Getting Married in the Great Recession: The Role of Local Economic and Marriage-Market Conditions in Young Adults' Marriage Formation in the United States

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The recent economic downturn in the US—now known as the Great Recession—has been a disruptive force in the economic and social lives of young adults in ways that are expected to be consequential for marriage formation (Grusky, Western, & Wimer 2011; Bell & Blanchflower 2011; Edwards & Hertel-Fernandez 2010). For instance, prior research suggests that spells of unemployment and loss of income harm single young adults' chances on the marriage market and prevent many cohabiting couples, who would otherwise marry, from feeling ready to do so (Gibson-Davis, Edin, & McLanahan 2005; Oppenheimer 2003). To the extent that job instability at this stage in the life course has implications for young adults' work trajectories moving forward, many men and women may continue putting off marriage for longer than desired as they struggle to build careers and achieve a level of economic security consistent with cultural norms about marriage (Oppenheimer et al. 1997; Xie et al. 2003; Cherlin 2004). Moreover, in parts of the country experiencing high unemployment, tight credit, and a depressed housing market, a general sense of economic uneasiness, uncertainty, and insecurity may be altering many young adults' plans for marriage as they contemplate not only their current economic circumstances but also their longer-term futures. Finally, the widespread nature of the recession means that those who have weathered the crisis successfully may still face a smaller pool of "marriageable" partners from which to find a mate. This effect on the local marriage market is likely to be most pronounced in areas and among groups (the less educated and racial/ethnic minorities) hardest hit by the recession (Katz 2010; Kuehn 2013; Fogli et al. 2012).

Using the National Longitudinal Study of Youth 1997 (NLSY-97), this paper will address the following research questions. First and foremost, has the recession had a measurable impact on marriage patterns among young adults and what roles have local economic and marriage-market conditions played? Second, drawing on the large but now outdated US marriage-market literature (*e.g.* Lichter et al. 1992; Lichter et al. 1995; Lloyd & South 1996), this paper will provide a much-needed update on the ways in which the demographic composition of locally available partners shapes marriage and union formation behaviors among contemporary young adults. While recent studies using the Fragile Families data (Harknett & McLanahan 2004; Harknett 2008) and the Toledo Adolescent Relationships Study (Warner et al 2011) have addressed these dynamics among subgroups in the US population, a comprehensive update using a nationally representative sample remains noticeably absent. Finally, this paper will examine how changes in conditions may be having different consequences for young men and women's marriage behavior. Despite the growing importance of women's economic potential for their marriage prospects (Sweeney 2002), researchers continue to find that men's employment and the supply of economically attractive male partners remain key determinants of whether single adults and cohabiting couples marry (Smock & Manning 1997; Sobotka et al 2010; Harknett 2008). The Great Recession—which has affected men's employment more severely than women's (Grusky, Western, & Wimer 2011)—provides an opportunity to examine these gendered dynamics in marriage formation.

The NLSY-97 is a national sample survey of 8,984 youth, born between January 1980 and December 1984, who were passing through young adulthood—finishing school, beginning careers, and starting families—right as the recession began. Respondents have been surveyed

annually since 1997 and are asked, among other topics, about their family formation and employment histories. The restricted version of the data provides geocodes that identify the state, county, and metropolitan area in which respondents reside at the time of each interview as well as the location and timing of relocations between interviews. These geographic identifiers will allow me to merge information from the 2000 Census, the American Community Surveys (ACS), and economic data from the Bureau of Labor Statistics (BLS) to describe the local conditions that respondents face and how changes in these conditions due to the recession influence their marriage and union formation decisions. I am currently waiting to receive the restricted NLSY-97 geocode file from the BLS, which is scheduled to arrive in mid-October. Therefore, in this extended abstract I present preliminary findings from two analyses using the public version of the NLSY-97 data file and the one-year American Community Surveys 2008-2011 that show (1) evidence of a period decline in marriage in the years following the financial crisis, and (2) empirical support for a connection between this decline and local economic and marriage-market conditions.

For the first analysis I used the NLSY-97 and created a person-month data file that begins at age 18 and ends at either the month of first marriage or the most recent observation. My strategy was to see whether a period decline in marriage during and after the recession (since 2007) was detectable *net of the effects of age*. Under "normal" economic circumstances we should expect to see no significant period effects, only age effects, in the probability of marriage. Table 1 displays the coefficients from discrete-time logistic regression models predicting the timing of first marriage for men and women, ages 18-30. All models controlled for baseline characteristics (*see note*), which included respondent's age (using dummy variables for each age, time-varying), and are weighted using the 1997 sample weights provided by the NLSY. Table 1 indicates that, net of age, the 2008-2009 period was associated with 30% lower odds of marriage for men and 35% lower odds for women compared to the pre-recession period 2004-2005. For men, the odds of marriage were even lower (~40%) in 2010-2011. The 2010-2011 period was not significantly different from 2004-2005 in the model for women; however, it was not significantly different from men. In ancillary analyses (not shown) I switched the reference group to be 2006-2007 and again found that there was a significantly lower probability of marriage for men and women in 2008-2009 and for men in 2010-2011 (no significant difference for women). Thus, I find evidence in the NLSY of a period decline in marriage for young men and women in 2008-2009 that persisted (at least for men) into 2010-2011. Also striking is that these period effects remained significant even after controlling for respondent's employment status and annual income, suggesting that the impact of the recession on marriage timing goes beyond its negative effects on individuals' economic circumstances.

Of course, these period trends may be unrelated to the economic effects of the recession: using the National Vital Statistics data, Morgan and colleagues (2011) found that the decline in the national marriage rate over 2007-2009 appeared to be a continuation of a downward trend that pre-dated the recession. As a preliminary test, I used the ACS to investigate the extent to which the decline in the yearly probability of marriage between 2007 and 2010 at the individual level could be explained by local economic and marriage-market conditions. I created the individual-level file, used to predict the likelihood of marriage in the past year, by pooling the one-year ACS microdata files from 2008-2011 (2008 was the first round of the ACS to ask about marriage behavior in the past year). Respondents who were already married a year prior to the survey (and who remained so) were excluded from the analysis. Characteristics of the local marriage market—the race-specific sex composition (proportion of the population of the

opposite-sex 15-45 years old) and the proportion of opposite-sex partners currently employed (race-specific)—were calculated at the state-level using the one-year ACS files. Because marriage formation takes time and the market that couples faced when they met and decided to get married may have changed substantially by the time they actually married, I lagged all contextual variables by one year; e.g., the sex composition in 2006 is used to predict marriage in 2007. Likewise, the two indicators of local economic conditions—the annual state unemployment rate and change in the unemployment rate over the past year—are lagged one-year and come from the BLS.

Table 2 displays logistic regression models for men and women, ages 20-39, predicting the probability of marriage in a given year from 2007-2010. All models controlled for respondents' age, race/ethnicity, and educational attainment. Models 1 and 3 are baseline models that do *not* control for the unemployment rate and the proportion of opposite-sex partners employed in the previous year. The coefficients for each observation year show a steady decline in the probability of marriage for men and women during this period, with 2010 associated with the lowest probability of marriage. In line with previous marriage-market studies (Lloyd & South 1996; Harknett 2008; Warner et al 2012), the crude sex composition was positively associated with marriage for women and negatively associated for men; that is, larger proportions of men in the population tended to increase women's chances of marriage while larger proportions of women decreased men's chances. Moving to models 2 and 4, the unemployment rate in the previous year and change in the unemployment rate (higher values=rising unemployment) were negatively associated with marriage for men but were unrelated to women's marriage. In contrast, the proportion of opposite-sex partners employed in the previous year was positively associated with marriage for women but was unrelated to men's marriage. Importantly, when the proportion of employed partners was not in the model, the unemployment rate was significantly associated with a lower likelihood of marriage for women—which suggests that the unemployment rate's "effect" on women's marriage chances *works through* the pool of economically attractive partners. The strongest evidence for a "recession effect" was seen in the models for men: after controlling for the local economic and marriage market conditions at the state-level, the size and significance of the period effects were dramatically reduced. There was less support for this among women: the yearly decline in women's marriage largely remained after accounting for state economic characteristics.

The NLSY-97 geocode data will allow me to explore the patterns found in these preliminary analyses in more depth. First, these data will make it possible to locate respondents' metropolitan area or county of residence, providing a more realistic measure of the local economic and marriage-market conditions respondents face than the one-year ACS files allow (Fossett & Kiecolt 1991). The NLSY-97 also contains a wealth of information on respondents' economic circumstances, work experience, and relationship/cohabitation history that will shed light on how individual economic circumstances and personal histories interact with the local context to shape their union formation decisions during this period of heightened economic uncertainty. This greater level of detail may also provide insight into the processes underlying the differential effects of the local economy on men and women's marriage behavior. In addition, I hope to test new marriage-market measures aimed at capturing dynamism in the local population. In these preliminary analyses with the ACS, I found that the proportion of unmarried men who had migrated into a state in the previous year was positively associated with marriage for women. This kind of population turnover may be particularly salient during the recession as many young adults relocate to find better work opportunities (Wozniak 2009). In sum, the full

version of this paper will document contemporary young adults' marriage and union behavior during the Great Recession and examine the ways in which the characteristics of local contexts connected to the labor and marriage markets continue to exert a powerful influence on these processes.

Table 1. Discrete-time logistic regression models predicting timing of first marriage for men and women ages 18-30, NLSY-97.

	Men		Women	
	Coef.	Std. Err.	Coef.	Std. Err.
Period effects				
1998-1999	-0.207	(0.36)	0.140	(0.28)
2000-2001	0.260	(0.18)	0.209	(0.18)
2002-2003	-0.081	(0.13)	-0.179	(0.13)
(ref: 2004-2005)	-		-	
2006-2007	-0.124	(0.11)	-0.084	(0.11)
2008-2009	-0.329*	(0.14)	-0.434**	(0.14)
2010-2011	-0.531**	(0.18)	-0.299	(0.18)
Economic attractiveness				
Working full-time	0.162*	(0.08)	-0.098	(0.07)
Annual income (logged)	0.269***	(0.04)	0.155***	(0.04)
Constant	-9.164***	(0.44)	-7.019***	(0.41)
N	258199		218404	

+ p<0.1 * p<0.05 ** p<0.01 *** p<0.001

Note: All models control for baseline characteristics, which include age, race/ethnicity, first birth status, parental educational attainment, childhood family structures (at age 12), regional and metropolitan residence, respondent's educational attainment, and school enrollment status.

Table 2. Discrete-time logistic regression models predicting the probability of marriage in the past year for men and women, ACS 2008-2011.

	Men				Women			
	1		2		3		4	
	Coef.	Std. Err.	Coef.	Std. Err.	Coef.	Std. Err.	Coef.	Std. Err.
Year (ref : 2007)								
2008	-0.069***	(0.01)	-0.041*	(0.02)	-0.050***	(0.01)	-0.032+	(0.02)
2009	-0.152***	(0.01)	-0.046	(0.03)	-0.133***	(0.01)	-0.119***	(0.03)
2010	-0.225***	(0.01)	-0.069**	(0.03)	-0.198***	(0.01)	-0.157***	(0.02)
Regional/contextual characteristics								
Urban residence	-0.130***	(0.01)	-0.123***	(0.01)	-0.258***	(0.01)	-0.259***	(0.01)
South	0.248***	(0.01)	0.238***	(0.01)	0.223***	(0.01)	0.219***	(0.01)
Sex composition (sex-specific)	-0.046***	(0.00)	-0.049***	(0.00)	0.048***	(0.01)	0.034***	(0.01)
Unmarried opposite-sex migrants (% of pop.)	0.022**	(0.01)	-0.004	(0.01)	0.048***	(0.01)	0.030***	(0.01)
Proportion of migrants that is Hispanic	-0.005***	(0.00)	-0.006***	(0.00)	-0.003***	(0.00)	-0.002**	(0.00)
State economic conditions (lagged one-year)								
State unemployment rate			-0.034***	(0.00)			0.006	(0.01)
Change in unemployment rate over past year			-0.114**	(0.04)			-0.037	(0.04)
Proportion of opposite-sex partners employed			0.000	(0.00)			0.016***	(0.00)
Constant	-0.808***	(0.23)	-0.314	(0.25)	-5.103***	(0.25)	-5.516***	(0.26)
N	774040		774040		678331		678331	

+ p<0.1 * p<0.05 ** p<0.01 *** p<0.001

Note: All models control for baseline characteristics, which include age, race/ethnicity, and educational attainment.

References

Bell, D., & Blanchflower, D.G. (2011). Young people and the Great Recession. *Oxford Review of Economic Policy, 27*(2), 241-267.

Cherlin, A. (2004). The deinstitutionalization of American marriage. *Journal of Marriage and Family, 66*, 848-861.

Edwards, K.A., & Hertel-Fernandez, A. (2010). The kids aren't alright: A labor market analysis of young workers. Economic Policy Institute, Briefing paper #258.

Fogli, A., Hill, E., & Perri, F. (2012). The geography of the Great Recession. National Bureau of Economic Research Working Paper Series.

Fossett, M.A., & Kiecolt, K.J. (1991). A methodological review of the sex ratio: Alternatives for comparative research. *Journal of Marriage and Family, 53*(4), 941-957.

Gibson-Davis, C., Edin, K., & McLanahan, S. (2005). High hopes but even higher expectations: The retreat from marriage among low-income couples. *Journal of Marriage and Family, 67*, 1301-1312.

Grusky, D., Western, B., & Wimer, C. (ed.) (2011). *The Great Recession*. New York: Russell Sage Foundation.

Harknett, K. (2008). Mate availability and unmarried parent relationships. *Demography, 45*(3), 555-571.

Harknett, K. & McLanahan, S. (2004). Racial and ethnic differences in marriage after the birth of a child. *American Sociological Review, 69*, 790-811.

Katz, L.F. (2010). Long-term unemployment in the Great Recession. Testimony for the Joint Economic Committee U.S. Congress, April 29.

Kuehn, D. (2013). The labor market performace of young black men in the Great Recession. Urban Institute, Brief #10 (Feb).

Lichter, D. T., McLaughlin, D. K., Kephart, G. & Landry, D.J. (1992). Race and the Retreat from Marriage: A Shortage of Marriageable Men? *American Sociological Review, 57*(6), 781-799.

Lichter, D. T., Anderson, R.N. & Hayward, M. (1995). Marriage Markets and Marital Choice. *Journal of Family Issues, 16*(4), 412-431.

Lloyd, K. M. & South, S. (1996). Contextual Influences on Young Men's Transition to First Marriage. *Social Forces*, *74*(3), 1097-1119.

Morgan, S.P., Cumberworth, E., & Wimer, C. (2011). The Great Recession's influence on fertility, marriage, divorce, and cohabitation. Pp. 220-245. *The Great Recession*. David B. Grusky, Bruce Western, and Christopher Wimer, editors. New York: Russell Sage Foundation.

Oppenheimer, V. K. (2003). Cohabiting and Marriage during Young Men's Career-Development Process. *Demography, 40*, 127-149.

Oppenheimer, V. K., Kalmijn, M. & Lim, N. (1997). Men's Career Development and Marriage Timing During a Period of Rising Inequality. *Demography, 34*(3), 311-30.

Smock, P. J. and Manning, W.D. 1997. Cohabiting Partners' Economic Circumstances and Marriage. *Demography, 34*(3), 331-342.

Sobotka, T., Skirbekk, V., & Philpov, D. (2010). Economic recession and fertility in the developed world: A literature review. Vienna: Vienna Institute of Demography.

Sweeney, M. M. (2002). Two Decades of Family Change: The Shifting Economic Foundations of Marriage. *American Sociological Review, 67*(Feb), 132-147.

Warner, T.D., Manning, W.D., Giordano, P.C., Longmore, M.A. (2011). Relationship formation and stability in emerging adulthood: Do sex ratios matter? *Social Forces, 90*(1), 269-295.

Wozniak, A. (2009). Are college graduates more responsive to distant labor market opportunities? *The Journal of Human Resources, 45*(4), 944-970.

Xie, Y., Raymo, J.M., Goyette, K. & Thornton, A. (2003). Economic Potential and Entry into Marriage and Cohabitation. *Demography, 40*, 351-367.