

## The pension mix for women in middle and late life: the changing employment relationship.

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### **Abstract:**

The effects of life-course, employment and labor market characteristics on the probability of pension participation and on type of pension coverage are estimated for two cohorts of working women in middle and late life, respectively. The National Longitudinal Surveys of Mature and Young Women are used to differentiate the relative importance of life course and diverse structural factors on worker pension participation and employer coverage patterns. The defined contribution plan is argued to be an indicator of the changing employment relationship which is relieving employers of pension liability and increasing workers' responsibilities for retirement saving. Probit regressions are used to estimate the relative risks for nonparticipation in any pension among these working women. Multinomial logistic models, controlling for selectivity, estimate cohort processes in workers' access to employer-provided pension types. The results reveal the relative importance for middle-aged and older women of life course and structural variables that reflect life stage and changing employment relationships. Younger cohorts appear to be relatively more vulnerable to the changing employment contract given their greater dependence on defined contribution plans and the conflict between family and market contingencies.

### **Article:**

Recent trends in pension coverage signal an apparent improvement in women's access to pensions as succeeding cohorts of women enter the labor force earlier and maintain their attachments to market work longer over their lives. Increased life expectancy and smaller family size are shrinking the share of adult life spent in childbearing and childrearing. Accordingly, women have increased opportunity for retirement saving based on their own market work. Yet, the opportunity structure for retirement saving has changed. The changing pension mix is shifting more and more saving and investment responsibility to individual workers and away from employers. This shift is consistent with other changes in the employment relationship observed in the labor market literature. The effects of these changes on recent cohorts of women workers and their implications for retirement saving are yet to be established.

This study examines two cohorts of working women in middle and late life, respectively. The National Longitudinal Studies (NLS) of Mature Women (born 1928-37) and of Young Women (born 1944-53) are compared in 1989/1991 in the effects of life course, employment, and sectoral characteristics on (1) the probability of pension participation and (2) their relative access to pension types. The 1989/1991 waves of the NLS ask specific questions regarding respondents' knowledge of pension types provided at their jobs and permit the comparison of these birth cohorts. This paper will first briefly review trends in pensions and women's life-course patterns that are intersecting in ways that raise questions about the future retirement of women. We will argue that these trends reflect changes in the employment relationship similar to others identified in the literature. This rationale yields a set of hypotheses specifying cohort-related influences on pension participation and pension type that will be tested using multinomial logistic regression techniques controlling for sample selectivity.

### **Two Birth Cohorts' Paths to Pension Coverage**

Women's labor force patterns have changed over the century as succeeding cohorts have encountered variable opportunities for market work related to historical, economic and social trends. Until World War II, the demand

for female workers - primarily in the clerical occupations and in service industries - favored younger (under age 25) rather than older women. After World War II women past their childbearing years (after 35 years of age) entered the labor force more rapidly until the 1960's. Since the 1960's, an overall pattern of increased labor force participation has prevailed for all age groups, but with younger women displaying the highest relative increases - even during their early childbearing years (Goldin 1990). By 1990, between 71% and 76% of women ages of 20 and 54 were in the labor force and slightly less than half of women (45%) between ages 55 and 64 were in the labor force (Bureau of Labor Statistics 1990, 1991). Finally, the labor force participation rates of women in their early 60's have risen slightly since 1986 (to about 42%), perhaps signaling a reversal of the longer term trend towards early retirement of this group (Levine & Mitchell 1993).

The relative importance of factors propelling women into the workplace and maintaining their attachments to it have changed across cohorts. First, educational levels have always had a positive effect on (1) women's occupational opportunities - especially among the most highly educated groups - and (2) women's attachments to work - both at the higher and lower ends of the occupational structure. But rising levels of educational attainment across successive birth cohorts have increased the salience of education on work and income directly, and indirectly through its influences on women's fertility decisions (Riche 1993). Second, over the past decade income has grown for women relative to men across nearly every age group and educational level, reflecting both the demand for female work in the economy and the supply of women as full-time workers. The economics of childbearing suggest therefore that children are becoming more and more costly as women's earnings approach men's (Riche 1993:23).

The third set of factors relate to workplace incentives that encourage women's work attachments. Historically, women have been concentrated in occupations and industries characterized by lower earnings, fewer earnings protections as fringe benefits and related internal labor market mechanisms, and higher turnover (Goldin 1990; O'Rand 1986). These structural factors- historically associated with competitive as opposed to the monopoly and state (public) employment sectors - have operated to limit pension-saving among earlier cohorts of working women. Thus, clerical and service occupations, service industries, and smaller firms in the private sectors have been disadvantageous for retirement saving for at least two interrelated reasons: on the demand side, they have provided few incentives (such as earnings and fringe benefits) for women to remain and, on the supply side, women have exhibited high levels of mobility and intermittent work within these markets.

As such, older cohorts of women whose work histories are rooted in an earlier era of relatively lower educational attainment, lower demand for female workers, lower fringe benefit levels and higher levels of fertility have followed a different pathway to retirement savings than younger women. Women born between 1928 and 1937 (the NLS-Mature Women) were in prime childbearing years in 1960s when they were in their 20's and 30's. During this period their access to pension coverage was severely limited outside the public sector. Thus, coverage by pensions during the 1960's and 1970's tended to exclude women (O'Rand & Henretta 1982). Women born between 1944 and 1953 in the early baby boom (the NLS-Young Women) reached their prime childbearing years in the mid to late 1970's. By this time, higher educational levels, declining and delayed fertility patterns, and the increasing demand for female workers provided women with greater opportunities for retirement saving across sectors. Pension coverage became more available to women during this period and contributed to women's increased attachments to work and increased conflicts between work and family role demands.

Accordingly, demographic and structural differences in women's acquisition of pensions across cohorts yields a sets of hypotheses regarding women's likelihood of pension participation (or risk for nonparticipation in pension plans) over the past three decades:

***Hypothesis 1.*** Both cohorts are at risk of nonparticipation in a pension as a result of structural factors that allocate workers into occupational, organizational, and industrial sectors with weaker employment relationships indicated by more contingent work, smaller enterprises and lower rates of union membership.

**Hypothesis 2.** Family roles, educational attainment, and structural factors related to occupational, organizational, and industrial sectors will vary in their relative importance across cohorts of women due to life course stage and to changing educational and labor market opportunity structures encountered by different cohorts. Family variables should operate more stringently to select younger women into or out of pension participation by creating higher competing role demands.

### **The Changing Pension Mix and the Changing Employment Relationship**

However, the retirement saving picture has changed for all workers since the mid-1970s. First, employer pension coverage has begun to decline overall. Over the 1970s until the early 1980's, slightly more than half of workers (50 to 55%) in the private sector were covered by employer-provided plans. The significant majority of covered workers were men. By 1988, fewer than half of workers in the private sector were covered by employer-provided pensions (49%), and the share of pension coverage shifted to favor women over men (Woods 1989; Even and MacPherson, 1994). Associated with this trend has been the growth of other employee benefits imposing fewer long-term commitments on employers; these include such benefits as family leave, flex-time, and childcare support (Kamerma & Kahn 1987).

Second, the pension structure that remains has been revised to reflect a new employment contract already identified in the labor market literature (Kalleberg 1996). The employment contract has been changing since the early 1970's as economic reorganization in the U.S. economy has included the strong shift away from manufacturing to service sectors, organizational downsizing and the expansion of employment and new job growth in smaller enterprises (with fewer than 50 employees), declining union membership, increased demand for contingent and subcontracted labor, and the leveling of wage growth (e.g., Belous 1989; Doeringer 1991; Henretta 1992; Levine & Mitchell 1993).

A product of these changes has been identified by Pfeifer and Baron (1988) as the externalization of labor. Employers are abandoning the long-term labor contract historically associated with such labor market structures as union contracts and internal labor markets. Economic shifts and stronger regulation of employer-pensions (c.f., Employee Retirement Income Security Act of 1974) has discouraged employer provision of traditional pensions and encouraged the development of pension instruments that relieve employers of pension liabilities by shifting more responsibly to workers (Gustmann, Mitchell & Steinmeier 1994).

The major change in the retirement savings structure has been the shift from the traditional defined benefit plan with employer contributions, fixed benefit levels at retirement, and employer funding liability as core features to a diverse set of more individualized savings plans requiring relatively more worker contribution and/or risk and less employer contribution and/or liability. The defined benefit plan developed over the middle of the twentieth century as an element of the employment contract associated with internal labor markets and multi-employer union-management accords. It encouraged worker attachment to an employer with the promise of deferred reward. Service and earnings formulae operated to induce long tenure and also to schedule final severance (retirement). Another feature of this plan has been its collective relevance; large categories and collectivities of workers (e.g., union members, professional groups, etc.) have been covered by the same rules and rights. The role of unions, particularly after World War II, was a central one in bargaining for protective structures like pensions to preserve income security. Finally, the defined benefit plan typically excluded women workers as a result of at least two factors: the unequal distribution of these plans that concentrated them in monopolistic manufacturing and unionized industries and in male-dominated occupations and the service requirements for benefit eligibility which eliminated workers in minority categories and with interrupted or truncated work careers (O'Rand 1986).

Newer plans range from Employee Stock Ownership Plans (ESOP's) to what are known as defined contributions plans (e.g. 401k's, 403b's) with tax shelter, cash surrender or loan, and portability features that appeal to the short-term needs of workers. These new plans are components of refashioned benefit packages offering flexibility and choice to new and more diverse workforces without imposing long-term promises on

employers to protect retirement income in the way the defined benefit plans have historically. They are also highly individualized and require more worker volition and earnings contribution.

Between 1975 and 1985 large employers began "mixing" primary defined benefit plans with supplementary defined contributions plans (Turner & Beller 1992). The predominance of defined benefit plans began to decline in 1986 as the growth of defined contribution plans increased across industrial sectors, particularly in the trades, services and financial sectors. The ratio of defined contribution to defined benefit plans exceeded 1:1 in the communications, wholesale trade, retail trade, and services sectors by 1988 with projections of achieving a 2:1 ratio in some trade sectors by the early 1990's (O'Rand 1994).

The defined contribution plan, in particular, is an indicator of the externalization process described by Pfeifer and Baron (1988) and the shift from the lifetime employment model to the day-laborer model characterized by Belous (1989). Its growing predominance is in those sectors without unions, with higher concentrations of female workers in professional and white-collar jobs, with high levels of gender segregation, with smaller firms whose lower resource bases for the provision of wages and fringe benefits place workers at some disadvantage for retirement saving under the rules historically associated with the defined benefit type. This period coincides with the large-scale presence of baby-boom cohorts of women in the workforce and with the increased labor force participation rates of older cohorts of women as well. Three-fourths of the younger cohorts and well over half of the older cohorts were working in 1990 (Bureau of Labor Statistics 1991). The relative access to and participation in these diverse plans by these cohorts are the subjects of this study.

In short, the net effect of these trends has been a retreat by employers from pension support. For women, this retreat comes as their participation in the workforce is higher and more continuous than ever. Older women, who were more likely to be excluded from defined benefit coverage available primarily in public, monopoly and unionized sectors earlier in their careers, are now more likely to be saving with these new instruments - if they have coverage to begin with. Some in this cohort worked in professional, public or industrial sectors with access to both pension types after the mid-1970's. Younger women who have relatively higher levels of education, early job attachment histories and lower fertility levels are also likely - perhaps even more likely - to be covered by defined contribution plans mixed with defined benefit packages as their major retirement savings mechanisms, since the timing of their large-scale entry into the labor market coincides with these changes in industrial and pension structures. For both cohorts, defined contribution pensions are especially likely to be associated with those gender-concentrated sectors where women have worked traditionally with lower wages, fewer internal labor market opportunities like training, job ladders, etc., and higher worker turnover.

The worker-centered savings plans with portability and cash surrender and/or loan options afford the worker more immediate knowledge and individualized control of her retirement savings; yet their prospects for assuring long-term savings on the level of defined benefit plans which are not accessible until benefit eligibility age are a matter of considerable debate (see Levine & Mitchell 1993). These options make the defined contribution plans attractive for their availability to handle short-term major expenses such as hospitalization, new home purchases and college costs. But, current estimates are that only about 10 to 15% of surrendered defined contribution plans are reactivated after seven years (O'Rand 1994). Thus, their pension saving value is problematic across sectors of the labor market.

These features of the new pensions bear upon the prospective economic status of women at retirement ages and on their opportunities for early retirement, perhaps compelling them to work later in their lives. Pension wealth is a fundamental basis of economic inequality and relative vulnerability in old age (Duncan & Smith 1989; Palmer, Smeeding & Torrey 1988; O'Rand 1994, 1996) and it influences the timing of retirement for individuals (Hurd 1990; Gustman, Mitchell & Steinmeier 1994) and couples (Henretta, O'Rand & Chan 1993). And, as noted earlier, recent small reversals in the early retirement of women ages 60 to 62 (Levine & Mitchell 1993) may be the first reflection of the impact of the changing pension mix.

In the midst of these changes, it is important to note that research has demonstrated that workers have far from perfect knowledge and understanding of their fringe benefits, and are especially at risk of not understanding their pensions (e.g., Mitchell 1988). Some workers understand the rules associated with their benefits; some have a more limited understanding; but a striking minority cannot enumerate or reliably describe the types of benefits that they have. The growing complexity of compensation packages with mixed pension instruments may exacerbate this situation and raises issues related to retirement planning and income security for all workers in a changing economy, and for women especially.

Following this rationale, hypotheses are proposed below to estimate the likelihood of pension participation by type of pension coverage among two cohorts of women, sampled in the National Longitudinal Studies of Mature Women and Young Women. After controlling for the risk of noncoverage by a pension:

**Hypothesis 3.** For both cohorts, the greater likelihood of participation in defined contribution plans (DC) only is increased by their location in occupational, organizational, and industrial sectors providing higher ratios of DC contribution plans. Monopoly sector employment and large firm size increases the likelihood of coverage by defined benefit or mixed plans when compared to DC plans.

**Hypothesis 4.** Across cohorts, labor market factors should include the differential effects of (1) union membership on pension type with union coverage more closely tied to defined benefit plans among older cohorts and defined contribution plans among younger cohorts; and (2) occupational status with occupations among older women more closely tied to DC coverage due to higher levels of gender segregation in these jobs among them.

**Hypothesis 5.** The younger cohort's greater likelihood to participate in defined contribution plans (DC) only is increased relatively more by life course factors, especially greater family role demands related to childbearing that compete with job tenure and increase the risks for nonparticipation in any plan.

**Hypothesis 6.** The older cohort's likelihood to participate in DC plans only is increased by lower earnings, which reflect long-term patterns of limited tenure and/or employment in sectors with limited coverage by defined benefit plan for workers in lower earnings categories.

## **Data and Methods**

The data come from the National Longitudinal Surveys of Labor Market Experience (NLS) of Mature Women (born between 1928-1937) and of Young Women (born between 1944-53). In 1989 (the NLS-MW) and 1991 (the NLS-YW), these surveys included for the first time questions that identified pension types for women with pension coverage. The primary purpose of the NLS surveys was the measurement of labor force experience with information collected at each wave (since 1967 and 1968, respectively) on labor force status, job characteristics, and work history. Additional information was collected regularly on educational attainment, marital status, fertility, and family responsibilities.

Nearly 50% of the original NLS- Mature Women and 65 percent of the original NLS-Young Women respondents surveyed in 1967 and 1968 were interviewed in 1989 and 1991, respectively. Sample selection criteria retain currently employed women from these surveys, therefore reducing the 1989 NLS-Mature Women's sample by half and the 1991 NLS-Young Women's sample by 30 percent. In addition, women currently receiving pension income, working without pay, or employed in mining or agricultural sectors were omitted (thereby excluding 36 and 11 respondents in the NLS-Mature Women and the NLS-Young Women's samples, respectively). In the NLS-MW survey, 725 employed women remain of which 408 employed women have employer sponsored pension coverage. In the NLS-YW survey, 2,200 employed women remain of which 1,406 respondents participate in employer sponsored pension coverage.(1) The distinctiveness of the sample should be emphasized. Respondents who remain in this analysis are (1) employed, (2) have remained in a longitudinal study for 20-plus years, and (3) provide complete answers to the pension questions.

## **Dependent Variables: Pension Participation and Type of Pension Coverage**

The 1989/91 NLS surveys specifically asked of all employed women if the respondent participated in "an employer sponsored pension plan." For women who claimed to have employer sponsored pension coverage, the following question regarding type of pension coverage was asked:

"Some pension plans have a definite formula based on years of service or salary. Some plans base benefits on how much money has accumulated in a person's account. Other plans use both ways of setting benefits. How are the benefits for your plan determined; by a definite formula based on years of service or salary, or by the amount of money in your account, or in both ways."

The possible responses for employer-sponsored pension participation are 'yes/no' and for the type of pension coverage: (1) definite benefit formula, (2) money accumulated in accounts, (3) both, or (4) don't know. Thus, type of pension coverage yields a four-category measure. The four respective categories include (1) defined benefit only, (2) defined contribution only, (3) mixed defined benefit and defined contribution, and (4) "don't know." Table 1 reports pension participation and pension type distributions. Younger women are 6% more likely to participate than older women. Women in both cohorts report slightly higher participation than Woods (1989) found in a cross-section of the working population; the distinctive characteristics of these survey panels noted earlier probably account for their higher rates. Also, younger women with pensions report slightly higher rates for all identified types of pension coverage, although these results are biased by the significant proportion of older women (25%) who were more likely not to know their pension type than younger women. The nontrivial proportion of "don't know" answers by the older women prompted our retention of 'don't know' respondents as an outcome category.

Our final model estimates pension type by contrasting mixed defined benefit-defined contribution, defined benefit only, and 'don't know' with the reference category defined contribution only. This permits a direct test of our working rationale regarding the changing employment contract for workers over the past 30 years and controls for selection out of pension participation.

## **Independent Variables**

The explanatory variables for the multivariate analysis include measures of life course and structural characteristics and are defined in Table 2, which includes the means and standard deviations of these variables for (1) all employed women and (2) those participating in pensions. Life course predictors include marital and fertility history, educational attainment, employment history and current employment information. Several life course measures were explored to capture heterogeneity in family history which has been demonstrated to influence pension coverage (e.g., Farkas 1995). Two variables were retained: remaining childless (having no birth by the year of observation) and widowhood status. These factors represent critical variations across the two cohorts that impinge upon employment careers and the access to pensions. Other life-course variables include educational attainment (measured as no high school completion) and recent employment history (measured as years of tenure with current employer and as part-time versus full-time employment status).

Structural factors representing labor market location include categorical measures of occupational status (professional/managerial and clerical sales worker categories); firm size (whether employing company has more than 1,000 employees); union membership; and sectoral location (measured as three categories: public sector employment; employment in a monopoly sector industry such as manufacturing, communication, transportation, public utilities, finance, insurance, real estate, and professional and related services; or in the remaining industries characterized as more competitive (following Hodson 1983).(2)

Respondent's salary and wages measure earnings during the previous year. Few respondents provided no information in their earnings (less than 3% for the NLSMW and 1% for the NLS-YW). For cases with missing information on earnings the mean income for the respective sample year was assigned. Earnings (logged) and a variable flagging missing data are used in the final model predicting pension type.

**Table 1**  
*Percentage Distributions of Pension Participation and Type of Pension Coverage among Working Women in Two Birth Cohorts*

Employed Women Pension Participants	NLS-MW Older Women	NLS-YW Younger Women	MLS-MW Older Women	MLS-YW Younger Women
Pension Participation				
Coverage in 1989 for NLS-Mature Women				
Coverage in 1991 for NLS-Young Women	57.24	63.63		
Type of Pension Coverage				
Defined Benefit				
1 = Defined Benefit based on a formula			41.83	45.21
Defined Contribution				
1 = Money Accumulated in Account			12.80	15.07
Mixed				
1 = Both			20.18	29.86
Don't Know				
1 = Don't know			25.14	10.10
Number of Cases	725	2,199	408	1,406

*Note. All descriptive data are weighted to represent the female population in 1989/91 for the NLS-Mature Women and in 1991 for the NLS-Young Women*

The descriptive and multivariate statistics are weighted to represent the female population for the year the pension questions are asked: 1989 for NLS-MW and 1991 for NLS-YW.

The distributions of the explanatory variables shown in Table 2 illustrate the distinctiveness (selectivity) of the final sample of employed women with pension coverage and also reflect expected cohort differences in life-course and structural factors outlined earlier. Younger women are twice as likely to have reported no births by interview year in both the employed and pension covered groups; older women are considerably more likely to be widows. Similarly, younger women are half as likely in the employed population and one-third as likely in the pension-covered workforce to have not completed high school. The pension participants in both groups differ similarly from working women generally; the former are more highly educated and less likely to have children.

Occupational and sectoral differences are also consistent with expectations. Older women are more likely to be part-time and clerical/sales workers and less likely to work for larger firms in both the general workforce and the pension participating subgroups. Finally, younger women's earnings are higher by 28% in the employed population and by 18% among pension participants.

## The Risk for Nonparticipation in a Pension

The question arises whether selection into pension type is influenced by the prior risk for nonparticipation in a pension.<sup>(3)</sup> Life-course and structural factors influencing the likelihood of participation may also have implications for types of plan coverage. Defined contribution plans have grown in prevalence as employers have retreated from the long-term employment contract and from defined-benefit liabilities and as the life-course and work-related attributes of worker cohorts have changed. Thus, both participation in a pension and coverage by a specific type or mix of pensions are likely to be affected by related processes. Accordingly, it is reasonable to expect that major predictors of nonparticipation in a pension may also influence selection into defined contribution plan coverage and away from defined benefit or mixed plan coverage. For this reason, we estimate the likelihood of pension type controlling for this selectivity. Selectivity models have been developed to apply to cases where the dependent variable is categorical (see Dubin and Rivers 1989, for the case of bivariate outcomes) and are available in LIMDEP for multinomial outcome variables (Greene 1995). Because these two birth cohorts of women have encountered risks for selection out of pension participation in different socioeconomic contexts over time in their lives, estimation of their risks for selection out of participation is specific for each cohort. The probit estimations of the risks for selection out of pension participation by cohort are found in Table 23.<sup>(4)</sup>

Although the general direction of effects for the variables are consistent for both cohorts, several cohort differences are notable initially. Life-course factors related to childbearing affect only younger women. Remaining childless decreases the likelihood of nonparticipation in a pension plan for younger women only by 21% ( $\exp -.234 = .791$ ). Education, measured as no high school completion, increases the risk of nonparticipation for older and younger women, though the difference in these two coefficients is significant at  $p$  [less than] .001, suggesting that the effect of lower education for the older cohorts is relatively stronger. Older women with no high school are 3.5 times more likely not to participate in plans ( $\exp 1.260 = 3.525$ ) while younger women with no high school are 1.5 times more likely not to participate.

Structural factors generally affect pension participation patterns among both cohorts in expected ways. The likelihood or risk of nonparticipation is increased significantly among part-time workers in both cohorts, though the Wald chi-square statistic suggests that this significant effect is relatively stronger among younger workers. Younger part-time workers are nearly twice as likely to be nonparticipants in a pension plan ( $\exp .676 = 1.966$ ), while older part-time workers are 1.3 times more likely not to be participants. As expected, the monopoly and public sectors both decrease the likelihood of nonparticipation when compared to the competitive sector both cohorts. In addition, those covered by union contracts and those employed in firms of 1,000 employees or more are at lower risks for nonparticipation. Comparisons of the union effects reveal that this variable is relatively more important for the older cohort ( $p$  [less than].05). Older women who are union members are 78% less likely to be nonparticipants ( $1 - \exp -1.280$ ) while younger union members are 54% less likely ( $1 - \exp -.776$ ).

Both the equivalent and significantly different variations in the effects of these variables for the risk of nonparticipation in a pension produce a general pattern of selection predicted earlier in this paper. Life course variables impinge more on younger women's pension patterns. While sectoral variables influence both cohorts in the same directions, some effects are stronger for older women, particularly union membership.

### Selection into Type of Pension Coverage

The analyses reported in Table 4 use multinomial logistic regression models to predict type of pension coverage, after controlling for selectivity into nonparticipation by applying the specification for the Inverse Mills Ratio in the probit model from version 7 of LIMDEP (Greene 1995). Multinomial logistic outcome equations are appropriate since the dependent variable is a four category measure. Women with defined benefit plans, women with mixed defined benefit and defined contribution plans, or women who did not know their type of pension coverage are contrasted to women with 'defined contribution plans' only. We estimate the effects of life-course and structural variables on the likelihood of type of pension coverage including the correction for selection out of pension participation in the models for the NLS-MW and the NLS-YW. The

covariates include: no children, no high school completion, widowhood, tenure at current job (logged years), professional or managerial worker, clerical or sales employee, firm size, monopoly sector employment, public sector employment, union membership, and earnings (logged) in addition to the selectivity variable ( $\lambda$ ). Missing information on earnings is flagged in the equation.

The following analysis reports the results of multinomial logistic regressions estimating the effects of life-course (family) and structural factors on the type of pension coverage of two cohorts of women workers, after controlling for the selectivity. The dependent variable consists of a set of three contrasts comparing the likelihood of coverage by (1) a mix of defined benefit and defined contribution plans (MIXED), (2) a defined benefit plan only (DB), and (3) a lack of knowledge of pension type (DK), when compared to a defined contribution plan only (DC). This set of contrasts distinguishes the externalized employment contract represented in the defined contribution plan only (DC) from other types including those that some workers are unable to identify.(5)

### **Approaching the Threshold to Retirement**

The first set of results in Table 4 come from NLS-MW. These women were between the ages of 52 and 61 in 1989 when they reported pension type. They are in the age-range conventionally identified as the threshold to retirement (Hurd 1990).(6) Immediately notable in the results are (1) the nonsignificance of selectivity for pension type by this sample (refer to the  $\lambda$  or risk for nonparticipation variable in last row of coefficients) and (2) the diminished effects of some variables which operated very strongly to select these women into participation.(7) Family, educational and structural factors have operated strongly to select these women into pension participation to begin with (see Table 3), a prior point in the sample selection sequence. After controlling for that process, most of these effects are diminished, with some exceptions. Widows in this cohort may be more likely to be covered by DB only plans as opposed to DC only plans, though these results only approach significance. Widowhood status in this cohort of pension participants may be highly associated with access to the earlier pension type - the defined benefit plan - which strictly regulates retirement timing based on service and earnings formulas and may encourage survivors to work towards their own pensions in the absence of spouses.(8) The earnings variable behaves similarly; earnings are positively associated with defined benefit versus defined contribution plans, though the effect only approaches significance. Finally, tenure is significantly associated with the MIXED versus DC plan. All three results - for widowhood, earnings, and tenure - reveal the relative importance of longer work careers for participation in defined benefit plans alone or mixed with defined benefit plans. Since the mixed plans typically began as DB plans only and became supplemented by DC plans during the late 1970's through the 1980's, longer tenure can be expected to be associated with them, especially among older workers.

Similarly, after controlling for its effects on selection into participation, union membership only approaches significance for selection into MIXED and DB only plans. Unions have been associated with pension access generally, and secondarily with the defined benefit plan in mixed or single form among older workers. The MIXED and DB types are remnants of older long-term contracts and protected labor markets.

The effects of other labor market factors, after controlling for selectivity, are also diminished. Monopoly sector, public sector and firm size effects disappear for determining type of pension coverage. The firm size variable approaches significance in an expected direction; workers in larger firms appear to be more likely to have defined benefit than defined contribution plans.

Clearly significant effects are evident for the occupational status variables. The occupational variables which contrast women in professional/managerial and in clerical/sales jobs with others strongly select women into DC only pension coverage when compared to the other two types. Professional/managerial workers are 84 and 88 percent less likely to be covered by Mixed and DB plans, respectively, when compared to DC coverage. Clerical/sales workers are 76 and 84 percent less likely to be covered by these plans when compared to DC only coverage. Women in this age-group are relatively highly segregated by gender in these occupations (Goldin 1990) which are, furthermore, among the sectors where women have continued to increase in numbers and

where defined contribution plans are increasingly the only plans available (Levine & Mitchell 1993; O'Rand 1994). Women covered by defined benefit and mixed plans are typically associated with unionized and blue-collar sectors.

As such, these women approach retirement in the 1990's as highly heterogeneous in family and work history and in type of pension coverage. This heterogeneity is all the more significant when we remember this sample is already highly selected - women with their own pension coverage excluding many working women without it as well as those not working at the time of our observations.

### **Between Family and Work Careers**

The second set of results in Table 4 represents the model estimating pension type among the younger cohort of women. These women were between the ages of 38 and 47 in 1991 when they reported their pension type. This period very likely signals the end of childbearing (though perhaps not of childrearing) for this group and the critical phase in the adult work career when retirement saving begins to become more salient. When compared to the older cohort, these women's work careers are, in many respects, less settled and more susceptible to contemporaneous life-course and structural factors. The significance of the lambda variable reveals that unobserved factors influencing pension participation in general in this cohort are strongly associated with the defined contribution plan only.

Also as predicted, life-course variables continue to have strong effects on type of pension coverage among middle-aged women. Not having children increases the likelihood of MIXED and DB only plan coverage by factors of 1.9 and 1.7, respectively (exp .664 and exp .528). Not completing high school is associated with DC coverage when compared to DB coverage; this educational category significantly decreases the likelihood of DB coverage by about 60% (1 minus exp -.907). Low educational attainment affects access to pension type in the direction of defined contribution plans only.

Tenure differentiates pension type among the younger cohort. Selection into MIXED and DB plans is significantly improved by a factor of 1 for each when compared with DC only plans. Like older women, access to both DB-based plans is a clear signal of long-term job attachment.

Several structural factors affecting the younger cohort's risk for nonparticipation also influence plan type. Interestingly, these effects are in the opposite direction from those observed among older women and from those observed in the selection process (see Table 3). Union membership clearly differentiates cohort experiences. For older women, union membership increases the likelihood of MIXED and DB only coverage. But for younger women, this variable has no effect. The historical and sectoral experiences of these two cohorts with unions underlie this important interaction. The older cohort's relationship with unions is characterized by membership in larger unionized sectors in the private monopoly industries, larger firms, and in the public sector. The younger cohort, on the other hand, is more likely to be in professional and service sectors and smaller firms (Krecker & O'Rand 1991) where the defined contribution plan predominates; when these women are employed in the monopoly sector they are likely to be excluded from the older plans and eligible only for the newer plans (Turner & Beller 1992). Results from Table 4 support this argument; younger women are 49 and 44% less likely to be covered by mixed and DB plans, respectively, in the monopoly sector. In the public sector they appear to be less likely to be covered by DB plans when compared with DC plans (p [less than] .09). Occupational variables influence plan type much less among younger workers. Location in professional/managerial occupations appears to decrease coverage by the MIXED plan (p [less than] .09). Clerical/sales occupations do not differ significantly from other jobs in plan type. Occupational status is far less important for younger women whose life-course stage, educational background, and historical access to pension types distinguish them from their older counterparts.

### **Imperfect Knowledge of Pension Provisions**

A final set of results deserves attention and discussion. Approximately one-fourth of the older cohort and one-tenth of the younger cohort of women covered by pensions reported that they did not know their pension types

(refer to Table 1). The overall pattern of relationships reported in Table 4 suggests that the "Don't Know" response is consistently associated with the defined contribution plan with one exception; the exception is the selectivity variable. To the extent that a substantive interpretation is permitted here, this result reflects a pattern of greater dependence among younger cohorts on the defined contribution plan.

All the other results, for both cohorts, suggest higher levels of worker knowledge about DC plans. In the absence of employer information or worker interest, the plausible explanation for the overall pattern is that the defined contribution plan is, on average, more readily identifiable because of its currency, portability, tax shelter benefit, and individualized elements. The DB plan, on the other hand, has historically been less accessible and consequently more difficult for workers to understand.

In order to test for the independence of the "Don't Know" option, the models in Table 4 were rerun after deleting the DK respondents. Both the selection and structural equations excluded these workers. The results are reported in Table 5. The overall patterns of effects across cohorts remain essentially the same among life-course and structural factors. The modal estimated for the younger cohort of women remains virtually the same. Among older workers omission of the DK respondents slightly amplifies or diminishes the effects of some variables, but never reverses any effects. The previous effects of widowhood, job tenure and firm size reported in Table 4 are increased somewhat, while the effect of clerical/sales occupations drops below standard significance levels ( $p$  [less than] .07). The results in Table 5 suggest that women with "Don't Know" responses are probably a relatively independent group of older workers with a mix of background and employment characteristics that constrains their knowledge of pensions.

## Conclusions

The workplace has changed steadily over the past three decades. The demographic characteristics of the workforce have changed, with the most significant change reflected in the employment rates of cohorts of women. Structural changes in the workplace have accompanied these demographic changes. Sectoral shifts away from manufacturing, from larger to smaller enterprises, from unionization, and from longer-term employment contracts between employers and workers are redefining the employment relationship and resulting in a growing individualization of the compensation package. Pensions are strategic indicators of this process and how it has intersected with the lives of recent cohorts of women in the workplace.

The shift to the defined contribution plan is a revealing indicator of the changing employment relationship, characterized in the labor market literature as the externalization of labor and the ascendance of the day-laborer over the lifetime employment model. The defined contribution plan, as part of the new cafeteria approach to employee benefits, individualizes the compensation package and relieves employers of long-term liabilities for workers' income security in retirement. Concomitantly, it places nearly exclusive responsibility on the individual to secure retirement wealth.

Women have been introduced to this changing employment relationship in growing numbers over this period. But their experiences have been shaped in part by the intersection of their work and family lives with these structural changes. Where older women workers have faced greater exclusion from pension coverage altogether, younger women have entered a new employment system offering new retirement savings options. The older cohort entered a highly segregated workplace thirty years ago which tended to exclude them from prevailing private pension systems built on the defined benefit plan as part of a closed employment system. Accordingly, their selection into pension participation was highly determined by labor market factors, especially unionization and public or monopoly sector employment.

The younger cohort, who must balance competitive family and work role demands at this stage of their lives, have encountered a turbulent environment for retirement saving in the workplace in the last decade. Pensions were more accessible to women in the 1980's. However, the pensions relatively more available to them were of the defined contribution type. These pensions have double-edged implications for retirement saving in this cohort. They decrease the risk of nonparticipation in pensions; yet they carry the long-term threat of under-

saving for retirement in the twenty-first century when public retirement income sources are also vulnerable and when life expectancy will reach the highest levels in history. The prospects are improved by the growth of portable, individualized savings instruments which can buffer the effects of voluntary and involuntary labor exits, job mobility, or life events that threaten income security.

Future research will benefit by linking workers' lives - including men and women - with institutional data which will permit the more specific decomposition of the effects of supply and demand factors in the changing employment relationship. Portable pensions, like other portable benefits influencing income security, are mixed blessings. They increase worker control and responsibility, but they atomize the retirement saving structure which has been grounded historically in collective public (welfare and social security) and private (union and employer defined benefit plans) systems. Also, the implications of portability and related defined contribution features for patterns of job mobility is yet to be examined in great detail. Job mobility among the young has always been relatively high for reasons not highly related to pension saving. Emergent job mobility patterns among older workers, including moving to so-called bridge jobs and post-career wage or self employment, are likely to be highly related to pension systems, especially for the coming Baby Boom retirement age in the next century. As economic restructuring proceeds, the employment contract may, arguably, move towards greater gender equality or rise to new forms of workplace inequality that may have sweeping implications for the institution of retirement.

## Notes

1. The cases are weighted accordingly to represent the NLS-Mature Women's population in 1989 and the NLS-Young Women's population in 1991.
2. While more detailed private industry sector breakdowns were examined, the public-monopoly-competitive sector partitioning was retained since it correlates highly with the distribution of pension types historically associated with these sector identifications and permits a parsimonious evaluation for our purposes here.
3. Alternative or additional specifications might include selection into employment following Heckman (1979) in the linear case. Attempts to estimate both selection processes (into employment and out of pension participation) produce a redundancy. The selection process of direct theoretical concern to this analysis is the selection of employed women out of participation in different employer-provided pensions. In addition, the two samples include women who are already more likely to be employed than women in the general population. Therefore, we restricted the selectivity issue to factors determining the likelihood of nonparticipation in a pension among workers and excluded a selectivity estimate for prior selection into employment. The constraints of design and theoretical priorities dictated the approach taken (following cautions from Stolzenberg & Relles 1990, 1997).
4. Nonparticipation in a pension is a dichotomous variable where the woman is coded 1 if she has no pension coverage and 0 otherwise. Nonparticipation rather than participation is indicated in order to emphasize the risk for nonparticipation in the context of a changing employment contract and its subsequent implications for type of pension.
5. Multinomial logit models assume that alternative outcomes represented in the dependent variable are independent of each other (Greene 1995). The inclusion of "don't know" responses as an outcome category does not violate this assumption since it cannot be argued that this option is ordered as opposed to independent; that is, the "don't know" option does not follow from one of the other options. Imperfect knowledge about pension type has been found to be associated with background characteristics of workers; its association with or contingency on types of coverage has not been firmly established. Nevertheless, alternative logit models that exclude this option will be examined to see whether the structure of effects varies following this change.
6. Early retirement among women in this and earlier cohorts is more highly associated with retiring on spousal benefits rather than on one's own pension benefits, since husband's benefits are higher on average based on gender differences in work history, pension opportunities, and family roles (Henretta, O'Rand & Chan 1993). Among selected women in the NLS-MW in 1989 only 31 claimed to be retired from work and only one of the "retired" women reported she had her own pension coverage; these retired workers were excluded from the analysis.

7. The lambda variable is a probit estimate in LIMDEP on all employed women and is incorporated in the multinomial model here for pension participants to capture the correlation in errors across the two equations and thus control for sample selection. Arguably, this technical adjustment may also be a theoretically relevant issue. Hargens (1988) has argued that correlated errors in equations may carry substantive meaning in multi-equation systems. The lambdas in these equations represent unmeasured factors influencing selection out of pension participation. Thus, in this equation lambda may represent the underlying risk for nonparticipation in any pension, whose error in estimation may be correlated with that predicting actual pension type.

8. Defined benefit plans have only recently been required in pension regulations to assure that spouses are well informed of "joint-survivor" options which permit front end reductions of benefits of retirees to assure coverage of surviving spouses (widows). Still, retirees usually opt for their full benefits. This decision can result in the need of spouses (widows) to remain at or return to work.

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