1-1-2000

Reflections on an Earlier Study of Mandatory Retirement: What Came True and What We Can Still Learn

Karen C. Holden
University of Wisconson Madison

W Lee Hansen
University of Wisconson Madison

Reflections on an Earlier Study of Mandatory Retirement: What Came True and What We Can Still Learn

To Retire or Not?

Retirement Policy and Practice in Higher Education

Edited by
Robert L. Clark and P. Brett Hammond

Pension Research Council
The Wharton School of the University of Pennsylvania

PENN

University of Pennsylvania Press
Philadelphia

Pension Research Council Publications

A complete list of books in the series appears at the back of this volume

Printed in the United States of America on acid-free paper
10 9 8 7 6 5 4 3 2 1

Published by
University of Pennsylvania Press
Philadelphia, Pennsylvania 19104–4011

Library of Congress Cataloging-in-Publication Data

To retire or not? : retirement policy and practice in higher education / edited by Robert L. Clark and P. Brett Hammond.
p. cm.
"Pension Research Council publications"—T.p. verso.
Includes bibliographical references and index.
ISBN 0-8122-3572-X (cloth : alk. paper)
1. College teachers—Pensions—United States—Congresses.
I. Clark, Robert Louis, 1949– II. Hammond, P. Brett.
III. Wharton School. Pension Research Council.
LB2334 .T6 2001
331.25′2913781′20973—dc21 00-055218

Chapter 10

Reflections on an Earlier Study of Mandatory Retirement: What Came True and What We Can Still Learn

Karen C. Holden and W. Lee Hansen

When the federal government eliminated age-based mandatory retirement in 1994, almost two decades of uncertainty ended regarding mandatory retirement age (MRA) policies in higher education. During those years, academe faced periods of high inflation that threatened to erode the real value of faculty salaries and pensions and thus, perhaps, delayed retirements and constrained operating budgets. This in turn limited the ability of institutions to expand and develop new programs by hiring new faculty. At the same time, the age distribution of faculty in higher education meant a rise in their mean age even without any change in retirement age policies. The prospect of uncapping was viewed with the same fears by academic institutions, as was the earlier rise (in 1982) in the MRA from 65 to 70.

Predictions about the dire effects on colleges and universities of raising the minimum MRA from age 65 to 70 in the early 1980s, and of subsequently uncapping the MRA in 1994, failed to materialize (see Smith, this volume). Yet, as evidenced elsewhere in this volume, colleges and universities continue to express concern about faculty retirement issues: too many highly paid (but less productive) professors will continue teaching well into their 70s; early retirement programs developed to help prevent this from occurring will be costly; and the age-bunching of faculty hires from the 1960s will make the retirement problem even more acute in the coming decade.

This chapter describes and assesses the only nationally representative study of retirement policies and practices and of retirement behavior in higher education. We address three questions:

- What are the institutional policies and individual characteristics that shape retirement timing?
- What bearing do the findings from our earlier study on raising the mini-

mum allowed MRA from 65 to 70 have on understanding how institutions and individuals may respond to uncapping mandatory retirement? and
- What will the likely pattern be of faculty retirements over the coming decade?

Lessons Learned from Prior Research: The 1978 Amendments

Background. The 1978 Amendments to the Age Discrimination in Employment Act (ADEA) raised the minimum allowed age of mandatory retirement from 65 to 70 for all Americans but granted a four-year exemption (until July 1, 1982) for faculty members with indefinite (i.e., tenured) appointments in institutions of higher education. In the meantime, colleges and universities could continue to retire faculty forcibly as early as age 65 for reasons of age alone, unless Congress made the exemption permanent, something it did not do. The subsequent 1986 ADEA eliminated mandatory retirement at any age, although once again faculty members in higher education were exempt, this time through January 1, 1994.

The 1978 and 1986 exemptions for faculty were granted in response to strong opposition from academe to the loss of what was viewed as an essential human resource tool. The principal arguments rested on the academic enterprise's unique mission to educate the next generation of workers and scholars and to nurture intellectual and scientific advances. Thus, it was argued, orderly and predictable retirements were essential to creating opportunities to hire recently trained new faculty who would further this mission. In the absence of this means of compelling older faculty to retire, the intellectual atmosphere and rewards and the nonphysically demanding nature of the job would lead to unacceptable delays in retirement. In addition, it was generally accepted wisdom that the defined contribution plans covering faculty in private institutions, in contrast to the defined benefit plans in public institutions and private industry, provided a financial incentive to delay retirement well past the plan's "normal" retirement age.

Because so little was known about the actual effect of MRA policies on retirement behavior even for the general workforce, a provision of the 1978 legislation called for the U.S. Department of Labor to carry out a study of the effect of raising the MRA to 70, including a separate study specifically on its impact for higher education. In 1979 we were commissioned to undertake the study of ending the 1978 exemption for tenured faculty.

Our study addressed four major questions: (1) What MRA policies prevailed in higher education? (2) What effect did these and other personnel policies have on the age of retirement of faculty members? (3) What would be the likely, first-round effects of raising the MRA from 65 to 70? (4) What adaptations in behavior both by higher education institutions and faculty would be triggered by such a change? These were not easily answered

questions since an MRA is just one factor influencing retirement. Personal characteristics of faculty members, institutional characteristics, job histories and current responsibilities, and fringe benefit and other personnel policies also influence when faculty members retire. Thus, understanding mandatory retirement policy effects required collecting and analyzing data so that we could distinguish the influence of other important factors from that of mandatory retirement rules. There were no national data on retirement policies and faculty characteristics across universities and colleges, so we collected data from a sample of institutions and from their tenured faculty members. This matched institutional-faculty data set still remains the only nationally representative study of retirement policies, pensions, and retirement timing in academe (Hansen and Holden 1981b; U.S. House of Representatives Select Committee on Aging 1982; Holden and Hansen 1989).

Although the surveys were conducted in 1979–80 and the study was completed in 1981, the findings on the determinants of retirement timing remain relevant to the current debate over the consequences of finally eliminating mandatory retirement in higher education. This claim stems from the following observations: (1) the underlying factors shaping retirement behavior have not changed to any substantial degree; (2) TIAA-CREF and state plans continue to be the principal retirement plans for the vast majority of faculty members and thus shape retirement options despite somewhat greater flexibility since then in benefit structure and supplemental annuity options; (3) evidence on retirement rates from those few institutions that in 1979–80 had no age of mandatory retirement both anticipated and are suggestive of the effects of raising the MRA to 70 and eventually uncapping it in 1994. Further, the chapters in this volume that describe primarily an uncapped world confirm many of our study's conclusions and predictions about retirement behavior in general and MRA effects specifically.

Retirement timing determinants. The lessons from our study that are most relevant to understanding the current and future patterns of faculty retirement include the following: (1) The absence of a comprehensive database severely limits the ability of higher education to plan for externally mandated personnel policy changes and is essential for understanding current and future retirement behavior; (2) although private institutions were more likely than public institutions to have an MRA of 65, they coupled this with liberal extension policies that resulted in similar retirement age patterns on average between public and private institutions; (3) although public and private institutions were generally covered by different types of plans, type of plan did not matter in explaining retirement patterns; (4) the average expected age of retirement is different for faculty members in public and private institutions, but this difference cannot be attributed to MRA policies; (5) other institutional policies matter and have an important influence on retirement timing in higher education; and (6) although eliminating the MRA would lead to some faculty continuing longer than they otherwise

would be able to, it is the more productive faculty members who tend to retire later.

The matched faculty-institutional data. We developed two surveys, one for a nationally representative sample of colleges and universities and another for a sample of faculty members at the responding institutions.[1] Information came from a sample of institutions drawn to reflect the population of degree-granting institutions with 250 or more students, including two-year community colleges, four-year colleges, and research universities. We then surveyed faculty at responding institutions; responses came from more than 6,000 associate and full professors at the 298 responding institutions. We matched the individual faculty data with that from the specific institution in which they were employed.

From institutions we obtained data on institutional characteristics, faculty numbers, and retirement-related policies. This included information on retirement age policies (mandatory, normal, and early ages of retirement) both at the time of the survey and just prior to the 1978 amendments, on the age distributions of their current faculty and of faculty retirements over the previous two years (1978–79, 1979–80), on benefit formulas for those covered by defined benefit plans, on contribution schedules for those covered by defined contribution plans, on reductions in pension benefits for early retirement, and on any post-MRA employment restrictions. We asked each faculty member for their expected age of retirement as well as demographic characteristics, work histories, professional accomplishments, health conditions, accumulations in defined contribution plans (most often TIAA-CREF), years covered by their current retirement plan, and their current institutional salary. We also obtained information on any other type of retirement benefits they expected to receive, including Social Security and pensions from former jobs. In addition, respondents provided detailed information on all sources of current income (institutional salary as well as income from, for example, consulting fees) and expected sources of income after retirement. To help understand the impact of other fringe benefits we obtained from each institution information on the availability and continuation into retirement of life insurance and health insurance policies, since the loss of this coverage would be a real economic loss on retirement. The linking of the two surveys enabled us to calculate the pension amounts—whether from a defined benefit or defined contribution plan—for which a faculty member would be eligible at different retirement ages. We could thus estimate, in combination with individual faculty service and salary characteristics, the incentives built into each pension for retirement at alternative ages. Our analysis focused on faculty members who were age 56–64, the group we expected to be most aware of and affected by the MRA provisions and the subsequent expiration of the faculty exemption.[2]

Distribution and enforcement of MRA policies. Our study found that MRA policies were neither universal nor strictly enforced during the period when

Table 1. Distribution of Full-Time Faculty by Mandatory Retirement Age and by Type of Institution, 1980

	Percent of all faculty		*Percent of full-time faculty with MRA of age*		
Type of institution	*With no MRA*	*With MRA-total*	*65*	*66–68*	*70+*
Private	1.2	21.9	13.0	1.4	7.5
2-year	0.3	0.5	0.2	0.0	0.3
4-year	0.9	14.5	8.3	0.6	5.6
University	0.0	7.0	4.5	0.8	1.7
Public	11.1	65.7	19.4	2.6	43.7
2-year	6.2	19.7	10.9	0.0	8.8
4-year	3.7	25.8	5.2	0.0	20.6
University	1.2	20.2	3.3	2.6	14.3
Total	12.4	87.6	32.3	4.0	51.3

Source: Holden and Hansen (1981b)
Cells are percentage of all faculty in that group.

they existed. This meant their potential impact on retirement timing varied across institutions and that the impact of eliminating the MRA was moderated. Just prior to passage of the 1978 ADEA, 84 percent of all responding institutions had some age of mandatory retirement with the majority (73 percent) setting this age at 65, 20 percent at 70, and the remainder having no MRA. A sharp contrast was evident between public and private institutions, with fewer than half the public universities (46 percent) and public four-year colleges (47 percent) having an age of 65 as compared to 81 percent and 67 percent of private colleges and universities, respectively. Because public institutions are on average larger, even at the time the 1978 ADEA was passed only about half of all full-time faculty members were covered by an MRA of 65. Another 15 percent were subject to an MRA of 66–68.

By the time of our survey—in 1980, about two years before the expiration of the exemption—only one third of all full-time faculty members were employed in institutions with an MRA of 65; another half were covered by an MRA of 70, while the remaining 12 percent were subject to no MRA (Table 1). Public institutions had moved most rapidly after 1978 to raise their MRA; 56 percent of public institutions with an MRA below 70 had raised or eliminated their MRA in contrast to only 25 percent of private institutions. As a result, among institutions with an MRA in 1980, only 26 percent of public universities and 34 percent of public four-year colleges had an MRA of 65 in 1980 as compared to 64 percent and 61 percent, respectively, for comparable private institutions.

Mandatory retirement does not require total separation from academic employment, and institutions reported considerable flexibility in its appli-

Table 2. Average Expected Retirement Age and Percentage of Faculty Expecting to Retire Before Age 67 and 70, by Mandatory Retirement Age, by Age and Control of Institution

Current age 63–64, and Type of Institution	*Expected retirement age*		*Percent expecting to before age 67*		*Percent expecting to retire before age 70*	
	MRA 65	*MRA 70*	*MRA 65*	*MRA 70*	*MRA 65*	*MRA 70*
All	66.3*	67.2	69.8*	52.6	81.1	69.2
Public	65.6*	66.8	90.5***	57.8	90.5	78.1
Private	66.8**	69.0	56.2*	28.6	75.0***	28.6

Source: Holden and Hansen (1981b).
Different from retirement probability with MRA of 70:
*Significant at .01; **significant at .05; ***significant at .1.

cation. Only a small fraction—13 percent—of all institutions in our survey that reported an MRA of 65 responded that retirement was in fact required at that age. Extensions beyond that date were standard, with most institutions reporting no age limit for extensions, while others granted extensions for one to five years. In effect, the MRA in higher education signaled the end of a tenure contract at which time some faculty members who could continue their teaching and research, perhaps after a review by colleagues or administrators on their ability to continue to perform effectively. The ability to extend service beyond the formal MRA meant the exemption's expiration promised to have a smaller impact on retirement timing than might have been expected although its expiration would clearly alter the nature of the post-65 employment contract.

Expected and actual retirement ages. Few faculty members plan a complete cessation of academic work after their expected age of retirement. In this study, we defined retirement as that age at which a person ceased employment at the institution at which he or she held a full-time, tenured job at the time of our survey. It is this institution-based job change that is the issue in estimating MRA effects on institutional retirement patterns and budgets. Thus, our data on retirement patterns refer to the age at which faculty separate from the institution at which they are employed, regardless of whether they seek a postretirement teaching assignment elsewhere.

The reported prevalence of service extensions beyond the official MRA in part explains why the average actual retirement age for faculty—even at schools with a 65 MRA—was higher than that. The average expected retirement age among faculty who would reach age an MRA of 65 before the exemption expired was also above 65. We examined differences in expected retirement age by age of MRA prevailing at the institution. In Table 2 we show differences for faculty who were age 63–64, a group that would still

have been covered by the 1978 ADEA exemption when they reached age 65. Although faculty members employed in institutions with an MRA of 65 had a somewhat lower expected retirement age (66.3 years vs. 67.2), the striking difference is between retirement ages in private and public institutions. Indeed, the average expected retirement age at public institutions with an MRA of 70 is identical to that at private institutions with an MRA of 65. Expected retirement from public institutions was significantly earlier than from private institutions, regardless of the MRA in effect (i.e., whether it is age 65 or 70).[3]

Type and value of retirement benefit plans. Because virtually all institutions offer their faculty members some kind of pension plan, the question for colleges and universities is not whether having a pension makes a difference to retirement timing, but rather the influence of different plans on retirement timing of individual faculty members. Faculty in our survey who were employed in private institutions were covered primarily by TIAA-CREF while those at public institutions were covered by a state retirement plan. Thus, to some extent perceptions of and empirical estimates of MRA effects are confounded by systematic differences between public and private institutions in both MRA and plan type (see also Clark et al., this volume). The gains to postponing retirement for a faculty member covered by a defined contribution plan will depend primarily on the expected investment earnings on accumulations. For faculty covered by a defined benefit plan the gain will depend primarily on expected increases in salary, which raises the salary average in the formula, and the contribution of the additional year of service. What type of plan is most likely to encourage delayed retirement depends on how expected gains in market earnings compare to salary (and formula) increases. We estimated these gains for faculty in our sample using 1981 prevailing interest and earnings gain expectations.[4]

For each institution we estimated the pension for which a faculty member with an identical service and salary profile would be eligible at age 65 and at 66. The benefit at age 65 and the gain in pension on delaying retirement by one year was almost identical on average for faculty in TIAA-CREF and in public plans. This indicated that, contrary to the then prevailing wisdom, on average the benefit gained by including one more year and a higher salary was equivalent to the then-actuarial gain and additional dividends provided by TIAA-CREF. One explanation is the short salary-averaging period (typically three years) in defined benefit plans in higher education, which in combination with additional years of service lead to relatively high gains from continued work if salary increases are generous. Although other relative salary gain and investment earning scenarios would alter these comparative estimates, our pension simulations showed that relative market and compensation conditions, not basic plan types, determine the gains to postponed retirements. These similar averages between the two types of plans,

however, obscure enormous variations within each type of plan. For example, the most generous public pension offered a benefit 2.5 times that offered by the least generous state plan to an identically positioned faculty member.

Identifying the separate effects of an MRA and other factors. We assessed the separate effect on average retirement age of an MRA by estimating a retirement model built around the assumption that faculty members are influenced by the relative rewards of retirement versus those of continuing to be employed in their current positions (see Appendix A and Keefe, this volume). Two approaches were taken. In the first approach we estimated the effect of an MRA on the actual retirement probabilities reported by institutions, controlling for institutional characteristics (public, private, and size), postretirement fringe benefit continuation (health insurance, and life insurance), and pension wealth (estimated for a hypothetical faculty under each institution's pension plan but with identical personal characteristics across institutions). In the other, which was the main focus of our study, we used the matched institutional-faculty data to examine determinants of expected retirement age, controlling for the same institutional characteristics as in the first analysis, plus individual-specific pension wealth and other financial characteristics. Because of the absence of any prior data on retirement behavior, our study relied on comparison of retirement behavior of faculty subject to different (including no) MRA rules to infer how changing the MRA would influence retirement timing.

In analyzing retirement probabilities at the institutional level, we estimated the effect of an MRA on the probabilities of retiring over a one-year period between ages 60 and 65 and between ages 60 and 69, using institutionally provided data on actual retirements. Three main conclusions emerged. First, an MRA (of 65) appears to have a relatively small effect on retirements, raising the probability among faculty 60–69 of retiring before age 65 by about 12 percentage points and before 70 by about 22 percentage points. At the mean an MRA of 70 (versus an MRA of 65) raises the average age of retirement from 65.6 to 67.0 years even when controlling for the retirement effects of institutionally provided benefits and the change in present value of the institution's primary pension plan if benefits were postponed from age 65 to 66. Second, private institutions, even after adjusting for average annuity wealth offers, could still expect to experience lower rates of retirement—by about 12 percentage points before age 65 and by about 15 percent before age 70. Third, the continuation of other fringe benefits into retirement has an equal or larger impact on retirement timing. Health insurance continuation offers raise the probability of retirement before age 65 by about 14 percentage points. Somewhat surprising, pension wealth had no effect on the actual retirement probabilities, a result perhaps of having to use a value for a hypothetical faculty member whose charac-

teristics are identical across institutions. This is consistent with our earlier conclusion that it is not broad pension type that matters, but how pension policy interacts with institution-specific hiring and salary policies.

We estimated a second retirement model, this time of retirement age expectations of individual faculty members. The matched faculty-institution data enabled us to incorporate the richer matched data including that on other financial assets held by the individual. The pension wealth variable was based on individual salary-service and contribution profiles. Results are presented in Appendix A, Table A1, with separate estimates for faculty aged 56–61, the group who could anticipate being subject to a minimum MRA of 70, and for those aged 62–64, who would have been subject to the ADEA exemption. The major conclusions we draw from this analysis follow.

Among the older group, the presence of an MRA of 65 accelerated retirement by about 1.1 years. This contrasts with the separate effect of employment in a private institution that alone raised the retirement age by even more—1.5 years later than faculty at public universities. Not surprisingly, an MRA of 65 had no effect on the retirement plans of younger faculty since they knew then they would be able to work up to age 70. For the younger faculty, however, the further they were from age 65, the younger they expected to retire.

We were surprised to find that the *level* of pension wealth did not affect retirement timing for the older faculty, although for younger faculty, the additional gains anticipated in earnings and pensions had a delaying effect on the expected age of retirement. Perhaps the most relevant finding for predicting uncapping effects was the increased chances of *delaying* retirement as *nonsalary* professional income rose. This is consistent with Switkes's discussion of the experience with the California voluntary early retirement plans (VERIPs) under which those faculty who had other employment opportunities had *lower* early retirement take-up rates and with Keefe's conclusions that it was the more accomplished scholars who delayed retirement (Switkes, this volume; Keefe, this volume).

Our major conclusion was that it was the combination of rewards provided by higher education to continued employment that mattered with an MRA playing a relatively small role. Factors that remain under control of administrators—salary increases, pension benefit gains with continued work, and research support—encourage faculty to plan a relatively late retirement. Indeed, our interpretation of the effect of nonsalary professional income on retirement timing is that faculty engaged in consulting activities depend on an institutional affiliation for the continuation of those activities. While in some occupations opportunities to earn outside a regular job may continue even after (early) retirement, this appears not to be the case in academe where the receipt of outside income may be conditioned on an institutional affiliation and use of institutional facilities. Our conclusion on the impor-

tance of ongoing institutional affiliation to the ability of faculty members to continue receiving outside income suggest that Cornell University was right on target in proposing supplements to emeritus status as one tool for encouraging early retirement (Ehrenberg et al., this volume).

Finally, our analysis of both actual and expected retirement timing highlights once again the difference between public and private institutions: at the latter faculty expect to retire later even after controlling for pension and MRA policies. We conclude that the perception that pension plan type matters (with defined contribution plans such as TIAA-CREF encouraging later retirement) is wrong. The public-private variable is picking up some other aspect of retirement policies of the academic environment that encourages earlier retirement.

Faculty productivity and retirement expectations. Because a critical issue in the debate on uncapping MRA is the scholarly productivity of faculty who would otherwise have retired, we asked faculty respondents about the number of articles published in the last three years and over their lifetime, as well as their perceptions of the quality of their research and scholarly output relative to that of other faculty in their field, plus a self-assessment of their teaching effectiveness. The analysis of retirement age expectations (Appendix A) indicated that faculty currently engaged in research expected to retire later—by as much as 1.4 years—than those reporting they were not engaged in research. This result is net of other effects and is consistent with Switkes's report of the California experience in which those with more recent publication retired at lower rates (Switkes, this volume).

Simulating effects on budget costs and new hire. We used our data on faculty age structure and retirement expectations to simulate the effect on budget and new hiring of having an age 65 versus age 70 MRA. Assuming constant faculty size, the higher MRA would raise average budget costs within the first five years by about 2 percentage points. New hires initially drop by about 20 percent below the level prevailing with an MRA of 65 but then begin to slowly rise back to near but not quite up to their old levels. When the simulations are undertaken with different faculty age structures the effects in five years on faculty budget costs ranges between 1.7 and 3.7 percent with a fall in that percentage and a narrowing of the range over time. For new hires as well the largest impact is in the short term but quickly diminishes. For the oldest age distributions hirings are actually greater in some later years than they would have been under a younger MRA.

Early retirement incentives. Because other personnel tools will have to be used in an era of a higher (and uncapped) MRA to manage retirements, we explored the attractiveness of several early retirement incentives (ERI) on expected retirement timing. Faculty respondents were presented with three hypothetical offers: (1) their pension benefit levels would not be reduced if they took early retirement; (2) their pension benefits, though reduced

for early retirement, would be fully adjusted for cost of living changes during their entire retired life; and (3) faculty could phase down their workload, with proportionate reductions in their salaries in the years immediately prior to their currently expected retirement age. We asked individuals not only about their interest in each plan but also the age at which they would definitely or possibly take up one of these options.

Among faculty members in our survey (all of whom were age 50 or older) about 25 percent said they would definitely retire earlier if there were no penalty for early retirement. While another 27 percent said they possibly would retire earlier, 41 percent said they definitely would not be interested. The average age at which people said they would retire under such an offer was age 62 compared with their average expected retirement age of 66. Despite then high prevailing rates of inflation, only 22 percent of faculty said that with a fully inflation-indexed pension they would definitely retire earlier and would do so at age 62. The option attractive to the most was the phased retirement offer; 37 percent said they would definitely take such an option although 47 percent expressed absolutely no interest. Postretirement indexing would reduce the average age of retirement by 2.4 years, and the ability to reduce work load would accelerate retirement by 2.9 years.

Faculty age affected the attractiveness of these options, a conclusion that has important implications for the short- and long-term impact of early retirement offers. Faculty members 65–69 expressed no interest in retiring earlier; these individuals had already planned (and acted upon) a delayed retirement or may have been close enough to their expected retirement age that little change in age (even if they took the offer) was possible. These options were also of little interest to the 50–59-year-olds whose expected retirement ages were already relatively early. These options mattered most to the age group 60–64, who on average expected to work another six years. Because an ERI offer appeared to accelerate retirement—and by even more than did an MRA of 65—we conclude that these may be powerful tools for managing retirement timing. Faculty actively engaged in research as well as those who were not were equally likely to accelerate retirement, although the former group made this change from an already later age of retirement. Thus, it appears that with appropriate early retirement incentives, both less productive faculty members, who already plan to retire somewhat earlier, and more productive faculty members can be encouraged to retire earlier than they had expected to retire.

At the time of our survey, few institutions offered ERIs that were anywhere near as attractive as these options. In the institutional survey we tried to obtain data on early retirement benefits that were universally offered to faculty through provisions built into institutional retirement plans as well as those paid fully out of institutional budgets and designed specifically to target early retirees. About 20 percent of all institutions reported some form of early retirement incentives in their pension plan, including 36 percent

of private universities and 22 percent of public universities. Closer examination of institutional ERIs revealed that almost half were optional tax deferred annuity (TDA) plans available to faculty members through salary reductions under IRS code, section 403(b). While the responses indicate a realization by administrators that financial incentives are important to retirement timing, these TDAs offered no greater advantage to earlier retirement than would any defined contribution pension plan.

Institutions were also asked about the ability of faculty members to reduce workloads prior to normal retirement age. Overall, about one third allowed this option, with public universities, in particular, most likely to allow faculty to work part time. Unfortunately, because nothing is known about the conditions faculty must meet to take advantage of this option, it is impossible to evaluate the attractiveness of decreased workloads. Only 31 percent of institutions with a 65 MRA offered a part-time teaching option compared with half of those with a 70 MRA. This suggests that institutions with higher MRAs and public institutions have adjusted in part by offering the option of reduced work loads. The survey results reported by Keefe in this volume document additional movement in this direction, although public institutions remain more likely to have such plans.

How Serious Is the Impact of Uncapping?

If an MRA has an effect on any individual's retirement plans, a change in that policy would lead to some increase in the number retiring after age 70. This increase would be smaller for those institutions that had liberally provided for extensions beyond their formerly established MRA. Thus, it is not surprising to see some small number of faculty delaying retirement beyond age 65 with the rise in MRA and beyond age 70 after uncapping (Clark et al., this volume). An opposing effect of uncapping MRA might also be observed as the MRA is removed as a target age of retirement. That is, as faculty must pay more attention to and are educated by their institutions about other retirement benefit provisions, retirement rates may rise among younger faculty. Clark et al. in this volume report higher rates of retirement among some younger people; the stability of mean ages of retirement even as some faculty delay retirement past age 70 imply increases in retirement rates at younger ages.

Whether the observed or anticipated change in retirement rates should be a concern to affected institutions depends on the teaching and research productivity of those who delay retirement. Clearly the academic enterprise is worse off if less productive faculty members continue past age 70, while those who are popular teachers and would otherwise publish and bring in grant money to support the research and teaching enterprise retire early.

Most chapters in this volume address the question of retirement numbers with but few addressing the question of individual retiree characteristics. In

part the inability to address productivity effects adequately is a result of the continuing lack of a comprehensive data set on retirement policies and retirement behavior of faculty across all types of institutions of higher education. For example, Clark et al. (this volume) in their modeling of retirement behavior at three North Carolina universities are restricted to data available from institutional records, lacking what turned out to be important in our study—information on other sources of income and activities outside that particular institution.

Although our study was of the effect of changing the MRA from 65 to 70, our findings anticipate many of those of uncapping. The reports of both the National Research Council's Committee on Mandatory Retirement in Higher Education and Project on Faculty Retirement concluded that the *increase* in the number extending beyond 70 would be small; that those who did extend would tend to be the most productive; and that the private research universities whose average age of retirement was highest were most able to afford well targeted early retirement programs (Smith, this volume). The studies in this volume show that a small number have continued past age 70, while most faculty retire well before that age. Indeed both the data on the age distribution at retirement and on the unchanged mean age of retirement after uncapping imply a spreading of retirement age as faculty take other factors into account than the targeted MRA as they plan their retirement. Clark et al. in this volume point out the seeming anomaly of increases in retirement rates for faculty younger than age 70. Recently obtained data from the University of Wisconsin, Madison campus, which had its MRA eliminated during the exempt period (O'Neil, this volume) showed a slight increase in retirement numbers and a decline in average age of retirement from age 66.0 to 65.3 after its uncapping.

Conclusion

The challenge in assessing the effect of changes in one retirement policy on retirement timing, faculty age distributions, hiring options, and salary costs, is separating its effects from other demographic and economic constraints that would have operated even without that policy change to alter the faculty age distribution and raise institutional costs. The strength of our 1980–81 study lies in attempting to understand the interplay between faculty decisions to retire and the institutionally provided benefits they expect to receive. Unfortunately, higher education has never launched a long-term effort to collect data necessary to understand how and why retirement decisions of faculty members have changed over time and in response to political, institutional, and personal factors. Large national data sets provide these data for the general population (e.g., the Health and Retirement Study) but contain only a small number of faculty members. Institutional employment data do not provide the rich individual and social context

within which these decisions are made. TIAA-CREF covers the majority of faculty members working in private institutions, and although it covers an increasing number in public institutions, it still excludes that larger group of faculty members. Because private and public institutions differ so substantially, an analysis that is confined to one or the other sector will leave important questions unanswered. As it was, the institutions taking advantage of the exemption were largely private colleges and universities, and private research universities in particular. It may be possible to examine the determinants of faculty retirement in those institutions and even their responses to early retirement incentives, but an important question remains: How different is the experience at these institutions from that of public institutions which for the most part did not take advantage of the MRA exemption? Similarly, looking only at the experience of private research universities, about which there is the greatest concern, one can see only part of the picture. One of our strongest conclusions is that we need better, industrywide data on faculty in higher education.

The measured effects of uncapping are mixed, a result anticipated in the studies of both the 1978 and 1986 ADEA amendments. Although some institutions saw increases in the number of faculty working up to age 70, the numbers were small, and many institutions saw no major change in retirement rates. Our own analysis anticipated what happened—that the major private research institutions were more likely to find their faculty delaying retirements. But these were precisely those institutions in which even prior to 1978 faculty were most likely to delay retirement, and apparently not simply because of defined benefit coverage, but because of some combination of factors that made delayed retirement more attractive to these faculty. This is good news if delayed retirement was and continues to be more likely because of the institutions' well-targeted (even if unintentional) incentives to continue productive teaching and research. Even if the news is not all good for these institutions, broad changes should not be made (eg in pension plans) until it is clear what the factors are leading to delayed retirements and their productivity consequences. Our study does support the development of options that allow faculty to move into part-time assignments that permit them to continue their research and in some cases limited teaching activity.

Several authors suggest that other economic and noneconomic factors are almost certain to dominate the effects of the relatively small numbers of faculty continuing to teach beyond age 70 (Keefe, this volume). We suggest further research on understanding the role and potential impact of these nonpension benefits on retirement behavior. In addition, at the institutional level the impact of other variables is considerable as our simulations show. In particular, enrollment levels and the revenues they produce, whether through tuition or public subsidies, fluctuate considerably from year to year. The number of faculty on the payroll varies from year to year because of un-

expected resignations and less than perfect timing in hiring replacements. Research funding that supports faculty salaries also varies. In short, the fiscal and other effects of faculty continuing until age 70 and beyond appear to be relatively small, when compared with the impact of other forces. This conclusion does not suggest that "at the margin" the continuation of faculty beyond age 70 is of no concern. But with unexpected variations on so many margins, this one is hardly critical and should not be used to divert attention of academe from more critical retirement policy issues.

Appendix A

Our estimated model took the form of

$$\mathrm{RA} = f(E, \mathrm{WEALTH}_i, \mathrm{DELTAWEALTH}_i, X_i, F_i),$$

where

RA is defined as the relevant retirement age,
E is earnings that would be received from an additional year of work.
WEALTH is the present value of future retirement benefits,
DELTAWEALTH is the change in the present value of retirement benefits if deferred for another year,
X represents personal and institutional characteristics,
F represents participation changes upon retirement in other fringe benefits.

Description of Variables

Dependent Variable: In the retirement estimates based on institutionally provided retirement data, RA is the probability that faculty within a particular age group one year prior to the survey retired during the following year. In the estimates based on faculty provided data, RA is the expected age at which the faculty expected to retire from their institution.

Independent variables:

Pv65	Present value of retirement benefit income stream at age 65 ($1,000); discount rate depends on postretirement inflation adjustments
CHPA	Net gains from postponing retirement from age 65 to 66 ($1,000); equal to the change in present value of the pension between age 65 and 66 plus the earnings during that additional year of work
INCDIFF	Professional income earned in 1979 above basic institutional salary ($1,000)

WEALTH	Total value of assets plus housing equity at age 65 assuming an interest rate of 2.5% between current age and age 65 ($1,000)
NOSS	Dummy variable equal to 1 if institution is covered by social security
CW	Dummy variable equal to 1 if faculty member is currently engaged in scholarly research that is likely to lead to publication or other form of dissemination in the next several years
PUB3	Number of articles in professional journals during the past 3 years
BOOKS3	Number of books authored or coauthored during past 3 years
STEV	Dummy variable equal to 1 if teaching is evaluated as excellent or above average
HINS	Dummy variable equal to I if health insurance coverage continues on retirement
LINS	Dummy variable equal to 1 if life insurance continues for retiree
CONTST	Dummy variable equal to 1 if contributions to retirement plan stop at some age
MR65	Dummy variable equal to 1 if there is a mandatory retirement age of 65
YRS65	65 minus current age
HLTH	Dummy variable equal to 1 if health is excellent or good
MARSTATE	A dummy variable equal to 1 if married
MATY	Spouse's income in 1979 ($1,000)
SEX	Dummy variable equal to 1 if male
UNIV	Dummy variable equal to 1 if employed
TWOYR	Dummy variable equal to 1 if employed at a two-year college
PUBPRV	Dummy variable equal to 1 if employed at a private institution

Table A1. Determinants of Expected Retirement Age Faculty Members 56–61 and 62–64.

	56–61	*62–64*
Constant	64.6	65.8
Financial variables		
PV65	–.0025	.0063
CHPA	.0897***	.0200
INCDIFF	–.0069	.1038***
WEALTH	–.0028	–.0033*
NOSS	.3988	–1.5482***
Productivity measures		
CW	1.4050***	.6354
PUB3	.0825***	.0843
BOOK3	–.3984*	.1785
STEV	.2024	.3804

Table A1. Continued

	56–61	*62–64*
Institutional policies		
HINS	.1229	–.0618
LINS	–.0597	–1.0977**
CONTST	.5755	1.0308
MR65	.3889	–1.0874**
Demographic and institutional characteristics		
YRS65	–.3314***	–.2622
HLTH	.7986	1.0061
MARSTAT	–.5966	1.0597
MATY	–.0012	–.0095
SEX	.9576*	–.7856
UNIV	–.1532	.7340
TWOYR	–.7932	1.7141**
PUBPRV	.1517	1.5081**
R^2	.15	.24
F	3.29	1.71
N	405	139

Source: Holden and Hansen, 1981b.
***Significant at .01 level;** significant at .05 level; * significant at .10 level.

Notes

1. The institutional sample was drawn from the U.S. Department of Education's 1978–79 *Directory of Educational Institutions* and the faculty sample matched to these institutions was drawn from 1979 *The Education Directory* compiled and published by an organization with the same name. For more details, see (Holden and Hansen 1981b).The resulting data were weighted to adjust for sampling and response rate differences between public and private institutions and by institutional size.

2. We asked each faculty member to report his or her current expected retirement age and used this age as our measure of retirement timing. Use of information on expectations was unique and controversial at the time but has since been incorporated into the Health and Retirement Survey and widely accepted as a legitimate measure of retirement timing (Ekerdt et al. 1996; Gustman et al. 1995; Honig 1996).

3. The same contrast appears to exist for faculty not subject to any MRA, although the number in our sample who were 63–64 of age is small. All were in public institutions. But on average, these faculty expected to retire 1.7 years earlier than did faculty employed in private institutions and covered by an age 70 MRA.

4. Wealth calculation takes into account both survival probabilities and benefit gains to postponed retirement. We assumed a fixed TIAA-CREF annuity would be taken at the specified retirement age and the dividend rate was 8 percent. We assumed a real discount rate of 5 percent and a then-realistic inflation rate of 10 percent with inflation adjustments in the annuity options modifying the inflation component. If plans were integrated with social security, we included the effect of that integration on the increase in benefits and TIAA-CREF accounts on gains in service and salary.

References

Clark, Robert L., Linda S. Ghent, and Juanita M. Kreps. This volume. "Retirement at Three North Carolina Universities."

Ehrenberg, Ronald G., Michael W. Matier, and David Fontanella. This volume. "Cornell Confronts the End of Mandatory Retirement."

Ekerdt, David J., Stanley DeVineuy, and Karl Kosloski. 1996. "Profiling Plans for Retirement." *Journal of Gerontology: Social Sciences* 51B: S140–S149.

Gustman, Alan L., Olivia S. Mitchell, and Thomas L. Steinmeier. 1995. "Retirement Measures in the Health and Retirement Survey." *Journal of Human Resources* 30 (Supplement 1995): S57-S83.

Hansen, W. Lee and Karen C. Holden. 1981a. "Effect of the Tenured Faculty Exemption in the 1978 ADEA Legislation," in *Abolishing Mandatory Retirement: Implications for America and Social Security of Eliminating Age Discrimination in Employment.* Select Committee on Aging, House of Representatives, 97th Congress, 1st Session, August.

Hansen, W. Lee and Karen C. Holden. 1981b. *Mandatory Retirement in Higher Education.* Department of Economics, University of Wisconsin-Madison. Report submitted to the U. S. Department of Labor, Contract J-9-E-9–0067, October.

Holden, Karen C. and W. Lee Hansen, eds. 1989. *The End of Mandatory Retirement: Effects on Higher Education.* New Directions for Higher Education 65. San Francisco: Jossey-Bass.

Honig, Marjorie. 1996. "Retirement Expectations: Differences by Race, Ethnicity, and Gender." *Gerontologist* 36 (3): 373–82.

O'Neil, Robert. This volume. "Ending Mandatory Retirement in Two State Universities."

Keefe, John. This volume. "Intangible and Tangible Retirement Incentives."

———. This volume. "Survey of Early Retirement Practices in Higher Education."

Smith, Sharon P. This volume. "Faculty Retirement: Reflections on Experiences in an Uncapped Environment."

Switkes, Ellen. This volume. "The University of California Voluntary Early Retirement Incentive Program."

U.S. Department of Labor. 1982. Final Report to Congress on Age Discrimination in Employment Act Studies. Washington, D.C.: U.S. Department of Labor.

U.S. House of Representatives, Select Committee on Aging. 1982. *Abolishing Mandatory Retirement: Implications for America and Social Security of Eliminating Age Discrimination in Employment.* Washington, D.C.: U.S. Government Printing Office 1982.