Introduction

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This is the fifth in a series of volumes dealing with the economics of aging. The prior volumes, also published by the University of Chicago Press, are *The Economics of Aging* (1989), *Issues in the Economics of Aging* (1990), *Topics in the Economics of Aging* (1992), and *Studies in the Economics of Aging* (1994). The papers in this volume deal with labor market behavior, health care, housing and living arrangements, and saving and wealth.

Labor Market Behavior

In "The Effect of Labor Market Rigidities on the Labor Force Behavior of Older Workers," Michael Hurd explores compensation arrangements and other employment practices that constrain workers to a particular number of hours per day, days per week, or weeks per year. Labor market rigidities include the inability to change hours, days, or weeks in an existing job; impediments to taking a different job with a more desirable combination of hours, days, and weeks; and situations that require a disproportionate sacrifice in compensation, job satisfaction, mental or physical requirements, or location in order to obtain a more desirable work schedule. The paper surveys the evidence on labor market rigidities, particularly as they affect older workers.

Hurd concludes that most workers of all ages face rigidities, and that these rigidities tend to arise from fixed employment costs and the requirements of team production. For example, part-time work will tend to have lower money wages than full-time work, because a greater fraction of the work time will be necessary to cover the fixed costs of employment. Similarly, the efficiencies

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associated with team production will tend to concentrate work hours and pe-
nalize those who want to work irregular hours or work part-time. These rigidi-
ties imply that an older worker cannot easily reduce hours (or phase into retire-
ment) in a career job.

However, there are additional impediments to older workers who want to
change jobs. Because it takes time to acquire job-specific skills, and because
older workers can be expected to stay in a new job for fewer years than a
younger worker, employers are likely to be more reluctant to invest in new job
training for older workers. In general, this means that older workers who move
to jobs with fewer work hours must accept positions with fewer job-specific
skills, high turnover rates, and lower compensation.

Labor market rigidities for older workers also result from the structure of
retirement policies. For example, the financial structure of Social Security and
pension plans tends to inhibit retirement (or job mobility) at some ages, and
induce retirement (or job mobility) at other ages. Pension plans may also dis-
courage part-time work by basing pension benefits on final salary rates. The
Social Security earnings test may discourage work beyond the earnings limit.
Employer-provided health insurance may reduce job mobility, particularly
among workers with preexisting conditions. While the effects of these policy-
related rigidities are difficult to quantify, Hurd suggests that they are probably
less important than the labor market rigidities that result from fixed employ-
ment costs and team production.

Because the cost of changing jobs late in the work life tends to be high,
efforts to facilitate phased retirement or other flexible work conditions may be
more effective within the context of a career job. Hurd cautions, however, that
any changes must be advantageous both to employers and employees, so that
older workers will not be viewed as liabilities to their employer. Indeed, de-
termining whether more flexible arrangements can work effectively within the
constraints of team production and fixed employment costs is far from easy.

Robin Lumsdaine, James Stock, and David Wise previously wrote a series
of papers on the incentive effects of employer-provided pension plans, empha-
sizing that plan provisions typically provide substantial incentives to retire
early. If employees do not retire before 65, a large fraction retire at age 65
exactly. In this volume, Lumsdaine, Stock, and Wise consider why retirement
rates are so high at 65.

Age 65 is no longer the typical retirement age. Most employees now retire
before 65, and those who are covered by defined-benefit pension plans often
retire well before 65. Nonetheless, a large fraction of persons who are still
working at 64 retire at 65. For example, at one of the Fortune 500 firms that
are studied in this paper (Firm 3), 48% of men working at 64 retire at 65. In
contrast, only 21% of men who work through age 63 retire at 64. Women at
this firm show a similar increase in retirement rates, from 18% at age 64 to
41% at age 65. Similar jumps in retirement rates at age 65 are found at other
individual firms and more generally in nationwide measures of labor force par-

ticipation. In each of the six data sets discussed in this paper, the highest retirement rate occurs at age 65.

In earlier papers, Lumsdaine, Stock, and Wise attributed the mismatch between predicted and actual rates to an "age-65 retirement effect," having in mind the influence of custom or accepted practice. This paper considers other commonly proposed explanations for the underprediction of age-65 retirement. It is difficult to directly demonstrate the influence of custom and the like. Thus the spirit of the paper is to rule out other explanations and thus, by implication, leave the age-65 retirement effect as the remaining possibility. The results suggest that such an effect is the only plausible explanation that cannot be rejected. In particular, the authors conclude that the availability of Medicare at 65 does not explain the age-65 retirement jump.

The unexplained age-65 spike is important because it limits our ability to predict the effect of potential policy changes, like the planned increase in the Social Security normal retirement age from age 65 to age 67. Would there then be a spike at 67, or would it remain at 65?

Lumsdaine, Stock, and Wise seek to quantify the age-65 retirement puzzle and to explore potential explanations for it. These include in particular the potential gap in health insurance coverage between retirement and the Medicare eligibility age. They also consider whether family status affects age-65 retirement. And they explore the possibility that previous results were importantly affected by small samples of older workers. Because so many employees retire early, the number still employed at 65 is typically small.

None of these possibilities explains the age-65 spike, lending indirect support to the "age-65 retirement effect" explanation. To support the plausibility of an age-65 effect, the authors also consider the possibility that for some employees the utility cost to electing to retire at this "customary" retirement age is small. They conclude that the economic cost is indeed small for some, although for most employees it is quite large. Thus, for most employees, choosing to retire at age 65 would impose noticeable economic cost.

John Ausink and David Wise consider the military pension, compensation, and retirement of U.S. Air Force pilots. Ausink and Wise emphasize that econometric models of job exit are of interest for at least two reasons. There has been a significant decline in the civilian labor force participation of older Americans for the past twenty years (Wise 1985). During the same period, private pension coverage has increased markedly, and Social Security benefits have risen. The study of relationships between the two trends is of interest to economists attempting to explain the incentives that pension plans may provide in encouraging workers to change jobs or stop working, and is also important to firms who may want to affect employee retirement behavior by changing the provisions of their pension plans.

In the military, there is a slightly different perspective. The armed forces must maintain adequate numbers of trained and experienced personnel without the realistic possibility of lateral job entry to replace losses. A shortage of expe-

rienced military pilots cannot be eliminated by hiring pilots from another military, for example. The absence of this remedy for the loss of personnel means that shortfalls in any cohort are difficult to correct, and the potential incentive effects of changes in compensation must be considered before they are made.

In this paper, Ausink and Wise use the option value model of retirement behavior developed by Stock and Wise to examine the effects of compensation on the decision of Air Force pilots to leave the military. The authors conclude that the option value model captures Air Force pilot departure behavior much better than the annualized cost of leaving model that has been used by the military, and substantially better than a more complex stochastic dynamic programming specification. The superiority of the option value model to the dynamic programming formulation raises the possibility that individual decision making may not always be best described with a model that is intended to approximate "correct" economic financial calculations. This is consistent with the results of previous work by Lumsdaine, Stock, and Wise (1992).

Predictions of the effects of changes in compensation using the option value model indicate that individuals at early stages in their careers are more sensitive to losses of future benefits than indicated by previous models. The effects of temporary annual bonuses, such as Aviator Continuation Pay, are small, and bonus amounts must be extremely large to induce departure rates that come close to Air Force objectives.

Ausink and Wise emphasize that the extraordinary changes in the world's political and military climate since the summer of 1991 have already led to adjustments in the defense structure of the United States, and the number of Air Force personnel is declining. To encourage people to leave the military, the Air Force has instituted two incentive programs since 1992. The authors point out that both programs were introduced with little econometric modeling of their potential effects and that fewer officers than expected applied to either program. As the Air Force and other services struggle to reduce in size, other separation incentives will be proposed and studied. The authors conclude that the procedures studied in this paper may be useful in predicting the effects of such programs.

Jonathan Gruber and Brigitte Madrian consider health insurance and early retirement. The dramatic decline in the labor force participation of older men in the past several decades has prompted many studies of retirement behavior. In particular, a great deal of attention has been given to the incentive effects of Social Security provisions and, more recently, to the effects of employer-provided pension plans. A potentially important factor that has not received much attention is the availability of health insurance for retirees. Gruber and Madrian point out that the increased availability of health insurance for older Americans, especially retirees, has come in several forms. First among them is the introduction in the mid-1960s of Medicare, a federal program that provides near-universal health insurance coverage for those over age 65. A second source of health insurance that has grown in importance, particularly for those

under age 65, is employer-provided postretirement health insurance. While only 30% of men who retired in the early 1960s received health insurance from their former employers, this fraction increased to almost half for those retiring in the 1980s (Madrian 1993).

This paper looks at the effect on retirement of a third source of health insurance for early retirees, namely, continuation coverage benefits. During the late 1970s and early 1980s, many states mandated that employers allow employees who leave their jobs to continue purchasing their group health insurance for a specified number of months. These continuation benefits were then extended to all workers in 1986 as part of the federal Consolidated Omnibus Budget Reconciliation Act (COBRA). Although this coverage is available to all workers regardless of age, it should be particularly attractive to older workers who face a relatively high price for health insurance in the private market and who are more likely to be subject to the preexisting-conditions exclusions that are characteristic of such policies.

Madrian and Gruber estimate the effect of health insurance on retirement by examining the effect of state and federal continuation coverage mandates on retirement behavior. They conclude that continuation coverage mandates have had a sizable effect on retirement. Contrary to their expectations, however, they conclude that the effects are not necessarily the strongest at older ages.

Health Care

In "Medicare Reimbursement and Hospital Cost Growth," Mark McClellan poses four questions. Why did Medicare's prospective payment system (PPS) lead to a decline in hospital admissions? Why is the average intensity per discharge increasing? Why do real per capita hospital costs keep increasing? And why aren't the diagnosis-related groups (DRGs) that serve as a basis for Medicare reimbursement of hospitals more related to diagnoses?

McClellan's study suggests that the PPS led to several unanticipated consequences. Under PPS, Medicare reimburses hospitals a fixed amount per patient, based on the patient's DRG. While many DRGs are indeed defined by diagnosis, McClellan makes the important observation that some DRGs are actually reimbursements for specific procedures (rather than just the diagnoses associated with those procedures). The results of the study indicate that hospitals are performing a lot more of the intensive treatments that are explicitly reimbursed (as DRGs), while intensity and admissions have remained constant or fallen for most diseases that are reimbursed by diagnosis alone.

McClellan begins by setting forth in some detail a formal model of hospital production, emphasizing the critical roles of four parties: fully insured patients, physicians, hospitals, and regulators who set the price schedule for hospitals. He then compares the predictions of the model with empirical evidence, emphasizing that the four questions posed above are not so puzzling when understood in the context of the model that he sets out.

Among other conclusions, McClellan emphasizes that hospitals have responded quite dramatically to PPS, to the point that intensive surgical treatments dominate hospital care for the elderly. He concludes that all growth in the case-mix index of Medicare admissions since PPS implementation appears attributable to increasing use over time of the particular intensive technologies that are reimbursed separately under PPS. While these trends may be attributable to exogenous technological change, the model of hospital incentives for investing in intensive technologies for the treatment of health problems suggests they are not. He also concludes that feasible reforms in the structure of PPS reimbursement would be likely to mitigate these trends, at least for some health problems.

Housing and Living Arrangements

In "Living Arrangements: Health and Wealth Effects," Axel Börsch-Supan, Daniel McFadden, and Reinhold Schnabel report several methodological developments in modeling living arrangement decisions. Estimating models with multiple-outcome situations (such as living arrangements) has been a topic of econometric investigation for some time, and these authors have been instrumental in finding solutions. The methodological developments in this paper are applied to the question of how health status and wealth affect living arrangement decisions, using panel data from the Longitudinal Study on Aging. Among the contributions of the paper are the econometric indicators of health status that are used in the analysis.

The authors emphasize that the choice of a living arrangement—in an independent household, in a shared living arrangement with adult children or others, or in an institution—has many implications for the well-being of an elderly person. First, there are important relationships between one's living arrangement and the level of care and assistance received by the elderly. For example, living with other family members eases situations of illness, while living alone makes coping with illnesses more difficult. Second, living arrangement decisions interact importantly with government assistance programs, such as food stamps, supplemental Social Security, and Medicaid, as well as social support services such as district nursing or meals-on-wheels. Eligibility for public assistance both affects and is affected by living arrangement decisions. And third, because a large portion of the wealth of most older people is invested in housing, and because different housing arrangements have different out-of-pocket costs, there are important interactions between financial status and living arrangement decisions. Selling a home, for example, may dramatically increase the liquid wealth of the elderly.

The analysis in this paper accounts for many of these relationships. The authors conclude that, while wealth is an important economic variable in the choice of living arrangements, income is of little relevance once wealth is included. As expected, health is one of the main predictors of living arrangement

choices. Health is well captured in the analysis by two factors: one associated with independent activities and strongly related to age, and the other associated with more basic and person-specific capabilities. Living together with others, mainly children, is positively affected by financial and housing wealth. Moving to an institution is negatively affected by homeownership.

Saving and Wealth

Leslie Papke, Mitchell Petersen, and James Poterba ask, "Do 401(k) plans replace other employer-provided pensions?" The authors point out that, although a growing body of evidence suggests that 401(k) contributors do not offset their contributions by reducing their accumulation of other financial assets, this does not necessarily mean that 401(k) contributions represent net additions to private saving. They could be offset by reduced contributions to other pension plans. Based on a survey of firms with 401(k) plans in 1987, Papke, Petersen, and Poterba investigate the degree of substitution between 401(k) plans and other employer-provided retirement saving arrangements.

They conclude that 401(k) plans do not appear to have displaced previous defined-benefit plans. None of the firms in their data reported substituting the 401(k) plan for a defined-benefit plan. They did find, however, that several firms reported replacing previous thrift or profit-sharing plans with a 401(k) plan. The authors also explored the link between 401(k) participation rates and corporate matching rates. They found that a 50% matching rate increased employee participation by only 10%. Thus they conclude that other factors must explain the high overall participation rate in 401(k) plans.

Jonathan Skinner observes that recent fluctuations in housing prices have led to concern that the windfall gains enjoyed by many of those currently retired could be matched in the future by windfall losses when the baby-boom generation retires. In his paper "Is Housing Wealth a Sideshow?" Skinner considers the extent to which housing price fluctuations play an important role in the economic security of retirees. In particular, he asks whether housing wealth is an important determinant of the consumption and saving of the elderly or whether it is just a "sideshow."

Skinner pursues his analysis by considering the degree to which the data are consistent with three economic models of behavior: the standard life-cycle model, a life-cycle model that includes a bequest motive, and a precautionary saving model. Skinner finds that an increase in housing wealth is associated with a small reduction in other saving, but that the elderly do not generally use their housing equity to finance consumption after retirement. He reconciles these two empiric irregularities by suggesting that housing wealth is a precautionary buffer against unanticipated financial needs. In this sense, the paper adds to the evidence for a precautionary view of saving and weighs against the standard life-cycle view.

Stylized Models and Simulations

The intent of the papers in this part is to consider stylized models of behavior among the elderly, and how the behavior of hypothetical individuals in the models would be predicted to change by varying some of the model parameters. The papers are not empirical in that they do not confront the stylized models with empirical evidence. Rather, they suggest factors that may be important to include in behavioral models, and how those factors appear to influence behavior in hypothetical simulations.

Jonathan Feinstein develops a stylized dynamic model in "Elderly Health, Housing, and Mobility." The goal of the paper is to elucidate the potentially complex relationship between health and housing decisions, and the role of mobility costs and other economic factors in this relationship. Rather than presenting empirical evidence on health and housing decisions, the conclusions of the paper are based on hypothetical simulations that characterize the model's implications. Feinstein gives particular emphasis to the importance of "transitional" housing, such as retirement communities, life care, and shared living arrangements.

David Weil's paper, "Intergenerational Transfers, Aging, and Uncertainty," presents the findings of another thought experiment. Weil considers the degree to which anticipated bequests may reduce the saving of potential recipients. Using a stylized overlapping-generations model, Weil characterizes the particular influence of uncertainty about the age of the donor's death and about the size of the future bequest. Based on his simulations, Weil concludes that uncertainty delays the reduction in individual saving that might otherwise take place by potential recipients of bequests, and delays the reduction in aggregate saving that may result from population aging.

References

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