Marital Homogamy and Economic Vulnerability During the Great Recession

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Abstract

Economic theories, such as the added worker effect, indicate that married women enter the labor force to make up for lost earnings when their husbands become unemployed. This theory would be consistent with increased employment among the wives of those formerly employed in occupations that were hard-hit by the recession. However, due to marital homogamy, men tend to be married to similar women with weak labor market prospects. This paper examines whether men and women employed or formerly employed in occupations that were hard-hit by the recession were more likely to have employed partners after the recession. Using American Community Survey 2006 and 2010 data, I show that the added worker effect was evident among married women during the recession. Married women increased their labor force participation by 6 percentage points when their husbands were not employed. However, the added worker effect was strongest in wealthier households and among professional workers. Compared to those employed in management and professional occupations, individuals in other occupations were significantly more likely to have an unemployed spouse. The percentage of individuals with an employed spouse declined significantly in construction and production occupations and individuals in these occupations also experienced significant growth in dual-unemployment and non-employment. These results indicate that men with weak labor market prospects were married to women who had weak labor market ties and prospects, as well. As a result, those who should theoretically benefit more from the added worker effect are the least likely to be able to supplement the loss in family income with their partner's earnings.

Introduction

Marital educational and occupational homogamy has important implications for the reproduction of social inequality because of the strong correlation between education, occupation, and earnings (Blossfeld 2009). This is particularly true during periods of recession. During the recent recession, from December 2007 through June 2009, the national average unemployment rate increased from 5.0 percent to 9.5 percent.[2] Unemployment was much higher among those with lower levels of education, while those with a bachelor's degree or higher level of education experienced relatively low

[1] The views expressed are those of the author and not necessarily those of the U.S. Census Bureau.
[2] Recession cycles are determined by the National Bureau of Economic Research.

unemployment. At the official end of the recession, 9.8 percent of those with high school-level education were unemployed, compared to 4.7 percent of those with a bachelor's degree or higher level of education (Bureau of Labor Statistics 2009).

Household inequality has been increasing since the 1970s (Goldin and Katz 1999). This may, in part, be a reflection of increasing educational and occupational homogamy between partners. In the 1990s, married couples were 4 times as likely to have the same rather than differing level of education. By contrast, in the 1960s, individuals were 3 times as likely to be married to someone with the same level of education (Schwartz and Mare 2005). Schwartz and Mare (2005) document a narrowing social distance between those with high-school level education and those with some college education but a growing distance between those with some college education and a bachelor's or higher level of education. The social and economic distance between married couples results in an uneven concentration of wealth and economic opportunities, particularly when these are scarce. In a tight labor market, those with higher levels of education are disproportionately likely to attain and retain jobs, while those with lower levels of education are more likely to become and remain unemployed (Bureau of Labor Statistics 2009). This disadvantage is compounded when individuals marry similar others with limited economic opportunities.

This paper examines inequality in couple-level employment dynamics during the recession. I examine whether men and women employed or formerly employed in occupations that were hard-hit by the recession (e.g., construction, agriculture, production) were more likely to have employed partners after the recession. Prior economic theories (e.g., the added worker effect) indicate that married individuals' partners enter the labor force to make up for lost earnings. However, due to marital homogamy, these individuals may be married to similar individuals with weak labor market prospects, themselves. I examine how the recession affected couple-level employment patterns in 22 occupations and show whether those individuals in hard-hit occupations became more likely to have an employed

partner over the course of the recession. Marital homogamy has been well-documented (Kalmijn 1991; Kalmijn and Flap 2001; Sweeney and Cancian 2004; Rosenfeld 2008; Furtado and Theodoropoulos 2011). Here, I explore the implications of marital homogamy on economic vulnerability during periods of recession. I show that marital homogamy intensifies the effect of recessions on families because of high levels of intermarriage between the economically disadvantaged.

The Great Recession

The Great Recession (2007-2009) resulted in unprecedented levels of long-term unemployment and large reductions in hours worked (Hilgeman 2010). At the start of the recession, the median duration of unemployment was 8 weeks (Bureau of Labor Statistics 2008). By the official end of the recession, the median duration of unemployment increased to 18 weeks (Bureau of Labor Statistics 2009). Because of the slow job recovery, the median duration of unemployment continued to increase post-recession reaching a high of 26 weeks in June of 2010. Men, mothers of young children, younger and less educated workers, and Blacks and Hispanics were among those most severely affected during the recession and experienced higher-than-average unemployment rates (U.S. Department of Labor 2011). Unemployment varied significantly by occupation, as well. According to the Bureau of Labor Statistics (2010), unemployment was 4.7 percent in management, professional, and related occupations, 10.3 percent in service occupations, 9.0 percent in sales and office occupations, 16.1 percent in natural resources, construction, and maintenance occupations, and 12.8 percent in production, transportation, and material moving occupations.

In addition to a weak labor market, this recession has been characterized by a weak housing market. During the economic crisis, median household net worth decreased by 35 percent, from $102,844 in 2005 to $66,740 in 2010 due to declining housing values and stock market indices (Gottschalck and Vornovytskyy 2012). Loss of home equity and home loan credit tightening

compounded unemployment problems, as individuals were more tied to their local labor markets as they were unable to sell their homes and move for new jobs (Elsby et al. 2010). Individuals or their partners who may have remained out of the labor force during a weak labor market had to reenter the labor force as they exhausted savings and home equity (Şahin et al. 2010).

The Added Worker Effect

Individuals may join the labor market to compensate for a spouse's unemployment or underemployment. A number of studies have looked at family household labor supply decisions and the "added worker effect," in particular. That is, households in which a wife/husband enters the labor force or increases hours of work to supplement the partner's employment (or lack thereof). Lundberg (1985) found a temporary increase in labor supply of married White women whose husbands became unemployed. On the other hand, Heckman and Macurdy (1980) find no female labor force response to "transitory shocks" in wages due to husbands' unemployment, perhaps because of the short duration of unemployment. Bingley and Walker (2001) argue that women's labor supply may only be affected if husbands experience long-term unemployment, resulting in greater necessity and allowing time to plan for labor force entry. Because of the long average duration of unemployment in the recent recession, we would expect to see an increase in married partners' employment, particularly among women.

Recent studies show that the recession may have had an effect on wives' employment, as they became "added workers" or the only workers in their households during the recent recession. Though representing only a small percentage of households, the percentage of married-couple families with children under 18 years old with an unemployed husband and an employed wife grew from 1.8 percent in 2008 to 3.4 percent in 2009 (Woodring 2010). Mattingly and Smith (2010) show that wives of husbands who stopped working during the recession were twice as likely to enter the labor force, particularly among those with older children or no children and those in lower-income households.

Similarly, Juhn and Potter (2007) found that women are 5 to 6 percent more likely to enter employment if their husbands exit employment, particularly among more highly educated women. They argue, however, that the growing correlation between spouses' employment has reduced the added worker effect over time.

The correlation of spouses' employment prospects is important. Because individuals with good employment prospects are likely to be married to similar individuals, they are more likely to experience dual-employment during prosperous and recessionary times. In contrast, families who have an unemployed or underemployed householder are less likely to benefit from a partner's employment, as they are similarly likely to be married to individuals with weaker employment prospects. Thus, the added worker effect may be less evident in the households that would benefit most from it. Indeed, Maloney (1987) shows that wives' unemployment is correlated with husbands' unemployment, limiting households' ability to substitute earnings with the employment of previously non-employed household members during recessions.

Marital Homogamy

Several studies show high levels of marital endogamy and homogamy by race and ethnicity (Rosenfeld 2008; Furtado and Theodoropoulos 2011), education (Kalmijn 1991; Kalmijn and Flap 2001; Rosenfeld 2008; Furtado and Theodoropoulos 2011), age (Kalmijn and Flap 2001), occupation and occupational status (Kalmijn 1991; Sweeney and Cancian 2004), and earnings (Sweeney and Cancian 2004). Homogamy, particularly educational homogamy, has also grown over time (Kalmijn 1991). As the educational system expanded and the required skill-level of occupations increased, achieved characteristics, such as education and earnings potential, increased in importance in partner selection over time. While Becker (1991) argued that marriage entailed specialization in productive roles resulting in mutual dependence, as women have become more specialized in the market, their economic qualities

have taken on added significance in partner selection. Using data from the Survey of Income and Program Participation, Chenevert (2012) shows that in recent years there has been an increase in the percentage of married couples where the wife has a higher level of education (+ 2 percentage points) and a decrease in the percentage of married couples where the husband is more highly educated (- 2 percentage points). Women are more highly educated in 26 percent of couples while men are more highly educated in 27 percent of couples. The proportion of couples with approximately the same level of education remained relatively stable between 1996 and 2010 at 47 percent.

Homogamy is driven by three main forces: individual preferences for spousal characteristics, marriage market constraints, and social group pressures (Kalmijn 1998). People tend to prefer equally educated partners, and this has become even more important with women's increased economic participation (Sweeney and Cancian 2004; Blossfeld 2009). Due to contact opportunities, individuals are more likely to meet others who share educational or occupational settings which are, themselves, highly segregated. Individuals are also less likely to face social pressure against a union with a person of similar characteristics (Kalmijn 1998).

Marital homogamy at the individual level can lead to higher levels of inequality at a societal level because of the high levels of intermarriage between socioeconomically attractive individuals and high levels of intermarriage between the least socioeconomically attractive individuals (Kalmijn 1998). Among the least socioeconomically attractive, this presents risks. Individuals with weak labor market prospects married to like individuals may be unable to provide each other with the necessary backup during difficult economic conditions, should one person lose his or her job, as each partner is more likely to be unemployed.

Research Questions

This paper examines inequality in couple-level employment dynamics during the recession. The basic premise of the added worker effect is that men, and especially women, enter the labor force to supplement unemployment or underemployment among partners to ease family economic hardship. This theory would be consistent with increased employment among the partners of those employed or formerly employed in occupations that were hard-hit by the recession (e.g., construction, agriculture, and production) to make up for lost wages. However, the partners of those employed in these occupations likely have weak employment prospects as well. Therefore, I argue that the added worker effect as reflected in partners' employment is symptomatic of socioeconomic advantage rather than disadvantage. As such, we should see the lowest levels of dual-unemployment and non-participation among those employed or formerly employed in lucrative occupations. This prompts my research questions:

1. How did couple-level employment dynamics change during the recession?
2. Is the added worker effect more prevalent in low-income or high-income households?
3. Is the added worker effect more prevalent in occupations that were hard-hit by the recession or among those in managerial and professional occupations?

Data and Methods

Data for this research come from the American Community Survey (ACS) 2006 and 2010. The ACS provides detailed demographic, social, economic, and housing data obtained from final interviews of approximately 2 million households per year. The ACS collects data at the household level, enabling me to assess couples' labor force participation rates before and after the recession. Because the ACS is the largest household survey in the United States, I can reliably estimate labor force participation by population subgroups (e.g., sex, race and ethnicity, occupation, and educational attainment).

I restrict the sample to married men and women and their spouses who are between the ages of 18 to 64 and who are currently employed or were last employed within the past 5 years because I am interested in couple-level employment dynamics.[3] I first examine the added worker effect by family income. Family income includes wage or salary income; self-employment income; interest, dividends, or net rental income; Social Security income; Supplemental Security income; public assistance income; and retirement, survivor, or disability income. The incomes of all coresident family members 15 years old and over for the past 12 months are summed and treated as a single amount. Earnings are reported for the past 12 months even if the individual is not currently employed or was employed for part of the year. However, if the householder or spouse was not employed at any time in the past 12 months, they will have missing earnings. To account for partial-year employment, I divided reported earnings by the number of weeks worked and multiplied these weekly earnings by 52. To address missing earnings, I created a synthetic earnings measure to predict potential earnings for men and women who are not currently working and had no earnings in the past year but had a job between 1 and 5 years ago. Measures that were used to predict earnings include 6-digit occupation, educational attainment, sex, race, ethnicity, and age. Mean predicted earnings for 2006 and 2010 closely match reported earnings.[4] Predicted earnings are included in the final family income amount so the net result is that all individuals in the sample have earnings, standardizing family income by number of workers for comparability across income categories in the added worker effect analysis.[5] While this does not capture wealth and assets that may be used to supplement earnings during a period of household income loss due to

[3] Only respondents and spouses of respondents are included. Subfamilies are excluded. Analyses are limited to married men and women with a job in the past 5 years because occupation data are only collected for the current job or most recently held job within the past 5 years.

[4] In 2006, earnings and predicted earnings were $54,996 and $53,968, respectively. In 2010, earnings and predicted earnings were $51,267 and $53,470. Earnings for 2006 were inflation adjusted to 2010 dollars. Earnings and predicted earnings do not match as closely for 2010 because the variable "weeks worked" changed from a continuous measure to a categorical measure on the American Community Survey, thus making a precise measure of weekly earnings more difficult to derive. This analysis incorporates Census Bureau-recommended point estimates to derive weekly earnings and weeks worked-adjusted earnings.

[5] Earnings and potential earnings are only included in Figure 1 and are not part of the analytical models.

unemployment, it does capture the potential earnings contributions of an unemployed or non-employed spouse.

Next, I examine occupational and educational homogamy among men and women in my sample. To examine occupational and educational homogamy, I crosstabulate couples' educational attainment and occupation. Educational attainment is captured in 3 categories: high school or lower level of education, some college, or college degree or higher level of education. Occupation is measured by 5 occupational groups: Management, business, science, and arts; service; sales and office; natural resources, construction, and maintenance; and production, transportation, and material moving.

To assess employment patterns by occupation, I examine the extent to which households experience dual-employment, dual-unemployment or non-employment (joblessness), and single-unemployment (at least one spouse is unemployed) in 22 major occupational groups.[6] Individuals who are temporarily absent from work (e.g., on sick leave or paid maternity leave) are considered employed.[7] To be considered unemployed, individuals had to be actively looking for work during the last four weeks of the reference period and available to start a job or had to be available to work and on temporary layoff from their employer. The non-employed are those who did not have a job and were not looking for work or available to work during the reference period. For ease of description in the figures, the jobless refer to the unemployed and non-employed, combined.

Finally, I use multinomial logistic regression models to determine how the recession affected couples' labor force participation rates. The final weighted sample size is 72,385,480 for 2006 and 69,228,756 for 2010. The dependent variable is labor force participation, with a value of 1 if the person is employed, 2 if the person is unemployed, and 3 if the person is out of the labor force. I compare the

[6] Occupational groupings follow the Standard Occupational Classification (SOC) system available online at www.bls.gov/soc.

[7] In 2008, the Census Bureau revised ACS employment questions. This had the effect of capturing a greater number of marginal workers working few hours per week. The definitions for employment, unemployment, and non-employment remained unchanged. For more information about the modified questions, please see http://www.census.gov/hhes/www/laborfor/researchnote092209.html.

pre-recession (2006) and post-recession (2010) likelihood of being employed or unemployed to being out of the labor force by their spouse's high-level occupational groups (5). Because employment may be affected by individuals' demographic characteristics, I control for race, ethnicity, educational attainment, own occupation, age, and presence and age of own children in additional models to determine their impact on the coefficients. [8]

Results

Overview

Between 2006 and 2010, married women showed a net increase in labor force participation of 6 percentage points when their husbands were unemployed or out of the labor force: 69 percent in 2006 to 75 percent in 2010. Men's employment declined from 85 percent in 2006 to 84 percent in 2010. These results provide support for an added worker effect for married women during the Great Recession. However, the added worker effect was more prevalent in higher-income households and among managerial and professional workers. In the lowest income households (less than $10,000 per year) married women increased their employment from 47 percent to 55 percent when their husbands were unemployed or out of the labor force. In the highest income households ($250,000 or higher), women already had higher labor force participation rates in 2006 (69 percent) and they increased their participation rate to 78 percent in 2010.

Compared to those employed in management, business, science, and arts occupations, individuals in all other occupations were significantly more likely to have an unemployed spouse. Although the same pattern was evident even prior to the recession, the recession did have an effect on couples' dual-employment prospects, particularly in non-managerial and professional occupations. The percentage of individuals with an employed spouse declined significantly in construction and production

[8] Households with children in multiple age groups are coded by the age of their youngest child.

occupations and individuals these occupations also experienced significant growth in dual-unemployment and non-employment. These results indicate that individuals with weak labor market prospects were likely married to individuals who had weak labor market ties and prospects, as well, thus preventing them from being able to supplement unemployment or underemployment with their partner's earnings.

The Added Worker Effect by Family Income

Figure 1 displays the added worker effect by predicted family income for men and women in 2006 and 2010. There are a few things to note in this figure. First, this figure shows that in 2006 as in 2010 men were more likely to be employed than were women when their spouses were jobless. However, women became substantially more likely to be employed when their spouses were jobless in 2010. Among couples with a jobless spouse, women's employment increased by 6 percentage points between 2006 and 2010 (from 69 percent to 75 percent). Men's employment declined by 1 percentage point (from 85 percent to 84 percent) when their wives were jobless. This shows that during the recession women experienced a much larger net increase in employment when they had a jobless spouse than men did by a substantial margin. This is driven by two factors: the increase in male unemployment (compositional change) and the increase in women as sole earners (behavioral change). Because of the increase in male unemployment, women throughout the income spectrum became more likely to have an unemployed spouse. Although women's employment rate increased in response to their spouses' joblessness, the change in women's employment seen in Figure 1 is partially driven by increased male unemployment.

Next, we see that dual-joblessness is more prevalent in low-income households. In 2010, about 55 percent of women with a non-employed spouse were employed in the lowest income group, posting a net increase of 8 percentage points since 2006. This means that 45 percent of wives in the lowest income group were jobless, as were their husbands. Men's employment remained relatively unchanged:

about 64 percent of men with a non-employed wife were employed in 2006 and 63 percent were employed in 2010.[9] Among those with family income of at least $250,000, employment rates were much higher. About 90 percent of men with a non-employed wife were employed in 2010 and 89 percent in 2006. Women increased their employment by 9 percentage points: 69 percent in 2006 compared to 78 percent in 2010. These results indicate that individuals in low-income households are much less likely to have at least one earner during a recession. Women's employment rate continued to climb until they reached a family income of about $80,000 per year. Their employment stabilized at around 80 percent thereafter, except among women in the highest income categories. Men's employment in 2010 was lower than their employment in 2006 in middle-income households earning less than $90,000 per year. Those under the poverty line ($22,050 for a family of 4 in 2010), were not only more likely to be unemployed or out of the labor force before and after the recession compared to those in wealthier households, but were also less likely to have an earner when their spouse was unemployed. Men living in households under the poverty line were especially less likely to have an employed wife.

Marital Educational and Occupational Homogamy

Results indicate that there were very high levels of educational and occupational homogamy among married couples in 2010. Table 1 provides the full results of spousal occupational homogamy. Approximately 62 percent of men in managerial and professional occupations were married to women in the same occupational group. Similarly, 53 percent of women in a management or professional occupation were married to men in the same group. Furthermore, my results show that homogamy is stronger in higher-status occupations and among the more highly educated. Table 2 shows that 71 percent of men and 67 percent of women with a bachelor's degree or higher level of education were also married to a partner with the same level of education. In contrast, only 48 percent of men and 45 percent of women with some college education were married homogamously, the lowest percentage

[9] These differences are not statistically significant.

among the 3 educational groups examined here. Approximately 54 percent of men and 63 percent of women with high-school or lower level of education were married to a partner with the same level of education. Because homogamy is stronger at the higher and lower end of the spectrum, this could compound household inequality to the extent that earnings and occupational opportunities are tied to educational attainment levels.

Results in Table 3 show that men in managerial and professional occupations were more likely to be married to women with at least a bachelor's degree (59 percent) and only 13 percent were married to women with a high school diploma or lower level of education. Similarly, about 53 percent of women in managerial and professional occupations were married to highly educated men and 19 percent were married to men with a high school diploma or lower level of education. In contrast, among men in construction, 42 percent were married to women with high school or lower levels of educational attainment and only 20 percent were married to women with at least a bachelor's degree. Similarly, 45 percent of men in production occupations were married to women with high-school or lower level education and 18 percent were married to women with at least a bachelor's degree.

Couple-Level Employment Dynamics During the Recession

Figure 2 shows the extent of dual-employment by 22 occupational groups. Healthcare practitioners were the most likely to have an employed spouse (81 percent) while those in farming, fishing, and forestry were the least likely to have an employed spouse (61 percent). Figure 3 shows that while unemployment increased in all occupational groups, those in construction and farming, fishing, and forestry were the most likely to be unemployed or have an unemployed spouse (18 and 17 percent, respectively) while healthcare practitioners were the least likely to be unemployed or have an unemployed spouse (6 percent).[10] Finally, those employed in farming, fishing, and forestry were the most likely to experience dual-unemployment or non-participation, as 7 percent of working age people

[10] Healthcare practitioners and technical occupations (6 percent) are not statistically different from education, training, and library (6 percent) and life, physical, and social science occupations (6 percent).

in this occupation were not employed and did not have an employed spouse (Figure 4). These results illustrate that even though the added worker effect would have been most beneficial to families with members employed in occupations that experienced the brunt of the recession (in construction or farming, fishing, and forestry, for example), these were the individuals least likely to have an employed spouse.

The recession disproportionately reduced the employment prospects of construction workers and their spouses. Figures 5 through 7 show that workers in construction experienced a sharp decline in dual-employment (-5 percentage points), growth in unemployment of at least 1 partner (10 percentage points), and growth in dual-unemployment and non-participation (1.2 percentage points). In prior research (Landivar 2012), I show that although the wives of construction workers may have been more likely to join the labor force as their husbands experienced unemployment, they were unlikely to be able to obtain employment and instead became unemployed. Because men in construction are more likely to be married to women with lower levels of education who were not in the labor force prior to the recession, they may be at a greater disadvantage to compete for jobs because of their lack of human capital and recent job experience.

The multinomial logistic regression models compare the likelihood of a spouse being employed or unemployed to being out of the labor force. Results from the multinomial logistic regression models show that even controlling for demographic and economic characteristics, men and women in non-managerial and professional occupations were the most likely to have unemployed partners (see tables 4 and 5).[11] These models also show that non-managerial and professional men were more likely to have employed wives after the recession, perhaps due to economic necessity.

Demographic and economic characteristics played a significant role before and after the recession in determining the likelihood of employment. Black, Asian, and Hispanic men were more likely

[11] The estimate was not statistically different for women in natural resources, construction, and maintenance after control variables, perhaps because of the smaller sample of women employed in this category.

to be unemployed after the recession, as were the less educated. Having young children in the household did not affect men's labor force participation, but having older children increased men's employment and unemployment likelihood. Non-White and less educated women (those with some college education or less) were more likely to be unemployed after the recession. Having young children in the household significantly reduced women's likelihood of being employed. Having older children in the household also depressed women's employment post-recession, though not to the same extent as having young children. Women with a preschool-aged child were 67 percent less likely to be employed than women without children, while those with school-aged children were 23 percent less likely to be employed. Interaction effects by year of survey (not shown) were tested in a separate model.[12] The main results remain the same: men and women in non-managerial and professional occupations were the most likely to have unemployed spouses.

Discussion and Conclusion

The recession did not affect all households equally and these results indicate that there is greater household polarization than prior to the recession. Although previous studies show that women became increasingly likely to enter the labor force (Mattingly and Smith 2010) or be sole earners in married-couple households during the recession (Woodring 2010), I show here that these patterns were occurring in households that were less economically disadvantaged. Low-income households were the most likely to experience dual-joblessness. Women married to jobless men did enter the labor force, partially in response to the recession, increasing their labor force participation by 6 percentage points between 2006 and 2010. However, the highest female employment rates were in households with family income above $80,000 per year. Those at the lowest end of the income spectrum saw no net change in the employment rate of men when they had a jobless spouse. Women in low-income

[12] Results available upon request.

households became more likely to work after the recession when they had a jobless spouse but their employment rates were still far below those of higher-income women.

Figure 4 shows that workers formerly employed in the occupations hardest hit by the recession (e.g., construction, production, and agriculture) were the least likely to have an employed spouse. Because their spouses had lower rates of labor force participation even prior to the recession (Landivar 2012), they may be at a greater disadvantage to compete for jobs because of their lack of recent job experience. This leaves these families with a smaller family safety net compared to families with managerial and professional workers. Even if one member of the family becomes unemployed among managers and professionals, their likelihood of also having an unemployed spouse is lower. They are more likely to be married to a highly educated partner employed in a managerial and professional occupation with a low unemployment rate as workers with higher levels of educational attainment had disproportionately low levels of unemployment during the recession.

These results indicate that the added worker effect follows an upside-down L-shape distribution. Individuals at the low end of the socioeconomic spectrum are less likely to be able to take advantage of a partner's employment and earnings because he or she is also more likely to be unemployed or out of the labor force. Families in the middle or high end of the socioeconomic spectrum may be more responsive to the added worker effect for several reasons. They have the educational and occupational background to be competitive in a difficult labor market. Individuals with a bachelor's degree or higher level of education and those employed in managerial and professional occupations had low unemployment rates during the recession: 4.7 percent (Bureau of Labor Statistics 2009). Furthermore, employment prospects were better in the education and healthcare industries as these industries continued to expand during the recession. These industries employ a large number of professional workers such as teachers, nurses, and doctors. Having a higher level of educational attainment not only makes the prospective employee more attractive, but they may have more openings available to them,

as well. Families in middle- and high-income households did experience declining housing values and household net worth along with everyone else. The resulting home loan credit tightening reducing their ability to borrow (Elsby et al. 2010) may have also increased actual or perceived economic need for additional earners.

Although the added worker effect theory is based on the premise that married workers may rely on their partner's temporary employment increase in the event of a job loss, these results show that among low-income families this may not be the case. Low-income families are much more likely to experience dual-unemployment and may not have the safety net of a partner's earnings. Members of low-income households are entering the labor force to look for jobs, but they are much less likely to obtain a job, hindering couples' ability to offset each others' labor market losses.

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Table 1: Spouse's Current or Former Occupation by the Householder's Current or Former Occupation[1]

(In percent)

Husband's current or former occupation	Management, business, science, and arts	Service	Sales and office	Natural resources, construction, and maintenance	Production, transportation, and material moving
Wife's current or former occupation					
Management, business, science, and arts	62.1	35.0	43.5	33.1	30.2
Service	9.1	29.2	13.1	22.6	22.2
Sales and office	26.1	29.4	39.3	34.6	34.3
Natural resources, construction, and maintenance	0.5	0.8	0.6	2.5	0.9
Production, transportation, and material moving	2.3	5.5	3.6	7.3	12.4
Total	100	100	100	100	100

Wife's current or former occupation	Management, business, science, and arts	Service	Sales and office	Natural resources, construction, and maintenance	Production, transportation, and material moving
Husband's current or former occupation					
Management, business, science, and arts	53.3	22.8	33.1	20.3	16.8
Service	8.0	18.1	9.6	8.6	10.6
Sales and office	15.5	13.2	20.3	10.2	11.2
Natural resources, construction, and maintenance	12.2	23.2	18.7	43.7	22.4
Production, transportation, and material moving	11.0	22.7	18.2	17.1	39.0
Total	100	100	100	100	100

[1]The analytical universe is limited to married householders and spouses between the ages of 18 and 64 who have worked in the past 5 years.

Data source: U.S. Census Bureau, 2010 American Community Survey

For information on the source and accuracy of these estimates, see http://www.census.gov/acs/www.

Table 2: Spouse's Educational Attainment by the Householder's Educational Attainment[1]

(In percent)

Husband's educational attainment	High school diploma or lower	Some college	Bachelor's degree or higher
Wife's educational attainment			
High school diploma or lower	53.9	22.3	7.8
Some college	32.7	48.4	21.2
Bachelor's degree or higher	13.4	29.4	71.1
Total	100	100	100

Wife's educational attainment	High school diploma or lower	Some college	Bachelor's degree or higher
Husband's educational attainment			
High school diploma or lower	62.6	30.3	10.7
Some college	26.1	44.6	22.1
Bachelor's degree or higher	11.2	25.1	67.3
Total	100	100	100

[1]The analytical universe is limited to married householders and spouses between the ages of 18 and 64 who have worked in the past 5 years.

Data source: U.S. Census Bureau, 2010 American Community Survey

For information on the source and accuracy of these estimates, see http://www.census.gov/acs/www.

Table 3: Spouse's Educational Attainment by the Householder's Current or Former Occupation[1]

(In percent)

Husband's current or former occupation	Management, business, science, and arts	Service	Sales and office	Natural resources, construction, and maintenance	Production, transportation, and material moving
Wife's educational attainment					
High school diploma or lower	13.4	37.0	25.0	42.0	44.6
Some college	27.5	36.1	36.1	37.7	37.7
Bachelor's degree or higher	59.1	26.9	38.9	20.3	17.7
Total	100	100	100	100	100

Wife's current or former occupation	Management, business, science, and arts	Service	Sales and office	Natural resources, construction, and maintenance	Production, transportation, and material moving
Husband's educational attainment					
High school diploma or lower	18.8	50.0	36.2	60.7	60.3
Some college	28.0	31.2	35.0	25.5	26.1
Bachelor's degree or higher	53.2	18.9	28.8	13.8	13.6
Total	100	100	100	100	100

[1]The analytical universe is limited to married householders and spouses between the ages of 18 and 64 who have worked in the past 5 years.
Data source: U.S. Census Bureau, 2010 American Community Survey
For information on the source and accuracy of these estimates, see http://www.census.gov/acs/www.

Table 4: Multinomial Logistic Regression Models Predicting Wives' Likelihood of Being Employed or Unemployed Based on Their Husbands' Occupation[1]

	2006				2010			
	Model 1		Model 2		Model 1		Model 2	
Wife's employment status[2]	Employed	Unemployed	Employed	Unemployed	Employed	Unemployed	Employed	Unemployed
Husband's occupation (current or last job)								
Management, business, science, and arts [ref]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Service	1.17***	1.89***	1.47***	1.56***	1.20***	1.75***	1.52***	1.56***
Sales and office	1.13***	1.33***	1.28***	1.22***	1.24***	1.49***	1.41***	1.39***
Natural resources, construction, and maintenance	0.96***	1.75***	1.22***	1.48***	1.03***	1.71***	1.31***	1.53***
Production, transportation, and material moving	1.03***	1.95***	1.30***	1.56***	1.07***	1.79***	1.35***	1.51***
Wife's characteristics (control variables)								
Race								
Black			1.35***	2.39***			1.39***	2.15***
Asian			0.97**	1.15***			1.02	1.27***
Other			0.97	1.08*			0.96	1.15***
White [ref]			1.00	1.00			1.00	1.00
Hispanic			0.97*	1.32***			1.03	1.34***
Age			1.21***	1.10***			1.25***	1.16***
Age squared			0.99***	0.99***			0.99***	0.99***
Presence and age of children								
No children [ref]			1.00	1.00			1.00	1.00
Children ages 0-5			0.33***	0.37***			0.33***	0.41***
Children ages 6-17			0.81***	0.84***			0.77***	0.80***
Education								
High school or less [ref]			1.00	1.00			1.00	1.00
Some college			1.17***	0.93***			1.14***	1.00
Bachelor's degree or higher			1.28***	0.83***			1.31***	0.83***
Occupation (current or last job)								
Management, business, science, and arts [ref]			1.00	1.00			1.00	1.00
Service			0.58***	1.00			0.60***	0.83***
Sales and office			0.73***	1.08***			0.70***	1.14***
Natural resources, construction, and maintenance			0.46***	1.36***			0.38***	1.21***
Production, transportation, and material moving			0.57***	1.31***			0.53***	1.27***
Likelihood ratio chi-square	200288***		3708662***		221645***		3373706***	
N	72,385,480		72,385,480		69,228,756		69,228,756	

*Note: *p < .05 **p < .01 ***p < .001 (two-tailed tests).*
Data source: U.S. Census Bureau, 2006 and 2010 American Community Surveys
[1]The analytical universe is limited to married householders and spouses between the ages of 18 and 64 who have worked in the past 5 years.
[2]The reference category is wives who are out of the labor force. Estimates displayed are odds ratios.

Table 5: Multinomial Logistic Regression Models Predicting Husbands' Likelihood of Being Employed or Unemployed Based on Their Wives' Occupation[1]

	2006				2010			
	Model 1		Model 2		Model 1		Model 2	
Husband's employment status[2]	Employed	Unemployed	Employed	Unemployed	Employed	Unemployed	Employed	Unemployed
Wife's occupation (current or last job)								
Management, business, science, and arts [ref]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Service	0.81***	1.38***	1.00	1.22***	0.85***	1.46***	1.04**	1.28***
Sales and office	0.91***	1.16***	1.11***	1.16***	0.89***	1.20***	1.13***	1.22***
Natural resources, construction, and maintenance	0.80***	1.75***	0.98	1.44***	0.74***	1.34***	0.97	1.06
Production, transportation, and material moving	0.69***	1.38***	0.98	1.29***	0.70***	1.37***	0.99	1.28***
Husband's characteristics (control variables)								
Race								
Black			0.73***	1.44***			0.77***	1.27***
Asian			0.69***	1.03			1.05	1.30***
Other			0.86***	1.07			0.89***	0.96
White [ref]			1.00	1.00			1.00	1.00
Hispanic			0.97	1.03			1.17***	1.34***
Age			1.31***	1.20***			1.39***	1.30***
Age squared			0.99***	0.99***			0.99***	0.99***
Presence and age of children								
No children [ref]			1.00	1.00			1.00	1.00
Children ages 0-5			1.05**	1.03			1.00	1.03
Children ages 6-17			1.24***	1.16***			1.23***	1.21***
Education								
High school or less [ref]			1.00	1.00			1.00	1.00
Some college			1.16***	0.94***			1.15***	0.96*
Bachelor's degree or higher			1.56***	0.99			1.63***	0.91***
Occupation (current or last job)								
Management, business, science, and arts [ref]			1.00	1.00			1.00	1.00
Service			0.69***	0.93***			0.69***	0.70***
Sales and office			0.94***	1.15***			0.88***	1.07**
Natural resources, construction, and maintenance			0.71***	1.39***			0.60***	1.29***
Production, transportation, and material moving			0.73	1.10***			0.70***	1.01
Likelihood ratio chi-square	154922***		3804742***		244816***		4374977***	
N	72,385,480		72,385,480		69,228,756		69,228,756	

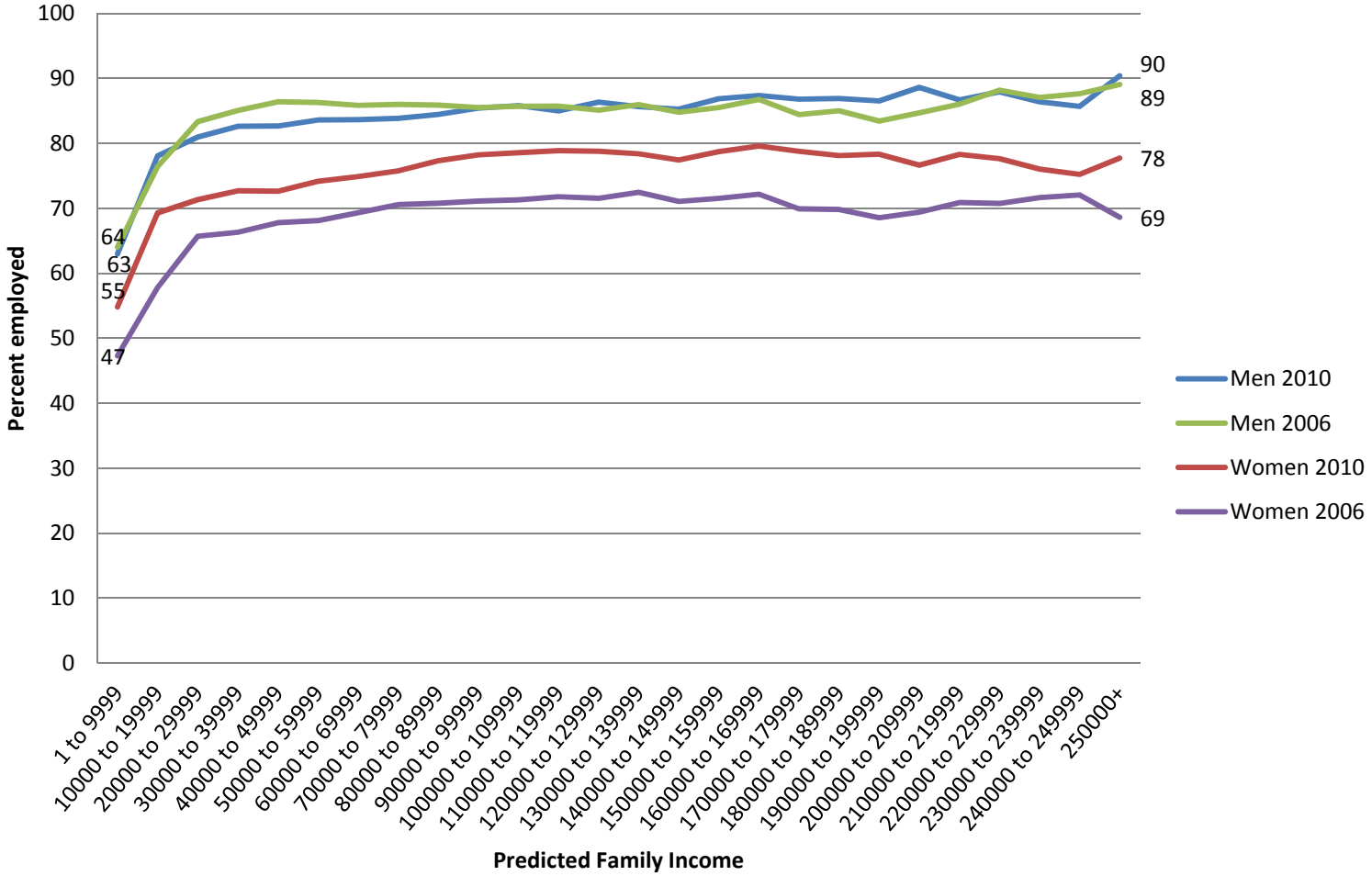
*Note: *p < .05 **p < .01 ***p < .001 (two-tailed tests).*

Data source: U.S. Census Bureau, 2006 and 2010 American Community Surveys

[1]The analytical universe is limited to married householders and spouses between the ages of 18 and 64 who have worked in the past 5 years.

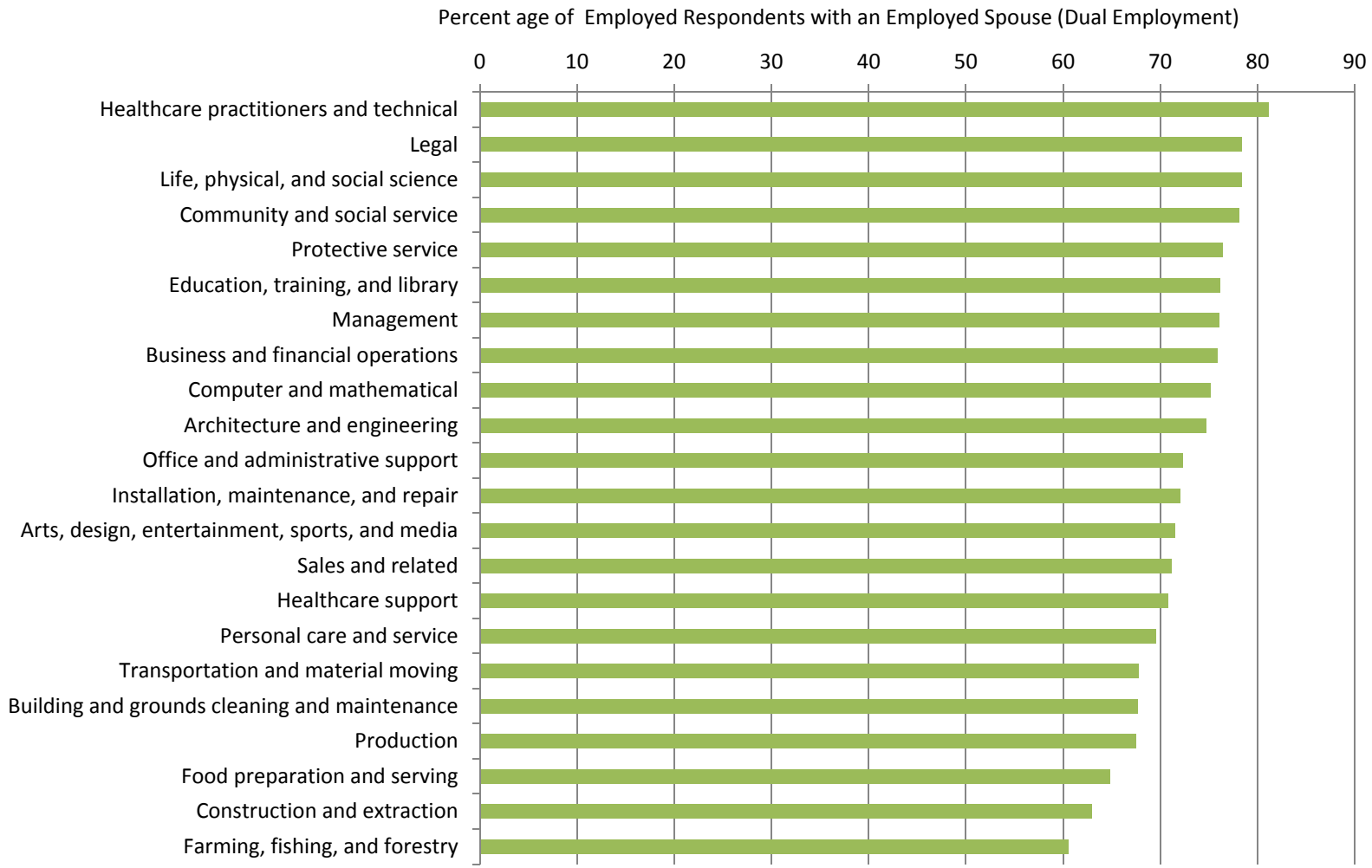
[2]The reference category is husbands who are out of the labor force. Estimates displayed are odds ratios.

Figure 1: Percentage of Individuals Employed When Their Spouse is Jobless (Added Worker Effect) by Predicted Family Income in the Last 12 Months[1]



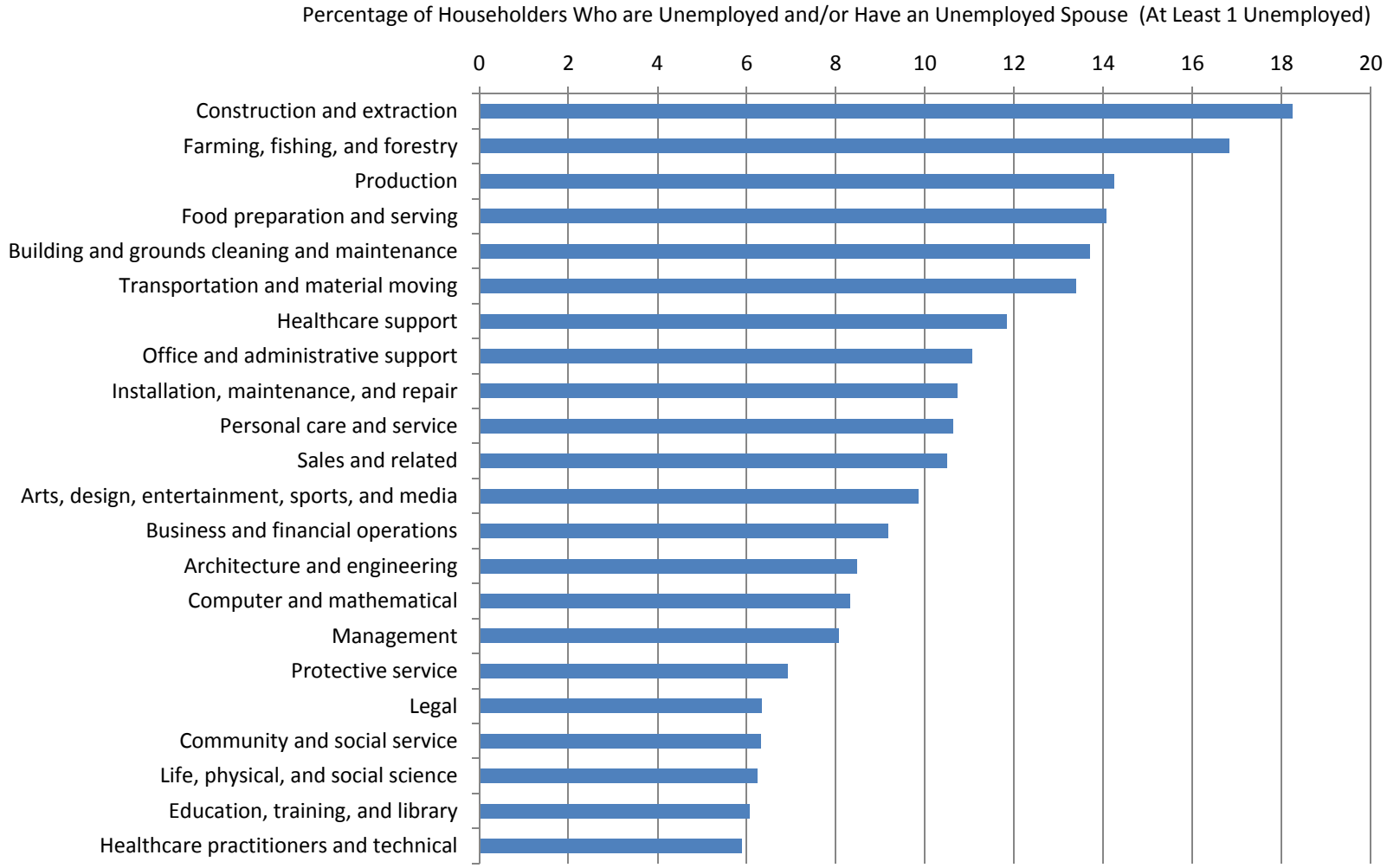
Data source: U.S. Census Bureau, 2010 American Community Survey
For information on the source and accuracy of these estimates, see http://www.census.gov/acs/www.
[1] The jobless include the unemployed and those not in the labor force.

Figure 2: Percentage of Employed Householders Who Have an Employed Spouse by the Householder's Current Occupation



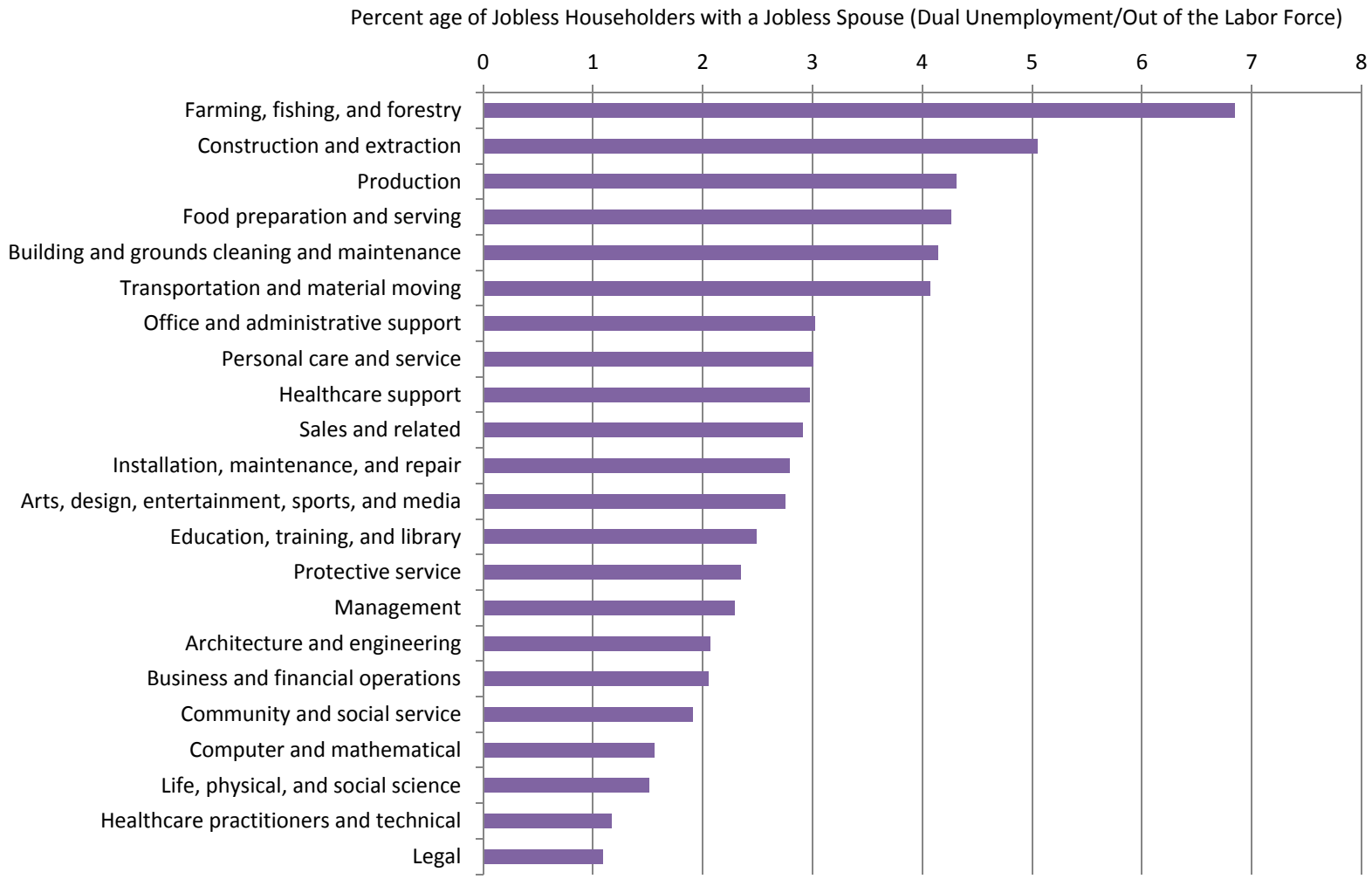
Data source: U.S. Census Bureau, 2010 American Community Survey
For information on the source and accuracy of these estimates, see http://www.census.gov/acs/www.

Figure 3: Percentage of Householders Who are Unemployed or Have an Unemployed Spouse by the Householder's Current or Former Occupation



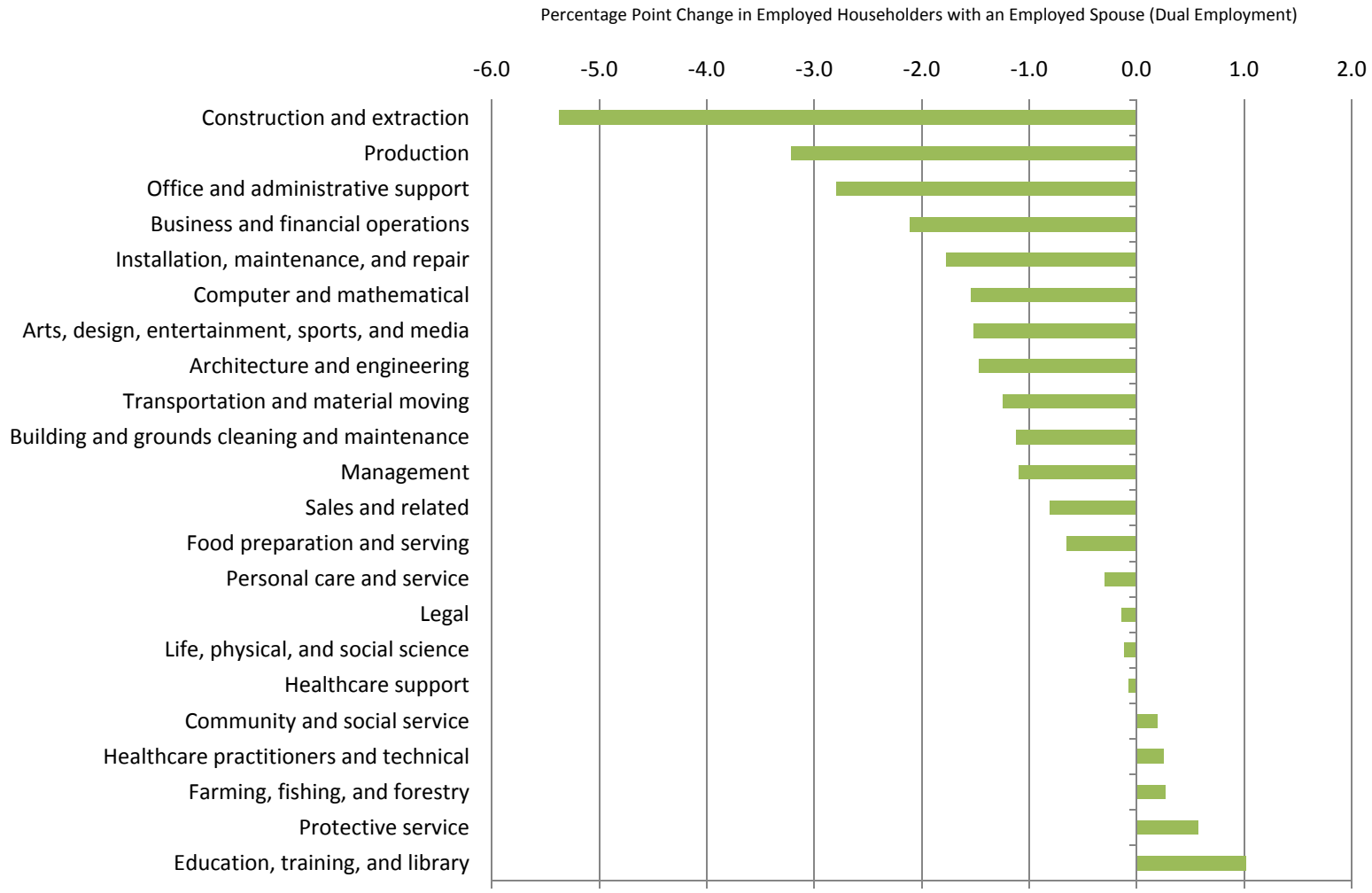
Data source: U.S. Census Bureau, 2010 American Community Survey
For information on the source and accuracy of these estimates, see http://www.census.gov/acs/www.

Figure 4: Percentage of Householders Who Are Jobless and Have a Spouse That is Jobless by the Householder's Former Occupation[1]



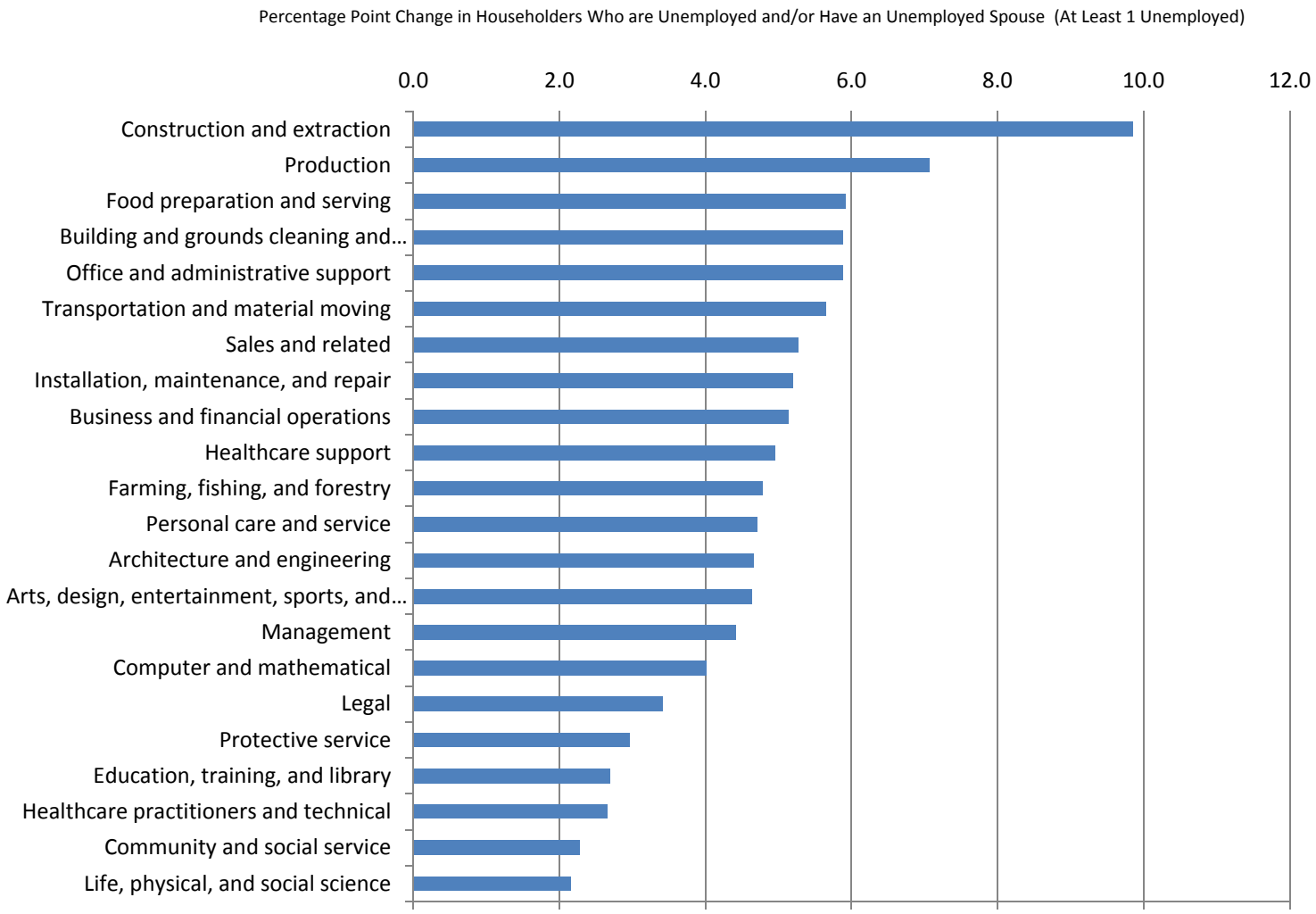
Data source: U.S. Census Bureau, 2010 American Community Survey
For information on the source and accuracy of these estimates, see http://www.census.gov/acs/www.
[1] The jobless include the unemployed and those not in the labor force.

Figure 5: Net Percentage Point Change Between 2006 and 2010 in Employed Householders Who Have an Employed Spouse by the Householder's Current Occupation



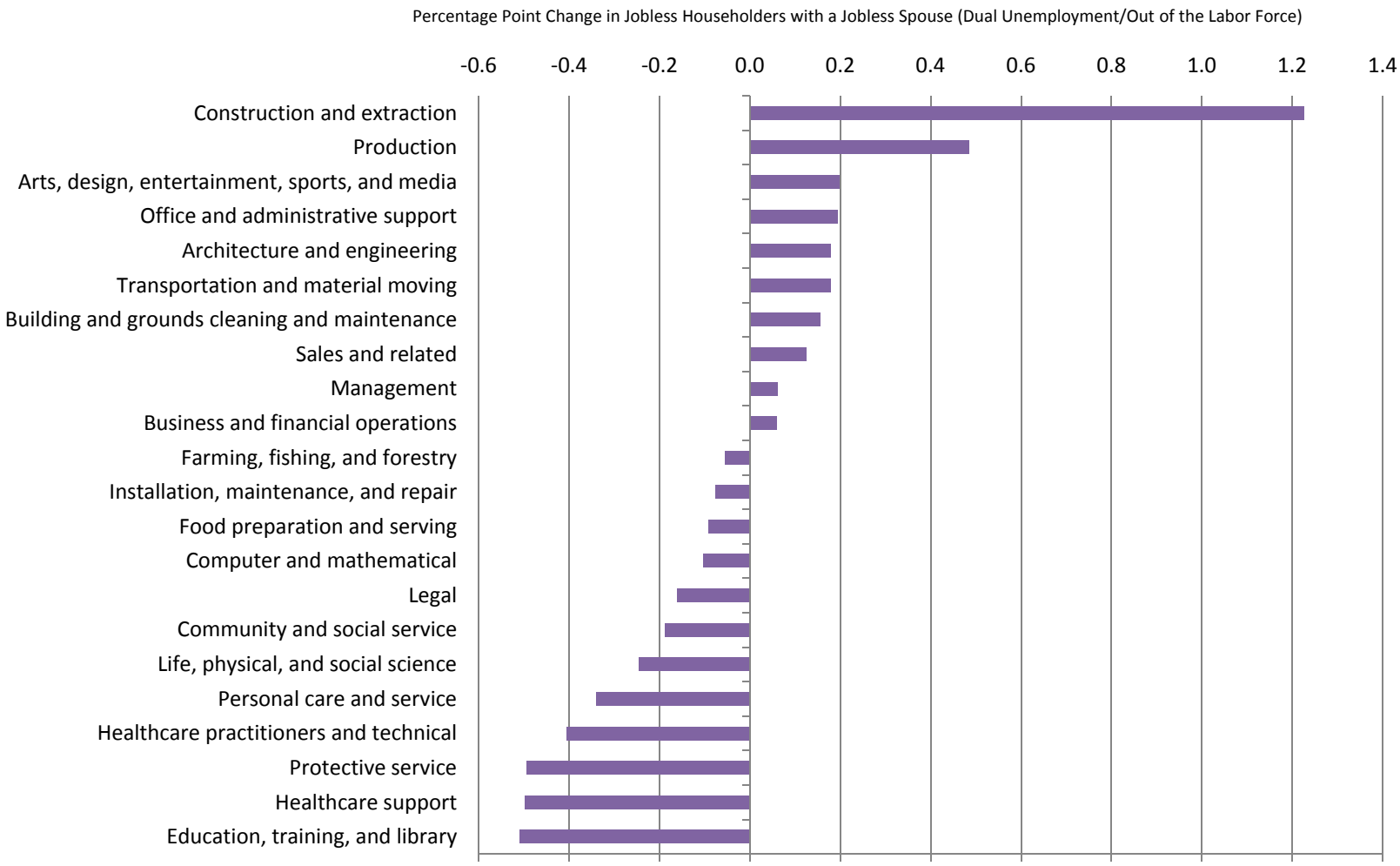
Data source: U.S. Census Bureau, 2006 and 2010 American Community Surveys
For information on the source and accuracy of these estimates, see http://www.census.gov/acs/www.

Figure 6: Net Percentage Point Change Between 2006 and 2010 in Householders Who are Unemployed or Have an Unemployed Spouse by the Householder's Current or Former Occupation



Data source: U.S. Census Bureau, 2006 and 2010 American Community Surveys
For information on the source and accuracy of these estimates, see http://www.census.gov/acs/www.

Figure 7: Net Percentage Point Change Between 2006 and 2010 in Respondents Who Are Jobless and Have a Spouse Who is Jobless by the Householder's Former Occupation[1]



Data source: U.S. Census Bureau, 2006 and 2010 American Community Surveys
For information on the source and accuracy of these estimates, see http://www.census.gov/acs/www.
[1] The jobless include the unemployed and those not in the labor force.