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Introduction

David A. Wise

The next twenty years mark a new phase in the demographic transition of the United States, as the baby boom generation becomes eligible for Social Security and Medicare. This large population mass, which has been in a prime working and earning phase of their careers, and supporting a comparatively smaller population of older retirees, reaches an age when they too may retire. Whatever social and economic transitions may accompany this demographic shift depend a lot on the labor market decisions of this population, how much they will have saved for their retirement, and what health care they will need.

We consider these issues in this, the twelfth in a series of NBER volumes on the Economics of Aging. The previous volumes are *The Economics of Aging*, *Issues in the Economics of Aging*, *Topics in the Economics of Aging*, *Studies in the Economics of Aging*, *Advances in the Economics of Aging*, *Inquiries in the Economics of Aging*, *Frontiers in the Economics of Aging*, *Themes in the Economics of Aging*, *Perspectives on the Economics of Aging*, *Analyses in the Economics of Aging*, and *Developments in the Economics of Aging*. This introduction provides an overview of the studies contained in the volume, relying to a significant extent on the authors' own language to summarize their findings.

Disability, Work, and Retirement

The first three chapters in the volume consider work and retirement behavior, work disability, and their relationship to the structure of retirement

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and disability policies. These issues are central to discussions of population aging and its impact, because the ages at which people leave the labor force, whether through retirement or disability, define the effective dependency ratio in the population and, by consequence, the associated economic strain that we collectively confront. Even modest changes in when people leave the labor force, on average, could have a very substantial impact on the productive output of the economy as a whole. Moreover, with continual improvements in functional health at older ages, there is an increased capacity for work at older ages that people may or may not choose to do. A common feature of all three studies is their attention to health and disability trends, and the extent to which public policies are structured in ways that reflect health and functional ability as they evolve over time.

In chapter 1, “New Age Thinking: Alternative Ways of Measuring Age, Their Relationship to Labor Force Participation, Government Policies, and GDP,” John Shoven develops several innovative approaches to thinking about age. The traditional measure of age is a measure of years-since-birth. Shoven suggests that for some purposes, age measures that are more closely associated with health and longevity might be more appropriate. For example, a simple alternative to years since birth would be a measure of age based on mortality risk. Groups whose mortality risk is high would be considered old, those with low mortality risk would be classified as young and those with the same mortality risk would be considered to be the same age. Another approach would be to measure age from the other end of life, based on remaining life expectancy, or RLE. Those with a short RLE would be considered elderly and those with a long RLE would be considered young. Shoven notes one advantage of the RLE approach over the mortality risk approach is that it is measured in years, units that are widely understood.

One can apply alternative measures of age in the context of different population groups at any one time, or to compare populations over the course of time. For example, using RLE or mortality risk as a measure of age, one would conclude that a man at the conventionally defined age of sixty-five is roughly the same “age” as a woman of age seventy. The differences across time may be even more dramatic, as mortality rates decline and as longevity increases. For example, fifty-one-year-old men in 1970 had the same mortality risk as fifty-eight-year-old men in 2000, suggesting that they are the same “age,” if age is defined as mortality risk. The mortality risk approach to measuring age would define each of the following groups as being the same age: seventy-year-old women in 2000, sixty-five-year-old men in 2000, and fifty-nine-year-old men in 1970. These kinds of comparative age measurements are presented in detail in chapter 1.

An interesting extension of alternative age measurement applies to population forecasts. By using alternative age measures in population forecasts, the huge wave of elderly forecast for the first half of this century does not

look like a huge wave at all. By conventional sixty-five and over standards, for example, the fraction of the population that is elderly will grow by about 66 percent in the coming decades. By contrast, the fraction of the population that is above a mortality rate that corresponds to sixty-five and over today will grow by only 20 percent. Needless to say, the aging of the society is a lot less dramatic with the alternative mortality-based age measures.

In yet another application of alternative age measurement, Shoven explores the consequences of stabilizing labor force participation rates by age, again using alternative definitions of age. If labor force participation were to remain as it is today with respect to remaining life expectancy (i.e., if the length of retirement stayed where it is today) rather than labor force participation remaining fixed by conventionally-defined age, then there would be almost 10 percent more total labor supply by 2050 in the United States. This additional labor supply would be very helpful in terms of meeting the challenges of financing entitlement programs, among other things. Gross domestic product (GDP) might be almost 10 percent higher by 2050 if retirement lengths stabilize. Several policies are examined in the chapter that would encourage longer work careers, based in part on the redefinition of policy parameters to a new definition of age.

Chapters 2 and 3 focus on the wide variation in enrollment and spending in disability insurance programs across countries, even among countries with similar levels of economic development and comparable access to modern medical technology and treatment. The range of per capita expenditures is enormous, even after correcting for purchasing power differences across countries. The question is, how much of the variation is based on underlying differences in health and functional ability across countries and how much is based on the policies and institutions that provide disability benefits?

The study in chapter 2, “Work Disability: The Effects of Demography, Health, and Disability Insurance,” by Axel Börsch-Supan, points to a trade-off in the provision of disability insurance. On the one hand, disability insurance is a welcome and necessary part of the social safety net as it prevents income losses for those who lose their ability to work before the normal retirement age. On the other hand, disability insurance may be used instead as a shortcut to early retirement even if an individual’s ability to work is not impaired. Understanding the trade-off between its role as a health-dependent social safety net and its use as a broader early retirement program is important for the design of a modern social security system, particularly at a time of financial strain on income support systems in most countries.

Börsch-Supan notes three explanations commonly offered for the large variation in disability insurance spending across countries: demographics, health, and institutions. First, while all European countries are aging, the specific age demographics of the population vary considerably from one country to another. A second potential cause for the cross-national varia-

tion is international variation in health and disability status, beyond just the difference in demographic composition. Third, public pension and disability support systems exert large incentive effects which, according to each country's legislation and policies, significantly increase or decrease the take-up of benefits.

The results of the cross-country study indicate that demographic and health-related differences explain very little of the cross-national variation in disability enrollment rates. By contrast, more than 75 percent of the cross-national variation can be explained by the generosity of, and the ease of access to, disability insurance. The most influential institutional variable is the minimum level of disability required to obtain full benefits. According to the study, this variable alone explains more than 60 percent of the cross-national variation.

In chapter 3, "Labor Market Status and Transitions during the Pre-Retirement Years: Learning from International Differences," Arie Kapteyn, James Smith, Arthur van Soest, and James Banks conduct a similar analysis and reach similar conclusions. Both studies analyze variations in work disability and enrollment in disability insurance in Europe and the United States. Both studies highlight the importance of institutional and policy variation as the primary cause of varying enrollments and spending. Chapter 2 analyzes the issue using data from the Survey of Health, Aging, and Retirement in Europe (SHARE), the English Longitudinal Study on Aging (ELSA), and the Health and Retirement Study (HRS). Chapter 3 uses data from the Panel Study of Income Dynamics (PSID) and the European Community Household Panel (ECHP).

An additional aspect of chapter 3 is a simulation analysis that applies U.S. institutional variables to the population characteristics of other countries to see how self-reported work disability would change in the other countries in the study. These institutional differences include program eligibility rules, workplace accommodation of older or sick workers, and generosity of benefits. Kapteyn, Smith, and van Soest find that by simulating work disability using U.S. parameters (i.e., U.S. institutions and norms), but applied to European countries, there is often a considerable reduction in self-reported disability rates.

Education and Disability

In many past studies of disability trends, a consistent finding is the strong correlation between education and functional ability. Those with more education are less likely to develop functional limitations and appear to cope more effectively with functional limitations when they do develop. The question is, why? What is it about education that reduces disability? The next three chapters in the volume consider aspects of this question.

Chapter 4, by David M. Cutler and Adriana Lleras-Muney, analyzes "The

Education Gradient in Old Age Disability.” The authors note that nearly half of elderly people with less than a high school degree report some difficulty caring for themselves; whereas only about a quarter of college graduates report that they are disabled. The lower disability rate among those who are better educated results in substantial differences in health and medical spending, in employment and earnings, and in many aspects of functional independence. Understanding why education is related to disability and whether changes in education have contributed to disability declines is thus a central policy concern.

There are many theories about the link between education and disability, ranging from childhood conditions that affect both education and disability, occupational differences in the working years, differential health behaviors, differential access to medical care, and differential living situations as a senior. Cutler and Lleras-Muney focus on each of them.

Three factors are highlighted in the chapter as particularly strong influences on the education gradient in disability. The first is health behaviors. Better educated people are significantly less likely to smoke than are less educated people; they are also less obese. Smoking and obesity are both strongly related to disability, and explain a good part of the education effect. In the case of smoking, the difference is not so much smoking initiation (a decision made early in life), but smoking cessation. The share of people who ever smoked is roughly similar by education; quitting behavior, in contrast, is very different. About one-third of the education gradient in disability is found to be associated with differential health behaviors. Another third is explained by differences in lifetime occupation. People are, in perhaps a literal sense, broken down by hard work. Finally, differential rates of medical conditions explain another fifth of the education gradient in disability. Stroke, heart disease, and chronic conditions such as diabetes and arthritis are highly related to disability. Less educated people are more likely to have suffered from these conditions, partly as a result of their greater propensity to smoke and to be obese.

All told, differences in occupation, health behaviors, and their disease consequences explain essentially all of the differences between those with a high school degree and college graduates. However, the factors we analyze can only explain about 55 percent of the differences in disability rates between those with a high school degree and high school dropouts. Interestingly, childhood conditions, use of preventive care after age sixty-five, and living arrangements after age sixty-five do not explain a large share of the education gradient in disability. Based on these results, Cutler and Lleras-Muney suggest that the increased education of recent cohorts will result in lower disability rates in the future and, if lowering education gradients are the policy objective, then efforts should concentrate on modifying the health behaviors of less educated individuals.

Chapter 5 considers one health behavior in particular, smoking, and the

effect of peer behavior in influencing smoking rates. “Social Interactions and Smoking,” by David M. Cutler and Edward L. Glaeser, asks whether people are more likely to smoke when they are surrounded by smokers. Cutler and Glaeser suggest several reasons that peers might matter for health-related behaviors. In many cases, health-related behaviors are more fun to do when others are doing them too (drinking, for example). Peers are also a source of information about health (the benefits of a mammogram) or about what is acceptable in society (the approbation accorded smokers). These interpersonal complementarities can have enormous social impact. They may also relate to the differences in health behavior by education described in chapter 4.

In addition to helping us understand how health behaviors operate, peer effects also magnify the impact of policy interventions. The existence of social interactions implies that a policy intervention has both a direct effect on the impacted individual and an indirect effect, as that person’s behavior impacts those around them. These indirect effects create a social multiplier where the predicted impact of interventions will be greater when the interventions are imposed in larger geographic areas.

Cutler and Glaeser find that individuals whose spouse faced a workplace smoking ban were less likely to smoke themselves. Put the other way, individuals whose spouses smoke are estimated to be 40 percent more likely to smoke themselves. Interestingly, the variation in smoking rates across states and metropolitan areas is estimated to be seven times higher than it would be if there were no social interactions and if there were no exogenous variables differing across geographic regions. The study also finds a significant social multiplier in the impact of smoking bans. The bans have a much stronger impact at higher levels of geographic aggregation. This social multiplier could explain the large time series drop in smoking among some demographic groups.

Chapter 6, by Steven J. Atlas and Jonathan Skinner, is entitled “Education and the Prevalence of Pain.” The study begins by documenting the dramatic differences across educational groups in the prevalence of pain. The authors find significant differences across educational groups, with rates of people aged fifty to fifty-nine troubled by pain ranging from 26 percent for women with a college education to 55 percent for those without a high school diploma. More surprisingly, the prevalence of pain declined with age.

One might think that these differences result from those with lower education being more likely to have worked in manual jobs, or to experience other types of health impairments. This motivated a second component of the study, which followed patients with intervertebral disk herniation (IDH) over a ten-year follow-up period after treatment. The study provided detailed clinical baseline information for a homogeneous sample of people with a common clinical complaint of lower back pain associated with sciatica (referred pain down the leg) arising from IDH. Atlas and Skinner con-

sider education-based differences in the long-term prevalence of pain with treatment, and whether these differences can be explained by underlying clinical health at baseline, or by access to surgical or other medical treatments. The initial severity of the IDH, as measured by imaging or clinical diagnosis, explains just a small degree of variation in outcomes. The most important predictive factor of long-term pain outcomes is education. Even after ten years, the percentage of people who experience leg or back pain “almost always” or “always” is 34 percent for high school dropouts but just 9 percent for college graduates.

Why then is pain so much greater among lower educational (or income) groups? One explanation may be that people report pain to justify nonemployment and disability. According to Atlas and Skinner, however, there is scant evidence for this explanation from the economics literature, and a growing clinical and neurological literature rejecting the idea of people falsely reporting pain. Instead, this new view recognizes the importance of the brain in generating *real* pain even in the absence of a specific physical injury. The strong association between education and pain in both the survey data and the clinical data are supportive of the view that educational attainment has an independent association with the neurological mediators of pain, or for social or even economic factors that may be associated with the perception of pain.

Economic Circumstances and Health

There is a well-established relationship between economic circumstances, health and mortality across the full continuum of economic circumstances. The next three chapters in the volume deal with aspects of this relationship. In chapter 7, “Aging and Death under a Dollar a Day,” Abhijit V. Banerjee and Esther Duflo consider this relationship among those with extremely low incomes around the world. Their research compares the consumption patterns and mortality outcomes of the very poor (living on less than one dollar per day), the poor (less than two dollars per day) and the somewhat less poor (two to four dollars per day, or six to ten dollars per day). As a point of comparison, the poverty line for a family of five in the United States amounts to \$13 per person per day.

Much of these investigators’ prior research has focused on the effects of poverty on relative consumption patterns. At least in some countries, there is evidence that the extremely poor are short on calories and other nutrients, relative to the standard norms for their country. In India, the poorest live on less than 1,500 calories a day compared to a norm of over 2,000, and even this number seems to be going down over time. Where there is more detailed health information, such as in a survey carried out by the authors in a rural Udaipur district, it is also clear that the very poor are undernourished: 65 percent of adult men and 40 percent of adult women have body

mass indexes (BMIs) of less than 18.5, which is the standard cut-off for being underweight. Compared to the poor, the less poor are more likely to send their children to school, more likely to see a doctor when they feel sick, and more inclined to see a private doctor rather than a public practitioner. They also have greater access to water, sanitation, and public infrastructure.

The additional focus of chapter 7 is on the implications of relative poverty for mortality. Based on multiple pieces of evidence, the results all point in the same direction: the poor, and particularly the very poor, have a lower chance of survival than those who are somewhat better off. The proxy measure of longevity used in the study is the probability that an adult's mother and father are alive. The mother of someone who is not poor is more likely to be alive than the mother of someone who is poor. Using panel data for Indonesia and Vietnam, the authors also find that older adults are more likely to have died five years later if they are poor.

Chapter 8 also explores the relationship between economic circumstances and health, focusing on health and environment in early childhood and its long-term effect on health and functioning in old age. In "What's Past is Prologue: The Impact of Early Life Health and Circumstance on Health in Old Age," Anne Case uses two markers of health and environment in early life to assess their impact on health in later life. First, Case documents the extent to which height, as a measure of early life health and nutrition, is associated with more favorable outcomes in old age. Second, she investigates whether conditions that might have affected a mother's nutrition while pregnant—specifically, the success of corn crop production while she was pregnant—are predictive of health in later life, and whether this marker of mother's nutrition can explain the association between height and health outcomes in old age.

The study finds that height is protective of health. On average, taller men and women are more likely to report themselves to be in better health, and are less likely to report that a doctor has told them that they have hypertension. They report fewer difficulties with activities of daily living (ADLs) and better fine motor skills. Height appears to become more protective against hypertension, ADLs, and loss of fine motor skills at the oldest ages, when there is a higher risk of poor health. The study also finds that height is predicted by the success of the corn crop in the year before birth, and that, taken together, height and corn production both have large and significant effects on health in old age. Corn production, like height, appears to be protective against hypertension, the loss of fine motor skills, the loss of large muscle group skills, and the ability to carry out activities of daily living.

The third study on economic circumstances and health is authored by Angus Deaton and is reported in chapter 9. "Income, Aging, Health, and Well-Being around the World: Evidence from the Gallup World Poll" looks at the effects of income and age on self-reported well-being in more than a

hundred countries. It addresses in particular self-reports of life satisfaction, health, and disability, how these measures change with age, and how the effects of age differ across countries according to their level of development and their region of the world. The analysis is based on the Gallup World Poll, which collected data from samples of people in each of 132 countries during 2006. With few exceptions, the samples are nationally representative of people aged fifteen and older. Because the survey used the same questionnaire in all countries, it provides an opportunity to make cross-country comparisons while, at the same time, providing enough data to permit within-country disaggregation; for example, by age, gender, ethnicity, or education.

Deaton finds that the citizens of richer countries are on average more satisfied with their lives than the citizens of poorer countries. Unlike most earlier studies, this effect of income is not confined to poor, unhappy countries, but extends across the range of the income distribution, from Cambodia, Sierra Leone, Togo, Niger, and Chad, which are among the bottom ten countries in both income and life-satisfaction, to Norway, Switzerland, Denmark, Australia, and Canada, which rank in the top ten in both income and life-satisfaction. Each doubling of national income is associated with a near one unit increase in average life-satisfaction measured on an eleven point scale from 0 (“the worst possible life”) to 10 (“the best possible life”). If anything, the effect of national income on national happiness is found to be *stronger* in the rich countries than in the poor countries.

Deaton also looks at the pattern of life satisfaction at different ages. He finds that the results differ according to the level of economic development. Life satisfaction was much worse among the elderly than among the young in poor and middle-income countries. By contrast, in rich countries, especially the English-speaking rich countries, the elderly were relatively satisfied with their lives, sometimes more satisfied than those in midlife. The elderly in the countries of Eastern Europe and the former Soviet Union are particularly dissatisfied with their lives and with their health. In almost all countries and for all age groups, satisfaction with health declines with age, and is lowest among the elderly. The rate of deterioration is much faster in poor than in rich countries, and in some of the richest, satisfaction with health actually *rises* toward the end of life. Thus it appears that one of the benefits of being rich, or at least of living in a rich country, is that wealth slows the ravages of age on health, or at least on satisfaction with health.

While the results of the study are powerful at some level, Deaton cautions that the links between life-satisfaction and life expectancy or HIV prevalence, or even between health-satisfaction and these measures, show too many anomalies to make life-satisfaction a good indicator of health and income combined. For example, HIV prevalence appears to have little or no effect on the fraction of the population reporting dissatisfaction with

their health. Indeed, the fraction of Kenyans who are satisfied with their personal health is the same as the fraction of Britons and higher than the fraction of Americans.

Retirement Saving

The next three chapters look at two of the largest asset categories of older households: retirement saving accounts and housing equity. Over the past two decades, personal retirement accounts have replaced defined benefit pension plans as the primary means of retirement saving, and contributions to 401(k)-type plans have expanded dramatically. More than 80 percent of private retirement plan contributions in 2000 and 2001 were to 401(k) and other personal accounts. Housing equity is the most significant nonretirement asset for a majority of households. Together with Social Security wealth, these asset categories represent a large fraction of the resources available to most households at older ages.

In chapter 10, James M. Poterba, Steven F. Venti, and I analyze “The Rise of 401(k) Plans, Lifetime Earnings, and Wealth at Retirement.” Because 401(k) plans have not existed for the full careers of currently retiring workers, their impact is becoming more significant with each retiring cohort. The typical 401(k) participant retiring in 2000, for example, contributed only for about seven years. By 2040, many more people will have participated, and they will have contributed for most or all of their working careers. In past work, we have projected the impact of 401(k) growth in aggregate, and on average, across households. For example, if equity returns between 2006 and 2040 are comparable to those observed historically, by 2040 average projected 401(k) assets of all persons age sixty-five will be over six times larger than the maximum level ever achieved by traditional defined-benefit pension plans. If equity returns average 300 basis points below their historical value, we project average 401(k) assets that are 3.7 times as large as the peak value of defined benefits (DB).

While these projections highlight aggregate trends, asset accumulation will vary across households. In this study, we look at how Social Security, 401(k) participation, and other asset accumulation fit together for households with different lifetime earnings and different Social Security wealth accumulations. We focus initially on two broad categories of wealth: (a) dedicated retirement assets, which are made up of Social Security wealth, accrued benefits in traditional pension plans, 401(k) savings, and IRAs and Keogh plans; and (b) undedicated assets, including nonretirement financial savings and housing equity.

We find that while 401(k) participation varies substantially by income, broader measures of retirement assets show a “retirement replacement rate” (inclusive of both Social Security and retirement saving) and a “total sav-

ing rate” (including both dedicated and undedicated assets) that varies only moderately by lifetime earnings and by Social Security wealth. Combining projections of 401(k) assets with estimated Social Security wealth, the study finds that the combined rate of growth is surprisingly similar across earnings deciles, and translates to at least a doubling of retirement resources in most earnings and Social Security wealth deciles. The growth rate is lower in the bottom two deciles of lifetime earnings. These various results are indicative of a very dramatic shift in the landscape of financial resources available to retirees in the future.

In Chapter 11, “The Impact of Employer Matching on Savings Plan Participation under Automatic Enrollment,” John Beshears, James J. Choi, David Laibson, and Brigitte C. Madrian present the next in a continuing series of studies on the structural features of 401(k) plans. Companies have used a variety of approaches to encourage participation in employer-sponsored savings plans. The most common approach, the provision of an employer matching contribution, is now offered by the vast majority of large firms. Even with a match, however, savings plan participation rates are often surprisingly low, and their effect on participation is found to be relatively small. Automatic enrollment is an alternative mechanism for increasing savings plan participation. Under automatic enrollment, employees are enrolled in their employer’s savings plan at a default contribution rate and asset allocation unless they actively make an alternative choice. Relative to the standard opt-in approach, automatic enrollment dramatically increases plan participation, particularly among younger, low-tenure, and lower-income employees.

All of the companies in which automatic enrollment has been studied to date have also offered an employer matching contribution. This raises a question about how effective automatic enrollment would be by itself, without an employer match. The extent to which automatic enrollment’s effectiveness relies on the presence of a match is an open question.

The study disentangles the effects of matching and automatic enrollment in two ways. The first is to study a large firm with automatic enrollment that replaced its employer match with a noncontingent employer contribution to the plan, thereby eliminating the incentive that was provided by the match. Among new hires with six months of tenure, savings plan participation rates are found to decrease by, at most, 5 to 6 percentage points after the firm eliminated the employer match. The second approach is to pool the participation data from nine firms, all with automatic enrollment, but with varying matching provisions. The findings from this approach suggest that moving from a typical matching structure (50 percent on the first 6 percent of pay) to no match reduces participation under automatic enrollment by 5 to 11 percentage points. These results lead the authors to conclude that automatic enrollment participation rates are positively related to match

generosity, but that the incremental effect is modest. Thus, companies with automatic enrollment need not offer a match in order to achieve broad-based participation.

In chapter 12, we turn our attention from targeted retirement saving to another important asset of older households, their home. In “Housing Price Volatility and Downsizing in Later Life,” James Banks, Richard Blundell, Zoë Oldfield, and James P. Smith model several types of housing transitions made at older ages in Britain and the United States. They consider the extent of residential mobility and the extent of downsizing across multiple dimensions, including housing size (number of rooms), housing value, and ownership (as compared with renting). They also look at some of the determinants of mobility, with a particular focus on house price volatility, but also the role of major life events, such as retirement or widowhood. A particular contribution of the chapter is its analysis of a longer time horizon, in which there is more likely to be evidence of downsizing if it exists in the data.

The authors find that on balance, looking over a number of dimensions and over a number of transition intervals, downsizing is an important part of life for older households in both countries, but particularly in the United States. For example, over a decade, almost one in every three American homeowners who were at least fifty years old moved out of their originally owned home. Mobility is also found to be higher among renters. And when people do move, they tend to downsize their housing consumption. This downsizing takes multiple forms, including reductions in the number of rooms per dwelling and the value of the home. Among the explanations offered for lower housing mobility and lower downsizing in Britain, the authors note differences in transactions costs associated with moving in Britain, the nature of bequests and inheritance tax bases, and the role of housing wealth in the means test for long-term care.

A second contribution of the chapter is to assess the role of house price volatility in the mobility decisions of the elderly. In addition to any type of downsizing in housing consumption that may occur, some housing transitions at older ages may reflect an attempt to escape from the risk associated with a highly volatile asset. For example, housing price risk at older ages may encourage relocation to less volatile markets. The study finds suggestive evidence that downsizing is greater when house price volatility is greater, and that American households may moderate house price volatility by moving to markets that are more stable.

Medicare

The last two chapters in the volume look at two of the more significant Medicare policy reforms of the last decade. The first was a part of the Balanced Budget Act of 1997. The second was the implementation of Medicare Part D prescription drug coverage in late 2005.

The 1997 Balanced Budget Act (BBA) was one of the most far-reaching attempts to control Medicare expenditure growth. The changes included direct reductions to the Prospective Payment System, affecting nearly all hospitals that care for Medicare inpatients; cuts in both direct and indirect medical education payments; changes in the formulas for disproportionate share payments; the implementation of prospective payment systems for outpatient hospital care, skilled nursing facilities, and home health agencies; and the creation of Medicare + Choice managed care plans. The BBA also expanded the Medicare transfer policy, which reduces payments for transfers of short-term acute patients to a Skilled Nursing Facility, PPS-exempt facilities, or a home health agency.

Chapter 13, “The Narrowing Dispersion of Medicare Expenditures 1997 to 2005,” by Jay Bhattacharya, Alan Garber, and Thomas MaCurdy, investigates how BBA affected Medicare expenditure trends. In the immediate post-BBA period, the most important effects were on inpatient services and home health services, where the intention was unambiguously to reduce Medicare payments. Other features of BBA, such as the introduction of prospective payment for some outpatient services and the creation of Medicare + Choice plans, involved new payment mechanisms with the prospect for long-term expenditure control. The study assesses whether expenditures grew more or less rapidly for high-expenditure Medicare beneficiaries (as compared with people who used few Medicare-covered services) in the period following BBA’s implementation. In particular, did it selectively reduce cost growth at the high end, where many of its provisions were targeted?

The study finds that after 1997, the growth in expenditures among the highest-cost users of Medicare-reimbursed care was less than growth among lower-cost users. Thus, the overall dispersion in expenditures fell over time. These findings suggest that the main effects of the BBA were realized as intended. The authors make the point that piecemeal changes to Medicare policy—those that target only some components of Medicare—cannot be assumed to control overall expenditure growth, since substitution of services can offset some of the savings. In the case of the BBA, however, the targeting of high-cost users is likely to have led to a compression of the expenditure distribution and an overall containment of cost growth.

Chapter 14, “Mind the Gap! Consumer Perceptions and Choices of Medicare Part D Prescription Drug Plans,” by Florian Heiss, Daniel McFadden, and Joachim Winter, analyzes an Internet-based survey of individuals who became eligible for prescription drug coverage through Medicare Part D. Decision making in Medicare Part D can be complicated, because of the diversity of plan options and plan features, combined with uncertainty about future medical needs. The complexity of the program was a source of concern before its introduction. Thus, the design of the program raises questions about how seniors made a decision about whether to enroll in

Medicare Part D and, if they did enroll, how they chose among the available plan options.

The data collection was done in three waves. The initial survey took place in the week before Medicare Part D enrollment began in November 2005, and focused on respondents' knowledge of the program, their perceptions, and their preferences regarding prescription drug use, cost, and insurance. A key finding from the initial data was that a majority of the Medicare population had at least some knowledge of Part D and intended to enroll. However, those with lower income, less education, and poorer health were less well-informed. After the initial enrollment period closed on May 15, 2006, the same respondents were reinterviewed to learn about the actual Medicare Part D enrollments that had taken place. Widespread enrollment was confirmed (though sizable numbers of older people remained uncovered); consumer opinions about the program were mixed. A year later, respondents were interviewed a third time to learn about their experiences in the first year of the program.

The study in chapter 14 focuses on the decisions made in the initial enrollment period, and the influence on plan choice of previous prescription drug use, health risks, health-related expectations, and subjective factors. It draws on all three waves of survey data. The study finds generally that seniors' choices respond in predictable ways to the incentives provided by their own health status and the plan options available to them. In some circumstances, however, consumers selected inexpensive plans even though more expensive and comprehensive alternatives were actuarially favorable. The model developed in the study also suggests that given the subsidies to the program, as well as the penalties for late enrollment, not enrolling immediately in a plan in 2006 would have been the optimal choice for just 2.5 percent of the sample. Despite these caveats, however, the proportion of individuals who appear not to have made an optimal choice is relatively small.