a. Omitted Category
b. $p < 0.025$
c. Significant difference between Blacks and Whites at $p < 0.025$

entered the labor force, White women were much more likely to obtain employment than

Black women which would, in turn, raise the employment-population ratio for Whites.

Turning to consideration of education, the results generally conform to prior

expectations. For both groups of women, the likelihood of nonparticipation and

unemployment, relative to employment, were inversely related to educational attainment.

Higher levels of education did appear to provide greater benefits to Black than to White

women. Contrary to the findings of Tienda et al. (1992), my results suggest that Black

women with at least some college education were, overall, less likely to be unemployed than

similarly educated Whites. At lower educational levels, Black women displayed greater odds

of unemployment but much lower odds of nonparticipation. Although it is impossible to tell

from the way the data are presented, the difference in odds of nonparticipation may reflect the

growing tendency of White women to attain higher levels of education than Blacks. White

women's higher odds of nonparticipation at lower educational levels may reflect their greater

tendency to remain in school

The results obtained for region of residence were in some ways contrary to findings

from past research. The South and the West were associated with greater odds of

employment for Blacks than for Whites, which follows from the claims of Cohn and Fossett

(1995) that these regions generally provide the greatest employment opportunities for Blacks.

However, these regions also displayed the greatest racial disparities in the odds of employment with the disparity favoring Blacks. In fact, every region appears to have favored the employment of Blacks. The odds of nonparticipation were either lower for Blacks or did not differ by race and Blacks actually had lower odds of unemployment than Whites. As indicated, these results appear to contradict past research. However, it must also be noted that these effects by region are net of central city residence. Not only do labor market outcomes differ for Black and White central city residents, but residence within a central city is much more common outside the South and West.

Finally, the results obtained for central city residence also conform to previous findings. Although it was surprising to find lack of a racial difference in the odds of unemployment by central city residence, nonparticipation was higher inside rather than outside the central city for Blacks but lower in central cities for Whites.

Family Structure Model: The next section of the analysis examined the influence of family characteristics on women's labor market status. The Family Structure model includes several indicators of familial characteristics which have recently been linked to changes in the propensity of women, especially White women, to enter the labor force. Inclusion of these variables was expected to mitigate the trend of increasing labor force participation, particularly among Whites.

By modeling demographic and family characteristics separately, it is assumed that each set of factors would influence labor market outcomes differently. In fact, one of the most significant findings from this section of the analysis was that family characteristics exerted an independent effect on labor market outcomes. Although most of the estimates for the

demographic variables changed once family characteristics were added, in a majority of cases the magnitude of change was marginal; 0.5 or less. For example, inclusion of family characteristics widened the racial differential in odds associated with nonparticipation but only very narrowly; the odds for unemployment remained practically unchanged.

One important exception to the general trend of small changes in individual odds ratios for particular variables was in the large overall increase in the odds of nonparticipation across the year categories. Similar to the effect of adding demographic characteristics, inclusion of family background characteristics increased the odds of nonparticipation for every year considered. In general the trend remained the same. Black women ended the period with slightly greater odds of nonparticipation than Whites and greater odds than at the beginning of the study period. The years 1980-81 appeared to mark an important turning point in the propensity of Black and White women to enter the labor force. In both the Demographic and Family Structure models the switch-over in odds of nonparticipation occurred between 1978-79 and 1980-81. In addition, racial differences in the odds of unemployment did not emerge until 1978-79.

The direction of change in estimates between the Demographic and Family Structure models depends on which variable is considered, but in most cases the increase or decrease was not very meaningful. However, a few of the changes stand out as exceptional in terms of their order of magnitude. With respect to age, the most meaningful difference between the Demographic and Family Structure variables is associated with Black women aged 16-19. Although these women still had the highest odds of nonparticipation compared with all other categories of women, their odds of nonparticipation were 0.9324 lower net of family

background variables. This was one of the largest declines evidenced between the two

models. Family circumstances obviously play an important role in the likelihood of young

Black women entering the labor force.

In most other cases, including family structure variables in the Demographic model did

not affect the statistical significance associated with the coefficients for age. In one case,

however, a racial difference emerged where there had not been one before. Under the

demographic model Black and White women age 26-44 were equally likely to be

nonparticipants but under the Family Structure model Black women were significantly less

likely to be nonparticipants than Whites at the same ages. However, the racial difference is

small (1.0773 versus 1.0431) suggesting little change occurred. One reversal in the odds of

nonparticipation also occurred under the Family Structure model with Whites aged 20-25

more likely to obtain employment than to remain out of the labor force. The magnitude of

change was not large but the reversal was unique to this variable.

Two additional points deserve mention with respect to the inclusion of family

characteristics into the Demographic model. First, the odds of nonparticipation declined

substantially for Black North Eastern residents once family characteristics were included. The

reduction in odds for this outcome was greater than for any other variable which further

challenges the claims that residence in the Northeast results in the greatest racial disparities in

employment. The odds of nonparticipation related to central city residence increased for

Blacks and Whites from those of the Demographic model. Both central city and non-central

city residents were significantly more likely to be out of the labor force net of family

characteristics.

The family structure variables themselves had the greatest effects on racial differences in the odds of nonparticipation. For only two of the variables were there any statistically significant racial differences with respect to unemployment. Net of both demographic and family characteristics the results indicate significant racial differences with respect to the odds of unemployment for never married women and for women at particular income levels. Black never married women had reasonably greater odds of unemployment (a difference of 0.023) than similarly situated Whites. Similarly, at two levels of income the odds of unemployment were statistically different between Blacks and Whites, but in both cases the differences were minuscule.

In examining the effects of family characteristics on the odds of nonparticipation racial differences were more pronounced. First of all, the data indicate a difference in the trend of nonparticipation across marital status. Among Whites, currently married women had greater odds of nonparticipation than both ever and never married women. A somewhat opposite trend emerged with respect to Black women. Never married Black women were more likely to remain out of the labor force, followed by ever married women. Currently married Blacks were most likely to be in the labor force. An interaction term between year and marital status would more clearly document the effect of marital status across time, but the results do indicate that as women continued to delay marriage Whites were obtaining employment in greater number than Blacks.

The odds associated with children followed a predictable pattern with a greater number of children under the age of five corresponding to a greater likelihood of nonparticipation. The effect was much bigger for Whites, however. White women with two

or more children had two and one-half times greater odds of nonparticipation than similarly situated Black women. For those women with only one small child at home White women were almost three times more likely to remain out of the labor force than similarly situated Blacks.

The results obtained in relation to female headship follow from the second χ^2 test presented earlier which indicated that in neither of the logit equations was there a statistically significant racial difference associated with this variable. Across both logits no racial differences were present and in the case of unemployment, there were no statistically significant effects at all. The estimates do indicate, however, that women heading households were significantly less likely to remain out of the labor force relative to women in male headed households. The estimates also suggest that the odds of nonparticipation for Black female household heads was lower than that for Whites but, again, the estimates were not significant. Tienda et al. (1992) obtained similar results in their analysis and suggested that the reason for absence of statistical significance was that over time, headship became a proxy for marital status.

The final variable, additional household income, was one of only two family structure variables to display racial differences by both nonparticipation and unemployment. As noted previously, however, the effects with respect to unemployment were very small. The estimates obtained for nonparticipation produced the only interesting results. For White women, the odds of nonparticipation were positively associated with income. White women with additional income of $50,000 or more were almost three times more likely to remain out of the labor force than women with additional household income of less than $10,000. These

financially secure women were also four times more likely to remain out of the labor force than similarly situated Black women.

Racial differentials with respect to income were pronounced at every income category but the difference declined in magnitude at each lower level of income due, in large part, to the more rapid descent in the odds of nonparticipation for Whites at lower income levels. Black women's odds of nonparticipation followed a U shaped curve. Women whose households provided an additional $20-$29,999 had the lowest odds of nonparticipation with these odds increasing as income approached the extremes. For White women, those with the least additional assets had the lowest odds of nonparticipation. These result also contradict the findings of Tienda et al. (1992) on one hand because they treated income as a continuous variable and on the other hand because they did not consider racial differences in the effects of income.

DISCUSSION

The primary purpose of this paper was to clarify the differential impact which particular factors had on women's labor market outcomes across the 1970s and early 80s. Over this period, Black women experienced increases in labor force participation but these changes were also associated with rising rates of unemployment. White women, in contrast, experienced not only significant increases in labor force participation but much more rapid movement into paid employment with only minimal changes in unemployment rates. These patterns resulted in the switch-over in employment-population ratios between Black and White women.

Past research suggested that shifts in demographic and family characteristics were responsible for these changes. However, Tienda et al. (1992:374) provided some justification for why these two sets of variables may have a differential impact on a woman's odds of employment. They noted that although "both nonparticipation and unemployment vary according to the business cycle, nonparticipation is a product both of individual preferences and market opportunities." It seems reasonable to assume that the family structure variables taken into account in this analysis more closely correspond to the types of preferences to which these authors allude. My analysis sought to test for these distinctions by controlling for demographic and family structure background factors separately. It was assumed that the influence of each set of variables would differ substantially by race and market status and that the factors considered would more effectively account for the increasing tendency of Black women to enter the labor force.

My analysis clearly supported these claims. Demographic and family characteristics exerted fairly unique effects on the labor market outcomes of Blacks and Whites with Black women's labor force status responding more strongly to the effects of demographic characteristics. The evidence for these claims was found in the negation of the trend toward declining nonparticipation in the Demographic model and substantial reductions in the odds of unemployment for Blacks. White women were not similarly affected by controls for demographic characteristics. In fact, inclusion of both sets of variables failed to eliminate the trend in nonparticipation observed in the Baseline model.

The studies cited earlier (e.g., Lichter and Costanzo 1987) demonstrated similar effects for the demographic variables on Black and "Non-black" women and suggested that

educational upgrading among Blacks was the variable of primary significance in explaining

changes in Black women's labor market involvement. Increases in the rates of labor force

participation for Blacks were shown to have resulted primarily from an educational upgrading

among those Black women most prone to enter the labor force. My analysis supported these

findings in the sense that the odds of nonparticipation were lowest among Black women with

at least some college training.

Consideration of the main effects of demographic and family structure variables clearly

did not account for the declining trend in nonparticipation for Whites. I considered it possible

that this failure was due in part to the model specification. As noted previously, it was not

just the case that married women entered the labor force in larger numbers or that women

with more young children decided to look for work, it was also that married women with

children and married women with greater additional income entered the labor force in larger

numbers. As such, I considered it possible that inclusion of interaction terms between marital

status and the number of children and marital status and income would significantly reduce the

trend towards declining participation for Whites. Although the results were not presented,

estimation of these models did not, in fact, eliminate the trend.

The persistence of a decline in the odds of nonparticipation posed an interesting puzzle

for understanding labor market outcomes. What accounts for this failure of demographic and

family characteristics to explain away most of the increase as was the case for Blacks?

Research by Herring and Wilson-Sadberry (1993) suggests that a change in norms among

Whites may have caused the increase in labor force participation. These authors found that

White women were substantially more likely to work out of preference than Black women,

who were, in turn, more likely to work out of economic necessity. It may in fact be the case that White women have come to see paid employment as a liberating activity, or so Herring and Wilson-Sadberry suggest in the following statement: "... Black women have had to perform roles that are now idealized by feminists and women who have been 'captives in the household'" (1993:316).

A couple of additional points deserve mention with respect to this analysis. First, although the models did account for many of the changes observed for Black and White women and although there were some reductions in the racial differentials for both nonparticipation and unemployment, significant racial differences persisted. It is assumed that some degree of model mis-specification (i.e., failure to include additional interactions) and the failure to include additional relevant variables may account for these results. For example, prior analyses of labor market outcomes have found that some portion of the racial gap in unemployment is due to the fact that Blacks are disproportionately represented in occupations more subject to the risk of unemployment (Schervish 1981; Hurh and Kim 1989; Darity 1990; Wilson et al. 1993). The Uniform March CPS did not report the industry or occupation of individuals who were unemployed or not in the labor force prior to 1980, hence these variables could not be included in the full analysis. Had these variables been included, the racial differences across years may have been reduced to insignificance.

Finally, this analysis demonstrated the importance of considering unemployment and nonparticipation separately when examining women's labor market outcomes (Maddala 1983). Not only did the demographic and family structure variables influence Black and

White women in distinct ways, demographic characteristics are clearly more important in

determining the levels of unemployment for women regardless of racial background.

CONCLUSION

      Further research is obviously necessary to more thoroughly document the reasons for

persistent racial differences in labor market outcomes for women. This study attempted to

provide a model of many of the factors thought responsible for changes in women's labor

market status. It goes beyond past studies by systematically considering the effects of both

demographic and family characteristics in a way not done in prior work. It looks at a wide

range of variables over a large cross-section of years during which rapid change took place

and suggests that factors beyond demographic characteristics and family background may be

responsible for the differences.

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APPENDIX

Table A1: Labor Market Status by Race 1970-1985[a]

		70-71	72-73	74-75	76-77	78-79	80-81	82-83	84-85
Employed	**Blacks**	4679 (48.02)	4356 (46.71)	4167 (46.41)	4544 (47.45)	5158 (50.41)	5847 (50.30)	5235 (48.23)	5678 (52.53)
	Whites	35571 (45.26)	34590 (47.05)	34220 (48.39)	38914 (50.53)	43897 (53.99)	53778 (56.77)	47662 (56.88)	49611 (59.76)
Unemployed	**Blacks**	526 (5.40)	566 (6.07)	594 (6.62)	750 (7.83)	781 (7.63)	962 (8.28)	1127 (10.38)	991 (9.17)
	Whites	2208 (2.81)	2089 (2.84)	2637 (3.73)	3250 (4.22)	2926 (3.60)	3406 (3.60)	3956 (4.72)	3344 (4.03)
Nonparticipant	**Blacks**	4539 (46.58)	4404 (47.22)	4218 (46.98)	4283 (44.72)	4294 (41.96)	4816 (41.43)	4493 (41.39)	4141 (38.31)
	Whites	40816 (51.93)	36836 (50.11)	33855 (47.88)	34841 (45.25)	34484 (42.41)	37549 (39.64)	32181 (38.40)	30064 (36.21)

Source: 1970-1985 Uniform CPS Files
a. Data in parentheses represent percentages.

Table A2: Percentage Distribution of Independent Variables by Race

		Blacks	Whites
Age	16-19	13.85%	10.87%
	20-25	17.73%	15.60%
	26-44	39.05%	38.77%
	45-54	15.48%	17.29%
	55-65	13.90%	17.47%
Education	< H.S. Grad	47.39%	27.34%
	HS. Grad	33.51%	44.18%
	College 1-5	17.76%	26.23%
	College 6+	1.34%	2.25%
Region	North East	17.81%	23.35%
	North Central	19.06%	28.16%
	South	41.99%	19.77%
	West	21.14%	28.72%
Central City Residence	Central City Resident	55.95%	21.07%
	Non-Central City Resident	44.05%	78.93%
Marital Status	Now Married	40.30%	66.61%
	Ever Married	27.22%	13.02%
	Never Married	32.49%	20.37%
Own Kids Under Age 5	0	85.94%	84.35%
	1	9.93%	11.42%
	2 or more	4.13%	4.23%
Type of Family Headship	Male Head	50.67%	78.75%
	Female Head	49.33%	21.25%
Other Household Income	< $10,000	50.55%	25.57%
	$10-$19,999	25.72%	23.55%
	$20-$29,999	14.71%	23.48%
	$30-$39,999	5.63%	13.90%
	$40-$49,999	2.23%	7.64%
	>= $50,000	1.16%	5.85%
Labor Force Status	Employed	48.88%	52.65%
	Unemployed	7.76%	3.68%
	Nonparticipant	43.36%	43.68%
Total Observations		81,149	642,496
Percent		11.21%	88.79%

Source: 1970-1985 Uniform CPS Files

Table A3: Coefficient Estimates from the Baseline Model

Variables		Nonparticipant vs. Employed	Unemployed vs. Employed
Intercept		0.1375^b	-2.7794^b
Black		-0.1679^b	0.5939^b
Year	70-71[a]	*******	*******
	72-73	-0.0746^b	-0.0274
	74-75	-0.1483^b	0.2163^b
	76-77	-0.2481^b	0.2967^b
	78-79	-0.3789^b	0.0045
	80-81	-0.4968^b	0.0201
	82-83	-0.5303^b	0.2905^b
	84-85	-0.6384^b	0.0824^b
Black*Year	70-71[a]	*******	*******
	72-73	0.1160^b	0.1723^b
	74-75	0.1908^b	0.0212
	76-77	0.2193^b	0.0873
	78-79	0.2259^b	0.2933^b
	80-81	0.3332^b	0.3608^b
	82-83	0.4078^b	0.3592^b
	84-85	0.3531^b	0.3575^b

Source: 1970-1985 Uniform CPS Files
a. Omitted Category
b. $p < 0.025$

Table A4: Coefficient Estimates from the Expanded Models

Variables		Demographic Model		Family Structure Model	
		Nonparticipant vs. Employed	Unemployed vs. Employed	Nonparticipant vs. Employed	Unemployed vs. Employed
Intercept		1.1352[b]	-3.0230[b]	1.1957[b]	-3.0711[b]
Black		-0.4029[b]	0.1232	-0.3800[b]	0.1234
Year	70-71[a]	*******	*******	*******	*******
	72-73	-0.0569[b]	-0.0064	-0.0643[b]	-0.0118
	74-75	-0.1207[b]	0.2590[b]	-0.0959[b]	0.2540[b]
	76-77	-0.2039[b]	0.3543[b]	-0.1474[b]	0.3498[b]
	78-79	-0.3308[b]	0.0727[b]	-0.2656[b]	0.0666[b]
	80-81	-0.4310[b]	0.1105[b]	-0.3078[b]	0.1102[b]
	82-83	-0.4440[b]	0.4157[b]	-0.2921[b]	0.4180[b]
	84-85	-0.5375[b]	0.2349[b]	-0.3662[b]	0.2378[b]
Black*Year	70-71[a]	*******	*******	*******	*******
	72-73	0.1395[b]	0.1677[b]	0.1519[b]	0.1586
	74-75	0.2566[b]	0.0367	0.2417[b]	0.0182
	76-77	0.3091[b]	0.1024	0.2762[b]	0.0803
	78-79	0.3313[b]	0.3183[b]	0.2881[b]	0.2853[b]
	80-81	0.4880[b]	0.4051[b]	0.4146[b]	0.3704[b]
	82-83	0.6021[b]	0.4193[b]	0.4961[b]	0.3718[b]
	84-85	0.5958[b]	0.4323[b]	0.4709[b]	0.3781[b]
Age	55-65[a]	*******	*******	*******	*******
	45-54	-0.6772[b]	0.2264[b]	-0.8751[b]	0.2804[b]
	26-44	-0.6451[b]	0.5868[b]	-1.1212[b]	0.5877[b]
	20-25	-0.8588[b]	1.0627[b]	-1.2263[b]	1.1278[b]
	16-19	-0.4931[b]	1.3272[b]	-0.5284[b]	1.5704[b]
Black*Age	55-65[a]	*******	*******	*******	*******
	45-54	0.0853[b]	0.1082	0.2913[b]	0.0828
	26-44	0.0135	0.5599[b]	0.3477[b]	0.5079[b]
	20-25	0.8832[b]	1.0527[b]	0.9361[b]	0.8534[b]
	16-19	1.5608[b]	1.2378[b]	1.3453[b]	0.9194[b]
Education	< H.S. Grad[a]	*******	*******	*******	*******
	H.S. Grad	-0.6017[b]	-0.5499[b]	-0.7426[b]	-0.5487[b]
	College 1-5 Yrs.	-0.8054[b]	-1.0512[b]	-0.9746[b]	-1.0274[b]
	College 6+ Years	-1.7606[b]	-1.4172[b]	-1.9281[b]	-1.3944[b]
Black*Education	< H.S. Grad[a]	*******	*******	*******	*******
	H.S. Grad	-0.3664[b]	0.1033[b]	-0.2141[b]	0.1491[b]
	College 1-5 Yrs.	-0.5648[b]	0.0232	-0.3716[b]	0.0743
	College 6+ Yrs.	-0.5593[b]	-0.8198[b]	-0.3838[b]	-0.7726[b]
Region	North Central[a]	*******	*******	*******	*******
	North East	0.0603[b]	0.1002[b]	0.0975[b]	0.1148[b]
	West	0.0761[b]	0.0895[b]	0.1023[b]	0.0785[b]
	South	0.0653[b]	-0.0873[b]	0.1173[b]	-0.0920[b]
Black*Region	North Central[a]	*******	*******	*******	*******
	North East	-0.0255	-0.5042[b]	-0.0677[b]	-0.5294[b]
	West	-0.2184[b]	-0.3929[b]	-0.2556[b]	-0.3873[b]
	South	-0.3802[b]	-0.3864[b]	-0.4385[b]	-0.3892[b]
Central City Residence	Non-Central City[a]	*******	*******	*******	*******
	Central City	-0.1553[b]	-0.0284	-0.0508[b]	-0.0281
Black*Central City Residence	Non-Central City[a]	*******	*******	*******	*******
	Central City	0.1961[b]	-0.0042	0.1079[b]	-0.0352

(Table A4 Continued)

Marital Status	Currently Married[a]		*******	*******
	Ever Married		-0.3663[b]	0.2590[b]
	Never Married		-0.4465[b]	-0.1374[b]
Black*Marital Status	Currently Married[a]		*******	*******
	Ever Married		0.5172[b]	-0.0075
	Never Married		0.8420[b]	0.4364[b]
Own Preschool Kids	0 Kids[a]		*******	*******
	1		1.0472[b]	0.3364[b]
	2 or More		1.6906[b]	0.5522[b]
Black*Own Preschool Kids	0 Kids[a]		*******	*******
	1		-0.6600[b]	-0.1274[b]
	2 or More		0.5720[b]	0.0544
Type of Family	Male Head[a]		*******	*******
	Female Head		-0.3269[b]	0.0095
Black*Type of Family	Male Head[a]		*******	*******
	Female Head		0.0655	0.0203
Other Income	< $10,000[a]		*******	*******
	$10-$19,999		-0.0397[b]	-0.0741[b]
	$20-$29,999		0.1576[b]	-0.1473[b]
	$30-$39,999		0.3488[b]	-0.1516[b]
	$40-$49,999		0.6902[b]	-0.0375[b]
	>= $50,000		1.0402[b]	0.0408[b]
Black*Other Income	< $10,000[a]		*******	*******
	$10-$19,999		-0.1634[b]	-0.1189[b]
	$20-$29,999		-0.4083[b]	-0.1063
	$30-$39,999		-0.5734[b]	-0.1500
	$40-$49,999		-0.7460[b]	-0.2538[b]
	>= $50,000		-1.0587[b]	-0.1240

Source: 1970-1985 Uniform CPS Files
a. Omitted Category
b. $p < 0.025$

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