W.E. UPJOHN INSTITUTE
FOR EMPLOYMENT RESEARCH

Upjohn Institute Working Papers | Upjohn Research home page

5-1-2014

The Ups and Downs in Women's Employment — Shifting Composition or Behavior from 1970 to 2010?

Kristin E. Smith
University of New Hampshire

Upjohn Institute working paper ; 14-211

Citation

Smith, Kristin E. 2014. "The Ups and Downs in Women's Employment — Shifting Composition or Behavior from 1970 to 2010?" Upjohn Institute Working paper 14-211. Kalamazoo, MI: W.E. Upjohn Institute for Employment Research. https://doi.org/10.17848/wp14-211

This title is brought to you by the Upjohn Institute. For more information, please contact repository@upjohn.org.

W.E. UPJOHN INSTITUTE
FOR EMPLOYMENT RESEARCH
Researching the causes and consequences of unemployment

The Ups and Downs in Women's Employment—Shifting Composition or Behavior from 1970 to 2010?

Upjohn Institute Working Paper 14-211

Kristin E. Smith
University of New Hampshire
e-mail: Kristin.Smith@unh.edu

May 2014

ABSTRACT

This paper tracks factors contributing to the ups and downs in women's employment from 1970 to 2010 using regression decompositions focusing on whether changes are due to shifts in the means (composition of women) or due to shifts in coefficients (inclinations of women to work for pay). Compositional shifts in education exerted a positive effect on women's employment across all decades, while shifts in the composition of other family income, particularly at the highest deciles, depressed married women's employment over the 1990s contributing to the slowdown in this decade. A positive coefficient effect of education was found in all decades, except the 1990s, when the effect was negative, depressing women's employment. Further, positive coefficient results for other family income at the highest deciles bolstered married women's employment over the 1990s. Models are run separately for married and single women demonstrating the varying results of other family income by marital status. This research was supported in part by an Upjohn Institute Early Career Research Award.

JEL Classification Codes: J11, J21

Key Words: women's employment, other family income, stalled gender revolution, regression decomposition

After decades of gains, women's employment levels plateaued in the mid-1990s (Cotter, Hermsen, and Vanneman 2004; England 2010; Mosisa and Hipple 2006; Smith 2008). The reasons for the large and steady rise in women's employment are many and well documented, but generally researchers examine labor force supply and demand factors, as well as cultural and technological factors (for a discussion, see Cotter, Hermsen, and Vanneman [2004]; England [2005]; Goldin [2006]). During the 2000s, women's employment trended downward, declining during the first half of the decade beginning in the 2001 recession (Boushey 2008; Mosisa and Hipple 2006; Smith 2008), only to rise briefly mid-decade and then decline again during the Great Recession (see Figure 1).

Yet, scholars continue to puzzle over the reasons behind the leveling off of women's employment over the 1990s, causing England (2005) to conclude that "change in all three indicators [women's labor force participation, occupational sex segregation, and the sex gap in pay] has stalled out in the 1990s in the United States, although no one has offered a good explanation of why this is" (p. 280). Cotter, Hermsen, and Vanneman (2004) put forth several possible factors, including the lack of employer- and state-level policies that facilitate employment for mothers, the unequal sharing of family responsibilities among spouses and partners, and the possibility of a cultural backlash to the women's movement, although some of these were present throughout time and thus would not explain the change in trajectory. They later argue that the rise of a new cultural frame, "egalitarian essentialism," (Charles and Bradley 2002, 2009; Charles and Grusky 2004) is the best explanation for the shifts in gender role attitudes that occurred over the 1990s (Cotter, Hermsen, and Vanneman 2011), a frame easily extendable to explain the change in women's employment as well.

Others point to the rise of intensive mothering (Hays 1996), the labor-intensive practice of cultivating childhoods which has become typical among mothers with higher education levels (Lareau 2011). This new norm increased conflict for mothers torn between the ideal mother role and the ideal worker role (Blair-Loy 2005; Lewis 1997). Stone (2007) aptly demonstrates how this conflict was one factor that pushed mothers to "opt out" of the labor force among her sample of highly educated, and very successful, professional married mothers (Stone 2007). Although, Percheski (2008) finds a rise in employment rates among college-educated women in professional and managerial occupations in her cohort analysis of working-age women born between 1906 and 1975.

Some contemplate the stalling of women's employment as part of a broader pattern of a stalling of women's progress and the end of the gender revolution (Cotter, Hermsen, and Vanneman 2004, 2011; England 2005, 2010). Indeed many measures of women's progress have stalled since the 1990s—the gender gap in pay (Blau and Kahn 2000); occupational sex segregation (England and Li 2006); gender role attitudes (Cotter, Hermsen, and Vanneman 2011); and women in elected office and positions of power in companies (Rutgers Center for American Women in Politics 2012).

In any event, scholars and pundits alike tend to frame the rise in women's employment, as well as the plateau and then decline, in terms of women's changing inclination to work for pay. Scholars argue that the rise in women's employment was due to shifting aspirations of women and their changing relationship to the labor market, one in which "occupation and employment define one's fundamental identity and societal worth" (Goldin [2006],p. 12; see also Shu and Marini [1998] for a similar argument). The media, on the other hand (Belkin [2003], Brenner [2001], Story [2005], and Wallis [2004], to name a few; see Williams, Manvell, and

Bornstein [2006] for an analysis of media coverage in the early 2000s), use the rhetoric of women's choice to describe women's labor force decisions.

But concurrent with these changing attitudes and behavior were shifts in the demographic composition of women—the decline in marriage and rise in single motherhood and divorce, reduced fertility, and gains in female education (Cherlin 2010; Ryan and Siebens 2012; U.S. Department of Commerce and Office of Management and Budget 2011)—which also may explain some of the change in women's employment. For example, the proportion of women aged 25–64 with a college degree rose from 11 percent in 1970 to 36 percent in 2010 (Bureau of Labor Statistics 2013a). As will be discussed below, higher education is positively associated with employment (Bureau of Labor Statistics 2013b), and merely having more women with college degrees in the population may account for a little, or a lot, of the change in women's employment.

To date, no research systematically examines the determinants of American women's employment over the past four decades with an eye to parsing out the contributions of shifting demographic composition and changing inclinations or behavior. Although a common analytical strategy used by scholars of women's employment in the United Kingdom and elsewhere in Europe (Blackaby et al. 1997; Booth, Jenkins, and Serrano 1999; Gutierrez-Domenech and Bell 2004), regression decomposition methods have been sparsely used by U.S. scholars of women's employment (for exceptions see Blank and Sheirholz [2006] and Sayer, Cohen, and Casper,[1999]), resulting in a serious gap in the American literature. This paper examines the change in women's employment over four decades, from 1970 to 2010, and investigates whether the decadal changes are due to shifts in the composition of women (sometimes called changing endowments or characteristics, or shifts in the means) or to shifts in the inclination of women to

work for pay (sometimes called behavioral change, or shifts in coefficients). To gain leverage on this question I first examine annual change in the determinants of women's employment over the 40-year time period using logistic regression, looking for trends and changes in the effects of specific variables on women's employment. I then use regression decomposition techniques for each decade separately and focus on the effects of three factors: 1) family composition, 2) educational attainment, and 3) other family income (other than the woman's earnings) for all women. I also run separate analysis for married women and single women to untangle the effect of other family income, which for married women generally represents husbands' earnings but is not the case for single women. Looking at the change in the effect of these factors from one decade to the next can pinpoint which factors propelled women's employment upward during the 1970s and 1980s, but perhaps exerted less pressure or even reversed during the 1990s, and thus contributed to the stalling of women's employment. Understanding the role of compositional change and behavioral change is crucial to correctly identifying the factors contributing to women's labor market trends.

BACKGROUND

Theoretical Considerations

One theoretical framework typically used in research on mothers' labor supply is neoclassical economic theory (Becker 1981; Blau, Ferber, and Winkler 1998), which contends that a mother's decision to work or not is made by comparing the value of her time in the market (her wage, w) to the value she places on her time spent at home caring for children and doing housework, or her reservation wage (w^*), given a fixed budget constraint. If w is greater than w^*, she participates in the labor market; if w is less than w^*, she does not (she remains out or exits).

The value of her market time consists of her wage rate net of child care expenses, and depends on her market value, including her education level, job skills, seniority, and cumulative work experience (Desai and Waite 1991; Hofferth 1996; Leibowitz, Klerman, and Waite 1992).

The decision to work for pay is influenced by tastes and preferences, by the level of demands on her nonmarket time (i.e., children), by the opportunity costs of her time spent at home (her forgone wages), and also by the family's objective economic need for her earnings. Theoretically, greater availability of income from other sources than the mother's wages (husband's earnings or savings) depresses wives' employment (Becker 1973, 1981), although to a lesser extent than previously thought (Cohen and Bianchi 1999).

When economists consider the causes of women's increased labor force participation, they contend that rising wages among women increased the opportunity cost of being a homemaker (Bergman 1986). In short, women's market value grew through increased education, job tenure, and cumulative experience (Blau, Ferber, and Winkler 1998; England and Farkas 1986; Hollister and Smith forthcoming), but also through technological innovation and other features in the economy that increased productivity of all workers, including women, and thus drove wages higher (Bergman 1986). Concurrently the demands on women's nonmarket time have decreased with lowered fertility, delayed marriage, and increased divorce, resulting in women spending less time married and raising children, leaving more time for paid market work (Casper and Bianchi 2002), although some argue that the demands of motherhood have increased (Hays 1996; Lareau 2011).

Another perspective is that the growth in women's employment was driven by the increase in demand for women's wages. The rise in single-mother families, stagnant and in some cases declining men's wages, and job loss in industries that traditionally employ men (such as

manufacturing and agriculture) has increased the need for women to work for pay (Levy 1998) by reducing alternative sources of family income. Economic restructuring has shifted the types of jobs available, increasing opportunities for women in the now larger, predominantly female service sector (Blau, Ferber, and Winkler 2002; Falk and Lobao 2003; Sayer, Cohen, and Casper 2004; Smith 2011; Smith and Tickamyer 2011; Oppenheimer 1970).

Furthermore, gender roles have become less rigid, and today it is more common for couples to share responsibility for both work and family spheres (Bianchi, Milkie, and Robinson 2007; Gallinsky, Aumann, and Bond 2011; Shelton and John 1996). Public attitudes have become more accepting of women working outside the home for pay (Thornton and Young-DeMarco 2001), even for women with young children. Policymakers have introduced legislation to ease work and family conflicts (such as the Family Medical Leave Act) and mandate paid work for single mothers who otherwise might seek welfare (Williams and Cooper 2004) and workers cite more job flexibility today than in the past (Golden 2001), even though job flexibility and family friendly policies are unevenly distributed (Golden 2008).

Determinants of Women's Employment

Several factors have been shown to be important predictors of women's employment across multiple studies, mainly family structure (marital status and the presence of children in the home), women's education levels, and access to other family income (the majority of which is husbands' earnings, but only for married women).

Family Structure

Conventional thinking is that marriage and children depress women's employment as married women and mothers cut back their time in the labor force because of their increased family responsibilities. Research shows that women perform the majority of housework and child care, even if they are employed (Bianchi, Milkie, Sayer and Robinson 2000; Bianchi, Robinson, and Milkie 2007; South and Spitze 1994). In fact, single women without young children are more likely to be employed than other women, but the strength of the association has eroded over time (Cohen and Bianchi 1999). In short, the gap in employment has narrowed greatly, most notably between single women without children and married women with children, as the latter have increased their attachment to market work substantially. Employment rates among single mothers increased sharply over the second half of the 1990s, due in part to welfare reform, the Earned Income Tax Credit (which increased incentives for employment among low-earning single mothers), and the economic boom of the late 1990s (which increased job opportunities for those with low education levels) (Blank 2000). Altogether, these factors narrowed the employment gap between single childless women and single mothers.

It is widely known that the increase in women's employment over the 1970s and 1980s was largely driven by the increased employment of married women, and particularly married women with children (Goldin 2006; Hayghe 1986). Goldin (2006) argues that there has been a quiet revolution in the relationship between women and the labor market, particularly among married mothers, with less emphasis on women engaging in paid work because of their families' financial need, and more emphasis on the role of paid work as a source of women's identity and societal worth. Hollister and Smith (2014) document an increase in job tenure among married mothers from 1983 to 2008, but a decrease in job tenure among never-married women and men.

They argue that the greater labor force attachment of married mothers has countered and masked the overall labor market trend of decreasing job tenure. Furthermore, Mattingly and Smith (2010) find an added worker effect among wives during the Great Recession, with wives looking for and attaining employment if their husbands stop working. Wives' contributions to family earnings also increased during the Great Recession (Smith 2012), suggesting more reliance on wives as breadwinners.

Education

A strong and consistent predictor of women's employment, women with higher education levels are more likely to be employed and have stronger ties to the labor force than women with lower education levels. Cohen and Bianchi (1999) find that this association grew stronger over time, with high school and college graduates committing more hours to paid employment between 1978 and 1998. Rising educational attainment has opened up job opportunities for women in occupations and industries that were otherwise closed to them (England 1992), and contributes to their higher earnings.

Economic theory posits that highly educated women have invested time and money into their human capital, they have higher earning power, and the opportunity costs of not working are greater (Blau, Ferber, and Winkler 2002). However, there are cultural factors that complicate this economic perspective. According to Lareau (2011), better educated parents hold higher standards of involvement in their children's daily lives, contributing in large part to the culture of intensive parenting, leading to work-family conflict for many mothers. Further, Stone (2007) credits inflexible workplaces and the lack of real part-time options for highly educated married mothers as factors that pushed these women out of the labor force. More recently, Cotter,

Hermsen, and Vanneman (2011) argue that the rise of a new cultural frame, "egalitarian essentialism," (Charles and Bradley 2002, 2009; Charles and Grusky 2004) is the best explanation for the shifts in gender role attitudes that occurred over the 1990s. Egalitarian essentialism combines elements from two previously conflicting frames—feminism and traditional familialism—by supporting stay-at-home mothering within the feminist rhetoric of choice and equality (Stone 2007). Gender essentialism also encompasses the notion that men and women are innately and fundamentally different in interests and skills (England 2010), with women being naturally better at child care and home production. This combination in turn provides support for women to exhibit traditional gender roles within marriage (and either exit the labor force or not enter in the first place) while denying any implications of lower status or power for women (Cotter, Hermsen, and Vanneman 2011). Thus, there is reason to believe that the stalling of women's employment over the 1990s may be attributable to a shift in the behavior of highly educated mothers.

Other Family Income

Theoretically, higher other family income operates as a deterrent to women's employment (Becker 1981; Blau, Ferber, and Winkler 2002). Early studies of female labor supply document a negative relationship between other family income, which is primarily husband's' earnings, and wives' employment (Becker 1973; Killingworth and Heckman 1986; Mincer 1962, 1974). Although nationally representative samples, these studies are based on a time when most women married (and remained married), and as such, most of other family income represented their husbands earnings. More recent research shows that the effect of other family income on women's employment diminished by almost half from 1978 to 1998 (Cohen

and Bianchi [1999]; see also Juhn and Murphy [1997]). Put another way, access to higher levels of other family income continues to depress women's employment, just to a lesser degree than in the past.

Autor, Katz, and Kearney (2008) document the rapid and continuous rise in men's earnings at the top of the wage distribution from 1979 to 2005. They find growing inequality in the upper half of the male wage distribution (90/50 wage gap), fueled by a persistent rise in wages among those at the upper tail. However, inequality in men's wages in the lower half of the distribution (50/10 wage gap) expanded rapidly over the first half of the 1980s, but reversed course and even declined thereafter. Thus, they document a polarization of earnings growth in the 1990s, with rapid wage growth at the very top of the male wage distribution, but wage stagnation at the middle and bottom of the wage distribution slowing wage inequality at the bottom tail of the wage distribution. Wage growth in the upper tail continued to outpace wage growth at the middle and the bottom during the Great Recession, marking the continued rise in wage inequality (DeNavas-Walt, Proctor, and Smith 2012).

Limited empirical evidence supports the notion that this rise in men's wages at the top contributed in some way to the leveling off of women's employment. Stone's (2007) study of highly educated, married women who left their high-powered careers finds that the high earnings of their husbands gave them the cushion needed to leave the labor force. Cotter, Hermsen, and Vanneman (2011) find marginal evidence that the mid-1990s downturn in gender ideology was stronger among high-income households, and "that change [in gender ideology] was felt most strongly by high-income households with working mothers for whom work-family stresses were most relevant" (p. 273).

Confounding this negative impact of high other family income is that high-earning men are more likely to marry high-earning women (Burtless 1996). Since the late 1960s the correlation between husbands' and wives' earnings has grown, although the correlation with education is stronger (Cancian and Reed 1999; Mare 1991). "Positive assortative mating" is a common practice; that is, men and women tend to sort into marriage on the basis of similar age, religion, race, class, physical characteristics, education (Becker 1981; Lichter 1990; Oppenheimer 1988; Sweet and Bumpass 1987) and increasingly on earnings (Cancian and Reed 1999; South 1991). Furthermore, employment rates are high among women with high-earning husbands, lending more credence to the notion that women's own human capital characteristics play an important role in their employment.

For example, Cohen and Bianchi (1999) find evidence of a larger emphasis on women's own human capital attributes as the effect of her education gained prominence as a determinant of her employment over time. The largest gains in women's employment over time have been among women with college degrees, and these women tend to be married to highly educated, high-earning husbands (Juhn and Murphy 1997). Women with college degrees have invested in their human capital and exhibit strong ties to the labor force (Goldin 1990). Theory and empirical research agree that factors that increase wages, such as higher education levels, full-time work, continuous work experience, and longer job tenure are positively associated with continuous labor force participation (Glass and Riley 1998; Leibowitz, Klerman, and Waite 1992; Smith, Downs, and O'Connell 2001).

Hypotheses

I hypothesize that all three of these factors—family composition, women's education, and other family income—are important determinants in women's labor supply decision making. Specifically, I expect to find a declining effect of marriage and children over time. Given the continued gendered division of labor in the home, I anticipate that married mothers will have a lower propensity to be employed than single childless women. However, given the rising labor force attachment among married mothers and the declining employment among single childless women, I expect that the employment gap between these two groups will decrease over time. I hypothesize that the decompositions will show a strong *coefficient* effect for married mothers over the 1980s, but possibly less so over the 1990s, as married mothers' employment rates leveled off.

I also hypothesize that education will have an increasingly stronger effect over time. I expect the decomposition results to show a positive effect of the shifts in the *means* for education, or put differently, that compositional shifts in education will account for a rise in women's employment at each decade. However, I hypothesize that the slowdown in women's employment over the 1990s is due in part to a reduction in the effect of the *coefficients* on education, and in particular women with college degrees, indicative of behavior change among highly educated women surrounding cultural shifts in what it means to be a mother.

In addition, I expect to find a declining effect of other family income on women's employment over the decades. However, research tentatively suggests that the slowdown of women's employment over the 1990s may be linked to the increase in men's wages at the very top of the male wage distribution, specifically over the latter half of the 1990s when the economy expanded. This may have, in turn, contributed to the leveling off of women's employment as

women married to very high-earning husbands curtailed their labor forced participation and exited the labor force or did not enter. If this is the case, I expect that the decomposition *mean* effects for high levels of other family income over the 1990s will be smaller than in the previous decade, or even negative, because more women are in these higher other income levels due to rising income inequality. On the other hand, I expect the decomposition *coefficient* effects to be positive as women with higher other family income are the women with the highest earnings potential and human capital, because of assortative positive mating on earnings, and thus have stronger ties to the labor force.

METHOD

Data

This analysis draws on Current Population Survey (CPS) data from 1980–2010 March Supplements IPUMS files downloaded from the University of Minnesota Population Center website. The CPS is collected monthly by the U.S. Census Bureau and includes a nationally representative sample of roughly 57,000 households. I limit my sample to women aged 25–54 and have a sample size ranging from 35,000 to 45,000 respondents annually. The CPS data are well suited for my analyses because the March supplements collect economic and demographic information useful to assess changes in the female labor supply.

Measurement of Variables

The dependent variable is women's employment. Women are coded as employed if they worked for pay in the previous year. Variables used in the analysis are presented in Table 1, which shows the change in these characteristics over the four decades. There are three key

explanatory measures of interest: marital status, education level, and other family income. Married is coded 1 if the woman is married, and 0 otherwise. Education is coded as four dummy variables indicating whether the woman has less than a high school degree (reference group), a high school diploma, some college but no degree, or a bachelor's degree or higher.

I use two measures of other family income. In the logistic regressions, other family income is measured using the natural log of other family income, which excludes women's own earnings. In the regression decompositions, other family income is broken into deciles. Types of other family income include spouses earnings (income from wages, business, or farm), social security income, welfare income, retirement income, income from SSI, interest, unemployment benefits, worker's compensation, veteran's benefits, survivor's benefits, disability benefits, dividends, rent, educational assistance, child support, alimony, assistance from friends or relatives or other not living in household, and assistance from everyone in the family except the personal earnings of the woman. Among married women, the vast majority of other family income is spouse's earnings (86 percent). The median other family income was $9,427 among married women and $1,444 among single women in 1970 and $9,050 and $445, respectively, in 2010 (in 1970 dollars). Regression decomposition models that include all women use other family income equivalent to the first year in the decomposition. For example, when decomposing the change from 1970 to 1980, the models use other family income standardized to 1970 levels for both years; when decomposing the change from 1980 to 1990, the models use other family income standardized to 1980s levels, and so on. Similarly, models for married women use other family income for married women equivalent to the first year in the decomposition, and models for single women use other family income for single women equivalent to the first year in the decomposition.

Several control variables are included in the models. Age is coded as three dummy variables indicating whether the woman is aged 25–34 (reference group), 35–44, or 45–54. Four dummy variables measure the woman's family composition: married with a child under18 living in the household, married without any children under 18 living in the household, single with a child under 18 living in the household, and single without any children under 18 living in the household (reference category). Other control variables include race and ethnicity, rural residence, and 50 state dummy variables that control for state fixed effects, with North Dakota as the reference. By including the state dummies, I control for any unexplained effects due to differences in the state environment, including differences in unemployment rates, unionization, welfare benefits, and policy differences. State measures in the CPS differ over the 40-year time period. Because of data constraints with the CPS, in the earlier years of data some states are grouped together by survey design. From 1977 and moving forward, states are no longer clustered.

Analysis Plan

In this research, I use data from the CPS from 1970–2012 March Supplements (1980–2004) and CPS Annual Social and Economic Supplements (2005–2012)[1] to document the rise, plateau, and decline in women's employment rates over four decades downloaded from the University of Minnesota IPUMs Web site. First, I examine changes in the determinants of women's employment from 1970–2012 for all women with a focus on the effect of family composition, education, and other family income over time using logistic regression techniques. Then, I use methods of regression decomposition to decompose shifts in women's employment

[1] In 2005, the Census Bureau changed the name of the CPS March Supplement to the Annual Social and Economic Supplement.

into two components: the portion that is attributable to shifts in the composition of women (i.e., the characteristics of the population of women changed in their proportions in categories of family structure, education, and other family income) and the portion that is due to shifts in women's behavior, or inclination to work for pay. Separate models are presented by marital status to get a more nuanced understanding of what factors are driving the change in married women's employment, and include parent status but exclude marital status. Finally, predicted probabilities are presented to show the overall effect of compositional change on women's employment from 1970 to 2010 by holding the coefficients at their 1970 level but allowing the means to change. The overall effect of the behavioral change on women's employment is also shown by holding the composition of the population of women constant at the 1970 values but allowing the coefficients to change.

Using the Stata command, *decompose*, I utilize a simple Oaxaca regression decomposition following Oaxaca (2008) and Blank and Shierloz (2006) that characterizes the change in employment between two periods as

$$y^{t1} - y^{t2} = \Delta x \beta^{t1} + \Delta \beta x^{t2} + \Delta x \Delta \beta,$$

where $\Delta x = x^{t1} - x^{t2}$ and $\Delta \beta = \beta^{t1} - \beta^{t2}$,

x is a vector of the means of all variables in the regression,

and β is a vector of all the estimated coefficients on each variable,

such that the differences in the x's are weighted by the coefficients (β) of the group in time 1, and the differences in the coefficients (β) are weighted by the x's of the group in time 2. In this way, we are able to partition the change in employment between time 1 and time 2 into a part that is attributable to a gap in endowments (or means) (E), a gap in coefficients (C)

including the intercept, and a gap arising from the interaction of endowments and coefficients (CE).

$$\Delta \text{ (employment)} = E + C + CE$$

Oaxaca-Blinder decompositions are often used to decompose dependent variables in linear models, such as wages using Ordinary Least Squares (OLS). More recently, methods to decompose nonlinear dependent variables, such as employment, have been developed. The focus of this paper is to examine the contributions of specific variables separately, therefore, this method (using the *decompose* command) is preferable over other Stata commands (such as *nldecompose*), as the latter does not separate out the contributions of single variables (Sinning, Hahn, and Bauer 2008).

This analysis decomposes the overall difference into components that reflect compositional differences between groups (differences in endowments, or means) and differences in the effects of characteristics (differences in coefficients) between time periods. The portion of the difference attributed to compositional differences, or endowments, E, which is the predicted probability of employment among women for time 1 minus the predicted probability of employment if the time 2 group faced the same composition as the group in time 1.

RESULTS

Logistic Regression Results

Women's employment grew by 13 percentage points over the 1970s, from 56 percent in 1970 to 69 percent in 1980 (see Figure 1). Yet, the pace of growth slowed over the 1980s and 1990s, leading to a plateau in the late 1990s. In the 2000s, women's employment declined over

the first half of the decade, then rose slightly before the decline associated with the Great Recession.

Table 1 presents the change over time in the demographic characteristics of women 25–54 years old. Since the 1970s, the proportion of women married with children dropped, while the proportion of women married without children, and single with and without children rose. Educational attainment of women rose markedly, from 9 percent of women in 1970 holding a college degree to 34 percent in 2010. Holding constant at 1970s levels, median total family income has grown modestly over the four decades, while median other family income has declined. When other family income is broken down into deciles, it is clear that there has been a hollowing out of the middle, with a shift downward in the lowest income deciles, particularly the lowest decile, where 27 percent of women are located by 2010. There is a rise in the top decile, particularly in the 1990s. Undoubtedly, these changes are interconnected, as the rise in single mothers who have lower other family income accounts for some of this downward shift. Table 1 also shows the change in distributions of women by age and race and ethnicity from 1970 to 2010. Appendix Table 1 displays the frequency distributions for married and single women separately from 1970 to 2010.

Table 2 presents logistic regression results predicting women's employment for each year separately from 1970 to 2012. The results are consistent with previous research. Relative to single women without kids, married women with children are less likely to be employed in every decade, but this deterring effect of being married with children becomes smaller each decade. The same pattern exists for being married without children, except that by 1989 it has no deterrent effect, and by 1993 married women without children are actually *more* likely to be employed than single women without children. The pattern for single women with children is

similar—the deterrent effect of being a single mother reverses itself, such that by 1999, single mothers are more likely to be employed than single women without children.

Controlling for family composition, family income, demographics, and state and rural residence, a clear relationship exists between increasing education and employment: women with higher levels of education are more likely to be employed. Relative to having less than a high school degree, the effect of having a high school degree, some college, or a college degree steadily increased the likelihood of employment from 1970 to 2012. However, closer examination of the annual data reveals that the effect of having a college degree on women's employment peaked in 1994, decreased but remained positive from 1994 to 2001, and then continued to rise over the 2000s. A similar pattern exists for having some college, but the effect of having a high school degree, relative to having less than a high school degree, peaked in 1997 and has since decreased. Consistent with previous research, I find that higher other family income depresses women's employment, but the effect has been more than cut in half since the 1970s.

Appendix Tables A.2A and A.2B show the logistic regression results for married and single women separately. The negative effect of children diminished monotonically over the decades for married women. But for single women, the deterrent effect of children increased somewhat between 1970 and 1990, and thereafter reversed sign, such that by 1997single women with children were *more likely* to be employed than single women without children.

The effect of education on married women's employment mirrors the results for all women. The effect of education on single women's employment is similar, except it peaked in the late 1980s, several years earlier than the peak for married women. And while the overall trend of having a college degree or some college from 1970 to 2012 is positive for single women,

the effect of having a high school degree relative to having less than a high school degree actually decreased over this time period but remained positive.

The effect for other family income is negative for both married and single women and has diminished over the decades, but it has decreased to a greater extent for married women. In separate analyses (see Table A.3), models were run for just the decades with other family income broken into deciles. In the 1970s, a linear relationship is observed for single and married mothers with higher levels of employment at lower other family income levels and lower levels of employment at higher other family income levels. This pattern remains in place throughout the decades for single mothers, but begins to change for married mothers over the 1980s, such that a curvilear relationship is displayed with other family income exerting a depressing effect on married women's employment at the highest other family income levels (deciles 8, 9, 10) and the lowest (deciles 1 and 2), with no effect found in the middle deciles (3, 4, 6, and 7), relative to decile 5. This finding highlights the importance of analyzing single and married women separately.

Regression Decomposition Results

Table 3 presents a summary of the regression decomposition results, which breaks the change in women's employment into three components: 1) the percent of the change that is due to shifts in the means (or composition), and 2) the percent of the change that is due to shifts in the coefficients (or behavior), and 3) the percent of the change due to an interaction between mean and coefficient shifts.[2] Over the 1970s and 1980s, shifts in the coefficients contributed roughly two-thirds of the change in women's employment, while shifts in the means contributed

[2] The remainder of the paper focuses on the shifts due to changes in the means and the coefficients because only a small amount of the change is due to an interaction.

about one-third. Put another way, if the composition of the population of women had stayed the same in 1990 as it was in 1980, women's employment would still have increased over the 1980s, but the increase would have been 39 percent less. However, over the 1990s, when women's employment only rose by three percentage points, shifts in the coefficients contributed less to the overall change than in the previous two decades (just over half compared with about two-thirds), and shifts in the means contributed a larger proportion than in previous decades. Over the 2000s, shifts in the coefficients depressed women's employment and overpowered the positive effect of the shifts in the composition, leading to an overall decline in women's employment of five percentage points over the decade.

Table 4 provides a detailed examination of the compositional and behavioral effects of three factors on women's employment for each decade. This side-by-side examination of the effects of shifting means and coefficients in family composition, education, and other family income illustrates how the effects changed over the decades and sheds light on what contributed to the stalling of women's employment over the 1990s.

As Table 4 shows, shifts in family composition accounted for 13 percent of the change in women's employment over the 1970s and 12 percent over the 1980s, concurrent with large shifts in the family structure over the 1970s and 1980s, such as the decline in married mothers, the rise in single women without children, and lowered fertility. In fact, compositional change among married women with children relative to single women without children was the driving factor. As family composition stabilized over the 1990s and 2000s, the percent of change in women's employment attributable to shifts in family structure was cut in half over the 1990s and no longer exerted an effect over the 2000s. Put another way, shifts in family structure continued to exert a

positive effect on women's employment over the 1990s, but the size of the effect was smaller, potentially contributing to the plateau in women's employment over the 1990s.

As expected, the mean effect of shifts in women's education levels pushed women's employment up. As women gained higher levels of education across each decade, this exerted an upward pressure on women's employment, particularly evident among women with college degrees because women with higher education levels are more likely to be employed. With respect to the plateau over the 1990s, absent this positive compositional effect of education, women's employment would have likely decreased rather than slowed.

As mentioned previously, larger proportions of women clustered in the highest and lowest deciles of other family income over the decades (using other family income standardized to 1970s levels). Table 4 shows that there is a compositional effect of other family income on women's employment. Other family income is broken into deciles in dollars equivalent to the first year in the composition (i.e., in the 1970–1980 decomposition, both years are using 1970 equivalents). The curvilinear effect of other family income on women's employment becomes clear when looking at the 1970s, with shifts in the slope of other family income for the highest and lowest deciles pushing women's employment up. Shifts in other family income accounted for 11 percent of the rise in women's employment over the 1970s, but compositional shifts in other family income over the 1980s only accounted for 2 percent of the change in women's employment. Over the 1990s, compositional shifts in other family income overall exerted no effect on women's employment, but closer examination of the deciles reveals that compositional change at the highest levels of other family income exerted a negative effect on women's employment, reducing it by 13 percent, and canceled out the positive effect of lower levels of other family income. The plateau in women's employment over the 1990s appears to be due in

part to the depressing compositional effect at the highest levels of other family income as more women entered these higher levels of other family income between 1990 and 2000s. In short, a greater proportion of women had other family income levels at the highest 1980s decile equivalent in the 1990s, and it is at this highest other family income decile where we continue to see a *compositional* depressing effect of other family income on women's employment.

Table 4 also shows the change in women's employment attributable to changes in the coefficients, or behavioral change, for the three factors for each decade. Looking first at the coefficient effect of family composition, we see that overall, 61 percent of the change in women's employment over the 1970s is attributable to shifts in family composition. Substantial change in behavior among married women with children, relative to single women without children, pushed women's employment up over the 1970s and 1980s. Although still exerting a large positive effect on women's employment over the 1990s, the behavioral effect of married women with children was lower in the 1990s than the 1980s and 1970s. Behavioral change among married women without children also exerted an upward pressure on women's employment, relative to single women without children, but the effect is smaller than that seen among married women with children. In the 1990s, a substantial change in behavior among single women with children, relative to single women without children, pushed women's employment up, concurrent with the economic boom, changes in the welfare laws, and changes in the Earned Income Tax Credit laws, three factors that worked in tandem to create an environment with favorable circumstances for low-wage employment (i.e., increase demand for low-wage work and create incentives for employment among low-wage workers). The large jump in employment among single mothers in the 1990s appears to be due to behavioral change on the part of these women.

In the 1970s, 34 percent of the change in women's employment was attributable to changes in the coefficients for education, with large changes in the behavior of women with high school degrees compared with women with less than a high school degree. Over the 1980s, the overall contribution of the coefficients on education was higher, at 44 percent. But over the 1990s, the effect of education was negative, indicating that relative to women with less than a high school degree, behavior change among women with higher education levels exerted downward pressure on women's employment. Over the 2000s, the coefficient effect for education was once again positive, with 64 percent of the change in women's employment being due to behavioral changes by education. The negative coefficients for education over the 1990s may be indicative of a temporary stalling of women's growing inclination to engage in paid employment among women with a high school degree or higher. The results for college graduates are evident and larger than in the 1970s and 1980s (and in the opposite direction). However, the results are largest for women with high school degrees relative to women with less than a high school degree. These results imply that the employment of educated women was going down, not absolutely, but relative to that of less-educated women, or that less-educated women's employment was rising. And in fact, during the latter part of the 1990s, the economy expanded and created low-wage jobs, and employment rose among women's with less than a high school degree.

Overall, in the 1970s other family income did not exert a behavioral effect on women's employment. That is, the small negative coefficient effects at the lowest other family income deciles were offset by the small positive coefficient effects at the highest other family income deciles. Over the 1980s, 7 percent of the rise in women's employment was attributable to changes in the coefficients for other family income. Over the 1990s, however, the behavioral

effect of other family income on women's employment was very large and positive, particularly among the higher other family income levels.

The same analyses were run for married and single women separately to provide a more nuanced examination of the compositional and behavioral effects of family composition, education, and other family income on the change in women's employment by decade. Simplified models are presented here, but full models are presented in Table A.4. The first thing to notice in Table 5 is that married women experienced larger increases in employment over the 1970s and 1980s than did single women, and that the plateau in women's employment over the 1990s was a phenomenon unique to married women. In fact, single women's employment *increased* over the 1990s compared with their employment over the 1980s. Finally, the decrease in women's employment over the 2000s was larger among single women than married women.

The results for married women largely mirror the results presented for all women. While shifts in the coefficients generally were the driving force behind the rise in married women's employment over the 1970s and 1980s and worked in tandem with the shifts in the means, for single women, shifts in the means propelled single women's employment upward and overpowered the depressing effect of the shifts in the coefficients. This pattern continues in the 1990s for single women. But for married women over the 1990s, shifts in the means take on a greater importance, and shifts in the coefficients contribute less to the overall change. Over the 2000s, shifting coefficients depress both married and single women's employment.

For the models broken out by marital status, family structure defaults to parental status. Changes in the composition of married women with children exerted a positive effect on married women's employment over the 1970s, 1980s, and 1990s, but had no effect or a negative effect (in the 1990s) on single women's employment. However, changes in the composition of single

women's education (i.e., their increase in educational attainment) bolstered single women's employment, particularly over the 1970s and 1980s. Increases in education also pushed married women's employment up, driven in large part by married women with college degrees relative to married women with less than a high school degree. In the 1990s, however, 71 percent of the rise in married women's employment was attributable to their increased attainment of college degrees, relative to the decline in their not finishing high school. In other words, if married women's educational attainment had remained the same in 2000 as it had been in 1990, the rise in married women's employment over the 1990s would have been 71 percent lower. Over the 2000s, changes in married and single women's education continued to exert a positive effect on their employment, but to a lesser extent than in previous decades.

Married women's other family income grew over the decades. Frequency distributions broken down by marital status shows that the proportion of married women in the highest deciles (in 1970 constant dollars) increased during every decade (see Table A.1). The regression decompositions show a negative compositional, or mean, effect for the highest two deciles (9 and 10) beginning in the 1980s and growing stronger in the 1990s, relative to decile 5. And in fact, no mean effect is found for most of the other deciles, compared with decile 5. Put another way, the rise in men's earnings at the highest levels, particularly over the 1990s when the economy was expanding, exerted a negative effect on married women's employment at those highest levels only. Absent the rising economic tide at the top 20 percent of men's earnings, married women's employment would have increased by 25 percent over the 1990s.

For single women, the picture is very different regarding the role of changes in the composition of other family income. In contrast to married women, single women's other family income dropped over the decades. The mean effect of other family income overall is positive for

single women across all four decades, but larger in the 1970s and 1980s. The decrease in single women's other family income exerted a positive effect on their employment.

Predicted Probability Results

Figures 2a (all women), 2b (married women), and 2c (single women) present the predicted probability of women's employment from 1971 to 2010 using the annual logistic regression results from Table 2 (all women) and Appendix Tables A.2A (married women) and A.2B (single women). In addition, the predicted probability of women's employment holding the means constant at the 1971 levels is shown to portray the effect of changes in the coefficients only. Similarly, the predicted probability of women's employment holding the coefficients constant at the 1971 levels is shown to portray the effect of the changes in the means only. Very different pictures emerge by marital status. The rise and fall of married women's employment is largely driven by changing effects of the coefficients, indicating that married women's changing inclinations toward employment has been instrumental in their employment, while changing effects of the means has been flat. In contrast, changing effects of the means has exerted a slow but steady upward force on single women's employment, while changing effects of the coefficients was more or less constant until 2000, and then exerted a strong negative force on single women's employment, which was somewhat hampered by the positive effect of changing composition.

DISCUSSION

This analysis examines how the changing composition and behavior of American women influenced the shifts in women's employment from 1970 to 2010. The results show that

decomposing the change in women's employment elucidates compositional and behavioral factors as contributors to the slowdown in growth in women's employment over the 1990s. Using regression decomposition, I find that compositional change has played a role in the change in women's employment. In particular, the rise in women's educational attainment has been a driving force across the decades, bolstering employment for married and single women (when analyzed separately). Even in decades where women's employment declined (i.e., the 2000s) and particularly in the 1990s, when women's employment slowed, the positive *mean* effect of education on women's employment held.

Moreover, I find that shifts in the composition of other family income over the decades exert a positive effect on women's employment, except in the 1990s, when the effect was neutral. The absence of a positive effect could account for some of the slowing in women's employment over the 1990s. But closer examination by marital status reveals variation in the effect due to the shift in the means on other family income. For married women, the overall mean effect of other family income was negative in the 1990s, particularly among those at the highest deciles of other family income, as men's wages at the top of the wage distribution rose in the 1990s, contributing to the slowdown in women's employment over the 1990s. But this was not the case for single women over the 1990s, when other family income declined, leading to a positive mean effect of other family income on single women's employment. This highlights the need to examine married and single women's employment separately, especially with respect to other family income.

Shifts in the coefficients also played a role in changes in women's employment over the decades. Large positive effects of shifting family structure were found. The logistic regressions showed that the negative effect on employment for married women with children, married

women without children, and single women with children all decreased over the years and reversed sign relative to single women without children. The regression decompositions supported this result, showing a positive effect attributable to coefficient differences on family structure. But, employment rates for single women without children were not stable over the period 1970 –2010, with rates beginning to decline in the 1990s and the employment gap narrowing. A lingering question is what factors contributed to the decline in employment among single women without children? Further research is needed to answer this question.

In addition, the coefficient effect of women's education is interesting when we examine the change over the decades. The coefficient effect is positive for the change in women's employment over the 1970s, 1980s, and 2000s, but it is negative over the 1990s for all women, as well as for both married and single women. Yet, this effect is not just for those with high education levels but rather for all education groups relative to women with less than a high school degree. Again, employment rose for women with less than a high school degree in the 1990s, thus some of this negative effect is due to the convergence of slopes.

At the same time, the results show a positive coefficient effect for other family income on married women's employment at the higher other family income deciles, but not for single women's employment during the 1990s. This finding supports the assertion that married women with higher other family income also have high earnings potential and human capital, due to assortative positive mating on earnings, and thus have stronger ties to the labor force and we see increased responsiveness of women's employment in regard to their own wages.

References

Autor, David H., Lawrence F. Katz, and Melissa S. Kearney. 2008. "Trends in US wage inequality: Revising the revisionists." *The Review of Economics and Statistics* 90(2): 300–323.

Belkin, Lisa. 2003. "The Opt-Out Revolution." *New York Times Magazine*, October 26, pp. 42 47, 58, 85–86.

Becker, Gary S. 1973. A Theory of Marriage: Part I. *Journal of Political Economy* 81(4): 813–846.

———. 1981. *A Treatise on the Family*. Cambridge, MA: Harvard University Press.

Bergman, B. 1986. *The Economic Emergence of American Women*. New York: Basic Books.

Bianchi, Suzanne, John Robinson, and Melissa Milkie. 2007. *Changing Rhythms of American Family Life*. New York: Russell Sage Foundation.

Bianchi, Suzanne, Melissa. A. Milkie, L. C. Sayer, and J. P. Robinson. 2000. Is Anyone Doing the Housework? Trends in the Gender Division of Household Labor. *Social Forces* 79(1): 191–228.

Blackaby, David, Stephen Drinkwater, Derek Leslie, and Phillip Murphy. 1997. "A Picture of Male and Female Unemployment among Britain's Ethnic Minorities." *Scottish Journal of PoliticalEconomy* 44(2): 182–197.

Blair-Loy, Mary. 2005. *Competing Devotions: Career and Family among Women Executives.* Cambridge, MA: Cambridge University Press.

Blank, Rebecca M. 2000. "Fighting Poverty: Lessons from Recent U.S. History." *Journal of Economic Perspectives* 14(2): 3–19.

Blank, Rebecca, and Heidi Shierholz. 2006. "Exploring Gender Differences in Employment and Wage Trends among Less-Skilled Workers." In *Working and Poor: How Economic and Policy Changes Are Affecting Low-Wage Workers*, Rebecca Blank, Sheldon Danziger, and Robert Schoeni, eds. New York: Russell Sage, pp. 23–58.

Blau, Francine, D., and L. M. Kahn. 2000. "Gender Differences in Pay." *Journal of Economic* Perspectives 14(4): 75–99.

Blau, Francine D., M. A. Ferber, and Anne E. Winkler. 1998. *The Economics of Women, Men, and Work, 3rd ed.* Upper Saddle River, NJ: Prentice-Hall.

———. 2002. *The Economics of Women, Men, and Work*. Upper Saddle River, NJ: Prentice-Hall.

Booth, A. L., S. P. Jenkins, and C. G. Serrano. 1999. “New Men and New Women? A Comparison of Paid Work Propensities from a Panel Data Perspective.” *Oxford Bulletin of Economics and Statistics* 61(2): 167–197.

Boushey, Heather. 2008. “The Effect of Children on Women’s Employment in the United States.” *Feminist Economics* 14: 1–36.

Brenner, M. 2001. “Not Their Mothers’ Choices.” *Newsweek* 138(7): 48–49.

Bureau of Labor Statistics. 2013a. “Women in the Labor Force: A Databook.” BLS Report No. 973. Washington, DC: Bureau of Labor Statistics.

———. 2013b. “Earnings and Unemployment Rates by Educational Attainment.” *Employment Projections*. Washington, DC: Bureau of Labor Statistics. http://www.bls.gov/emp/ep_chart_001.htm (accessed May 6, 2014).

Burtless, Gary. 1996. *Does Money Matter? The Effect of School Resources on Student Achievement and Adult Success*. Washington, DC: Brookings Institution.

Cancian, M., and D. Reed. 1999. “The Impact of Wives’ Earnings on Income Inequality: Issues and Estimates.” *Demography* 36(2): 173–184.

Casper, Lynne M., and Suzanne M. Bianchi. 2002. *Continuity and Change in the American Family*. Thousand Oaks, CA: Sage.

Charles, Maria, and Karen Bradley. 2002. “Equal but Separate: A Cross-National Study of Sex Segregation in Higher Education.” *American Sociological Review* 67(4): 573–599.

———. 2009. “Indulging our Gendered Selves: Sex Segregation by Field of Study in 44 Countries.” *American Journal of Sociology* 114: 924–976.

Charles, Maria, and David Grusky. 2004. *Occupational Ghettos: The Worldwide Segregation of Women and Men*. Stanford, CA: Stanford University Press.

Cherlin, Andrew J. 2010. “Demographic Trends in the United States: A Review of Research in the 2000s.” *Journal of Marriage and Family* 72(3): 403–419.

Cohen, P. N., and S. M. Bianchi. 1999. “Marriage, Children, and Women’s Employment: What Do We Know?” *Monthly Labor Review* 122(12): 22–31.

Cotter, David, Joan Hermsen, and Reeve Vanneman. 2004. *Gender Inequality at Work*. New York: Russell Sage.

———. 2011. “The End of the Gender Revolution? Gender Role Attitudes from 1977 to 2008.” *American Journal of Sociology* 117(1): 259–89.

DeNavas-Walt, Carmen, Bernadette Proctor, and Jessica Smith. 2012. *Income, Poverty, and Health Insurance Coverage in the United States: 2011*. Washington, DC: U.S. Census Bureau.

Desai, S., and L. J. Waite. 1991. "Women's Employment During Pregnancy and After the First Firth: Occupational Characteristics and Work Commitment." *American Sociological Review* 56(4): 551–566.

England, Paula. 1992. *Comparable Worth: Theories and Evidence*. New York: Aldine de Gruyter.

———. 2005. "Gender Inequality in Labor Markets: The Role of Motherhood and Segregation." 12(2): 264–288.

———. 2010. "The Gender Revolution: Uneven and Stalled." *Gender & Society* 24(2): 149–166.

England, Paula, and G. Farkas. 1986. *Households, Employment, and Gender: A Social, Economic, and Demographic View*. Hawthorne, NY: Aldine Publishing Co.

England, Paula, and Su Li. 2006. "Desegregation Stalled: The Changing Gender Composition of College Majors, 1971–2002." *Gender & Society* 20(5): 657–677.

Falk, William, and Linda Lobao. 2003. "Who Benefits from Economic Restructuring? Lessons from the Past, Challenges for the Future?" In *Challenges for Rural America in the Twenty-First Century*, D. Brown and L. Swanson, eds. University Park, PA: Pennsylvania State University Press, pp. 152–165.

Gallinsky, Ellen, Kerstin Aumann, and James T. Bond. 2011. "Times are Changing: Gender and Generation at Work and at Home." New York: Families and Work Institute.

Glass, J., and L. Riley. 1998. "Family Responsive Policies and Employee Retention Following Childbirth." *Social Forces* 76(4): 1401–1435.

Golden, Lonnie. 2001. "Flexible Work Schedules: What Are We Trading Off to Get Them?" *Monthly Labor Review* 124(3): 50–67.

———. 2008. "Limited Access: Disparities in Flexible Work Schedules and Work at Home" *Journal of Family and Economic Issues* 29(1): 86–109.

Goldin, Claudia. 1990. *Understanding the Gender Gap: An Economic History of American Women*. New York: Oxford University Press.

———. 2006. "The Quiet Revolution That Transformed Women's Employment, Education, and Family." *American Economic Review* 96(2): 1–21.

Gutiérrez-Domenech, M., and B. Bell. 2004. *Female Labour Force Participation in the United Kingdom: Evolving Characteristics or Changing Behaviour?* Bank of England Working Paper No. 221. London: Bank of England.

Hayghe, Howard. 1986. "Rise in Mothers Labor Force Activity includes those with Infants." *Monthly Labor Review* 109(2): 43–45.

Hays, S. 1996. *The Cultural Contradictions of Motherhood*. New Haven, CT: Yale University Press.

Hofferth, S. 1996. "Child Care in the United States Today." *The Future of Children* 6(2): 41–61.

Hollister, M., and K. Smith. 2014. "Unmasking the Divergence in Job Tenure in the United States, 1983–2010." *American Sociological Review* 79(1): 159-181.

Juhn, C., and K. M. Murphy. 1997. "Wage Inequality and Family Labor Supply." *Journal of Labor Economics* 15: 72–97.

Killingworth, M.R., and J. Heckman. 1986. "Female Labor Supply: A Survey." *In Handbook of Labor Economics*. Vol. 1.O. Ashenfelter and R. Layard eds. Amsterdam: North-Holland, pp. 101–204.

Lareau, A. 2011. "Unequal Childhoods: Class, Race, and Family Life." Berkeley, CA: University of California Press.

Leibowitz, Arleen, Jacob Klerman, and Linda Waite. 1992. "Employment of New Mothers and Child Care Choice: Differences by Children's Age." *Journal of Human Resources* 27(1): 112–123.

Lichter, Daniel T. 1990. "Delayed Marriage, Marital Homogamy, and the Mate Selection Process among White Women." *Social Science Quarterly* 71(4): 802–811.

Levy, Frank. 1998. *The New Dollars and Dreams: American Incomes and Economic Change*. New York: Russell Sage.

Lewis, S. 1997. "Family Friendly Employment Policies: A Route to Changing Organizational Culture or Playing about at the Margins?" *Gender, Work & Organization* 4(1): 13–23.

Mare, Robert D. 1991. "Five Decades of Educational Assortative Mating." *American Sociological Review* 56: 15–32.

Mattingly, M., and K. Smith. 2010. "Husband's Job Loss During the 'Great Recession': Are Wives Picking up the Slack?" *Family Relations* 59: 343–357.

Mincer, Jacob A. 1974. *Schooling, Experience, and Earnings*. New York: Columbia University Press.

Mincer, Jacob. 1962. “Labor Force Participation of Married Women: A Study of Labor Supply.” In *Aspects of Labor Economics*, H. Greg Lewis, ed. Princeton, NJ: Princeton University Press, pp. 63–106.

Mosisa, Abraham, and Steven Hipple. 2006. “Trends in Labor Force Participation in the United States.” *Monthly Labor Review* 129(10): 35–57.

Oaxaca, Ronald L. 2008. “Explaining Differences between Groups: Oaxaca Decomposition.” In *Analyzing Health Equity Using Household Survey Data: A Guide to Techniques and their Implementation*, Owen O’Donnell, Eddy Van Doorsslaer, Adam Wagstaff, and Magnus Lindelow, eds. Washington, DC: World Bank, pp. 147–156.

Oppenheimer, Valerie K. 1970. *The Female Labor Force in the United States: Demographic and Economic Factors Governing Its Growth and Changing Composition.* Population Monograph Series No. 5. Berkeley: University of California.

———. 1988. “A Theory of Marriage Timing.” *American Journal of Sociology* 94(3): 563–591.

Percheski, Christine. 2008. “Opting Out? Cohort Differences in Professional Women’s Employment Rates from 1960 to 2005.” *American Sociological Review 73*(3): 497–517.

Rutgers Center for American Women and Politics. 2012. “Facts: Proportion of Women in Statewide Elective Office, 1971–2011.” http://www.cawp.rutgers.edu/fast_facts/levels_of_office/statewide.php (accessed March 1, 2012).

Ryan, Camille L., and J. Siebens. 2012. “Educational Attainment in the United States: 2009. Current Population Reports P20-566.” Washington, DC: U.S. Census Bureau.

Sayer, Liana C., Phillip N. Cohen, and Lynne M. Casper. 2005. *Women, Men, and Work*. In *The American People: Census 2000*, Reynolds Farley and John Haaga, eds. New York: Russell Sage, pp. 76–106.

Sinning, Mathias, Markus Hahn, and Thomas K. Bauer. 2008. “The Blinder-Oaxaca Decomposition for Nonlinear Regression Models.” *Stata Journal* 8(4): 480–492.

Shelton, Beth Anne, and Daphne John. 1996. “The Division of Household Labor.” *Annual Review of Sociology* 22: 299–322.

Shu, Xiaoling, and Margaret Mooney Marini. 1998. “Gender-Related Change in Occupational Aspirations.” *Sociology of Education* 71:43–67.

Smith, Kristin. 2008. “Working Hard for the Money: Trends in Women’s Employment, 1970–2007.” *Reports on Rural America* 1(5). University of New Hampshire, Durham: Carsey Institute.

———. 2011. “Changing Roles: Women and Work in Rural America.” In *Economic Restructuring and Family Well-Being in Rural America*, Kristin E. Smith and Ann R. Tickamyer, eds. University Park, PA: Pennsylvania State University Press, pp. 60–81.

———. 2012. “Recessions Accelerate Trend of Wives as Breadwinners.” Issue Brief No. 56. Durham, NH: Carsey Institute, University of New Hampshire.

Smith, K., B. Downs, and M. O’Connell. 2001. “Maternity Leave and Employment Patterns: 1961–1995.” Current Population Reports P70-79. Washington, DC: U.S. Census Bureau.

Smith, K., and A. Tickamyer. 2011. *Economic Restructuring and Family Wellbeing in Rural America*. University Park, PA: Pennsylvania State University Press.

South, Scott J. 1991. “Sociodemographic Differentials in Mate Selection Preferences.” *Journal of Marriage and the Family* 53(4): 920–940.

South, Scott J., and Glenna Spitze. 1994. “Housework in Marital and Nonmarital Households.” *American Sociological Review* 59(3): 327–347.

Stone, Pamela. 2007. *Opting Out? Why Women Really Quit Careers and Head Home*. Berkeley, CA: University of California Press.

Story, L. 2005. “Many Women at Elite Colleges Set Career Path to Motherhood.” *New York Times*, September 20, A:1.

Sweet, James A., and Larry L. Bumpass. 1987. “American Families and Households.” New York: Russell Sage Foundation.

Thornton, A., and L. Young-DeMarco. 2001. “Four Decades of Trends in Attitudes toward Family Issues in the United States: The 1960s through the 1990s.” *Journal of Marriage and Family* 63(4): 1009–1037.

U.S. Department of Commerce and Office of Management and Budget. 2011. “Women in America: Indicators of Social and Economic Well-Being.” Prepared for the White House Council on Women and Girls. Available at http://www.whitehouse.gov/administration/eop/cwg/data-on-women (accessed March 31, 2014).

Wallis, C. 2004. “The Case for Staying Home: Caught between the Pressures of the Workplace and the Demands of Being a Mom, More Women Are Sticking with the Kids.” *Time* 163(12): 50.

Williams, Joan, and Holly Cohen Cooper. 2004. “The Public Policy of Motherhood.” *Journal of Social Issues* 60(4): 849–865.

Williams, Joan, Jessica Manvell, and Stephanie Bornstein. 2006. “‘Opt-Out’ or Pushed Out? How the Press Covers Work/Family Conflict.” *Center for WorkLifeLaw Report.* ADVANCE Library Collection, Paper 575. San Francisco: UC Hastings College of the Law.

Table 1 Frequency Distribution of Women Aged 25−54, by Demographic Characteristics, 1970−2010

	1970	1980	1990	2000	2010
Education					
Less than high school	33.9	21.2	14.2	10.1	10.9
High school	45.8	42.4	46.7	31.7	26.9
Some college	10.9	19.4	16.6	29.3	29.5
College graduate	9.4	17.0	22.6	28.2	33.6
Marital/fertility					
Married with kids	66.8	51.1	43.2	40.5	38.1
Married without kids	15.4	22.4	24.3	24.3	22.9
Single with kids	7.9	12.0	12.9	13.0	14.2
Single without kids	9.9	14.5	19.6	22.3	24.8
Median other family income (1970)	$8,425	$7,470	$6,719	$6,748	$5,367
Median total family income (1970)	$10,100	$10,377	$11,573	$12,838	$12,456
Other Family Income deciles (1970)					
1	10.1	16.2	21.1	23.7	27.3
2	9.9	12.8	13.9	13.0	14.8
3	9.9	11.1	9.7	9.2	9.8
4	10.0	8.5	7.7	6.6	7.1
5	9.9	7.5	6.7	6.2	5.0
6	10.0	9.3	6.7	6.5	5.4
7	10.1	7.3	6.2	5.0	5.1
8	10.0	8.9	7.6	6.9	5.4
9	10.0	8.3	8.6	8.1	6.9
10	10.1	10.1	11.9	14.7	13.3
Age					
25−34	34.7	42.9	40.6	31.7	32.2
35−44	32.3	30.0	35.2	37.4	32.2
45−54	33.0	27.2	24.3	30.9	35.7
Race					
White, non−Hispanic	88.4	81.0	76.1	70.5	64.2
Black, non−Hispanic	10.5	11.3	12.2	13.0	13.1
Other, non−Hispanic	1.2	2.2	3.7	5.3	7.5
Hispanic	x	5.6	8.0	11.3	15.1

SOURCE: 1980, 1990, 2000, 2010 Current Population Survey (March).

Table 2 Logistic Regression Predicting All Women's Employment, 1970–2012

	High school	Some college	College grad	Married with kids	Married no kids	Single with kids	Log of other income	Age 35−44	Age 45−54	Black, non−Hispanic	Other, non−Hispanic	Hispanic	Rural	_cons
1970	0.413	0.388	0.760	−1.050	−0.509	−0.439	−0.191	0.223	0.074	0.417	**−0.111**		**0.043**	2.119
1971	0.438	0.455	0.930	−0.983	−0.459	−0.427	−0.172	0.170	0.069	0.370	**0.026**	−0.217	0.096	2.028
1972	0.474	0.536	1.001	−0.930	−0.372	−0.458	−0.194	0.219	0.113	0.300	**−0.104**	−0.232	0.066	2.196
1973	0.481	0.553	0.949	−0.959	−0.377	−0.548	−0.191	0.155	**−0.027**	0.197	**−0.112**	−0.178	0.104	2.274
1974	0.500	0.622	1.047	−0.802	−0.188	−0.402	−0.208	0.125	−0.078	0.163	**−0.045**	**−0.019**	**0.049**	2.352
1975	0.586	0.683	1.109	−0.779	−0.192	−0.361	−0.184	**0.060**	−0.113	**0.085**	**−0.178**	**−0.105**	**−0.007**	2.105
1976	0.577	0.730	1.269	−0.813	−0.267	−0.478	−0.208	0.141	−0.105	0.089	**−0.138**	−0.165	**0.001**	2.483
1977	0.600	0.747	1.153	−0.801	−0.212	−0.421	−0.175	0.141	−0.129	0.128	**−0.107**	−0.155	**0.018**	1.982
1978	0.574	0.706	1.149	−0.740	−0.210	−0.406	−0.175	0.088	−0.173	**0.055**	**−0.085**	−0.143	**0.027**	2.100
1979	0.675	0.817	1.284	−0.753	−0.165	−0.365	−0.168	0.092	−0.224	**0.014**	**−0.096**	−0.217	**−0.002**	2.299
1980	0.734	0.937	1.266	−0.756	−0.132	−0.308	−0.159	**0.040**	−0.283	**−0.044**	**−0.128**	−0.195	**0.024**	2.101
1981	0.808	1.017	1.346	−0.701	−0.153	−0.445	−0.157	**0.054**	−0.163	**−0.076**	−0.202	−0.231	**0.014**	1.940
1982	0.792	1.031	1.389	−0.656	−0.203	−0.425	−0.139	0.146	−0.173	**−0.061**	**−0.157**	−0.239	0.067	1.761
1983	0.846	1.107	1.545	−0.640	−0.178	−0.429	−0.129	0.103	−0.240	**−0.061**	−0.343	−0.284	**0.042**	1.539
1984	0.891	1.207	1.624	−0.585	**−0.060**	−0.429	−0.143	0.163	−0.135	−0.166	−0.251	−0.262	**−0.006**	1.605
1985	0.950	1.236	1.561	−0.523	**−0.009**	−0.380	−0.150	0.088	−0.140	−0.214	−0.294	−0.226	**−0.041**	1.889
1986	0.916	1.176	1.602	−0.549	**−0.073**	−0.421	−0.142	0.190	−0.066	−0.154	−0.286	−0.315	−0.095	2.038
1987	0.968	1.302	1.678	−0.310	0.155	−0.371	−0.172	0.196	−0.092	−0.107	−0.265	−0.295	**−0.037**	1.830
1988	0.989	1.361	1.678	−0.487	**−0.099**	−0.502	−0.140	0.199	**−0.089**	−0.191	−0.562	−0.329	**−0.065**	1.899
1989	1.035	1.352	1.703	−0.364	**0.058**	−0.414	−0.168	0.209	**−0.069**	−0.177	−0.367	−0.267	**−0.035**	2.203
1990	1.003	1.274	1.667	−0.368	**0.015**	−0.364	−0.144	0.109	−0.140	−0.119	−0.391	−0.255	0.088	2.167
1991	0.992	1.282	1.660	−0.413	**0.015**	−0.375	−0.138	0.150	−0.080	−0.264	−0.487	−0.269	**−0.025**	1.977
1992	1.031	1.415	1.779	−0.360	**0.118**	−0.459	−0.136	0.155	−0.093	−0.204	−0.472	−0.265	**0.030**	2.036
1993	1.007	1.409	1.801	−0.216	0.177	−0.335	−0.135	0.161	**−0.004**	−0.247	−0.355	−0.251	**0.016**	1.894
1994	1.033	1.426	1.855	−0.180	0.235	−0.290	−0.141	0.096	**−0.015**	−0.221	−0.547	−0.337	**0.041**	2.022
1995	0.957	1.363	1.680	−0.254	0.140	−0.256	−0.124	0.130	**0.039**	−0.253	−0.481	−0.339	**−0.009**	2.130
1996	1.004	1.460	1.728	−0.255	**0.118**	−0.255	−0.130	0.164	**−0.001**	−0.270	−0.415	−0.285	**−0.017**	2.297
1997	1.078	1.427	1.828	−0.111	0.187	**−0.012**	−0.121	0.121	**0.055**	−0.180	−0.349	−0.228	**0.054**	1.968
1998	0.899	1.265	1.697	**−0.080**	0.183	**0.051**	−0.110	**0.063**	**−0.028**	**−0.059**	−0.314	−0.226	**−0.056**	2.031
1999	0.921	1.304	1.637	−0.133	0.146	0.192	−0.100	**0.074**	**−0.028**	**−0.063**	−0.458	−0.267	**−0.014**	1.696
2000	0.923	1.260	1.590	−0.185	0.136	0.198	−0.105	**0.064**	**−0.002**	**−0.016**	−0.401	−0.223	**0.013**	1.812
2001	0.944	1.297	1.488	−0.177	**0.092**	0.318	−0.094	**0.046**	**−0.059**	**−0.003**	−0.408	−0.122	**−0.006**	2.016
2002	0.899	1.236	1.554	−0.108	0.268	0.267	−0.103	0.106	**−0.005**	**−0.052**	−0.391	−0.121	**−0.048**	1.649
2003	0.869	1.237	1.449	**0.038**	0.422	0.416	−0.114	0.107	0.086	−0.113	−0.501	−0.232	**0.002**	1.612
2004	0.867	1.285	1.540	**−0.061**	0.252	0.222	−0.102	0.108	0.136	**−0.015**	−0.423	−0.149	**0.009**	1.653
2005	0.868	1.320	1.605	−0.159	0.158	0.220	−0.088	0.162	0.149	−0.103	−0.371	−0.149	**0.076**	1.610

Table 2 (Continued)

	High school	Some college	College grad	Married with kids	Married no kids	Single with kids	Log of other income	Age 35−44	Age 45−54	Black, non−Hispanic	Other, non−Hispanic	Hispanic	Rural	_cons
2006	0.928	1.329	1.672	**0.027**	0.341	0.221	−0.105	0.097	0.134	**0.002**	−0.389	−0.146	**0.056**	1.674
2007	0.884	1.309	1.576	**0.035**	0.275	0.187	−0.105	**0.065**	0.126	**0.014**	−0.308	−0.092	**−0.026**	1.781
2008	0.896	1.345	1.683	**−0.029**	0.286	0.256	−0.090	**0.054**	**0.013**	**−0.070**	−0.271	−0.132	**0.037**	1.698
2009	0.916	1.342	1.692	**0.039**	0.226	0.226	−0.095	**0.057**	0.099	−0.084	−0.327	−0.094	**0.011**	1.575
2010	0.882	1.282	1.688	0.088	0.306	0.212	−0.095	0.072	0.132	−0.170	−0.296	−0.120	**0.013**	1.217
2011	0.888	1.346	1.726	0.116	0.314	0.207	−0.097	0.117	0.118	−0.133	−0.239	−0.097	**0.041**	1.441
2012	0.771	1.207	1.699	**0.072**	0.283	0.262	−0.093	0.163	0.158	−0.159	−0.337	**−0.074**	**0.018**	1.345

NOTE: states included in analysis

Table 3 Decomposition of Women's Employment by Decade

	1970−1980	1980−1990	1990−2000	2000−2010
Change in women’s employment	12.9	8.2	3.1	−5.0
Percent of change in women's employment due to:				
Shifts in means (composition)	37.2	39.0	48.4	24.0
Shifts in coefficients (behavior)	61.2	68.3	51.6	−118.0
Shifts due to interaction	1.6	−7.3	3.2	−6.0

Table 4 Detailed Decomposition of Women's Employment Attributable to MEAN (COMPOSITIONAL) and COEFFICIENT (BEHAVIORAL) Differences in Independent Variables

	Attributable to MEAN (COMPOSITIONAL) differences in independent variables				Attributable to COEFFICIENT (BEHAVIORAL) differences in independent variables			
	1970−1980	1980−1990	1990−2000	2000−2010	1970−1980	1980−1990	1990−2000	2000−2010
As a percent of total change:								
Family composition−−Total	13.2	12.2	6.5	0.0	60.5	61.0	80.6	50.0
Married with children	16.3	12.2	6.5	0.0	47.3	56.1	41.9	38.0
Married no children	0.0	0.0	0.0	−2.0	10.9	4.9	6.5	10.0
Single with children	−3.1	0.0	0.0	2.0	2.3	0.0	32.3	2.0
Single no children (REFERENCE)								
Education−−Total	15.5	24.4	51.6	20.0	34.1	43.9	−71.0	64.0
Less than high school (REFERENCE)								
High school degree	−0.8	−4.9	−67.7	−18.0	20.9	24.4	−35.5	8.0
Some college	4.7	11.0	64.5	2.0	8.5	9.8	−12.9	20.0
College graduate	11.6	18.3	54.8	36.0	4.7	9.8	−22.6	36.0
Other family income−−Total	10.9	2.4	0.0	12.0	0.0	7.3	103.2	38.0
Decile 1	6.2	3.7	9.7	12.0	−2.3	−1.2	0.0	14.0
Decile 2	−0.8	0.0	0.0	−4.0	−2.3	−4.9	12.9	6.0
Decile 3	0.0	0.0	3.2	0.0	0.0	1.2	9.7	4.0
Decile 4	0.0	0.0	0.0	2.0	0.8	−1.2	3.2	2.0
Decile 5 (REFERENCE)								
Decile 6	0.0	0.0	0.0	0.0	0.0	0.0	6.5	4.0
Decile 7	0.8	1.2	0.0	0.0	−0.8	1.2	16.1	0.0
Decile 8	0.8	1.2	0.0	0.0	0.0	4.9	19.4	2.0
Decile 9	1.6	0.0	0.0	0.0	2.3	3.7	12.9	6.0
Decile 10	2.3	−3.7	−12.9	2.0	2.3	3.7	22.6	0.0
Other variables	−2.3	1.2	−9.7	−6.0	−44.2	−64.6	−6.5	−30.0
Constant					10.1	18.3	−54.8	−240.0

NOTE: Other variables include age, race and ethnicity, state fixed effect, and metro status.

Table 5 Decomposition of women's employment by decade by marital status

	Married women				Single women			
	1970−1980	1980−1990	1990−2000	2000−2010	1970−1980	1980−1990	1990−2000	2000−2010
Change in women's employment	13.7	10.0	2.8	−3.7	2.7	1.8	3.1	−7.5
Percent of change in women's employment due to								
Shifts in means (composition)	16.1	18.0	35.7	18.9	144.4	188.9	54.8	14.7
Shifts in coefficients (behavior)	75.9	84.0	57.1	−113.5	−77.8	−94.4	58.1	−109.3
Shifts due to interaction	8.0	−1.0	7.1	5.4	33.3	5.6	−12.9	−6.7
	Attributable to MEAN (COMPOSITIONAL) differences in independent variables							
	Married women				Single women			
	1970−1980	1980−1990	1990−2000	2000−2010	1970−1980	1980−1990	1990−2000	2000−2010
As a percent of total change:								
Family composition−−Total	2.2	4.0	7.1	0.0	0.0	−5.6	0.0	0.0
Education−−Total	13.9	19.0	60.7	27.0	103.7	122.2	48.4	12.0
Other family income−−Total	2.9	−7.0	−25.0	0.0	63.0	61.1	22.6	1.3
Other variables	−2.9	1.0	3.6	−13.5	−11.1	16.6	−0.2	2.7
	Attributable to COEFFICIENT (BEHAVIORAL) differences in independent variables							
	Married women				Single women			
	1970−1980	1980−1990	1990−2000	2000−2010	1970−1980	1980−1990	1990−2000	2000−2010
As a percent of total change:								
Family composition−−Total	−2.2	42.0	42.9	29.7	37.0	−33.3	61.3	6.7
Education−−Total	29.2	35.0	−32.1	89.2	107.4	122.2	−116.1	30.7
Other family income−−Total	0.0	−4.0	82.1	0.0	44.4	227.8	−6.5	−14.7
Other variables	−43.8	−61.0	21.4	5.4	−33.9	161.2	−99.5	−57.2
Constant	92.7	75.0	−53.6	−237.8	−163.0	−583.3	177.4	−82.7

NOTE: Other variables include age, race and ethnicity, state fixed effect, and metro status.

Figure 1 Women's Employment by Year and Marital/Child Status

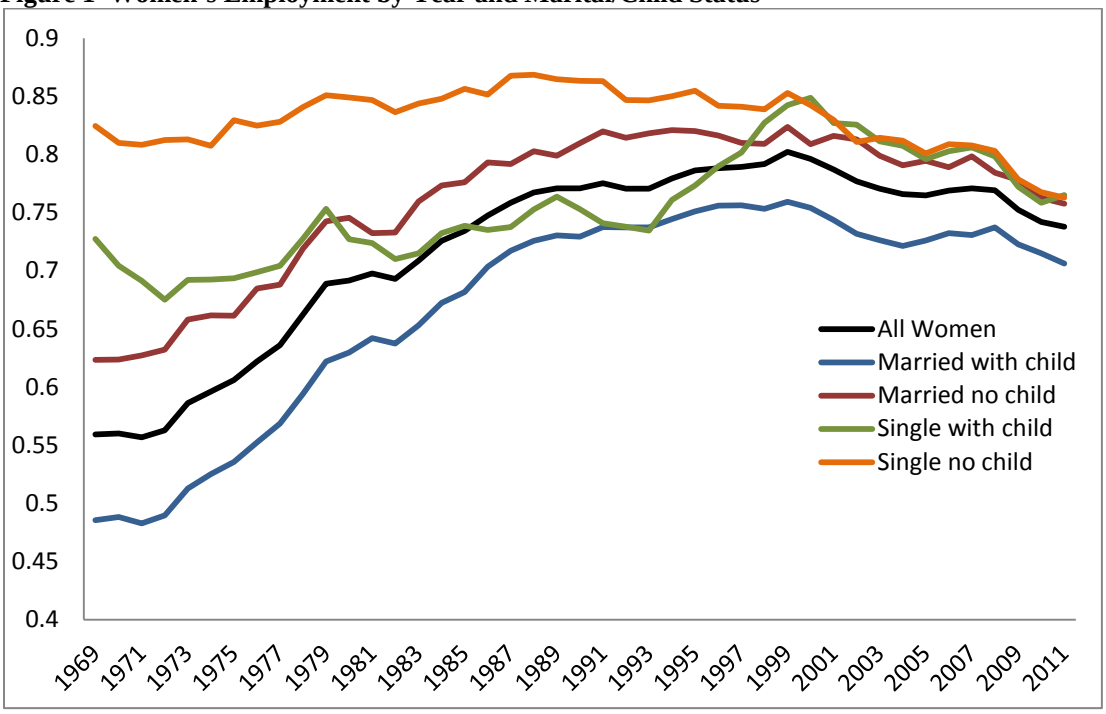


Figure 2a Predicted Probability of Women's Employment, 1970–2010

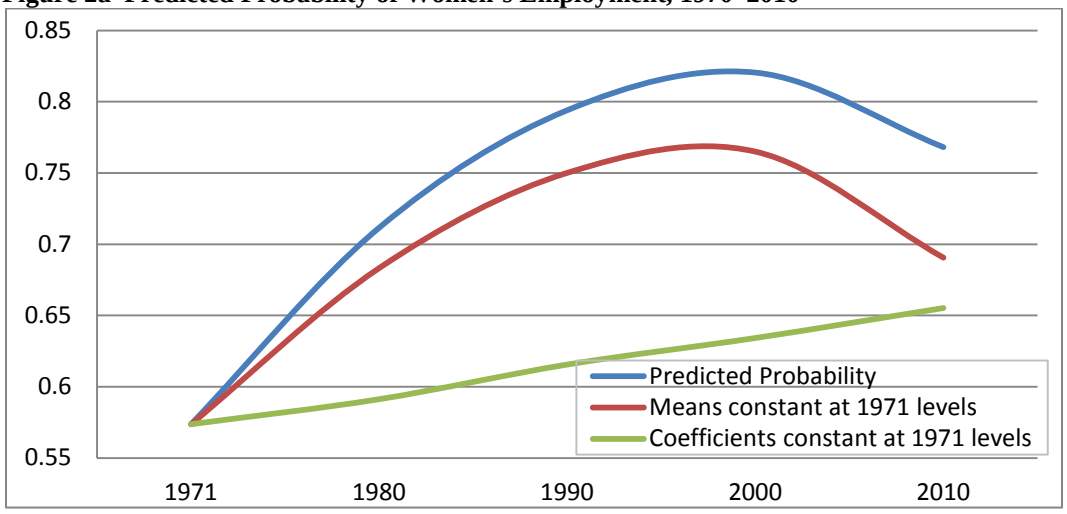


Figure 2b Predicted Probability of Married Women's Employment, 1971–2010

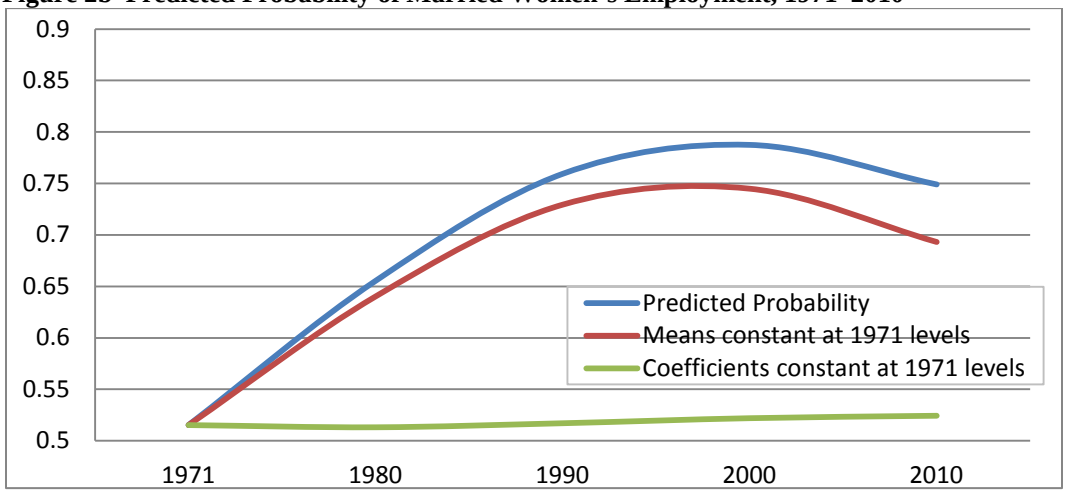


Figure 2c Predicted Probability of Single Women's Employment, 1971–2010

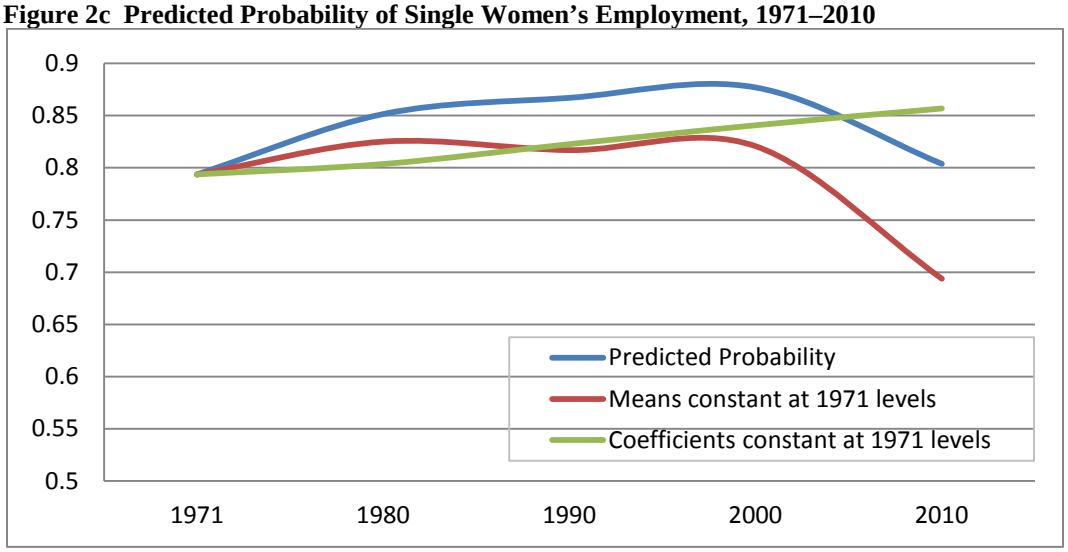


Table A.1 Frequency Distribution of Women by Demographic Characteristics, 1970−2010, by Marital Status

	All married women 25−54					All single women 25−54				
	1970	1980	1990	2000	2010	1970	1980	1990	2000	2010
Education										
Less than high school	32.4	19.8	12.6	9.5	8.8	40.0	26.0	17.3	13.5	11.9
High school	47.4	47.4	43.6	32.1	25.8	38.8	38.4	39.4	31.0	28.5
Some college	11.1	16.4	21.0	28.8	28.1	10.3	17.6	21.2	30.1	31.5
College graduate	9.1	16.4	22.8	29.7	37.3	10.9	18.1	22.1	25.4	28.1
Marital/ fertility										
Married with kids	81.2	78.5	75.0	72.3	73.4					
Married without kids	18.8	21.5	25.1	27.7	26.6					
Single with kids						46.2	49.6	45.8	43.4	43.4
Single without kids						53.8	50.4	54.2	56.6	56.6
Median other family income (1970)	$9,427	$9,245	$9,402	$9,794	$9,051	$1,440	$1,008	$742	$586	$445
Median total family income (1970)	$10,100	$10,377	$11,573	$12,838	$12,456	$3,000	$3,333	$3,858	$4,279	$3,559
Other Family Income deciles (1970)										
1	9.9	12.0	14.5	13.6	17.4	24.1	15.3	18.4	23.4	32.2
2	10.1	11.8	11.4	10.4	11.3					
3	9.9	9.6	8.5	8.4	9.6	6.4	16.9	17.9	16.6	11.9
4	9.9	8.6	7.7	7.2	6.4	10.0	14.3	14.8	13.3	11.7
5	10.1	9.0	8.0	7.7	7.3	9.9	11.6	11.4	10.5	9.1
6	10.3	9.4	7.4	6.6	5.5	9.9	11.7	9.7	8.7	9.0
7	10.2	9.8	8.7	8.2	7.5	10.0	8.2	7.3	6.6	6.1
8	9.8	9.3	9.0	8.4	7.7	9.9	7.3	6.1	5.6	5.7
9	9.9	9.3	10.2	10.5	9.1	10.0	7.1	5.8	6.2	5.8
10	10.1	11.2	14.6	18.9	18.3	9.9	7.6	8.7	8.9	8.5
Age										
25−34	35.0	39.7	37.7	28.5	27.1	33.5	48.2	46.4	37.2	39.6
35−44	33.1	32.1	36.6	39.1	34.8	28.8	26.7	32.2	34.4	28.2
45−54	31.9	28.2	25.7	32.3	38.1	37.8	25.1	21.3	28.4	32.1
Race										
White, non−Hispanic	91.18	85.6	81.2	76.1	69.9	76.2	68.7	66.0	60.6	55.9
Black, non−Hispanic	7.62	7.1	7.4	7.5	7.3	22.7	22.4	21.8	22.6	21.6
Other, non−Hispanic	1.2	2.3	3.9	5.4	8.3	1.1	2.1	3.2	5.0	6.3
Hispanic		5.1	7.5	10.9	14.5		6.7	9.0	11.8	16.1

SOURCE: 1980, 1990, 2000, 2010 Current Population Survey (March)

Table A.2A Logistic Regression Predicting Married Women's Employment, 1970−2012

	High school	Some college	College grad	Married with kids	Log of other income	Age 35−44	Age 45−54	Black, non−Hispanic	Other, non−Hispanic	Hispanic	Rural	_cons
1970	0.302	0.267	0.604	−0.539	−0.178	0.245	0.064	0.728	−0.038		0.068	0.998
1971	0.318	0.309	0.749	−0.533	−0.120	0.156	0.039	0.710	−0.001	−0.151	0.116	0.652
1972	0.349	0.407	0.857	−0.559	−0.159	0.215	0.112	0.663	−0.141	−0.151	0.075	0.994
1973	0.359	0.373	0.789	−0.599	−0.149	0.117	−0.076	0.603	0.095	−0.113	0.134	1.558
1974	0.370	0.437	0.867	−0.658	−0.138	0.114	−0.143	0.552	0.130	0.077	0.070	1.659
1975	0.410	0.489	0.912	−0.618	−0.113	0.033	−0.170	0.458	−0.248	0.012	0.016	0.807
1976	0.387	0.535	1.050	−0.561	−0.157	0.150	−0.134	0.511	−0.197	−0.038	0.021	1.302
1977	0.461	0.563	0.959	−0.624	−0.099	0.151	−0.163	0.559	−0.035	−0.026	0.048	0.547
1978	0.383	0.452	0.857	−0.585	−0.062	0.056	−0.256	0.614	−0.058	0.004	0.061	1.070
1979	0.479	0.572	1.010	−0.651	−0.074	0.065	−0.315	0.610	−0.034	−0.055	0.019	0.828
1980	0.551	0.698	0.997	−0.645	−0.094	0.018	−0.342	0.474	−0.006	−0.093	0.074	1.536
1981	0.564	0.713	0.987	−0.589	−0.061	0.001	−0.274	0.471	−0.140	−0.123	0.026	1.254
1982	0.558	0.722	1.049	−0.510	−0.037	0.069	−0.305	0.558	−0.056	−0.122	0.148	0.407
1983	0.632	0.855	1.224	−0.508	−0.046	0.059	−0.346	0.563	−0.283	−0.162	0.099	0.291
1984	0.680	0.941	1.310	−0.567	−0.074	0.104	−0.251	0.345	−0.139	−0.203	0.034	0.543
1985	0.755	0.976	1.246	−0.554	−0.060	0.032	−0.252	0.412	−0.167	−0.067	0.001	1.243
1986	0.705	0.879	1.237	−0.556	−0.053	0.129	−0.238	0.473	−0.131	−0.207	−0.033	1.424
1987	0.803	1.060	1.376	−0.516	−0.126	0.160	−0.213	0.500	−0.171	−0.180	0.032	1.207
1988	0.726	1.056	1.276	−0.427	−0.099	0.139	−0.237	0.338	−0.495	−0.275	0.000	1.704
1989	0.806	1.072	1.308	−0.462	−0.115	0.190	−0.201	0.408	−0.195	−0.206	−0.014	1.568
1990	0.812	1.029	1.323	−0.423	−0.087	0.077	−0.227	0.435	−0.148	−0.139	0.158	1.919
1991	0.773	0.972	1.260	−0.486	−0.053	0.067	−0.208	0.339	−0.394	−0.192	0.072	1.041
1992	0.826	1.150	1.404	−0.520	−0.088	0.073	−0.234	0.384	−0.362	−0.246	0.094	1.453
1993	0.785	1.108	1.426	−0.446	−0.097	0.130	−0.136	0.283	−0.325	−0.279	0.088	1.638
1994	0.862	1.140	1.515	−0.473	−0.069	0.016	−0.186	0.301	−0.497	−0.330	0.118	1.517
1995	0.795	1.090	1.313	−0.462	−0.018	0.100	−0.098	0.256	−0.413	−0.249	0.122	1.037
1996	0.901	1.295	1.455	−0.412	−0.063	0.087	−0.112	0.233	−0.340	−0.210	0.054	2.068
1997	0.922	1.164	1.467	−0.332	−0.053	0.108	−0.016	0.291	−0.298	−0.191	0.077	1.407
1998	0.709	0.978	1.283	−0.295	−0.069	0.066	−0.060	0.358	−0.236	−0.239	0.067	2.264
1999	0.831	1.122	1.360	−0.306	−0.043	0.148	0.114	0.440	−0.325	−0.199	0.022	1.173
2000	0.765	1.043	1.282	−0.348	−0.046	0.126	0.073	0.401	−0.395	−0.174	0.085	1.223
2001	0.788	1.047	1.156	−0.294	−0.037	0.122	0.034	0.435	−0.373	−0.110	0.132	1.329
2002	0.796	1.026	1.221	−0.402	−0.058	0.153	0.083	0.399	−0.338	−0.126	0.023	1.789
2003	0.701	0.978	1.074	−0.390	−0.060	0.144	0.194	0.309	−0.481	−0.274	0.100	1.789
2004	0.668	1.079	1.174	−0.331	−0.037	0.104	0.209	0.441	−0.434	−0.189	0.121	1.631

Table A.2A (Continued)

	High school	Some college	College grad	Married with kids	Log of other income	Age 35−44	Age 45−54	Black, non−Hispanic	Other, non−Hispanic	Hispanic	Rural	_cons
2005	0.696	1.067	1.245	−0.338	−0.018	0.247	0.253	0.300	−0.374	−0.199	0.183	0.938
2006	0.848	1.169	1.370	−0.330	−0.064	0.153	0.203	0.384	−0.369	−0.166	0.224	1.458
2007	0.787	1.147	1.265	−0.242	−0.062	0.113	0.232	0.371	−0.291	−0.145	0.062	1.638
2008	0.741	1.118	1.341	−0.290	−0.055	0.103	0.156	0.163	−0.265	−0.236	0.150	1.936
2009	0.811	1.186	1.407	−0.176	−0.019	0.091	0.205	0.279	−0.310	−0.178	0.167	1.327
2010	0.819	1.151	1.373	−0.223	−0.034	0.134	0.250	0.163	−0.328	−0.204	0.180	0.765
2011	0.813	1.191	1.438	−0.206	−0.033	0.184	0.207	0.213	−0.259	−0.164	0.093	1.109
2012	0.714	1.081	1.409	−0.192	−0.040	0.234	0.268	0.151	−0.406	−0.155	0.117	1.371

NOTE: States included in analysis.

Table A.2B Logistic Regression Predicting Single Women's Employment, 1970−2012

	High school	Some college	College grad	Single with kids	Log of other income	Age 35−44	Age 45−54	Black, non−Hispanic	Other, non−Hispanic	Hispanic	Rural	_cons
1970	1.028	1.036	1.902	−0.084	−0.196	0.041	0.143	−0.251	−0.652		−0.097	1.927
1971	0.900	1.092	1.960	−0.102	−0.196	0.148	0.163	−0.261	0.269	−0.451	−0.017	2.115
1972	1.025	1.053	1.714	−0.160	−0.208	0.154	0.071	−0.363	0.353	−0.588	0.022	2.411
1973	0.987	1.443	1.713	−0.253	−0.213	0.282	0.135	−0.550	−1.038	−0.431	−0.053	2.704
1974	0.948	1.311	1.826	−0.120	−0.233	0.083	0.105	−0.482	−0.734	−0.291	−0.019	2.253
1975	1.204	1.304	1.800	−0.132	−0.216	0.110	0.063	−0.468	0.594	−0.458	−0.093	1.880
1976	1.263	1.384	2.161	−0.227	−0.223	0.040	−0.004	−0.565	0.442	−0.623	−0.083	2.262
1977	0.989	1.356	1.789	−0.154	−0.212	−0.009	−0.077	−0.502	−0.390	−0.535	−0.025	2.484
1978	1.095	1.435	2.231	−0.087	−0.233	0.081	0.049	−0.678	−0.122	−0.532	0.001	2.217
1979	1.143	1.432	2.139	−0.089	−0.217	0.114	−0.031	−0.723	−0.403	−0.742	−0.008	2.420
1980	1.187	1.614	2.226	−0.022	−0.185	0.041	−0.111	−0.680	−0.741	−0.543	−0.169	2.070
1981	1.392	1.794	2.504	−0.208	−0.198	0.154	0.126	−0.720	−0.362	−0.590	0.085	0.991
1982	1.330	1.763	2.306	−0.223	−0.193	0.371	0.159	−0.775	−0.456	−0.523	−0.180	1.508
1983	1.272	1.605	2.369	−0.210	−0.174	0.165	−0.026	−0.793	−0.519	−0.648	−0.166	1.650
1984	1.298	1.773	2.441	−0.217	−0.175	0.290	0.140	−0.718	−0.642	−0.448	−0.110	1.705
1985	1.274	1.725	2.317	−0.168	−0.196	0.168	0.089	−0.889	−0.677	−0.675	−0.141	2.059
1986	1.240	1.759	2.534	−0.169	−0.182	0.288	0.371	−0.841	−0.852	−0.633	−0.280	1.814
1987	1.224	1.818	2.431	−0.176	−0.190	0.239	0.224	−0.761	−0.554	−0.657	−0.266	1.960
1988	1.413	1.901	2.737	−0.249	−0.160	0.297	0.257	−0.685	−0.767	−0.550	−0.313	1.604
1989	1.406	1.872	2.815	−0.158	−0.183	0.207	0.241	−0.783	−0.933	−0.544	−0.126	1.849
1990	1.244	1.660	2.561	−0.161	−0.163	0.167	0.039	−0.683	−1.184	−0.620	−0.121	1.729
1991	1.242	1.771	2.591	−0.126	−0.163	0.296	0.112	−0.818	−0.738	−0.527	−0.318	1.505
1992	1.291	1.817	2.659	−0.246	−0.154	0.305	0.176	−0.694	−0.765	−0.380	−0.196	1.777
1993	1.259	1.828	2.587	−0.178	−0.145	0.191	0.246	−0.678	−0.387	−0.266	−0.206	1.299
1994	1.190	1.798	2.500	−0.134	−0.165	0.207	0.260	−0.623	−0.618	−0.408	−0.174	1.399
1995	1.054	1.705	2.431	−0.065	−0.161	0.165	0.263	−0.708	−0.553	−0.592	−0.368	1.986
1996	1.055	1.628	2.287	−0.124	−0.148	0.280	0.165	−0.656	−0.582	−0.478	−0.204	1.788
1997	1.204	1.769	2.586	0.161	−0.137	0.127	0.157	−0.555	−0.448	−0.347	0.014	1.681
1998	1.068	1.633	2.645	0.240	−0.123	0.039	0.002	−0.422	−0.483	−0.264	−0.351	1.374
1999	0.973	1.569	2.234	0.355	−0.120	−0.087	−0.383	−0.510	−0.821	−0.417	−0.110	1.379
2000	1.050	1.527	2.181	0.346	−0.121	−0.100	−0.204	−0.387	−0.410	−0.361	−0.154	1.600
2001	1.023	1.599	2.110	0.485	−0.112	−0.104	−0.277	−0.347	−0.444	−0.204	−0.329	2.071
2002	0.935	1.481	2.287	0.405	−0.115	0.037	−0.198	−0.364	−0.509	−0.145	−0.214	1.051
2003	1.016	1.532	2.180	0.556	−0.129	0.051	−0.153	−0.429	−0.499	−0.193	−0.217	1.111
2004	1.047	1.458	2.214	0.358	−0.125	0.127	−0.050	−0.330	−0.289	−0.124	−0.266	1.009

Table A.2B (Continued)

	High school	Some college	College grad	Single with kids	Log of other income	Age 35−44	Age 45−54	Black, non−Hispanic	Other, non−Hispanic	Hispanic	Rural	_cons
2005	0.996	1.593	2.234	0.357	−0.111	−0.013	−0.088	−0.374	−0.290	−0.074	−0.143	1.411
2006	0.960	1.489	2.267	0.372	−0.121	0.013	−0.022	−0.222	−0.342	−0.146	−0.275	1.492
2007	0.968	1.480	2.228	0.313	−0.118	−0.006	−0.103	−0.226	−0.304	−0.006	−0.243	1.408
2008	1.013	1.573	2.256	0.354	−0.100	0.003	−0.243	−0.220	−0.201	0.016	−0.212	1.270
2009	0.957	1.436	2.112	0.321	−0.114	0.005	−0.116	−0.303	−0.242	0.042	−0.329	1.260
2010	0.866	1.364	2.214	0.343	−0.113	−0.012	−0.075	−0.338	−0.110	0.000	−0.293	1.269
2011	0.906	1.452	2.128	0.298	−0.113	0.026	−0.032	−0.275	−0.115	0.023	−0.052	1.227
2012	0.761	1.265	2.157	0.345	−0.107	0.077	−0.015	−0.295	−0.116	0.054	−0.150	0.865

NOTE: states included in analysis

Table A.3 Logistic Regression Predicting Women's Employment with Income Deciles, by Marital Status, 1970−2012

	All women					Married women					Single women				
	1970	1980	1990	2000	2010	1970	1980	1990	2000	2010	1970	1980	1990	2000	2010
Less than high school	−0.459	−0.745	−0.996	−0.901	−0.847	−0.359	−0.593	−0.840	−0.777	−0.819	−0.982	−1.106	−1.177	−1.023	−0.829
Some college	0.033	0.242	0.299	0.344	0.393	0.037	0.211	0.269	0.322	0.360	−0.015	0.371	0.356	0.445	0.465
College grad	0.465	0.602	0.747	0.717	0.818	0.448	0.558	0.639	0.668	0.673	0.860	0.940	1.204	1.018	1.240
Married with kids	−1.139	−0.774	−0.402	−0.164	0.082	−0.483	−0.584	−0.387	−0.320	−0.194					
Married no kids	−0.652	−0.192	−0.042	0.146	0.298										
Single with kids	−0.488	−0.247	−0.311	0.254	0.249						0.032	0.138	0.049	0.438	0.397
Decile 1	0.759	0.906	0.917	0.628	0.747	0.068	−0.160	−0.233	−0.288	−0.165	−	0.524	0.311	−	−
Decile 2	−0.163	−0.066	0.270	1.156	1.357	0.136	−0.013	−0.163	−0.194	−0.241	1.246	2.317	2.486	−0.193	−
Decile 3	0.027	−0.405	−0.508	−0.271	0.059	0.212	0.166	0.020	−0.086	−0.097	2.055	1.544	2.118	1.102	−0.113
Decile 4	0.054	−0.050	−0.239	−0.289	−0.161	0.081	0.127	−0.038	0.018	0.065	0.953	0.827	0.473	0.656	1.038
Decile 5															
Decile 6	−0.109	−0.066	−0.041	0.079	0.164	0.018	−0.128	−0.198	0.066	−0.145	−0.319	−0.751	−1.165	−0.736	−0.525
Decile 7	−0.160	−0.229	−0.210	0.095	0.178	−0.149	−0.212	−0.246	−0.055	−0.058	−0.538	−0.944	−1.220	−1.618	−1.362
Decile 8	−0.333	−0.426	−0.263	0.045	0.132	−0.281	−0.328	−0.344	−0.317	−0.177	−0.336	−1.012	−1.195	−1.419	−1.383
Decile 9	−0.496	−0.459	−0.475	−0.319	−0.030	−0.399	−0.387	−0.598	−0.542	−0.451	−0.199	−0.725	−0.671	−1.134	−1.221
Decile 10	−0.927	−0.898	−0.965	−0.653	−0.487	−0.890	−0.879	−0.942	−0.942	−0.919	−0.175	−0.474	−0.663	−0.951	−0.968
Age 35−44	0.283	0.097	0.158	0.092	0.084	0.327	0.117	0.154	0.187	0.189	0.066	0.109	0.184	−0.042	0.025
Age 45−54	0.155	−0.191	−0.049	0.068	0.156	0.181	−0.186	−0.080	0.206	0.343	0.144	−0.044	0.044	−0.114	−0.025
Black, NH	0.382	−0.072	−0.140	0.007	−0.161	0.664	0.391	0.371	0.358	0.111	−0.212	−0.645	−0.632	−0.312	−0.278
Other, NH	−0.137	−0.145	−0.404	−0.362	−0.285	−0.079	−0.028	−0.183	−0.383	−0.328	−0.670	−0.771	−1.181	−0.378	−0.086
Hispanic		−0.219	−0.279	−0.199	−0.104		−0.155	−0.190	−0.205	−0.240		−0.485	−0.592	−0.283	0.074
Rural	0.002	0.000	0.053	−0.004	0.012	0.029	0.029	0.103	0.031	0.143	−0.117	−0.136	−0.088	−0.104	−0.246
_cons	1.071	1.555	1.964	1.696	1.062	0.226	1.211	1.974	1.937	1.544	1.469	2.188	2.137	2.432	1.930

Table A.4 Detailed Decomposition of Women's Employment Attributable to MEAN (COMPOSITIONAL) and COEFFICIENT (BEHAVIORAL)Differences in Independent Variables

	Attributable to MEAN (COMPOSITIONAL) differences in independent variables							
	Married Women				Single Women			
	1970−1980	1980−1990	1990−2000	2000−2010	1970−1980	1980−1990	1990−2000	2000−2010
As a percent of total change:								
Family composition−−Total	2.2	4.0	7.1	0.0	0.0	−5.6	0.0	0.0
With children	2.2	4.0	7.1	0.0	0.0	−5.6	0.0	0.0
No children (REFERENCE)								
Education−−Total	13.9	19.0	60.7	27.0	103.7	122.2	48.4	12.0
Less than high school (REFERENCE)								
High school degree	0.0	−5.0	−75.0	−32.4	−3.7	11.1	−64.5	−5.3
Some college	3.6	8.0	64.3	−5.4	44.4	50.0	77.4	5.3
College graduate	10.2	16.0	71.4	64.9	63.0	61.1	35.5	12.0
Other family income−−Total	2.9	−7.0	−25.0	0.0	63.0	61.1	22.6	1.3
Decile 1	0.0	−1.0	0.0	−2.7	−51.9	11.1	6.5	0.0
Decile 2	0.7	0.0	0.0	−2.7				
Decile 3	0.0	0.0	0.0	0.0	74.1	5.6	−3.2	0.0
Decile 4	0.0	0.0	0.0	0.0	22.2	5.6	0.0	−2.7
Decile 5 (REFERENCE)								
Decile 6	0.0	1.0	0.0	0.0	−3.7	0.0	6.5	1.3
Decile 7	0.0	0.0	0.0	0.0	7.4	22.2	6.5	0.0
Decile 8	0.7	0.0	0.0	2.7	7.4	16.7	3.2	1.3
Decile 9	1.5	−1.0	−3.6	0.0	3.7	11.1	0.0	0.0
Decile 10	0.0	−6.0	−21.4	2.7	3.7	−5.6	0.0	1.3
Other variables	−2.9	1.0	3.6	−13.5	−11.1	16.6	−0.2	2.7

Table A.4 (Continued)

	Attributable to COEFFICIENT (BEHAVIORAL) differences in independent variables							
	Married Women				Single Women			
	1970−1980	1980−1990	1990−2000	2000−2010	1970−1980	1980−1990	1990−2000	2000−2010
As a percent of total change:								
Family composition−−Total	−2.2	42.0	42.9	29.7	37.0	−33.3	61.3	6.7
With children	−2.2	42.0	42.9	29.7	37.0	−33.3	61.3	6.7
No children (REFERENCE)								
Education−−Total	29.2	35.0	−32.1	89.2	107.4	122.2	−116.1	30.7
Less than high school (REFERENCE)								
High school degree	18.2	21.0	−17.9	16.2	59.3	44.4	−58.1	−2.7
Some college	7.3	8.0	−3.6	29.7	29.6	27.8	−25.8	9.3
College graduate	3.6	6.0	−10.7	43.2	18.5	50.0	−32.3	24.0
Other family income−−Total	0.0	−4.0	82.1	0.0	44.4	227.8	−6.5	−14.7
Decile 1	−1.5	−1.0	0.0	5.4	−3.7	33.3	−16.1	4.0
Decile 2	0.0	−2.0	0.0	−2.7		11.1	−3.2	
Decile 3	−0.7	−3.0	0.0	0.0	−3.7	22.2	−6.5	2.7
Decile 4	0.0	−4.0	7.1	2.7	0.0	16.7	0.0	1.3
Decile 5 (REFERENCE)								
Decile 6	−2.2	0.0	17.9	−8.1	0.0	−5.6	25.8	−1.3
Decile 7	−0.7	1.0	17.9	0.0	3.7	27.8	−3.2	−2.7
Decile 8	1.5	2.0	14.3	2.7	7.4	33.3	3.2	−6.7
Decile 9	2.2	0.0	10.7	2.7	18.5	55.6	−6.5	−6.7
Decile 10	1.5	3.0	14.3	−2.7	22.2	33.3	0.0	−5.3
Other variables	−43.8	−61.0	21.4	5.4	−33.9	161.2	−99.5	−57.2
Constant	92.7	75.0	−53.6	−237.8	−163.0	−583.3	177.4	−82.7

NOTE: Other variables include age, race and ethnicity, state fixed effect, and metro status.