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TECHNICAL REPORT

The Economic Burden of Providing Health Insurance

How Much Worse Off Are Small Firms?

Christine Eibner

Supported by the Ewing Marion Kauffman Foundation

KAUFFMAN-RAND INSTITUTE FOR
ENTREPRENEURSHIP PUBLIC POLICY

The research described in this report was conducted within the Kauffman-RAND Institute for Entrepreneurship Public Policy in the RAND Institute for Civil Justice (ICJ). ICJ research is supported by pooled grants from corporations, trade and professional associations, and individuals; by government grants and contracts; and by private foundations.

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Preface

More than 60 percent of nonelderly Americans receive health-insurance coverage through employers. However, rising health-care costs are leading many to question the long-term viability of the employer-based insurance system. Concerns about the economic burden of providing health insurance are particularly acute for small businesses, which are both less likely to offer health insurance and more sensitive to price when making offer decisions than are larger firms. In this report, we analyze trends in the economic burden associated with health-insurance provision, and the distribution of this burden, for firms of different sizes. We also explore differences across firm-size categories in the generosity of health plans provided.

The Kauffman-RAND Institute for Entrepreneurship Public Policy

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Summary

More than 60 percent of nonelderly Americans receive health-insurance coverage through employers, either as policyholders or as dependents. However, rising health-care costs are leading many to question the long-term viability of the employer-based insurance system. Concerns about the economic burden of providing health insurance are particularly acute for small businesses, which are both less likely than larger firms to offer health insurance and more sensitive to price when deciding to offer insurance. Small firms may have difficulty containing costs due to their limited bargaining power and their inability to hire experts skilled in negotiating with insurance companies. Further, while few recent studies have systematically explored differences in the quality of health-insurance plans that small and large firms offer, there is some evidence to suggest that small firms may offer health plans of lower quality.

To better understand these issues, researchers from the Kauffman-RAND Institute for Entrepreneurship Public Policy (KRI) explored trends in the economic burden associated with health-insurance provision, as well as the distribution of this burden, for small and large businesses. Researchers also considered the quality of plans that small and large firms offer.

To measure economic burden, researchers examined firms' health-insurance spending relative to payroll. To understand the generosity of health-insurance plans offered, researchers reviewed specific plan characteristics as well as the predicted actuarial value of the plans. Data for these analyses come from the Employment Cost Index (ECI), a quarterly survey of businesses conducted by the U.S. Bureau of Labor Statistics (BLS), as well as the Employee Benefits Survey (EBS), a periodic survey of employer health plans that BLS also conducts.

Health-Insurance Burden Increased, Especially for Small Firms

The study found that, between 2000 and 2005, the economic burden of providing insurance increased for employers, particularly for the smallest firms. Holding constant other factors, such as unionization and industry mix, researchers found that, by 2005, a typical firm offering health insurance spent between 7 and 10 percent of payroll on health insurance. Over this period, the health-insurance burden grew substantially for firms with fewer than 25 employees, for which average health-insurance costs as a share of payroll grew from 8 to 11 percent, which was an overall increase of 30 percent. By 2005, 50 percent of all small businesses offering health insurance spent more than 10 percent of payroll on health-insurance costs. In comparison, the health-insurance burden grew by 16 percent at firms with 25 to 49 employees and by 25 percent at firms with 50 to 99 employees.

Very small firms (<10 employees) had higher cost growth than firms with 11 to 24 employees. Between 2000 and 2005, firms with 10 or fewer employees experienced a 32-percent increase in health-insurance costs relative to payroll, compared with a 22-percent increase at firms with 11 to 24 employees. Not only was the increase steeper for the smallest firms, but, in 2005, the smallest offering firms had higher health-insurance costs relative to payroll than larger firms: Small firms (fewer than 25 employees) spent 11 percent of payroll on health insurance, compared with 7 percent at firms with 25 to 49 employees, 9 percent at firms with 50 to 99 employees, and 10 percent at firms with 100 or more employees.

There was also considerable variance in the level of health-insurance burden among small firms. While, in 2005, 25 percent of small firms that offered insurance spent less than 6 percent of payroll on health care, another 25 percent spent in excess of 15 percent of payroll on health-insurance costs. The considerable variance in the level of health-insurance burden for small firms suggests that a "one-size-fits-all" policy to facilitate health-insurance provision at small businesses may be poorly targeted. Subsidies or exemptions targeted solely on the basis of firm size might give unfair advantage to small firms with higher payrolls (and more highly paid employees) while excessively burdening larger firms with employees who earn less.

An unexpected finding in this analysis was that both very small firms (fewer than 25 employees) and very large firms (100 or more employees) have higher health-insurance burdens than do medium-sized firms (26 to 99 employees). A potential explanation for this is that take-up of health insurance at very small and very large firms is higher than that at medium-sized firms. Take-up at small firms may be high either because small employers that offer health insurance require all their employees to purchase coverage or because small employers that offer insurance have employees with unusually high demand for coverage.

Despite Higher Cost Burden, Firms Did Not Drop Insurance Coverage

Perhaps the most surprising finding in this analysis is that, despite clear increases in health-insurance costs and cost burden, there is no evidence that firms dropped coverage over the period analyzed. Health-insurance offer rates remained relatively stable from 2000 to 2005. Moreover, the stability in offer rates was evident even for the smallest firms (fewer than 25 employees and fewer than 11 employees), among which the growth in health-insurance burden was most pronounced.

These findings suggest that firms, and ultimately their employees, were willing to shoulder the burden of rising health-insurance costs even if it meant giving up increases in wages. However, it is unclear whether employers and their employees will be able to afford this burden in the future, if health-insurance costs continue to outpace growth in payroll.

Smaller Firms Offered Plans of Slightly Lower Quality

Overall, the study found that small firms offered plans that were of slightly lower quality than those offered by large firms. The research found that plans offered by small firms (fewer than 25 employees) had slightly lower actuarial values than those offered by large firms, especially for non-HMO plans (e.g., preferred-provider organizations [PPOs] and traditional fee-for-service [FFS] plans), and for enrollees in the top 50 percent of expenditures. The study found that an

average employee at a small firm would expect to spend 1.9 percent of annual earnings on out-of-pocket (OOP) health expenditures, while an average employee at a firm with more than 100 employees would expect to pay 1.3 percent of annual earnings on such expenses. While the lower actuarial values at small firms do not translate into large differentials in OOP spending, they exacerbate compensation differentials between employees at small and large firms, given the fact that employees at small firms tend to have lower salaries. Employees at small firms who have higher expenditures, such as older and sicker employees, may be particularly disadvantaged when they receive insurance through their employer.

Overall, the results paint a mixed picture of the relative generosity of plans offered by small and large firms. Although health plans at large firms (100+ employees) are more likely to include drug and dental coverage, and non-HMO plans offered by large firms have lower deductibles and coinsurance rates, HMO plans offered at large firms require higher copayments, and non-HMO plans offered at large firms are less likely to have an OOP maximum.

Employer-Based Health Insurance May Become Unaffordable If Costs Continue to Grow

The results of the study indicate that the growth in health-insurance burden has been substantial for firms of all sizes, although the burden is especially significant at smaller firms with fewer than 25 employees. These results suggest that, if health-insurance costs continue to rise, all employers—large and small alike—may have difficulty shouldering health-insurance burdens. Although firms may pass insurance costs back to employees in the form of lower salaries, employees may be unwilling or unable to afford these cost increases in the future. This may be particularly true at very small firms, whose employees appear to be sacrificing a larger share of their salaries for a lower-quality benefit.

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Abbreviations

AHRQ	Agency for Healthcare Research and Quality
BLS	Bureau of Labor Statistics
EBS	Employee Benefits Survey
ECI	Employment Cost Index
FFS	fee for service
HSA	health savings account
KRI	Kauffman-RAND Institute for Entrepreneurship Public Policy
MEEI	multiestablishment employer indicator
OLS	ordinary least squares
OOP	out of pocket
POS	point of service
PPO	preferred-provider organization
QCEW	Quarterly Census of Employment and Wages
RU	reporting unit
RWJF	Robert Wood Johnson Foundation
UI	unemployment insurance

CHAPTER ONE

Introduction

More than 60 percent of nonelderly Americans receive health-insurance coverage through employers, either as policy holders or as dependents (Fronstin, 2006). However, rising health-care costs are leading many to question the long-term viability of the employer-based insurance system. Health spending per privately insured person increased by an average of 8.6 percent per year between 2000 and 2005, more than double the annual average increase in per-capita GDP (Ginsburg et al., 2006). The Agency for Healthcare Research and Quality (AHRQ) reports that the average total premium for an individual employer-sponsored insurance policy was $3,991 in 2005, an increase of 32.5 percent (in inflation-adjusted dollars) from 2000.[1]

Concerns about the economic burden of providing health insurance are particularly acute for small businesses, which are both less likely to offer health insurance (KFF, 2006) and more sensitive to price when making offer decisions (Hadley and Reschovsky, 2001; Gruber and Lettau, 2004) than are larger firms. In this report, we explore trends in the economic burden associated with health-insurance provision, as well as the distribution of this burden, for small and large businesses. We also consider the quality of plans that small and large firms offer, helping us to understand the value of the firms' health-insurance expenditures as a recruitment and retention incentive for employees. Our measure of economic burden is the ratio of per-capita health-insurance costs relative to per-capita payroll. We found a large increase over time to be our measure of employer burden, particularly at smaller businesses. But, despite this increase, employer health-insurance–offer rates remained stable over the period studied (2000 to 2005). Finally, we found that smaller firms offered less-generous benefits than did larger firms, although these differences were small and of borderline statistical significance.

Data for this analysis come from the Employment Cost Index (ECI), a quarterly survey of businesses that the Bureau of Labor Statistics (BLS) conducts, as well as the Employee Benefits Survey (EBS), a periodic survey of employer health plans that BLS also conducts. Like many employer surveys used to study health-insurance markets, the sampling unit for both the ECI and the EBS is the establishment rather than the firm. Establishment-based surveys pose challenges for researchers interested in the health-insurance–offering behavior of small businesses, because health-insurance–offer decisions are typically made at the firm level. To address this issue, we used supplementary data from BLS to identify single-establishment firms. Our data span the years 2000 through 2005.

[1] Figure comes from a comparison of AHRQ (2000) to AHRQ (2005b).

Background

Health-care cost inflation is a particularly vexing problem for small firms. Recent data from the Henry J. Kaiser Family Foundation, Harvard School of Public Health, and USA Today (2006) indicate that total premiums for businesses with three to 24 employees increased by 10.5 percent between 2005 and 2006, exceeding the growth rate for all other firm-size categories. Small firms may have difficulty containing costs due to their limited bargaining power and their inability to hire experts skilled in negotiating with insurance companies (Carpenter, 2003). A qualitative study of small firms conducted in 2000 and 2001 (Short and Lesser, 2002) found that many small businesses used aggressive tactics, such as eliminating dependent coverage, to reduce costs. While the study did not find an overall reduction in offers during the period analyzed, the authors concluded that eliminating offers might be the only option for small businesses that have exhausted other cost-cutting possibilities.

Compared with other businesses, small firms are both less likely to offer insurance and more likely to drop coverage as prices increase. The KFF (2006) report indicated that 60 percent of small firms (three to 199 employees) offered health insurance in 2006, compared with 98 percent of larger firms. Studies that estimate firms' price elasticity of demand for offering insurance have consistently found that smaller firms have higher elasticities than larger businesses. Gruber and Lettau (2004) found a price elasticity of demand for offering insurance of –0.50 for establishments with fewer than 100 employees, which is double the estimate of –0.25 for all establishments in their sample. Similarly, Hadley and Reschovsky (2002) estimated elasticities of offering that were monotonically decreasing in establishment size, starting at –0.63 for establishments with fewer than 10 employees and declining to –0.03 for establishments with 50 or more employees.

Several previous studies have analyzed the impact of state health-insurance regulations enacted during the 1990s on small firms' health-insurance provision and employment outcomes. These reforms, which restricted insurers' ability to decline coverage and limited their ability to base prices on experience, effectively increased the price of insurance policies offered to small firms. Despite the fact that the purpose of these reforms was to increase health-insurance access, several studies (Simon, 2000; Kaestner and Simon, 2002) found that extensive small-group reforms increased the health-insurance price that small firms face and decreased coverage. Other studies found that small-group reforms had an insignificant effect on coverage (Sloan and Conover, 1998; Buchmueller and DiNardo, 2002). While Kaestner and Simon (2002) found no evidence for adverse labor-market outcomes stemming from small-group health-insurance reforms, Kapur (2004) found suggestive evidence that, after the reforms, small employers were less likely to hire employees who might have been denied coverage in the prereform era.

Other literature, not specifically targeted to small firms, finds that businesses in general react to insurance-price increases in ways that have implications for overall labor-market outcomes. Cutler and Madrian (1998) found that increases in health-insurance costs throughout the 1980s led to more hours worked by employees with health insurance. The authors argued that, since health insurance has a fixed cost, businesses have an incentive to substitute hours for employment as health-insurance costs increase. Baicker and Chandra (2005) exploited state-specific variation in medical-malpractice payments to identify the effect of health-insurance cost on employment outcomes and found that higher costs reduce the probability of employment and increase the probability of working part time.

Finally, while few recent studies have systematically explored differences in the quality of health-insurance plans that small and large firms offer, there is some evidence to suggest that small firms offer health plans of lower quality. Using the 1997 Robert Wood Johnson Foundation (RWJF) employer survey (Long and Marquis, 1997), Cantor, Long, and Marquis (1995) found that plans offered by small firms (fewer than 25 employees) had higher deductibles and were less likely to include supplementary services, such as prescription-drug coverage and mental-health coverage, than were plans offered by larger firms (50 or more employees). More recently, the 2006 KFF survey (KFF, 2006) found that deductibles for preferred-provider–organization (PPO), point-of-service (POS), and high-deductible health plans offered by small firms (three to 199 employees) were almost twice as large as similar plans offered by large firms (200+ employees). Lower-quality benefits may inhibit small firms' ability to compete for qualified employees in the labor market and may leave employees at risk of being underinsured.

Motivation

Most economists believe that employees, rather than firms, ultimately bear the burden of rising health-insurance costs through reduced wages (Summers, 1989; Pauly, 1994). However, characterizing the burden at the firm level is relevant for several reasons. Many proposals to expand health-insurance coverage build on the employer-based system, often by requiring employers to offer health insurance to their employees. Although, in the long run, costs associated with insurance provision may be passed on to employees, in the short run, they may cause labor-market distortions. Sommers (2005) found that wage rigidity keeps firms from fully shifting costs to employees and concluded that rising health-insurance costs may force employers to bear part of the cost burden. Prior research has shown that rising health-insurance costs may cause firms to reduce employment, require employees to work longer hours, or hire more part-time employees (Baicker and Chandra, 2005; Cutler and Madrian, 1998). Looking specifically at small firms, Kapur (2004) found that increases in health-insurance costs may cause businesses to screen out job applicants who have costly health conditions. Additionally, businesses with a large share of low-wage employees may have difficulty passing health-insurance costs on to employees due to minimum-wage laws. This issue may be of particular concern to small businesses, which tend to have lower wages than other firms have (Brown and Medoff, 1989). While firms may respond to higher health-insurance costs by reducing the number or amount of wage increases over time, it is also unclear whether firms can accurately target these wage increases to specific employees with high health-insurance costs. Although Gruber (1994) found that female employees of child-bearing age bear almost all costs associated with the Family and Medical Leave Act (P.L. 103-3), evidence is weak that firms target wage reductions specifically to employees with high health-insurance costs (Morrisey, 2001).

Recent evidence also suggests that firms view addressing rising health-care costs as being in their best interest. An increasing number of firms are beginning to take a more active role in promoting employees' health through encouraging preventive care, providing incentives for healthy behavior, and managing disease (Wojcik, 2006b; Craver and Kennedy, 2006; Smerd, 2007; Race, 2007). Employers have also resisted health-care reform proposals requiring them to offer insurance (McDonough, 2005; Wojcik, 2006c), arguing that they are financially unable to provide coverage to the nation's working uninsured (Wojcik, 2006a). These responses to rising health-care costs and the possibility of state or federal mandates suggest that employers

view health expenditures as something that affects their bottom line rather than as a cost that can easily be shifted to employees.

These insights, combined with the results of prior research discussed here, imply that rising insurance prices have a significant effect on employers' health-insurance offers and on the labor market, that small firms may have experienced insurance-price increases throughout the 1990s as a result of regulatory reforms, and that small firms' health-insurance–offer decisions are particularly responsive to price. In this analysis, we attempt to answer several questions related to growth in employers' cost burden associated with providing health insurance, focusing on small firms. The key questions that we explore include (1) How much did employers' health-insurance burden grow between 2000 and 2005, overall and for small firms? (2) Did growth in health-insurance burden at small firms differ from growth at larger firms? (3) Were health-insurance burdens relatively similar across all offering firms of a given size? If not, what did the distribution of health-insurance burden look like at offering firms? (4) Were increases in health-insurance costs paralleled by declines in other forms of compensation (e.g., wages, other benefits)? and (5) Did health-insurance–offer rates decline between 2000 and 2005? As a secondary question, we explore whether small firms offered lower-quality health-insurance plans than do larger firms, assessing quality by the fraction of health-care costs that the plan covers.

Approach

In this report, we explore trends in the economic burden associated with health-insurance provision, as well as the distribution of this burden, for small and large businesses. We also consider the quality of plans offered by small and large firms, helping us to understand the value of the firms' health-insurance expenditures as a recruitment and retention incentive for employees. Specifically, we analyze trends in the distribution of health-insurance burden borne by small and large businesses from 2000 to 2005. Our measure of economic burden is the ratio of per-employee health-insurance costs to per-employee payroll expenditures (*HI*/*P*). This ratio has been used in several policy proposals to cap the health-insurance burden that firms should be required to shoulder. For example, the failed 1994 Health Security Act (H.R. 3600) capped employer health-insurance payments at 7.9 percent of total payroll. More recently, the California governor's health-care reform proposal (which recently failed in the California senate) would have assessed employers who do not provide health insurance a 4-percent payroll tax (State of California, undated). We also look at trends in health-insurance cost relative to payroll (*HI*/*P*) on average and at the 25th, 50th, and 75th percentiles of the *HI*/*P* distribution among offering firms to determine whether the distribution of health-insurance burden has increased over time. Measures of plan quality include plan characteristics (e.g., deductibles, copayments), as well as a predicted actuarial value.

Another potential measure of employer health-insurance costs is the total premium per enrolled employee; however, this measure does not capture the "burden" associated with health-insurance provision, since not all employees will enroll and employers with lower payrolls may have more difficulty shifting these costs onto their employees. One might also consider the employer's health-insurance cost as a share of total compensation. While we do not explicitly evaluate premium prices or health-insurance costs as a share of total compensation, in some

models, we separately assess trends over time in employer compensation costs for health care, wages, and non–health-insurance benefits.

All of our analyses hold business characteristics constant at 2005 levels, allowing us to distinguish general trends in health-insurance burden from compositional effects. This distinction is important from a policy standpoint, since a change in health-insurance burden stemming from a change in the composition of businesses might not be as large a concern as a change stemming from pure health-care cost inflation. For example, the health-insurance burden borne by firms might increase if the share of full-time employees increased, but this is not necessarily cause for concern from a policy perspective. We consider trends in the economic burden of health-insurance provision on average and at the 25th, 50th, and 75th percentiles of the distribution for small and large offering businesses. Understanding the distribution of health-insurance burdens for firms of different sizes may help policymakers understand the effects of various health-care–system reform proposals, such as employer mandates to offer insurance, on firms' competitiveness.

Finally, we consider the relative generosity of plans offered by small and large firms, measured using plan characteristics and actuarial values. Understanding plan generosity is relevant in the context of evaluating the health-insurance burden because employees will be more willing to trade wages for a generous health plan than for an equivalently priced but less generous plan. Further, firms that are currently providing bare-bones plans may have greater difficulty sustaining health benefits in the face of rising prices, since they have fewer cost-cutting options available to them. From a policy standpoint, we may be less concerned about firms that have a high burden and a generous plans than we are about firms that have high burdens and low-quality plans.

Overview of This Report

Chapter Two provides an overview of the data used in this analysis, including a discussion of how we identified firms in the establishment-based BLS data. In Chapter Three, we discuss the econometric methods we used in this analysis. Chapter Four presents the results, including a sensitivity analysis focused on very small firms (fewer than 11 employees). Chapter Five addresses the limitations of our study. In Chapter Six, we discuss our findings, returning to the five key questions posed at the end of the "Motivation" section earlier in this chapter. Chapter Seven concludes.

CHAPTER TWO

Data

Our data come from two BLS data files—the ECI and the EBS. The ECI measures quarterly changes in total wage and nonwage compensation per hour for U.S. employees and is fielded to a nationally representative sample of establishments. Compensation costs for wage and nonwage benefits are collected for a randomly selected group of occupations within each establishment. We converted the ECI data to an establishment-level file by computing average compensation costs per employee across all sampled occupations. We also converted the weights, originally designed to represent all U.S. employees, to establishment-level weights by summing the weights over all occupations in the establishment and dividing by the total number of employees in the establishment. Because establishments can remain in the ECI sample for several quarters, we restricted our sample to one observation per establishment per year by choosing the last data point for each establishment in a calendar year. This leaves us with 54,739 establishment-year observations for the years 2000 to 2005. Offering firms in the ECI are defined as firms that have positive spending for health insurance.[1] State and local government employers, as well as agricultural employers, are excluded from the sample.

Because some small establishments may be part of larger firms, it is potentially misleading to use the establishment-based ECI data to analyze health-insurance burdens for small businesses. To address this issue, we use supplementary data from BLS's Quarterly Census of Employment and Wages (QCEW) to restrict our sample to establishments that are not affiliated with any other establishments within their state. Specifically, the QCEW data contain administrative information that employers report for state unemployment insurance. Each firm within a state is assigned an unemployment-insurance (UI) account number, and each establishment within the firm is assigned a reporting unit (RU) number. Although a unique UI number would identify a single-unit establishment, selecting observations with unique UI numbers within the ECI would be imperfect because the ECI is a sample of establishments rather than a universe (and therefore we would erroneously keep nonunique establishments for which only one location was surveyed). Instead, we used two approaches to identify unique establishments within a state. First, we kept only establishments for which the RU number is equal to 0, which—in theory—should identify single-unit establishments due to BLS coding conventions. In practice, we found many cases in which establishments with RU numbers equal to 0 had nonunique UI numbers within their states. Thus, we also screened out establishments for which the UI number is nonunique in the ECI sample. Out of the 49,852 ECI observations with a match in the QCEW, we identified 26,007 as single-unit establishments.

[1] Employer contributions to flexible spending accounts and health savings accounts (HSAs) are categorized as health-insurance spending in the ECI (Saleem, 2003). However, these plans are not recorded as medical benefits in the EBS.

The methodology that we used to identify single-unit establishments has several limitations. First, we potentially miss multiunit establishments for which the RU number is erroneously coded 0 but sibling establishments are outside of the ECI sample frame. Second, we miss multiunit establishments with sibling establishments in different states. For a small subset of establishments, we can check the accuracy of our classification system using a variable called a multiestablishment employer indicator (MEEI), which is available for 14,536 of the 49,852 firms with a QCEW match. This identifier directly identifies single- and multiunit establishments. Table A.1 in the appendix reports both weighted and unweighted cross-tabulations validating our single-unit–firm classification system against the MEEI. In the weighted sample, only 1.6 percent of firms that we identified as single were actually multiunit, and most of these were classified as small (fewer than 11 employees) in all secondary establishments combined. Conversely, of the observations that were identified as single using the MEEI, we classified 98.8 percent as single in our weighted sample. Match rates are not nearly as good in the unweighted sample, and our method excludes 29 percent of establishments that would have been classified as single using the MEEI. However, since we used weights in all subsequent analyses, the discordant observations would have been substantially down-weighted even if they were included in our sample.

An additional limitation of restricting the sample to single-unit firms is that these firms have different costs and offer different compensation from those of multiunit firms. Tables 2.1 and 2.2 compare payroll per employee, health-insurance spending per employee, firm size, and insurance-offer probabilities at single- and multiunit establishments, for all and offering establishments, respectively. The analysis reveals that multiunit establishments are, on average, significantly larger than single establishments and that multiunit establishments have a higher probability of offering insurance. Single-unit establishments, however, have slightly higher payroll per employee, and—when we restrict the analysis to offering establishments—single-unit businesses have substantially higher compensation costs. These differences suggest that our results do not necessarily apply to multiunit firms. However, because small businesses are more likely to be single-unit businesses, our results are relevant for understanding how rising health-insurance costs affect small businesses. Since we focus on single-unit firms, we use the

Table 2.1
Differences in Average Characteristics of Multiunit and Single-Unit Establishments, 2005

Characteristic	Multiunit Establishments	Single-Unit Establishments	T-Test[a]
Payroll per employee	$27,185 (19,455)	$28,384 (21,585)	–2.77
Health-insurance spending per employee	$2,568.21 (2,659.12)	$1,811.70 (2,842.47)	13.09
Establishment size (employees)	37.81 (201.24)	13.93 (56.64)	8.21
Probability of offering insurance	0.79 (0.40)	0.49 (0.50)	31.09
N	5,282	4,035	

NOTE: Standard deviations are in parentheses.

[a] Null hypothesis: No difference in values between multi- and single-unit establishments.

Table 2.2
Differences in Average Characteristics of Multiunit and Single-Unit Establishments, Offering Establishments Only, 2005

Characteristic	Multiunit Establishments	Single-Unit Establishments	T-Test[a]
Payroll per employee	$31,844 (20,121)	$38,436 (25,003)	–12.45
Health-insurance spending per employee	$3,451.51 (2,540.51)	$3,846.81 (3,054)	–6.06
Establishment size (employees)	44.38 (230.89)	21.86 (79.14)	6.32
N	4,990	3,142	

NOTE: Standard deviations are in parentheses.

[a] Null hypothesis: No difference in values between multi- and single-unit establishments.

terms *firm* (an entire business, including plants and offices at all locations) and *establishment* (a single plant or office) interchangeably throughout the remainder of this document.

To explore trends in benefit generosity, we used data from the EBS, a survey of employee benefits collected periodically, using the same sampling frame as the ECI. Like the ECI, the EBS is an occupation-based survey, and establishments are asked to report information on health plans available to employees in selected occupations. When sample weights are applied, the EBS data are nationally representative of U.S. employees enrolled in employer-sponsored health plans. We used data from the 2000 and 2003 EBS data, but because the 2003 survey was fielded from December 2001 until April 2003, it is more accurately thought of as 2002–2003 data. As with the ECI, we use the QCEW data to identify single-unit firms in the EBS. There are 32,678 plans in the 2000 and 2003 EBS data, sampled from 3,320 establishments. The sample falls to 29,723 plans at 3,152 establishments when we limit to observations with a match in the QCEW and drops again to 14,643 plans at 1,848 establishments when we restrict our sample to single-unit firms. Table A.2 in the appendix shows MEEIs from the subset of establishments with an MEEI. We show unweighted data only, since the weights in the EBS are representative of enrolled employees rather than establishments. Overall, the match rate is relatively high—93 percent of the sample is accurately classified as single—and almost half of the remaining establishments have fewer than 10 employees at all sibling units.

The EBS contains information on plan characteristics, but the specific information collected in the EBS varies by type of plan. While information on copayments is available for all plans, information on other plan characteristics (deductibles, coinsurance rates, and out-of-pocket [OOP] maximums) is not available for prepaid (HMO) plans. As a result, we report results separately for prepaid and other plans (i.e., fee-for-service [FFS], POS, and PPO plans). These categorizations ensure that our descriptive statistics align with published statistics reported by the BLS (2003, 2005). All of the plan characteristics used in the analysis are derived from single, as opposed to family, plans.

The unit of analysis in the EBS regressions is the plan, and the weights in the EBS inflate the sample to reflect the population of enrolled employees. As a result, the EBS results reflect not only the sample of plans offered by establishments but also employees' enrollment decisions. It is debatable whether employees' enrollment decisions should be considered when evaluating the generosity of firm offers. If employers offer plans that are expensive or unattractive

and therefore have low enrollment, these plans may not contribute substantially to employer costs and may be less relevant from a policy perspective. However, by weighting the sample to reflect enrollment, we are not fully considering the employee's true choice set. It would be ideal to consider both enrollment-weighted and plan-weighted regressions; however, two concerns prevented us from analyzing the data without enrollment weights. First, in 2000, the EBS explicitly did not collect data on plans with zero enrollment, making it impossible to observe the full spectrum of choice. Second, as a practical matter, we were unable to remove the enrollment component of the EBS weights without jeopardizing the overall validity of the weights. In light of these considerations, all of the reported results are weighted to reflect enrollment.

Finally, we use data from the 1997 RWJF Employer Health Insurance Survey (Long and Marquis, 1997) to estimate actuarial values of plans. The RWJF data contain information on 17,858 plans offered by 13,726 employers in 1997, including the overall actuarial value of the plans. Because insurance typically covers large medical bills more generously than it does small medical bills, we also analyze actuarial values for employees grouped into four health-expenditure categories: upper 50 percent of spending, bottom 50 percent of spending, upper 20 percent of spending, and bottom 20 percent of spending. Actuarial values for employees grouped by spending category were estimated by Actuarial Research Corporation using data from the Medical Expenditure Panel Survey (see Gabel, Long, and Marquis, 2002).

CHAPTER THREE

Methods

We analyzed the ECI data using logistic regression, ordinary least squares (OLS) regression, and quantile regression. In contrast to OLS regression, which allows the researcher to predict the mean of the outcome holding other characteristics constant, quantile regression (Buchinsky, 1998; Koenker and Hallock, 2001) allows for predictions at various percentiles across the distribution, such as the median, the 25th percentile, and the 75th percentile. Understanding differences in health-insurance costs relative to payroll across the distribution is important both because means can be heavily influenced by outliers and because quantiles can shed light on dispersion of health insurance–cost ratios across firms. Our two primary dependent variables are offer rates and the employer's economic burden associated with health-insurance provision, measured using the *HI*/*P* ratio. In all analyses of the *HI*/*P* ratio, including both the OLS and quantile regressions, we restricted our sample to firms that offer. We consider four firm-size categories in our analysis: fewer than 25 employees, 25 to 49 employees, 50–99 employees, and 100+ employees. The literature on health-insurance benefits has used numerous size cut-offs, ranging from 10 to 200 employees, to characterize small firms. We chose a firm size of 25 as our threshold for measuring the smallest employers because the practice of underwriting prior to 1990s reforms was most common for groups under the size of 25 (Kapur, 2004), suggesting that insurers view firms with less than 25 employees as particularly risky. A firm-size cut-off of 50 employees is also potentially relevant given that most employer-mandate proposals cover firms with 50 or more employees (Meara, Rosenthal, and Sinaiko, 2007). However, because the Massachusetts health-care reform plan requires all firms with more than 10 employees to offer health insurance (Commonwealth of Massachusetts, 2006), we explore changing the lower-bound cut-off from 25 employees to 10 employees in the sensitivity analysis.

Regardless of the regression approach (OLS, logistic, or quantile), all of our regressions using the ECI data took the following format:

$$y_{it} = \beta_o + X_{it}\mathrm{B} + \sum_{j=1}^{J} size_{ijt}\Theta_j + \sum_{t=1}^{T} year_{it}\Gamma_t + \sum_{j=1}^{J}\sum_{t=1}^{T}(size_{ijt} \times year_{it})\Psi_{jt} + \varepsilon_{it}, \tag{3.1}$$

where y_{it} represents the outcome for establishment i in year t, and X_{it} is a vector of establishment characteristics, including wage quartile, industry group (construction and mining; manufacturing; trade transportation and utilities; service), region (North, Midwest, South, West), share of employees who are full time, and a dummy variable for whether a union is present at the establishment. The term $year_{it}$ is a vector of year dummy variables, and the term $size_{ijt}$ represents the four firm-size dummies. We included a *year* × *size* interaction term in the regression to

determine whether time trends diverged for firms of different sizes. When y_{it} is the probability of offering insurance, we estimated analogous logit regressions.

After running each regression, we then predicted the value of the outcome variable, holding vector X_{it} constant as it was in 2005. Specifically, we restricted our sample to 2005 data and predicted outcomes for each firm-size category, and then we artificially recoded the year dummy variables to an earlier year and reran these predictions. This exercise yields a prediction of what the dependent variable (e.g., offer rates, *HI/P*) would have been in a prior year if the distribution of other business characteristics (e.g., region, industry group) were the same as in 2005.[1]

We used the EBS data to explore the generosity of plans offered by small and large firms. Because we have only two years of EBS data collected over a relatively short period, we focused on fixed differences between firms of different sizes rather than on trends over time. Our EBS regressions take the following format:

$$y_{it} = \alpha_0 + X_{it}\Gamma + \sum_{j=1}^{J} size_{ijt}\Theta_j + \alpha_1 year_{it} + \varepsilon_{it}, \tag{3.2}$$

where y_{it} represents particular measures of benefit generosity for plan i observed in year t, such as copayment amount, deductible amount, and coinsurance rate. Term X_{it} is a vector of characteristics, including whether the sampled establishment has a union presence, whether the sampled occupation is a full-time or part-time position, industry classification of the sampled establishment, and census region of the sampled establishment. The establishment-size dummy variables are the same as those described earlier (fewer than 25 employees, 25 to 49 employees, 50 to 99 employees, 100 or more employees). The term $year_{it}$ is a dummy variable equal to 1 if the year is 2003. For dichotomous outcomes, such as whether there is an OOP maximum, we estimated an analogous logit model. We used Equation 3.2 to estimate the relationship between establishment size and benefit generosity and to predict benefit-generosity levels for establishments of different sizes, holding all else constant.

To generate actuarial values, we regressed the actuarial values reported in the RWJF data on plan characteristics for prepaid and nonprepaid plans separately. Output from these regressions is presented in Tables A.3 and A.4 in the appendix. We then predicted actuarial values by multiplying the vector of regression coefficients from the actuarial-value regressions by a vector of predicted plan characteristics for firms of different sizes estimated using Equation 3.2. We computed separate actuarial values for prepaid and nonprepaid plans. To get an overall expected actuarial value for each firm-size category, we took a weighted average of the two actuarial values based on the predicted probability that an employee was enrolled in a prepaid plan, conditional on firm-size category. We estimated overall actuarial values, as well as actuarial values for employees with high and low health-insurance expenditures, since prior literature has shown that plans are often more generous for high spenders (Gabel et al., 2006). Standard deviations for the actuarial-value results were bootstrapped by randomly drawing

[1] For the OLS model, this approach is equivalent to taking the mean of the dependent variable in 2005 and then adding and subtracting coefficients from the regression model to get predictions for 2000 and 2003. For example, to get predictions for 2003, holding other characteristics constant as in 2005, we take the mean in 2005, subtract the 2005 dummy variable and the 2005 *year* × *size* interaction term from this mean, and then add the 2003 dummy variable and the 2003 × *size* interaction.

5,000 observations from the EBS data 200 times, predicting a unique actuarial value for each replication, and computing the standard deviation across these 200 values.

CHAPTER FOUR

Results

Employer Health-Insurance Burdens

Table 4.1 shows the means of key variables in the ECI for the years 2000, 2003, and 2005 for each firm-size category. For all firm-size categories, we see a slight downward trend in offer rates and a clear upward trend and health-insurance expenditures per employee. Our measure of burden, the *HI*/*P* ratio, also increased over time. The smallest firms have substantially lower offer rates and lower per-capita payroll than larger firms have. However, conditional on offering, health-insurance costs per employee are not necessarily lower at smaller firms. Annual payroll per employee, an approximation of the average annual salary within the firm, remained relatively flat over time.

In Table 4.2, we report marginal effects, coefficients, and standard errors found after using Equation 3.1 in Chapter Three to predict offer rates, and—for firms that offer health insurance—health-insurance burdens measured using the *HI*/*P* ratio. For the *HI*/*P* analysis, we ran both OLS and quantile regressions, where the quantile regressions are evaluated at the 25th, 50th, and 75th percentiles of the *HI*/*P* ratio. Column 1, which reports marginal effects from the logit model of offers, indicates that offer rates remained relatively stable over the period analyzed, overall and within firm-size category. None of the year dummy variables or *year* × *size* interaction terms is statistically significant. For firms with more than 25 employees, the year dummies and the *year* × *size* interactions could be jointly significant, even if the individual coefficients are not. We have annotated the table to indicate the joint significance of the year and *year* × *size* interactions at the 90th and 95th percentiles, respectively. Chi-squared and F-statistics for these significance tests, as well as tests of joint significance between the size and *year* × *size* coefficients, are reported in Table A.5 in the appendix. In the logit model, we find virtually no evidence that time trends were significant, regardless of firm-size category.

While these results may initially seem to be at odds with reports that employer health-insurance coverage has declined since 2005 (DeNavas-Walt, Proctor, and Smith, 2007), other evidence suggests that declines in coverage are driven by decreases in employee take-up rather than by decreases in firm offers (Cutler, 2002). Consistent with prior research (AHRQ, 2005b; KFF, 2006), we found a strong monotonic relationship between firm size and offer rates, with larger firms having a higher probability of offering insurance.

The remaining columns show the year, size, and year × size interactions from OLS and quantile regressions predicting the health-insurance burden for offering firms. These results show a statistically significant increase in burdens between 2000 and 2005 at the mean, median, 25th, and 75th percentiles of the distribution. In the OLS model, we find that, in 2000, there were fixed differences across firm-size categories in the size of health-insurance

Table 4.1
Descriptive Statistics, by Year and Firm Size (weighted)

Characteristic	2000	2003	2005
<25 workers			
Probability offers health insurance	0.476	0.459	0.456
Payroll per employee	$27,626	$27,187	$27,423
Average health-insurance cost per employee	$1,254	$1,469	$1,704
Health-insurance cost per employee (conditional on offer)	$2,738	$3,355	$3,956
Health-insurance cost/payroll	0.037	0.043	0.047
Health-insurance cost/payroll (conditional on offer)	0.083	0.099	0.109
N	1,202	1,740	1,528
25–49 workers			
Probability offers health insurance	0.794	0.771	0.778
Average payroll per employee	$32,881	$36,194	$36,617
Average health-insurance cost per employee	$2,173	$2,333	$2,386
Health-insurance cost per employee (conditional on offer)	$2,784	$3,130	$3,103
Health-insurance cost/payroll	0.057	0.063	0.062
Health-insurance cost/payroll (conditional on offer)	0.073	0.085	0.081
N	492	667	558
50–99 workers			
Probability offers health insurance	0.863	0.830	0.840
Average payroll per employee	$35,631	$33,628	$34,298
Average health-insurance cost per employee	$2,416	$2,611	$2,874
Health-insurance cost per employee (conditional on offer)	$2,806	$3,185	$3,470
Health-insurance cost/payroll	0.063	0.073	0.080
Health-insurance cost/payroll (conditional on offer)	0.074	0.089	0.096
N	517	684	567
100+ workers			
Probability offers health insurance	0.922	0.915	0.912
Average payroll per employee	$37,662	$38,285	$38,921
Average health-insurance cost per employee	$2,665	$3,308	$3,539
Health-insurance cost per employee (conditional on offer)	$2,885	$3,605	$3,903
Health-insurance cost/payroll	0.071	0.088	0.092
Health-insurance cost/payroll (conditional on offer)	0.077	0.096	0.102
N	1,423	2,096	1,382

NOTE: Dollar figures are reported in 2005 constant-dollar terms (i.e., adjusted for inflation).

Table 4.2
Insurance Offers and Health-Insurance Costs Relative to Payroll, Logit Marginal Effects, OLS and Quantile Regression Coefficients, and Standard Errors

		Health-Insurance Cost Relative to Payroll, Offerers Only			
Characteristic	Offers: Logit Model (1)[a,b]	OLS (2)[b]	25th Percentile (3)	50th Percentile (4)	75th Percentile (5)
2001	0.002 (0.022)	0.007 (0.005)	0.004 (0.003)	0.007 (0.003)**	0.007 (0.002)**
2002	−0.008 (0.026)	0.013 (0.006)**	0.007 (0.003)**	0.010 (0.003)**	0.016 (0.002)**
2003	−0.026 (0.028)	0.015 (0.005)**	0.014 (0.003)**	0.016 (0.002)**	0.021 (0.002)**
2004	−0.011 (0.031)	0.023 (0.006)**	0.017 (0.003)**	0.023 (0.003)**	0.032 (0.002)**
2005	−0.039 (0.033)	0.025 (0.005)**	0.021 (0.003)**	0.031 (0.003)**	0.039 (0.002)**
25–49 employees	0.342** (0.036)	−0.014 (0.005)**	−0.002 (0.003)	−0.009 (0.003)**	−0.013 (0.002)**
50–99 employees	0.38** (0.031)	−0.012 (0.005)**	0.001 (0.003)	−0.003 (0.003)	−0.008 (0.002)**
100+ employees	0.413** (0.025)	−0.014 (0.005)**	−0.0004 (0.003)	−0.010 (0.003)**	−0.006 (0.002)**
(25–49) × 2001	−0.021 (0.042)	0.001‡ (0.005)	0.001 (0.005)	−0.002† (0.004)	0.002‡ (0.003)
(25–49) × 2002	0.032 (0.048)	−0.002‡ (0.007)	0.003‡ (0.005)	0.007‡ (0.004)*	−0.002‡ (0.003)
(25–49) × 2003	0.022 (0.052)	−0.0004‡ (0.006)	−0.002‡ (0.004)	−0.002‡ (0.004)	−0.006‡ (0.003)**
(25–49) × 2004	0.075 (0.055)	−0.007‡ (0.007)	−0.008‡ (0.004)*	−0.006‡ (0.004)	−0.008‡ (0.003)**
(25–49) × 2005	0.014 (0.066)	−0.013‡ (0.007)*	−0.016 (0.005)**	−0.025‡ (0.004)**	−0.016‡ (0.003)**
(50–99) × 2001	0.082 (0.065)	−0.003 (0.006)	−0.003 (0.005)	−0.009 (0.004)**	−0.004 (0.003)
(50–99) × 2002	0.04 (0.068)	−0.002‡ (0.007)	−0.002 (0.005)	−0.006 (0.004)	−0.004‡ (0.003)
(50–99) × 2003	0.012 (0.068)	−0.0008‡ (0.006)	−0.007‡ (0.004)*	−0.004‡ (0.004)	−0.004‡ (0.003)
(50–99) × 2004	0.025 (0.072)	−0.006‡ (0.007)	−0.010‡ (0.004)**	−0.010‡ (0.004)**	−0.016‡ (0.003)**
(50–99) × 2005	0.027 (0.077)	−0.006‡ (0.007)	−0.012**,‡ (0.004)	−0.018**,‡ (0.004)	−0.024**,‡ (0.003)
(100+) × 2001	−0.092† (0.056)	0.002‡ (0.005)	0.0002 (0.004)	0.009**,‡ (0.004)	0.004‡ (0.003)
(100+) × 2002	−0.011 (0.057)	0.002‡ (0.007)	−0.002† (0.005)	0.010**,‡ (0.004)	0.003‡ (0.003)

Table 4.2—Continued

Characteristic	Offers: Logit Model (1)[a,b]	Health-Insurance Cost Relative to Payroll, Offerers Only			
		OLS (2)[b]	25th Percentile (3)	50th Percentile (4)	75th Percentile (5)
(100+) × 2003	0.006	0.005‡	–0.004‡	0.010**,‡	0.002‡
	(0.063)	(0.006)	(0.004)	(0.004)	(0.003)
(100+) × 2004	0.005	–0.002‡	–0.008**,‡	0.0008‡	–0.005**,‡
	(0.065)	(0.007)	(0.004)	(0.004)	(0.003)
(100+) × 2005	0.025	–0.0003‡	–0.011**,‡	–0.004‡	–0.011**,‡
	(0.075)	(0.007)	(0.004)	(0.004)	(0.003)
R^2 or pseudo-R^2	0.27	0.12	0.06	0.10	0.13
N	25,982	20,603	20,603	20,603	20,603

NOTE: Unreported controls are wage quartile, industry group, union presence, region, and share of full-time employees. Numbers in parentheses are standard errors.

[a] The logit column reports marginal effects rather than regression coefficients.

[b] Standard errors from logit and OLS models are adjusted for clustering at the establishment level and weighted using ECI-based establishment weights.

* Statistically significant at the 10-percent level.

** Statistically significant at the 5-percent level.

† Year and year × size interactions jointly significant at the 10-percent level.

‡ Year and year × size interactions jointly significant at the 5-percent level.

burdens, with very small firms having larger burdens than other firms had. F-tests (reported in Table A.5 in the appendix) confirmed that these fixed differences persisted over time. However, for the most part, we cannot reject the hypothesis that time trends in average health-insurance burdens were equivalent for very small firms and other firms (though there is weak evidence that burdens for moderately small firms fell relative to the smallest firms in 2005). In the 25th-percentile regression, we found no evidence of fixed differences in burdens across firm-size categories in 2000, but we found that burdens diverged over time, with the smallest offering firms having the steepest increase between 2000 and 2005. At the 50th and the 75th percentiles, we found evidence both for fixed differences in health-insurance burdens in 2000 and for diverging trends over time. These results imply that health-insurance burdens at the 50th and 75th percentiles of the distribution are the highest for the smallest firms and that the gap between the smallest firms and larger firms increased over time. However, at the median, the increase over time for small firms is statistically significant only relative to medium-sized firms (25 to 49 employees and 50 to 99 employees).

The second-to-last row in Table 4.2 reports goodness-of-fit measures (R^2 and pseudo-R^2 values) for the five regressions. Goodness-of-fit for the *HI/P* regression series is relatively modest—the OLS regression explains 12 percent of the variance in the dependent variable. In the quantile regressions, the fit increases across quantiles. Table A.6 in the appendix contains logit marginal effects, coefficients, and standard errors for the covariates not reported in Table 4.2 (e.g., wage category, industry group).

Table 4.3 shows predicted values based on the regressions reported in Table 4.2, holding business characteristics constant at 2005 levels. Panel A shows that there was a small decline in the probability of offering insurance between 2000 and 2005, but—based on the regressions reported earlier—this decline was not statistically significant. Panel B shows predicted

Table 4.3
Predicted Health-Insurance–Offer Rates and Costs Relative to Payroll (based on regressions reported in Table 4.1)

	Firm-Size Category (Employees)			
Characteristic	**<25**	**25–49**	**50–99**	**100+**
A. Predicted health-insurance offer rate: logit regression				
2000	0.484	0.790	0.845	0.916
2003	0.466	0.789	0.839	0.911
2005	0.466	0.778	0.840	0.912
Change, 2000–2005 (%)	–3.79	–1.49	–0.54	–0.43
B. Predicted health-insurance costs relative to payroll: OLS regression				
2000	0.084	0.069	0.077	0.077
2003	0.098	0.084	0.091	0.097
2005	0.108	0.081	0.096	0.102
Change, 2000–2005 (%)	29.6	16.8	25.3	32.1
25th percentile				
2000	0.040	0.038	0.046	0.048
2003	0.054	0.050	0.052	0.059
2005	0.061	0.044	0.055	0.059
Change, 2000–2005 (%)	51.8	13.9	19.3	21.7
Median				
2000	0.070	0.062	0.073	0.068
2003	0.086	0.075	0.085	0.093
2005	0.101	0.068	0.086	0.095
Change, 2000–2005 (%)	43.5	10.3	18.1	39.5
75th percentile				
2000	0.110	0.097	0.110	0.113
2003	0.130	0.111	0.127	0.135
2005	0.149	0.120	0.126	0.142
Change, 2000–2005 (%)	35.8	23.8	14.3	25.8

NOTE: Predictions hold business characteristics constant at 2005 levels.

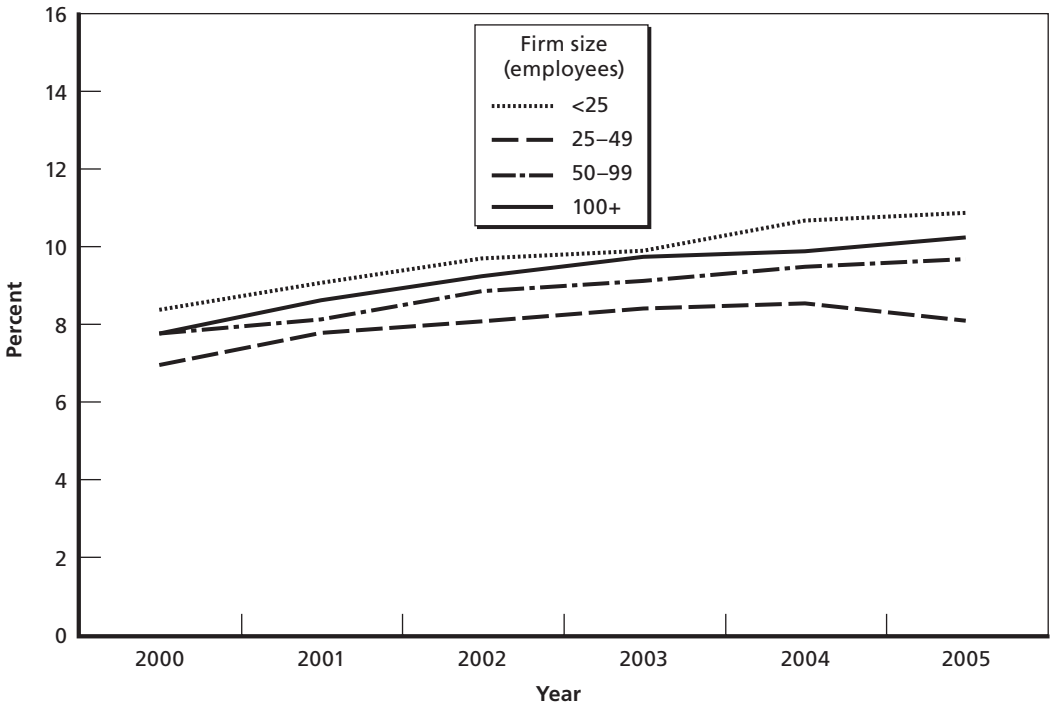
health-insurance burdens by firm-size category. The burden associated with health-insurance provision increased for all firms between 2000 and 2005, but particularly for the smallest firms (fewer than 25 employees) and the largest firms (100+ employees). In 2005, the smallest offering firms shouldered the highest overall burden, spending, on average, 11 percent of payroll on health insurance, a 30-percent increase from 2000 levels. The smallest offering firms also had higher health-insurance burdens at each point in the distribution. Small offering firms expe-

rienced a particularly large increase in health-insurance burdens at the 25th percentile of the distribution, with a 52-percent increase. As indicated by the regression coefficients reported in Table 4.1, the differences in health-insurance burdens across firm-size categories were statistically significant.

Figures 4.1 through 4.4 illustrate trends in health-insurance burdens for small and large firms. These figures concisely convey several of the key findings from Tables 4.1 and 4.2. First, health-insurance burdens increased over time, for all firm-size categories and at all points in the distribution. Second, in 2005, the smallest firms (fewer than 25 employees) had the highest health-insurance burdens (on average and at all points in the distribution), and moderately small firms (25 to 49 employees) had the lowest burdens. A potential explanation for this finding is that take-up of insurance at very small firms (fewer than 25 employees) may be high, perhaps because small offering firms require all employees to take the benefit (e.g., to more effectively pool risk). This hypothesis is consistent with findings in the 2006 Kaiser/HRET survey documenting that very small firms (three to 24 employees) and very large firms (1,000 to 4,999 employees) had higher take-up rates than medium-sized firms had (KFF, 2006). Finally, the dispersion in health-insurance burdens across firm-size categories increased over time. This increase was statistically significant in the quantile regressions but not in the OLS regression.

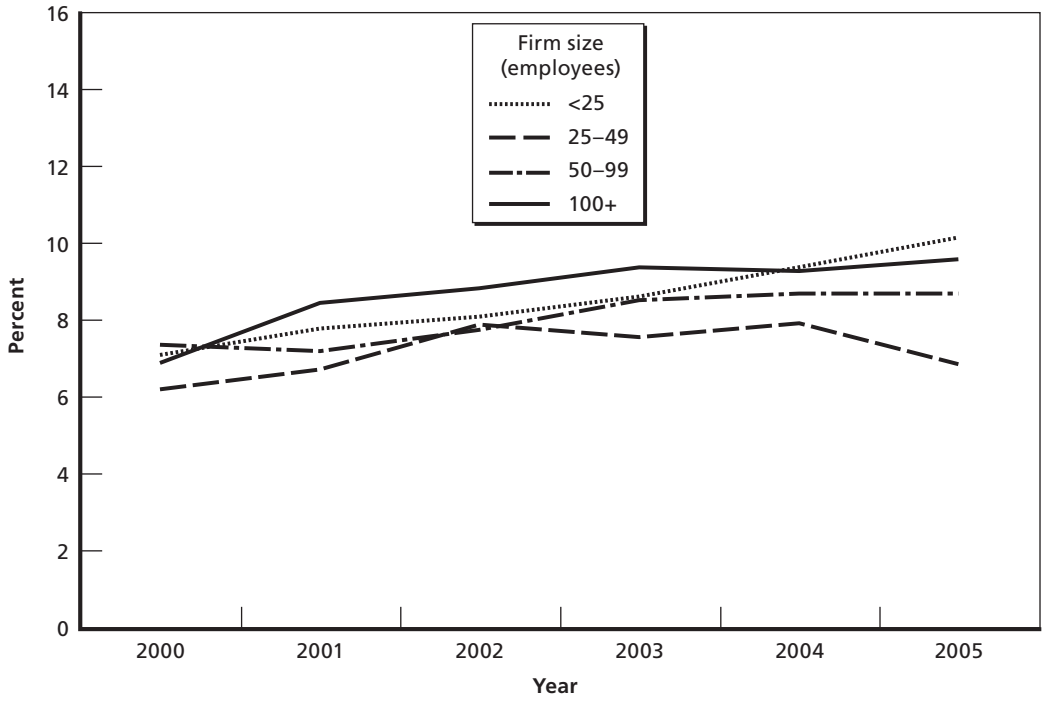
The regressions reported in Table 4.2 do not control for the occupational composition of the establishment, which may be relevant if large and small businesses employ different types of employees and if the occupational composition of the workforce is related to health-insurance–offer decisions and take-up rate. Table 4.4 reports results, controlling for the percent of the workforce in each of nine occupational groups (executive, administrative, and managerial

Figure 4.1
Predicted Values, Mean Regression



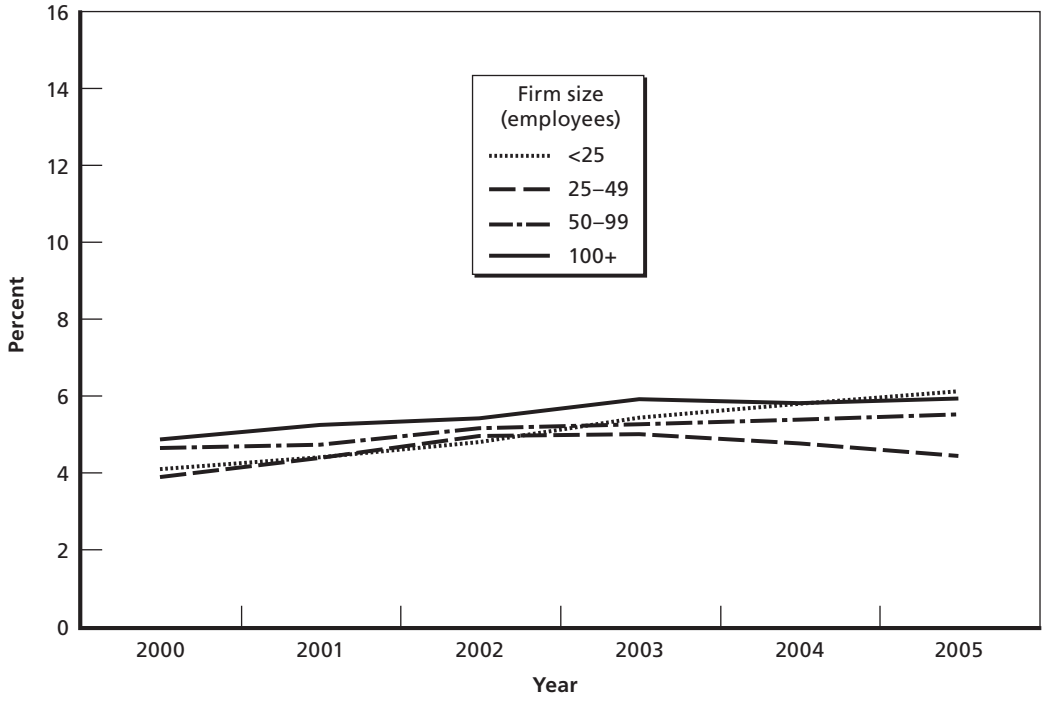
RAND *TR559-4.1*

Figure 4.2
Predicted Values, Median Regression



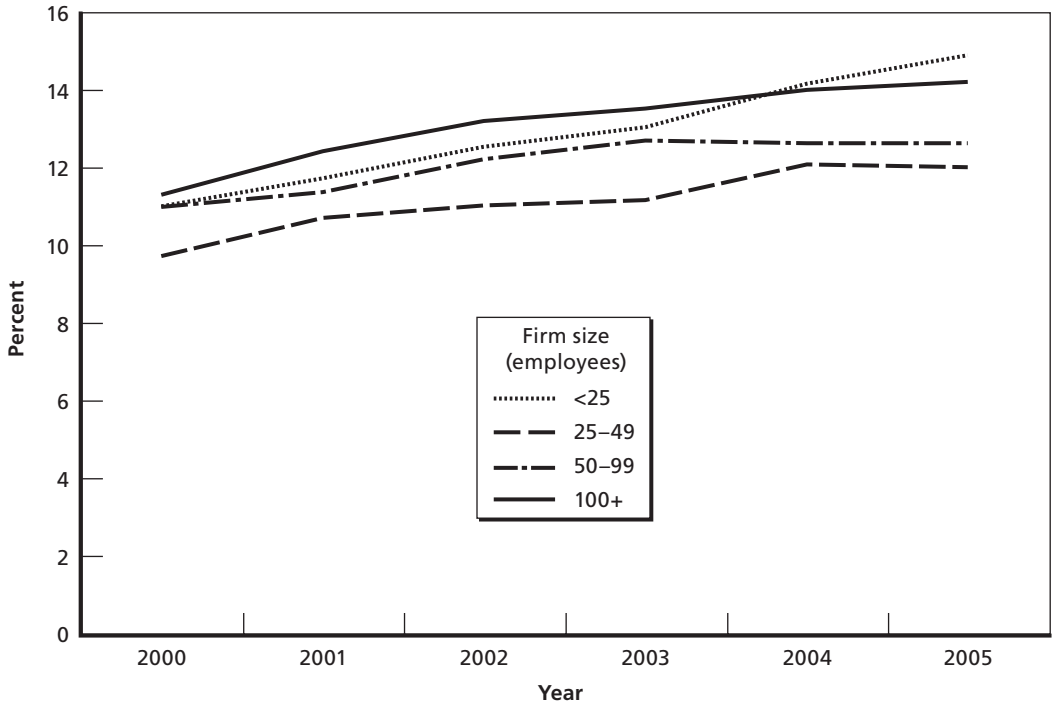
RAND *TR559-4.2*

Figure 4.3
Predicted Values, 25th-Percentile Regression



RAND *TR559-4.3*

Figure 4.4
Predicted Values, 75th-Percentile Regression



RAND *TR559-4.4*

occupations are the omitted category). While including occupation in the analysis does not change the conclusions about trends in costs or offer rates over time, the results on occupation are nonetheless interesting. Businesses with a large share of helpers, cleaners, and laborers are less likely to offer health insurance than are other firms; employers with a large share of service, production, and administrative employees also have a lower probability of offering health insurance. Conditional on offering, businesses with a large share of machine operators, assemblers, and inspectors have lower health-insurance costs relative to payroll than other firms. We cannot determine, however, whether these lower costs are due to lower take-up, less-generous benefits, or a combination of these factors. Chi-squared and F-test on the joint significance of the interaction terms and main effects corresponding to Table 4.4 are reported in Table A.7 in the appendix.

To summarize, we found that offer rates remained stable between 2000 and 2005 but that health-insurance burdens increased, particularly for the smallest firms. Increases in health-insurance burden (*HI*/*P*) could be driven by changes in health-insurance cost per employee, change in payroll per employee, or both. In Table 4.5, we analyze separate trends in the numerator and the dominator of the *HI*/*P* ratio to get a better understanding of what is contributing to the overall growth in health-insurance burden. We also consider trends in costs associated with non–health-insurance benefits, which include life-insurance benefits, pensions, social-security payments made by the employer, employer costs for short- and long-term disability insurance, and employer costs associated with unemployment benefits. While these non–health-insurance benefits are not reflected in our measure of health-insurance burden, employers may react to growing health-insurance costs by cutting other, nonwage benefits. All dollar figures are

Table 4.4
Insurance Offers and Health-Insurance Costs Relative to Payroll, Logit Marginal Effects, OLS and Quantile Regression Coefficients, and Standard Errors, Controlling for the Percent of the Workforce in Each of Nine Occupational Groups

		Health-Insurance Cost Relative to Payroll, Offerers Only			
Characteristic	Offers: Logit Model (1)[a,b]	OLS (2)[b]	25th Percentile (3)	50th Percentile (4)	75th Percentile (5)
2001	0.001 (0.022)	0.006 (0.005)	0.004** (0.002)	0.007** (0.001)	0.009** (0.001)
2002	–0.012 (0.026)	0.013** (0.005)	0.008** (0.002)	0.01** (0.002)	0.016** (0.001)
2003	–0.026 (0.028)	0.015** (0.005)	0.013** (0.002)	0.013** (0.001)	0.021** (0.001)
2004	–0.013 (0.03)	0.024** (0.006)	0.017** (0.002)	0.022** (0.001)	0.03** (0.001)
2005	–0.041 (0.033)	0.026** (0.005)	0.02** (0.002)	0.035** (0.001)	0.041** (0.001)
25–49 employees	0.354** (0.036)	–0.011** (0.005)	0.001 (0.002)	–0.005** (0.002)	–0.013** (0.001)
50–99 employees	0.39** (0.032)	–0.011* (0.006)	0.001 (0.002)	–0.002 (0.002)	–0.005** (0.002)
100+ employees	0.42** (0.026)	–0.011** (0.006)	0.005** (0.002)	–0.004** (0.002)	–0.003** (0.001)
(25–49) × 2001	–0.02 (0.043)	0.002‡ (0.005)	0.001‡ (0.003)	–0.003‡ (0.002)	0.006**,‡ (0.002)
(25–49) × 2002	0.037 (0.051)	–0.002‡ (0.007)	0.001‡ (0.003)	0.005*,‡ (0.002)	0.00‡ (0.002)
(25–49) × 2003	0.024 (0.055)	–0.001‡ (0.006)	–0.003‡ (0.003)	–0.005**,‡ (0.002)	–0.006**,‡ (0.002)
(25–49) × 2004	0.085 (0.057)	–0.009‡ (0.007)	–0.012**,‡ (0.003)	–0.01**,‡ (0.002)	–0.004**,‡ (0.002)
(25–49) × 2005	0.016 (0.069)	–0.015**,‡ (0.007)	–0.017** (0.003)	–0.031**,‡ (0.002)	–0.015**,‡ (0.002)
(50–99) × 2001	0.097 (0.067)	–0.001 (0.006)	–0.004 (0.003)	–0.008** (0.002)	–0.007** (0.002)
(50–99) × 2002	0.049 (0.07)	–0.001‡ (0.007)	–0.004 (0.003)	–0.009** (0.002)	–0.004*,‡ (0.002)
(50–99) × 2003	0.018 (0.071)	0.000‡ (0.006)	–0.008**,‡ (0.003)	–0.001‡ (0.002)	–0.003‡ (0.002)
(50–99) × 2004	0.039 (0.076)	–0.005‡ (0.007)	–0.006**,‡ (0.003)	–0.009**,‡ (0.002)	–0.014**,‡ (0.002)
(50–99) × 2005	0.039 (0.082)	–0.006‡ (0.007)	–0.009**,‡ (0.003)	–0.023**,‡ (0.002)	–0.022**,‡ (0.002)
(100+) × 2001	–0.091† (0.058)	0.002‡ (0.005)	–0.003 (0.003)	0.004**,‡ (0.002)	0.002‡ (0.002)
(100+) × 2002	–0.004 (0.059)	0.001‡ (0.006)	–0.005 (0.003)	0.006**,‡ (0.002)	0.003‡ (0.002)

Table 4.4—Continued

Characteristic	Offers: Logit Model (1)[a,b]	Health-Insurance Cost Relative to Payroll, Offerers Only			
		OLS (2)[b]	25th Percentile (3)	50th Percentile (4)	75th Percentile (5)
(100+) × 2003	0.008 (0.066)	0.005‡ (0.006)	–0.006**,‡ (0.003)	0.007**,‡ (0.002)	0.003*,‡ (0.002)
(100+) × 2004	0.012 (0.068)	–0.003‡ (0.007)	–0.01**,‡ (0.003)	–0.003‡ (0.002)	–0.005**,‡ (0.002)
(100+) × 2005	0.034 (0.08)	–0.001‡ (0.007)	–0.012**,‡ (0.003)	–0.014**,‡ (0.002)	–0.013**,‡ (0.002)
Sales occupations	–0.049 (0.154)	0.021 (0.017)	0.019** (0.003)	0.002 (0.002)	NA[c]
Administrative support, clerical	–0.300* (0.161)	0.014 (0.012)	0.011** (0.003)	0.007** (0.002)	0.00 (0.002)
Productions, craftsmen, repair	–0.375** (0.153)	0.007 (0.011)	0.009** (0.003)	–0.001 (0.002)	–0.014** (0.002)
Machine operators, assemblers, and inspectors	–0.244 (0.18)	–0.032** (0.016)	–0.026** (0.004)	–0.039** (0.003)	–0.054** (0.002)
Transportation and material moving	–0.29 (0.196)	0.003 (0.015)	0.002 (0.003)	–0.001 (0.002)	–0.008** (0.002)
Handlers, cleaners, helpers, and laborers	–0.423** (0.159)	–0.001 (0.015)	0.004 (0.004)	0.000 (0.002)	–0.013** (0.002)
Services	–0.377** (0.16)	0.003 (0.015)	–0.001 (0.003)	0.000 (0.002)	–0.004** (0.002)
Professional	0.039 (0.172)	–0.01 (0.012)	–0.01** (0.004)	–0.009** (0.002)	–0.013** (0.002)
Technical and related occupations	–0.077 (0.216)	0.015 (0.013)	0.03** (0.004)	0.022** (0.003)	0.006** (0.003)
R^2 or pseudo-R^2	0.30	0.14	0.08	0.10	0.13
N	25,982	20,603	20,603	20,603	20,603

NOTE: Unreported controls are wage quartile, industry group, union presence, region, and share of full-time employees.

[a] The logit column reports marginal effects rather than regression coefficients.

[b] Standard errors from logit and OLS models are adjusted for clustering at the establishment level and weighted using ECI-based establishment weights.

[c] To achieve convergence in the 75th quantile regression, we combine executive, managerial, and administrative occupations (the omitted category in the other regressions) with sales.

* Statistically significant at the 10-percent level.

** Statistically significant at the 5-percent level.

† Year and year × size interactions jointly significant at the 10-percent level.

‡ Year and year × size interactions jointly significant at the 5-percent level.

Table 4.5
Payroll and Benefits per Employee, Log OLS Regression, Coefficients, and Standard Errors

	Payroll per Employee		Health-Insurance Cost per Employee	Non–Health-Insurance–Benefit Cost per Employee	
Characteristic	Nonofferers (1)	Offerers (2)	Offerers (3)	Nonofferers (4)	Offerers (5)
2001	0.015 (0.03)	–0.032 (0.024)	0.046 (0.049)	0.035 (0.031)	–0.028 (0.02)
2002	0.077** (0.037)	–0.047 (0.03)	0.072 (0.06)	0.073** (0.036)	–0.029 (0.025)
2003	0.063 (0.045)	–0.005 (0.027)	0.19** (0.064)	0.093* (0.048)	0.035 (0.026)
2004	0.083 (0.055)	0.019 (0.036)	0.368** (0.065)	0.156** (0.061)	0.093** (0.029)
2005	0.102* (0.053)	0.019 (0.039)	0.408** (0.064)	0.171** (0.06)	0.074** (0.03)
25–49 employees	0.072 (0.068)	–0.017 (0.041)	–0.112 (0.122)	0.314** (0.069)	0.028 (0.037)
50–99 employees	0.054 (0.082)	0.017 (0.05)	0.046 (0.133)	0.331** (0.068)	–0.007 (0.031)
100+ employees	0.229** (0.094)	0.02 (0.045)	0.092 (0.16)	0.465** (0.089)	0.037 (0.033)
(25–49) × 2001	–0.025 (0.066)	0.012 (0.036)	0.029 (0.078)	–0.081 (0.068)	–0.009 (0.035)
(25–49) × 2002	–0.138 (0.092)	0.092* (0.053)	0.135‡ (0.092)	–0.153 (0.095)	0.061 (0.05)
(25–49) × 2003	–0.086 (0.1)	0.053 (0.055)	0.01‡ (0.089)	–0.144 (0.097)	–0.005 (0.044)
(25–49) × 2004	–0.094 (0.085)	0.041 (0.055)	–0.129‡ (0.095)	–0.151* (0.08)	–0.029† (0.044)
(25–49) × 2005	–0.126 (0.091)	0.079‡ (0.063)	–0.248**,‡ (0.098)	–0.191** (0.087)	–0.004‡ (0.047)
(50–99) × 2001	–0.024 (0.076)	–0.058‡ (0.045)	–0.082 (0.08)	–0.007 (0.079)	0.037 (0.029)
(50–99) × 2002	–0.112 (0.076)	–0.006 (0.05)	0.033† (0.088)	0.002 (0.082)	0.067**,† (0.033)
(50–99) × 2003	–0.078 (0.081)	–0.014 (0.05)	0.014‡ (0.095)	–0.042 (0.075)	0.056‡ (0.035)
(50–99) × 2004	–0.101 (0.096)	–0.042 (0.058)	–0.105‡ (0.097)	–0.121 (0.089)	0.029‡ (0.039)
(50–99) × 2005	–0.085 (0.096)	–0.051 (0.059)	–0.125‡ (0.097)	–0.119 (0.089)	0.046‡ (0.041)
(100+) × 2001	0.01 (0.105)	0.07** (0.035)	0.035 (0.071)	–0.079 (0.072)	0.024 (0.024)
(100+) × 2002	–0.082 (0.088)	0.07* (0.039)	0.071‡ (0.081)	–0.124 (0.077)	0.039 (0.03)

Table 4.5—Continued

Characteristic	Payroll per Employee		Health-Insurance Cost per Employee	Non–Health-Insurance–Benefit Cost per Employee	
	Nonofferers (1)	Offerers (2)	Offerers (3)	Nonofferers (4)	Offerers (5)
(100+) × 2003	–0.039 (0.11)	0.038 (0.039)	–0.013‡ (0.097)	–0.179* (0.094)	0.011‡ (0.032)
(100+) × 2004	–0.179 (0.117)	0.019 (0.047)	–0.158‡ (0.105)	–0.233* (0.122)	0.039‡ (0.034)
(100+) × 2005	–0.307**,† (0.117)	0.026 (0.05)	–0.147‡ (0.098)	–0.317** (0.123)	0.053‡ (0.037)
N	5,082	20,900	20,506	5,082	20,900
Mean of the dependent variable	9.55	10.38	7.69	7.47	8.40
R^2	0.52	0.33	0.17	0.61	0.67

NOTE: Unreported controls are industry, union presence, region, share of full-time employees, and, in columns 3–5, wage quartile. Standard errors are adjusted for establishment-level clustering. Analysis is weighted.

* Statistically significant at the 10-percent level.

** Statistically significant at the 5-percent level.

† Year and year × size interactions jointly significant at the 10-percent level.

‡ Year and year × size interactions jointly significant at the 5-percent level.

adjusted for inflation using the Consumer Price Index (all urban consumers series) and are reported in 2005 dollars.

Columns 1 and 2 in Table 4.5 consider log payroll per employee at firms that do not offer health insurance and at firms that offer health insurance, respectively. Holding all else constant, we found little evidence for a time trend in payroll per employee for firms of any size category or either offer status (F-statistics reported in Table A.8 in the appendix). Although the unadjusted means reported in Table 4.1 suggest that average payroll is higher at larger firms, we found only weak evidence for a firm-size effect in the regression analysis. Specifically, per-employee payroll at large (100+ employees) businesses was higher than at the smallest businesses in 2000, 2001, and 2003 for nonoffering firms and in 2001, 2002, and 2003 for offering firms (see Table A.8 in the appendix for the F-statistics confirming statistical significance in later years). In the most recent years, however, there was no statistically significant difference in payroll per employee between the smallest and largest firms.

Column 3 reports results from OLS regression for offering firms, where log health-insurance cost per employee is the dependent variable. We found a clear increase over time in inflation-adjusted health-insurance costs per employee at firms of all sizes. However, we found little evidence for fixed differences in costs between small and large firms. An exception is that costs for moderately small firms (25 to 49 employees) were lower than costs for the smallest firms in 2004 and 2005 (see F-statistics in Table A.8 in the appendix). This finding is consistent with the possibility that very small offering firms have higher take-up rates than do medium-sized firms (KFF, 2006), leading very small offering firms to have higher per-capita health-insurance spending. Very small offering firms may require employees to take up health-insurance benefits

to facilitate risk-pooling; alternatively, very small firms that offer health insurance may have employees with high demand for health benefits.

Columns 4 and 5 evaluate trends in other nonwage compensation costs for offering and nonoffering firms. At small nonoffering firms, other nonwage compensation increased by 0.17 log points between 2000 and 2005. In contrast, there was no statistically significant increase in nonwage compensation at large nonoffering firms (see F-statistics in Table A.8 in the appendix). Column 4 also indicates that large nonoffering firms had higher nonwage benefits than did small nonoffering firms; these differences were statistically significant in 2000, and the F-statistics reported in the appendix confirm that the differences remained statistically significant in most subsequent years. Non–health-insurance–benefit spending increased over time for offering firms of all sizes, and—by 2004—large offering firms (50 to 99 employees, 100+ employees) had higher nonwage benefits than did small offering firms (fewer than 25 employees; F-statistic = 8.06).

In summary, we find that health-insurance costs increased over time between 2000 and 2005, while payroll per employee was relatively stable in real (inflation-adjusted) dollars. Non–health-insurance benefits rose at small, nonoffering firms and at larger, offering firms. In both the payroll regressions and the non–health-insurance–benefit regressions, there is some suggestive evidence that small (fewer than 25 employees), nonoffering firms may have had higher growth in payroll per employee (or, less negative growth) over time than do small, offering firms. However, in an unreported analyses, we tested whether trends in wages and non–health-insurance benefits diverged for small offering and nonoffering businesses; we could not reject the null hypothesis of no difference.

Sensitivity Analyses With Very Small Firms

Some health-reform proposals, including the recently enacted Massachusetts health reform plan (Commonwealth of Massachusetts, 2006), make a distinction between firms with 10 or fewer employees and all other firms. In sensitivity analyses, we restricted our sample to firms with fewer than 25 employees and tested whether trends in offer rates and health-insurance burdens differed between firms with fewer than 11 employees and firms with 11 to 24 employees. Conceptually, we repeated the analyses shown in Table 4.2 with the restricted sample and with a single firm-size dummy variable equal to 1 if the firm had fewer than 10 employees. Results from these analyses are reported in Table 4.6. Column 1 shows that offer rates in 2000 were lower for firms with fewer than 11 employees (F-statistics in Table A.9 in the appendix confirm that this pattern held in all subsequent years) but that offer rates remained stable over time for both firm-size categories. Column 2, which analyzes the health-insurance burden using OLS regression, indicates that burdens increased over time for both firm-size categories. Although burdens for very small (fewer than 11 employees) and small (fewer than 25 employees) were similar in 2000, by 2005, smaller firms had a significantly higher health-insurance burden (the F-statistic for joint significance of the size and size × year interaction in 2005 was 5.73). The quantile regressions also suggest that burdens for small and very small firms may have diverged over time, particularly at the 25th and 50th percentiles. Predictions based on these regressions, shown in Table 4.7, suggest that health-insurance burdens for firms at the 25th percentile may have increased by 65 percent for firms with fewer than 11 employees, compared to a 15-percent increase for firms with 11 to 24 employees, between 2000 and 2005.

Table 4.6
Offer and Benefit Regressions, Logit Marginal Effects, OLS and Quantile Regression Coefficients, and Standard Errors, Small Firms Only

Characteristic	Offers: Logit Model (1)	Health-Insurance Costs Relative to Payroll, Offerers Only			
		OLS (2)[a]	25th Percentile (3)	50th Percentile (4)	75th Percentile (5)
2001	0.012	−0.005	−0.007**	0.002	−0.002
	(0.056)	(0.003)	(0.003)	(0.003)	(0.003)
2002	−0.019	0.009	0.002	0.008**	0.014**
	(0.058)	(0.004)**	(0.003)	(0.003)	(0.003)
2003	−0.019	0.012**	0.012**	0.010**	0.019**
	(0.058)	(0.004)	(0.003)	(0.003)	(0.003)
2004	−0.004	0.011**	0.009**	0.004	0.020**
	(0.06)	(0.005)	(0.003)	(0.003)	(0.003)
2005	−0.033	0.018**	0.007**	0.014**	0.031**
	(0.061)	(0.006)	(0.003)	(0.003)	(0.003)
10 or fewer employees (≤10)	−0.356**	0.007	−0.004	−0.001	0.004
	(0.054)	(0.007)	(0.003)	(0.003)	(0.003)
≤10 × 2001	−0.007	0.016**,†	0.011**	0.008‡	0.015**,‡
	(0.065)	(0.008)	(0.005)	(0.005)	(0.005)
≤10 × 2002	0.019	0.006†	0.006‡	0.002‡	0.001‡
	(0.071)	(0.009)	(0.005)	(0.005)	(0.005)
≤10 × 2003	−0.006	0.004‡	0.001‡	0.007‡	0.001‡
	(0.07)	(0.008)	(0.005)	(0.005)	(0.005)
≤10 × 2004	−0.003	0.016*,‡	0.012**,‡	0.022**,‡	0.010**,‡
	(0.072)	(0.010)	(0.004)	(0.005)	(0.005)
≤10 × 2005	−0.004	0.009‡	0.019**,‡	0.023**,‡	0.006‡
	(0.075)	(0.009)	(0.005)	(0.005)	(0.005)
R^2 or pseudo-R^2	0.28	0.14	0.07	0.11	0.14
N	9,020	5,329	5,329	5,329	5,329

NOTE: Unreported control variables include wage quartile, industry group, union presence, region, and share of employees who are full time. Standard errors are in parentheses. N for all regressions is 20,603. They are weighted using ECI-based establishment weights.

[a] Standard errors from the OLS regression are adjusted to account for clustering at the establishment level.

* Statistically significant at the 10-percent level

** Statistically significant at the 5-percent level.

† Year and year × size interactions jointly significant at the 10-percent level.

‡ Year and year × size interactions jointly significant at the 5-percent level.

Similarly, median costs may have increased by a factor of 53 percent for firms with fewer than 11 employees, compared to a 20-percent increase for firms with 11 to 24 employees. Overall, these results suggest that the growth in health-insurance burdens for firms with fewer than 25 employees may have been heavily influenced by trends for the very smallest businesses (fewer than 11 employees).

Table 4.7
Predicted Health-Insurance–Offer Rates and Costs Relative to Payroll (based on regressions reported in Table 4.6)

	Firm Size (Employees)	
Characteristic	**≤10**	**11–24**
A. Predicted health-insurance–offer rates: logistic regression		
2000	0.436	0.690
2003	0.418	0.679
2005	0.409	0.670
Change, 2000–2005 (%)	–6.1	–2.9
B. Predicted health-insurance costs relative to payroll: OLS regression		
2000	0.084	0.082
2003	0.100	0.094
2005	0.112	0.100
Change, 2000–2005 (%)	32.5	22.0
25th percentile		
2000	0.041	0.044
2003	0.053	0.056
2005	0.067	0.051
Change, 2000–2005 (%)	64.5	15.5
50th percentile		
2000	0.070	0.075
2003	0.088	0.085
2005	0.107	0.089
Change, 2000–2005 (%)	52.9	19.1
75th percentile		
2000	0.110	0.113
2003	0.130	0.132
2005	0.147	0.144
Change, 2000–2005 (%)	33.6	27.5

NOTE: Predictions hold business characteristics constant at 2005 levels.

Plan Quality

Our results so far suggest that small firms have the highest health-insurance burdens, but—in absolute terms—they spend less money per employee on health insurance than the largest firms do. Spending on health insurance, however, is a limited measure because it captures

Table 4.8
Logit Marginal Effects and Standard Errors, Plan Characteristics, All Plans

Characteristic	Prepaid Plan (1)	Drug Coverage Included (2)	Dental Coverage Included (3)	Vision Coverage Included (4)
25–49	–0.041 (0.058)	0.024 (0.021)	–0.055 (0.049)	0.036 (0.057)
50–99	–0.048 (0.052)	0.042** (0.018)	0.009 (0.055)	0.033 (0.059)
100+	–0.007 (0.045)	0.045** (0.018)	0.013 (0.046)	0.089** (0.043)
Probability dependent variable = 1	0.359	0.901	0.227	0.210
Pseudo-R^2	0.07	0.05	0.08	0.03
N	11,932	11,932	11,932	11,932

NOTE: Unreported controls include unionization status, full-time status, industry code, region, and year. Standard errors have been adjusted for clustering at the establishment level.

** Statistically significant at the 5-percent level. No data in this table are statistically significant at the 10-percent level.

Table 4.9
Logit Marginal Effects and Standard Errors, Plan Characteristics, by Plan Type

		Nonprepaid Plans			
Characteristic	Prepaid Plans: Has Copayment (1)	Has Copayment (2)	Has Deductible (3)	Has Coinsurance (4)	Has OOP Maximum (5)
25–49	0.037** (0.01)	0.071 (0.065)	–0.189** (0.086)	–0.125 (0.085)	–0.029 (0.055)
50–99	–0.014 (0.029)	0.094* (0.056)	–0.062 (0.066)	–0.093 (0.068)	–0.035 (0.052)
100+	0.002 (0.018)	–0.03 (0.05)	–0.100** (0.048)	–0.103** (0.043)	–0.074** (0.033)
Probability dependent variable = 1	0.943	0.623	0.684	0.782	0.825
Pseudo-R^2	0.11	0.05	0.03	0.04	0.07
N	4,496	7,420	7,436	7,436	7,395

NOTE: Unreported controls include unionization status, full-time status, industry code, region, and year. Standard errors have been adjusted for clustering at the establishment level.

* Statistically significant at the 10-percent level

** Statistically significant at the 5-percent level.

neither employee enrollment nor the quality of the health-insurance plans offered. Although the ECI data cannot be used to infer the number of enrolled employees, we can use information from the EBS to investigate how plan quality differs for enrolled employees at small and large firms. Tables 4.8, 4.9, and 4.10 show results from regressions that analyzed the relationship

Table 4.10
OLS Regression Coefficients and Standard Errors, Plan Characteristics, by Plan Type

Characteristic	Prepaid Plans: Copayment Amount (1)	Nonprepaid Plans: Copayment Amount (2)	Nonprepaid Plans: Deductible Amount (3)	Nonprepaid Plans: Insurer Share of Coinsurance (4)	Nonprepaid Plans: OOP Maximum Amount (5)
25–49	1.21 (0.877)	–1.53** (0.755)	–48.48 (44.79)	1.70** (0.839)	–205.31 (155.22)
50–99	1.71* (1.01)	–1.33** (0.671)	–69.11 (45.35)	1.75** (0.82)	138.24 (216.01)
100+	1.99** (0.916)	–0.583 (0.569)	–142.23** (38.00)	1.71** (0.623)	–113.24 (143.60)
Mean of dependent variable	$12.18	$15.13	$367.22	84.0%	$1,594.59
R^2	0.09	0.08	0.04	0.04	0.05
N	4,181	4,811	4,798	5,358	5,580

NOTE: Sample is restricted to plans with the relevant characteristic (e.g., copayment results are restricted to plans with nonzero copayments). Unreported controls include unionization status, full-time status, industry code, region, and year. Standard errors have been adjusted for clustering at the establishment level. Money amounts are reported in 2002 dollars.

* Statistically significant at the 10-percent level

** Statistically significant at the 5-percent level.

between plan characteristics and firm size, using the framework outlined in Equation 3.2 in Chapter Three. The top panel in each table reports marginal effects (or regression coefficients) and standard errors on the size dummy variables, where firms with fewer than 25 employees are the omitted category. In the bottom panel, we report the mean of the dependent variable, as well as the number of observations (N) used for each regression. The regressions reported in Table 4.8 combine data from all of the plans in the EBS (weighted to reflect employee enrollment) and show that enrolled employees at large firms are 4.5 percentage points more likely to have plans that include drug coverage and 9 percentage points more likely to have plans that include vision coverage than are enrolled employees at firms with fewer than 25 employees. However, there is no relationship between firm size and the probability that an employee is enrolled in a prepaid plan or the probability that an employee is enrolled in a plan that includes dental coverage.

In Table 4.9, we consider five dichotomous measures of plan quality, focusing first on prepaid plans and then on non-prepaid plans. Measures include whether the plan requires a copayment and whether it has a deductible, coinsurance, and an OOP maximum. Employees enrolled in nonprepaid plans offered by large firms (100+ employees) are 10 percentage points less likely to have a deductible and 10 percentage points less likely to have coinsurance than are employees enrolled in nonprepaid plans at firms with fewer than 25 employees. However, enrolled employees at large firms are also 7 percentage points less likely to have an OOP maximum limiting the total amount of expenses that enrollees are required to pay in a given year. The relationship between copayment status and firm size is nonmonotonic employees enrolled in prepaid plans offered by firms with 25 to 49 employees are more likely to have copayments, and employees enrolled in nonprepaid plans offered by firms with 50 to 99 employees are more

likely to have copayments, than are enrolled employees at the smallest firms. These results seem to suggest that medium-sized firms may have lower-quality benefits, which could explain the lower health-insurance costs at medium-sized firms reported earlier. However, when we compute actuarial values using the full spectrum of plan characteristics, we find no evidence that medium-sized firms have less-generous benefits than do small firms (in fact, if anything, small firms have less-generous benefits).

Table 4.10 considers five continuous measures of plan quality: copayment amount for prepaid plans, copayment amount for nonprepaid plans, deductible amount for nonprepaid plans, insurer share of the coinsurance payment for nonprepaid plans, and OOP maximums for nonprepaid plans. Each regression is restricted to plans that have the relevant feature, so, for example, column 1 is restricted to prepaid plans with nonzero copayment requirements. Figures are reported in 2002 dollars. We find that employees enrolled in prepaid plans offered by large firms (100+ employees) have higher copayment amounts, conditional on having any copayment. Employees enrolled in nonprepaid plans offered by large firms have deductibles that are, on average, $142 lower than deductibles for nonprepaid plans at the smallest firms. Further, the insurance policy pays about 1.7 more of the costs for employees enrolled in nonprepaid plans at large firms than it does at the smallest firms, conditional on any coinsurance requirements.

Overall, the results in Tables 4.8, 4.9, and 4.10 paint a mixed picture of the relative generosity of plans offered by small and large firms. Although health plans at large firms (100+ employees) are more likely to include drug and dental coverage and nonprepaid plans offered by large firms have lower deductibles and coinsurance rates, prepaid plans offered at large firms require higher copayments, and nonprepaid plans offered at large firms are less likely to have an OOP maximum. Goodness of fit is also relatively low for these models—our regressions explain, at best, 10 percent of the variance in outcomes. Tables A.10, A.11, and A.12 in the appendix report marginal effects, coefficients, and standard errors on additional covariates not reported in Tables 4.8, 4.9, and 4.10.

To get a more complete picture of the overall generosity, we estimated actuarial values[1] based on predicted plan characteristics derived from Tables 4.8, 4.9, and 4.10. The predicted values, which are reported in Table A.13 in the appendix, hold constant all covariates other than firm size. We calculated overall actuarial values, as well as actuarial values for enrollees above the median, below the median, and in the top and bottom 20th percentiles of expenditures. We estimated separate actuarial values for nonprepaid and prepaid plans, and then we computed an overall expected actuarial value that is the weighted average actuarial value of prepaid and nonprepaid plans. Weights reflect the predicted probability that an enrollee is in a prepaid plan for each firm-size category—these probabilities are shown in the first row of Table A.13 in the appendix.

Our findings, reported in Table 4.11, indicate that the average actuarial values are higher at firms with 100 or more employees, and this result is driven by the higher actuarial values of indemnity plans at large firms. Actuarial values of indemnity plans are higher at large firms, both overall and for overmedian spenders. In contrast, we found no difference in overall actuarial values of prepaid plans between small and large firms; for spenders in the top 20 percent

[1] An actuarial value represents the share of expected health-care costs that the insurer will pay. Plans with higher actuarial values are more generous than plans with lower actuarial values.

Table 4.11
Predicted Actuarial Values and Bootstrapped Standard Deviations

Plan Type	Firm Size (employees)	Overall Actuarial Value	Overmedian Spenders	Undermedian Spenders	High 20%	Low 20%
Indemnity	<25	80.5% (0.831)	81.7% (0.841)	61.5% (2.409)	82.6% (0.704)	65.0% (2.475)
	25–49	82.4% (0.808)	83.3% (0.769)	68.8% (2.666)	85.6% (0.703)	70.2% (4.221)
	50–99	82.4% (0.608)	83.3% (0.596)	68.3% (2.059)	85.5% (0.538)	67.7% (3.057)
	100+	83.4% (0.327)	84.4% (0.331)	66.4% (1.146)	86.7% (0.321)	62.3% (1.794)
T-test: actuarial value <25 = actuarial value 100+		–3.23	–3.03	–1.84	–5.20	0.91
Prepaid	<25	78.8% (0.815)	78.9% (0.792)	75.2% (1.551)	82.6% (0.704)	65.0% (2.475)
	25–49	78.0% (0.668)	78.1% (0.644)	74.5% (1.17)	78.7% (0.552)	73.9% (1.203)
	50–99	78.4% (0.718)	78.6% (0.711)	73.3% (1.345)	79.4% (0.671)	72.0% (1.538)
	100+	77.9% (0.327)	78.1% (0.317)	73.0% (0.623)	78.9% (0.282)	71.8% (0.683)
T-test: actuarial value <25 = actuarial value 100+		0.99	0.95	1.30	4.99	–2.64
Average	<25	79.8% (0.73)	80.7% (0.741)	66.6% (1.779)	82.6% (0.704)	65.0% (2.475)
	25–49	80.9% (0.674)	81.5% (0.67)	70.6% (1.885)	83.3% (0.669)	71.2% (2.80)
	50–99	81.1% (0.508)	81.8% (0.504)	70.0% (1.503)	83.5% (0.475)	69.2% (2.143)
	100+	81.3% (0.29)	82.1% (0.297)	68.8% (0.754)	83.8% (0.295)	65.8% (1.153)
T-test: actuarial value <25 = actuarial value 100+		–1.89	–1.79	–1.16	–1.48	–0.28

NOTE: Bootstrapped standard deviations are based on 200 replications, drawing 5,000 observations each time. T-statistics test the null hypothesis that predicted actuarial values for firms with fewer than 25 employees are equivalent to predicted actuarial values for firms with 100 or more employees. Because the bootstrapped values are derived from means rather than from individual observations, the formula for calculating the T-statistic is (x–y)/(sqrt[var(x)+var(y)]).

of the distribution, prepaid plans offered by small firms appear to be slightly more generous than prepaid plans offered by larger firms.

The bottom panel of Table 4.11 reports average actuarial values across all types of plans. The final row reports a T-statistic testing whether the actuarial value is different for small firms

(fewer than 25 employees) and large firms (100+ employees). Although the bootstrapped standard deviations reported in Table 4.11 are small, these are standard deviations computed across 200 values that are already means, and statistical inference is therefore different from what we would expect if this were a sample of 200 individual observations. Specifically, the T-statistic is calculated using a different formula, omitting the square root of the sample N from the denominator.[2] As a result, despite the low standard deviations, the T-statistics testing the difference between small firms (fewer than 25 employees) and large firms (100+ employees) are relatively low. While the overall actuarial value and the actuarial value for overmedian spenders are higher at the largest firms, the differences between small and large firms are statistically significant only at the 10-percent level.

While the estimates in Table 4.11 suggest that small firms provide lower-quality benefits to their employees, it is debatable whether the differences are economically meaningful. We used the Medical Expenditure Panel Survey's Web-based query (AHRQ, 2005c) to calculate average and median annual health expenditures of $2,602 and $728, respectively, for privately insured individuals under the age of 65 (in 2003 dollars). Applying the overall actuarial values reported in Table 4.9 to these estimates, we calculate that an enrolled employee at a small firm (fewer than 25 employees) with average expenditures would on average pay $526 per year OOP, while an enrolled individual at a firm with 100 or more employees would, on average, pay $487 OOP per year. In absolute terms, the difference in projected expenditures is $39 per year, which seems relatively minor. However, the burden seems more substantial when we take into account the fact that employees at small firms tend to have lower salaries. Using the 2003 per-capita payroll estimates from Table 4.1, we can infer that an average employee at a small firm would expect to spend 1.9 percent of annual earnings on OOP health expenditures, while an average employee at a firm with more than 100 employees would expect to pay 1.3 percent of annual earnings on such expenses. Overall, these findings suggest that the lower actuarial values at small firms do not translate into large differentials in OOP spending, but they exacerbate compensation differentials between employees at small and large firms. Differences are likely to be the most meaningful for high health-insurance spenders, since actuarial values for high spenders are lower in small firms and because their expected expenditures are larger.

[2] The formula used to calculate the bootstrapped T-statistics is (y–x)/(sqrt[var(y)+var(x)]).

CHAPTER FIVE

Limitations

Our analysis is limited to single-unit establishments, but costs and time trends at multiunit establishments may have been different. To the extent that multiunit establishments are larger, have dissimilar compensation, and have better risk-pooling and bargaining ability than single-unit establishments, we might expect that health-insurance burdens would be lower at these firms. Thus, our results may understate the true difference in health-insurance burdens between large and small firms. Another limitation is that, while the data allow us to observe information on both health-insurance costs and plan quality, we do not have data on enrollment at firms of different sizes. Previous work suggests that fewer employees are enrolled at health plans offered by large firms (Fronstin, 2005). If this relationship holds in our data, then our measures of the burden do not capture the fact that the higher spending at a small firm covers a larger share of the workforce. We also focus on single coverage rather than family coverage when analyzing benefit generosity. Anecdotally, there is evidence to suggest that small employers are more inclined to cut family benefits than they are employee benefits, sometimes eliminating dependent coverage entirely when insurance prices increase (Short and Lesser, 2002). If these anecdotal observations hold on a larger scale, then our results may understate declines in generosity that may have occurred at small firms.

Another important limitation is that we observe costs only for offering firms. We cannot comment on how insurance prices that nonoffering firms face may have changed over time. A related limitation is that these results cannot be generalized to firms that do not currently offer insurance. For example, while we found that small firms that offered insurance in 2000 did not appear to drop coverage in response to higher prices, this does not imply that nonoffering firms would be able offer insurance at current price levels.

CHAPTER SIX

Discussion

Overall Results

We find substantial increases over time in health-insurance burdens for all firm-size categories, holding constant other factors, such as unionization and industry mix. Health-insurance burdens increased at the mean and at the 25th, 50th, and 75th percentiles of the distribution. By 2005, a typical offering firm spent between 7 and 10 percent of payroll on health insurance, depending on size. Because these percentages exceed expenditure limits suggested in recent employer-mandate proposals (such as the 4-percent payroll tax discussed in the California governor's plan), employer mandates could have the unintended consequence of reducing employer coverage. In some cases, firms may prefer to pay, hoping that employees will find coverage through government-funded pools, rather than devote an increasing fraction of compensation to health-insurance expenditures.

Growth in Health-Insurance Burden at Small Firms

Health-insurance burden grew substantially for firms with fewer than 25 employees. Between 2000 and 2005, average health-insurance costs as a share of payroll grew from 8 to 11 percent at small businesses (fewer than 25 employees), an increase of 30 percent. Over the same period, the median health-insurance burden for small businesses increased by 43.5 percent. By 2005, 50 percent of all small businesses that offered health insurance spent more than 10 percent of payroll on health-insurance costs. Very small firms (fewer than 11 employees) had higher cost growth than firms with 11 to 24 employees; firms with 10 or fewer employees experienced a 32-percent increase in health-insurance costs relative to payroll between 2000 and 2005, compared to a 22-percent increase at firms with 11 to 24 employees.

Differences Between Small and Large Firms

Growth in health-insurance burden was more pronounced for small offering firms (fewer than 25 employees) than it was for medium-sized offering firms (25 to 99 employees). While the average health-insurance burden grew by 30 percent at firms with fewer than 25 employees, it increased by only 16 percent at firms with 25 to 49 employees and by 25 percent at firms with 50 to 99 employees. Not only was the increase steeper for the smallest firms, but, in 2005, the smallest offering firms had higher health-insurance costs relative to payroll than larger firms. Specifically, small firms (fewer than 25 employees) spent 11 percent of payroll on health insur-

ance, compared to 7 percent at firms with 25 to 49 employees, 9 percent at firms with 50 to 99 employees, and 10 percent at firms with more than 100 employees.

An unexpected finding in this analysis was that both small firms (fewer than 25 employees) and large firms (100+ employees) have higher health-insurance burdens than do medium-sized firms. A potential explanation for this is that take-up of health insurance at very small and very large firms is higher than take-up at medium-sized firms. Although we cannot determine take-up in the BLS data, the 2006 KFF survey confirms this hypothesis, reporting that firms with three to 24 employees have higher take-up rates than do firms with 25 to 999 employees (KFF, 2006). Take-up at small firms may be high either because small employers that offer health insurance require all of their employees to purchase coverage or because small employers that offer insurance have employees with unusually high demand for coverage.

Another explanation for the higher health-insurance burden borne by small employers could be that smaller employers offer health-insurance plans of higher quality. However, when we estimated the actuarial values of plans offered by small and large firms, we found that plans offered by small firms had slightly lower actuarial values, especially for nonprepaid plans, and for enrollees in the top 50 percent of expenditures. These results suggest that small firms shoulder a larger burden to provide a less valuable benefit. Further, employees at small firms who have higher expenditures, such as older and sicker employees, may be particularly disadvantaged when they receive insurance through their employers.

Distribution of Health-Insurance Burden Among Offering Firms

In addition to looking at growth in average health-insurance costs relative to payroll, we also look at growth in this measure of burden at several percentiles of the distribution: the 25th percentile, the median, and the 75th percentile. Analyzing the health-insurance burden across these quantiles provides a more nuanced perspective on the distribution of the burden at firms that offer insurance. Among offering businesses with fewer than 25 employees, we found quite a bit of variation in the level of burden that firms shoulder. While 25 percent of small firms that offered insurance spent less than 6 percent of payroll on health care in 2005, another 25 percent of small firms spent in excess of 15 percent of payroll on health-insurance costs. We found a similar amount of variance across quantiles at medium-sized and larger firms; however, at every quantile that we considered, small firms had a higher burden than larger firms did. For example, median health-insurance costs relative to payroll at firms with fewer than 25 employees was 10 percent, compared to 7 percent at firms with 25 to 49 employees, 9 percent at firms with 50 to 99 employees, and 9.5 percent at firms with more than 100 employees.

The considerable variance in the level of health-insurance burden for small firms suggests that a "one-size-fits-all" policy to facilitate health-insurance provision at small businesses may be poorly targeted. Subsidies or exemptions targeted solely on the basis of firm size will give equal benefit to firms of the same size regardless of their health-insurance burden. Such policies might give unfair advantage to small firms with higher payrolls (and more highly paid employees), while excessively burdening larger firms with employees who are paid less.

Components of Employer Cost Burden

When we disaggregated our measure of health-insurance burden into its underlying components (health-insurance costs and payroll), we found that payroll per employee was relatively stable over the period analyzed, while health-insurance costs grew substantially. These results suggest that health-insurance costs increased at a faster rate than total payroll. When we analyzed trends in non–health-insurance benefits (columns 5 and 6 of Table 4.5 in Chapter Four), we found statistically significant growth for the smallest nonoffering firms and no clear trend for the smallest offering firms. While this suggests that growth in non–health-insurance benefits may have stagnated due to rising health-insurance costs, in an unreported analysis in which we estimated the regression jointly, we could not reject the hypothesis that trends were the same for offerers and nonofferers.

Insurance-Offer Rates

Perhaps the most surprising finding in this analysis is that, despite clear increases in health-insurance costs and health-insurance–cost burdens, there is no evidence that firms dropped coverage over the period analyzed. Offer rates remained relatively stable, and we cannot reject the hypothesis that offer rates in 2000 were equivalent to offer rates in 2005. Moreover, the stability in offer rates is evident even for the smallest firms (fewer than 25 employees and fewer than 11 employees), among which the growth in health-insurance burdens was most pronounced. This suggests that firms, and ultimately their employees, were willing to shoulder the burden of rising health-insurance costs even if it meant giving up increases in wages. However, it is unclear whether employers and their employees will be able to afford this burden in the future, if health-insurance costs continue to outpace growth in payroll.

CHAPTER SEVEN

Conclusion

Health-insurance burdens borne by employers grew substantially between 2000 and 2005, regardless of firm size. While growth was highest for small firms (<25 employees), medium-sized firms (25 to 99 employees) did not face higher growth in health-insurance burdens than larger employers did. Our results suggest that targeting health reforms that build on the employer-based system solely to large firms may be unwarranted, given that large firms do not face lower health-insurance burdens than moderately small firms do. However, our results indicate that the growth in health-insurance burdens has been substantial regardless of firm size. As a result, it seems that all employers—large and small alike—may have difficulty shouldering health-insurance burdens if costs continue to rise. Although firms may pass insurance costs back to employees in the form of lower wages, employees may be unwilling or unable to afford these cost increases in the future. This may be particularly true at very small firms, at which employees appear to be sacrificing a larger share of their wages for a lower-quality benefit.

APPENDIX

Supporting Data

Table A.1
Identification of Single-Unit Establishments Among Those with Valid Multiestablishment Employer Indicators in the Employment Cost Index

	Single Status Based on Our Classification Method			
	Unweighted		Weighted	
MEEI	Multi	Single	Multi	Single
Single-unit establishment	2,289	5,677	70,330	5,913,544
Multiestablishment record	0	0	0	0
Subunit establishment-level record reporting as multiunit establishment	5,923	0	1,646,278	0
Multiunit establishment reporting as single due to unavailability of data	146	126	1,806.4	9,162.9
Subunit record of the state's file that actually represents a combination of establishments, finer-level breakouts not yet available	129	0	4,500.8	0
Known multiunit establishment reporting as single and not solicited for disaggregation due to small employment (<10) in all secondary establishments combined	84	162	6,994.8	86,423
Total N		14,536		7,739,040
Multiunit based on MEEI misclassified as single using our method (%)		4.8		1.6
Single-unit based on MEEI misclassified as multiunit using our method (%)		28.7		1.2

Table A.2
Identification of Single-Unit Establishments Among Those with Valid Multiestablishment Employer Indicators in the Employee Benefits Survey

	Single Status Based on Our Classification Method (unweighted)	
MEEI	**Multi**	**Single**
Single-unit establishment	0	1,169
Multiunit establishment	0	0
Subunit establishment-level record reporting as multiunit establishment	933	0
Multiunit establishment reporting as single due to unavailability of data	0	46
Subunit record of the state's file that actually represents a combination of establishments, finder-level breakouts not yet available	19	0
Known multiunit establishment reporting as single and not solicited for disaggregation due to small employment (<10) in all secondary establishments combined	0	38
Total N		2,205
Multiunit based on MEEI misclassified as single using our method (%)		6.7
Single-unit based on MEEI misclassified as multiunit using our method (%)		0

Table A.3
Actuarial-Value Regressions, Nonprepaid Plans

		By Employee Spending:			
Characteristic	**Overall**	**Above Median**	**Below Median**	**Upper 20 Percent**	**Lower 20 Percent**
Intercept	0.786 (0.003)	0.802 (0.003)	0.518 (0.006)	0.836 (0.003)	0.424 (0.007)
Plan has deductible	–0.011 (0.002)	0.0007 (0.002)	–0.207 (0.003)	0.005 (0.002)	–0.384 (0.004)
Deductible amount	–0.0001 (0.00000)	–0.0001 (0.00000)	–0.0002 (0.00001)	–0.0001 (0.00000)	–0.0001 (0.00001)
Plan has copayment	–0.029 (0.003)	–0.050 (0.003)	0.334 (0.007)	–0.074 (0.003)	0.558 (0.008)
Copayment amount	–0.002 (0.0002)	–0.002 (0.0002)	–0.008 (0.0004)	–0.001 (0.0002)	–0.011 (0.0005)
Plan has coinsurance	–0.079 (0.004)	–0.089 (0.004)	0.091 (0.007)	–0.104 (0.004)	0.147 (0.009)
Coinsurance amount	–0.004 (0.0001)	–0.003 (0.0001)	–0.006 (0.0002)	–0.003 (0.0001)	–0.005 (0.0003)
Plan covers drugs	0.156 (0.002)	0.154 (0.002)	0.196 (0.005)	0.133 (0.002)	0.163 (0.006)
Plan covers dental	0.0005 (0.0013)	0.0002 (0.0013)	0.005 (0.003)	–0.0003 (0.001)	–0.0002 (0.003)
Plan covers vision	0.007 (0.001)	0.007 (0.001)	0.008 (0.003)	0.007 (0.001)	0.006 (0.003)
Plan has an OOP maximum	0.084 (0.002)	0.087 (0.002)	0.021 (0.004)	0.102 (0.002)	0.027 (0.005)
OOP maximum amount	–0.000008 (4.77E-7)	–0.000009 (4.80E-7)	–5.50E-7 (9.52E-7)	–0.00001 (4.92E-7)	0.000002 (0.000001)

NOTE: Numbers in parentheses are standard errors. N = 10,313.

Table A.4
Actuarial-Value Regressions, HMO Plans

		By Employee Spending:			
Characteristic	**Overall**	**Above Median**	**Below Median**	**Upper 20%**	**Lower 20%**
Intercept	0.823 (0.003)	0.832 (0.003)	0.678 (0.006)	0.860 (0.003)	0.635 (0.009)
Plan has deductible	0.012 (0.002)	0.026 (0.002)	–0.219 (0.005)	0.028 (0.003)	–0.465 (0.007)
Deductible amount	–0.0001 (0.00001)	–0.0001 (0.00001)	–0.0004 (0.00001)	–0.0001 (0.00001)	–0.0001 (0.00002)
Plan has copayment	–0.062 (0.003)	–0.073 (0.003)	0.115 (0.005)	–0.091 (0.003)	0.186 (0.007)
Copayment amount	–0.009 (0.0001)	–0.008 (0.0001)	–0.016 (0.0003)	–0.007 (0.0001)	–0.017 (0.0004)
Plan covers drugs	0.133 (0.003)	0.131 (0.003)	0.167 (0.005)	0.111 (0.003)	0.140 (0.007)
Plan covers dental	0.002 (0.002)	0.002 (0.002)	–0.0004 (0.003)	0.003 (0.002)	0.001 (0.004)
Plan covers vision	0.004 (0.001)	0.005 (0.001)	0.001 (0.002)	0.005 (0.001)	0.0009 (0.003)
Plan has OOP maximum	0.108 (0.002)	0.114 (0.002)	0.003 (0.004)	0.134 (0.002)	0.003 (0.005)
OOP maximum amount	–0.00002 (8.50E-7)	–0.00002 (8.49E-7)	0.000003 (0.000002)	–0.00002 (8.73E-7)	0.00001 (0.00000)

NOTE: Numbers in parentheses are standard errors. N = 7,543.

Table A.5
Chi-Squared Statistic and F-Statistic Tests, with P-Values, of Joint Significance Corresponding to Table 4.2

Year	Size	Offers: Logit (chi-squared)	Health Insurance/Payroll, Offerers Only (F-statistic)			
			OLS	25th	50th	75th
A. Size and year × size interaction tests of joint significance (null hypothesis: $\Theta\varphi+\Psi_{jt}=0$)						
2001	25–49	60.76 (0.00)	4.64 (0.03)	0.04 (0.84)	16.56 (0.00)	23.42 (0.00)
2002	25–49	67.84 (0.00)	6.28 (0.01)	0.19 (0.66)	0.34 (0.56)	42.21 (0.00)
2003	25–49	78.6 (0.00)	7.86 (0.01)	2.15 (0.14)	18.17 (0.00)	97.63 (0.00)
2004	25–49	108.63 (0.00)	12.93 (0.00)	12.12 (0.00)	30.7 (0.00)	93.4 (0.00)
2005	25–49	67.14 (0.00)	24.56 (0.00)	29.86 (0.00)	125.64 (0.00)	147.85 (0.00)
2001	50–99	90.24 (0.00)	6.39 (0.01)	0.18 (0.67)	18.65 (0.00)	27.83 (0.00)
2002	50–99	83.61 (0.00)	4.55 (0.03)	0.03 (0.86)	8.97 (0.00)	24.28 (0.00)
2003	50–99	84.61 (0.00)	6.65 (0.01)	4.85 (0.03)	7.67 (0.01)	36.95 (0.00)
2004	50–99	78.75 (0.00)	9.68 (0.00)	8.96 (0.00)	25.85 (0.00)	137.65 (0.00)
2005	50–99	70.5 (0.00)	11.47 (0.00)	13.88 (0.00)	56.94 (0.00)	216.32 (0.00)
2001	100+	85.71 (0.00)	4.18 (0.04)	0 (0.96)	0.13 (0.72)	0.62 (0.43)
2002	100+	103.11 (0.00)	3.75 (0.05)	0.53 (0.47)	0.03 (0.87)	1.07 (0.3)
2003	100+	129.22 (0.00)	3.62 (0.06)	2.23 (0.14)	0 (0.95)	5.24 (0.02)
2004	100+	115.38 (0.00)	9.97 (0.00)	9.64 (0.00)	17.29 (0.00)	39.39 (0.00)
2005	100+	86.03 (0.00)	8.01 (0.00)	13.71 (0.00)	31.53 (0.00)	73.92 (0.00)
B. Year and year × size interaction tests of joint significance (null hypothesis: $\Gamma_t+\Psi_{jt}=0$)						
2001	25–49	0.3 (0.58)	8.31 (0.00)	2.31 (0.13)	3.42 (0.06)	21.23 (0.00)
2002	25–49	0.36 (0.55)	9.69 (0.00)	9.41 (0.00)	29.32 (0.00)	36.61 (0.00)
2003	25–49	0.01 (0.93)	13.97 (0.00)	12.17 (0.00)	22.07 (0.00)	44.72 (0.00)
2004	25–49	1.94 (0.16)	12.86 (0.00)	6.83 (0.01)	34.31 (0.00)	107.43 (0.00)

Table A.5—Continued

Year	Size	Offers: Logit (chi-squared)	Health Insurance/Payroll, Offerers Only (F-statistic)			
			OLS	25th	50th	75th
2005	25–49	0.2 (0.65)	6.23 (0.01)	2.3 (0.13)	4.16 (0.04)	92.34 (0.00)
2001	50–99	1.86 (0.17)	0.92 (0.34)	0.1 (0.75)	0.36 (0.55)	1.79 (0.18)
2002	50–99	0.28 (0.6)	6.75 (0.01)	2.68 (0.1)	1.64 (0.2)	21.78 (0.00)
2003	50–99	0.05 (0.82)	12.25 (0.00)	4.24 (0.04)	17.27 (0.00)	46.78 (0.00)
2004	50–99	0.05 (0.83)	16.89 (0.00)	6.07 (0.01)	22.49 (0.00)	44.9 (0.00)
2005	50–99	0.03 (0.86)	17.82 (0.00)	7.59 (0.01)	21.77 (0.00)	42.51 (0.00)
2001	100+	2.9 (0.09)	10.43 (0.00)	1.68 (0.19)	37.94 (0.00)	31.43 (0.00)
2002	100+	0.14 (0.71)	21.33 (0.00)	2.92 (0.09)	58.84 (0.00)	89.89 (0.00)
2003	100+	0.13 (0.72)	34.99 (0.00)	13.82 (0.00)	109.92 (0.00)	166.84 (0.00)
2004	100+	0.01 (0.93)	33.01 (0.00)	9.01 (0.00)	91.89 (0.00)	231.49 (0.00)
2005	100+	0.05 (0.83)	38.12 (0.00)	8.8 (0.00)	101.79 (0.00)	241.66 (0.00)

NOTE: p-values are in parentheses.

Table A.6
Insurance Offers and Health-Insurance Costs Relative to Payroll: Logit Marginal Effects, OLS and Quantile Regressions, Coefficients, and Standard Errors, Variables Not Reported in Main Text

Characteristic	Offers: Logit Model (1)	Health-Insurance Costs Relative to Payroll, Offerers Only			
		OLS (2)	25th Percentile (3)	50th Percentile (4)	75th Percentile (5)
Second wage quartile	0.314**	–0.008	0.009**	–0.012**	–0.024**
	(0.04)	(0.01)	(0.003)	(0.003)	(0.003)
Third wage quartile	0.47**	–0.028**	0.000	–0.025**	–0.06**
	(0.037)	(0.011)	(0.003)	(0.003)	(0.003)
Fourth (highest) wage quartile	0.534**	–0.054**	–0.007**	–0.049**	–0.097**
	(0.037)	(0.011)	(0.003)	(0.003)	(0.003)
Manufacturing	0.285**	0.01	0.014**	0.011**	0.015**
	(0.056)	(0.009)	(0.002)	(0.002)	(0.001)
Trade, transport, and utilities	0.265**	0.001	0.003	0.005**	0.013**
	(0.05)	(0.008)	(0.002)	(0.002)	(0.001)
Services, financial	0.155**	0.002	0.003	0.004**	0.005**
	(0.052)	(0.007)	(0.002)	(0.002)	(0.001)
Midwest	–0.039	–0.001	–0.001	–0.005**	–0.006**
	(0.069)	(0.006)	(0.002)	(0.002)	(0.001)
South	–0.117*	0.003	0.001	–0.003**	0.001
	(0.068)	(0.006)	(0.002)	(0.002)	(0.001)
West	–0.136*	–0.004	–0.003	–0.009**	–0.006**
	(0.073)	(0.007)	(0.002)	(0.002)	(0.001)
Union presence	0.383**	0.061**	0.058**	0.062**	0.073**
	(0.059)	(0.007)	(0.002)	(0.002)	(0.001)
Percent of employees who are full time	0.442**	0.04**	0.032**	0.062**	0.064**
	(0.058)	(0.016)	(0.003)	(0.003)	(0.003)
Constant	NA	0.074**	0.007	0.043**	0.109**
		(0.017)	(0.004)	(0.004)	(0.003)

NOTE: Weighted using ECI establishment weights. Size dummy variables, year dummy variables, and year × size interactions are not reported.

* Statistically significant at the 10-percent level.

** Statistically significant at the 5-percent level.

Table A.7
Chi-Squared Statistic and F-Statistic Tests, with P-Values, of Joint Significance Corresponding to Table 4.4

Year	Size	Offers: Logit (chi-squared)	Health Insurance/Payroll, Offerers Only (F-statistic)			
			OLS	25th	50th	75th
A. Size and year × size interaction tests of joint significance (null hypothesis: $\Theta_j+\Psi_{jt}=0$)						
2001	25–49	60.15 (0.00)	3.37 (0.07)	0.97 (0.33)	33.84 (0.00)	19.38 (0.00)
2002	25–49	69.64 (0.00)	5.66 (0.02)	0.56 (0.45)	0.16 (0.69)	77.28 (0.00)
2003	25–49	77.19 (0.00)	5.81 (0.02)	1.2 (0.27)	46.49 (0.00)	215.2 (0.00)
2004	25–49	107.2 (0.00)	12.06 (0.00)	28.01 (0.00)	105.4 (0.00)	151.2 (0.00)
2005	25–49	65.15 (0.00)	24.88 (0.00)	48.75 (0.00)	485.4 (0.00)	319.1 (0.00)
2001	50–99	86.55 (0.00)	4.69 (0.03)	1.41 (0.23)	47.97 (0.00)	67.4 (0.00)
2002	50–99	81.12 (0.00)	3.47 (0.06)	1.98 (0.16)	45.77 (0.00)	35.06 (0.00)
2003	50–99	83.01 (0.00)	4.18 (0.04)	11.62 (0.00)	7.39 (0.01)	38.2 (0.00)
2004	50–99	75.92 (0.00)	8.18 (0.00)	7.12 (0.01)	70.91 (0.00)	230.5 (0.00)
2005	50–99	67.82 (0.00)	10.01 (0.00)	13.72 (0.00)	276.4 (0.00)	361.9 (0.00)
2001	100+	87.18 (0.00)	2.52 (0.11)	0.84 (0.36)	0.18 (0.67)	1.57 (0.21)
2002	100+	99.66 (0.00)	2.74 (0.1)	0.01 (0.92)	2.16 (0.14)	0.27 (0.6)
2003	100+	118.9 (0.00)	1.4 (0.24)	0.73 (0.39)	6.36 (0.01)	0.17 (0.68)
2004	100+	110.2 (0.00)	6.96 (0.01)	9.51 (0.00)	26.6 (0.00)	62.66 (0.00)
2005	100+	78.98 (0.00)	5.82 (0.02)	11.81 (0.00)	151.7 (0.00)	164.9 (0.00)
B. Year and year × size interaction tests of joint significance (null hypothesis: $\Gamma_t+\Psi_{jt}=0$)						
2001	25–49	0.25 (0.62)	7.24 (0.01)	5.75 (0.02)	4.85 (0.03)	124.4 (0.00)
2002	25–49	0.33 (0.56)	9.15 (0.00)	12.22 (0.00)	67.68 (0.00)	113.3 (0.00)
2003	25–49	0.00 (0.97)	13.26 (0.00)	19.38 (0.00)	32.36 (0.00)	129.8 (0.00)
2004	25–49	2.15 (0.14)	11.59 (0.00)	5.94 (0.01)	54.07 (0.00)	313.9 (0.00)

Table A.7—Continued

Year	Size	Offers: Logit (chi-squared)	Health Insurance/Payroll, Offerers Only (F-statistic)			
			OLS	25th	50th	75th
2005	25–49	0.18 (0.67)	5.54 (0.02)	1.73 (0.19)	4.35 (0.04)	277.5 (0.00)
2001	50–99	2.31 (0.13)	1.41 (0.23)	0.04 (0.85)	0.49 (0.48)	1.08 (0.30)
2002	50–99	0.33 (0.57)	8.02 (0.00)	2.08 (0.15)	0.54 (0.46)	49.21 (0.00)
2003	50–99	0.02 (0.89)	13.43 (0.00)	6.02 (0.01)	61.15 (0.00)	146.1 (0.00)
2004	50–99	0.14 (0.71)	18.27 (0.00)	27.08 (0.00)	62.46 (0.00)	111.8 (0.00)
2005	50–99	0.00 (0.98)	18.87 (0.00)	26.01 (0.00)	56.74 (0.00)	153.1 (0.00)
2001	100+	2.71 (0.1)	9.84 (0.00)	0.67 (0.41)	63.71 (0.00)	65.65 (0.00)
2002	100+	0.09 (0.76)	19.16 (0.00)	1.86 (0.17)	125.3 (0.00)	198.3 (0.00)
2003	100+	0.10 (0.75)	37.36 (0.00)	13.86 (0.00)	250.3 (0.00)	468.6 (0.00)
2004	100+	0.00 (0.98)	35.09 (0.00)	12.71 (0.00)	204.9 (0.00)	507.8 (0.00)
2005	100+	0.01 (0.93)	37.79 (0.00)	14.2 (0.00)	227.1 (0.00)	546.2 (0.00)

NOTE: p-values are in parentheses.

Table A.8
F-Statistic Test, with P-Values, of Joint Significance Corresponding to Table 4.5

		F-Statistic				
		Payroll		Health-Insurance Costs	Non–Health-Benefit Costs	
Year	Size	Nonofferers	Offerers	Offerers	Nonofferers	Offerers
A. Size and year × size interaction tests of joint significance (null hypothesis: $\Theta_j+\Psi_{jt}=0$)						
2001	25–49	0.39 (0.53)	0.01 (0.91)	0.46 (0.50)	9.83 (0.00)	0.43 (0.51)
2002	25–49	0.48 (0.49)	2.20 (0.14)	0.03 (0.86)	2.63 (0.10)	4.32 (0.04)
2003	25–49	0.02 (0.88)	0.54 (0.46)	0.75 (0.39)	3.54 (0.06)	0.47 (0.49)
2004	25–49	0.11 (0.74)	0.32 (0.57)	5.06 (0.02)	8.23 (0.00)	0.00 (0.97)
2005	25–49	0.61 (0.44)	1.46 (0.23)	8.20 (0.00)	4.51 (0.03)	0.55 (0.46)
2001	50–99	0.11 (0.74)	0.96 (0.33)	0.07 (0.78)	15.3 (0.00)	0.90 (0.34)
2002	50–99	0.54 (0.46)	0.06 (0.8)	0.33 (0.57)	15.26 (0.00)	4.04 (0.04)
2003	50–99	0.14 (0.71)	0.01 (0.94)	0.23 (0.63)	21.27 (0.00)	2.93 (0.09)
2004	50–99	0.64 (0.42)	0.40 (0.53)	0.21 (0.65)	11.55 (0.00)	0.61 (0.43)
2005	50–99	0.25 (0.62)	0.73 (0.39)	0.42 (0.52)	10.66 (0.00)	1.70 (0.19)
2001	100+	5.56 (0.02)	4.23 (0.04)	0.80 (0.37)	22.19 (0.00)	4.32 (0.04)
2002	100+	2.59 (0.11)	4.69 (0.03)	1.16 (0.28)	16.79 (0.00)	6.48 (0.01)
2003	100+	4.94 (0.03)	2.99 (0.08)	0.33 (0.57)	13.82 (0.00)	2.90 (0.09)
2004	100+	0.32 (0.57)	0.95 (0.33)	0.27 (0.60)	5.61 (0.02)	8.06 (0.00)
2005	100+	0.56 (0.45)	1.15 (0.28)	0.23 (0.63)	1.72 (0.19)	9.75 (0.00)
B. Year and year × size interaction tests of joint significance (null hypothesis: $\Gamma_t+\Psi_{jt}=0$)						
2001	25–49	0.03 (0.87)	0.69 (0.41)	1.66 (0.20)	0.57 (0.45)	1.84 (0.18)
2002	25–49	0.52 (0.47)	1.37 (0.24)	9.70 (0.00)	0.85 (0.36)	0.57 (0.45)
2003	25–49	0.06 (0.8)	1.22 (0.27)	10.36 (0.00)	0.37 (0.54)	0.77 (0.38)
2004	25–49	0.02 (0.88)	2.25 (0.13)	12.54 (0.00)	0.01 (0.93)	3.55 (0.06)

Table A.8—Continued

		F-Statistic				
		Payroll		Health-Insurance Costs	Non–Health-Benefit Costs	
Year	Size	Nonofferers	Offerers	Offerers	Nonofferers	Offerers
2005	25–49	0.11 (0.74)	4.23 (0.04)	4.64 (0.03)	0.11 (0.74)	3.95 (0.05)
2001	50–99	0.02 (0.89)	5.51 (0.02)	0.34 (0.56)	0.15 (0.70)	0.19 (0.66)
2002	50–99	0.28 (0.6)	1.71 (0.19)	2.73 (0.10)	1.02 (0.31)	2.88 (0.09)
2003	50–99	0.05 (0.83)	0.18 (0.68)	8.55 (0.00)	0.81 (0.37)	14.61 (0.00)
2004	50–99	0.05 (0.82)	0.27 (0.6)	12.16 (0.00)	0.31 (0.58)	22.49 (0.00)
2005	50–99	0.05 (0.83)	0.53 (0.47)	14.10 (0.00)	0.62 (0.43)	19.5 (0.00)
2001	100+	0.06 (0.81)	2.39 (0.12)	2.35 (0.13)	0.45 (0.50)	0.06 (0.81)
2002	100+	0.00 (0.96)	0.84 (0.36)	5.98 (0.01)	0.60 (0.44)	0.34 (0.56)
2003	100+	0.06 (0.8)	1.41 (0.23)	6.05 (0.01)	1.23 (0.27)	6.18 (0.01)
2004	100+	0.91 (0.34)	1.35 (0.24)	7.35 (0.01)	0.57 (0.45)	45.14 (0.00)
2005	100+	3.65 (0.06)	1.85 (0.17)	14.34 (0.00)	1.68 (0.20)	36.49 (0.00)

NOTE: p-values are in parentheses.

Table A.9
Chi-Squared Statistic and F-Statistic Tests, with P-Values, of Joint Significance Corresponding to Table 4.6

			Health-Insurance/Payroll, Offerers Only (F-statistic)			
Year	Size	Offer: Logit (chi-squared)	OLS	25th	50th	75th
A. Size and year × size interaction tests of joint significance (null hypothesis: $\Theta_j+\Psi_{jt}=0$)						
2001	≤10	63.94 (0.00)	9.23 (0.00)	4.21 (0.04)	3.9 (0.05)	27.78 (0.00)
2002	≤10	51.59 (0.00)	2.18 (0.14)	0.51 (0.47)	0.11 (0.74)	2.36 (0.12)
2003	≤10	75.37 (0.00)	2.91 (0.09)	0.98 (0.32)	4.63 (0.03)	2.7 (0.10)
2004	≤10	65.87 (0.00)	9.69 (0.00)	8.76 (0.00)	40.06 (0.00)	20.35 (0.00)
2005	≤10	58.24 (0.00)	5.73 (0.02)	23.09 (0.00)	42.39 (0.00)	8.38 (0.00)

Table A.9—Continued

Year	Size	Offer: Logit (chi-squared)	Health-Insurance/Payroll, Offerers Only (F-statistic) OLS	25th	50th	75th
B. Year and year × size interaction tests of joint significance (Ho: $\Theta_t+\Psi_{jt}=0$)						
2001	≤10	0.03 (0.85)	2.75 (0.1)	1.36 (0.24)	7.52 (0.01)	11.49 (0.00)
2002	≤10	0.00 (1.00)	3.18 (0.07)	4.48 (0.03)	7.58 (0.01)	15.53 (0.00)
2003	≤10	0.52 (0.47)	5.58 (0.02)	13.19 (0.00)	26.14 (0.00)	35.16 (0.00)
2004	≤10	0.03 (0.87)	11.17 (0.00)	39.97 (0.00)	55.5 (0.00)	73.93 (0.00)
2005	≤10	0.90 (0.34)	14.4 (0.00)	54.87 (0.00)	100.69 (0.00)	98.12 (0.00)

NOTE: p-values are in parentheses.

Table A.10
Logit Marginal Effects and Standard Errors: Plan Characteristics, All Plans, Variables Not Reported in Main Text

Characteristic	Prepaid Plan	Drug Coverage Included	Dental Coverage Included	Vision Coverage Included
Prepaid	NA	–0.016 (0.016)	–0.181** (0.031)	–0.05** (0.025)
Nonunion	0.093** (0.046)	–0.013 (0.02)	–0.213** (0.055)	–0.127** (0.047)
Part time	0.029 (0.058)	–0.04 (0.047)	–0.039 (0.045)	–0.041 (0.042)
Manufacturing	0.005 (0.06)	–0.001 (0.025)	0.046 (0.051)	–0.057 (0.045)
Trade, transport, and utilities	0.040 (0.058)	–0.007 (0.026)	0.022 (0.048)	–0.027 (0.045)
Services, financial	0.043 (0.056)	0.030 (0.023)	0.048 (0.045)	–0.054 (0.043)
Midwest	–0.263** (0.036)	0.007 (0.021)	0.025 (0.05)	–0.085** (0.036)
South	–0.273** (0.037)	0.022 (0.02)	0.108* (0.062)	–0.04 (0.039)
West	–0.08* (0.044)	0.06** (0.016)	0.141** (0.059)	0.008 (0.043)
2003	–0.079** (0.036)	–0.077** (0.014)	–0.041 (0.035)	–0.014 (0.031)

NOTE: Data are weighted to reflect the population of enrolled employees. Size dummy variables are not reported.

* Statistically significant at the 10-percent level.

** Statistically significant at the 5-percent level.

Table A.11
Logit Marginal Effects and Standard Errors: Plan Characteristics, by Plan Type, Variables Not Reported in Main Text

		Nonprepaid Plans			
Characteristic	Prepaid Plans: Has Copayment (1)	Has Copayment (2)	Has Deductible (3)	Has Coinsurance (4)	Has OOP Maximum (5)
Nonunion	0.031 (0.03)	0.229** (0.06)	0.051 (0.059)	0.006 (0.048)	0.085* (0.047)
Part time	–0.016 (0.023)	–0.103 (0.091)	0.028 (0.064)	0.02 (0.045)	0.041 (0.033)
Manufacturing	–0.171 (0.111)	–0.061 (0.073)	–0.022 (0.094)	0.100 (0.068)	0.103** (0.038)
Trade, transport, and utilities	–0.225* (0.133)	–0.108 (0.076)	0.095 (0.085)	0.092 (0.069)	0.017 (0.047)
Services, financial	–0.09** (0.043)	0.034 (0.065)	–0.011 (0.089)	0.014 (0.077)	–0.031 (0.047)
Midwest	0.021** (0.011)	0.013 (0.061)	0.043 (0.054)	0.105** (0.038)	0.139** (0.027)
South	0.019 (0.012)	0.07 (0.059)	0.099** (0.049)	0.143** (0.037)	0.122** (0.029)
West	0.052** (0.012)	–0.004 (0.069)	0.116** (0.048)	0.125** (0.033)	0.121** (0.022)
2003	0.015 (0.015)	0.102** (0.043)	–0.071* (0.041)	0.029 (0.038)	0.023 (0.029)

NOTE: Data are weighted to reflect the population of enrolled employees. Size dummy variables are not reported.

* Statistically significant at the 5-percent level.

** Statistically significant at the 10-percent level.

Table A.12
OLS-Regression Coefficients and Standard Errors: Plan Characteristics, by Plan Type, Variables Not Reported in Main Text

Characteristic	Prepaid Plans: Copayment Amount	Nonprepaid Plans			
		Copayment Amount	Deductible Amount	Insurer Share of Coinsurance	OOP Maximum Amount
Nonunion	0.769 (0.794)	1.106 (0.7)	77.176** (25.91)	0.184 (0.70)	95.08 (158.78)
Part time	0.533 (0.871)	1.715** (0.848)	115.514 (147.43)	–0.611 (0.92)	117.49 (218.32)
Manufacturing	0.667 (1.051)	–0.287 (0.939)	–0.899 (38.92)	0.326 (0.899)	–672.99** (204.27)
Trade, transport, and utilities	1.225 (0.952)	0.323 (0.967)	1.52 (38.67)	–0.836 (0.841)	–432.34** (193.91)
Services, financial	–0.028 (1.038)	–1.786** (0.886)	–14.548 (34.84)	1.038 (0.86)	–547.48** (203.72)
Midwest	0.069 (0.636)	0.122 (0.707)	12.631 (37.04)	0.739 (0.89)	63.57 (166.10)
South	–0.58 (0.936)	1.862** (0.698)	50.279 (37.20)	0.067 (0.883)	384.47** (181.042)
West	0.068 (0.677)	1.329* (0.749)	53.17 (48.95)	1.24 (0.948)	340.32* (195.488)
2003	1.453** (0.545)	0.449 (0.474)	17.22 (27.95)	–1.04** (0.49)	262.14** (111.597)
Constant	8.942** (1.209)	14.29** (1.181)	335.65** (46.76)	82.55** (1.211)	1,652.94** (285.889)

NOTE: Data are weighted to reflect the population of enrolled employees. Size dummy variables are not reported.

* Statistically significant at the 10-percent level.

** Statistically significant at the 5-percent level.

Table A.13
Predicted Plan Characteristics, Holding All Else Constant

	Firm Size (Employees)			
Characteristic	**<25**	**25–49**	**50–99**	**100+**
A. All plans				
Prepaid	0.374	0.336	0.330	0.368
Drugs covered	0.860	0.894	0.919	0.915
Dental covered	0.227	0.173	0.235	0.240
Vision covered	0.162	0.192	0.190	0.248
B. Indemnity plans				
Has copayment	0.661	0.730	0.751	0.632
Has deductible	0.762	0.591	0.709	0.670
Has coinsurance	0.851	0.749	0.776	0.758
Has OOP maximum	0.864	0.840	0.834	0.792
Copayment amount[a] ($)	15.875	14.348	14.546	15.292
Deductible amount[a] ($)	449	400	379	306
Coinsurance amount[a]	0.173	0.156	0.155	0.156
OOP maximum amount[a] ($)	1,655	1,450	1,793	1,542
C. Prepaid plans				
Has copayment	0.937	0.991	0.911	0.939
Copayment amount[a] ($)	10.87	12.08	12.58	12.87

NOTE: Deductibles, copayments, and OOP maximums are reported in 2002 dollars.

[a] Prediction is conditional on having the relevant plan characteristic (e.g., copayment results are restricted to plans with nonzero copayments).

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