

► Retirement

# *Factors Influencing Participation in a Voluntary Retirement Plan: An Empirical Study*

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► A groundbreaking study of university employees provides insight into the many factors that influence retirement plan participation. ◀

## **INTRODUCTION**

The objective of this research was to investigate the important demographic and other characteristics that distinguish those employees most likely to reject participation in a voluntary retirement plan from those most likely to participate. A human resource department needs this information for several reasons. When considering installation of a matching 401(k), supplemental 403(b) or other voluntary retirement program, an employer needs to estimate the likely degree of participation in order to project cost. When considering how to best stimulate participation, the characteristics of employees most likely to decline participation (where that is an option) or to choose only minimal participation are needed. Thus, in addition to demographic variables, we investigated the factors that best explain: (1) the *decision* to participate or not participate in (a) a primary (but optional) voluntary retirement plan and (b) a supplemental plan; (2) employee *knowledge* about their prospective retirement plan and needs; and (3) employee *satisfaction* with their retirement plan.

## **DESIGN OF STUDY**

### *The Literature*

Most of the literature concentrates on employee satisfaction with benefit programs. The studies that are most relevant are those by Lust (1990), Collins and Wyckoff (1988), and Sanchez and Juetten (1988). Lust found that pay level satisfaction, education level and length of employment were the best predictors of satisfaction with employee benefits programs. Collins and Wyckoff used the 1983 Survey of Consumer Finances to estimate the determinants of household decisions to purchase individual retirement accounts (IRAs) and tax-deferred annuity (TDA) plans. They found income to be relevant, but not marginal tax rate. Variables were limited by the survey instrument. Sanchez and Juetten explored satisfaction with pay and benefits for different demographic groups. They found that workers are generally more satisfied with benefits than pay, but are generally dissatisfied with retirement benefits.

Curatola and Smith (1991) and O'Neil and Thompson (1987) provide some Internal Revenue Service data showing participation in IRAs by income levels and tax filing status, which tend

to verify the reliability of some of the results of this study relating to income level as a predictive variable. Topolnicki (1989) found by telephone survey that preretirees were very good savers and very concerned about funding their retirement years because of inflation, but chose to place savings in inflation susceptible savings accounts. Several articles (*Employee Benefit Plan Review* 1991a; Kittrell 1988; Liberto 1991; Locke 1989; Pearson 1991; *Employee Benefit Plan Review* 1991b; and Starr 1991) addressed the advantages, growth and marketing to employees of 401(k) plans. Daniels (1989) gathered empirical data on current pension plans and retirement policies in American higher education.

This study, then, appears to be unique in a number of ways:

- It tests for a broad variety of participation and nonparticipation determinants other than simply demographic ones.
- It focuses specifically on a retirement plan rather than employee benefits in general.
- It seeks to determine the variables accounting for actual participation/nonparticipation choices rather than simply satisfaction levels.

### **Methodology**

Data were collected using a 30-item survey of the 459 faculty, staff and administration of St. Mary's University, with the full support of the personnel office. The survey's questions centered around the school's retirement program. St. Mary's has a fairly simple retirement plan: Social Security combined with a 403(b) defined contribution plan funded through TIAA-CREF. Participation is not permitted the first year of employment unless the employee was previously in TIAA-CREF. After one year the employee may elect to join the regular retirement plan by agreeing to have 5% of his or her salary withheld and contributed to the plan, to be matched by a 6% contribution from the university. In addition, the employee may choose to contribute additional funds to TIAA's supplemental retirement plan. Almost 30% of eligible employees (mostly those with over one year of service) do *not* participate even in the regular plan and thus forfeit the employer's matching funds.

With 201 of the 459 St. Mary's employees completing and returning the survey, the response rate was 44%. Of these 201 surveys received, however, 26 were first year employees who were ineligible for participation (two first year faculty were

eligible). While overall survey question averages presented in the exhibits include these 26, for t-test purposes they were excluded. The 26 were kept in one column of data in Tables I and II in order to compare their similarity to participants versus nonparticipants. A review of Tables I and II shows them generally more like participants. Several demographic factors were hypothesized as being significant determinants of participation.

“Several demographic factors were hypothesized as being significant determinants of participation. They included income, education, sex, age, race and marital status.”

They included income, education, sex, age, race and marital status. Many other factors were also considered in a second category, among them trust in the Social Security system to provide retirement needs, knowledge of tax implications of retirement plans and relative fear of inflation. In this category, a five-choice Likert scale was used for responses to each factor.<sup>1</sup> Participants were asked to indicate their degree of belief, concern, reliance or planning according to the following choices: (1) to a very little extent; (2) to a little

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TABLE I

**Demographic Variables Significantly Related to Plan Participation/Nonparticipation**

Rank By t Value	Variable	Averages of Responses			Level of Sig. of Dif.
		All	Pars.	Nonpars.	
1	Salary	2.47	2.91	1.47	.01
2	Age	4.09	4.82	2.59	.01
3	Employment length	1.88	2.22	1.46	.01
4	Degrees	2.62	2.87	2.03	.01
5	Years of school	16.91	17.53	15.23	.01
6	Position	2.10	1.98	2.46	.01
7	Race	1.37	1.32	1.52	.05
8	Does your spouse work?*	2.70	2.77	2.64	.10
9	Percentage of retirement income from spouse	2.96	2.79	3.43	.10
10	Marital status	1.62	1.67	1.52	.10
11	Family size	3.05	3.22	2.86	
12	Sex	1.52	1.48	1.54	

\*Only those married considered.

TABLE II

**Ranked Retirement Planning Variables; Determinants of Plan Participation**

(Likert 1-to-5 Scale)\*

Rank By Likert Value	Variable	Averages of Responses			Level of Sig. of Dif.
		All	Pars.	Nonpars.	
1	Inflation concern	3.94	4.03	3.61	.05
2	Satisfied with TIAA	3.63	3.79	3.33	.05
3	TSA better than other investment	3.34	3.54	3.09	.05
4	Like more counseling	3.33	3.12	3.62	.05
5	Need to save more	3.26	3.02	3.64	.01
6	Prefer TSA contributions to salary	3.14	3.41	2.38	.01
7	Believe SMU plan comparable	3.02	3.01	3.00	
8	Satisfied with SMU contributions	3.02	2.94	3.37	.10
9	Satisfied with SMU plan aspects	2.98	3.07	2.78	
10	Satisfied with SMU counseling	2.91	2.96	3.00	
11	Have planned for retirement	2.90	3.26	2.18	.01
12	Understand tax advantages of plan	2.82	3.04	2.60	.05
13	Spend more time than spouse	2.68	3.01	2.06	.01
14	Rely on other investments	2.59	2.60	2.53	
15	Could save more for retirement	2.54	2.46	2.59	
16	SS main source of retirement income	2.23	2.16	2.40	
17	Believe SS promises are good	1.78	1.93	1.68	
18	Rely on inheritances	1.32	1.31	1.25	

\*The authors will be pleased to provide to interested readers the survey and the precise manner of the scaling arrangement for the 1-5 response.

extent; (3) to some extent; (4) to a great extent; (5) to a very great extent.

There is a wide variety in employee demographics at St. Mary's: Salaries range from \$8,874 to \$127,000; ages range from 21 to 71; and 61% are white and about 35% Hispanic. Data regarding sensitive information such as salary and age were coded by the personnel office to protect the privacy of participants.

### **Sample Representativeness**

The respondents represented 44% of the total number of employees at St. Mary's. It would be difficult to address the question of response bias by surveying the nonrespondents, since their identity was known only by code, but we could and did compare the sample demographics to those for all employees. Table III shows that the distributions by position (i.e., faculty vs. staff and administration) and by sex are almost equal: 36.8% of the respondents are faculty compared with 34.5% overall; 48.3% are male compared with 50.6% overall. A slightly larger percentage of the survey respondents participate in the retirement plan than that for all employees: 74.9% compared to 70.4% overall. This may be accounted for by the sample variance in Hispanics and income level. A smaller percentage of respondents were Hispanic and a smaller percentage were low income. It is noteworthy, however, that these factors were shown to be significant determinants of participation even with the lower representation in the sample. The only way to assume error due to non-response bias would be to conjecture that low-income Hispanics not responding were greater participants than those responding, and this is not likely.

### **Demographic Variables**

The significant demographic variables are given in Table I in rank order of significance, using t-test analyses of participating and nonparticipating samples. Salary and age were found to be the dominant determinants of participation: Older employees with higher salaries were most likely to participate. Length of employment at St. Mary's was also a significant variable, although there is most likely a close association with this variable and age. Education, whether measured by degrees or years of schooling, was a significant determining variable. Location of job was also a significant variable: Faculty and administration were much more likely to participate

**TABLE III**

### **Sample Representativeness**

	University Overall	Those Completing Survey
1. Employees	100.0%	44.0%
2. Participation in plan	70.4	79.9
3. Faculty	34.5	36.8
4. Males	50.6	48.3
5. Hispanics	34.7	26.4
6. <\$20,000	46.2	38.3

than staff. The above variables were all significant at the .01 level. Race (using the Equal Employment Opportunity perspective) was significant at the .05 level, with Hispanics less likely to participate than Anglos.

Some other observations were made. There appeared to be some relationship between participation and marital status (whether the spouse worked or not). While those married were more likely to be participants, there was one special condition for not participating when married. When the spouse worked and when a greater percentage of retirement income was expected from his or her retirement plan, then the St. Mary's employee was less likely to participate in St. Mary's plan. Sex was not found to be a determining factor.

### **Other Significant Factors**

A number of questions were asked to determine such things as: (1) knowledge about taxes, Social Security, the university retirement plan, etc.; (2) readiness for retirement; (3) satisfaction with current plans; (4) desire for counseling; and (5) concerns about economic factors affecting retirement. Table II displays, in ranked order by Likert 1-to-5 scale response, the variables that were of most concern to survey participants. Remember that column 1 values are for all respondents, while columns 2 and 3 exclude first year employees, most of whom are ineligible for plan participation.

Some interesting observations can be made from Table II. The greatest concern seems to be inflation, which is interesting given the relatively low rates of inflation in recent years compared to those a decade ago. It is also a significant determinant of participation. While No. 3 (belief that saving via St. Mary's tax-sheltered annuity (TSA) plan is more advantageous than a separate investment



FIGURE 1

**Hispanic Respondents**

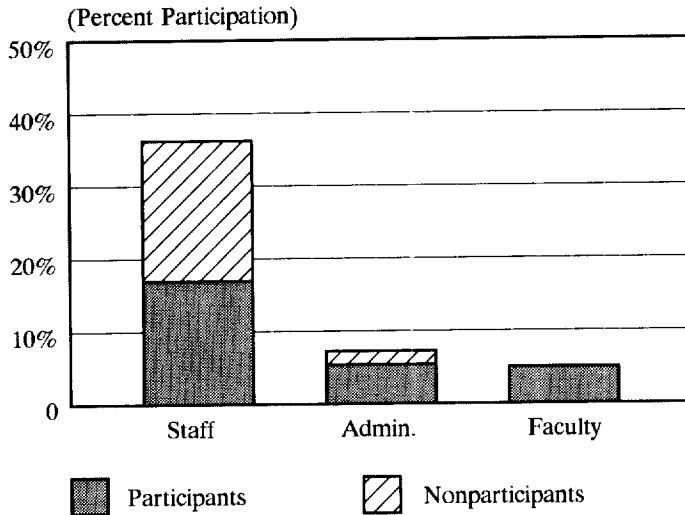
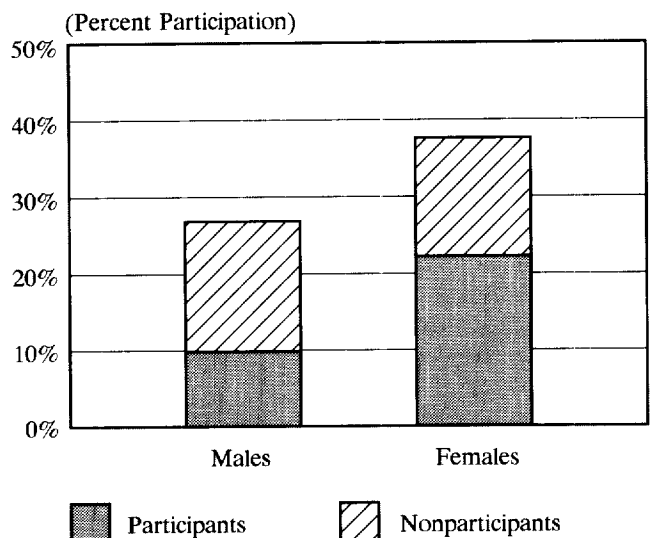


FIGURE 2

**Eligible Employees <\$20,000**



program) is rather obvious as a determinant factor, it is interesting that even nonparticipants give it high credence. No. 4 suggests that nonparticipants want more information and counseling than participants. Nos. 6 and 11 are rather expected, since only those in the plan would consider the alternative of putting more into the plan rather than a salary increase, and participants would naturally consider that they have done more planning for retirement than nonparticipants. It is possible also that those in the plan would feel less need to save more (No. 5). No. 13 indicates that participants tend to be the primary retirement planners in the family (and perhaps the primary income providers).

Factors 4 and 12 seem to indicate that participation levels could be improved through more retirement counseling. The St. Mary's personnel office conducts workshops for employees concerning retirement planning, but it appears that many do not perceive that such counseling is sufficient. A trigger point for the participation decision is the first anniversary of employment. The personnel office may need to concentrate on notification and education of employees at this critical time.

The bottom-ranked factors are interesting, though not significant as predictive participation variables. They show that, on the whole, employees do not rely on inheritances, other investments or even Social Security as important sources of income during retirement. They seem to recognize that a retirement plan is their most important source of financial security during retirement, yet feel that they cannot save any more. Perhaps this is due to the demographic factors discussed in Table I.

After reviewing all data, we conclude that the most likely nonparticipants are young, low-income Hispanic staff, who feel the need for more savings and who, if married, rely on spouses' incomes and plans. Figure 1 shows the participation levels of Hispanics. Note that less than one-half of Hispanic staff participate. Figure 2 shows that participation levels are also particularly low among low-income employees, with males in this group participating less than females.

**The Decision to Contribute Supplemental Funds**

To determine if further distinguishing factors could be identified that would characterize those who choose to contribute additional funds to the

TIAA-CREF supplemental plan, t-tests were conducted relating those in the supplemental plan to the various factors tested. In this case, only those who already participated in the regular plan were included in the analysis. Four factors were found to distinguish these individuals from those who only belonged to the regular plan (at the 1% level of significance): They are considerably older; they are more likely to have working spouses; they scored higher on the very first question ("Have you planned for your retirement?"); and they spend more time than their spouses planning for retirement income.

## CONCLUSIONS

Demographically, the significant variables describing nonparticipants were income level (defined as salary), age, length of employment, education level, employment classification and race. Sex was not a factor, while marital status and whether the spouse worked proved to be somewhat significant.

The need to save more for retirement was a greater concern for nonparticipants than for participants; they also recognize that they have planned for retirement to a lesser extent than participants. However, they are less willing to forgo salary for retirement savings. Their spouses tend to be the primary retirement planners in the family. Their understanding of the tax advantages of TSAs is less than that of participants, and they expressed a greater interest for more information and counseling than did participants (who obviously felt that they were getting enough). While concern about inflation is significant among both groups, it is significantly greater for participants.

All of the above mentioned variables were found to be significant determinants of participation, using standard t-test analyses. Both participants and nonparticipants, however, felt that they would be hard pressed to save more for retirement, even though they could not rely much on other investments, inheritances or Social Security for retirement income. ◀

## Endnotes

1. Likert was a well-known statistician, academic and psychologist who favored a five-point scale for survey responses. He headed the University of Michigan's Institute for Social Research for a number of years.

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