

A Cohort Analysis of Household Contribution Rates in Defined Contribution Plans

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Abstract

The pattern of increased prevalence of Defined Contribution plans over Defined Benefit plans has placed greater responsibility for retirement financial security on employees. Many studies suggest that there is inadequate savings by baby boomers; it is not clear whether this varies by cohort. There has been scant research on investigating the influence of age, time, and cohort in retirement saving behavior of boomers. However, the cohort effect may be of importance since it might represent overall differences in response to legislation, changes in the economy, or world events.

The main research question for this study is that whether the effect of time period, cohort, and age play an important role in influencing the likelihood of boomers' contribution and the contribution rates in Employer-sponsored Defined Contribution plans after controlling other variables? The secondary questions are listed below.

1. How does age influence contribution when controlling for period and cohort?
2. How does period influence contribution when controlling for age and cohort?
3. How does age influence contribution by period when controlling for other variables?

Using data from 1989, 1995, and 2001 Survey of Consumer Finances, the study examines the effect of age, cohort, and time on boomers' own contribution to Defined Contribution plan. The dependent variables are the likelihood of contributing to a defined benefit plan and second, the ratio of the household own contribution to all Employer-sponsored Defined Contribution plan to total annual income. The multivariate procedure is based on Heckman's correction for self-selection bias, a two-step procedure. This procedure is preferred since it allows for the decision to contribute and the decision of what percent of income to contribute to be modeled separately.

The independent variables included in the analysis of likelihood of contributing are: age, year, cohort (An interaction of age and period), marital Status, dependents, race, education, net worth, inheritances, homeownership, eligibility, employer contribution, planning horizon, risk tolerance, economic expectation, perceived pension adequacy, goals, and saving habit. The results are used to estimate the inverse mills ratio or likelihood function, denoted as lambda.

The independent variables in addition to lambda in the OLS regression of the contribution rate are: year, cohort, years left until retirement, marital status, dependents, education, net worth, inheritances, homeownership, matching percentage, risk tolerance, economic expectation, perceived pension adequacy, and reason for saving.

The results show that boomers in 2000 are more likely to contribute to DC plans and save higher percentage of their income to DC plans than boomers in 1994. In addition, older boomers are less likely to contribute to DC plans and save lower percentage of their income to DC plans than younger boomers in year 2000.

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