Discouraging Times: The Labor Force Participation of Married Black Women, 1930–1940

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The extraordinary unemployment rates of black women during the Great Depression caused a sizeable number to leave the labor force as “discouraged workers.” Consequently, while married white women entered the labor force in increasing numbers, the participation rate of married black women stagnated. The higher unemployment of black women was not primarily a function of their occupational or industrial distribution, but reflected unequal treatment within markets. This article adds support to the view of black economic progress as episodic in nature, with the Depression as a period of relative retrenchment for African Americans.© 2001 Academic Press

The historical record of economic progress for African Americans during the 20th century exhibits episodes of relatively rapid gains punctuating episodes of relative stagnation. Progress appears to have been most dramatic during economic boom times, often associated with wartime demand shocks. The episodic timing of change has been seen by some economists and economic historians as confirming the role of discontinuous institutional and legal changes in reducing labor-market discrimination. But others have argued that to a considerable degree the timing actually reflects longer-run trends in underlying variables, such as the quantity and quality of black schooling.2

Much of the research on these historical changes has focused on the earnings and employment of men. But a comparison of the experiences of black and white women raises distinctive historical issues. One of these is the racial difference in the evolution of married women’s labor-force participation.

Over the course of the 20th century, the labor-force participation rate of

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1 For helpful comments and suggestions, I thank Marcellus Barksdale, Giovanni Federico, Tim Hatton, two anonymous referees, and participants in the conference “One Kind of Freedom Reconsidered: African American Economic Life in the Segregation Era,” at Lehigh University, September 17–19, 1999. The financial support of the Leavey School of Business at Santa Clara University is gratefully acknowledged.

2 Important discussions of these views include Smith and Welch (1989), Margo (1990, Chap. 6), Donohue and Heckman (1991), and Wright (1999).
married women in the United States has increased consistently and, in the postwar period, dramatically. The general upward trend was shared by white and African-American women, though black women started the century with much higher participation rates. Only during the 1930s and 1940s did the trends diverge significantly by race, as participation increased for whites but remained nearly constant for blacks. After 1950, married women’s participation rates resumed their upward trajectory for both races, but the racial gap had permanently narrowed.

The timing suggests a role for the Great Depression in suppressing the trend increase in married black women’s participation. In this article I show that the discouraged-worker effect of high unemployment kept many black women out of the labor force during the 1930s and explains most of the change in the racial gap in married women’s participation. This effect exacerbated the impact of the Depression on the incomes of black families, which tended to be more reliant on the earnings of women than were white families. I argue that discrimination in employment decisions played an important role in generating the unusually high rates of unemployment for black women. Altogether, the article provides new evidence in support of the view that periods of economic stagnation have tended to be periods of retrenchment in the economic progress of African Americans. A reasonable interpretation would be that slack labor market conditions render discrimination less costly to employers at the same time that they increase the resistance of white workers to minority employment.

In the following section, I present the basic trends in married women’s participation rates and discuss potential problems with the consistency and racial comparability of participation measures over time. I then turn to a review of two classes of explanation for the convergence of participation rates by race during the 1930s. The first emphasizes the effect of the Depression-era reduction in labor demand (the discouraged worker effect). The second focuses on potential shifts in the labor supply of a married woman in response to changes in the employment or public relief status of her husband.

I use data on matched husbands and wives drawn from the Public Use Microdata Sample (PUMS) of the 1940 U.S. Census to estimate the size of each of these effects. To identify the discouraged-worker effect I include a variable for local (city-level) unemployment. The core results come from predicting counterfactual 1940 participation rates for white and black women, setting local unemployment to its 1930 level. The greater increase in black women’s unemployment between 1930 and 1940 accounts for most of the racial convergence in participation.

High black unemployment during the Depression might have been due to the concentration of black workers in occupations or industries that tended to be more cyclically sensitive, regardless of a worker’s race. But in previous work I have shown that the occupational distribution of black women cannot account for the large racial differences in unemployment. In the final substantive section of this article, I present some evidence suggesting that differential demand shifts
across industries do not offer a compelling explanation of racial unemployment differences either. Discrimination in employment decisions, although always a “residual” in quantitative work, likely played an important role.

RACIAL DIFFERENCES IN MARRIED WOMEN’S PARTICIPATION DURING THE TWENTIETH CENTURY

The measured labor-force participation (LFP) rates of married African-American women have exceeded those of married white women since at least the late 1800s (Goldin, 1990). Meanwhile, over the course of the 20th century an increasing proportion of married women of both races have entered the labor force. Figure 1 plots the conventional published figures for married women’s participation rates by race between 1920 and 1970, the period during which the most dramatic changes in the racial difference occurred. These participation rates are derived from published tabulations of the decennial censuses of population, the comparability of which are discussed below.

The published figures reveal a consistent upward trend in participation for white women, with an acceleration after 1940, and a substantial dip in participation for nonwhite (predominantly black) women between 1930 and 1940. While the general trend in participation rates is upward for both races, the racial gap narrowed substantially, with most of the narrowing occurring between 1930 and 1940. During the 1930s, the percentage-point gap between nonwhite and white married women’s LFP rates fell from 23.4 to 14.8, a narrowing of 8.6 percentage points. The participation rate for nonwhite married women had not recovered to its 1930 level as late as 1950.

The figure actually shows participation for whites and nonwhites; the large majority of nonwhites were African Americans throughout this period.
The comparability of the published participation measures over this period is a serious concern. There are two major problems that could affect comparability between 1930 and 1940. The first has to do with who is counted as married, the second with who is counted as in the labor force.

The published participation rates for 1930 and earlier refer to all married women, whereas those for 1940 and later generally refer only to married women with spouse present. This change biases the racial comparison, because married black women were more likely to have an absent husband, and women whose spouses were absent had higher participation rates. Using census microsamples I have generated participation rates for all married women and for married women with spouse present, for available census years between 1920 and 1970. These estimates are summarized in Table 1 and Fig. 2.

Table 1 compares participation measures in 1930 and 1940 for various age groups. The top panel of Table 1 is for all married women, the bottom half for married women residing in cities with populations of at least 100,000. The 1940 participation rates for both races are higher when women with absent spouses are included, and the change is greater for black women. In fact, for the full sample, there are slight gains during the 1930s in the participation rates of black women in the prime age groups (25–44), although these gains are smaller than those for whites. The story is rather similar in the urban subsample. Overall, the participation rates of prime-aged white married women increased during the 1930s by about 5–8 percentage points, depending on the sample, whereas black women

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### Table 1

<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td></td>
<td>White Black</td>
<td>White Black</td>
<td>White Black</td>
<td>White Black</td>
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<tr>
<td><strong>Full sample</strong></td>
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<td></td>
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<tr>
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<td>13.3</td>
<td>29.9</td>
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<td>1940, all married</td>
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<td>24.6</td>
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<td>32.0</td>
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<td><strong>Cities 100,000+</strong></td>
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<tr>
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<td>15.8</td>
<td>43.4</td>
<td>12.8</td>
<td>43.8</td>
</tr>
<tr>
<td>1940, all married</td>
<td>25.1</td>
<td>34.9</td>
<td>23.6</td>
<td>45.9</td>
</tr>
<tr>
<td>1940, married, spouse present</td>
<td>22.8</td>
<td>26.3</td>
<td>21.3</td>
<td>36.7</td>
</tr>
</tbody>
</table>

Source. 1930 from Goldin (1990, pp. 18, 25). 1940 from 1940 PUMS sample (see text).

Note. 1930 figures are for nonwhite. 1940 figures are calculated from all noninstitutional white and black women in the self-weighting household sample of the 1940 PUMS.

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4 The issue of absence of spouses among ever-married women is distinct from the much-discussed high rate of unwed parenthood among African-American women in recent decades. Marital instability (in the form of separation or divorce) has been greater for blacks than for whites throughout the century, and appears to be linked to the higher labor-force participation rates of married black women (see Ruggles (1997)).
experienced small reductions or gains of no more than 2.5 percentage points. For prime-age women residing in urban areas, the racial participation gap narrowed by 5–8 percentage points. Using all married women thus eliminates the apparent dip in participation of married black women between 1930 and 1940, but the large change in the racial gap remains, as white women increasingly entered the labor force.

FIG. 2. Alternative measures of married women’s labor force participation rates: (Top) published census data; (bottom) all married women. Published series (top) includes all married (spouse present or absent) in 1920 and 1930, and married with spouse present from 1940 on. In published series, “black” includes all nonwhites. All married series (bottom) includes all married (spouse present or absent) throughout. In all married series, “black” includes blacks only except in 1930, when all nonwhites are included. Sources: published series, Goldin (1990, p. 18); all married, 1930, Goldin (1990, p. 18); all married, all other years, IPUMS samples of noninstitutional married women (Ruggles, Sobek, et al., 1997).
Figure 2 shows how using a consistent definition of marital status affects the racial comparison of participation rates over the period 1920–1970, for women ages 25–34 and 35–44. The top panel of Fig. 2 uses the published (inconsistent) series, while the bottom panel uses the (consistent) series for all married women. The trend toward convergence in participation between the races is evident in both figures, although using a consistent definition of marital status reveals an important contribution of changes during the 1940s as well as the 1930s.

The category “married” is a heterogeneous one, including as it does women whose spouses were absent and, in many cases, not contributing to household income or production. In the analysis that follows I restrict my sample to married women with spouse present in 1940, a step that is of course necessary in order to estimate the impact of the husband’s employment status on labor supply decisions. To my knowledge, it is presently impossible to calculate comparable 1930 participation rates for married women with spouse present.

The second inconsistency between the 1930 and 1940 censuses is a major change in the way labor-force participation is defined. The participation rates beginning with the 1940 census are based on what is essentially the modern definition of the labor force: a woman is counted as in the labor force if she was at work for pay or profit, an unpaid family worker, or seeking work during the census survey week. Participation rates for 1930 and earlier are derived from reported occupations, using the so-called gainful employment concept: a woman is in the labor force if she reported having a gainful occupation.

The comparability of the gainful employment and labor force measures has been discussed by a number of authors. Long (1958) notes two major differences between the concepts, which should affect measured participation rates in opposite directions. First, the modern concept excludes from the labor force individuals who worked seasonally but were neither employed nor looking for work at the time of the census survey. At least some of these individuals probably considered themselves to have a gainful occupation and thus would have been counted as gainful workers by the old definition. Second, unemployed entrants to the labor force, who had begun searching for work, would be counted as in the labor force by modern standards but might not have reported a gainful occupation in earlier censuses.

Both Long (1958) and Goldin (1990) assert that the biases introduced probably have only a small effect on the comparability of labor-force measures over time. However, because the disjuncture in definitions occurs precisely between 1930 and 1940, it is essential to consider here how the racial comparison might be affected. As I show, there is reason to believe that the change in definition matters, but probably only for farm residents.

Perhaps the most serious potential source of bias would arise from racial differences in the distribution of days worked during the year. Suppose, for

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5 The discrepancy is particularly important for female farm laborers, because of changes between 1930 and 1940 in how census enumerators were instructed to record the occupation and employment status of “unpaid family workers” on the farms (U.S. Dept. of Commerce, 1943, pp. 24–28).
example, that black working women were concentrated in seasonal agricultural employment. Many such women might have reported a gainful occupation in 1930 but would not have been considered in the labor force in 1940. In this case the measured decline in black married women’s participation could be spurious, a consequence of changing responses to the labor-force question and the different occupational composition of the black and white work forces.

The distribution of weeks worked during 1939 can be examined using data from the 1940 Census. Table 2 provides some summary statistics regarding weeks worked by race, for married women who reported positive weeks worked during 1939. The sample is a random sample of married women living with their husbands, stratified by race (the construction of the sample is discussed below). For the full sample, the mean number of weeks worked is rather similar for black and white women, but the distribution indicates a greater tendency for white women to work most of the year (40–52 weeks).

The breakdown by farm and nonfarm households in Table 2 shows that the source of this racial difference lies in the farm sector. Among nonfarm residents, the white and black distributions of weeks worked were virtually identical. On the farms, however, black women reported far fewer weeks of work during 1939 than did whites. The reason for the racial differential in weeks of farm labor is not clear. Whatever its source, because black women were disproportionately concentrated in the farm sector, the possibility of bias in the racial comparison of participation rates due to the changed definition of labor force must be admitted.

Because most black farm workers resided in the South, it is possible that regional differences in the labor requirements for different crops are at work. However, the racial difference in weeks worked of female farm workers is just as large within each southern census division (results available from the author).

### TABLE 2

<table>
<thead>
<tr>
<th></th>
<th>Distribution of weeks worked (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Full sample</strong></td>
<td></td>
</tr>
<tr>
<td>White</td>
<td>39.1</td>
</tr>
<tr>
<td>Black</td>
<td>37.2</td>
</tr>
<tr>
<td><strong>Nonfarm sample</strong></td>
<td></td>
</tr>
<tr>
<td>White</td>
<td>38.5</td>
</tr>
<tr>
<td>Black</td>
<td>39.3</td>
</tr>
<tr>
<td><strong>Farm sample</strong></td>
<td></td>
</tr>
<tr>
<td>White</td>
<td>42.0</td>
</tr>
<tr>
<td>Black</td>
<td>32.5</td>
</tr>
</tbody>
</table>

*Source.* Sample from 1940 PUMS (see text).

*Note.* Sample includes married women living with their husbands, ages 14–54, who reported positive weeks worked during 1939. Weeks worked includes work for pay or profit, as well as unpaid family work on a farm or business, but does not include housework.
If the apparent narrowing of the racial gap in participation between 1930 and 1940 were actually spurious for the reason just outlined, then one should not observe the narrowing outside of the farm sector—for example, in urban markets. In fact, the change in the racial difference is if anything more pronounced in the urban sector, as can be seen by comparing the top and bottom panels of Table 1. The fact that the basic change in the racial gap holds for the urban subsample suggests that the narrowing of the racial difference is not strictly a product of racial differences in the farm–nonfarm composition of the population, nor of changes in that composition due to racial differences in rural-to-urban migration rates. In the remainder of the article, I focus on urban areas, both because the measures of labor-force participation are probably more comparable for urban workers and because my test of the discouraged worker hypothesis relies on city-level data. I also check the results against some alternative definitions of participation that may be more consistent with the 1930 gainful worker concept—namely, a woman is considered to be in the labor force if she is either employed or reports having worked at least $X$ weeks during 1939, for $X = 1, 27, 51$. The results are robust to using these alternative definitions. 

EXPLAINING THE RACIAL DIFFERENTIAL

The historical difference in married female participation rates between whites and blacks has been noted in a number of studies, most of which find that it cannot be explained by differences in observable individual and household characteristics. Goldin (1977), using samples from seven southern cities from the 1870 and 1880 censuses, finds that little of the cross-sectional difference between black and white married women’s participation can be explained by differences in such characteristics as age, presence of children, and husband’s employment status. Goldin contended that the greater participation of black wives was a legacy of slavery. A similar conclusion is reached by Linsley and Pate (1994) in

7 Remaining potential sources of bias are less easily identified. Some female workers may have had an incentive to conceal their work activities, or an antipathy toward census takers. If such sources of bias were larger for black women, black women’s labor-force participation, and thus the racial difference, would be underestimated. Whether this bias would have increased between 1930 and 1940 is another matter. To the extent that concealing paid work was motivated by the desire to qualify a husband for public relief work, controlling for husband’s relief status should mitigate the bias (see below).

8 Goldin’s results for the late 19th century have recently been challenged in a paper by Geib-Gunderson (1995). Geib-Gunderson shows that 90 to 95% of the racial difference that existed in 1880 and 1900 can be accounted for if the participation equation includes a control for the self-employment status of the husband. Self-employment rates were higher for white men than for black men. Geib-Gunderson hypothesizes that a sizable percentage of wives of self-employed men were working for the family business, even though they reported not being gainfully employed. Although these results are suggestive, one must remain skeptical that the rather small racial difference in self-employment rates (2% points in 1900) could drive the very large differences in married women’s labor-force participation. As I show below, including a control for husband’s self-employment status in 1940 leaves most of the racial difference in participation rates unexplained.
their study using data from Chicago in 1925. Work using data of more recent vintage also finds that much of the racial gap is unexplained by characteristics.9

The apparent decline of black married women’s participation during the 1930s and the consequent narrowing of the black–white gap have been noted but rather little studied using quantitative data. Long (1958) notes the greater impact of the Depression on the participation of black women. Jones (1985, p. 197) attributes the decline to “diminished work opportunities” during the Depression without further comment. Goldin (1990, p. 27) also blames “depressed economic conditions” and notes that for the cohorts of black women most affected, the decrease in employment “was not fully restored in later decades” (p. 28).

In fact, as we have seen, the purported decline in married black women’s participation is spurious, but the puzzle of the declining racial difference remains. The argument that the depressed economic conditions of the 1930s had an adverse impact on married black women’s participation rests on the presumption that for black women the discouraged worker effect outweighed the added worker effect, whereas for whites the discouraged worker effect was presumably too small to counteract the combined effects of added workers and the general trend toward greater participation. The greater importance of the discouraged worker effect for blacks relative to whites might in turn have been a function of two factors, a larger reduction in employment probability (higher unemployment rate), and/or a greater sensitivity of married black women’s participation to the reduction in employment probability.

That the probability of employment fell more for black women during the Depression is indicated by their higher unemployment rates, especially in the cities. In 1937, the overall unemployment rate of nonwhite women was 32.4%, compared with 23.5% for whites, with a black/white ratio of 1.38. In the cities, the unemployment rates were 35.5 and 22.8% for nonwhite and white women, respectively, implying a black/white ratio of 1.56. In rural areas, on the other hand, the unemployment of white women actually exceeded that of nonwhites (27.8 versus 18.7%). By 1940, unemployment rates had dropped generally, but they remained higher for blacks: the nonwhite unemployment rate was 14.5% (18.1% in cities), compared with 13.0% for whites (12.7% in cities).10 Whether black women’s labor supply may also have responded more elastically to high unemployment remains to be seen.

Long (1958, p. 192) suggests another plausible hypothesis for explaining the relative decline in black married women’s participation, the effect of government work relief policies. The most important work relief agency, the Works Progress Administration (WPA), set eligibility requirements stipulating that relief jobs were to go to unemployed heads of households without other significant sources


of income (see Howard (1943) and U.S. Federal Works Agency (1946)). Men with working wives were thus generally not considered eligible for relief work. This rule provided an incentive for some married female workers to leave the labor force in order for their unemployed husbands to qualify for relief.\textsuperscript{11} Because a larger percentage of black men than white men were unemployed and on work relief, a proportionately larger number of black wives may have left the labor force to allow their husbands to qualify. Long also suggests that work relief was probably an attractive alternative to private-sector employment for black men, whose pay tended to be lower than that of whites.

Recent work by Finegan and Margo (1994) has attempted to quantify the added worker, discouraged worker, and relief incentive effects using a sample drawn from the 1940 Census. They find that women whose husbands held government relief jobs did indeed have substantially lower participation rates than women whose husbands were employed at regular jobs or were unemployed. Whether the WPA actually \textit{caused} a significant reduction in married women’s participation is difficult to nail down. On the one hand, the relief rules clearly provided an incentive for working women to exit the labor force so that their husbands might qualify for relief. On the other hand, even if women’s labor force response had been totally inelastic with respect to the availability of relief, only the husbands of women who happened not to be working would have qualified for relief jobs. Thus through a process of selection, husband’s relief status would be negatively correlated with wife’s participation in any sample.\textsuperscript{12} Finegan and Margo also find evidence in support of the added and discouraged worker effects: participation rates were higher for wives of men who were unemployed or not in the labor force, and lower for women residing in cities with higher unemployment rates.

In the remainder of the article, I use samples drawn from the 1940 PUMS to assess the potential importance of the relief incentive and discouraged worker effects in explaining the convergence of black and white women’s participation rates during the 1930s. Setting aside the question of whether the relief programs actually induced women’s withdrawal from the labor force, the maximum potential magnitude of the effect of relief employment on the participation gap can easily be examined with some straightforward counterfactual calculations. Quantifying the contribution of the discouraged worker effect requires a somewhat more involved set of calculations, based on a participation equation from a

\textsuperscript{11} Of course the same eligibility requirement created an incentive for working wives to conceal their employment from the WPA and, perhaps, from census takers.

\textsuperscript{12} Finegan and Margo address the causality question in a couple of ways. First, they examine transition rates into and out of the labor force, in an attempt to see whether women were responding to their husbands’ relief status. Second, they examine the participation rate of women whose husbands had been on relief in 1939 but were unemployed and off relief work at the time of the census in 1940, to see whether husbands’ preference for relief was correlated with a low preference for market work by wives. The results are suggestive, but without longitudinal data (and perhaps even with it), the direction of causality cannot definitively be determined.
sample restricted to residents of large cities. Before proceeding to these calculations, however, I briefly discuss the samples used here.

THE DATA

The core data come from the 1940 Census Public Use Microdata Sample (PUMS). I generated a sample of married women living with their husbands, stratified by race. Details on the samples are given in the Appendix. The unit of observation is the married couple, with variables describing characteristics of the wife and the husband and characteristics common to the household, such as location and home ownership. The core sample includes women ages 14 and up, but much of the analysis that follows uses a sample restricted to “prime-age” women, ages 25–54. For this sample, there are 23,200 white and 15,960 black women.

To examine the discouraged worker effect, I also generated an urban subsample of the core data set, containing prime-age women residing in central cities of standard metropolitan areas identified in the PUMS, for which the census published labor-force and unemployment statistics by race and gender in 1930 and 1940. Use of this restricted sample is necessary because the effects of local labor market conditions are identified using city-level unemployment rates. This sample contains 6,266 white women and 4,523 black women.

DOES PUBLIC RELIEF WORK ACCOUNT FOR THE RACIAL DIFFERENCE? A SIMPLE COUNTERFACTUAL EXERCISE

Using a sample drawn from the 1940 PUMS, Finegan and Margo (1994) find that women whose husbands held government relief jobs (such as WPA) had substantially lower participation rates than women whose husbands were employed at regular jobs or were unemployed. Their finding is replicated in my sample for both races, as is evident from Table 3. Wives of emergency (relief) workers had dramatically lower participation rates. The added worker effect appears to hold in the full sample: participation rates were higher for wives of men who were unemployed or not in the labor force. When the sample is restricted to large cities (lower half of Table 3), the effect of relief work is still evident, but the added worker effect is quite small, especially among black women.

Might the convergence of black and white women’s participation rates between 1930 and 1940 plausibly be accounted for by racial differences in husbands’ relief employment? Table 4 shows that black husbands were indeed more likely to be on relief work and to be unemployed than were white husbands. This was especially the case in large cities. But is this difference large enough to account for a significant portion of the change in the LFP gap?

13 Tables 3 and 4 restrict the sample to women ages 14–54, which is the age range used by Finegan and Margo (1994). Finegan and Margo also restrict their sample to the nonfarm population; doing so here does not change the substantive results.
A simple counterfactual exercise to address this question is to assign black husbands the same incidence of emergency employment as white husbands (thereby reducing the black relief rate from 6.8 to 4.8%) and reallocate the “excess” black husbands (2%) to regular employment or unemployment. The number of married black women in the labor force can then be adjusted upward using the participation rates in each husband’s employment category.

The effect of this adjustment in the full sample is very small. As can be seen

<table>
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<tr>
<th>Husband’s status</th>
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<th>Black</th>
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<tbody>
<tr>
<td>Employed, regular</td>
<td>13.2</td>
<td>27.8</td>
</tr>
<tr>
<td>Employed, public relief job</td>
<td>4.8</td>
<td>17.1</td>
</tr>
<tr>
<td>Unemployed</td>
<td>20.0</td>
<td>40.3</td>
</tr>
<tr>
<td>Not in labor force</td>
<td>19.5</td>
<td>37.5</td>
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<tr>
<td>All statuses</td>
<td>13.4</td>
<td>28.3</td>
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<tr>
<td>Observations</td>
<td>26,932</td>
<td>20,193</td>
</tr>
</tbody>
</table>

**Source.** 1940 PUMS samples (see text).

**Note.** Married women ages 14–54.

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<table>
<thead>
<tr>
<th>Employment status</th>
<th>White</th>
<th>Black</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employed, regular</td>
<td>86.3</td>
<td>82.0</td>
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<td>Employed, public relief job</td>
<td>4.8</td>
<td>6.8</td>
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<tr>
<td>Unemployed</td>
<td>5.5</td>
<td>7.0</td>
</tr>
<tr>
<td>Not in labor force</td>
<td>3.4</td>
<td>4.2</td>
</tr>
</tbody>
</table>

**Source.** See Table 3.

**Note.** Husbands of married women of ages 14–54.
from Table 3, the overall black married women’s participation rate in this sample is 28.3%. Reassigning the excess black emergency workers to regular jobs leads to a counterfactual wives’ participation rate of 28.6%. Reassigning them to unemployment yields a counterfactual participation rate of 28.8%. Evidently the higher incidence of relief work among black husbands can account for very little (perhaps up to one-half of a percentage point) of the closing gap between black and white women’s participation rates.

A more complete appraisal of the effect of husband’s employment status would also factor in the “added worker” effect due to the higher rates of pure unemployment and nonparticipation among black husbands. As Table 3 indicates, the participation rates of married women whose husbands were unemployed or not in the labor force were higher than those of women whose husbands held regular jobs, for both races. Because black men were more likely to be unemployed or not in the labor force (NILF), the added worker effect should have offset to some extent the effect of relief employment noted above. If we reallocate black husbands from the relief, unemployment, and NILF categories so that the proportional composition of black husbands’ employment status across all employment categories is identical to the white husbands’ composition, the black married women’s participation rate rises to only 28.5%, a negligible change from the actual value of 28.3%.

These effects are somewhat stronger in the sample restricted to large cities. In that sample, if the “excess” black relief workers are reallocated to regular employment, the counterfactual participation rate of married black women rises to 33.9% from its actual figure of 32.4%. If these husbands are reallocated to unemployment, the counterfactual participation rate is yet a bit higher, 34.2%. Finally, if the composition of employment status among black husbands were the same as that of white husbands, their wives’ overall participation rate would be 33.7%. In sum, although these counterfactual figures suggest a modest role for husbands’ relief status in reducing black women’s participation, the effect is negligible relative to the overall change in participation in the full sample, and quite small in the urban sample. Furthermore, while there is evidence of an added worker effect, it too has little influence on the racial differential.

THE DISCOURAGED WORKER EFFECT

The available evidence suggests that the unemployment rates of black women were considerably higher than the rates of white women through most of the 1930s, at least outside of the rural South (see above and Sundstrom, 1992). These extraordinary unemployment rates for women may have induced a withdrawal of some portion of black women from the labor force. The strength of this effect can be examined using a fairly standard technique, estimating labor-

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14 Although there is some question whether unemployment and NILF are distinct states for men, they appear to be so for women (Gönül, 1992).
force participation equations that include a measure of local labor-market conditions (unemployment). These estimates can be used to simulate the effect of higher black unemployment on participation. Local labor market conditions can be estimated using city-level unemployment rates in the urban sample.

I estimate probit participation equations separately by race, using the urban subsample of my PUMS sample (see the Appendix). The subsample includes observations from 74 large central cities of SMAs that are identified in the PUMS, and for which the census published unemployment rates by race and sex. As a measure of local labor-market conditions I use the city-specific (Lebergott) unemployment rate for women of each race, counting female relief workers as unemployed. Black women are assigned the unemployment rate of black women in their city, and white women are assigned the unemployment rate of white women. The participation equation also includes controls for the woman’s age and education, nonwage income, migration status, children (by age), and census division, as well as controls for the husband’s age, education, earnings in 1939, and current employment status.

Table 5 presents sample means for the variables and probability derivatives implied by the estimated probit coefficients for the participation equation. The estimates in Table 5 were for a sample restricted to prime-age women, ages 25–54; results are quite similar when the sample is expanded to include women 14–54. For the dummy variables, each probability derivative can be interpreted roughly as the effect on the labor-force participation probability of switching the dummy variable from 0 to 1, holding all other variables fixed. The probability derivatives (for either race) were evaluated for a woman ages 25–34, with 8 years of school, 1 child age 6–13, living in the Middle Atlantic division, whose husband was 35–44, had 8 years of school, and earned $1000 in 1939; the city unemployment rate was set at 15%; all other variables were set to 0.

The estimates presented in Table 5 indicate that the directions of the effects of the variables are generally the same for blacks and whites, although the magnitudes of some effects are rather different. For both races, older women are less likely to participate, although this age effect is far stronger among whites. Schooling has little effect, with the exception of women with more than a high school education, for

15 Raw unemployment rates are used. A further refinement would be to estimate the city-level unemployment probability as a function of individual characteristics and predict the probability of unemployment for each individual; however, sample sizes are prohibitively small in many of the cities.

16 Husband’s earnings in 1939 may not be a very good measure of either current pay or permanent income, but the results are not sensitive to dropping husband’s earnings from the equation. I do not attempt to include the woman’s actual or potential earnings directly in the participation equation. For nonparticipants (most women), the wage would have to be imputed from a first-stage wage regression for participants, using the same set of regressors already used to predict participation. This raises difficult issues of specification and sample-selection bias (see Killingsworth and Heckman (1986) for a discussion of the sensitivity of labor-supply estimates to different specifications). At any rate, participation may not be very responsive to the wage: for example, in their study using 1925 data, Linsley and Pate (1994) find that the wage has no significant effect on the participation of either white or black women.
<table>
<thead>
<tr>
<th></th>
<th>Whites Mean</th>
<th>dP/dX</th>
<th>Blacks Mean</th>
<th>dP/dX</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age 35–44</td>
<td>0.346</td>
<td>−0.077</td>
<td>0.382</td>
<td>−0.004</td>
</tr>
<tr>
<td>Age 45–54</td>
<td>0.281</td>
<td>−0.226</td>
<td>0.188</td>
<td>−0.099</td>
</tr>
<tr>
<td>School 8 years</td>
<td>0.309</td>
<td>−0.020</td>
<td>0.205</td>
<td>0.039</td>
</tr>
<tr>
<td>School 9 to 11</td>
<td>0.187</td>
<td>−0.025</td>
<td>0.158</td>
<td>−0.013</td>
</tr>
<tr>
<td>School 12</td>
<td>0.198</td>
<td>0.047</td>
<td>0.102</td>
<td>0.049</td>
</tr>
<tr>
<td>School greater than 12</td>
<td>0.083</td>
<td>0.108</td>
<td>0.052</td>
<td>0.131</td>
</tr>
<tr>
<td>Nonwage income (dummy)</td>
<td>0.071</td>
<td>0.153</td>
<td>0.105</td>
<td>0.112</td>
</tr>
<tr>
<td>New state since 1935</td>
<td>0.063</td>
<td>0.019</td>
<td>0.052</td>
<td>−0.033</td>
</tr>
<tr>
<td>New place since 1935</td>
<td>0.109</td>
<td>−0.061</td>
<td>0.076</td>
<td>0.114</td>
</tr>
<tr>
<td>Child under 1 present</td>
<td>0.041</td>
<td>−0.306</td>
<td>0.034</td>
<td>−0.310</td>
</tr>
<tr>
<td>Child 1 to 5</td>
<td>0.227</td>
<td>−0.156</td>
<td>0.171</td>
<td>−0.128</td>
</tr>
<tr>
<td>Child 6 to 13</td>
<td>0.362</td>
<td>−0.071</td>
<td>0.290</td>
<td>−0.054</td>
</tr>
<tr>
<td>Total children &lt;14</td>
<td>0.8717</td>
<td>−0.055</td>
<td>0.8427</td>
<td>−0.059</td>
</tr>
<tr>
<td></td>
<td>(1.1419)</td>
<td>(1.4833)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Own house</td>
<td>0.330</td>
<td>−0.019</td>
<td>0.152</td>
<td>0.006</td>
</tr>
<tr>
<td>Middle Atlantic</td>
<td>0.368</td>
<td>−0.003</td>
<td>0.253</td>
<td>−0.077</td>
</tr>
<tr>
<td>East North Central</td>
<td>0.270</td>
<td>0.000</td>
<td>0.227</td>
<td>−0.078</td>
</tr>
<tr>
<td>West North Central</td>
<td>0.071</td>
<td>−0.008</td>
<td>0.058</td>
<td>−0.114</td>
</tr>
<tr>
<td>South Atlantic</td>
<td>0.062</td>
<td>0.080</td>
<td>0.193</td>
<td>0.045</td>
</tr>
<tr>
<td>East South Central</td>
<td>0.027</td>
<td>0.006</td>
<td>0.117</td>
<td>−0.073</td>
</tr>
<tr>
<td>West South Central</td>
<td>0.047</td>
<td>−0.014</td>
<td>0.113</td>
<td>0.004</td>
</tr>
<tr>
<td>West</td>
<td>0.107</td>
<td>−0.017</td>
<td>0.027</td>
<td>−0.024</td>
</tr>
<tr>
<td>Husband 35–44</td>
<td>0.337</td>
<td>−0.029</td>
<td>0.400</td>
<td>−0.039</td>
</tr>
<tr>
<td>Husband 45–54</td>
<td>0.318</td>
<td>−0.063</td>
<td>0.255</td>
<td>−0.103</td>
</tr>
<tr>
<td>Husband over 54</td>
<td>0.099</td>
<td>−0.059</td>
<td>0.095</td>
<td>−0.158</td>
</tr>
<tr>
<td>Husband school 8</td>
<td>0.313</td>
<td>0.031</td>
<td>0.197</td>
<td>0.033</td>
</tr>
<tr>
<td>Husband school 9–11</td>
<td>0.162</td>
<td>0.045</td>
<td>0.116</td>
<td>0.012</td>
</tr>
<tr>
<td>Husband school 12</td>
<td>0.150</td>
<td>0.030</td>
<td>0.063</td>
<td>0.016</td>
</tr>
<tr>
<td>Husband school &gt;12</td>
<td>0.139</td>
<td>0.015</td>
<td>0.056</td>
<td>0.001</td>
</tr>
<tr>
<td>Husband NILF</td>
<td>0.034</td>
<td>−0.014</td>
<td>0.065</td>
<td>0.007</td>
</tr>
<tr>
<td>Husband unemployed</td>
<td>0.065</td>
<td>0.073</td>
<td>0.105</td>
<td>0.067</td>
</tr>
<tr>
<td>Husband relief work</td>
<td>0.031</td>
<td>−0.196</td>
<td>0.106</td>
<td>−0.221</td>
</tr>
<tr>
<td>Husband self-employed</td>
<td>0.147</td>
<td>−0.076</td>
<td>0.059</td>
<td>0.001</td>
</tr>
<tr>
<td>Husband’s earnings in 1939</td>
<td>1352.3</td>
<td>−0.00008</td>
<td>685.8</td>
<td>−0.00011</td>
</tr>
<tr>
<td></td>
<td>(1100.4)</td>
<td>(532.3)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>City unemployment rate, 1940 (%)</td>
<td>13.6</td>
<td>−0.00344</td>
<td>23.3</td>
<td>−0.00581</td>
</tr>
<tr>
<td></td>
<td>(2.8)</td>
<td>(8.5)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LFP rate</td>
<td>0.161</td>
<td>0.335</td>
<td></td>
<td></td>
</tr>
<tr>
<td>City unemployment rate, 1930 (%)</td>
<td>5.35</td>
<td>7.99</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(1.21)</td>
<td>(3.39)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Log likelihood</td>
<td>−2534.04</td>
<td></td>
<td>−2529.79</td>
<td></td>
</tr>
<tr>
<td>Number obs.</td>
<td>6727</td>
<td></td>
<td>4521</td>
<td></td>
</tr>
</tbody>
</table>

*Source.* Probit estimates from sample of 1940 PUMS (see text for details).

*Note.* Sample standard errors in parentheses for nondichotomous variables; all other variables are dummy variables. Excluded categories are age under 25, school less than 8 years, New England.

*Probit coefficient (not reported) significantly different from zero at 5% level.*
whom participation is greater. The presence of children has the expected depressing effect on participation, with the effects stronger the younger the children. These effects are very similar in magnitude across the races. Controlling for other factors, there is little evidence of regional differences in this sample, for either race.

Husband’s age and employment status influence participation, with an added worker effect evident in the positive coefficients on the variables for husband unemployed and NILF, and the relief work effect evident in the negative coefficient on that variable. These probit results are, unsurprisingly, quite similar to Finegan and Margo’s (1994) findings using the same basic data set, and they furthermore show that white and black women responded very similarly to their husband’s employment status and income.\textsuperscript{17}

Although most of the variables have qualitatively similar effects for white and black women, most of the racial difference in participation rates reflects racial differences in the coefficients rather than characteristics. In the first four rows of Table 6, the labor-force participation rate is predicted using actual and counter-

\textsuperscript{17} The results also show that the participation of white women was somewhat lower when their husband was self-employed, whereas among blacks participation was unaffected by husband’s self-employment status, in contrast with Geib-Gunderson’s (1995) findings.
factual characteristics. The counterfactual rates are calculated by predicting each woman’s participation probability given her characteristics and the relevant probit coefficients, and then averaging the predicted probabilities. The first entry in the second row, for example, shows that if the black women in the sample are assigned the coefficients (“prices”) estimated for white women, their predicted participation rate would be 21.7%, far below their actual sample participation rate of 33.5%. Conversely, if the white women in the sample are assigned the coefficients estimated using the sample of black women (row 4), their predicted participation rate jumps from a true value of 16.1% to 30.5%, which is very close to the actual black participation. In sum, these results confirm the findings of Goldin (1977) and others that cross-sectional racial differences in married women’s participation rates cannot be accounted for by differences in commonly measured individual characteristics.

The variable of greatest interest here in discerning the importance of the discouraged worker effects is the city unemployment rate. As expected, the coefficient is negative for both races, consistent with the discouraged worker effect, although it is significant at the 5% level for black women only. The means of this variable show that the city-level unemployment rate was nearly 10 percentage points higher for the average black women in the sample than for the average white woman. Using the probability derivative for black women (about $-0.006$), a back-of-the-envelope calculation suggests that if black women had had the average white unemployment rate, their participation would have been about 6 percentage points ($10 \times 0.006$) higher.

Of course there is no reason to suppose that black women would have had the same unemployment probabilities as white women in the absence of the depressed labor-market conditions. Experience since the Depression suggests that black unemployment rates are consistently higher than those of whites. Therefore, a more realistic counterfactual is to assign the race-specific city-level unemployment rates that obtained in 1930 in place of the 1940 rates. The mean of the 1930 city-level unemployment rate is given at the bottom of Table 5. Evidently, unemployment rates in the cities tended to be higher for black women than for white women in 1930.

The results of the counterfactual exercise are presented in the fifth and sixth rows of Table 6. For the 25–54 sample (the first column), reducing city-level unemployment to its 1930 levels would have increased white women’s participation by about 2 percentage points (compare row 5 and row 1). For black women, the effect is far more dramatic. Returning the city-level unemployment rates to their 1930 levels for black women increases the predicted participation rate by fully 7.5 percentage points (row 6 versus row 3). Thus roughly 5.5 points of the change in the racial gap in participation rates can be accounted for by the differential impact of the discouraged worker effect on black married women. This is roughly equal to the entire change in the gap for all married urban women indicated in Table 1.

The discouraged worker effect is much stronger for black women than for

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18 The effect is similar in magnitude for the sample that includes women 14–54 (the gap narrows by about 5 percentage points).
white women here both because the unemployment rate increased by much more between 1930 and 1940 for black women (in percentage point terms) and because black women’s participation responded more elastically (larger coefficient on the city unemployment rate). These effects are roughly equal in magnitude. Assigning black women the city unemployment rates for white women leads to a predicted reduction in their participation between 1930 and 1940 of about 4 percentage points, which is about half the total predicted reduction of 7.5 percentage points.

Table 6 also includes counterfactual estimates that take account of the impact of federal emergency employment programs on labor force participation. The seventh and eighth rows use the counterfactual (1930) city unemployment rates and also reassign husbands who held emergency employment to the regular employment category. This has a marginal effect on white women but increases black women’s participation by a further 2 percentage points. Thus the work programs could be considered a contributing although secondary factor in the convergence of white and black married women’s participation rates during the 1930s.

The third through fifth columns of Table 6 repeat the counterfactuals of the first column using three alternative definitions of labor-force participation based on weeks worked in 1939, which may be more consistent with the 1930 gainful worker concept. Namely, a woman is considered to be in the labor force in 1940 if she was employed at the time of the census or reported having worked at least 1, 27, or 51 weeks in 1939, respectively. The results are very similar to those using the conventional definition of the labor force, again suggesting that the discouraged worker effect had a large impact on the racial participation gap, with the emergency work incentive playing a smaller role.

**DISCOURAGING TIMES: ACCOUNTING FOR RACIAL DIFFERENCES IN WOMEN’S UNEMPLOYMENT**

Why was the unemployment rate in 1940 so much higher for black women? Employers may have discriminated against African-American women in employment by laying them off first. Another possibility is that black women were employed in occupations or industries that were more vulnerable to the cycle. Occupational segregation by race was substantial at the time of the Depression, especially among women. Estimates based on the 1940 Census show that about 65% of black women would have had to switch occupations in order to achieve equal proportionate representation of white and black women in all occupations; the corresponding proportion for men was 44% (King, 1992, p. 32). More than half of black female workers held domestic service jobs in 1940, compared with 11% of white women. Clerical jobs, which employed about 27% of white female workers, employed less than 2% of black women.

Despite the striking pattern of occupational segregation by race among working women, I have shown elsewhere that almost none of the large racial
difference in women’s unemployment in 1931 could be attributed to occupational composition (Sundstrom, 1992). Rather, black–white differences in unemployment rates within occupations account for most of the overall differential. These results suggest that racial discrimination in layoffs played an important role in the employment problems faced by black women, at least early in the Depression.

Of course, it is still possible that between 1930 and 1940 changes in the industrial structure of demand for women’s employment affected black women adversely. Such changes would not necessarily show up in a cross-sectional analysis of unemployment by industry or occupation if women in declining sectors switched jobs or simply dropped out of the labor force. To capture the net effect of changes in the industrial structure of employment, I have estimated a simple shift-share decomposition of the change in the percentage of blacks among female workers between 1930 and 1940. The change in the percentage black is given by

$$p_{40} - p_{30} = \sum e_i^{40} p_i^{40} - \sum e_i^{30} p_i^{30}$$

$$= \sum (e_i^{40} - e_i^{30}) p_i^{30}$$

$$+ \sum (p_i^{40} - p_i^{30}) e_i^{30} + \sum (e_i^{40} - e_i^{30})(p_i^{40} - p_i^{30}),$$

where \(p\) is the overall percentage black in year \(t\), \(e_i\) is the share of total women’s employment in industry \(i\) in year \(t\), and \(p_i\) is the percentage black in industry \(i\) in year \(t\). The first term in the decomposition is the industry composition effect, which captures the impact of changing industry structure of employment, the second term is the weighted effect of within-industry changes in the proportion of employees who were black, and the final term is an interaction.

To calculate the decomposition, I have used published census data from 1930 and 1940 to create reasonably comparable distributions of employment by industry for black and white women. Alba Edwards (U.S. Dept. of Commerce, 1943a) notes various problems of comparability of the census industry categories across the 1930 and 1940 population censuses. For my analysis I have used 16 industry categories. These industries met two criteria: (1) Edwards judged that the employment figures could be compared, appropriately adjusted for changes in definition, and (2) at least 100,000 women worked in the industry in 1930. Women employed in any other industry were assigned to a residual category. For the comparable industry groups, Edwards provides an adjustment factor for each industry that allows one to scale the 1930 employment numbers up or down for greater comparability with 1940. The adjustment keeps the total employment constant.

Table 7 presents the results for both the unadjusted and the adjusted 1930 figures. The first two columns use the raw census employment figures for 1930;

---

19 This contrasts with the pattern for men. In the South, at least, higher unemployment rates for black men were largely a function of the concentration of blacks in cyclically vulnerable low-skilled occupations (see Sundstrom (1996)).
the second two use 1930 employment adjusted using Edward’s adjustment factors. Results are presented for all workers and for nonagricultural workers.\footnote{Table 7 uses only workers who were actually employed in 1940. The results are not substantively changed if one adds to the 1940 employment figures experienced workers who were unemployed and seeking work and who reported an industry.}

The first two rows of Table 7 show the percentage black in 1930 and 1940 \((p^{30}\) and \(p^{40}\)), respectively. The third row is the difference between rows (1) and (2), or the change from 1930 to 1940. Reading across the third row, the first number indicates an overall reduction of 3.4 percentage points in the proportion of female workers who were black. The fourth row shows the estimated effect of changing industrial composition. In columns (1) and (2), using the unadjusted numbers, the composition effect appears to explain most of the overall change, suggesting a demand shift that disfavored black women. For all industries, changing industry composition explains 2.65 out of the 3.38 percentage-point reduction, and 1.38 out of 2.20 percentage points when agriculture is excluded.

Adjusting the employment numbers for consistency across the census dates, however, makes a big difference in the results. Reading across the fourth row to the third and fourth columns, the Edwards adjustment dramatically reduces the size of the composition effect, and virtually eliminates it for the nonagricultural sample. The reason is that the Edwards adjustment reduces employment in domestic service by 16% in 1930, resulting in greater measured employment growth in that industry, which also had very high representation of black women. Using the adjusted numbers, most of the action is in the negative interaction term, which indicates that industries with relatively greater employment growth tended to be industries in which black representation was declining, and vice versa.

Comparability of industry definitions across the censuses is clearly problematic. Taking Edward’s adjusted figures as more reliable, there is little evidence that at the beginning of the Depression black women were concentrated in

\begin{table}[h]
\centering
\begin{tabular}{lrrrr}
\hline
 & Unadjusted 1930 employment & & & \\
 & All workers & Nonagricultural & & \\
\hline
(1) Percentage black 1930 & 17.27 & 14.39 & 17.27 & 14.42 \\
(2) Percentage black 1940 & 13.89 & 12.19 & 13.89 & 12.19 \\
(3) Change 1930–1940 (\%) & \(-3.38\) & \(-2.20\) & \(-3.38\) & \(-2.23\) \\
(4) Composition effect & \(-2.65\) & \(-1.38\) & \(-1.17\) & \(-0.31\) \\
(5) Within-industry effect & 0.06 & 0.08 & \(-0.01\) & \(0.01\) \\
(6) Interaction/residual & \(-0.80\) & \(-0.89\) & \(-2.20\) & \(-1.92\) \\
\hline
\end{tabular}
\caption{Shift-Share Analysis of Change in Proportion Black among Employed Women, 1930–1940}
\end{table}

\textit{Source.} U.S. Dept. of Commerce (1933b, Table 1); U.S. Dept of Commerce (1943b, Table 76).
\textit{Note.} Unadjusted uses published census figures. Adjusted uses 1930 employment multiplied by Edwards (1943a) adjustment factor (see text).
industries that had particularly large negative demand shocks between 1930 and 1940. Coupled with the anecdotal and quantitative evidence presented in Sundstrom (1992, 1996), this evidence supports the conclusion that discrimination against black women in layoffs and/or rehires resulted in higher rates of unemployment and consequently discouraged workers.

**CONCLUSIONS**

The labor-force participation rates of black and white married women began to converge during the 1930s, as the percentage of white women in the workforce increased and the percentage of black women did not. Conventional published participation rates overstate this convergence because they use different definitions of marital status in 1930 and 1940, but a sizeable narrowing of the gap remains even when a consistent definition is employed.

The discouraged worker effect played an important role in depressing black married women’s participation in 1940: unemployment rates were higher for black women than for white women, and black women’s participation was more sensitive to unemployment than whites’. The evidence also confirms the existence of added-worker and work-relief incentive effects, but neither one had as much impact on the racial differential as did the discouraged worker effect. Explaining the higher unemployment among black women requires further research, although it appears that aggregate shifts in labor demand by industry do not offer a compelling account.

By reducing married women’s participation rates, the discouraged worker effect had an adverse impact on family incomes, and this impact was greater for African-American families than it was for whites. Table 8 provides some data on the contribution of wives to the earnings of married couples in 1939. In the aggregate, wives contributed a small fraction of total earnings, on the order of 8%
for whites and 14% for blacks. However, among couples in which wives had positive earnings, their contribution was substantial, on the order of 40% of total earnings (slightly higher for whites than blacks). The incomes of such families thus may have taken a substantial hit not only as a direct consequence of job loss but also as a result of the discouraged worker effect. Quantifying this impact would of course be greatly complicated by the problems of controlling for self-selection and measuring the value of nonmarket time, and is beyond the scope of this article.

APPENDIX

The data sets used in this article are samples of the 1940 PUMS, stratified by race, in which married men and women are matched. The unit of observation is the married couple, with separate variables for the household, the husband, and the wife. The following is a description of the principal samples.

In the core sample, I sample from the full 1940 PUMS (U.S. Dept. of Commerce, 1938). The observations included satisfy the following criteria:

(1) married couple living together;
(2) both husband and wife at least 14 years old;
(3) noninstitutional household;
(4) household in the self-weighting household sample;
(5) all such couples with black wives and 1/8 of such couples with white wives were sampled.

The matching of husbands and wives used the following procedure, taking advantage of the hierarchical structure of the PUMS. First, males satisfying the above criteria who are married with spouse present are identified. If the following record is a female in the same household who is also married with spouse present, the couple is a match.

The hierarchical structure of the PUMS also made it possible to count the number of the couples’ own children living at home, for various age groups (<1, 1–5, 6–13, and 14–17). This was accomplished by moving to the record following a husband and wife. If the person is in the same family class as the couple, is a child of the family or subfamily head, and is in one of the age groups indicated, the counter for that age group is incremented. This process continues until a new household, a new family, or a new subfamily is encountered.

The PUMS definitions lead to some potential discrepancies in the count of children, but none of these is likely to be large for children under 14. First, only children who are in the same family (not including subfamilies) as the family

21 Use of the self-weighting household sample assures a truly random sample, as the full PUMS oversampled large households.

22 The possible family classes are: (1) member of primary family but not of any subfamily; (2) member of primary family and of subfamily 1; (3)–(6) analogous to (2) for subfamilies 2–5; (7) member of secondary family 1; (8) member of secondary family 2.
head are counted. Thus, for example, a 16-year-old living with her parents who has her own subfamily (a husband and/or grandchildren of her parents) will not be counted as one of her parents’ children. This is unlikely to be much of a problem in the counts of children under 14. Second, within families, any own child under 18 who is living in the household and not in a subfamily is counted; within subfamilies, only never-married children under 18 are counted. Again, this discrepancy seems unlikely to have much impact at ages under 14.

To analyze the discouraged worker phenomenon, I created an urban subsample of the core data set that includes only those central cities of SMAs that were identified in the PUMS, and for which the census published labor-force and unemployment statistics by race and gender in both 1930 and 1940. Data from 73 cities are included; all 73 had populations of at least 100,000 in both 1930 and 1940. To each observation I added variables for the white and black female unemployment rates in the household’s city of residence. The 1930 unemployment rates are the sum of “Class A” and “Class B” unemployment (which includes individuals who reported that they were out of work and looking for work as well as workers on temporary layoff without pay) divided by gainful workers. The 1940 unemployment rates count women on relief jobs, such as WPA, as unemployed (so-called “Lebergott” unemployment rates). In four of the SMAs used in this sample there were more than one central city, and the unemployment rates for the combined central cities in that SMA are assigned.

REFERENCES


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23 Unemployment: U.S. Dept. of Commerce (1931, Table 8), for each state. Gainful workers: U.S. Dept. of Commerce (1933a, Table 14, pp. 333–334).


