Till Death Do Us Part or I Get My Pension? Wives' Pension Holding and Marital Dissolution in the United States[*]

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Abstract

Wives' financial independence gained from their pension may increase the risk of marital dissolution, especially when wives are approaching retirement age (the older wives' independence hypothesis). Applying single and simultaneous equations probit models to data from the Panel Study of Income Dynamics, we investigate the effect of wives' pension holding in 1984 on the risk of subsequent marital dissolution. Results from the single equation model appear to support the older wives' independence hypothesis. However, results from the simultaneous equations model suggest that interpreting the single equation results as a sign of older wives' economic independence may be misleading.

Keywords: Marital dissolution; pension; aging; wealth; panel

JEL classification: *C*33; *D*31; *J*12; *J*32

I. Introduction

Since the mid-1970s, an increasing proportion of married women in the U.S. have been moving from non-career occupations to career occupations,[1] see e.g. Johnson and Stafford (1998). A likely change accompanying this movement of married women into career occupations is increased pension holding; previous studies suggest that human capital investments by workers increase their employment benefits, such as pension contributions by the employer; see Johnson (1996).

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[1]By career occupations, we mean jobs with prospects of upward career mobility within a track. This is used in contrast to jobs with no prospect of career mobility, which are primarily filled by temporary workers.

As reported by e.g. Hoffman and Duncan (1995) and South and Lloyd (1995), resources gained by married women in the labor market, such as income and work experience, influence the stability of marriage. However, the effect of a wife's benefits payments, such as pension holding, on marital dissolution patterns has not been investigated. With the majority of married women now in the labor market in the US, cf. Cancian, Danziger, and Gottschalk (1993), the influence of employment benefits on marriage should be better understood.[2]

In this paper, we test hypotheses based on contrasting views regarding the effect of wives' pension benefits on marital dissolution in the US. Do older wives gain economic independence from their husbands when pension funds become available as they approach retirement age?[3] As a result, is the disruptive effect of wives' pension holding present for those approaching retirement age, while it is absent in younger wives? Alternatively, does the marriage disruptive effect of a wife's pension holding exist in both younger and older age groups because a wife's pension holding reflects her career commitment?[4] The results in this paper provide some answers to these questions.

II. Background

A wife's pension may be viewed as: (i) a source of financial independence from her husband among retirement and near-retirement age women; see Sorensen and McLanahan (1987); and (ii) a benefit reflecting her career commitment. Both financial independence, as in e.g. Hoffman and Duncan (1995) and South and Lloyd (1995), and career commitment, as in e.g. Oppenheimer (1988), have been linked to marital dissolution.

The first view, *older wives' independence*, implies that wives' pension holding may be disruptive to marriage only in the age groups that are close to or in retirement. A number of processes linking wives' actual or anticipated financial resources and a higher risk of marital dissolution (i.e., the independence effect) have been proposed. For example, a wife's

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[2]To provide some context, pension coverage in the US is substantially lower than in some European countries—while more than 80 percent of the labor force is covered by a pension plan in Sweden, Switzerland, Australia, and France, only 46 percent of the labor force is covered by such a plan in the US; see Bodie and Mitchell (1996). The divorce rate is substantially higher in the US than in many European countries, including Denmark, France, Germany, and England; see Lye (1989).

[3]Sorensen and McLanahan (1987, p. 659) state that: "[m]arried women become less dependent as they grow older . . .".

[4]In the younger age group, the marriage disruptive effect of a wife's pension holding may be offset by the reverse effect of marital dissolution on a wife's pension holding, which arises from the poor economic prospects of some wives who experience marital dissolution.

resources make her more attractive to alternative mates outside the marriage, give her a chance to leave an unhappy marriage, and reduce the couple's social and economic benefits to marriage gained through intra-marital exchange of resources; see e.g. Becker (1981), Michael (1988), and Ross and Sawhill (1975).[5] The independence effect arising from the availability of retirement funds should appear only in the near retirement group for two reasons. First, retirement funds become consumable only in old age; actual income differentials due to retirement funds also appear only in old age. While wives who do not receive a pension will undergo a major income decline when they retire, those who receive a pension will experience a relatively small drop, if any, in income. Second, for wives, the anticipated gain in income from retirement funds becomes certain only near retirement (i.e., when the wives are older). The estimated income gain from a pension is uncertain for young wives, who may not stay with the job due to gender role socialization, discrimination, and child care responsibilities; see e.g., Mincer and Polachek (1974), Sandell (1977) and Treiman and Hartmann (1981).[6] Thus, pension holding may produce economic independence only in older wives through actual resource availability or anticipated resource availability in the near term; see Sorensen and McLanahan (1987).

In contrast, the second view, *career commitment*, implies that wives' pension holding may be disruptive to marriage in wives of all ages. Pension holding may reflect the disruptive impact of wives' career commitment in wives of all ages, rather than the disruptive impact of increased financial independence to older wives, in two ways. First, wives holding of pension jobs—typically full-time, non-temporary jobs with a career orientation, as documented by McShulskis (1997)—may produce unresolvable conflicts in the marriage when problems arise such as status inconsistency[7] and geo-

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[5]In contrast to the proponents of the wifes' economic independence hypothesis, proponents of the economic interdependence hypothesis suggest that women's economic contribution to the family, including pension receipt on retirement, reduces the risk of marital dissolution; see Oppenheimer and Lew (1995). For example, by pooling income, couples are able to gain consumption options and raise the level of consumption; see Oppenheimer (1997). Little emphasis is placed on this argument in our analysis.

[6]It is possible that pension holding increases the lifetime income of an individual, and hence increases the chance of marital dissolution even for younger wives. The assumption underlying this argument is that young wives' career trajectories are certain enough that they are able to estimate, and divorce on the premise of, income anticipated in a distant future (e.g., 30 or more years later); see Neilssen (1998). However, given the uncertain career trajectory of young American wives reported by Treiman and Hartmann (1981), this assumption may not be applicable to them.

[7]Some sociologists, e.g. Oppenheimer (1977) argue that, when one of the spouses' occupational status reflects poorly on the other spouse's status in dual-earner couples (i.e., status inconsistency), their marriages become unstable.

graphic mobility,[8] see Blossfeld and Huinink (1991) and Oppenheimer (1988). One solution to such problems is for the wife to exit the labor market. However, this solution may not be acceptable to wives who are committed to their career. Since few institutionalized solutions to these career conflicts exist in the US other than wives to exit the labor market, their career commitment may raise the risk of marital dissolution. Second, wives' career commitment may increase the certainty of their career trajectories and hence allow them to estimate and act on their anticipated income over the long term. Thus, even in the younger age group, the marriage disruptive effect of the rise in wives' lifetime income may be indicated by their pension holding. For these reasons, the disruptive impact of their pension holding should be observed in both wives who are close to retirement *and* those who are younger.

When testing hypotheses about the impact of wives' pension holding on marital dissolution, the potential presence of a reverse effect should also be considered. In particular, the effect of a wife's pension holding on the risk of marital dissolution may not be detected in a single equation framework because of an offsetting reverse effect, whereby the increased marital dissolution risk reduces the chance of a wife's pension holding. Despite the economic attractiveness of jobs with pension, there may be forces that prevent some women—especially divorced women with children—from obtaining these jobs; see Joshi and Davies (1991) and Olson (1985). Many of these forces have been articulated by Mincer and Polachek (1974), including insufficient work experience and skills due to the reduced labor market attachment associated with marriage and childbearing,[9] gender socialization, discrimination, and child-care responsibilities; see also O'Rand and Henretta (1982) and Treiman and Hartmann (1981). For divorced women, the situation is exacerbated by persistent maternal custody practices; see Weitzman (1985). The poor labor market prospects of some divorced women are revealed by their high poverty rates; see e.g. Peterson (1989). Therefore, the presence of an offsetting reverse effect should be explored when studying the effect of a wife's pension holding on the risk of marital dissolution.

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[8]Workers in the US are highly mobile; see Gladden (2000). For most couples, geographic mobility leads to improvements in the husband's earnings at the expense of the wife's earnings; see Sandell (1977). Thus, moves that are attractive to the husband may be unattractive to the wife, thereby creating conflicting economic incentives that may induce dual-earner couples to separate.

[9]It has been noted by e.g. Becker (1981) that some American women reduce their labor market attachment when they marry and have children, reflecting American couples' tendency to engage in gender-based specialization of labor market and household work. By reducing their labor market attachment through marriage, these wives accumulate insufficient work experience and skills while married to become a viable breadwinner after a divorce; see Peterson (1989).

III. Data and Methods

The contrasting hypotheses regarding the impact of wives' pension holding on marital dissolution and the potential presence of a reverse effect are tested on data from the Panel Study of Income Dynamics (PSID), 1984–1993; see Hill (1992) or www.isr.umich.edu/src/psid. The PSID, a longitudinal household panel survey conducted by the Survey Research Center of the University of Michigan, was designed to examine economic, social, and demographic changes in families over time.[10] Generally, the head of the household, usually male, answered questions about family members. The PSID is the only US data set available that has longitudinal information on marriage as well as pension information for wives of all age groups.

For our analysis, we drew male head and wife pairs from the 1984 interview. The question on employer-provided pension was asked if the respondent was employed at the time of the survey, but not self-employed.[11] Because data on wives' pensions are available only in the 1984 wave,[12] the current analysis uses a synthetic cohort framework (i.e., a cohort life cycle proxied by a cross-section of age groups), but takes advantage of the longitudinal information available to measure separation. In particular, data regarding the change in marital status were obtained from both the cumulative retrospective marital history file (1985–1993) and the panels between 1985 and 1988. The sample consists of approximately 4,000 household head and wife pairs in 1984.[13]

To focus on the impact of a wife's pension holding on the chance of marital dissolution among couples who are at risk of obtaining jobs with pension, the sample was limited to years when the wife was most likely out of school and was younger than age 65. In a given year, the mean ages of the wives and the husbands in the sample are 36 (SD = 10) and 39 (SD = 11), respectively. Because of oversampling in the PSID, the sample has a higher percentage of low income and black couples than would a nationally representative sample of marriages. Analyses presented apply family weights, which adjust for differing sampling rates and attrition in the panel. Table 1 shows unweighted and weighted (using the 1984 family weights) descriptive

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[10]The panel study is funded by the National Science Foundation, the National Institute of Aging, the Department of Health and Human Services, and other US federal agencies.
[11]Self-employed husbands and wives are included in the "not applicable" category.
[12]Because PSID data on the value of pensions were poor, with many missing values, we have not used this information in the current paper.
[13]Both first and higher order marriages are included in the analysis because the exclusion of higher order marriages would most likely bias the representation of marriages in the older age groups. However, because higher order marriages have shorter duration than first marriages; as reported by Sweet and Bumpass (1987), we include a variable to control for the difference in the order of the current marriage.

Table 1. *Means of selected variables included in the analysis*

Variables	Unweighted	SE	Weighted[a]	SE
Separation, 1985–1986	0.133	0.339	0.101	1.247
Separation, 1985–1988 among wives who were working at 1984 survey	0.105	0.362	0.126	1.342
Wife's pension holding				
Employer-provided pension	0.224	0.427	0.225	1.757
Does not have employer-provided pension	0.240	0.434	0.231	1.771
Not applicable	0.536	0.500	0.544	2.059
Wife's age				
23–34	0.446	0.497	0.314	1.924
35–44	0.226	0.418	0.243	1.777
45+	0.262	0.439	0.338	1.959
Wife's other socio-economic status				
Labor income				
$0	0.356	0.479	0.386	2.017
$1–$15,000	0.473	0.499	0.438	2.055
$15,001–$30,000	0.152	0.359	0.153	1.491
$30,000+	0.016	0.129	0.022	0.610
Percentage of years worked since age 18				
1–70% of the years	0.718	0.434	0.759	1.689
71+% of the years	0.182	0.386	0.151	1.483
Never worked	0.098	0.253	0.089	0.983
Union membership	0.087	0.281	0.083	1.143
Husband's socio-economic status				
Pension holding				
Employer-provided pension	0.412	0.492	0.410	2.037
Does not have employer-provided pension	0.252	0.434	0.218	1.711
Not applicable	0.336	0.472	0.372	2.002
Annual labor income (×10,000)	2.124	2.329	2.309	11.633
Percentage of years worked since age 18				
1–70% of the years	0.585	0.492	0.516	2.070
71+% of the years	0.415	0.492	0.483	2.070
Education				
Below 12 years (some high school or less)	0.232	0.422	0.206	1.676
12 years (high school graduate)	0.457	0.498	0.482	2.070
13+ years (some college)	0.310	0.462	0.311	1.918
Marital stress/investment				
Presence and age of the younger children				
No children	0.611	0.498	0.684	1.925
Youngest child below age 6	0.190	0.392	0.135	1.417
Youngest child below age 6–12	0.150	0.357	0.131	1.400
Youngest child below age 13+	0.048	0.214	0.048	0.892
Home ownership	0.717	0.450	0.804	1.643
Other control variables				
Reside in state with community property law	0.181	0.385	0.179	1.589
Wife is black	0.259	0.438	0.078	1.111
Year of first marriage	1966.414	14.142	1962.322	61.966
Order of current marriage	1.254	2.221	1.255	2.221

Source: Panel Study of Income Dynamics, 1984–1993.
Notes: $N = 4,219$; SE stands for standard errors.
[a]The 1984 family weights were used to calculate the means.

statistics of the marriage sample for the variables included in this paper and the categorization used for each discrete variable.[14]

Analytic Strategy

For all regressions, we used the characteristics of the wife and the husband in 1984 to predict the probability of separation (used as a measure of marital dissolution) in the subsequent few years.[15] Single and simultaneous equations probit models were applied to marriages that are intact in 1984 in two steps. In the first step, we explore the association between a wife's pension holding and marital dissolution by applying a single equation model to the 4,219 marriages (not shown).[16] We predict, using a single equation probit model, the probability of separation in 1985 and 1986 with the variables listed in Table 1, excluding the measures of separation.[17] An interaction term between the wife's age and her pension holding was included to examine whether the association between pension holding and the risk of separation differs across the wife's age group. To better examine the effect of a wife's pension holding on the risk of marital dissolution, we then estimated the effect of a wife's pension holding on the probability of separation, when controlling for the reverse effect of marital dissolution on the chance that the wife has a pension-paying job. In particular, we estimated the following two equations:

$$Y_1 = \alpha_0 + \alpha_1 Y_2 + \sum_{i=1}^{10} \beta_i X_i + \delta Z + u_1$$

$$Y_2 = \gamma_0 + \gamma_1 Y_1 + \sum_{i=1}^{10} \theta_i X_i + \sum_{k=1}^{4} \phi_k W_k + u_2,$$

where Y_1 is coded "1" if the wife has a pension job and Y_2 is coded "1" if

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[14]A number of covariates included in the exploratory analysis were subsequently excluded on the basis of statistical non-significance. These covariates include a wife's professional occupation and a wife's education.

[15]Although ideally, we would have used separation in the following year as the measure of marital dissolution, an insufficient number of cases of marital dissolution within the first year did not allow this.

[16]The single equation results are available on request.

[17]Only 3 percent of the wives surveyed in 1984 were self-employed. Self-employed wives, who are placed in the "not applicable" category, are included in the single equation analysis but excluded from the simultaneous equations analysis. Owing to the small number of cases, excluding the marriages of self-employed wives from the single equation analysis did not change the results in a major way.

the couple becomes separated. The error terms, u_1 and u_2, are assumed to be bivariate normally distributed with mean zero and a covariance matrix,

$$\begin{pmatrix} \sigma_1^2 & \sigma_{12} \\ \sigma_{12} & \sigma_2^2 \end{pmatrix}.{}^{18}$$

X_i's are the covariates that affect both the probability of a wife having a pension job and a couple's probability of separation. The X_i's include 10 variables measuring a wife's non-pension socio-economic status and her husband's socio-economic status; namely husband's education, two dummy variables for wife's income and a linear term for husband's income, wife's and husband's work experience, presence of children, two dummy variables for husband's pension holding, and residing in a state with a community property law. Z is the instrumental variable (i.e., union membership) to predict the probability of a wife's pension holding; see Gustman and Steinmeier (1989).[19] It is expected to be exogenous to the process of separation.[20] W_k's are the four variables that explain the probability of separation but are viewed as not affecting the probability of the wife having a pension job. These include year of marriage, frequency of marriage, home ownership, and race. We tested the two hypotheses against one another by observing the impact of a wife's pension holding on marital dissolution while explicitly controlling for the reverse effect of marital dissolution on her chance of receiving a pension in the younger and older age groups. After the simultaneous equations models were estimated, we conducted an exogeneity test to determine the need to control for the reverse effect; see Greene (1990, p. 641).

The sample used for the simultaneous equations model was restricted to couples with employed, but not self-employed, wives ($N = 2,262$).[21] We had

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[18]See Madalla (1983) and Luoh (1999) for further details on stochastic specification.

[19]Gustman and Steinmeier (1989) find that union membership is a major predictor of pension wealth in the US.

[20]The specification of the simultaneous equations model is subject to criticism for the choice of identifying variables. The results presented in this paper have undergone sensitivity tests, in which alternative specifications were used to examine the extent to which the results changed under various specifications. We found that, even though the standard errors are somewhat sensitive to the specification, the signs of the coefficients as well as the coefficient sizes remain fairly stable under most specifications that are reasonable on substantive grounds.

[21]Does the exclusion of non-employed wives from the simultaneous equations models bias our conclusions about the impact of wives' pension holding on marital dissolution? The answer to this question would depend on how we view pension-paying jobs. For example, a pension-paying job may be viewed as an attractive job that only wives who are employable are at risk of obtaining. From this perspective, there is little reason to expect that the exclusion of non-employed wives from the analysis would bias our conclusions regarding the effect of wives' pension holding on the risk of marital dissolution.

two reasons for restricting the simultaneous equations analysis to couples with wives who are employed at the time of the survey.[22] First, the introduction of the non-employed ("not applicable") as a third category, which contains heterogeneous subgroups, is not likely to provide much substantive insight. Second, even if we created several meaningful subcategories from the "inapplicable" category, such as self-employed, unemployed, and out of the labor force, we may not have gained quality information because of the increased complexity in specification, which could lead to major specification errors.

The simultaneous equations model used here is an extension of a two-stage probit procedure; see Luoh (1999) for details on the estimation algorithm. It differs from an ordinary two-stage probit procedure because it contains a "third stage," in which the covariance matrix is adjusted to make the estimation efficient; see Amemiya (1979) and Maddala (1983). In particular, because ordinary two-stage probit procedures produce incorrect standard errors, we used an alternative procedure that corrects the standard error and the *t*-statistics in the third stage. Selected variables used in the analysis are described below.

Variables

Separation is used as a measure of marital dissolution because heterogeneity exists among couples in the length of time from separation to divorce; see Morgan and Rindfuss (1985). Whether or not a couple separated between 1985 and 1986 serves as the dependent variable in our single equation model. Of the 4,219 intact marriages in 1984, there were 352 separations in 1985 and 1986. In the simultaneous equations model, we used separations from 1985–1988, rather than 1985–1986, as the dependent variable—this was done to make the estimation possible and stable by increasing the number of events observed.

Pension holding of the wife and the husband are defined as two dummy variables.[23] Those in the "inapplicable" category are persons who are unemployed, out of the labor force at the time of the survey, and self-

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[22]Of the employed wives, there were 238 separations between 1985 and 1988 in the younger, 23–35, age group ($N = 1,171$) and 111 separations in the older, 35–64, age group ($N = 1,091$).

[23]Jobs with pension do not necessarily yield high earnings, and jobs with high earnings do not necessarily provide pension for wives. According to the PSID data, the top three occupations (from first to third) in which wives with pension are concentrated are: (1) elementary and secondary school teachers; (2) secretaries; and (3) registered nurses. In contrast, husbands with pension are primarily concentrated in managerial and administrative occupations. Even in the top tenth percentile of the wives' earnings distribution, some receive no pension. The modal occupation of these wives is insurance agents, brokers, and underwriters.

employed. Here, it should be kept in mind that we focus on the impact of a wife's rather than a husband's pension holding.

Wife's age is included as three categories. The single equation model also includes interaction terms between a wife's age and a wife's pension holding. Age groups were defined in approximately 10-year age groups. The older age groups, namely those age 45 and above, were collapsed into one group due to lack of event availability—the event of marital dissolution becomes rarer in the older age groups.

The simultaneous equations models were applied to the younger (23–34) and older (35–64) age groups separately to examine whether the impact of pension holding on marital dissolution is present in both age groups. To make estimation of the simultaneous equations model possible and stable, we increased the number of separations observed in the sample by further combining the older age groups. In particular, the 35–44 and 45–64 age groups were combined due to the low frequency of separation in the 45–64 age group ($N = 25$). However, even in the 45–64 age group, in a single equation framework, the number of separations was sufficiently large to make estimation possible.

To examine whether a wife's pension holding has an effect distinct from previously reported effects of a wife's resources, we controlled for a wife's and a husband's non-pension resources. We also controlled for marital investment, which has been found to influence marital dissolution in previous studies by e.g. Becker, Landes, and Michael (1977), Greene and Quester (1982) and Waite and Lillard (1991). Most of the discussion of the variables in this as well as the results section for the simultaneous equations model focuses on the variables' effects on the probability of marital dissolution rather than on the probability of a wife's pension holding. We maintain the focus of this paper on the effect of pension holding on marital dissolution in order to address the perspective that women become economically independent in their old age; see Sorensen and McLanahan (1987).

Non-pension resources. The husband's actual total labor income ($1984) was entered in the regressions as a linear term. This linear restriction was found appropriate as a result of an exploratory regression using dummy variables corresponding to categories of husband's earnings.[24] *The wife's actual total labor income* ($1984) is categorized into four groups, as shown in Table 1.[25]

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[24]Proponents of the husband's income hypothesis suggest that the husband's better economic position reduces the risk of marital dissolution in part by reducing economic stress and increasing options available to the family; see e.g. South and Spitze (1986).
[25]Non-linearity has been reported by e.g. Ono (1998) in the association of wife's income and the risk of separation and divorce. As a result, rather than imposing a linear or a quadratic constraint, dummy variables were used to adequately capture the non-linearity in the effect. An imposition of quadratic terms did not yield statistically significant results.

Husband's education is the total number of years of schooling attained as of 1984 and is classified into three categories. In the simultaneous equations regressions reported here, "below 12 years" and "12 years" are grouped to reduce the number of terms included in the model, given that the difference in the coefficients of the categories was non-significant.[26] Wife's education is omitted from the regressions reported in this paper because its effect was not statistically significant and caused multicollinearity problems with husband's education.[27]

A wife's percentage of years worked since age 18 is used as a measure of work experience and has three categories. *A husband's percentage of years worked since age 18* is also included in the analysis, and has only two categories because all husbands in the sample had some work experience. *Union membership* of the wife is a dummy variable, which is used as an instrument to predict the probability of a wife's pension holding in the simultaneous equations model.

The *presence of children,* the *age of the youngest child, and home ownership,* are also included as control variables. The presence of children and the age of the youngest child have four categories.[28] The children include those who are under age 18 and living at home at the time of the survey. The complexity of the effect of children on a marriage has been documented. Children produce two opposing effects on marriages; they depress the risk of marital dissolution by raising the level of marital investment, while increasing the risk of marital dissolution by functioning as the source of marital stress; see Waite and Lillard (1991).[29] Home ownership is included as a dummy variable and as a measure of marital investment; see e.g. Ross and Sawhill (1975).

Community property law, wife's race, current order of the marriage and year of marriage are additional control variables included in the analysis.

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[26]The non-significance of the wife's education arises from the inclusion of wife's earnings or wife's employment history. When either of these covariates is excluded from the regressions, wife's education becomes statistically significant. Thus, the results suggest that wife's education does not directly affect the risk of a wife's pension holding and the risk of marital dissolution, net of the effects of wife's earnings and her employment history. Rather, the wife's education indirectly affects the risks by increasing her earnings and by lengthening her employment history.

[27]In general, the final results of the regressions are reported here. The initial regressions that have non-significant covariates causing collinearity problems are available upon request.

[28]The age of the youngest child is excluded from the simultaneous equations model, which is applied separately for the two age groups, because an insufficient number of women in the older age group have children below the age of 6 to make estimation of the effect possible separately by age group.

[29]Because the presence and the age of children are measured at the time of the survey rather than over the life cycle, these measures probably better index marital stress present at the time of the interview rather than index marital investment.

When couples divorce in states with a *community property law* rather than in states with no particular legal arrangements for property division, they may be more likely to experience marital dissolution for two main reasons. First, the process of property division, which is part of the divorce procedure, becomes less costly with a prescribed fifty-fifty split in the "equal division" states. Second, wives, who are typically economically disadvantaged compared to their husbands, are likely to anticipate better economic outcomes as a result of the equal division of property.[30] *The wife's race* is coded 0 if she is a non-Hispanic white and 1 if she is Afro-American.[31] We also controled for the *order of the current marriage* and the *year of marriage*. Previous studies suggest that a higher order marriage and more recent marriage cohorts should have higher probabilities of marital dissolution than lower order marriages and older marriage cohorts; see Sweet and Bumpass (1987) and Ono (1999). Year of marriage may also capture the effect of marital duration because the covariates are fixed at 1984.

IV. Results

The results from the single-equation model indicated that the interaction terms between the wife's pension holding and the wife's age group were statistically significant (not shown). In particular, in the youngest age subgroup of wives (i.e., below age 35), the risk of separation of pension holders was not statistically significantly higher than that of non-pension holders, but in the two older age subgroups of wives (i.e., ages 35–44 and age 45 and above), the marital dissolution risk of pension holders was statistically significantly higher than that of non-pension holders. Estimated probabilities using means for the covariates other than the wife's age indicated that, in wives below age 35, the probability of separation was 0.13 for both those with pension and those without pension. In contrast, in both subgroups of wives ages 35–44 and age 45 and above, those with pension had a substantially higher probability of separation (0.11 for ages 35–44 and 0.12 for age 45 and above) than the probabilities of those with no pension (0.07 for ages 35–44 and 0.02 for age 45 and above). Thus, when a potential presence of a reverse effect is not modeled explicitly, the results appear to be

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[30]In many US states, a wife's ownership rights to her husband's pension in a divorce settlement were not clearly delineated until well into the early 1990s; see Joshi and Davies (1991) and Olson (1985). Therefore, until recently in non-community property states, wives with no pension of their own could emerge from a divorce with no pension at all.

[31]Gustman and Steinmeier (1989, Table 17) find that race has a non-significant impact on pension holding once socioeconomic and demographic characteristics, such as education, occupation, and firm size, are controlled for. The number of Asian and Hispanic respondents in the PSID, particularly prior to 1990, is small. Hence, they are excluded from the analysis.

consistent with the argument that wives obtain economic independence from their husband in the close-to-retirement age group due to imminent or current access to retirement funds.

Whether the findings in the single-equation model persist when specifying a reverse effect was investigated in a simultaneous equations framework, applied only to those who were employed at the time of the 1984 survey (see Table 2). The results indicate that, among those between the ages of 35 and 64, a wife's pension holding statistically significantly increases the risk of separation (i.e., three percentage points). The equation predicting pension holding reveals that there is also a minor reverse effect: a higher chance of marital dissolution reduces the probability of a wife's pension holding among wives between the ages of 35 and 64.

Can we conclude from these single and simultaneous equations results that older wives gain economic independence from their husbands due to resources that become available with retirement, which, for example, reduce the gains to marriage in older couples and provide means to leave an unhappy marriage? To further investigate this question, we applied the same regression to the younger age group (see Table 3). The results in Table 3 indicate that, even in the younger age group, pension holding significantly increases the chance of separation—in fact, the marginal effect of a wife's pension holding for the younger age group (0.104) is larger than that for the older age group (0.031).[32] This result is not consistent with the argument that older wives experience marital dissolution primarily because of economic independence gained from the actual or anticipated availability of pension payments in the near future. It is more consistent with the argument that a

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[32] Does the difference in the size of the coefficient observed across age groups reflect biases caused by selection of more robust marriages over marital duration? We suspect that this bias may not be major for three reasons: (i) it has been noted, by e.g. Waite and Lilland (1991), that couples have pent-up demand for divorce over the life cycle; (ii) remarriages are included in the analysis; and (iii) the duration of marriage is in effect controlled for by the inclusion of year of marriage.

Contrary to expectations, the effects of the presence of children on the probabilities of pension holding and marital dissolution are statistically non-significant in both the younger and older age groups. The non-significant effect of children may arise from restriction of the sample to employed wives, who most likely have access to child care to be employed in the first place. Marital stress from children may be reduced by the use of child care. The effect of children on a wife's pension-paying job may be minor because, as long as the husband is present, employed wives may have little trouble finding additional child care in order to hold a job that pays pension. The major pension-depressive effect of children is likely to appear for single working mothers who separate—this is probably captured by the effect of separation on the risk of pension holding.

Table 2. *Regression results from simultaneously predicting the chance of separation from 1985–1988 (separation equation) and the chance of having a job with pension (pension equation), women ages 35–65*

Covariates	Pension equation			Separation equation		
	Coeff.	SE	Marg.	Coeff.	SE	Marg.
Intercept	−1.135***	0.210		−2.674***	0.535	
Separation	−0.133	0.141	−0.053			
Wife's pension holding				0.243*	0.118	0.031
Wife's other socio-economic status						
Labor income						
$1-15,000	0	0	0	0	0	0
$15,001-30,000	0.986***	0.118	0.393	−0.265	0.118	−0.030
$30,001+	1.609***	0.292	0.641	−0.216	0.292	−0.025
Percentage of years worked since age 18						
1−70% of the years	−0.313*	0.134	−0.124	0.436**	0.134	0.050
71+% of the years	0	0	0	0	0	0
Union membership	1.145***	0.170	0.456			
Husband's socio-economic status						
Pension holding						
Does not have a job with pension	0	0	0	0	0	0
Has job with pension	0.391***	0.115	0.156	−0.178	0.168	−0.020
Not applicable	0.114	0.130	0.045	−0.190	0.183	−0.022
Labor income (×10,000)	−0.032	0.029	−0.013	−0.100***	0.029	−0.017
Education						
Below 13 years (no college)	0.082	0.103	0.032	0.107	0.103	0.012
13+ years (some college)	0	0	0	0	0	0
Percentage of years worked since age 18						
1−70% of the years	0.115	0.127		0.462***	0.127	0.053
71+% of the years	0	0	0	0	0	0
Marital stress/investment						
Have children	0.016	0.110	0.006	0.252	0.110	0.029
Home ownership				−0.263	0.197	−0.030
Other control variables						
State with community property law	−0.011	0.122	−0.004	0.214	0.183	0.024
Wife is black				0.058	0.227	0.006
Year of marriage				0.163*	0.079	0.019
Order of current marriage				0.574***	0.183	0.066
σ_{12}	−0.113	0.210				
Log-likelihood	−895.891					
N	1,091					

Notes: ***$p < 0.001$, **$p < 0.01$, *$p < 0.05$-Coeff. stands for coefficient, SE for standard errors, and Marg. for marginal effects. The reference category (omitted) is indicated by a 0. Variables excluded from the regressions are indicated by a blank.

Table 3. *Regression results from simultaneously predicting the probability of separation from 1985–1988 (separation equation) and the chance of having a job with pension (pension equation), women ages 23–34*

Covariates	Pension equation			Separation equation		
	Coeff.	SE	Marg.	Coeff.	SE	Marg.
Intercept	−1.253***	0.305		−3.257***	0.855	
Separation	−0.340*	0.145	−0.103			
Wife's pension holding				0.384***	0.122	0.104
Wife's other socio-economic status						
Labor income						
$1–15,000	0	0	0	0	0	0
$15,001–30,000	1.338***	0.171	0.408	−0.789**	0.293	−0.215
$30,001+	2.329***	0.530	0.710	−0.022	0.461	−0.006
Percentage of years worked since age 18						
1–70% of the years	−0.074	0.148	−0.022	−0.244	0.144	−0.066
71+% of the years	0	0	0	0	0	0
Union membership	1.211***	0.232	0.369			
Husband's socio-economic status						
Pension holding						
Does not have a job with pension	0	0	0	0	0	0
Has job with pension	0.371***	0.124	0.113	−0.355*	0.154	−0.096
Not applicable	−0.096	0.161	−0.029	0.169	0.171	0.046
Labor income (×10,000)	−0.100***	0.044	−0.052	−0.100**	0.055	0.039
Education						
Below 13 years (no college)	0.133	0.129	0.040	0.337**	0.126	0.092
13+ years (some college)	0	0	0	0	0	0
Percentage of years worked since age 18						
1–70% of the years	0.206	0.161	0.062	0.442**	0.161	0.092
71+% of the years	0	0	0	0	0	0
Marital stress/investment						
Have children	0.030	0.126	0.009	−0.036	0.135	−0.009
Home ownership				−0.395	0.161	−0.107
Other control variables						
State with community property law state	−0.143	0.141	−0.043	0.060	0.152	0.016
Wife is black				0.079	0.218	0.021
Year of marriage				0.266*	0.103	0.072
Order of current marriage				0.712***	0.158	0.194
σ_{12}	−0.103	0.193				
Log-likelihood	−1142.712					
N	1,171					

Notes: ***$p < 0.001$, **$p < 0.01$, *$p < 0.05$-Coeff. stands for coefficient, SE for standard errors, and Marg. for marginal effects. The reference category (omitted) is indicated by a 0. Variables excluded from the regressions are indicated by a blank.

wife's career commitment increases the chance of marital dissolution for wives of all ages.[33]

If the wife's pension holding has a disruptive impact on marriage even in the younger age group, why did we observe in the single-equation results that the gap in the probability of separation between wives with and without pension was close to zero in this age group? The answer seems to be that there is a major offsetting reverse effect of marital dissolution on a wife's pension holding in the younger age group. When wives are between age 23 and 34, the marginal effect of the probability of separation on pension holding (-0.103) is large enough to almost entirely offset the disruptive effect of pension holding on separation (0.104).

To investigate whether we need to specify a wife's pension holding as an endogenous or an exogenous variable, exogeneity tests were conducted (not shown); see Greene (1990, p. 641). For both the younger and older age groups, the tests rejected the hypothesis that a wife's pension holding should be treated as an exogenous variable. Results from the exogeneity tests provide further evidence that the reverse effect should be controled for when investigating the impact of a wife's pension holding on the risk of marital dissolution.

V. Summary and Conclusions

In this paper, we test the older wives' independence hypothesis (i.e., wives' pension holding is disruptive to marriage in couples with older wives). This hypothesis arises from the view that wives gain economic independence from their husbands due to the availability of retirement funds either currently or in the near future; see Sorensen and McLanahan (1987). The results from the single-equation probit model appear to be consistent with the hypothesis. However, a simultaneous equations probit model provides evidence contrary to this hypothesis, as reflected by the marriage disruptive effect of pension holding in both younger and older wives. Thus, at least within a synthetic cohort framework, the results are not consistent with the view that older wives experience marital dissolution by gaining economic

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[33] Does a wife's pension holding capture the disruptive impact of a wife's high-status job, rather than the disruptive impact of financial resource availability or career commitment? Because part of a wife's social dependence on her husband arises from the wife "borrowing" his status, her high-status job may increase her independence from the husband; see Beeghley and Cochran (1988). If this is true, then controlling for occupational status should remove the impact of a wife's pension holding on separation. We tested this possibility by including a measure of a wife's high-status job, namely a dummy variable indicating the wife's professional occupation (not shown). However, we found that a wife's professional occupation had a non-significant effect when both including and excluding a wife's pension job, and that the significant effect of a wife's pension holding remained under both conditions.

independence from their husbands as they age, due to the actual receipt of retirement resources or the receipt of them in the near future.[34] The results are more consistent with the argument that wives' career commitment leads to marital dissolution in American wives of all ages because it leads to career conflicts unresolvable within marriage, as observed by e.g. Blossfeld and Huinink (1991) and Oppenheimer (1988), and reduces the uncertainty in young wives' career trajectory.

In addition to the disruptive impact of pension holding on marriage, we find a reverse effect whereby an increased probability of marital dissolution leads to a lower chance that the wife has a job with pension. This reverse effect was large enough in couples with younger wives to offset the effect of their pension holding on marital dissolution. The results are consistent with the argument that some young wives who foresee marital dissolution have difficulty obtaining jobs that require employment commitment by the employer and by the wife; see Joshi and Davies (1991) and Olson (1985). This, in turn, is partly due to reduced labor market attachment with marriage and child bearing, gender socialization, discrimination, and child-care responsibilities; see e.g. Mincer and Polachek (1974), Treiman and Hartmann (1981), and Weitzman (1985). The results are insightful in light of other reported findings, by e.g. Greene and Quester (1982), Johnson and Skinner (1986), and Luoh (1999), that a higher risk of marital dissolution leads to an increase in labor supply. This suggests that some of the American women who foresee separation obtain jobs but do not obtain jobs with pension; i.e., which require some level of employment commitment.

Our findings suggest that couples who experience marital dissolution include wives in widely varying economic circumstances. In particular, the wives who experience marital dissolution seem to include *both* those who are economically better-off and those who have poor economic prospects. On the one hand, some wives who are committed to their jobs, as measured by pension holding, seem to experience marital dissolution. On the other hand, some of the wives who foresee marital dissolution are not committed to their jobs, as indicated by their lack of pension holding, possibly due to institutionalized employment barriers. Although beyond the scope of this paper, a thorough evaluation of the attractiveness of jobs that pay pension for wives, and the risk of American women entering old-age poverty because of their divorce and subsequent attainment of jobs that pay no pension, deserves a closer look.

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[34]Although the independence hypothesis is not supported within the synthetic cohort framework, it may still be supported in a real cohort framework. In particular, there may be an independence effect associated with the aging of the real cohorts, which is not observed in this study. We cannot investigate the presence of an independence effect over wives' life cycle in real birth cohorts due to data limitations at this time.

There are several limitations in the analysis of this paper. Use of a synthetic cohort framework to examine the differences in the effect of pension holding over the wives' life cycle was necessitated by data limitations. The age effect in our analysis may be interpreted as a cohort effect—separating an age effect from a cohort effect would be possible as more data on long-term pension receipts become available. This paper provides a "baseline" on which further analyses can be built once more data become available. In addition, the sample size of separated couples is small, particularly in the oldest age group. This prevents us from conducting a more elaborate analysis of the differential impact of wives' pension holding on the risk of marital dissolution across a larger number of age groups. Although the PSID data set has these sample size and cohort range limitations, it is one of the few data sets that contains information on both spouses' pension receipt status for individuals of all ages. We should also note that results from the simultaneous equations models are subject to possible specification error; see Maddala (1983). Although some sensitivity tests were conducted to check for the stability of the results reported here, the analysis should be replicated to further examine the stability of the results.

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