English Language, Skills, and Health Benefits

PRELIMINARY DRAFT
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Abstract

This paper shows that because a firm's decision to offer insurance to low-skilled workers is dynamic and grounded its compensation policies, firms select the mix of workers and restrictions placed an offer of health benefits in response to market forces. We support this proposition using two databases of California workers (California Work and Health Surveys) and firms (Bay Area Longitudinal Surveys). Although the offer of health benefits is rarely rescinded over time, the firm changes its criteria for receiving benefits as labor market forces alter the availability of workers. We show that firms base health benefit offers on the skills of workers, even in jobs that require relatively few skills. Of particular note, low-skill workers with English language skills are significantly more likely to be offered a job in a firm offering health benefits than low-skill workers that do not possess such skills.

Health insurance coverage, including that provided through the employer, has been eroding over time leaving an increasing number of Americans without health insurance. In 2003, 26 percent of adults, an estimated 45 million people, were without coverage for some time during the year (Collins et al., 2004), with more than half of the uninsured adult population working. Low-wage, low skilled workers are least likely to have health insurance coverage (Budetti, 2000; Quinn, Schoen, and Buatti, 2000; Glied et al., 2003). Even if low-skilled workers are offered insurance through their employer, their low wages may not provide sufficient discretionary income to pay the required cost-sharing premiums (Lambrew, 2001). As a result, employment no longer represents a guarantee of health insurance.

It is therefore of critical importance to determine why low-skilled individuals are not receiving offers of employer-based health insurance. Do their skill levels preclude offers of employment from firms offering health insurance? Do firms face rigidities in offering health insurance for workers such that adjustments in exogenous price changes produce marginal changes in health benefits that leave the least skilled vulnerable to discontinuations of health insurance offers?

This study addresses these questions by examining the relationship between labor market skills and health benefit offers made by employers and the over time changes in the employer's offer. We develop a dynamic framework for examining the health benefit offer. The more dynamic framework changes the emphasis from a static principal-agent framework of health insurance offers in which the decision to offer insurance is grounded in the firm's price of offering insurance to one in which firms view health insurance as compensation to workers and select the mix of workers and restrictions placed on the offer of insurance in response to the exogenously determined price.

The change in focus of the health insurance creates a new avenue of policy interventions that might increase the level of insurance among the uninsured by increasing the human capital of the uninsured. If firms decision to offer insurance is part of a dynamic environment in which

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they can select the mix of workers and alter the nature of the offer, workers with above average skill levels will receive offers of health insurance, only the more skilled of low-level workers will receive health insurance offers, and the nature of the offer will change over time. Because results of this study support this more dynamic environment for employer-offered insurance, policy alternatives to increase the coverage of uninsured workers include increasing their skill levels so that they become more attractive to employers that offer insurance. Because most studies on access to employment-based health insurance have focused on worker characteristics such as race, ethnicity, and immigration status (Schur and Feldman, 2001; Quinn, 2001), policy prescriptions have generally centered around improving outreach to communities and targeting programs to those most in need. If race, ethnicity, and immigration status are associated with skills, as a large body of research suggests and skills are correlated with receiving an offer of employment-based health insurance, as results of our study suggests, outreach policies should be augmented with policies to increase human capital to be most effective. Individuals cannot change race, ethnicity, and immigration status. They can, however gain labor market skills that would gain them employment in a firm offering health insurance.

This study adopts a more dynamic approach to the employment-based insurance offer and examines the relationship between workers' skill levels and health benefits offer using two unique, but complementary data sets. By examining the relationship between workers' skill levels and their access to benefits, we can assess the potential of increasing human capital to low-skill individual to improve their access to employment-based health insurance. Toward this end, we focus our analysis on describing the offers received by workers and those provided by employers of low-skilled workers and on assessing the relationship skills and health insurance offers for workers with relatively low levels of human capital.

Framework

Firms compensate workers for their labor in many ways, including the offer of health insurance. Compared to flexible forms of pay (e.g., wages, sick leave) that can be adjusted to

compensate individual workers for productivity-related differences, health insurance offers represent a relatively fixed payment for services that is established for a firm's entire workforce. Once a firm offers health insurance benefits to its employees, it must offer benefits to all workers that meet the eligibility criteria. Even adjustments in the restrictions on the eligibility criteria for health benefits (e.g. minimum number of hours, minimum tenure with the firm) generally apply to all workers at the firm.

Despite the rigidities in the health insurance offer, powerful incentives exist for the firm to include health insurance as part of the compensation package to its workers. The relatively large difference between the firm's price for insurance and the market-established price the individual must pay makes the health insurance offer an attractive form of compensation for both the firm and the employee because the worker values the offer at a higher rate (its market-set price) than the firm pays.

However, the rigidities introduced by including health insurance in the compensation package may produce incentives to create distributional inequities in the offer. Because the health benefit offer and price is fixed across employees,[1] health insurance becomes a relatively large proportion of the compensation package for low-skill, low-wage workers than for higher-skilled workers with relatively high wages. Firms not wishing to compensate low-skilled workers the higher rate forced by including a health insurance offer in compensation but wishing to offer health insurance to attract a quality high-skilled workforce, have a limited number of options to pursue. They can reduce wages paid to low-skilled workers to offset the cost of health insurance, an option that may be precluded by the presence of minimum wage laws. Firms can also outsource the services of low-skilled workers, in which case the worker becomes an employee of another firm and has an entitlement to the health benefit offer as compensation set by the firm to which services were outsourced. Finally, the firm can alter the terms of employment to low-skilled

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[1] Although firm's price of insurance varies factors such as its the age structure (Hadley and Reschovsky, 2002), it does not vary with the characteristic of any individual worker.

workers in such a manner as to leave the worker ineligible for the health insurance offer. For example, the firm could increase the hours worked per week requirement for receiving a health benefit offer and reduce the hours of low-skilled jobs to a level below the offer requirement.[2]

Despite the intuitive appeal of the compensation framework for making a health benefit offer, studies have not approached the firms' decision to provide health insurance to workers using this perspective. For example, Hadley and Reschovsky (2002) and Feldman et al. (1997) view firms as agents for their employees and offering insurance if their employees' collective reservation price exceeds the price at which the employer can make insurance available.

However, this static approach to examining determinants of health insurance offers ignores the incentives produced by changes in the price of health insurance and the labor market, both of which are likely to affect offers made to low-skill workers who are the most vulnerable to falling into the ranks of the uninsured. If the price of insurance increases total compensation above the marginal revenue product of the worker—a more likely outcome for low-skilled workers for whom insurance represents a larger proportion of the compensation—the firm has an incentive to reduce wages, eliminate the offer of insurance, or terminate the employment relationship. Likewise, when labor markets loosen and put downward pressure on wages, firms have an incentive to reduce compensation to the worker if the firm gains no long-term advantage from the employment relationship, which is frequently true for lower-skill workers (Weiss, 1980).

The more dynamic view of the employment-based health insurance offer suggests that firms' would make health benefits offers in a manner consistent with wage offers. Offers would increase with skill levels as the health insurance premium increases compensation above marginal revenue product for less-skilled workers. Offers would also increase as labor markets tighten (decrease as labor markets loosen). In cross sectional data, we would see skill levels positively related to an employment-based offer of health insurance and in longitudinal data, we

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[2] Firms can also alter the premium that a worker pays for the benefit, however, this represents a noticeable change in compensation to the worker and is a change generally made to all workers, not just low-skill workers.

would see changes in the nature of the offer consistent with contractions and expansions in the labor market, ceteris paribus.

Descriptive analyses of the uninsured are consistent with a compensatory model of employment-based health insurance offers with education, earnings, work effort, language, and immigration status all correlated with insurance status (Table 1). The 2000 data from the California Work and Health Surveys (discussed below) show that workers aged 18 to 64 with a high school education or less also account for nearly one-fourth of the California's workers, yet nearly 45 percent of the uninsured in the state. Rates of uninsurance generally fall as earnings rise, with nearly 90 percent of California's uninsured workers making less than $40,000 a year. Part time and workers that have less than one year with the firm are more likely to be uninsured than their full time and longer-tenured counterparts.

Workers whose primary speak a language at home is not English are considerably more likely to be uninsured than those who speak English as they account for less than 20 percent of California workers but 40 percent of uninsured workers in the state. Immigrant workers are more likely to be uninsured than native-born Americans (30.9 percent and 13.5 percent). One explanation for the lower rates of insurance for these groups of workers is the lower level of skills they bring to the labor market.[3]

The interplay between immigration status, Hispanic ethnicity, language ability, and education level is an important public policy concern, particularly for states in the Southwest. In California, Hispanics account for about one-fourth of California workers, but for nearly one-half of the uninsured in the state (Table 1). Immigration status and Hispanic ethnicity, while often used to identify populations at risk for uninsurance may be masking the true culprit, which

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[3] Our focus on workers in this study does not to diminish the high rates of uninsurance among other populations (Table 1) In 2000, California had 14.5 million workers of which 2.6 million or 18.1 percent were uninsured. For example, uninsurance rates generally decrease with age. Workers were aged 18-24 (nearly 12 percent of the population), had an uninsurance rate of 28.9 percent (19 percent of uninsured workers) while workers aged 55-64 accounted for 20.1 percent of California workers but only 12.5 percent of the uninsured. Because many insurance policies permit parents to cover their children on the parents' policy until the child is 23 so long as the child is in school. Consequently, we focus our framework and analysis on prime aged workers, 25-64. Also, small firms are much less likely to offer health insurance to workers than large firms. We discuss these differences in Appendix A.

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is the fact that workers in these categories are often poorly educated and lack skills, including language competency, necessary to obtain jobs that offer health insurance.

This study addresses these public policy concerns by employing a dynamic, compensatory model of employment-based health insurance offers to examine the relationship between skills and health benefit offers. We expect that 1) worker skills, including English language, will be positively related to receiving an employment-based offer of health insurance, 2) skills will increase the probability of a firm making a health benefit offer, *even among workers with few labor market skills*, and 3) firms will change the nature of their offer in a manner consistent with expansionary and contractionary labor market forces. Should we find support for a model of employment-based health offers that is grounded in labor market compensation, we will assess the nature of the skills that could be enhanced to increase insurance rates among the uninsured.

Data and Estimation Models

We address a dynamic, compensatory model of employment-based health insurance using two databases that contain information on health benefit offers and skills within a single California labor market, the San Francisco Bay Area. The need to examine the employment-based health insurance within a single state and a single labor market are important for at least two reasons. First, much of the existing research on the firms' decision to offer health insurance focuses on its price of insurance. Since insurance markets are likely to vary from area to area, the ability to examine the firm's offer decision in one market area essentially holds constant many of the factors that would affect price (e.g., competition among insurers, availability of public services, and prices for hospital care). Second, the workforce diversity in both the Bay Area and California labor markets provides a unique opportunity to assess the interplay between ethnicity and skills by examining the role that English language abilities plays in determining offers of health insurance. In many respects, California is ahead of the curve on workplace issues of immigrant employment and language barriers as more than one-fifth of the working population speaks a language other than English at home and three in ten California workers were born

outside of the United States (tabulations from CWHS data). As such, analysis of the

employment-based health insurance offer in the California labor market offers insights into the

types of policies that might be developed in other states before increasing rates of immigration

change their populations' demographics in ways that typically increase uninsurance rates.

Our two Californian databases allow us to examine the health benefit offers made to

workers by employers. One data base, the 2000 California Work and Health Survey (CWHS), is

particularly suited to examining the factors correlated with whether or not a California worker is

offered health insurance by his/her employer (http://medicine.ucsf.edu/programs/cwhs/). The

second data base, the Bay Area Longitudinal Survey (BALS), is particularly suited to examining

the skill correlates of a firm making a health benefit offer to low-skill workers and to assessing

changes made in the health benefit offer in contractionary and expansionary labor markets

(http://www.hire.csuhayward.edu/Hire/bals.htm).

The CWHS is a telephone-based, longitudinal survey of California adults designed by

faculty and staff at the Institute for Health Policy Studies at the University of California, San

Francisco. The survey contains considerable information on the insurance status of the

population both at the time of the survey and over the past year as well as information on health

insurance offers made to workers and the worker's acceptance. Although the survey was fielded

annually from 1998 through 2000, we exploit the cross sectional information from the 2000

survey in our analysis.

The 2000 CWHS was administered between May 1 and July 9, 2000 and includes 2,168

California adults, of whom 627 were part of the 1998 and 1999 CWHS, 638 were part of the 1999

CWHS and 903 were new respondents.[4] 441 of the new respondents were selected through

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[4] The first round of CWHS surveys was conducted in June 1998 and included 1,771 respondents over the age of 18.
85 percent were selected through random digit dialing. The remaining respondents were selected from over-
sampling three population subgroups: African Americans, Asian Americans and persons with disabilities. The 1999
survey was administered between May 1 and July 9, 1999 and included 2,044 individuals, of which 913 had been
interviewed in round one. The sample of new respondents in 1999 was composed of 700 adults from a random
digit dialing sampling of the state's adult population. The remaining sample consisted of African-Americans,
Asian/Pacific Islanders, persons with disabilities and persons aged 45-70.

random-digit dialing and the remainder consisted of over-sampling of African Americans, Asian/Pacific Islanders and Latinos. Weights available with the CWHS data enable one to generate statewide estimates of employer provided health insurance to different worker groups and to identify the population groups at risk of not having employment-based health insurance.

The BALS research project was designed to uncover the knowledge and skills that employers required in *entry-level* jobs and over time changes in the nature compensation in the job. Entry-level was defined as a position in which employers required no more than a high school education and no more than one year of work experience. BALS data were collected from firms in three counties in the San Francisco Bay Area and its longitudinal dimension allows for assessing changes in the nature of the job, including changes in the health benefit offer, that occurred between the dot.com and dot.bust labor markets. [5]

At the core of the BALS data collection from firms is a series of questions about skills. Analysis of BALS data helps uncover the heterogeneity in health insurance coverage among those most likely to be uninsured, workers with low levels of education, by examining the relationship between the skills required in low-skills jobs and the offer of health benefits in the job. Under a compensatory model of health insurance offers, jobs requiring only a high school education and little work experience but higher levels of skills will offer health benefits while others will not. [6]

We use 53 skills questions posed to firms about worker requirements in a particular entry-level job. Skill questions fell into six categories: reading and writing English, math,

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[5] BALS data collection occurred in San Francisco, Alameda, and San Joaquin. Selection of firms for surveying in Wave I was stratified by both county and number of employees in the firm to ensure meaningful analysis along these lines. Within each county, three sizes of firms were targeted for surveying: small (1-49 employees), medium (100-250 employees), and large (over 300 employees). Discrete categories were developed to allow for discontinuity in classification, which makes firms in different size categories unique (e.g., they do not differ by only one employee).

[6] Even the lowest level of entry-level jobs require some skill (Newman, 1999) and the types of skills required can be quite varied. For example, over half employers in the Multi-City Study of Urban Inequality required daily reading of at least a paragraph, about half required use of computers and arithmetic, and nearly half required writing—all academic skills generally learned in school. The softer workplace skills, which include motivation, personality, ability to get along with others, etc., were highly valued by entry-level employers, particularly retail firms (Moss and Tilly, 2000) but hard workplace skills, which are often acquired on the job, are required by under half of the entry-level employers (Holzer, 1996).

communication, problem solving, use of equipment, and computer software. A factor analysis on the skills in each category defined a set of 15 skill constructs required in entry-level jobs, including two measures of English language ability. [7]

BALS also includes information on the benefits that firms offer to workers in a particular entry-level position and the restrictions put on those benefits. The benefits offer was obtained by asking human resource managers to identify which of benefits were offered from a list of 23 benefits (and an open-ended other category). A factor analysis of the benefits (Appendix B Table 1) identified seven benefits that grouped together to make a "health" factor: paid vacation, paid sick leave, retirement, medical, dental, vision, and life insurance.[8] We define these benefits as "health benefits" in our analyses. Although a paid vacation is not technically a health benefit, it allows the worker flexibility in taking paid time from work when health concerns arise.

Restrictions on receiving benefits was obtained through open-ended questioning of the employers with responses lending themselves to coding in terms of the number of hours per week that must be worked before benefits are offered and the number of months (or weeks) that must be worked before benefits begin.

Surveys administered to employers were fielded in two waves. In Wave I, 5,514 employers were randomly selected and asked over the telephone for cursory information (job title, wage, benefits, English language ability, and job availability in next year) about the firm and its entry-level positions (*Phone Survey)* and the willingness to participate in an in-depth, on-site survey about a selected entry-level position. In the second part of Wave I surveying, 405 firms hiring for entry-level positions participated in an on-site survey to collect in-depth information

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[7] The constructs developed from each set of skills explain between 61.3 (communication) and 70.3 percent (equipment) of the variation in the entry-level skill requirements. Skills loading high on the simple English construct include reading written instructions, labels, schedules, journals; general memos, letters, and forms; technical materials; writing simple sentences and paragraphs; and completing forms, logs, charges, or labels. Skills loading high on the complex English construct include using correct spelling, grammar, and style; proofreading; and writing complex or creative materials or reports. Appendix B Table 2 provides an explanation of the skill constructs. A more detailed description that describes both the factor analysis and skill constructs is available upon request from the author.

[8] Our factor analysis shows other benefit packages as well. When firms offer workers leave benefits, they provide paid maternity and paid paternity leave. When they offer child care benefits, they offer paid child care and child care assistance. When they offer workers flexibility, they offer job sharing and flexible hours.

about one specific entry-level job (*Employer Survey*).[9] Wave I surveys were administered from June 1998 to October 2002. In Wave II, BALS reinterviewed the 405 firms participating in the Employer Survey from October 2002 through October 2003 (averaging about 22.8 months after initial surveying) to determine overtime changes in wages and job requirements (*Longitudinal Survey*) that occurred between the two time periods. 92.4 percent of the firms surveyed had a positive disposition, meaning they completed the survey or were no longer in business.

We begin our inquiry into the relationship between skills, including English language, and health benefit offers in multivariate estimations of determinants of health benefits. Worker skills would not be included in a general model of the firm's decision to offer health insurance since firms cannot offer health insurance on a worker-by-worker basis. However, under a compensatory model of health benefit offers, skills are correlated with the offer since firms can reduce the offer to low-skill workers by outsourcing their positions or changing the employment contract such that the terms of employment (e.g., hours worked) no longer meet the requirements for receiving an offer.

For this analysis we examine the offer of health benefits from both the worker and the firm's perspective. In this analysis we estimate the general equation:

1) $Offer = \alpha_0 + \sum_{s=1}^{n}\alpha_s Skill_s + \sum_{f=1}^{m}\alpha_f Firm_f + \sum_{i=1}^{x}\alpha_j Indiv_j + \alpha_1 LM + \varepsilon_1$

where:

Offer   = A measure of health benefit offer;

Skill   = A measure of skills;

Firm   = A measure of the firms' characteristics (e.g., industry, company size, or unionized);

Indiv = A measure of individual human capital;

LM   = A measure of labor market conditions; and

ε = Error term.

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[9] 75.2 percent of the 5,514 firms selected for surveying in the *Phone Survey* had a positive survey disposition, meaning they completed the survey or were not eligible to do so (e.g., no entry-level jobs, not in business, restrictive hiring). 20.8 percent of those eligible for surveying from the *Phone Surveying* participated in the *Employer Survey*.

We estimate the general form of this equation using both the CWHS and BALS data sets as a way of assessing the robustness of α to unit of observation (i.e., worker reported or firm reported), measures of offer (i.e., Offer), measures of skills (i.e., Skill), and model specification (i.e., different measures of Indiv and LM). If a compensatory model of health insurance offer is in operation, our estimations would reveal that $\alpha_s > 0$ (p ≤ .05), irrespective of model specification, data base, or unit of observation.

Should we support a compensatory model of health insurance offer, we will examine which specific skills determine an offer of health benefit. The BALS data set is of critical importance in this regard, for it allows us the ability to assess which skills gain access to an offer of health benefits. Of particular interest is the need for English language skills to obtain an employment-based offer of health benefits. If English language skills underlie the offer decision, immigrants and workers residing in households in which English is not spoken would be less likely to receive an employment-based offer of health benefits by virtue of their lower level of English language abilities. In such cases, English language skills should be built to help reduce uninsurance rates among this population group.

The BALS data allow us to test for robustness in our results by estimating the equation with three different dependent variables: the factor score for health benefits offered in the job, the number of health benefits offered, and whether or not medical benefits were offered. Because the dependent variable in each estimation provides a slightly different measure of health benefits provided in the entry-level position, our estimations provide a sensitivity analysis to ensure that our results will hold up under a wide variety of model specifications.

We use a logit analysis when the dependent variable takes the form of the binary measure of offering medical benefits in both the CWHS and BALS data. We use ordinary least squares analysis in BALS data estimations of equation (1) when the dependent variable takes

the continuous form of the factor score and number of health benefits. Appendix B Table 2 provides a definition of the variables used in the analysis of BALS data.

The depth of controls in the BALS data allows us to estimate equation (1) under three different stages to determine the sensitivity of the skills relationship to the health benefit offer to model specification. We initially estimate the offer equation with only skill constructs entered into the estimation to examine the total effect of skills on receiving a health benefit offer. We enter firm-level variables into the next estimation to determine whether the relationship between skills and the probability of receiving an offer of health benefits operates through employment in a particular firm (e.g., increased skills could facilitate placement in larger firms which are more likely to offer health benefits). An indirect effect of skills would be shown by a reduction in coefficient size over the initial estimation. Finally, we add individual characteristics—captured as wages in the BALS estimation—to determine if the correlation between individual characteristics alters the estimated relationship of skills and health benefit offer.

Equation (1) represents a static view of the firms' offer decision. A more dynamic view assesses the overtime changes in the offer that are associated with exogenous changes in prices. The BALS data are unique in their ability to ferret out the changes in the offer of health benefits as labor market conditions change. Should offers of health benefits be made within a dynamic, compensatory framework, we would expect to see firms decreasing the health benefit offer as labor markets loosen. Because BALS data follow firms from a relatively tight labor market into a relatively loose labor market, we can determine if firms decrease the benefit offer as the availability of workers increases. For this analysis, we compare proportion of firms that offer health benefits to entry-level workers in tight and loose labor markets and the nature of restrictions placed on the offer. Because offering health benefits represents a relatively high fraction of compensation to all low-skill workers in the firm, we expect that the actual offer of health benefits will not change over time, but the restrictions on the offer, which are more easily changed and are more flexible with their application, will change with exogenous labor market changes.

Results

We begin our analysis with a description of employment-based health insurance offers to California workers and see that offers differ along both skill and ethnicity lines (Table 2), although the discrepancy in employment-based health insurance offers by education level and by language was greater than the discrepancy by immigration status and ethnicity. In 2000, 74.2 percent of the 12.7 million California workers between the ages of 25 and 64 were offered employment-based health insurance, with Hispanics and immigrants less likely to receive an employment-based health insurance offer than Non-Hispanics and those born in the U.S. Less than two-thirds of workers who spoke a language other than English at home were offered health insurance by their employer compared to more than 80 percent of those who spoke English at home.

Only two-thirds of workers with a high school education or less were offered employment-based health insurance compared to more than 80 percent of workers with more than a high school education. Workers with a tenure of one year or more with the firm and those who worked full-time were more likely to receive an offer of employment-based health insurance than those who worked part-time and those that had been with the firm for less than one year. Less than half of workers earning under $20,000 per year were offered health insurance by their employer, an artifact of the fact that a disproportionate number of these workers worked part-time.

Of course, the distinction between ethnicity and skills in obtaining an employment-based health benefit offer is of paramount importance from a public policy perspective. If ethnicity determines the offer, outreach efforts to uninsured groups might be the effective approach to increasing insurance rates. If, however, skills determine the offer, policy interventions should build the human capital necessary to obtain employment in firms offering health benefits.

We assess whether skills determine the health benefit offer by estimating equation (1) using the CWHS data. In the relatively straightforward estimation of whether or not California

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workers'[10] skills are correlated with whether or not they receive a health insurance offer from their current employer (Table 3). Less skilled individuals are less likely to receive an employment-based offer of health insurance, ceteris paribus. Individuals with a high school education or less are less than half as likely as those with more than a high school education to receive a health insurance offer from their employer and those whose primary language at home is English are 1.7 times more likely to be offered employment-based health insurance than those whose primary language is not English. Analysis also suggests that employers can eliminate their offer of insurance by placing restrictions of the offer. Part-time workers and workers with less than one year of tenure with the firm are significantly less likely to be offered employment-based health insurance than workers who work full-time and have greater tenure.

BENEFIT OFFERS TO LOW-SKILL WORKERS

Results of the CWHS data suggest that low-skill workers, with no more than a high school education and one year or less of work experience, might have trouble receiving an employment-based offer of health benefits, a suspicion that gains support with analysis of the BALS data on entry-level positions.

Table 4 shows that obtaining a job offer may be quite difficult for the individual that is only has a high school education and one year or less of work experience. Even though so-called entry-level employers state that no more than a high school education and one year of work experience is required for employment, the successful applicant has qualifications that far exceed these levels. In fact, nearly 20 percent of the entry-level jobs hire workers with some college and nearly 30 percent have two or more years of work experience. While only about half the firms require entry-level workers to have general English skills (speak, understand or read English very well), over 60 percent of the firms hire applicants with these abilities. Requirements to advance out of the entry-level position are even more stringent. Firms offering medical

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[10] Because workers aged 18 – 24 are frequently covered under their parents' health plan and may be both working and attending school full-time, we restrict the analysis to workers ages 25 and over.

benefits generally have higher minimum requirements for employment, and hire workers with far more education and work experience that firms that do not offer medical benefits.

If low-skill workers find employment they have a good chance of getting health benefits, if benefits are offered since health benefits dominate the benefits offered to entry-level workers (Table 5). Nearly 80 percent of the firms with entry-level job openings offer workers medical benefits and paid vacation. About two-thirds of the firms offer entry-level workers dental benefits and paid sick leave. Somewhat fewer firms offer vision, retirement, and life insurance benefits, although over half the firms offer these benefits.

Offering benefits is a necessary but not sufficient condition for entry-level workers to obtain benefits, for all but 5.7 percent of the firms place restrictions on their offer (Table 5). Benefits can start immediately only for 16.6 percent of the workers even if they meet the minimum hours worked per week requirement. Over half the firms (56.3 percent) require the entry-level worker to work 30 hours a week before receiving benefits, with over one-third requiring full time work (35 hours a week). Nearly 40 percent (39.0 percent) of the firms make the entry-level worker wait 3-5 months before they can participate in benefit programs. Almost five percent make the entry-level worker wait one year before the worker can receive benefits.

Results of our multivariate analysis suggest that skills, *particularly English skills,* underlie the probability that an individual will receive a job offer that includes health benefits (Table 6), a finding that is robust to several different model specifications, including the definition of health benefit (a high factor score, the number of health benefits offered, an offer of medical benefits. Because the coefficient size and significance on simple English does not diminish as skills and institutional variables are entered into the model (nor does it decline when wages are entered), the influence of English language skills on the probability of receiving an offer of health benefits is significant and robust. Employers are more likely to offer entry-level workers with English language skills health benefits than those without English language skills. Small firms are less likely to make health benefit offers and unionized firms are more likely to make offers. Employment in the retail

sector decrease the probability of receiving a health benefit offer, as does the ability to work with coworkers, although the latter effect may work through institutional placement in the labor market as its significance goes away as institutional influences are taken into account.

OVER TIME CHANGES IN BENEFIT OFFERS

Results thus far suggest that a dynamic, compensatory model of health benefit offers explains why some groups of workers receive employment-based offers and others do not: skills. Firms apparently base health benefit offers on the skills of workers, even in jobs that require relatively few skills. The dynamics in this model also posit that firms change the nature of the offer as labor market conditions change, a prediction that is supported with our descriptive analysis of the continuity in benefits offered (Table 7). Few changes in the offer of benefits to low-skill workers occur over time. Given the high fixed costs associated with making the offer, this is what the model would predict.

Differences do exist in the offers made in tight and loose labor markets, however (Table 7). Although no statistically significant (p ≤ .05) differences exist between t and t+1 offers of health benefits (or other benefits), irrespective of whether t is a tight or a loose labor market, overtime reduction in health benefit offers occurs with the removal of the position from entry-level or in increasing the restrictions placed on the offer. Overall, eight percent of the firms removed the position as employment option for entry-level workers, either because it went out of business or it no longer had the position between t and t+1 (an average of 23 months). Another 12.6 percent of the firms increased the restrictions placed on the worker before the benefit offer could be accepted. These numbers increase for firms that moved from a tight to a loose labor market, with 11.5 percent of those firms removing the position from entry-level workers and over 20 percent (21.2 percent) increasing the restrictions on offers.

Although changes in the requirements for health benefits appear to change little with time, they differ significantly between tight and loose labor markets (Table 7), suggesting that the nature of the offer changes as the supply of workers changes. Far fewer firms that operate

in a loose labor market place restrictions on workers receiving benefits. In fact, only about two percent of firms operating in a loose labor market make offers to entry-level workers irrespective of the hours they work, in contrast to the nearly ten percent (9.1 percent) of firms operating in a tight labor market. These results, and the direction of change in hours restrictions for firms moving between tight and loose labor markets, suggest that firms make changes in benefit offers in response to external labor market conditions by changing the requirements placed on low-skill workers before the offer is extended.

Summary, Discussion, and Policy Implications

Our study has shown that firms' offers of health insurance are dynamic and in response to market forces. Although the offer of benefits is rarely rescinded over time, unless the firm goes out of business, the firm changes eligibility criteria (e.g. tenure on the job, hours of work per week) for benefits as labor market forces alter the availability of a pool of workers. Firms also limit eligibility for employment-based health insurance by offering employment-based health insurance as part of the compensation package to attract workers with higher skill levels. Workers who are able to acquire skills needed by employers will increase the probability that they will land jobs offering employment-based health insurance. This is true regardless of the wage offered by the firm or the education level that the worker possesses. These results suggest that policies designed to decrease the levels of uninsured should focus on providing skills to individuals that might not be able to gain employment in a firm that offers health benefits.

Of particular note, low-skill workers with English language skills are significantly more likely to be offered a job in a firm offering health benefits than low-skill workers that do not possess such skills, even after controlling for wages and education levels. For the California labor market as a whole, workers with English language skills are more likely to be offered employment-based health insurance by their employers than those who do not have such skills.

Other studies on the employment-based heath insurance have found that immigrant and Hispanic workers in the state of California are much less likely to have employment-based

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health insurance than other workers. However, both ethnicity and race are inextricably linked with education and with English language skills (National Center for Education Statistics, 2004). Using a more dynamic perspective of the health benefit offers, we see that such factors as ethnicity, race, or immigration do not underlie the lack of access to employment-based health insurance. Rather, ethnicity, race, and immigration are correlated with education and skill levels, which prevent individuals from gaining employment in a firm offering health benefits.

Ethnicity, race and immigration status cannot be altered. However, workers, through education and training, can alter their levels of human capital. It is through this channel that policymakers should focus attention in improving access to employment-based health insurance for workers who currently cannot access this important fringe benefit.

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Table 1: The Insurance Status of California Workers

	Distribution of Workers (aged 18-65)	Percent Uninsured	Distribution of Uninsured
Total (in thousands)	14,459		--
Uninsured	2,617	18.1	--
Skills			
Education	100.0		
Percent No More than High School	24.3	33.1	44.4
Percent More than High School	75.7	13.3**	55.6
Language at home			
Percent other than English	19.5	37.1	40.0
Percent English	80.5	13.5**	60.0
Demographics			
Age			
Percent 18-24	11.9	28.9	19.0
Percent 25-34	27.4	22.7	34.5
Percent 35-44	31.9	16.7**	29.5
Percent 45-54	20.1	11.2**	12.5
Percent 55-64	8.7	9.4**	4.5
Ethnicity			
Percent Hispanic	24.7	34.1	46.6
Percent Non-Hispanic	75.3	12.8**	53.4
Immigration Status			
Percent Foreign Born	26.4	30.9	45.1
Born in the US	73.6	13.5**	54.9
Labor Market Outcomes			
Annual Earnings			
Percent <$20,000	27.8	37.4	57.4
Percent $20,000-$39,999	32.8	16.9**	30.6
Percent $40,000-59,999	21.1	7.4**	8.6
Percent $60,000-79,999	8.2	0.0**	0.0
Percent $80,000-99,999	4.5	4.3**	1.1
Percent $100,000 or more	5.6	7.2**	2.3
Weekly Hours of Work			
Percent Part-time (less than 30 hours a week)	16.2	27.0	25.0
Percent Full-time	83.8	15.7**	75.0
Years at Firm			
Percent Less than one year	17.0	27.7	25.6
Percent One or more years	83.0	15.7**	73.4

Table Notes: Data are from the CWHS and are weighted to reflect California's population. N is about 1187, although item-specific nonresponse lowered the total response for some categories. ** indicates significant ($p \leq .05$) differences in percent uninsured as compared to the initial group listed in the distribution.

Table 2: The Offer of Health Insurance to California Workers

	All Workers (aged 25-65)	Percent Offered Employer Based Health Insurance
Total	12,717	74.2
Skills		
Education		
Percent No More than High School	22.7	66.6
Percent More than High School	73.3	80.4**
Language at home		
Percent other than English	18.6	63.9
Percent English	81.4	80.3**
Demographics		
Age		
Percent 25-34	31.1	79.4
Percent 35-44	36.2`	78.0
Percent 45-54	22.8	72.9
Percent 55-64	9.9	77.4
Ethnicity		
Percent Hispanic	23.2	69.2
Percent Non-Hispanic	76.8	79.8**
Immigration Status		
Percent Foreign Born	26.7	68.3
Born in the US	73.3	80.4**
Labor Market Outcomes		
Annual Earnings		
Percent <$20,000	22.6	46.4
Percent $20,000-$39,999	33.5	77.7**
Percent $40,000-59,999	23.3	93.2**
Percent $60,000-79,999	9.3	95.3**
Percent $80,000-99,999	4.8	89.5**
Percent $100,000 or more	6.3	85.9**
Weekly Hours of Work		
Percent Part-time (less than 30 hours a week)	13.7	38.4
Percent Full-time	86.3	83.3**
Years at Firm		
Percent Less than one year	13.8	68.7
Percent One or more years	86.2	79.0**

Table Notes: Data are from the CWHS and are weighted to reflect California's population. N is about 1050, although item-specific nonresponse lowered the total response for some categories. ** indicates significant (p ≤ .05) differences in percent offered employer based health insurance as compared to the initial group listed in the distribution.

Table 3: Determinants of the Health Insurance Offer: The Worker's View

	Logit	Odds Ratio
Skills		
High School or Less Education	-.827***	.438
	(.287)	
English spoken at home	.693**	2.001
	(.318)	
Less than one year at firm	-1.093****	.335
	(.318)	
Part time worker	-1.763***	.172
(less than 30 hours a week)	(.308)	
Age		
35-44	-.303	.739
	(.314)	
45-54	-696**	.499
	(.309)	
55-64	.137	1.147
	(.397)	
Firm Size		
Less than 10 employees	-3.452****	.032
	(.337)	
10 to 49 employees	-1.033***	.356
	(.356)	
50-99 employees	-.999**	.368
	(.451)	
100-499 employees	-.489	.614
	(.410)	
Industry		
Government/Utilities	.390	1.477
	(.653)	
Trade/Services	-.593*	.553
	(.316)	
Medical/Dental	.157	1.169
	(.431)	
Manufacturing	.255	1.291
	(.482)	
Education/Day care	-.631	.532
	(.395)	
Union Coverage	1.979****	7.232
	(.506)	
Mean Dependent Variable	.776	
Intercept	2.909	
N	835	

Table Notes: Data are from the CWHS. Numbers represent coefficients or log odds from logit estimations. The dependent variable is a 0, 1 binary variable with 1 indicating a worker that was offered health insurance by their current employer. Standard errors are in parentheses. All independent variable are binary measures with 1 taking the indicator listed.

****p ≤ .001
***p ≤ .01
**p ≤ .05
**p ≤ .10

Table 4: Human Capital Needed to Obtain, Succeed, and Advance

	TOTAL		MEDICAL BENEFITS IN t		NO MEDICAL BENEFITS IN t	
	MINIMUM REQUIRED	AVERAGE OF WORKERS	MINIMUM REQUIRED	AVERAGE OF WORKERS	MINIMUM REQUIRED	AVERAGE OF WORKERS
Education						
None	38.8	--	36.4	--	48.2	--
Less than high school	14.0	18.1**	14.1	15.8	13.6	27.4**
High school graduate	43.5	60.1**	45.5	60.1	35.8	60.3
GED	2.5	1.6	3.1	1.7	0.0**	1.4
Vocational/technical	0.3	0.5	0.3	0.7	0.0	0.0
College (no degree)	1.0	17.5**	0.6	19.1	2.5	11.0
Associate Degree	0.0	0.3	0.0	0.3	0.0	0.0
Bachelor's Degree	0.0	1.9**	0.0	2.4	0.0	0.0**
Graduate Degree	0.0	0.0	0.0	0.0	0.0	0.0
Other	0.0	0.0	0.0	0.0	0.0	0.0
No advancement potential	--	--	--	--	--	--
Work Experience						
None	59.8	12.3	57.9	9.8	67.1	21.8**
Less than one year	20.0	24.5	20.8	24.6	17.1	24.4
One year	15.3	16.2	15.7	16.1	13.4	16.7
Between one and two years	2.3	17.5**	2.8	19.3	0.0**	10.3**
Two or more years	1.3	28.5**	1.6	29.2	0.0**	25.6
Preferred	0.3	0.0	0.3	0.0	0.0	0.0
Amount depends on skill	0.8	0.8	0.3	0.7	2.4	1.3
Other	0.5	0.3	0.6	0.3	0.0	0.0
No Advancement	--	--	--	--	--	--
English Ability						
Speak very well	45.7	60.1**	45.8	60.2	45.1	59.7
Understand very well	52.7	61.7**	54.0	62.3	47.6	59.7
Read very well	50.1	59.7**	51.6	60.1	47.3	58.3
N	405	327	323	249	82	78

Table Notes: Data are from the BALS Employer Survey. Employers were asked to identify the minimum level of skills needed to get the job (i.e., advertised requirements), the skills of the average employee in the job, and the skills needed to advance to the next position. Questions on moving up were not asked in San Francisco County. ** indicates statistical significance (p ≤ .05) exists between minimum requirements and those of the average workers (in Total) or firms offering and those not offering medical benefits in t. N's vary slightly with missing data.

Table 5: Benefits Offered and Requirements: Descriptive Analysis

BENEFITS (Percent offering)		REQUIREMENTS (Percent requiring)	
Medical	79.8	No requirements	5.7
Paid vacation	79.0	No benefits	13.8
Dental	72.8		
Paid sick leave	64.2	*Hours restrictions (Percent with:)*	
Retirement	61.5	No restrictions on hours worked	4.9
Overtime	60.0	Full time work (35 or more hours a week)	36.8
Vision	55.6	30 or more hours per week	19.5
Life insurance	52.3	20 or more hours per week	17.6
Employee discounts	42.2	10 or more hours per week	1.7
Flexible hours	39.3		
Bonuses	34.6	*Months delay (Percent with:)*	
Tuition reimbursement	33.8	Benefits start immediately	16.6
Flexible spending	27.2	1-2 months delay before benefits begin	9.2
Paid maternity leave	23.2	3-5 months delay before benefits begin	39.0
Profit sharing	16.8	6-9 months delay before benefits begin	11.3
Transportation aids	12.4	12 months delay before benefits begin	4.5
Paid paternity leave	10.6	24 months delay before benefits begin	0.3
Stock options	10.4		
Child care assistance	9.4		
Job sharing	9.4		
Paid child care	3.7		
Piece rates	1.7		
N	405	*N*	405

Table Notes: Data are from the BALS *Employer Survey*. Shading indicates the items included in the health factor (Appendix Table). Requirements for medical benefits were used, if multiple requirements existed. If benefits began within a month of starting, we counted them as started immediately. Percentages do not round to 100 because of rounding.

Table 6: Determinants of Health Benefits: The Firm's View

Skills	Health Factor	Number Benefits	Medical Benefits	Health Factor	Number Benefits	Medical Benefits	Health Factor	Number Benefits	Medical Benefits
Simple English	0.176***	0.443***	0.343**	0.168***	0.429***	0.358**	0.143**	0.370**	0.334*
	(0.064)	(0.164)	(0.162)	(0.058)	(0.148)	(0.176)	(0.058)	(0.148)	(0.179)
Complex English	-0.003	-0.091	-0.168	-0.021	-0.148	-0.221	-0.036	-0.186	-0.219
	(0.070)	(0.178)	(0.187)	(0.064)	(0.161)	(0.208)	(0.063)	(0.160)	(0.211)
Applied Math	-0.071	-0.147	-0.006	-0.026	-0.038	0.063	-0.012	-0.004	0.088
	(0.064)	(0.164)	(0.172)	(0.060)	(0.151)	(0.189)	(0.059)	(0.150)	(0.191)
Algebra	0.085	0.202	0.285	0.031	0.084	0.188	0.029	-0.080	0.156
	(0.065)	(0.167)	(0.192)	(0.060)	(0.153)	(0.207)	(0.060)	(0.151)	(0.209)
Measurements	-0.031	-0.069	-0.179	-0.004	0.003	-0.149	-0.005	0.000	-0.167
	(0.056)	(0.143)	(0.151)	(0.051)	(0.130)	(0.166)	(0.051)	(0.129)	(0.171)
Customers	-0.132*	-0.352*	-0.296	-0.110	-0.319	-0.346	-0.086	-0.258	-0.318
	(0.074)	(0.189)	(0.207)	(0.069)	(0.175)	(0.233)	(0.069)	(0.175)	(0.237)
Coworkers	0.175***	0.436***	0.308**	0.114**	0.255*	0.227	0.103*	0.227	0.208
	(0.060)	(0.154)	(0.146)	(0.055)	(0.140)	(0.167)	(0.055)	(0.139)	(0.171)
Prioritize	0.036	0.114	0.175	0.035	0.115	0.245	0.031	0.106	0.227
	(0.064)	(0.164)	(0.172)	(0.058)	(0.147)	(0.183)	(0.057)	(0.146)	(0.184)
Evaluate	0.037	0.099	0.078	0.053	0.135	0.139	0.053	0.134	0.149
	(0.059)	(0.151)	(0.162)	(0.054)	(0.137)	(0.179)	(0.053)	(0.136)	(0.183)
Leadership	-0.138**	-0.338**	-0.206	-0.074	-0.184	-0.106	-0.072	-0.178	-0.107
	(0.057)	(0.145)	(0.160)	(0.052)	(0.132)	(0.181)	(0.052)	(0.131)	(0.180)
Office Equipment	-0.011	-0.060	-0.346	0.026	0.069	-0.203	0.006	0.019	-0.259
	(0.084)	(0.216)	(0.227)	(0.078)	(0.199)	(0.253)	(0.078)	(0.197)	(0.259)
Production Equip.	0.055	0.194	0.118	-0.013	0.031	-0.037	-0.028	-0.008	-0.066
	(0.055)	(0.140)	(0.158)	(0.052)	(0.132)	(0.175)	(0.052)	(0.131)	(0.177)
Productivity Enh.	0.152*	0.450**	0.567**	0.147**	0.442**	0.590**	0.121*	0.376**	0.521**
	(0.078)	(0.201)	(0.233)	(0.072)	(0.181)	(0.256)	(0.071)	(0.181)	(0.260)
Multimedia	-0.112**	-0.256*	-0.156	-0.096**	-0.219*	-0.113	-0.099**	-0.225*	-0.147
	(0.051)	(0.130)	(0.145)	(0.047)	(0.118)	(0.167)	(0.046)	(0.117)	(0.169)
Financial	-0.010	-0.047	0.141	0.009	0.010	0.168	0.013	0.021	0.167
	(0.050)	(0.129)	(0.195)	(0.046)	(0.116)	(0.204)	(0.045)	(0.115)	(0.203)
Firm	no	no	no	yes	yes	yes	yes	yes	yes
Labor Market	yes	yes	yes	yes	yes	yes	yes	yes	yes
Wage	no	no	no	no	no	no	yes	yes	yes
Mean Dep. Variable	-0.002	4.651	.796	-0.002	4.651	.796	-0.002	4.651	.796
Intercept	-0.139	4.310	1.743	0.258	5.112	2.744	-0.289	3.723	1.394
R^2	.136	.134	--	.313	.324	--	.328	.340	--
F	3.69	3.62	--	6.97	7.36	--	7.18	7.56	--
N	392	392	398	392	392	398	392	392	398

Table Notes: Data are from the *Employer Surveys* of the BALS data. Numbers represent coefficients from Ordinary Least Squares (Health Factor, Number of Benefits) or logit (Medical Benefits) estimations. See Appendix B Table 2 for a full description of all variables.

****$p \leq .001$
***$p \leq .01$
**$p \leq .05$
**$p \leq .10$

Table 7: Continuity in Benefits Offered: Descriptive Analysis

	TOTAL		UNEMPLOYMENT TIGHT TO LOOSE LABOR MARKET		LOOSE LABOR MARKET	
	t	t+1	t	t+1	t	t+1
Offers						
Percent Not offering benefits	13.8	14.8	14.8	15.9	13.1	14.1
Percent with No requirements	5.7	3.8	5.1	2.9	6.11	4.4
Health Benefits Offered						
Percent Medical	79.8	80.2	80.7	80.4	79.0	80.1
Percent Paid vacation	79.0	80.5	77.3	79.7	80.3	81.1
Percent Dental	72.8	74.4	71.0	73.2	74.2	75.2
Percent Paid sick leave	64.2	65.1	63.6	64.5	64.6	65.5
Percent Retirement	61.5	61.9	58.5	58.0	63.8	64.6
Percent Vision	55.6	58.1	50.6	52.9	59.4	61.7
Percent Life insurance	52.5	53.3	46.0	44.2	57.5**	59.5**
Health (Fringe) Benefit Offers						
Percent Stayed same (no change)	--	80.2	--	77.1	--	86.7
Percent Lost position	--	8.0	--	11.5	--	5.5
Percent Reduced offer	--	6.7	--	9.6	--	4.5
Percent Increased offer	--	5.1	--	7.7	--	3.1
Hours worked per week restrictions						
Percent no hours restrictions	5.0	3.8	9.1	6.5	1.7**	2.0
Percent requiring Full time work (35 or more hours a week)	36.8	30.9	40.4	37.7	34.1	34.4
Percent requiring 30 or more	19.4	20.6	14.3	18.2	23.6**	22.3
Percent requiring 20 or more	17.6	18.9	14.8	16.7	19.6	20.4
Percent requiring 10 or more	1.9	2.4	1.8	2.1	1.7	2.5
Requirements for Benefits						
Percent Stayed same (no change)	--	72.5	--	60.3	--	81.2**
Percent Lost position	--	8.0	--	11.5	--	5.5**
Percent Increased restrictions	--	12.6	--	21.2	--	6.4**
Percent Decreased restrictions	--	7.0	--	7.1	--	6.9**
N	405	374	176	156	229	218

Table Notes: Data are from the BALS *Employer* and *Longitudinal* Surveys. ** indicates statistical significance (p ≤ .05) exists between t or t+1 tight and loose labor markets. T and t+1 distributions within each of the stratified analyses did not differ (p ≤ .05). Ns were sometimes lowered by one with item specific nonresponse. Ns were also lowered when firms that discontinued the position were eliminated from the analysis (Health Benefit Offers and Benefit Requirements).

Appendix A: Firm Size and Health Benefit Offers

The relationship between firm size and the health benefit offer is well established. In this appendix we illustrate the relationship between firm size, firm stability, industry and the probability that the firm offers health insurance to entry-level workers to show that our results are not driven by the relationship.

Both BALS and CWHS data show that workers in smaller firms are less likely to have health insurance offers. Firms with less than 50 employees represented 40.5 percent of the firms in the BALS data, but only 33.4 percent of the firms that offered medical benefits and only 16.8 percent of the firms that offered all seven of the healthy-related benefits (Appendix A Table 1). Twenty-two percent of California workers were employed in firms with fewer than 10 employees but only 28.4 percent of these workers received employment-based health insurance offers from their employers (Appendix A Table 2). By contrast, of the fifty-four percent of workers employed by firms with 100 or more employees, more than 90% were offered employment-based health insurance by their employers.

A relationship also exists between firm size and going out a business, an action that removes the offer of employment-based health benefits. 4.2 percent of the firms went out of business between the first and second BALS surveying period and another eight percent with an entry-level position in the first time period no longer had that position at the time of the second interview. The firms that went out of business and/or no longer and an entry-position available were more likely to be firms not initially offering medical benefits (Appendix A Table 1).

One reason frequently cited as to why immigrants, Hispanics, those with a high school education or less and those with limited English skills are less likely to have employment-based health insurance than other workers is that they are more likely to be employed by small firms that do not offer health insurance. Appendix A Table A3 indicates that this is not the case. Data from the CWHS show that 22 percent of all workers are employed in firms with less than 10 employees, regardless of whether the workers are Hispanics, immigrants, have limited education, or speak a foreign language at home.

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Appendix B Table 2: Health Benefit Offer Packages: Firm Characteristics

	ALL FIRMS	FIRMS WITH MEDICAL BENEFITS	FIRMS WITH MEDICAL AND SICK	FIRMS WITH MEDICAL, SICK, DENTAL AND VISION	FIRMS WITH ALL SEVEN BENEFITS
Firm Size					
Large (more than 300)	27.4	30.7	33.5	39.6	47.2
Medium (100-249)	32.1	35.9	38.5	37.9	36.0
Small (less than 50)	40.5	33.4	28.0	22.5	16.8
Offer Stability					
Firms out of business by t+1	4.2	4.0	3.1	2.6	0.8
Position no longer available by t+1	8.0	7.6	6.3	5.9	4.3
Industry					
Agriculture/mining	1.5	0.3	0.0	0.0	0.0
Construction	1.2	1.2	0.4	0.5	0.0
Manufacturing	12.8	14.2	14.4	14.8	14.4
Transportation, communication, public utilities	4.2	4.3	3.9	3.3	4.0
Wholesale trade	6.2	5.6	6.2	5.5	4.8
Retail trade	22.2	22.9	21.0	21.4	18.4
Finance, insurance, and real estate	5.4	5.9	6.6	6.6	8.8
Education and medical	11.9	12.4	14.4	17.6	20.0
Business services	12.6	11.8	9.7	7.7	8.0
Other services	16.5	14.9	15.6	14.3	12.8
Public administration	5.4	6.5	7.8	8.2	8.8
N	405	323	257	182	125
Percent of total firms	100.0	79.8	63.5	44.9	30.9

Table Notes: Data are from the BALS *Employer Survey*. Numbers reflect the percentage of firms in each category that fall into ach category. For example, 30.7 percent of the firms that offer medical benefits are large.

Appendix A Table 2: The Offer of Health Insurance to California Workers by Firm Size

Number of Employees	All Workers (aged 25-65)	Percent Offered Employer Based Health Insurance
Less than 10 workers	22.0	28.4
10-49 workers	16.7	80.3
50-99 workers	7.3	81.4
100-499 workers	16.6	91.4
500 or more workers	37.4	94.1
Total	100.0	--

Table Notes: Data are from the CWHS and are weighted to reflect California's population. N is about 1,187, although item-specific nonresponse lowered the total response for some categories.

Appendix A Table 3: The Offer of Health Insurance to California Workers by Firm Size

Number of Employees	All Workers (aged 25-65)	Hispanic	Immigrant	High School Educ. or Less	Language other than English at Home
Less than 10 workers	22.0	22.0	22.2	21.6	22.1
10-49 workers	16.7	21.9	15.3	24.2	16.0
50-99 workers	7.3	10.5	6.0	11.3	6.1
100-499 workers	16.6	19.8	16.3	13.5	15.4
500 or more workers	37.4	25.7	40.2	29.4	40.3
N					

Table Notes: Data are from the CWHS and are weighted to reflect California's population.

Appendix B Table 1: Benefits Offered: Factor Analysis

BENEFIT	ROTATED FACTOR PATTERN						COMMUNALITY
	HEALTH FACTOR	MERIT FACTOR	LEAVE FACTOR	RETAIL FACTOR	FLEXIBLE FACTOR	CHILD CARE FACTOR	
Paid vacation	0.766	0.132	0.024	0.326	0.125	0.028	0.728
Paid sick leave	0.757	0.141	0.142	0.036	0.047	0.067	0.621
Retirement	0.748	0.039	0.142	0.043	0.040	0.042	0.587
Medical	0.794	0.112	0.025	0.317	0.185	-0.020	0.778
Dental	0.819	0.121	0.056	0.225	0.145	0.002	0.759
Vision	0.665	0.022	0.027	0.197	0.077	0.002	0.489
Life insurance	0.728	0.090	0.128	-0.021	0.002	0.116	0.568
Tuition reimbursement	0.556	0.092	0.202	-0.212	0.083	0.218	0.458
Paid child care	0.037	0.129	0.015	0.086	0.001	0.836	0.724
Child care assistance	0.195	-0.057	0.213	-0.108	0.167	0.697	0.612
Job sharing	0.072	0.027	0.070	-0.104	0.758	0.129	0.614
Flex hours	0.297	0.200	-0.063	0.089	0.627	0.015	0.533
Flex spending (pre-tax)	0.517	0.120	0.062	-0.424	0.228	0.053	0.519
Bonuses	0.167	0.470	0.004	0.209	0.164	0.131	0.336
Paid maternity leave	0.221	0.210	0.821	0.088	0.007	0.018	0.774
Paid paternity leave	0.131	0.058	0.816	0.021	0.069	0.193	0.730
Piece rates	-0.117	0.636	0.026	0.104	0.174	0.202	0.500
Profit sharing	0.238	0.633	0.073	-0.085	-0.182	-0.064	0.508
Stock options	0.165	0.678	0.108	-0.100	0.008	-0.097	0.518
Overtime pay	0.387	-0.094	0.138	0.634	0.105	-0.210	0.635
Employee discounts	0.239	0.132	0.070	0.649	-0.018	0.128	0.518
Transportation aids	0.089	-0.128	0.419	0.116	0.482	-0.009	0.446
Variance explained by factor (ignoring other factors)	5.106	1.733	1.718	1.479	1.475	1.443	--
Percent factor variance explained	23.2	7.9	7.8	6.7	6.7	6.6	58.9

Table Notes: Data are from the BALS *Employer Survey*. Question reads: "Please look over the list of employee benefits to determine which, if any, are offered to employees in this job. Numbers in columns three through eight are the rotated factor computed using an oblique (nonorthogonal) rotation, which represent the loadings used to compute the health factor score used as the dependent variable in some analysis. The communality reflects the proportion of the variation of each variable involved in the pattern (sum of squared factor loadings). The total variance is the sum of the communalities divided by the number of variables and tells the percent of the variation among all the variables explained by the factor patterns. The shading highlights factor loadings exceeding .6.

Appendix B Table 2: Definition of Variables used in the Multivariate Analysis

Dependent Variables

Health Factor	A health factor score from the factor analysis of benefits offered by the firm in the entry-level position. The benefits loading high on the health factor include 1) paid vacation; 2) paid sick leave; 3) retirement; 4) medical; 5) dental; 6) vision and 7) life insurance.
Number Benefits	A 0-7 numeric variable designating the number of health benefits the firm offers in the entry-level position. The seven benefits are those identified by the factor analysis as offered as loading high on the health benefit package.
Medical	A 0,1 binary variable with 1 indicating a firm that offers medical benefits in the entry-level position.

Independent Variables

Skills

Simple English	A factor value from a factor analysis of reading and writing, in English, skills needed in the position. Skills loading high on this factor include reading written instructions, labels, schedules, journals; general memos, letters, and forms; technical materials; writing simple sentences and paragraphs; and completing forms, logs, charges, or labels.
Complex English	A factor value from a factor analysis of reading and writing, in English, skills needed in the position. Skills loading high on this factor include using correct spelling, grammar, and style; proofreading; and writing complex or creative materials or reports.
Basic Math	A factor value from a factor analysis of math skills needed in the position. Skills loading high on this factor include using ratios, fractions, decimals, or percents; estimating or round off numbers; solving simple equations; and interpreting data from graph, tables, or charts
Higher Math	A factor value from a factor analysis of math skills needed in the position. Skills loading high on this factor include making change; taking discounts and markups of selling price calculations; using equipment (e.g., a calculator or business machine).
Applied Math	A factor value from a factor analysis of math skills needed in the position. Skills loading high on this factor include using simple measurements; and measurement instruments.
Customers	A factor value from a factor analysis of communication skills needed in the position. Skills loading high on this factor include making and receive business phone calls; dealing with customers; explaining products and services; handling complaints; and selling a product or service to a customer.
Coworkers	A factor value from a factor analysis of communication skills needed in the position. Skills loading high on this factor include choosing words and manner of expression appropriate to the workplace; picking up on verbal and non-verbal cues from others; and interacting with co-workers to accomplish a task.
Prioritize	A factor value from a factor analysis of problem solving skills needed in the position. Skills loading high on this factor include prioritizing tasks; gathering information; sorting and categorizing information; and identifying work-related problems.
Evaluate	A factor value from a factor analysis of problem solving skills needed in the position. Skills loading high on this factor include identifying potential solutions to problems; identifying barriers to solutions; and evaluating results.
Leadership	A factor value from a factor analysis of problem solving skills needed in the position. Skills loading high on this factor include applying solutions to problems; working in teams; making decisions independently; and providing leadership in problem solving.
Office Equipment	A factor value from a factor analysis of equipment skills needed in the position. Skills loading high on this factor include the ability to operate telephone systems (multiple lines); telephone answering machines; copiers; fax machines; and DOS based computers.
Production Equipment	A factor value from a factor analysis of equipment skills needed in the position. Skills loading high on this factor include the ability to operate production machinery; and heavy equipment (e.g., forklifts, cranes).
Productivity Enhancers	A factor value from a factor analysis of software/program skills needed in the position. Skills loading high on this factor include the ability to use word processing programs; spreadsheet programs; database software; email; and Internet browsers.
Multimedia	A factor value from a factor analysis of software/program skills needed in the position. Skills loading high on this factor include the ability to use web page design/authoring programs; multimedia authoring and editing software; graphics software; and desktop publishing programs.
Financial	A factor value from a factor analysis of software/program skills needed in the position. Skills loading high on this factor include the ability to use financial inventory software.

Firm Characteristics

Small	A 0, 1 binary variable with 1 indicating a small (50 or fewer employees) firm.
Large	A 0, 1 binary variable with 1 indicating a large (300 or more employees) firm.
Service	A 0, 1 binary variable with 1 indicating firm in the service sector (1987 SIC code of 70-72, 74-79, 81, 83-86, 88-89).
Manufacturing	A 0, 1 binary variable with 1 indicating a firm in the manufacturing sector (1987 SIC of 20-40)
Business Services	A 0, 1 binary variable with 1 indicating a firm in the business service sector (1987 SIC of 73 or 87, which includes engineering, accounting, research, management, and relates services as business services).
Education and Medical	A 0, 1 binary variable with 1 indicating a firm in the education or medical sector (1987 SIC of 80 or 82).
Retail	A 0, 1 binary variable with 1 indicating a firm in the education or retail sector (1987 SIC of 52 to 60).
Union	A 0, 1 binary variable with 1 indicating that the incumbent in the position is represented by a union.

Labor Market	Unemployment rate in the county during the month of surveying.
Wage	Starting hourly rate of pay in position (average if the position pays a range).