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HEALTH INSURANCE COVERAGE IN AMERICA: ARE IMMIGRANTS DIFFERENT?

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SUMMARY

While the majority of adults living in America have health insurance, typically an employer-based plan, approximately 40 million people have no coverage. Among the uninsured, the foreign-born are over-represented. How well the indicators that help explain coverage rates among the native-born apply to immigrants is unclear.

This research examines the determinants of health insurance coverage, focusing on immigrants. The hypothesis tested is that, *ceteris paribus,* immigrants have lower rates of health insurance that the native-born. A theoretical model of the demand for health insurance is developed and tested with probit and multinomial regressions that control for a extensive set of demographic, work-related and immigrant-related characteristics.

At personal incomes of approximately $30,000 or more, immigrants' coverage odds are typically 10% lower than their native-born counterparts'. At lower income levels the nativity gap increases greatly, particularly for Mexican males. Income changes of up to $10,000 have little effect on coverage status regardless of nativity, a finding which supports previous literature that rejects the implementation of tax credits or vouchers to decrease the number of uninsured. The best coverage indicators for all adults are personal income, firm size, marital status and nativity. Longer stays in the United States and citizenship increase the odds that an immigrant has coverage, usually by 10%. Why, all other things equal, immigrants have less coverage is unclear. Access to work-based plans may be difficult in certain industries or small firms employing immigrants, or they may prefer not to insure, meaning lower rates are the outcome of rational decision making.

1. INTRODUCTION

The majority of us living in America have health insurance. The most common method of coverage is through an employer, or employer of an immediate family member. Though government aid is available toa groups considered disadvantaged or vulnerable, including the very poor and elderly, the United States essentially has a private, employer-based system of health insurance. America has the least comprehensive coverage of all industrial nations. Neither offering nor opting into a health plan is mandatory. This noncompulsory system leaves approximately 40 million non-elderly people uninsured, mainly young adults, the working poor, the self-employed and immigrants (Fronstin, 2000b).[1]

This research examines the determinants of health insurance coverage, focusing on immigrants. The hypothesis explored here is that, all other things equal, immigrants have lower rates of health insurance than the native-born. The foreign-born have a significant presence throughout six states: California, Texas, Florida, New York, New Jersey and Illinois. Growing immigrant populations are also found in other states, such as Colorado, Indiana, Kansas, and North Carolina. Immigrants make up approximately 11% of the U.S. population but 18% of America's uninsured (Kaiser, 2001b). For major metropolitan areas such as Los Angeles, Dallas and Miami, immigrants represent a large portion of the indigent population. Why might immigrants have lower coverage rates than native-born

[1] During the four years examined in this research (1996-2000) there was minimal change in the percent of insured adults in America. From 1996 to 1997 the percent of insured declined by .1%, from 1997 to 1998 the decline was 1%, from 1998 to 1999 there was no change, and from 1999 to 2000 the percent of insured increased by .1%.

TABLE I: ADULTS AGED 25-64 BY INSURANCE STATUS 1996-2000

Citizenship Status	Uninsured	Insured*	Type of Coverage	
			Private, including place of work**	Government
Native born	16.3%	83.7%	91.2%	8.8%
Immigrant				
Naturalized	23.2%	76.8%	91.0%	9.0%
Not naturalized	45.6%	54.4%	84.1%	15.9%

Source: March CPS 1996-2000

Note: N= 309,242

* The small percentage of those with dual coverage or who indicated their coverage source as "other" are excluded.

** 'Place of work' denotes insurance coverage by a current or former employer, or a current or former union, either as policyholder or dependent. Approximately 78-85% of the insured sample has private, employer-based coverage.

Americans (*Table I*)? Some indicators – income, age, employment characteristics – which help explain coverage rates for the native-born also apply to immigrants. But while 29% of immigrants are poor compared to 16% of the native-born (Kaiser, 2001b), poverty alone does not account for less insurance among immigrants. Economic theory suggests that *ceteris paribus* immigrants will have lower rates of insurance.

Why do the uninsured warrant policy concern? Part of the answer is public awareness.[2] Sherwin Rosen undoubtedly speaks for some when he writes that charity care for the uninsured, "encourages reckless inefficient behavior that can be avoided by

[2] A public opinion poll conducted jointly by the Kaiser Family Foundation, Harvard School of Public Health, and NewsHour with Jim Lehrer early in 2000 shows most Americans are concerned about the uninsured, despite a lack of consensus on a solution. Only 11% said the current system was acceptable (Kaiser, 2000).

forcing people to set aside resources to take care of themselves" (2000). Yet particularly in emergency cases, most people seem to feel access to care should not be denied because of inability to pay. All states have laws requiring emergency medical care be given to anyone in need at certain county clinics and hospitals; thus, the states to varying degrees accept the responsibility of indigent care. But whether these state mandates to provide a safety net stem from political pressure, media hype or a commitment to social well-being, there are negative economic consequences of having millions uninsured. Health insurance is typically the way individuals access the American health care system. Without insurance, those in need of care either turn to providers of last resort or else forgo treatment, generating negative externalities. These take the form of increased government expenditures for medical care and productivity loss if those without treatment have adverse health outcomes. Communicable diseases also rise. For the individual, an expensive medical procedure paid even partially out-of-pocket can have catastrophic effects on family finances. In California, few of the uninsured report having received totally free care or even reduced rates (Kaiser, 2001a), and those without insurance are likelier to deplete their assets after a serious health incidence (Levy, 2000, unpublished data). There is a evidence of a strong association between health insurance and better medical outcomes (Institute of Medicine, 2002), although among economic literature the relationship is more tenuous. Health insurance policy is important, especially for those populations lacking coverage. If the foreign-born consistently have lower health insurance coverage than the general public, then local public policy makers will want to target this group differently, because while immigration is a federal policy, the states actually manage immigrant welfare.

1.1 Health insurance in the United States

Compared to other highly developed nations, the United States' health insurance system is largely voluntary. Health care is normally viewed more as a market good rather than a social right with the responsibility of coverage lying with the individual. In the absence of government mandates, most residents under the age of 65 receive health insurance via their employer or the employer of a spouse or parent. Two main government programs cover some of those without employer-based insurance. Federal and state governments jointly administer Medicaid, the health program for the poor. This program is aimed at low-income families, available to those who qualify under varying state guidelines. For those economic migrants who entered the United States on or after August 22, 1996, there is a five-year ban on Medicaid eligibility under the Personal Responsibility and Work Opportunity Reconciliation Act (PRWORA). The largest health insurance program in the nation is Medicare. Those eligible must have either worked or have a spouse who worked in Medicare-covered employment for ten years (40 quarters), reached the age of 65 and have permanent residence in the United States. Some eligibility is also extended to those under 65 who are disabled or have end stage renal disease.

Health insurance can also be obtained privately, most commonly in groups such as alumni associations or loosely associated professional organizations. It should be noted that while the decision to offer insurance is voluntary, the American health care system is highly self-regulated and must meet additional federal and state government standards, although the degree of intervention is markedly less than in other first world nations.

1.2 Health insurance and health care systems in source regions

Most immigrants have very different health care systems in their home country. Milton Roemer (1991) categorizes the world's health care systems into four groups. Entrepreneurial, or free market, systems rely heavily on the private market with little government intervention. Government programs serve a small portion of the population and access to health care is not guaranteed. Examples of countries with such systems besides the United States are Thailand, South Africa and Ghana.

Welfare oriented systems retain a private health care market but with major government intervention. Private physicians practice and private pharmaceutical companies exist, but health insurance policy and financing of medical care is usually collectivized and always highly regulated. The degree of care may vary according to insurance type. Most of Western Europe, Canada, Mexico and India have instituted welfare systems.

Universal health care takes the welfare system one step further. All the nation's population may receive complete health service at little or no charge. While resources may be quite limited, those in place are available to everyone, with services allocated via waiting lists as opposed to financial ability. There are few, if any, private physicians, although private insurance supplements may exist that extend services to those who pay for them, as in Great Britain. Other nations with universal health care systems include Norway, Tanzania and Saudi Arabia.

Socialist systems have, theoretically, eliminated the private market for health care. A centrally planned system has collectivized all financial, physical and human resources for delivering health care. Drug companies are government owned, health personnel are state employees and no part of medical education is private. Most of the

former Soviet satellite states, the Russian Federation, Cuba and China use such systems. In the past ten years, heavy government control has relaxed somewhat as entrepreneurial systems gain a toehold in socialist systems.

1.3 Specific Research Aims

The goal of this research is to test the hypothesis that *ceteris paribus* immigrants have lower rates of health insurance coverage than the native-born. This will be accomplished by examining a representative sample of non-elderly adults living in the United States. Demographic, work-related and immigrant-specific characteristics of the native and foreign-born will be analyzed. An assumption is made that immigrants from nations that most closely resemble America economically and culturally are more likely to have health insurance, and the presence of these source country effects will be tested. The significance of a change in income will also be verified since insufficient income, along with price, are by far the most common reasons cited for not having health insurance.

This work is organized into nine chapters, including the introduction. Chapter Two is a review of related labor and health economics literature. Chapter Three discusses the theoretical underpinnings of this work and the methodology of employing probit and multinomial logit specifications. The data are outlined in Chapter Four. Chapter Five presents the results of health insurance determinants for the entire adult sample, first as a pooled group and then by nativity for men and women. Chapter Six examines a subgroup reporting low personal incomes. Source region and home country health system influences on the foreign-born odds of having health insurance are analyzed in Chapter

Seven. Outcomes by gender and marital status are discussed in Chapter Eight. The last chapter summarizes this work and its implications for public policy.

2. LITERATURE REVIEW

There is a dearth of economic research on immigrants and health insurance coverage. Comments regarding the foreign-born are generally lumped into a discussion of the uninsured. Specifically, how well the indicators that help explain coverage rates among the native-born apply to immigrants is unclear. Related literature is found in the areas of labor and health.

2.1 Labor

Jasso and Rosenzweig (1986) examine source country characteristics of immigrants coming to the United States. Their model of the decision to immigrate and remain in the destination country is based on direct and opportunity costs of migration, and quantity and quality of information available in the home country about the destination country. An individual immigrates if the expected well being of moving exceeds the well being from remaining in the home country. They find using country characterizations, rather than simply a dummy variable for a country's proper name, eliminates past observed earning associations between a country's name and the earnings of its immigrants. Fluctuations in the earnings of U.S. immigrants depend on more than just changes in the American labor market: changes in home country economies and information dissemination are important, too.

Lucas (1975) estimates the responsiveness of migration to America from less developed countries to a Bhagwati (1972) brain drain tax. Bhagwati proposes taxing professionals from less developed nations, pooling this money in the host country, and giving it to an international agency that sponsors developmental spending in the home

country. A logit immigration equation with the dependent variable of male labor certification applicants shows that higher U.S. wages encourage migration, but larger incomes in the source country deter migration, and native English speakers apply for more visas to the United States. Lucas then examines the sensitivity of migration flows and hours worked per adult immigrant to a proportional tax on immigrants' earnings ranging from 5-50%. Revenue generated from such a tax increases over the entire range, indicating the hours worked are fairly inelastic. The rate of male visa seekers, however, falls sharply even with a low tax rate.

One of the few, if not sole, pieces of research that examines the influence of social programs in source countries on immigration to the United States is credited to Greenwood, McDowell, Waldman, and Zahniser (1999). Specific characteristics of social programs in 60 origin countries are added as variables along with more standard measures in a rate of migration model. The types of social programs are pension benefits, sickness and maternity leave, unemployment insurance, and family allowances. Immigrants are broken into separate classes, numerically limited verses numerically exempt (immediate relatives of U.S. citizens and refugees), and newly entered immigrants verses those who applied for adjustment of status once in America. The model is standard: migration occurs when expected utility in the destination country exceeds expected utility at home. The difference here is the claim that the presence or absence of social programs influences the economic advantage between two countries. A Hausman-Taylor instrumental variable technique estimates pooled cross-sectional and time series data from the INS Public Use Tapes. Potentially new, numerically exempt immigrants are least likely to migrate when source countries offer any of the listed social programs.

In an earlier paper, Greenwood and McDowell (1982) estimate the magnitude of immigration by those with an occupation to America if U.S. entry barriers were removed. The dependent variable of a double log form of ordinary least squares is the rate of the natural log of the number of immigrant males from country *i* in 1970 divided by the number of 1969 males in source country *i*. Distance deters migration, as do high weekly earnings in the source country. Those coming from countries with a large portion of the labor force in manufacturing have increased migration rates to the United States, and so do migrants from the western hemisphere. In a regression for older migrants, social programs in the home country is inversely related to the rate of migration to the United States. Greenwood and McDowell predict an overall immigration rate 16% higher than actually occurs if barriers to entry were not in place.

Chiswick (1978) examines the effect of foreign birth and years since migration to the United States on the earnings of foreign-born white males in 1969. Males born outside the United States are less likely to have the same schooling, martial status, and live in rural areas than their native-born counterparts. New immigrants also tend to have fewer characteristics associated with higher wages. Over time, the immigrant becomes Americanized: job-specific training accrues, language proficiency is higher, cultural norms are adapted, so the earnings gap shrinks the longer the stay in the U.S. To test this theory, a human capital earnings function is estimated with ordinary least squares of a pooled sample of native and foreign-born, as well as samples from each group. Years since migration is an important variable, and earnings rise with duration in America but at a decreasing rate. The partial effect of schooling is smaller for immigrants than the native-born. Immigrant earnings match those of native-born after 13 years, and surpass them by 6% after 20 years. The eventual higher earnings of immigrants than native-born

suggest immigrants positively self-select. In later work, Chiswick (1982) reaffirms the substantial progress of economic immigrants and that their initial earnings disadvantage disappears over time. Patterns of racial and ethnic differences exist, with non-Hispanic whites, Japanese and Chinese experiencing the most economic success.

2.2 Health

Grossman's work "On the Concept of Health Capital and the Demand for Health" (1972) is considered a cornerstone of health economics literature. In modeling his demand for health, Grossman argues that health capital differs from other human capital. Consumers actually demand health, rather than health care, because sickness is a "source of disutility," and health status dictates time available to spend in market and non-market activities (225). Individuals maximize their stock of health capital and use medical care to protect against its depletion. His model predicts that while the quantity of health capital demanded falls over the life cycle, expenditures on medical care increase with age. In addition, at higher wages the value of healthy time is greater, so the demand for medical care should correlate positively with the wage rate. Also, if education increases the efficiency of investments in health, then those with more education would demand more health. Grossman produces a model for studying the effects of demographic variables by their impact on the cost of health capital or its marginal efficiency.

Sindelar (1982) tests several hypotheses on why women use more medical care than men with a retrospective survey of 1,550 families in the early 1970s. Building on Grossman's derived demand for medical care, Sindelar views the individual maximizing the production of health within, rather in isolation of, the family. The expected (as opposed to experienced) cause of health loss is also considered. Using probit and

ordinary least squares techniques, Sindelar finds no support for an often cited explanation that women's lower opportunity cost of time accounts for their greater use of medical care. There is evidence that marital status and wives' labor force participation affect men, who more easily substitute home medical care administered by their spouses for market health care. Health losses resulting from behavioral choices, such as smoking, drinking or fast driving, are better remedied with lifestyle changes rather than preventative care. These last two findings explain almost 50% of the spending differences in medical care by gender. Sindelar's conclusions were bolstered thirteen years later with the work of Hunt-McCool, Kiker, and Ng (1995).

Wilensky and Cafferata (1983) also explore the differential usage of medical care by gender with an examination of ambulatory doctor services from the National Medical Care Expenditure Survey. Their data show great similarities among men and women in most of the characteristics associated with use of services: average sick days, age, and other demographic variables. Women did wait slightly longer and pay a higher average out-of-pocket price. On a larger scale, women were less likely than men to be in excellent health, have less educational attainment, worked less, and were less likely than their male survey counterparts to have high family incomes. The strongest predictors reflecting purchase of services are perceived health status, sick days and visits for chronic conditions, suggesting economic factors (money price and waiting times) are not the most important determinants of health care use. They conclude women utilize more care because they are sicker and have slightly different characteristics that influence medical care use.

Fronstin, Goldberg and Robins (1997) identify characteristics of private health insurance coverage among working male Mexican-Americans, Puerto Ricans and Cuban-

Americans, the latter whose attributes most closely mirror the general population. Utilizing Current Population Survey data from 1989-1994 they employ a linear probability model of the odds that an individual has private insurance, followed by a decomposition analysis. Their models explain 22-31% of the variation in coverage of the three groups. Older married men are more likely to have coverage. Education level has little effect on coverage for Puerto Ricans and Cuban-Americans. Coverage probability is higher for full-time, white-collar workers in large firms. Regional differences appear important for Mexican-Americans who are concentrated in California and Texas where coverage is lower in general. All other things equal, Mexican-Americans are less likely than their Hispanic counterparts to have private insurance due to lower wages, a younger workforce and industry choice. Fronstin et al. suggest Hispanics' human capital investment plays a vital role in the probability of having private health insurance and that general job investment training programs may yield favorable results for insuring more Mexican-Americans.

Dewar (1998) examines a non-elderly, full-time sample from the 1987 National Medical Expenditure Survey to determine if higher levels of education translate into more health insurance opportunities. She postulates that more formal education yields efficient users of health care who have an increased understanding of the nature of health: these individuals demand health care services to maintain or improve their health status. Both education and health investments tend to occur early in life, so those with low discount rates put personal resources into both. Workers with less formal education have less access to jobs with benefits, tend to work in riskier environments requiring more health services, and see a larger percent of income going to health insurance or health care. Dewar runs two separate probit regressions: one on the probability of coverage by a

private insurance, and a second on probability of coverage by an employer's plan. Indicators of having private insurance are working full-time, union status, employment in manufacturing or finance industries, high hourly wages, older age, being female, having more education, and working in industries with a high percentage of college graduates. For those who tend to have employer provided insurance, the range of characteristics narrow: they work full-time, have more education, and within their occupation (verses industry) work with college graduates. Education appears to increase access to different types of private health care plans.

Marquis and Long (1993) find near universal acceptance of work-based health insurance when it is offered. In 1987 three-fourths of all workers were offered insurance by their firms. Most accepted and some declined due to other coverage sources, leaving only 2% of those offered insurance uninsured. Are the millions of uncovered workers victims of a lack of supply? Marquis and Long focus on the 18% of the labor force that is uninsured and works full-time with more than three months experience, examining both firms (supply) and employees (demand). Most of the uninsured work at firms where health insurance is not offered. These places of work tend to be small, which increases the companies' premiums. They experience high turnover, often due to the seasonal nature of the job, meaning less workforce investment is needed. Employees tend to be young, non-unionized, low-wage earners with weaker labor force attachment who lack the financial resources to prioritize health insurance. It seems efficient sorting is occurring: firms that do not offer insurance employ individuals who tend not to accept coverage even when offered.

Later Marquis and Long (1995) explore the choice of workers who do not have employment based health insurance to purchase a policy privately. The family, as

opposed to the individual, is the unit of analysis as the purchase of insurance is assumed to be a familial decision. It is not possible to separate working families without access to employer based coverage from those who voluntarily decline insurance. But since Marquis and Long (1993) find most workers given the opportunity to buy insurance through their workplace do so, they assume the bias to be small. The probability that a family purchases insurance is framed within expected utility, the key variables being the premium and expected expenses if insurance is not purchased, given by demographic proxies such as age and number of children. They estimate a price elasticity of demand for insurance of 0.3 to 0.4, concluding that even large subsidies to the working uninsured would not induce more than a quarter of them to buy their own coverage voluntarily. Chernew et al. (1997) come to the same conclusion for low-income workers, as do French and Kamboj (2002) for uninsured individuals aged 50 and over.

Long and Rodgers (1995) challenge the conventional wisdom that expansion of employment into sectors without health insurance coverage account for the increasing number of uninsured in the 1980s. The two shifts - workers changing status to part-time and self-employment, and workers switching to industries with non-union jobs – are examined as commonly touted root causes. Using data from the CPS 1980-1987, they find that while the proportion of part-timers fluxuated slightly between years, it hovered around 17.5% of the workforce. The percentage of self-employed shows a slight decline by the latter part of the decade. Yet there was a definite shift of workers between industries. Manufacturing declined to less than one-fifth of all workers while services employed one-third of the workforce. A more probable explanation for coverage decline than industry switching is that coverage fell within all industries. Indeed, the percentage of employees covered did fall in all areas except public administration, where it was

unchanged. A Laspeyres index calculating price changes of insurance over time is used to measure magnitudes of employment shifts and insurance changes among industries. The decomposition indicates that about 20% of the coverage decline from 1980-1987 was due to shifting between industries. This is a relatively small portion of the uninsured increase in that time period. Indeed, the coverage decline across all industries appears the most probable culprit.

Cooper and Schore (1997) inquire into the decrease in employer-based health insurance coverage from the late 1980s to mid 1990s. While access to coverage increased for most workers, excluding Hispanics, acceptance of work-based insurance declined. Cooper and Shore find those choosing employer plans tend to be over the age of 25, non-Hispanic, high earners, and working for large firms. They conclude the slack in employer-based take up is due to falling real incomes, a dramatic increase in health insurance costs, a large rise in employee contributions and the expansion of Medicaid coverage.

Perry and Rosen (2001) analyze how the self-employed differ from wage earners in health insurance coverage and health status. Using data from the Medical Expenditure Panel Survey in 1996 and a probit technique, they estimate the probability of having a self-classification of “healthy” as a function of being self-employed and various demographic variables. Measuring health status several ways, they find wage earners and the self-employed to be statistically indistinguishable from one another. They claim this result is not due to self-selection on the part of healthier individuals into self-employment. Though the self-employed are 25% less likely to have health insurance, Perry and Rosen argue that the lack of worse health outcomes for the self-employed means policy concern for this group is unwarranted.

Gruber and Poterba (1994) examine the demand for health insurance among the self-employed in light of the Tax Reform Act of 1986. The Act allows self-employed individuals to claim a tax deduction of 25% of their health insurance expenditures. Demand is a function of income, socio-demographic characteristics and the tax code. These researchers focus exclusively on the latter. Utilizing probit and difference-in-difference methods, they find that a 1% increase in the cost of insurance coverage reduces the chance than a self-employed household is insured by 1.8%.

Fronstin (2000b) uses estimates from the March 2000 CPS to compile 1999 information about the uninsured population in America. He finds the percentage of uninsured Americans declined for the first time since 1987, with 82.5% of the non-elderly covered. Approximately 42 million non-elderly adults in this country remain uninsured. Close to two-thirds of the insured have employer-based coverage: those working full-time, in the public service or manufacturing sectors and in higher income families.

While Fronstin claims employment characteristics are the most important determinants of having health insurance coverage, the uninsured tend to have several characteristics in common. Most are concentrated in the south central and southwest, with Houston, Los Angeles and Dallas as three of the top four cities with the highest percentage of uninsured, over 20%. A good portion of the uninsured lack U.S. citizenship. Non-citizens, of whom 45% are uninsured compared to 16.5% of Americans, tend to have lower incomes, less workforce attachment and work for small companies. One-third of the workforce in this country is employed in wholesale and retail trade; 41% of them are uninsured. Other industries with low coverage rates are agriculture, forestry, fishing, mining and construction. Firm size counts: 60% of the uninsured are either self-

employed or work for firms with less than 100 employees. In earlier work, Fronstin (2000a) finds small employers (2-50 workers) are not as likely as large firms to offer health benefits because of cost, a perceived lack of need among employees and a misunderstanding of a tax code favorable to employer based insurance. Low-income workers are less likely to have insurance due to less disposable income, less workforce attachment and employment in industries with low coverage rates. Single adults, usually without children, are more likely to be uninsured than other family types. Young workers are insured at a lower rate than older workers, because they have less labor force experience, attachment and possible low demand from a perceived lack of need in youth.

Fronstin notes the uninsured are less likely to receive basic care and therefore probably have a lower overall health status which can translate into lower productivity. In addition, charity care tends to shift costs to taxpayers and private payers. While premiums remained steady in the 1990s, a worsening economy could cause employers to cut back on health benefits, pushing the number of uninsured up greatly.

Spillman (1992) estimates the impact of the uninsured on the annual use of ambulatory care, emergency room services, and inpatient hospital care. She concurs with past research (most notably Freeman et al. 1987) that the uninsured are less likely than the insured to seek care and use it once obtained. Not surprisingly, inpatient hospital care was used by the uninsured at only 25-30% the rate of insured adults and children.

Johnson and Crystal (2000) see the current system as “the worst of both worlds:” unequal access to regular care with the large costs from serious illnesses shifted to taxpayers. Their research on coverage at midlife shows the uninsured avoid out-of-pocket costs by using few health services unless seriously sick, when they turn to a charity safety net. Conversely, Levy (2000, unpublished manuscript) finds severe financial

consequences for those without insurance who become seriously ill, and, unlike the insured, often deplete their household assets to pay for care.

2.3 Summary

Current literature suggests that young, low-income males have the lowest demand for medical care and are the least likely to have health insurance. The self-employed also have lower insurance rates than other workers, although their health outcomes appear no different. Immigrants, particularly Hispanics, are less likely to be insured but how much of this can be explained by observable characteristics is uncertain. Those immigrants who remain in the United States become Americanized to varying degrees. Their incomes catch up and eventually surpass their native-born counterparts'. Increased health insurance rates may also be part of the acclimation process, and naturalized citizens do have coverage rates closer to the native-borns'. In addition, there is evidence that those foreigners who value social programs in their home countries are less likely to immigrate to the United States. This suggests that those who do come place less importance on access to health care. Finally, optimism regarding vouchers or tax credits are a way to decrease the number of uninsured appears unwarranted. Empirical evidence consistently shows that most of the uninsured are price inelastic, relying on charity care.

3. THEORETICAL MODEL AND METHODOLOGY

Demand for all types of insurance stems from risk aversion. For health insurance, the unpredictability of medical spending is key. With an exhaustive inquiry into the framework of health insurance Cutler and Zeckhauser (2000) show the value from insurance comes from removing the risk of large, normally unanticipated medical expenses. Yet the decision to opt into a health insurance plan depends on more than just risk adversity.

3.1 A model of the demand for health insurance

A standard demand for insurance can be specified using a discrete choice model of individual insurance demand, such as employed by Marquis and Phelps (1987). The demand for health insurance among immigrants, which produces utility, is derived from risk aversion (RA), tax advantages (TA), expected demand for medical care (MC) and immigrant influences (I), and may be written as

$$D_i = RA_i\,\alpha + MC_i\,\beta + TA_i\,\sigma + I_i\,\nu + \varepsilon_i,$$

assuming the error term, epsilon, follows a normal distribution with a mean of zero. Since D_i is unobservable and we have no direct measures of these components, observable characteristics serve as proxies (*Table II*).

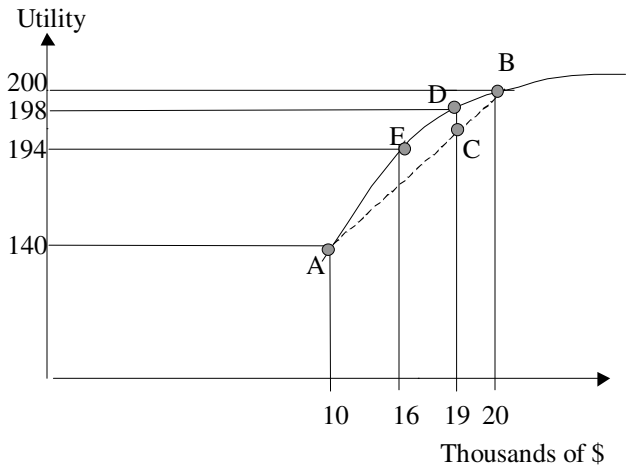
TABLE II: INDICATORS OF DEMAND

	Risk Aversion	Demand for Care	Tax Advantages	Immigrant Influences
Age	X	X		
Personal income		X	X	
Gender	X	X		
Education		X		X
Familial status	X	X		
Health status		X		
Labor force status		X	X	
Self-employment	X			
Work-related variables			X	
Nativity				X
Years since migration				X
Citizenship				X

3.1.1 Risk Aversion

In the context of health insurance risk adversity is actually a derived financial risk from becoming ill and the unanticipated purchase of care. The expected utility model is useful for explaining most behavior associated with buying health insurance, although individuals may not act according to this model in other health situations (Phelps 1997). Anyone with a utility function shaped liked Figure 1 is risk averse and prefers less risk to more. Most people seem to have concave utility functions given the wide purchase of all sorts of insurance in our society, though the less risk averse will have a straighter curve. The concave shape of the function results from diminishing marginal utility of income. The individual in Figure 1 has an annual income of $20,000 but realizes some risky event, *r*, could cut his income in half. If we assume *r* is 10%, then this person's expected income is calculated as E(I) = (10,000*r) + (20,000(1-r)) = (10,000*.1) + (20,000*.9) =

FIGURE 1: UTILITY FUNCTION OF A RISK ADVERSE INDIVIDUAL



$19,000. The expected utility associated with this risky environment is $E(U_{RISK})$ = (U(10,000)*.1) + (U(20,000)*.9)] = (140*.1) + (200*.9) = 194 (point C).[3] If this individual were offered an insurance policy that cost $1,000, he would accept since the utility associated with the certain income of $19,000, 198 (point D), exceeds the utility associated with the expected income of $19,000 gained in a risky situation, 194 (point C). To see how much this person would pay to avoid the risky event, move down the utility function to the point where the utility of the certain income equals the expected utility from the gamble, 194 (point E). The income associated with 194 utils is $16,000, known as the certainty equivalent. The difference between the certainty equivalent and average income is the risk premium, here $3,000. The amount of the risk premium is proportional

[3] $E(U_{RISK})$ lies 90% of the way between U(10,000) and U(20,000) since the $20,000 income has a .9 chance of being realized. The actual utility values have been randomly assigned: important is that utility increases more slowly than income.

to the probability of the risky event occurring and how fast marginal utility decreases as income increases.

While we assume that the average person is risk adverse, individuals differ in the amount of risk they are willing to face, or spend to reduce it. Health insurance represents a major expense for much of the population. Those less risk averse have smaller gaps between average and certainly equivalent income and, if they are maximizing utility, will not participate in plans with relatively high premiums and co-payments.[4] Risk adversity clearly varies according to the type of medical care. Demand for insurance is higher the more financial risk an individual faces and the less price-elastic the demand for care. For example, acute hospital care entails a large financial risk and has a very small price-elasticity of demand, so the majority of Americans have emergency care coverage, as opposed to dental insurance (Phelps, 1997).

3.1.2 Demand for Medical Care

The demand for medical care is a derived demand for health. Phelps (1997) provides a good overview of the factors affecting the demand for care. The effects of age, gender, income, the value of time and perceptions of modern medicine on the demand for care will be discussed in turn.

Young adults, men in particular, are less likely to use medical services. Even casual observation suggests younger individuals tend to be less risk adverse and have less income for purchasing care. From a biological standpoint, those who are young normally do not need large quantities of individualized health care. With aging, the stock of health decreases, quite rapidly in the late stages of life, so older individuals have a higher

FIGURE 2: ADULT INSURANCE RATES BY AGE 1996-2000

Source: March CPS 1996-2000

Note: N= 309,242

demand for medical care. The plot of insurance rates by age in Figure 2 supports the notion that access to medical care becomes more important with aging.

Women utilize more medical services than men (Sindelar, 1982; Wilensky and Cafferata, 1983), indicating a higher demand for care then men. While childbirth is the most common reason for hospitalization, Sindelar notes higher female usage rates persist even controlling for gynecological and obstetric care. Women are less likely to view themselves as being in good health, and are more likely to initiate and respond to medical treatment (Wilensky and Cafferata, 1983). Sindelar postulates that men tend to make riskier lifestyle choices that result in health conditions difficult for modern medicine to remedy, like lung cancer or automobile injuries. The more comprehensive and costly

[4] Risk premiums are directly proportional to the variance of the gamble (Phelps, 1997).

insurance plans commonly offered would not appeal to individuals who are unlikely to frequent a physician's office.

Health care may be viewed as a normal good. *Ceteris paribus*, an increase in income, as well as a decrease in price of medical care, should induce individuals to purchase more health services. But it is difficult to isolate pure income and price effects since care is usually purchased because of some sort of illness event (Phelps, 1997). Price does matter for the purchase of all types of medical care, less so for emergency outlays and more so for ambulatory and dental care. Yet empirical evidence exists that there is a lower price and income elasticity of demand in the decision to purchase medical care compared to other types of goods (Wilensky and Cafferata, 1983; Phelps, 1997); common sense bolsters this idea. And while price surely influences the purchase of health insurance, the magnitude remains unclear (Phelps, 1997).

The price of time may either increase or decrease the demand for care. Those with a high price of time forgo frequent trips to a physician or minor surgeries; on the other hand, they may be the first to seek out care quickly in an illness event so little production time is lost. Grossman (1972) argues that at higher wages, the value of healthy time is greater, so that the demand for medical care should rise with the wage rate.

Beliefs about the medical profession and efficacy of modern medicine influence demand for care. The problem of asymmetrical information causes many patients to fully rely on their physician's recommendations, so physician trust is an integral component of attitudes towards the medical field.[5] Patients who are more educated may experience less

[5] The economic incentive for a physician to over provide care in order to increase income is known as induced demand.

uncertainty and confusion about medical procedures. Individuals with a history of health problems may take comfort in dealings with the medical community, or conversely be more skeptical about assurances of relief. Some beliefs about the American medical system are tied to cultural background, and this idea will be explored more fully in the discussion of immigrant influences.

3.1.3 Tax Advantages

The U.S. government has created a large incentive to purchase health insurance through place of work. Payments made by employers to purchase health insurance for workers, or for workers' dependents, are deductible as business expenses and are not counted as part of employees' taxable income. Hence health insurance in this setting is purchased with pretax dollars, creating a tax advantage to opt into an employment-based insurance plan. This subsidy reduces the price of insurance, more so for those with high incomes as the advantage rises with the marginal tax rate. Unsurprisingly, group insurance has become a popular employee fringe benefit.[6] Large firms have additional advantages when buying insurance. Purchasing power gives big companies more weight with insurers. Administration costs don't vary much with firm size, so big companies enjoy economies of scale that lower insurance prices. Lastly, the number of employees in large firms practically eliminates adverse selection problems since risk decreases with size.

[6] Without work-based plans, group insurance would probably remain the dominant policy form since a group collected on any basis other than buying health insurance reduces adverse selection.

3.1.4 Immigrant Influences

Immigrants are risk takers: they leave their home country for uncertain outcomes in an often unfamiliar environment. Recent immigrants tend to be young, low-income workers who will not reap marginal tax advantages, as they lack many of the characteristics associated with higher wages. They are probably, on average, healthy individuals as economic migrants tend to be favorably self-selected (Chiswick, 1978). The illegal immigrant population has less access to the insurance system and may hesitate to seek medical care for fear of being reported to immigration authorities. A lack of U.S. specific information and human capital accumulation results in confusion about the American health care system, language difficulties and reliance on traditional cures. In addition a lot of immigrants make regular trips home, so many factors cause immigrants to shy away from insurance plans in America, at least initially.

Research finds consistent health disparities based on ethnicity (for an overview of current research, see Clancy and Stryer, 2001). While generalizations must be used with caution, among some ethnic groups various factors point towards less utilization of health services. A recent study found that Asian-Americans seem to have different expectations and worse primary care outcomes relative to other major racial and ethnic groups (Clancy and Stryer, 2001). Many Chinese rely on their own traditional practitioners and turn to Western medicine for short-term relief, as opposed to cures (Gould-Martin and Ngin, 1981). Hispanics tend to be concentrated in occupations with low health insurance coverage rates and live in parts of the country with lower Medicaid enrollment (Ginzberg, 1992; Trevino et. al, 1992; Fronstin, 2000b). Mexican-Americans often employ folk medicine (Schreiber and Homiak, 1981). While information problems and limited access to health care surely explain some of the disparities, cultural background may play a role.

Source country health programs may influence demand for health insurance and usage of the American medical system. Growing up in an environment with ready access to high quality health care should increase the demand for health insurance as an adult living here. If migrants come from countries with lower quality health care, the opportunity cost of foregoing treatment in America can be small.

Thus immigrants are not as risk adverse, have a favorably selected health status, do not benefit much from tax advantages and may be subject to cultural influences different from most of the native-born population, including a demand for non-western medicine. Immigrant demand for health insurance – which generally does not provide benefits for non-Western medicine - will be lower than for the native-born. The foreign-born remaining in the United States assimilate to varying degrees. Their familiarity with the American medical system improves. Demand for care should increase with duration in the United States as individuals age, earn more, start families and experience fewer informational and linguistic difficulties.

3.2 Expected Outcomes

It is hypothesized that there is a positive correlation between personal income and the probability of being insured (*Table III*). As income increases, tax advantages make it relatively cheaper to take additional compensation in the form of health benefits provided by the employer as opposed to salary. Particularly for low-income workers, a wage increase decreases the opportunity cost of purchasing insurance with flat rate premiums. Low-income workers are less likely to receive Medicaid if they earn more than the maximum salary to qualify for government assistance.

TABLE III: VARIABLE DEFINITIONS AND EXPECTED SIGNS

Variable	Definition	Expected sign, probability of being insured
pincome	Personal income in thousands of dollars, bounded by $0-$150,000	+
age	age in years	+
age2	age in years squared	-
male	gender dummy (1 for male)	-
edu	education in years	+
married	marital status dummy (1 for married)	+
child18	number of children under age 18 (up to 9)	+
health	self-reported health status (1 for excellent, 5 for poor)	?
notinlf	labor force status dummy (1 for out of labor force)	?
fu10[a]	firm size dummy: under 10 employees	-
f10t24	firm size dummy: 10-24 employees	-
f25t99	firm size dummy: 25-99 employees	-
ft499	firm size dummy: 100-499 employees	-
ft999	firm size dummy: 500-999 employees	-
part-time[b]	hours worked dummy (1 for part-time)	-
union	union contract dummy (1 for covered)	+
service	major occupation dummy (1 for service)	-
semp[c]	self-employment dummy (1 for self-employed)	-
fborn[d]	nativity dummy (1 for foreign-born)	-
fbysm	fborn and years since migration interaction variable, years since arriving in US to stay	+
natcit	citizenship status dummy (1 for naturalized)	+
mx	Mexican dummy (1 for Mexican)	-

a: basis of comparison: 1,000+ employees

b: part or full year

c: unincorporated only, due to CPS coding

d: sample excludes citizens of Puerto Rico and outlying US territories, and natives born abroad of US parents

Age should have a positive sign on insurance coverage since the perceived and actual demand for medical care increases as workers grow older. An assumption is made that the importance of age increases at a decreasing rate.

Since women have a higher demand for medical care, the gender dummy variable may reveal a smaller likelihood of coverage for men. On the other hand, women are likely to have less personal income and labor characteristics associated with private health insurance coverage, though these variables can be held constant in a multiple regression analysis.

More years of schooling are associated with higher salaries and a higher value of time. Demand for care may be higher for the more educated who may possess a better understanding of modern medicine and the intricacies of insurance, or lower if the educated are more efficient in protecting their stock of health.

The presence of an employed spouse can be an additional venue for coverage as total family income increases and the second employer may offer insurance. In this case, the couple selects the more favorable package of coverage offered by their employers. A spouse, as well as having an increasing number of children under 18, increases the demand for familial health care and insurance.

The demand for medical care increases with illness severity. A positive self-reported health status may either increase access to insurance or decrease demand for coverage.

Since most insured individuals are covered under employer-based plans, work-related characteristics are highly relevant. Large employers are more likely to offer health insurance than small employers because administration costs are lower, adverse selection

is smaller and big companies have more bargaining power with insurers. The bigger the firm, the better is the chance of coverage. Since fringe benefits represent a quasi-fixed cost for employers, management tends to offer these only to full-time employees, often after a waiting period.[7] Those working part-time are less likely to have health insurance through their employer. Many low-skilled jobs with high turnover rates fall under the service industry category, so workers in those industries should be less likely to have insurance due to less commitment by both employers and workers. Jobs covered by union contracts typically come with generous benefit packages, including health insurance. The self-employed have less access to competitive health insurance rates since the vast majority is in very small firms. Being out of the labor force may decrease the odds of having health insurance as most coverage is employment based. On the other hand, some of those not in the labor force may be eligible for government health programs, have coverage through a spouse, coverage from a previous job or some other private source.

A foreign-born variable is hypothesized to have a significant negative sign. Factors such as less risk adversity and cultural hurdles, such as difficulties with language and information, which are difficult to measure will be reflected in the foreign-born coefficient. For low earners, as many new immigrants are, the cost of health insurance appears high. That noted, earnings will be held constant for this regression. Many new economic immigrants are automatically denied Medicaid for their first five years in the United States under the Personal Responsibility and Work Opportunity Act of 1996, although some states do not enforce the ban. Years since migration and naturalization

[7] Quasi-fixed costs do not vary with wage or hours worked, but with employment status (whether an individual is employed or not). Fixed costs are invariant to the number of employees.

should have positive effects on health insurance coverage due to benefits of assimilation and increased demand for medical care that accompanies age. An interesting question for immigrants is whether they reluctantly sort into jobs that do not offer insurance, or if they refuse to opt into a coverage plan when one is available. There is a strong negative correlation between industries that employ a high percentage of the foreign-born and industries with a high number of insured employees, so it seems there is sorting among immigrants into industries with low coverage rates. Theory does not predict if foreign-born women will have coverage rates closer to their male counterparts or native-born women, but suggests an answer somewhere in between the two.

The economic and health system climates of source countries may influence the preference for medical care, but it has not yet been tested if this enters into the demand for insurance in the United States. A sample of the foreign-born will look for this effect by testing separately for region and type of health system effects. Wealthier countries tend to have higher quality health care systems. The larger the per capita gross national product in the origin country, the greater the chance an individual grew up with access to health care, increasing demand for access as an adult. Immigrants from nations culturally similar to the United States are expected to have health insurance coverage patterns closer to that of the native-born. The majority of migrants to the United States come from welfare systems, so these immigrants will serve as the basis of comparison. Because in practice there is little difference between welfare, universal and centrally planned health care systems, no economic differences are expected. Those immigrants from free market systems are expected to show a decreased chance of coverage.

3.3 Methodology

A binomial probit specification tests the probability of being insured verses uninsured since this technique avoids the problem of a linear probability model with unbounded dependent variables that may fall outside the meaningful range of zero and one.[8] Probits are estimated using maximum likelihood, a technique that chooses coefficient estimates maximizing the log of the probability of observing the set of values of the dependent variable in the sample for a given set of independent variables (Studenmund 1997). Maximum likelihood is particularly desirable with very large samples as coefficients are normally distributed. A binomial probit model uses a variant of the cumulative normal distribution function:

$$\text{Prob}_i = \frac{1}{\sqrt{2\pi}} \int_{-\infty}^{Zi} e^{-(s*s)/2} (\text{HI})s$$

where

Prob_i = the probability that the dummy variable HI_i=1 (the individual had health insurance the previous year), and

$Z_i = \beta 0 + \beta 1\text{pincome} + \beta 2\text{age} + \beta 3\text{age}^2 + \beta 4\text{male} + \beta 5\text{edu} + \beta 6\text{married} + \beta 7\text{child18} + \beta 8\text{health} + \beta 9\text{workrelated} + \beta 10\text{fborn} + \beta 11\text{fbysm} + \beta 12\text{natcit} + \beta 13\text{mx} + e_{i,}$ and

s = a standard normal variable.

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[8] The CPS requests health insurance status of the previous year (reference year), rather than current year. The number of those changing their insurance status within that time is assumed very small.

Then the probability that an individual had health insurance is

$$Z_i = F\text{-}1(Prob_i) = \beta 0 + \beta 1 pincome + \beta 2 age + \beta 3 age^2 + \beta 4 male + \beta 5 edu + \beta 6 married + \beta 7 child18 + \beta 8 health + \beta 9 workrelated + \beta 10 fborn + \beta 11 fbysm + \beta 12 natcit + \beta 13 mx + e_i,$$

where F-1 is the inverse of the normal cumulative distribution function. *Pincome* is personal income from the previous year (in thousands of dollars)[9], *edu* is the years of schooling, *married* is a dichotomous variable denoting marriage status, *child18* gives the number of children under age 18 (to a maximum of 9), *health* is the self-reported health status (1 for excellent and 5 for poor), and *workrelated* is a set of dichotomous of variables related to employment. The immigrant related variables, which are absent in the native-born regressions, are *fbysm*, an interaction term yielding the extra impact on coverage probability an immigrant receives per year in the United States, *natcit* for naturalization, and *mx,* controlling for Mexicans, the largest single group (34%) in the foreign-born sample.

Analysis of two additional sub-samples also uses the probit technique. The never married sub-group introduces no new variables, whereas the foreign-born samples do. The *fborn* variable is removed and *fbysm* changes to *ysm*. Four additional variables are added: *gdp*, gross domestic product per capita (in thousands of 1999 dollars) and the

following dummies for global economic regions: *wfwld* for western, highly developed nations, *csacar* for Central and South America (not Mexico) and the Caribbean, *asiar* for Asia and those from the rest of the world, with Mexico as the benchmark. Thirty-four percent of the sample come from Mexico, 28% from Central and South America and the Caribbean, 19% from Asia and 15% from western first-world countries (the remaining 3% are classified with Asia). These variables test for a culture effect by source region, the financial aspect controlled for with the *gdp* variable. The theoretical model suggests immigrants from areas culturally similar to the United States, like Canada and Europe, are more likely to have insurance patterns similar to the native-born, whereas Mexicans, other Central and South Americans, those from the Caribbean and Asians are less likely. A second foreign-born regression tests for the influence of source country health programs and uses *gdp*, *freemkt* for free market systems, *universal* for universal systems, *centralplan* for centrally planned systems with *welfare* as the benchmark.

Low-income individuals constitute another sub-sample where a similar, expanded technique is used, multinomial logit. Whereas most of the population is ineligible for government programs, the low-income group has access to Medicaid and Medicare.[10] For them, the insured category is split in two: private and government programs. Multinomial logit allows consideration of multiple discrete alternatives – no insurance, private coverage, or government plan - at the same time (Studenmund 1997). This model is a

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[9]The CPS reports personal income as the exact dollar amount. For this research personal income is bounded from $0-$150,000. The approximately 0.3% of the sample reporting negative personal incomes are given the value $0 since although the percentage is small, the negative amounts could disproportionately affect the average incomes and standard deviations for the entire sample. A top value of $150,000 for the highest earners was given for similar reasons. The income and age squared coefficients are divided by 1000.

[10] Civilian recipients of CHAMPUS also fall under the "government program" category.

two-equation system:

$$\ln(P_{gi}/P_{pi}) = \beta 0 + \beta 1 pincome + \beta 2 age + \beta 3 age^2 + \beta 4 male + \beta 5 edu + \beta 6 married + \beta 7 child18 + \beta 8 health + \beta 9 workrelated + \beta 10 fborn + \beta 11 fbysm + \beta 12 natcit + \beta 13 mx + e_i,$$

$$\ln(P_{ui}/P_{pi}) = \beta 0 + \beta 1 pincome + \beta 2 age + \beta 3 age^2 + \beta 4 male + \beta 5 edu + \beta 6 married + \beta 7 child18 + \beta 8 health + \beta 9 workrelated + \beta 10 fborn + \beta 11 fbysm + \beta 12 natcit + \beta 13 mx + e_i,$$

where P_{gi} is the probability that the *i*th person had government insurance, P*ui* is the probability the *i*th person was uninsured, and P*pi* is the base, private insurance (primarily employment based, both also other non-work related policies).[11]

A disadvantage of probit is the difficulty in interpreting the coefficients: the estimates represent the impact of a one-unit increase in the independent variable on the inverse of the normal cumulative distribution of the odds of having health insurance, not on the probability of having insurance itself. A similar problem exists with logit. Resulting coefficients are used primarily to determine sign and statistical significance. In order to evaluate magnitude and economic significance, results will also be reported as predicted probabilities.[12]

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[11] Work-related policies constitute approximately 78-85% of the privately insured, other private plans the remainder.

[12] For statistically insignificant variables, coefficient estimates will be used in calculating the predicted probabilities but the results associated with those particular characteristics will not be reported.

4. DATA SOURCES

This research utilizes health insurance coverage and other demographic information contained in the March 1996-2000 Supplements to the Current Population Survey (CPS). The CPS is a comprehensive survey of the population 16 years and older conducted monthly since 1947 by the Bureau of the Census for the Bureau of Labor Statistics. Participants are selected with the goal of producing a representative sample of the civilian, non-institutionalized population. Sample groups are adjusted after each decennial census in order to reflect the national population. The CPS has 754 state-based sample areas. Within these areas, much smaller sampling units of approximately four households per unit are chosen for voluntary participation. Nationwide this means a probability sample of 59,000 housing units is selected, of which approximately 50,000 households are eligible for interview. The CPS surveys approximately 94,000 people monthly during the week containing the 19th day, with the previous seven days serving as the reference week. Those living in a selected dwelling unit are interviewed on a rotation basis: four consecutive months, then again eight months later for a last four months. This method allows individuals within a dwelling unit to enter or leave the sample while retaining the general characteristics of a given subgroup over time, though on a month-to-month basis 75% of the sample does contain the same individuals. Information is collected mainly by telephone, but also by some personal interviews. Basic labor force data are collected monthly, with data on special topics obtained in periodic supplements.

The March Supplement, or Annual Demographic Survey, was added in 1948 to collect information about annual income, consisting at that time of two questions. Since then, more questions have been added regarding sources of income, job characteristics

and work experience. In 1994 the CPS began requesting information on health insurance coverage (regarding the previous year) in the March Supplement.[13] While there are other data sets containing more detailed health insurance questions, no data set that includes health insurance information surpasses the CPS's demographic information for a representative sample of the nation's adult population. CPS data are appropriate for this research as the interest in this project lies not in the details of insurance plans but in the characteristics of the individual who has, or does not have, coverage. The CPS's questions regarding immigrants – nativity, year of migration, citizenship status – prove particularly useful. A sample of these questions is found in Table V.

Information on unemployment and employment experience classified by age, gender, race and other characteristics contained within the CPS forms the official monthly source of labor and demographic statistics for the federal government. These data are widely used for economic indicators, unemployment rates, characteristics of the labor force and labor supply and classifying wage rates by demographic groups. Final data are adjusted in a way that reduces the variability of estimates due to undercounting of blacks and Hispanics. Analysis is restricted to civilian adults aged 25 to 64. Military personnel captured by the CPS automatically receive the military health care CHAMPUS and do not face the health insurance decisions of the civilian population. The upper bound on age was chosen since 65 is the typical age for Medicare eligibility. The lower bound of 25 decreases the chance that an individual has insurance via a parent, which is

[13] While questioning regarding health insurance began in 1994, the type of questions changed considerably over those first two years. From 1996 to 2000, no alterations were made which promises more consistent

the case for many students until age 25, depending on type of policy.[14] A small percentage of individuals receive coverage from more than one source and while dual coverage is largely atypical, these people are included in all samples except for those reporting low personal incomes due to methodological restrictions.[15] Excluded from the sample are citizens of Puerto Rico and outlying U.S. territories, as well as United States citizens born abroad of American parents. While individuals in these groups are U.S. citizens by birth, cultural differences from the mainstream American population make including these people in the native-born sample problematic. And as they are likely to be distinct from immigrants, including them in the foreign-born group is also inappropriate.

Supplemental data regarding Gross Domestic Product and other international figures are obtained from the United Nations' Statistics Division, the World Bank, and the CIA Factbook. Information useful in classifying source country health programs comes mainly from Romer's Health Systems of the World (1991), supplemented by the World Health Organization. Romer's two-volume work provides a unique view of health systems in their economic climates. Some sixty countries are classified into one of sixteen categories, determined by cross-classifying the health care system (free market, welfare, universal, or centrally planned) with an economic dimension (industrialized, transitional, very poor, or resource rich).

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[14] There is no guarantee that this age floor excluded students from the sample. The March CPS does not explicitly ask those over 25 if they are in school. There was a question regarding the reason for not being in the labor force for those over 25, but due to a CPS reporting error, this information is unavailable.

[15] Approximately 7% of the entire sample have dual coverage. Those excluded from the low personal income analysis because of dual coverage compose less than 6% of that group.

TABLE IV: SELECTED HEALTH QUESTIONS FROM THE 1996-2000 MARCH CPS

Variable	Question
	Private coverage
Work-based	At any time in 19XX, (were you/was anyone in this household) covered by a health plan provided through (their/your) current or former employer or credit union? (Exclude military health insurance) Who in this household were policyholders? In addition to (you/name), who else in this household was covered by (name's/your) plan?
Private	At anytime during 19XX, (were you/was anyone in this household) covered by a plan that (you/they) PURCHASED DIRECTLY, that is, not related to current or past employer? Who in this household were policyholders? In addition to (you/name), who else in this household was covered by (name's/your) plan?
	Government coverage
Medicare	At any time in 19XX, (were you/was anyone in this household) covered by Medicare, the health insurance for persons 65 years old and over or persons with disabilities? Who was that?
Medicare	At any time in 19XX, (were you/was anyone in this household) covered by Medicaid/(fill state name), the government assistance program that pays for health care? (List of state appropriate titles follows. MED-CAL: CA WELFARE: OR MEDI-KAN: KS MEDICAL ASSISTANCE: AK, AR, CO, DE, DC, GA, HI, ID, KY, LA, ME, MD, MA, MI, MN, NJ, OK, PA, RI, SC, TX, VA, WA, WI) Who was that?
CHAMPUS	At any time in 19XX, (were you/was anyone in) this household) covered by CHAMPUS, CHAMP-VA, VA or military health care?
	Other coverage
Other	Other than the plans I have already talked about was anyone in this household covered by a health insurance plan (such as the [USE FILL SPECIFIED FOR PARTICULAR STATE SHOWN BELOW] plan or any other type of plan/of any other type)? Who has insurance?

(TABLE IV CONTINED)

Fills for State-specific health insurance program for low-income uninsured individuals (for SHIC1).

Arizona	Medically Indigent Program
California	AIM (Access for Infants and Mothers) CA's children's health insurance program
Colorado	Children's Health Plan
Connecticut	Healthy Steps
Delaware	Nemours Child Program
Florida	Healthy Kids
Hawaii	Hawaii HealthQUEST
Iowa	Iowa coverage for unemployed workers
Kansas	Kansas Caring Program for Kids
Maine	Maine Health Program
Maryland	AIDS Insurance Assistance Program
Massachusetts	Healthy Kids, CenterCare Program, Medical Security Plan
Michigan	Caring for Children
Minnesota	Minnesota Care
Mississippi	MS's subsidized insurance coverage
Missouri	MO's coverage for unemployed
New Hampshire	Healthy Kids
New Jersey	NJ's coverage for pregnant women and children, Health Access New Jersey
New York	Child Health Plus, New York's subsidized insurance
Ohio	Children's Health Care Program
Oregon	Oregon Health Plan
Pennsylvania	Children's Health Insurance Programs
Rhode Island	RIte Care
Tennessee	TennCare
Washington	Children's Health Plan, Basic Health Plan
Wisconsin	Healthy Start

Self-reported health status

Health	Would you say (name's/your) health in general is
	Excellent
	Very good
	Good
	Fair
	Poor

Source: March CPS 1996-2000

TABLE V: SELECTED IMMIGRATION-RELATED QUESTIONS FROM THE 1996-2000 MARCH CPS

Variable	Question
Nativity	In what country (was/were) (name/you) born? Enter other country. (write in)
MigrationYear	When did (name/you) come to the United States to stay?
Citizenship	In what country (was/were) (name/you) born? 1. United States 2. Puerto Rico 3. Outlying area of the U.S. (American Samoa, Guam, U.S. Virgin Islands, Northern Marianas, other U.S. Territory) 4. (Are/Is) (name/you) a citizen of the United States? That is, (you/he/she) (have/has) one American parent or (you/he/she) (are/is) a citizen by naturalization? 5. (Are/Is) (name/you) a citizen by naturalization or (do/does) (you/he/she) have at least one American parent?

Source: March CPS 1996-2000

5. ANALYSIS OF THE ENTIRE SAMPLE

This chapter is an analysis of the determinants of health insurance coverage for a representative sample of the non-elderly adult population of the United States, including a detailed examination of immigrants. In order for public policy to effectively reduce the number of uninsured, the characteristics of those lacking coverage should be well understood.

5.1 Native and Foreign-born Adults

5.1.1 The Explanatory Variables

The means and standard deviations of the independent variables for all adults in the sample are shown in Table VI. The average personal income of all adults aged 25-64 in 1996-2000 was $28,510.[16] The native-born earned slightly more, the foreign-born approximately 25% less. The foreign-born tend to have less education but a higher standard deviation around that mean, suggesting extremes in educational attainment. Most native-born have some post-high school education, and many of the foreign-born have a high school diploma or equivalent.[17] Most adults are married. The foreign-born are more likely to have at least one child under the age of 18 years, whereas less than half of American adults have young children. Immigrants' self-reported health status is somewhat lower than the native-borns'.

[16] These sums represent income in the years 1995-1999.

[17] The median level of education years among the foreign-born is 12.

TABLE VI: MEANS AND STANDARD DEVIATIONS, NATIVE AND FOREIGN BORN ADULTS AGED 25-64, 1996-2000

	All Adults		Native-born		Foreign-born	
	Mean	SD	Mean	SD	Mean	SD
Demographic variables						
Personal income (previous year) (thousands of $)	28.50	27.26	29.72	27.50	21.29	24.61
Age	42.36	10.63	42.64	10.62	40.72	10.54
Education (years)	13.27	3.08	13.59	2.60	11.41	4.65
Married (%)	67.18	*	66.49	*	71.93	*
One or more children under age 18 (%)	44.31	*	42.53	*	54.81	*
Self-reported health status excellent or very good (%)	64.23	*	65.21	*	58.44	*
Work-related variables (previous year)						
Not in labor force (%)	17.53	*	16.54	*	23.32	*
Among the labor force[a] (%)						
Part-time[b]	14.06	*	14.34	*	12.29	*
Service industry[c]	40.25	*	41.02	*	35.33	*
Union covered (current year)	3.42	*	3.62	*	2.12	*
Self employed[d]	7.38	*	7.53	*	6.45	*
Firm size (%)						
Under 10	20.85	*	20.38	*	23.86	*
10-24	8.76	*	8.37	*	11.26	*
25-99	12.75	*	12.33	*	15.43	*
100-499	14.15	*	14.09	*	14.60	*
500-999	5.69	*	5.77	*	5.18	*
1000+	37.80	*	39.07	*	29.67	*
Immigrant-related variables						
Foreign-born (%)	14.49	*	*	*	*	*
Naturalized citizen (%)	*	*	*	*	35.47	*
Years since migration	*	*	*	*	19.04	11.44
Mexican (%)	*	*	*	*	32.74	*

Source: March CPS 1996-2000

N: total = 331,640: native-born = 283,597 (male 48%), foreign-born = 48,043 (male 49%)

* denotes 'not applicable'

a: Percentages exclude adults out of the labor force.

b: part or full year

c: Of the 14 major industry classifications for the longest job held in the previous year, service industries include: personal services including private household, business and repair, other professional and related services and public administration.

d: unincorporated only, due to CPS coding

About one-fifth of all adults are not in the labor force, the majority of whom are female (see Tables XI and XIV). One sixth of the labor force works part-time, again mainly women (see Tables XI and XIV). The service industry represents over one-third of the labor force. This probably under-represents the true number in service occupations as the CPS excludes several industries typically associated with service, such as retail trade.[18] A small fraction of adults in this sample work in jobs covered by union contracts; nationwide the average is 14 %.[19] A slightly higher percent of native-born are unincorporated self-employed. Firm size varies by nativity, albeit slightly. While among the native-born the ratio of those working in very large firms (those with 1,000 or more employees) compared to very small firms (less than 10 employees) is essentially 2:1, for the foreign-born the ratio is much closer to 1:1. The average immigrant does work for a large employer.

The foreign-born compose almost 15% of this sample. A typical immigrant has been in the United States for 19 years, and 35% of the foreign-born are naturalized citizens. Mexicans make up one-third of all immigrants to the United States, their percentages dwarfing those from other source countries.

5.1.2 Empirical Findings

The coefficients and t-statistics from the probit regression for the probability of being insured are shown in Table VII. Personal income and age have the expected

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[18] Of the 14 major industry classifications for the longest job held in the previous year, service industries include: personal services including private household, business and repair, other professional and related services and public administration.

[19] Under 10% of private workers are unionized; close to 4 in 10 government workers are (Greenhouse).

TABLE VII: COEFFICIENTS (T-STATISTICS IN PARENTHESES) FROM PROBIT ANALYSIS, DEPENDENT VARIABLE: PROBABILITY OF BEING INSURED

	Native-born	Pooled	Foreign-born
Demographic Variables			
Personal income (previous year)	0.014 (67.9)	0.014 (77.05)	0.015 (33.8)
Age	0.027 (11.4)	0.023 (10.5)	0.004 (0.9)*
Age2	-0.192 (-7.0)	-0.147 (-5.9)	-0.010 (-0.2)*
Male	-0.190 (-27.5)	-0.201 (-32.3)	-0.239 (-16.3)
Education years	0.051 (36.9)	0.045 (42.6)	0.036 (21.0)
Married	0.524 (76.6)	0.492 (79.5)	0.340 (22.9)
Number of children under 18 years	0.027 (8.5)	0.036 (13.0)	0.067 (11.7)
Self-reported health status:			
1 = excellent, 5= poor	-0.029 (-9.3)	-0.025 (-8.9)	0.003 (0.5)*
Work-related Variables (previous year)			
Not in labor force	-0.270 (-23.7)	-0.283 (-27.7)	-0.368 (-15.4)
Part-time	-0.102 (-10.4)	-0.091 (-10.2)	-0.054 (-2.3)
Service industry	0.049 (6.4)	0.052 (7.6)	0.056 (3.3)
Union covered (current year)	0.335 (13.1)	0.332 (14.1)	0.324 (5.3)
Self-employed	-0.106 (-8.0)	-0.107 (-8.9)	-0.181 (-5.7)
Firm size			
under 10	-0.694 (-66.3)	-0.720 (-76.0)	-0.857 (-37.7)
10-24	-0.498 (-39.5)	-0.520 (-46.0)	-0.630 (-24.0)
25-99	-0.276 (-23.7)	-0.301 (-28.8)	-0.416 (-17.3)
100-499	-0.131 (-11.1)	-0.136 (-12.8)	-0.185 (-7.4)
500-999	-0.026 (-1.5)*	-0.026 (-1.6)*	-0.045 (-1.2)*
Immigrant-related Variables			
Fborn		-0.739 (-53.1)	
Fbysm		0.014 (21.4)	0.016 (22.2)
Natcit		0.160 (10.2)	0.172 (10.8)
MX		-0.304 (-21.4)	-0.359 (-23.1)
log likelihood	-102557.06	-128374.23	-25606.180
Constant	-0.651 (-12.3)	-0.463 (-9.7)	-0.559 (-5.1)
Sample size	283597	331640	48043

*statistically insignificant at the 5% level

Source: March CPS 1996-2000

positive signs, although age is insignificant for immigrants. For the foreign-born, controlling for years since migration means the age variable reflects the age of the immigrant when he or she came to the United States to stay, and this has no effect on insurance coverage. A gender effect in favor of women is statistically significant. Education has a positive, statistically significant sign, though the coefficient is somewhat smaller for immigrants. This is plausible as education received outside the United States may be difficult for American employers to evaluate, so they place less importance on foreign education than other observable traits. While education has non-market health implications for the individual, the ties between educational attainment and high wages, and high wages and health insurance, are strong and may be what is picked up here. Familial status matters: the positive coefficient on marriage is large, particularly for the native-born. The more children, the greater the odds of having insurance. Self-reported health status is statistically insignificant for immigrants. For the native-born reporting a lower level of general health, the chances of having insurance are slimmer.[20] The demand for coverage by those who are less healthy seems to outweigh insurance supply.

All other things equal, being out of the labor force has a negative effect on insurance status, which is not surprising given most coverage is employer-based. As predicted, those working part-time are less likely to have insurance. Employers normally offer health benefits to full-time workers since insurance is a quasi-fixed cost varying not by hours worked but by number of employees. The self-employed, generally small employers who have less access to work-based group plans, are also less likely to have health insurance. Contrary to expectation, service industry has a positive, significant

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[20] There is no control for the potential risk of endogeneity between the dependent variable and the self-reported health variable given the ambiguity of the relationship of health insurance and health status.

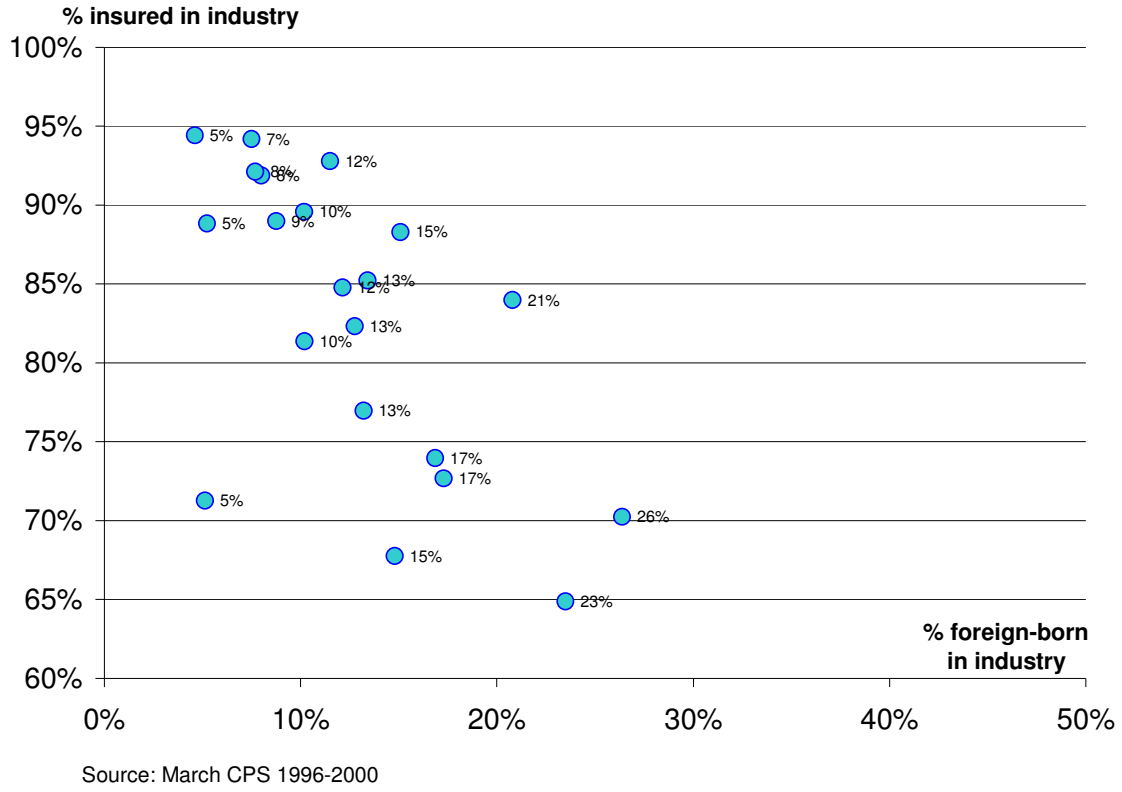
sign. This is probably due to CPS coding since several industries typically associated with service, such as retail trade, are not categorized as service industries by the CPS. Workers in jobs under union contracts are more likely to be insured as unions tend to fight for extensive benefits as part of the compensation package.

Those in firms with 1,000 or more employees are more likely to be insured than workers in companies with less than 500 employees.[21] Firm size under 25 employees for the native-born and under 100 employees for the foreign-born have the largest coefficients of all variables, suggesting primary importance. This size discrepancy by nationality hints that sector or industry may also be very important for immigrants. Though a detailed examination of workplace sorting is beyond the scope of this research, there is evidence that immigrants tend to sort into firms and industries that are unlikely to offer health insurance. Figure 3 displays the negative association with immigrant concentration and percent of insured employees by industry. The foreign-born have larger coefficients, but smaller t-statistics, on firm size at each interval, suggesting firm size has a larger effect on the health insurance status of immigrants.

The coefficient on foreign-born is negative, statistically significant and very large. Despite the extensive demographic and work-related controls, immigrants have unobservable characteristics such as less information about the American health care system, preferences for home country remedies, varying degrees of English language competency that result in lower coverage rates and are reflected in this result. Both years since migration and naturalization have positive, statistically significant signs, indicating

[21] While the range of 500-999 employees has a negative sign, it is statistically insignificant.

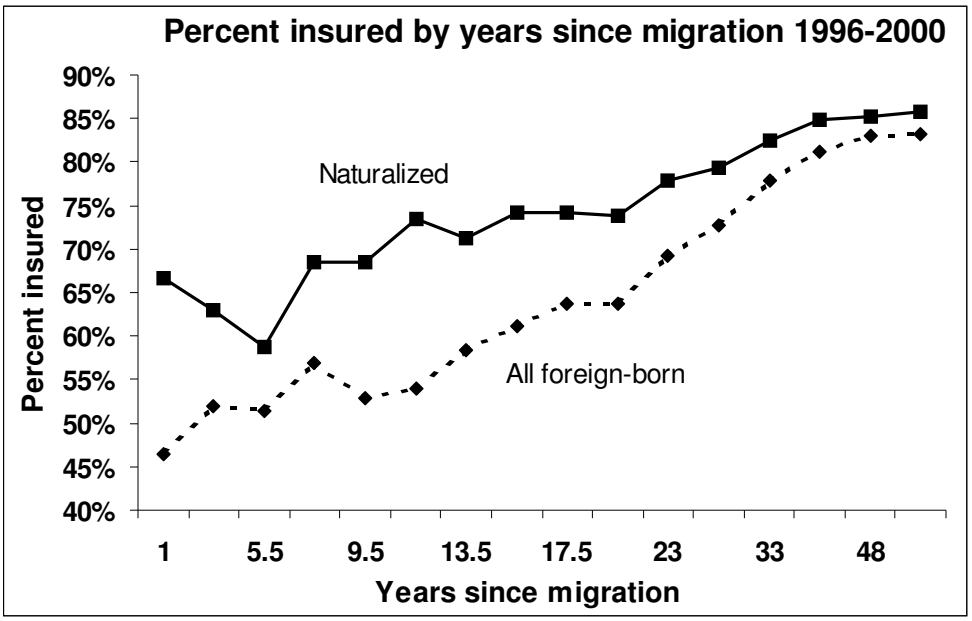
FIGURE 3: PERCENT INSURED BY PERCENT FOREIGN-BORN IN INDUSTRY, ADULTS AGED 25-64, 1996-2000



Source: March CPS 1996-2000

a degree of assimilation to the American health care system. Citizenship surely marks a bigger step towards cultural assimilation than duration alone, and data show the insurance rates of naturalized immigrants are higher than all immigrants (*Figure 4).* The negative, significant sign on Mexican is relatively large. This Mexican effect among immigrants may be a result of close geographical proximity (many Mexicans work in California and Texas where returning home is easier than for, say, a Chinese immigrant) combined with cultural disparity.

FIGURE 4: FOREIGN-BORN ADULTS AGED 25-64, 1996-2000



Source: March CPS 1996-2000

Note: N = 48, 043

Predicted probabilities for the native and foreign-born outcomes are found in Tables VIII, IX and X. These results are useful for determining magnitude effects of the variables for economic significance. The reference adult in Table XIII, who is similar to the reference native-born in Table IX, is constructed from the pooled sample so a detailed discussion of the results by variable follows in Tables IX and X. The unique finding from the pooled regression is that while the native-born reference person has a 93% chance of being insured, were the reference person foreign-born his odds of coverage fall to 84%, despite having the same observable characteristics. Figure 5 is a graphical representation of the variable effects for the pooled sample in order of decreasing magnitude.

A typical native-born male with the ascribed characteristics in Table IX has a very

TABLE VIII: PREDICTED PROBABILITIES BASED ON PROBIT ANALYSIS FROM TABLE VII: POOLED SAMPLE

	Insurance Status	
	Insured[a]	Uninsured
Reference case[b]	0.93	0.07
Selected cases[c]		
Demographic variables		
Personal income (previous year)		
$18.5K	0.91	0.09
$23.5K	0.95	0.05
Age		
31	0.91	0.09
53	0.94	0.06
If female	0.95	0.05
Education years		
10 years	0.91	0.09
16 years	0.95	0.05
Not married	0.84	0.16
1 child under 18 years	0.93	0.07
Self-reported health status		
good	0.93	0.07
excellent	0.93	0.07
Work-related variables (previous year)		
Not in labor force	0.88	0.12
Part-time	0.92	0.08
Service industry	0.94	0.06
Union covered (current year)	0.96	0.04
Self-employed[d]	0.74	0.26
Firm size (1,000+ benchmark)		
under 10	0.77	0.23
10-24	0.83	0.17
25-99	0.88	0.12
100-499	0.90	0.10
500-999	*	*
Immigrant-related variables		
If foreign-born	0.84	0.16

* statistically insignificant

a: Insured includes private and government coverage.

b: The reference case has the following characteristics: NB male, personal income $28,510, 42 years of, 13 years of schooling, no children under 18, very good health, employed full-time at a firm with 1000+ employees.

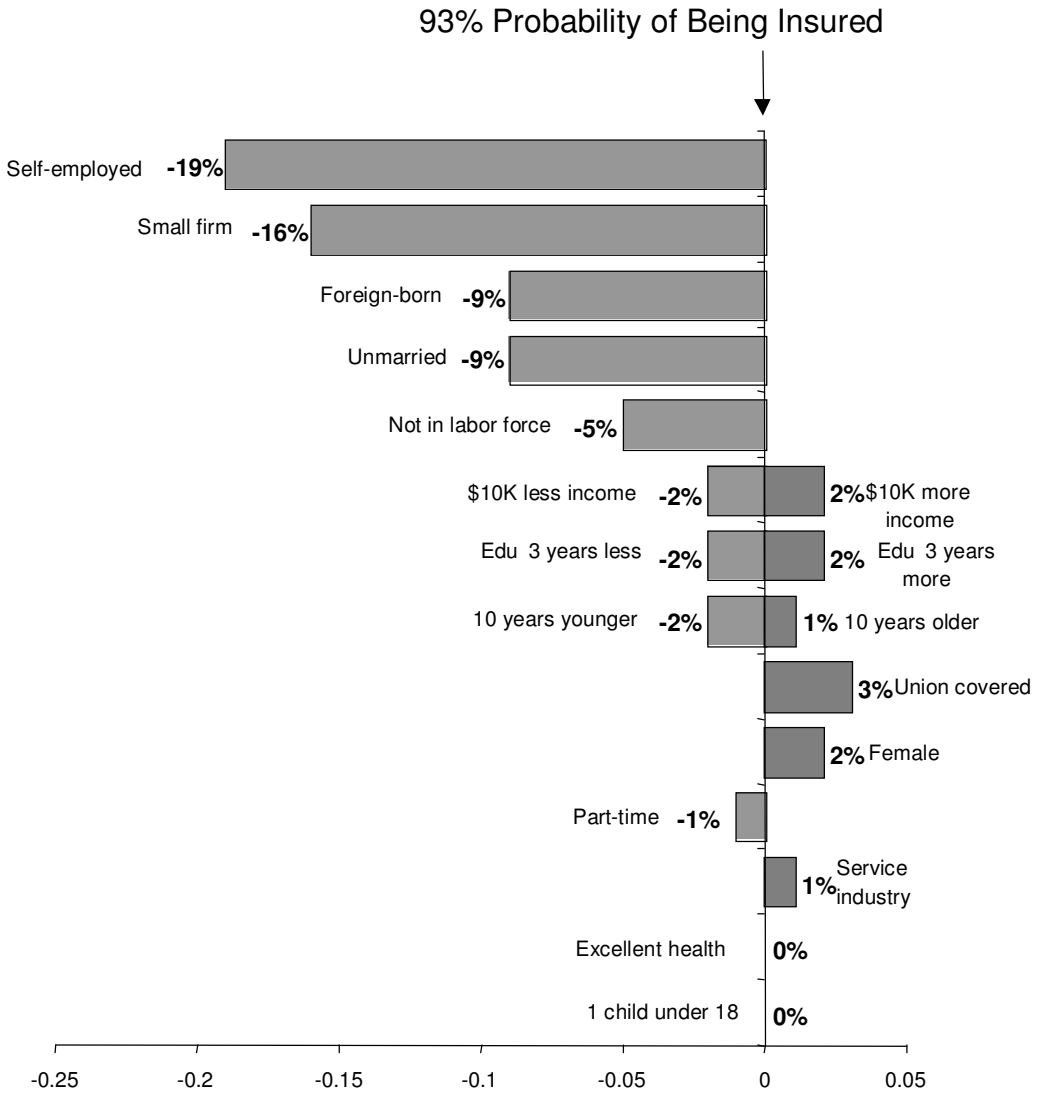
c: These differ from the reference person in only one characteristic, as shown in stub. These changes generally represent one standard deviation from the mean.

d: Self-employed generally are sole employees: firm size also changes from large to under 10.

Source: March CPS 1996-2000

FIGURE 5: VARIABLE EFFECTS IN DECREASING MAGNITUDE

Reference: Adult Male



Note: reference native born male, $28,510 personal income, age 42, 1 year of college, married, no children under 18, very good self-reported health status, employed part-time by a very large firm

Source: March CPS 1996-2000

TABLE IX: PREDICTED PROBABILITIES BASED ON PROBIT ANALYSIS FROM TABLE VII: NATIVE-BORN ADULTS

	Insurance Status	
	Insured[a]	Uninsured
Native-born reference case[b]	0.94	0.06
Selected cases[c]		
Demographic variables		
Personal income (previous year)		
$19.72K	0.92	0.08
$39.72K	0.96	0.04
Age		
32	0.92	0.08
54	0.95	0.05
If female	0.96	0.04
Education years		
11 years	0.92	0.08
17 years	0.96	0.04
Not married	0.85	0.15
1 child under 18 years	0.94	0.06
Self-reported health status		
good	0.94	0.06
excellent	0.94	0.06
Work-related variables (previous year)		
Not in labor force	0.90	0.10
Part-time	0.93	0.07
Service industry	0.95	0.05
Union covered (current year)	0.97	0.03
Self-employed[d]	0.78	0.22
Firm size (1,000+ benchmark)		
under 10	0.81	0.19
10-24	0.86	0.14
25-99	0.90	0.10
100-499	0.92	0.08
500-999	*	*

* statistically insignificant

a: Insured includes private and government coverage.

b: The reference case has the following characteristics: personal income $29,790, 42 years old, 14 years of schooling, married, no children under 18, very good health, employed full-time at a firm with 1000+ employees.

c: These differ from the reference person in only one characteristic, as shown in stub. These changes generally represent one standard deviation from the mean.

d: Self-employed generally are sole employees: firm size also changes from large to under 10.

Source: March CPS 1996-2000

TABLE X: PREDICTED PROBABILITIES BASED ON PROBIT ANALYSIS FROM TABLE VII: FOREIGN-BORN ADULTS

	Insurance Status	
	Insured[a]	Uninsured
Foreign-born reference case[b]	0.81	0.19
Selected cases[c]		
Demographic variables		
Personal income (previous year)		
$11.29K	0.76	0.24
$31.29K	0.85	0.15
Age		
30	*	*
52	*	*
If female	0.87	0.13
Education years		
7 years	0.76	0.24
17 years	0.85	0.15
Not married	0.70	0.30
Children under 18 years		
No children	0.79	0.21
2 children	0.83	0.17
Self-reported health status		
good	*	*
excellent	*	*
Work-related variables (previous year)		
Not in labor force	0.69	0.31
Part-time	0.79	0.21
Service industry	0.82	0.18
Union covered (current year)	0.88	0.12
Self-employed[d]	0.43	0.57
Firm size (1,000+ benchmark)		
under 10	0.51	0.49
10-24	0.60	0.40
25-99	0.68	0.32
100-499	0.75	0.25
500-999	*	*
Immigrant-related variables		
Years since migration		
In US 8 years	0.76	0.24
In US 30 years	0.85	0.15
Naturalized citizen	0.85	0.15
Mexican immigrant	0.70	0.30

* statistically insignificant

a: Insured includes private and government coverage.

b: The reference case has the following characteristics: personal income $21,200, 42 years old, 12 years of schooling, married, one child under 18, very good health, employed full-time at a firm with 1000+ employees, in America 19 years.

c: These differ from the reference person in only one characteristic, as shown in stub. The changes generally represent one standard deviation from the mean.

d: Self-employed generally are sole

Source: March CPS 1996-2000

high probability of being insured, 94%. This combination of characteristics is conducive to having coverage, and altering a single variable does not dramatically change the odds of being insured. A $10,000 change in personal income causes only a small adjustment in the odds of coverage. The results for changes in age are similar. A small gender effect in favor of women is evident. The lack of a high school diploma causes almost no economically significant change in coverage status, nor does having a college degree improve odds dramatically. There is no change in status from the presence of a child or change in self-reported health status. The only variables that have large negative effects are being unmarried (85%), self-employed in a very small company (78%), and working for a firm with less than 25 employees (81-86%). Even these lower probabilities may be considered at the higher end of the coverage range.

An average foreign-born male with the characteristics given in Table X has an 81% chance of being insured. While this is lower than the native-born male in Table IX, the odds are still high, despite earning $8,000 less and having 2 years fewer education than the native-born male. Changes in income have approximately the same proportional effect as for the native-born. The gender effect appears stronger for immigrants. Were the reference male missing a high school degree, his odds of coverage would fall merely 6%. Variations in the number of children affect status only slightly. As with the native-born, marital status is an important coverage determinant for immigrants. Work-related characteristics have the biggest effects on coverage. Self-employment in a small firm cuts the odds of coverage almost in half, compared to a 17% loss for the native-born male in Table 4. Employees at small firms see similar effects, again much more pronounced for immigrants compared to natives. Years since migration have a mild effect on coverage.

Citizenship combined with duration has a stronger effect than duration alone. A Mexican with the given characteristics is 14% less likely to be insured.

5.2 Native and Foreign-born Males

5.2.1 The Explanatory Variables

In order better evaluate how nativity impacts health insurance coverage, additional probit regressions are run separately for native and foreign-born males, and native and foreign-born females. Table XI reports the means and standard deviations of men in the CPS sample 1996-2000. Native-born men earned about $10,000 more annually than the foreign-born. Other demographic results are very similar to those for all adults (see Table 1). The vast majority of prime aged males are in the labor force and only a tiny fraction work part-time. The native-born are twice as likely to work in a union-covered job, but the absolute percentage is still quite small, failing to total 5% of the labor force. The ratio of native-born men working for firms with 1000 or more workers (37.5%) compared to very small firms (21.9%) is larger than for immigrants, who have a ratio almost 1:1. At the small firm level, the nativity difference is not as pronounced, 22% for natives verses just over 24% for immigrants. Yet at the top of the spectrum, only 27% of immigrant men work for companies with 1,000 employees or more, compared to over 1 in 3 for the native-born. The immigrant-related percentages mirror those in Table VI.

5.2.2 Empirical Findings

The coefficients and t-statistics from the probit regression for the probability of being insured for adult men are shown in Table XII. Except for the statistical

TABLE XI: MEANS AND STANDARD DEVIATIONS, NATIVE AND FOREIGN-BORN MALES AGED 25-64, 1996-2000

	All Men		Native-born		Foreign-born	
	Mean	SD	Mean	SD	Mean	SD
Demographic variables						
Personal income (previous year) (thousands of $)	37.42	30.50	38.91	30.69	28.70	27.81
Age	42.33	10.60	42.70	10.58	40.23	10.41
Education (years)	13.34	3.20	13.65	2.73	11.52	4.78
Married (%)	68.66	*	67.89	*	73.13	*
One or more children under age 18 (%)	41.73	*	39.84	*	52.63	*
Self-reported health status excellent or very good (%)	65.75	*	66.89	*	61.17	*
Work-related variables (previous year)						
Not in labor force (%)	10.19	*	10.32	*	9.43	*
Among the labor force[a] (%)						
Part-time[b]	5.86	*	5.84	*	5.94	*
Service industry[c]	28.50	*	29.11	*	24.93	*
Union covered (current year)	3.82	*	4.12	*	2.11	*
Self employed[d]	8.68	*	8.94	*	7.20	*
Firm size (%)						
Under 10	22.24	*	21.87	*	24.41	*
10-24	9.33	*	8.73	*	12.77	*
25-99	13.48	*	12.90	*	16.79	*
100-499	13.77	*	13.66	*	14.42	*
500-999	5.24	*	5.34	*	4.71	*
1000+	35.94	*	37.51	*	26.90	*
Immigrant-related variables						
Foreign-born (%)	14.64	*	*	*	*	*
Naturalized citizen (%)	*	*	*	*	34.67	*
Years since migration	*	*	*	*	18.84	11.27
Mexican (%)	*	*	*	*	35.48	*

Source: March CPS 1996-2000

N: total = 159,057: native-born = 135,769, foreign-born = 23,288

a: Percentages exclude adults out of the labor force.

b: part or full year

c: Of the 14 major industry classifications for the longest job held in the previous year, service industries include: personal services including private household, business and repair, other professional and related services, and public administration.

d: unincorporated only, due to CPS coding

TABLE XII: COEFFICIENTS (T-STATISTICS IN PARENTHESES) FROM PROBIT ANALYSIS, DEPENDENT VARIABLE: PROBABILITY OF BEING INSURED, ADULT MALES

	Native-born	Foreign-born
Demographic		
Personal income (previous	0.013 (51.2)	0.014 (26.1)
Age	0.032 (9.0)	0.005 (0.6)*
Age2	-0.206 (-5.0)	-0.032 (-0.4)*
Education years	0.044 (22.6)	0.034 (13.9)
Married	0.541 (49.6)	0.359 (15.3)
Number of children under 18	-0.004 (-0.9)*	0.041 (4.8)
Self-reported health		
1 = excellent, 5=	-0.032 (-6.9)	0.008 (0.8)*
Work-related Variables (previous		
Not in labor force	-0.340 (-18.5)	-0.463 (-11.6)
Part-time	-0.284 (-15.8)	-0.174 (-4.3)
Service industry	0.027 (2.3)	0.075 (3.1)
Union covered (current	0.341 (10.1)	0.413 (5.1)
Self-employed	-0.097 (-5.6)	-0.204 (-5.0)
Firm size		
under 10	-0.844 (-56.5)	-0.966 (-31.0)
10-24	-0.592 (-33.4)	-0.724 (-21.1)
25-99	-0.323 (-19.4)	-0.485 (-15.2)
100-499	-0.162 (-9.4)	-0.237 (-7.0)
500-999	-0.047 (-1.8)*	-0.031 (-0.6)*
Immigrant-related		
YSM		0.016 (14.7)
Natcit		0.182 (8.0)
MX		-0.318 (-14.2)
log likelihood	-47364.96	-12080.26
Constant	-0.784 (-10.1)	-0.735 (-4.6)
Sample size	135769	23288

*statistically insignificant at the 5%

Source: March CPS 1996-2000

insignificance of number of children for native-born men, there are no changes in sign or significance of the variables from the all adults regression in Table VII, though coefficient values may vary slightly. Despite the marked differences in work-related characteristics between men and women, outcomes for the male sample are similar to that for all adults. Working in the service industry and in union covered jobs increases odds of coverage, whereas those out of the labor force, working part-time or working for themselves have decreased chances. Compared to working in a large firm, both native and foreign-born men in smaller companies have decreased odds of being insured, although when firm size reaches 500 employees, the coefficients are statistically insignificant. Years since migration and naturalization have positive effects on coverage. Men from Mexico have lower odds of coverage than do other immigrants.

Predicted probabilities for native and foreign-born men are found in Table XIII. The reference individuals have the same observable characteristics, except that the immigrant has been in the United States for 19 years.[22] The impact nativity has on health insurance status is plain: the reference immigrant is three times as likely to be uninsured (15%) as the native-born (5%). Nonetheless, the odds of having insurance are relatively high for both males. For the native-born with this favorable mix of characteristics, only changes in marital status, self-employment or firm size under 25 show large effects on coverage. These variables are also the most important for the foreign-born. Self-employment with less than ten workers is proportionally more detrimental for the

[22] Though the reference values for income and education are more accurate for a native-born male, these are minor inconsistencies. Giving both males the same characteristics better illustrates results by nativity.

TABLE XIII: PREDICTED PROBABILITIES BASED ON PROBIT ANALYSIS FROM TABLE XII: ADULT MALES

	Native-born Uninsured	Foreign-born Uninsured
Male reference case[a]	0.05	0.15
Selected cases[b]		
Demographics variables		
Personal income (previous year)		
$27.39K	0.06	0.18
$47.39K	0.04	0.12
Age		
32	0.07	*
52	0.04	*
Education years		
10 years	0.06	0.16
16 years	0.03	0.12
Not married	0.13	0.25
Children under 18 years		
No children	*	0.16
2 children	*	0.14
Self-reported health status		
good	0.05	*
excellent	0.04	*
Work-related variables (previous year)		
Not in labor force	0.09	0.28
Part-time	0.08	0.19
Service industry	0.04	0.13
Union covered (current year)	0.02	0.07
Self-employed[c]	0.23	0.55
Firm size (1,000+ benchmark)		
under 10	0.20	0.47
10-24	0.14	0.37
25-99	0.09	0.29
100-499	0.07	0.21
500-999	*	*
Immigrant-related variables		
Years since migration	n/a	
In US 8 years		0.19
In US 30 years		0.11
Naturalized citizen	n/a	0.11
Mexican immigrant	n/a	0.23

*statistically insignificant

n/a: not applicable

a: The reference case has the following characteristics: personal income $37,390, 42 years old, 12 years of schooling, married, one child under 18, very good health, employed full-time at a large firm, immigrant has been in America 19 years.

b: These differ from the reference in only one characteristic, as shown stub. Then changes generally represent one standard deviation from the mean.

c: Self-employed generally are sole employees: firm size also changes from large to under 10.

Source: March CPS 1996-2000

immigrant. His odds of being insured are cut in half (85% to 45%), whereas the native-born male's odds fall by 19% (95% to 77%). The impact of being employed by smaller firms is similar. Years since migration affect coverage levels by a few percentage points.[23] Mexican immigrants are even less likely to be covered (77%).

5.3 Native and Foreign-born Females

5.3.1 The Explanatory Variables

The means and standard deviations of the independent variables for adult females in the sample are shown in Table XIV. The average personal income for native-born women is $21,320, with foreign-born women earning approximately one-third less. Other demographic variables are very similar to men's (see Table XI). Immigrant women have less education than the native-born, though the median foreign-born female does have a high school diploma. Slightly more immigrant women are married, and over half of them have at least one child under the age of 18 years, in contrast to native-born women. As with native-born men, native-born women are more likely than immigrant women to report a higher health status. Among those in the work force, one-forth work part-time. Half of native-born women work in the service industry, and among the foreign-born the percentage is almost as high. Just under one quarter of native-born women are out of the labor force. The percentage among immigrant women is higher, almost 40%. Among those in the labor force, very few women work in union-covered jobs, and well under 10% are self-employed. There is little difference in firm size distribution along nativity until size reaches 1,000 or more workers. Forty percent of native-born women work for

[23] The lower end of the evaluation is 8 years. It may be that the first several years of migration (5 and under) entail a more pronounced drop in coverage.

TABLE XIV: MEANS AND STANDARD DEVIATIONS, NATIVE AND FOREIGN-BORN FEMALES AGED 25-64, 1996-2000

	All Women		Native-born		Foreign-born	
	Mean	SD	Mean	SD	Mean	SD
Demographic variables						
Personal income (previous year)						
(thousands of $)	20.28	20.73	21.28	20.90	14.32	18.65
Age	42.38	10.67	42.59	10.66	41.17	10.64
Education (years)	13.21	2.95	13.53	2.47	11.31	4.52
Married (%)	65.83	*	65.21	*	69.57	*
One or more children						
under age 18 (%)	46.69	*	45.00	*	56.74	*
Self-reported health status						
excellent or very good (%)	62.55	*	63.67	*	55.87	*
Work-related variables (previous year)						
Not in labor force (%)	24.29	*	23.34	*	36.38	*
Among the labor force[a] (%)						
Part-time[b]	23.03	*	23.34	*	20.79	*
Service industry[c]	53.10	*	53.62	*	49.24	*
Union covered						
(current year)	2.97	*	3.09	*	2.12	*
Self employed[d]	5.96	*	6.03	*	5.45	*
Firm size (%)						
Under 10	19.32	*	18.80	*	23.11	*
10-24	8.14	*	7.98	*	9.25	*
25-99	11.96	*	11.73	*	13.61	*
100-499	14.58	*	14.54	*	14.85	*
500-999	6.17	*	6.22	*	5.81	*
1000+	39.83	*	40.72	*	33.37	*
Immigrant-related variables						
Foreign-born (%)	14.34	*	*	*	*	*
Naturalized citizen (%)	*	*	*	*	36.22	*
Years since migration	*	*	*	*	19.24	11.59
Mexican (%)	*	*	*	*	30.17	*

Source: March CPS 1996-2000

N: total = 172,583: native-born = 147,828, foreign-born = 24,755

a: Percentages exclude adults out of the labor force.

b: part or full year

c: Of the 14 major industry classifications for the longest job held in the previous year, service industries include: personal services including private household, business and repair, other professional and related services, and public administration.

d: unincorporated only, due to CPS coding

large firms, compared to 33% of immigrant females. Fourteen percent of the female sample is foreign-born, 36% of whom are U.S. citizens. The average immigrant has been in the United States for 19 years. Mexicans compose 30% of foreign-born women.

5.3.2 Empirical Findings

The coefficients and t-statistics from the probit regression for the probability of being insured for adult women are shown in Table XV. As with the male sub-sample, for women there are no changes in sign or significance of the variables from the adult regression in Table VII, with the exception that the variables for part-time and service industry are now statistically insignificant for foreign-born women. Coefficient values vary slightly. For all women, an increasing number of children has a positive effect on insurance status. The probability of being insured increases with firm size for both native and foreign-born women, although there is no statistically significant difference between the two largest firm size categories. Years since migration and naturalization increase immigrant odds of coverage, whereas Mexicans have a lower chance of having health insurance than other immigrants.

Predicted probabilities results for native and foreign-born women are found in Table XVI. The reference individuals have the same observable characteristics, except that the immigrant female has been in America for 19 years.[24] As seen with men, among women the foreign-born are more likely to be uninsured, for these reference females

[24] Though the reference values for income and education are more accurate for a typical native-born female, these are minor inconsistencies. Giving both women the same characteristics better illustrates results by nativity.

TABLE XV: COEFFICIENTS (T-STATISTICS IN PARENTHESES) FROM PROBIT ANALYSIS, DEPENDENT VARIABLE: PROBABILITY OF BEING INSURED, ADULT FEMALES

	Native-born	Foreign-born
Demographic Variables		
Personal income (previous year)	0.016 (44.4)	0.019 (21.7)
Age	0.023 (7.0)	0.004 (0.6)*
Age2	-0.166 (-4.5)	-0.004 (0.0)*
Education years	0.057 (29.3)	0.036 (15.5)
Married	0.518 (56.6)	0.333 (17.0)
Number of children under 18 years	0.044 (10.4)	0.090 (11.3)
Self-reported health status:		
1 = excellent, 5= poor	-0.026 (-6.2)	0.003 (0.3)*
Work-related Variables (previous year)		
Not in labor force	-0.192 (-12.6)	-0.254 (7.8)
Part-time, usually part-time	-0.049 (-4.1)	-0.010 (0.3)*
Service industry	0.053 (5.2)	0.024 (1.0)*
Union covered (current year)	0.297 (7.6)	0.199 (2.1)
Self-employed	-0.079 (-3.8)	-0.106 (-2.0)
Firm size		
under 10	-0.546 (-36.8)	-0.726 (-21.6)
10-24	-0.413 (-22.8)	-0.515 (-12.3)
25-99	-0.244 (-14.8)	-0.343 (-9.2)
100-499	-0.110 (-6.8)	-0.137 (-3.7)
500-999	-0.012 (-0.5)*	-0.069 (-1.2)*
Immigrant-related Variables		
YSM		0.017 (16.7)
Natcit		0.162 (7.3)
MX		-0.394 (-18.3)
log likelihood	-54821.900	-13463.62
Constant	-0.709 (-9.7)	-0.677 (-4.5)
Sample size	147828	24755

*statistically insignificant at the 5% level

Source: March CPS 1996-2000

TABLE XVI: PREDICTED PROBABILITIES BASED ON PROBIT ANALYSIS FROM TABLE XV: ADULT FEMALES

	Native-born Uninsured	Foreign-born Uninsured
Female reference case[a]	0.07	0.14
Selected cases[b]		
Demographics variables		
Personal income (previous year)		
$10.28K	0.10	0.19
$30.28K	0.05	0.11
Age		
32	0.09	*
52	0.06	*
Education years		
10 years	0.09	0.16
16 years	0.04	0.11
Not married	0.17	0.23
Children under 18 years		
No children	0.08	0.16
2 children	0.07	0.12
Self-reported health status		
good	0.07	*
excellent	0.07	*
Work-related variables (previous year)		
Not in labor force	0.10	0.21
Part-time	0.08	*
Service industry	0.06	*
Union covered (current year)	0.04	0.10
Self-employed[c]	0.20	0.41
Firm size (1,000+ benchmark)		
under 10	0.18	0.37
10-24	0.15	0.29
25-99	0.11	0.23
100-499	0.08	0.18
500-999	*	*
Immigrant-related variables		
Years since migration	n/a	
In US 8 years		0.19
In US 30 years		0.11
Naturalized citizen	n/a	0.11
Mexican immigrant	n/a	0.25

*statistically insignificant

n/a: not applicable

a: The reference case has the following characteristics: personal income $20,280, 42 years old, 12 years of schooling, married, o
under 18, very good health, employed full-time at a large firm, immigrant has been in America 19 years.

b: These differ from the reference in only one characteristic, as shown in stub. These changes generally represent one standard d
from the mean.

c: Self-employed generally are sole employees: firm size also changes from large to under 10.

Source: March CPS 1996-2000

twice as likely. Like males whose combination of characteristics puts them in the high range of coverage, changing a single characteristic does not dramatically affect insurance status of females. Surprisingly the number of children appears to exert little or no influence on the odds of coverage for women (or men). The important variables for men also hold for women. Not being married decreases coverage odds by approximately 20%. The biggest drop in coverage is from self-employment with less than 10 workers and working is smaller firms. There is a 19% chance of being uninsured for immigrant women who have lived in America for 8 years compared to an 11% chance for those here 30 years. Naturalization decreases the odds of being uninsured by a relatively slight 3%. Mexican nativity increases the odds of being uninsured by more than ten percentage points.

5.4 Conclusions

There are differences in the demographic characteristics of native and foreign-born adults that affect health insurance coverage rates. On average immigrants tend to have less personal income and less education. There are also work-related differences. Over one-third of foreign-born women are out of the labor force. Immigrants have a lower probability of union coverage and less likely to work for in very large companies. This last characteristic, firm size, has the single biggest influence on coverage probability for all adults – some see a change in coverage of over 30 percentage points - but is more pronounced for immigrants. The other main determinants of insurance status are marital status and nativity. Yet none of the included demographic, work-related or immigrant-related controls eliminate the negative foreign-born effect, significant both statistically and economically. A Mexican effect resulting in lower coverage odds is also present.

A $10,000 change in personal income does not affect coverage rates by more than a few percentage points, though perhaps at lower income levels changes in personal income influence health insurance coverage more. This possibility is examined in the next chapter that looks at a low personal income sub-sample.

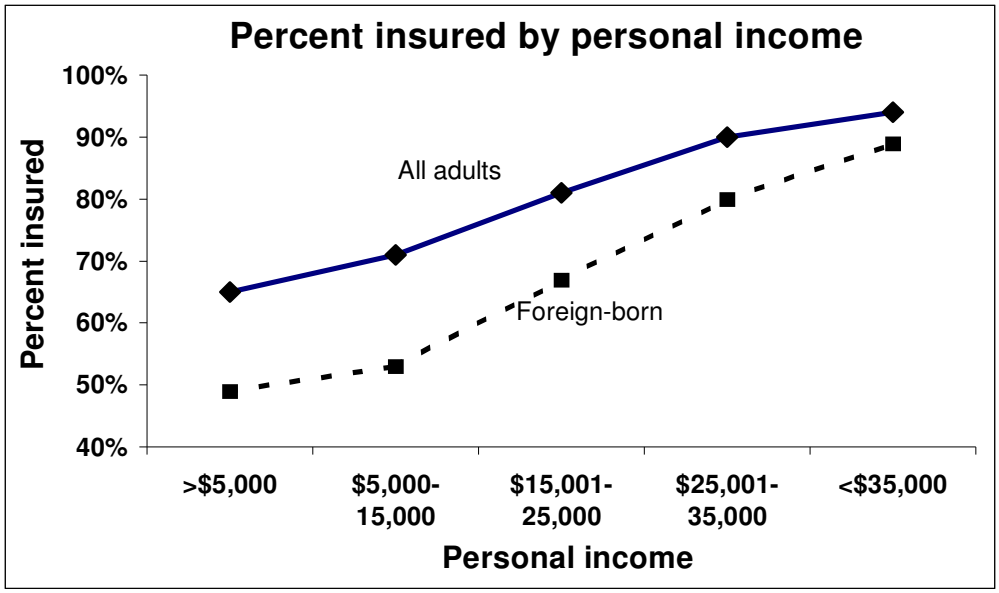
6. LOW PERSONAL INCOME SUB-SAMPLE

There is a strong positive association with income and health insurance (*Figure 6*). Since many without insurance report low personal incomes, current policy options aim to reduce the price of insurance with vouchers or tax credits to boost participation of the uninsured in medical plans. But unless a voucher or credit completely covers the cost of insurance, the effectiveness of these types of efforts depends greatly on how responsive this group's coverage rates are to marginal changes in income.

6.1 The Explanatory Variables

The means and standard deviations of the independent variables for adults

FIGURE 6: ADULTS AGED 25-64, 1996-2000



Source: March CPS 1996-2000

Note: N = 331,640

reporting a personal income less than $11,870 are shown in Table XVII. $11,869 is the poverty level listed by the Bureau of the Census in 2000 for a household of two adults under the age of 65 with one child. This is the income ceiling used for the sub-sample since the typical adult is married and approximately half have a young child at home. The average personal income of these adults, aged 25-64, is $4,480 with the native-born reporting $130 more and immigrants averaging $460 less. Low-income adults have less education than the general population. A typical native-born adult has a high school diploma, which is not the case for the foreign-born, though the relatively high standard deviation around immigrant education persists even at lower incomes. Marriage rates are slightly lower among these adults compared to the general population, although the percent of those with young children is somewhat higher; still, the average native-born with a low personal income adult is childless. Low-income adults are much less likely than average adults to report an excellent or very good health status. This drop among the low-income native-born compared to the general population is especially pronounced, over 20%.

Work-related characteristics tend to reflect the female patterns of Table XIV as 73% of low personal income adults in this sample are women. One half of low- income adults are not in the labor force. Half of the low-income native-born in the labor force are employed part-time, as are almost one in three working immigrants. A mere 1% work in union-covered jobs. The percent of self-employed among the low personal income native-born is double those who have higher incomes. Both native and foreign- born are much more likely to work for firms with less than 10 employees, and as with the general population the percent of native-born working in large firms is higher than that of

TABLE XVII: MEANS AND STANDARD DEVIATIONS, NATIVE AND FOREIGN-BORN ADULTS REPORTING LOW PERSONAL INCOMES AGED 25-64, 1996-2000

	All Adults		Native-born		Foreign-born	
	Mean	SD	Mean	SD	Mean	SD
Demographic variables						
Personal income (previous year) (thousands of $)	4.48	3.94	4.61	3.89	4.02	4.07
Age	42.31	11.24	42.82	11.25	40.42	11.04
Education (years)	11.95	3.30	12.49	2.59	9.96	4.62
Married (%)	65.43	*	63.94	*	70.96	*
One or more children under age 18 (%)	47.06	*	44.17	*	57.76	*
Self-reported health status excellent/very good (%)	50.52	*	50.71	*	49.85	*
Work-related variables (previous year)						
Not in labor force (%)	50.45	*	51.24	*	46.94	*
Among the labor force[a] (%)						
Part-time[b]	45.47	*	49.05	*	31.18	*
Service industry[c]	43.24	*	44.88	*	36.69	*
Union covered (current year)	1.12	*	1.14	*	1.04	*
Self employed[d]	14.37	*	15.57	*	9.56	*
Firm size (%)						
Under 10	36.96	*	37.24	*	35.85	*
10-24	10.69	*	10.16	*	12.80	*
25-99	12.54	*	11.71	*	15.89	*
100-499	11.46	*	11.20	*	12.51	*
500-999	4.01	*	4.16	*	3.45	*
1000+	24.33	*	25.54	*	19.51	*
Immigrant-related variables						
Foreign-born (%)	21.25	*				
Naturalized citizen (%)	*	*	*	*	24.93	*
Years since migration	*	*	*	*	17.16	11.13
Mexican (%)	*	*	*	*	40.82	*

Source: March CPS 1996-2000

Note: N: total = 89,671, native-born = 70,620 (male 28%), foreign-born = 19,051 (male 30%)

* denotes 'not applicable'

a: Percentages exclude adults out of the labor force.

b: part or full year

c: Of the 14 major industry classifications for the longest job held in the previous year, service industries include: personal services including private household, business and repair, other professional and related services, and public administration.

d: unincorporated only, due to CPS coding

immigrants.

The foreign-born are over-represented in this low-income sample, although low-income status is more likely to be temporary for new immigrants than for the native-born. Only one quarter are naturalized, compared to 35% of all immigrants, and have been in America an average of 17 years. Mexicans make up 41% of low personal income immigrants, compared to 33% of entire immigrant sample.

6.2 Empirical Findings

The results for native and foreign-born adults, shown in Tables XVIII and XIX, are very similar. *Ceteris paribus*, those with higher personal incomes are more likely to be privately insured than uninsured, but when insured are more likely to have government coverage. An increase in income provides more opportunities to purchase private insurance, particularly job-based. It is highly probable that some in this sample reporting low personal incomes reside in high-income households and have insurance coverage as dependents, for example, spouses out of the labor market. This scenario explains why an increase in income is accompanied by an increase in government verses private coverage: those earning a low salary are more likely to be eligible for Medicaid than those earning no salary and living with higher income individuals. Unlike the general population, at lower income levels age does matter for immigrants. All older individuals are more likely to have private coverage, since demand for care and possibly access increases with age and private plans tend to be more generous. Males are more likely than females to be uninsured than receive coverage under private plans, suggesting the gender effect in favor of women persists at low-income levels. Insured men are more likely than women to be

TABLE XVIII: COEFFICIENTS (T-STATISTICS IN PARENTHESES) FROM MULTINOMIAL LOGIT ANALYSIS, DETERMINANTS OF HAVING HEALTH INSURANCE, NATIVE-BORN ADULTS

	Uninsured vs Private Coverage	Government Coverage vs Private Coverage
Demographic Variables		
Personal income (previous year)	-0.060 (-18.8)	0.165 (41.9)
Age	-0.064 (-8.5)	-0.044 (-4.6)
Age2	0.449 (5.2)	0.096 (0.9)*
Male	0.690 (28.2)	0.477 (15.6)
Education years	-0.180 (-39.3)	-0.245 (-44.9)
Married	-1.811 (-75.7)	-2.338 (-79.7)
Number of children under 18 years	-0.064 (-6.5)	0.223 (18.8)
Self-reported health status:		
1 = excellent, 5= poor	0.236 (25.0)	0.660 (56.3)
Work-related Variables (previous year)		
Not in labor force	0.187 (4.6)	2.590 (46.4)
Part-time	-0.071 (-2.5)	0.804 (19.1)
Service industry	-0.063 (-2.3)	0.269 (6.4)
Union covered (current year)	-0.879 (-6.2)	-1.152 (-5.1)
Self-employed	-0.244 (-5.7)	-0.216 (-2.8)
Firm size		
under 10	0.582 (15.0)	0.230 (4.0)
10-24	0.463 (9.3)	0.277 (3.8)
25-99	0.210 (4.4)	0.068 (1.0)*
100-499	0.032 (0.6)*	-0.133 (-1.9)*
500-999	-0.061 (-0.8)*	-0.262 (-2.4)
log likelihood	-53832.17	
Constant	4.218 (24.5)	0.567 (2.6)
Sample size	70620	

*statistically insignificant at the 5% level

Source: March CPS 1996-2000

TABLE XIX: COEFFICIENTS (T-STATISTICS IN PARENTHESES) FROM MULTINOMIAL LOGIT ANALYSIS, DETERMINANTS OF HAVING HEALTH INSURANCE, FOREIGN-BORN ADULTS

	Uninsured vs Private Coverage	Government Coverage vs Private Coverage
Demographic Variables		
Personal income (previous year)	-0.052 (-7.6)	0.211 (23.4)
Age	-0.053 (-3.7)	-0.073 (-3.6)
Age2	0.542 (3.2)	0.800 (3.5)
Male	0.705 (15.6)	0.397 (6.1)
Education years	-0.091 (-19.3)	-0.102 (-15.7)
Married	-1.320 (-27.4)	-1.705 (-27.4)
Number of children under 18 years	-0.057 (-3.6)	0.292 (13.7)
Self-reported health status:		
1 = excellent, 5= poor	0.190 (10.5)	0.624 (24.7)
Work-related Variables (previous year)		
Not in labor force	0.433 (5.2)	3.062 (22.9)
Part-time	-0.035 (-0.6)*	0.884 (9.2)
Service industry	-0.017 (-0.3)*	0.260 (2.7)
Union covered (current year)	-0.877 (-3.5)	-0.892 (-2.0)
Self-employed	-0.103 (-1.0)*	0.148 (0.8)*
Firm size		
under 10	1.075 (14.0)	0.550 (4.2)
10-24	0.905 (9.4)	0.799 (5.2)
25-99	0.513 (6.0)	0.238 (1.6)*
100-499	0.259 (2.9)	0.050 (0.3)*
500-999	-0.085 (-0.6)*	0.028 (0.1)*
Immigrant-related Variables		
YSM	-0.030 (-14.4)	-0.018 (-6.2)
Naturalized citizen	-0.348 (-7.4)	-0.219 (-3.3)
Mexican immigrant	0.603 (14.0)	0.019 (0.3)*
log likelihood	-15177.18	
Constant	3.120 (9.9)	-1.763 (-3.9)
Sample size	19,051	

*statistically insignificant at the 5% level

Source: March CPS 1996-2000

covered under government rather than private plans, probably due to the aforementioned case that for this sample those with low wages, compared to no wages, tend to be eligible for Medicaid. The more educated are more likely to have private insurance. This may be due to the close association with education level and jobs that have benefits plans, or because demand for insurance among the educated is higher even at low personal income levels. The marriage coefficient is very large, particularly for government verses private plans. Married individuals are more likely to be insured privately: a spouse may increase both demand for care and access to private insurance if another income source is now present. The more children under age 18, the more likely an individual is insured privately rather than uninsured. Large, low-income families are more likely to have government as opposed to private coverage as the government intends for Medicaid to support low-income mothers with children. Self-reported health status for this sub-sample is statistically significant for the foreign-born, unlike for the general immigrant population. Those with a worse self-reported health status are more likely to be uninsured than have private coverage, and when insured more likely to receive government aid than have a private policy. Adverse selection makes private insurance difficult to find, and government programs are intended to cover the very poor or disabled.

Since most private coverage in America is work-based, being out of the labor force increases the chances of being uninsured verses privately covered. The coefficient on government verses private is huge. Government coverage is more likely than private as those out of work probably have few private options and Medicaid targets low-income persons who cannot work. The native-born who work part-time are more likely to be privately covered than uninsured, perhaps because they have coverage from another source. The coefficient on part-time is positive and much larger for the government case.

It seems the government provides insurance for those working part-time and earning low salaries who do not have other coverage means. Working in the service sector increases the likelihood of private coverage verses no coverage for the native-born, while increasing chances of government verses private coverage. The results for uninsured verses private status on part-time, service, and both self-employed variables are statistically insignificant for immigrants. As expected, all workers covered by unions have an increased likelihood of private coverage. Unlike the self-employed with higher incomes, the native-born low personal income self-employed are more likely to have private coverage than be uninsured or use government programs. This may partly explain why self-employment among those with low-personal incomes is double that of the general population: they are more likely to have private coverage. The significance of firm size varies more among those with low personal incomes. In general, those employed by smaller firms are more likely to be uninsured than have private coverage, and more likely to have government coverage verses private. Compared to the benchmark of firms with 1,000 or more workers, the native-born are more likely to be uninsured than have private coverage until firm size reaches 100 whereas for immigrants size must be 500 or more. The coefficients for government verses private coverage are insignificant for the native-born from company size 25-499, and insignificant for the foreign-born at size 25 or higher.

For immigrants the effect of duration on private coverage is positive, reflecting a degree of assimilation to American health care norms. Naturalized citizens are more likely to have private coverage, having made a commitment to stay in America and participate in its health care system. Those from Mexico are more likely than other

immigrants to be uninsured verses privately covered. The government verses private coverage results for Mexicans are statistically insignificant.

Predicted probabilities are shown in Tables XX through XXIII. Each regression has two reference persons, a female out of the labor force and a male in the labor force. This has been done to show how tightly eligibility for government programs is tied to labor force participation. Turning first to the native-born, the reference female in Table XX is not in the labor force which favorably affects her eligibility for government coverage as seen in the third column of figures. She has an 82% chance of having health insurance, and when insured a one in four chance of having government coverage. While the signs on the multinomial logit coefficients suggest that those out of the labor force tend to be uninsured or have government coverage rather than private, a typical individual reporting a low personal income is privately covered.

There is a mild fluctuation in the chances of having private insurance among the demographic variables, but much more variability in the odds of a having government provided care or being uninsured. If the reference female's personal income doubles, the odds of both private coverage and being uninsured fall as the chances of government coverage increase by 74%. Still, the shift in coverage status due to relative income changes is similar to changes in other variables. Changes by age are fairly small. A male with the same characteristics as the reference female has much higher odds of being uninsured, 28% verses 18%. Education level has a dramatic effect on those with insurance as the probability of having government aid falls sharply as years of schooling increase. An unmarried reference female has the largest chance of government coverage, 57%. Having no or even two children has a relatively small positive effect on government coverage. Self-reported health status has almost no effect on being uninsured but large

TABLE XX: PREDICTED PROBABILITIES BASED ON MULTINOMIAL LOGIT ANALYSIS FROM TABLE XVIII: NATIVE-BORN ADULTS REPORTING LOW PERSONAL INCOMES

	Insurance Status		
	Uninsured	Private Plan	Government Program
Native-born female reference case[a]	0.18	0.59	0.23
Selected cases[b]			
Demographics variables			
Personal income (previous year)			
$0K	0.26	0.63	0.11
$9.22K	0.12	0.49	0.40
Age			
32 years	0.21	0.51	0.28
54 years	0.16	0.67	0.17
If male	0.28	0.44	0.27
Education years			
9 years	0.24	0.40	0.36
15 years	0.14	0.71	0.15
Not married	0.28	0.15	0.57
Children			
If no child under 18 years	0.21	0.61	0.19
If 2 under 18 years	0.17	0.56	0.27
Self-reported health status			
fair	0.19	0.47	0.35
very good	0.17	0.69	0.14
Work-related variables (previous year)[c]			
In labor force	0.31	0.66	0.02
Part-time	0.29	0.66	0.05
Service industry	0.30	0.67	0.03
Union covered (current year)	0.16	0.83	0.01
Self-employed	0.26	0.72	0.02
Firm size (under 10 benchmark)			
10-24	0.29	0.69	0.03
25-99	0.24	0.74	0.02
100-499	*	*	*
500-999	0.19	0.79	0.02
1,000+	0.20	0.77	0.02

* statistically insignificant

a: The reference case has the following characteristics: personal income $4,610, 43 years old, 12 years of schooling, married, 1 child under 18, good health, not in labor force.

b: These differ from the reference in only one characteristic, as shown in stub. The changes generally represent one standard deviation from the mean.

c: For a full-time worker, firm size under 10

Source: March CPS 1996-2000

consequences for the insured. With an improvement of health status government coverage falls steeply as private coverage rises, perhaps due to improved access to private plans.

There is a precipitous drop in the odds of having government coverage once the reference person enters the labor force. A small portion of the loss means private coverage increases slightly, but most of government reduction translates to higher odds of being uninsured. This is why the reference individual is more likely to be uninsured if she is working. Union coverage and self-employment are the exceptions: the fall in government coverage and being uninsured is absorbed by private plans. Among the firm size variables insurance coverage status changes as the odds of being uninsured fall and privately insured rise.

For the native-born reference male in Table XXI, the odds of being uninsured (47%) and having private health insurance coverage (50%) are essentially equal, and almost all changes in coverage status arise from movement between these two states. Because this reference person is working, the only change in government coverage with real economic significance is a move out of the labor force. The odds of having private coverage fall some, but the odds of being uninsured drop significantly, and government coverage absorbs the loss from the other two groups. Because of government eligibility, the odds of having insurance are 34% higher for those not in the labor force.

Personal income is clearly important to coverage status. If the reference native-born male in Table XXI worked for a very large firm, his odds of being insured would be 67%. Compare this to the higher income native-born male with essentially the same given characteristics in Chapter 5, Table XIII, who has a 95% chance of being insured. Yet

TABLE XXI: PREDICTED PROBABILITIES BASED ON MULTINOMIAL LOGIT ANALYSIS FROM TABLE XVIII: NATIVE-BORN ADULTS REPORTING LOW PERSONAL INCOMES

	Insurance Status		
	Uninsured	Private Plan	Government Program
Native-born male reference case[a]	0.47	0.50	0.03
Selected cases[b]			
Demographics variables			
Personal income (previous year)			
$0K	0.55	0.44	0.01
$9.22K	0.39	0.55	0.07
Age			
32 years	0.53	0.43	0.04
54 years	0.40	0.57	0.02
If female	0.31	0.66	0.02
Education years			
9 years	0.61	0.35	0.05
15 years	0.37	0.61	0.02
Not married	0.78	0.14	0.08
Children			
If no child under 18 years	0.49	0.49	0.02
If 2 under 18 years	0.45	0.51	0.04
Self-reported health status			
fair	0.52	0.43	0.05
very good	0.42	0.56	0.02
Work-related variables (previous year)			
Not in labor force	0.28	0.44	0.27
Part-time	0.44	0.50	0.06
Service industry	0.45	0.51	0.04
Union covered (current year)	0.28	0.71	0.01
Self-employed	0.41	0.56	0.03
Firm size (under 10 benchmark)			
10-24	0.44	0.53	0.03
25-99	0.38	0.59	0.03
100-499	*	*	*
500-999	0.32	0.65	0.02
1,000+	0.33	0.64	0.03

* statistically insignificant

a: The reference case has the following characteristics: male, personal income $4,610, 43 years old, 12 years of schooling, married, 1 child under 18, good health employed full-time at a small firm.

b: These differ from the reference in only one characteristic, as shown in stub. The changes generally represent one standard deviation from the mean.

Source: March CPS 1996-2000

adding or subtracting one standard deviation from the lower income mean has an effect on overall coverage of 8 percentage points, suggesting that coverage status is still only mildly responsive to relative income changes. Effects of age and health status changes are small. Increasing education shifts some uninsured to private plans. The negative effect of not being married is very large as the odds of being uninsured are now 78%.

Were the reference male working part-time, the small reduction in being uninsured would come from government coverage. A union-covered job increases the likelihood of private coverage dramatically, from 50% to 71%. Since the typical low personal income employee works in a very small firm, the benchmark for firm size is under 10, and like those with higher incomes, those working for larger firms will see a gradual increase in private coverage rates.

The reference female immigrant in Table XXII who is out of the labor force has a 66% chance of having health insurance, much lower than the native-born female in Table XX even considering that the foreign-born female reports $600 less personal income. The odds of being uninsured, privately insured or publicly insured are almost evenly split, whereas for the native-born female the odds of having private coverage dominated. Variations by characteristic generally affect changes similar to the native-born female in Table XX with some differences by nativity. Were the reference person male, the rise in the odds of being uninsured would be attributed solely to a loss of private coverage. An unmarried female reference person has the same odds of being uninsured as having government coverage (46%), whereas the native-born female has greater chances of using a government plan. Once in the labor force, the probability of coverage falls from 66% to 37%, explained almost entirely by the loss of government coverage since the odds of

TABLE XXII: PREDICTED PROBABILITIES BASED ON MULTINOMIAL LOGIT ANALYSIS FROM TABLE XIX: FOREIGN-BORN ADULTS REPORTING LOW PERSONAL INCOMES

	Insurance Status		
	Uninsured	Private Plan	Government Program
Foreign-born female reference case[a]	0.34	0.37	0.29
Selected cases[b]			
Demographics variables			
Personal income (previous year)			
$0K	0.46	0.40	0.13
$8.07K	0.21	0.28	0.51
Age			
29 years	0.36	0.35	0.30
51 years	0.33	0.39	0.28
If male	0.46	0.25	0.29
Education years			
5 years	0.39	0.28	0.34
15 years	0.29	0.49	0.23
Not married	0.46	0.08	0.46
Children			
If no child under 18 years	0.38	0.39	0.23
If 2 under 18 years	0.30	0.34	0.36
Self-reported health status			
fair	0.31	0.28	0.41
very good	0.35	0.46	0.19
Work-related variables (previous year)[c]			
In labor force	0.62	0.35	0.02
Part-time	0.60	0.35	0.05
Service industry	0.61	0.36	0.03
Union covered (current year)	0.42	0.57	0.01
Self-employed	*	*	*
Firm size (under 10 benchmark)			
10-24	0.69	0.28	0.03
25-99	0.49	0.49	0.02
100-499	0.43	0.55	0.02
500-999	*	*	*
1,000+	0.37	0.61	0.02
Immigrant-related variables			
YSM			
6 years	0.40	0.31	0.29
28 years	0.29	0.43	0.28
Naturalized	0.29	0.44	0.27
MX	0.49	0.29	0.23

* statistically insignificant

a: The reference case has the following characteristics: personal income of $4,020, 40 years old, 10 years of schooling, married, 1 child under 18, good health, out of the labor force, in America 17 years.

b: These differ from the reference in only one characteristic, as shown in stub. The changes generally represent one standard deviation from the mean.

c: For a full-time worker, firm size under 10

Source: March CPS 1996-2000

private coverage fall by only 2 percentage points.

The odds of coverage via a government program hardly change for the immigrant-related variables, suggesting use of government programs by the foreign-born with low personal incomes is not affected by duration or citizenship. This may reflect a traditional reliance on public health programs in source countries. In addition it may be that refugees who are eligible for government aid are utilizing public programs. The more years in the United States, the more the odds of private insurance rise and being uninsured falls. Remaining in America longer and having citizenship cause private coverage to increase. A reference Mexican female has a 49% chance of being without insurance compared to 34% for other immigrant women, a sizeable negative nativity effect.

The reference immigrant in Table XXIII has a 23% chance of having health insurance. Though he has a somewhat smaller income than the native-born male in Table XXI and does not have a high school diploma, the difference in coverage is large. As with females, changes in most variables for men effect insurance status in a similar way regardless of nativity. For the working foreign-born, in almost all cases the odds of using government aid is well under 5%. The exception is for a reference male not in the labor force, which has a magnitude very similar to the native-born in Table XXI. Like the native-born, relative income changes have a small effect on coverage status. Gender effects are also comparable to the native-born. The unmarried reference male has a 90% of being uninsured. Those out of the labor force have a 54% chance of being insured, the highest rate possible for this reference person due to government eligibility. Immigrants working for larger firms will see a gradual increase in private coverage rates. Years since

TABLE XXIII: PREDICTED PROBABILITIES BASED ON MULTINOMIAL LOGIT ANALYSIS FROM TABLE XIX: FOREIGN-BORN ADULTS REPORTING LOW PERSONAL INCOMES

	Insurance Status		
	Uninsured	Private Plan	Government Program
Foreign-born male reference case[a]	0.77	0.21	0.02
Selected cases[b]			
Demographics variables			
Personal income (previous year)			
$0K	0.81	0.18	0.01
$8.07K	0.70	0.24	0.05
Age			
29 years	0.78	0.20	0.02
51 years	0.75	0.23	0.02
If female	0.62	0.35	0.02
Education years			
5 years	0.83	0.15	0.02
15 years	0.68	0.30	0.02
Not married	0.90	0.07	0.03
Children			
If no child under 18 years	0.78	0.20	0.01
If 2 under 18 years	0.75	0.22	0.03
Self-reported health status			
fair	0.79	0.18	0.03
very good	0.74	0.25	0.01
Work-related variables (previous year)			
Not in labor force	0.47	0.25	0.29
Part-time	0.74	0.21	0.05
Service industry	0.76	0.22	0.02
Union covered (current year)	0.59	0.40	0.02
Self-employed	*	*	*
Firm size (under 10 benchmark)			
10-24	0.73	0.24	0.03
25-99	0.66	0.32	0.02
100-499	0.60	0.38	0.02
500-999	*	*	*
1,000+	0.54	0.44	0.02
Immigrant-related variables			
YSM			
6 years	0.82	0.17	0.02
28 years	0.71	0.27	0.02
Naturalized	0.70	0.28	0.02
MX	0.86	0.13	0.01

* statistically insignificant

a: The reference case has the following characteristics: male, income of $4,020, 40 years old, 10 years of schooling, married, 1 child under 18, good health, employed full-time at a small firm, in America 17 years.

b: These differ from the reference in only one characteristic, as shown in stub. The changes generally represent one standard deviation from the mean.

Source: March CPS 1996-2000

migration have a mild effect on coverage status. Being here 28 years as compared to 17 years boosts coverage odds by 20%. Naturalization also has a relatively small positive effect on coverage for those with low incomes. Low-income Mexicans have a minimal chance of coverage, 14%.

6.2 Conclusions

Analysis of a low personal income sub-group was done to see if the determinants of health insurance coverage for this set differ from those in higher income brackets. Specifically, the importance of income changes was examined. On an absolute level personal income is important. Most demographic characteristics are comparable for lower and higher income individuals in the sample. And though work-related traits vary more, particularly the odds of working for a small employer, coverage rates are much lower, sometimes by more than 50%, among those reporting small personal incomes. But like those with more wealth, proportionally large changes in income for this group have a small impact on coverage status, suggesting partial aid (vouchers or tax credits) for purchasing insurance policies would be largely ineffective. In addition to sharing the main coverage determinants as the general population - nativity, marital status and firm size – labor force status and employment in union-covered jobs are also good predictors of coverage for the low personal income group, prompting greater changes in insurance status than variations in personal income. Many employed low personal income individuals are less likely to have health insurance than those who do not work. *Ceteris paribus*, usage of government programs varies little with nativity even though immigrants are disproportionately represented among the poor. While low-income immigrants may have a lack of insurance in common, the foreign-born are composed of various groups

from all over the world. The importance of immigrants' source region on the odds of having health insurance will be examined in the next chapter.

7. FOREIGN-BORN SUB-SAMPLES

Some of the effects that nativity, naturalization and years since migration have on health insurance coverage for the foreign-born were discussed in Chapter 5. This chapter looks more closely at nativity effects, specifically, how the source region influences health coverage in America.

7.1 Foreign-born Adults, Region Effects

7.1.1 The Explanatory Variables

The means and standard deviations of the independent variables for foreign-born adults are shown in Table XXIV. The average personal income of all adults, aged 25-64, was $21,230. Men had 35% more than the average and women reported a personal income of 33% less. The average immigrant does not have a high school diploma, but the median immigrant does. Most are married with at least one child. Foreign-born men are more likely to report a positive health status than women (61% verses 55.8%). Ninety-one percent of men are in the labor force, whereas close to one in four women is not. The ratio of immigrant men working in large firms (26.8%) compared to small firms (24.4%) is almost 1:1. Women who do work tend to be employed by large companies. The average duration for immigrants in the United States is 19 years, and 35% are naturalized citizens. Mexicans make up one-third of all immigrants in this sample.

TABLE XXIV: MEANS AND STANDARD DEVIATIONS, FOREIGN BORN ADULTS AGED 25-64, 1996-2000

	All Adults		Males		Females	
	Mean	SD	Mean	SD	Mean	SD
Demographic variables						
Personal income (previous year) (thousands of $)	21.23	24.56	28.62	27.70	14.29	18.68
Age	40.70	10.55	40.21	10.41	41.16	10.66
Education (years)	11.37	4.65	11.48	4.78	11.28	4.52
Married (%)	71.45	*	73.31	*	69.71	*
One or more children under age 18 (%)	54.93	*	52.95	*	56.79	*
Self-reported health status excellent or very good (%)	58.35	*	61.07	*	55.79	*
Work-related variables (previous year)						
Not in labor force (%)	23.34	*	9.37	*	36.46	*
Among the labor force[a] (%)						
Part-time[b]	12.21	*	5.86	*	20.73	*
Service industry[c]	35.13	*	24.68	*	49.12	*
Union covered (current year)	2.09	*	2.05	*	2.14	*
Self employed[d]	6.45	*	7.18	*	5.46	*
Firm size (%)						
Under 10	23.85	*	24.41	*	23.10	*
10-24	11.29	*	12.80	*	9.26	*
25-99	15.50	*	16.85	*	13.69	*
100-499	14.68	*	14.48	*	14.95	*
500-999	5.16	*	4.69	*	5.79	*
1000+	29.52	*	26.77	*	33.21	*
Immigrant-related variables						
Naturalized citizen (%)	35.27	*	34.53	*	35.97	*
Years since migration	19.06	11.43	18.87	11.27	19.24	11.59
Source Region (%)						
Mexico	33.58	*	36.95	*	31.51	*
Central or South America and Caribbean	27.66	*	25.78	*	29.43	*
Asia and rest	22.08	*	21.88	*	22.26	*
Western first world	15.19	*	14.27	*	16.05	*

Source: March CPS 1996-2000

Note: N: total = 48,847, male = 22,688 female = 24,159

* denotes 'not applicable'

a: percentages excludes adults not in the labor force

b: part or full year

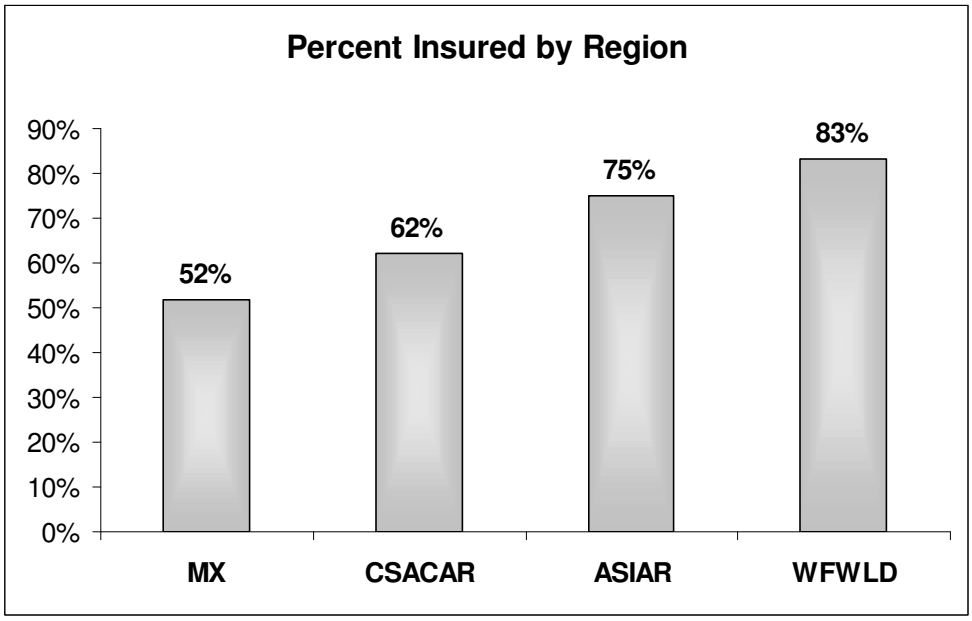
c: Of the 14 major industry classifications for the longest job held in the previous year, service industries include: personal services including private household, business and repair, other professional and related services, and public administration.

d: unincorporated only, due to CPS coding

7.1.2 Empirical Findings: Native and Foreign-born Adults

This foreign-born sub-sample is tested for region effects of source countries on the likelihood of having health insurance while living in America. The hypothesis is that immigrants from countries that are culturally similar to the United States have a greater likelihood of being insured than those from other parts of the world since the cultural aspect of health care influences insurance decisions. Immigrants who declare their birthplace to be a specific country are classified into one of four categories: Mexico (*mx*), Central and South America and the Caribbean (*csacar*), western first-world (*wfwld*) and Asia and rest (*asiar*).[25] Figure 7 shows the percent of immigrants insured by source region.

FIGURE 7: FOREIGN-BORN ADULTS AGED 25-64, 1996-2000



Source: March CPS 1996-2000

The coefficients and t-statistics from the probit regression for the probability of being insured are shown in Table XXV. There are no changes in sign or significance from previous analyses in Chapter 5, Tables XII and XV, of aforementioned variables. The new region variables indicate that immigrants from all other parts of the world are more likely to have health insurance while in America than Mexicans. That the coefficients for western first-world immigrants are largest supports the hypothesis that immigrants from countries culturally similar to the United States are more likely to be covered. The coefficient on the variable gdp that controls for economic climate is statistically insignificant for men and barely significant at the 5% level for women. In fact the explanatory power of the gdp variable is minimal since gdp is largely controlled for by the region variables. In this case the variable captures gdp differences within regions, which are statistically insignificant.

Predicted probabilities for foreign-born male and female outcomes are found in Tables XXVI and XXVII. The reference persons are from the western first-world as they are assumed to be more culturally similar to typical native-born Americans than immigrants from other regions. The reference foreign-born male in Table XXVI has a 94% probability of being insured, as high as the native-born reference male in Chapter 5, Table XII, who has similar characteristics but earns slightly less. As for other individuals with this mix of characteristics conducive to having health insurance coverage, most variables affect only minor insurance status changes. The pattern of exceptions is the same as in previous chapters. The unmarried see a 5% drop in coverage. Those not in the labor force have a 9% fall in the probability of being insured. The odds of coverage

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[25] Some respondents decline to answer which nation they are from but will give a general area, such as Europe. These individuals are excluded from the sample due to geographical overlap. For example,

TABLE XXV: COEFFICIENTS (T-STATISTICS IN PARENTHESES) FROM PROBIT ANALYSIS, DEPENDENT VARIABLE: PROBABILITY OF BEING INSUREDD, FOREIGN-BORN ADULTS

	Males	Females
Demographic Variables		
Personal income (previous year)	0.013 (24.4)	0.018 (20.7)
Age	0.010 (1.3)*	0.009 (1.2)*
Age2	-0.036 (-0.4)*	-0.059 (-0.7)*
Male		
Education years	0.031 (12.3)	0.033 (14.9)
Married	0.352 (14.8)	0.306 (15.2)
Number of children under 18 years	0.042 (4.9)	0.092 (11.5)
Self-reported health status:		
1 = excellent, 5= poor	-0.009 (-0.9)*	0.009 (1.0)*
Work-related Variables (previous year)		
Not in labor force	-0.485 (-11.9)	-0.268 (-8.1)
Part-time, usually part-time	-0.188 (-4.5)	-0.011 (-0.4)*
Service industry	0.083 (3.3)	0.044 (1.8)*
Union covered (current year)	0.378 (4.6)	0.197 (2.1)
Self-employed	-0.230 (-5.5)	-0.142 (-2.7)
Firm size		
under 10	-0.971 (-30.6)	-0.711 (-20.8)
10-24	-0.725 (-20.8)	-0.514 (-12.1)
25-99	-0.485 (-15.0)	-0.339 (-9.0)
100-499	-0.243 (-7.1)	-0.135 (-3.6)
500-999	-0.026 (-0.5)*	-0.067 (-1.2)*
Immigrant-related Variables		
YSM	0.015 (13.3)	0.015 (15.2)
Naturalized citizen	0.178 (7.5)	0.170 (7.5)
Region (MX base)		
Western first-world	0.606 (14.6)	0.559 (14.9)
Central, So. America and Caribbean	0.159 (6.3)	0.258 (10.7)
Asia and rest	0.368 (12.2)	0.443 (15.9)
GDP	0.000 (0.2)*	0.004 (2.5)
log likelihood	-11391.36	-12687.97
Constant	-1.156 (-7.1)	-1.185 (-7.6)
Sample size	21926	23015

*statistically insignificant at the 5% level

unspecified Central America could be Mexico.

Source: March CPS 1996-2000

TABLE XXVI: PREDICTED PROBABILITIES BASED ON PROBIT ANALYSIS FROM TABLE XXV: ADULT MALES

	Probability of Being Insured	
	Insured[a]	Uninsured
Male reference case[b]	0.94	0.06
Selected cases[c]		
Demographics variables		
Personal income (previous year)		
$25.08K	0.92	0.08
$45.08K	0.96	0.04
Age		
33	*	*
55	*	*
Education years		
10 years	0.93	0.07
18 years	0.95	0.05
Not married	0.89	0.11
Children		
If no child under 18 years	0.94	0.06
If 2 under 18 years	0.95	0.05
Self-reported health status		
good	*	*
excellent	*	*
Work-related variables (previous year)		
Not in labor force	0.86	0.14
Part-time	0.92	0.08
Service industry	0.95	0.05
Union covered (current year)	0.97	0.03
Self-employed[d]	0.64	0.36
Firm size (1,000+ benchmark)		
under 10	0.72	0.28
10-24	0.80	0.20
25-99	0.86	0.14
100-499	0.91	0.09
500-999	*	*
Immigrant-related variables		
YSM		
8 years	0.91	0.09
In US 38 years	0.96	0.04
Naturalized	0.96	0.04
Region (Western first-world benchmark)[e]		
Mexico	0.83	0.17
Central, So. America and Caribbean	0.87	0.13
Asia and rest	0.91	0.09

*statistically insignificant

a: Insured includes private and government coverage.

b: The reference case has the following characteristics: western first-world, income $35,080, 44 years old, 14 years of schooling, married, 1 child under 18, very good health, employed full-time at a large firm, in America 23 years.

c: These differ from the reference in only one characteristic, as shown in stub. The changes generally represent one standard deviation from the mean.

d: Self-employed generally are sole employees: firm size also changes from very large to under 10.
e: Controlling for per capita GDP
Source: March CPS 1996-2000

decrease the most for the self-employed in firms with less than ten workers, a difference of twenty percentage points, or 32%. Employees in smaller firms also have much lower coverage chances, and this size-related decrease is more pronounced than for the reference native-born male in Chapter 5, Table XII.

The new region variables yield economically significant results. While at this high probability of insurance, regional effects are less pronounced, there is a change in coverage odds based on source area. Asians are slightly less likely to be covered than those from western first-world countries. Immigrants from Central and South America and the Caribbean have an 87% chance of coverage. A Mexican with the same demographic and work-related characteristics has only an 83% chance of coverage, a 12% drop from the reference person. While this blend of characteristics is atypical for Mexican immigrants, even with a favorable mix the Mexican effect is evident.

Table XXVII shows the results for a female immigrant from a western first-world nation. Although she reports a personal income 60% less than the male in Table XXVI, her odds of coverage are 91%, a mere three percentage points less. This probability is only three percentage points less than the reference native-born female in Table XV of Chapter 5 whose personal income is 30% higher. This finding bolsters the hypothesis that culturally similarity matters. Changes in most variables have a small effect in coverage status. However those who are not married, not in the labor force, self-employed with few workers and employed in smaller firms have reduced coverage odds, but – except for marriage - on a slightly smaller scale than for the reference male in Table XXVI. While the decrease in coverage for women from Asia, Central and South American and the

Caribbean is comparable to the fall for men from those areas, the drop for Mexican women is more pronounced, 16%.

TABLE XXVII: PREDICTED PROBABILITIES BASED ON PROBIT ANALYSIS FROM TABLE XXV: ADULT FEMALES

	Probability of Being Insured	
	Insured[a]	Uninsured
Female reference case[b]	0.91	0.09
Selected cases[c]		
Demographics variables		
Personal income (previous year)		
$4.0K	0.87	0.13
$24.0K	0.93	0.07
Age		
35	*	*
57	*	*
Education years		
10 years	0.88	0.12
18 years	0.93	0.07
Not married	0.84	0.16
Children		
If no child under 18 years	0.89	0.11
If 2 under 18 years	0.92	0.08
Self-reported health status		
good	*	*
excellent	*	*
Work-related variables (previous year)		
Not in labor force	0.85	0.15
Part-time	*	*
Service industry	*	*
Union covered (current year)	0.93	0.07
Self-employed[d]	0.68	0.32
Firm size (1,000+ benchmark)		
under 10	0.73	0.27
10-24	0.79	0.21
25-99	0.84	0.16
100-499	0.88	0.12
500-999	*	*
Immigrant-related variables		
YSM		
8 years	0.86	0.14
In US 38 years	0.94	0.06
Naturalized	0.93	0.07
Region (Western first-world benchmark)[e]		
Mexico	0.76	0.24
Central, So. America and Caribbean	0.83	0.17
Asia and rest	0.87	0.13

*statistically insignificant

a: Insured includes private and government coverage.

b: The reference case has the following characteristics: western first-world, personal income $14,000, 46 years old, 14 years of schooling, married, 1 child under 18, very good health, employed full-time at a large firm, in America 23 years.

c: These differ from the reference in only one characteristic, as shown in stub. The changes generally represent one standard deviation from the mean.

d: Self-employed generally are sole employees: firm size also changes from very large to under 10.

e: Controlling for per capita GDP

Source: March CPS 1996-2000

7.2 Foreign-born Adults, Health Care System in Source Region

Table XXVIII lists the coefficients and t-statistics from the probit regression for the probability of being insured including source country health care system identifiers.[26] This regression of a foreign-born sub-sample tests for type of health system effects. The hypothesis is that those from welfare, universal and centrally planned health care systems should have higher coverage rates than those from free market systems (controlling for economic climate with a gdp variable). Welfare is the base since most immigrants come from such a system. No differences from welfare are expected from the universal and centrally planned groups due to their similarity with welfare systems, but free market should have a negative sign.

The results are inconclusive. Universal shows no statistical difference from welfare, as hypothesized, yet neither does free market. The centrally planned variable shows a positive significant result, suggesting these immigrants are more likely than welfare country immigrants to have insurance. Yet this last variable is the most suspect of the four. The bulk of data on the former Soviet states comes from the 1980s which is just when the political climate and health care systems of those nations began to change. In fact it is still difficult to classify these countries properly. These findings, or lack thereof, suggest the benefit from including the type of health care system in an analysis of insurance probability is questionable.

7.3 Conclusions

The hypothesis that immigrants from countries culturally similar to the United

[26] This sample is smaller than that above as those nations lacking clear information on the type of health care system could not be classified and were dropped.

TABLE XXVIII: COEFFICIENTS (T-STATISTICS IN PARENTHESES) FROM PROBIT ANALYSIS, DEPENDENT VARIABLE: PROBABILITY OF BEING INSURED

	Pooled
Demographic Variables	
Personal income (previous year)	0.015 (28.3)
Age	0.009 (1.6)*
Age2	-0.059 (-0.8)*
Male	-0.225 (-13.2)
Education years	0.031 (15.6)
Married	0.347 (20.0)
Number of children under 18 years	0.070 (10.8)
Self-reported health status:	
1 = excellent, 5= poor	0.008 (1.0)*
Work-related Variables (previous year)	
Not in labor force	-0.388 (-14.1)
Part-time	-0.064 (-2.4)
Service industry	0.078 (3.9)
Union covered (current year)	0.308 (4.1)
Self-employed	-0.213 (-5.9)
Firm size	
under 10	-0.850 (-32.3)
10-24	-0.634 (-21.1)
25-99	-0.406 (-14.7)
100-499	-0.176 (-6.1)
500-999	-0.008 (-0.2)*
Immigrant-related Variables	
YSM	0.015 (18.3)
Naturalized citizen	0.171 (9.2)
MX	-0.327 (-14.9)
Source country health care system	
(welfare base)	
free market	0.042 (1.8)*
universal	0.029 (0.7)*
centrally planned	0.222 (8.2)
GDP	0.017 (9.7)
log likelihood	-19395.92
Constant	-0.734 (-5.7)
Sample size	36607

*statistically insignificant at the 5% level

Source: March CPS 1996-2000

States have a greater likelihood of health insurance coverage receives support from the findings in this chapter, despite the somewhat broad classification of all foreign-born into one of four economic regions. The ranking of insurance likelihood among immigrant groups is not easily explained. That western first-world immigrants are the most likely to have insurance is expected. Why Asians rank a close second – a four percentage point difference - is unclear. Their demographic characteristics, particularly income and educational attainment, are similar to western-first world immigrants, but these variables are controlled for in the regression. The markedly lower coverage rates among Mexicans compared to those from Central and South America is another puzzle. Perhaps geographical proximity is a key influence for Mexicans. Many Mexicans in the United States live in the southern parts of California and Texas making a trip back to Mexico for medical care a viable option. Mexicans may also be more likely to view themselves as being in America temporarily, decreasing the chances that they commit financially to a local health insurance plan.

An attempt to show source country health care systems affect insurance rates was unsuccessful. While most nations were probably accurately classified, the variables themselves are vaguely defined. Three of the four system types – welfare, universal, and centrally planned – are in practice indistinguishable. Other country specific variables, such as distance from the United States or physician density, may shed light on what it is about source countries that affect coverage in the United States. Yet it may also be that the roots of this cultural effect lie largely in traits that are difficult to quantify.

Gender and familial status are characteristics that are more easily classified, and their impact on health insurance status is not clear. The next chapter turns to measuring the effects of gender and marital status.

8. GENDER AND MARITAL STATUS

Economic theory predicts women are more likely to have health insurance than men, attributed primarily to their higher demand for medical care. To gain a sense of the economic impact gender has on the likelihood of having insurance, the discussion in this chapter focuses on coverage differences by gender and marital status.

8.1 Native and Foreign-born Adults by Gender

8.1.1 The Explanatory Variables

The means and standard deviations of the independent variables for native-born adults are shown in Table XXIX. The mean personal income of men was $38,910 with women reporting 45% less. Average age, educational attainment, and marital status are essentially the same for both sexes. Fewer men have children under the age of 18 living with them. Self-reported health status varies slightly by gender with men more likely to report an excellent or very good overall state of health.

Work-related characteristics differ more by gender. One in ten men are not in the labor force whereas over one-fifth of women are not. Close to four times as many working women are employed part-time compared to men. Over half of all females who work are in the service industry, compared to 29% of males. Union coverage is small among both sexes: 4% for males and 3% for females. Women are somewhat less likely to be self-employed, 6% verses 9% for men. Distribution by firm size is comparable by

TABLE XXIX: MEANS AND STANDARD DEVIATIONS, NATIVE-BORN ADULTS AGED 25-64, 1996-2000

	All Adults		Males		Females	
	Mean	SD	Mean	SD	Mean	SD
Demographic variables						
Personal income (previous year) (thousands of $)	29.72	27.50	38.91	30.69	21.23	20.90
Age	42.64	10.62	42.70	10.58	42.59	10.66
Education (years)	13.59	2.60	13.66	2.73	13.53	2.47
Married (%)	66.49	*	67.89	*	65.21	*
One or more children under age 18 (%)	42.53	*	39.84	*	45.00	*
Self-reported health status Excellent or very good (%)	65.21	*	66.89	*	63.67	*
Work-related variables (previous year)						
Not in labor force (%)	17.53	*	10.32	*	23.34	*
Among the labor force[a] (%)						
Part-time[b]	14.34	*	5.84	*	21.93	*
Service industry[c]	41.02	*	29.11	*	53.62	*
Union covered (current year)	3.62		4.12	*	3.09	*
Self employed[d]	7.58	*	8.94	*	6.03	*
Firm size (%)						
Under 10	20.38	*	21.87	*	18.80	*
10-24	8.37	*	8.73	*	7.98	*
25-99	12.33	*	12.90	*	11.73	*
100-499	14.09	*	13.66	*	14.54	*
500-999	5.77	*	5.34	*	6.22	*
1000+	39.07	*	37.51	*	40.72	*

Source: March CPS 1996-2000

Note: N: total = 283,597, male = 135,769 female = 147,828

* denotes 'not applicable'

a: percentages excludes adults not in the labor force

b: part or full year

c: Of the 14 major industry classifications for the longest job held in the previous year, service industries include: personal services including private household, business and repair, other professional and related services, and public administration.

d: unincorporated only, due to CPS coding

gender, though a smaller percent of women are in firms with less than ten employees and a bigger percent with very large companies.

Gender differences among the foreign-born in Table XXX follow a similar pattern. On average men had double the personal income reported by women. The percent of immigrant women not in the labor force is over one in three, much higher than among native-born women. The rate of foreign-born in union covered jobs does not differ by sex and is lower than among the native-born. Working immigrant women show the same pattern of firm size distribution as native-born women in that they are more likely than men to be with larger firms. The percent of naturalized males and females is nearly equal. Both sexes have been in America for a mean of 19 years. A somewhat smaller percent of foreign-born women are Mexican.

8.1.2 Empirical Findings

The coefficients and t-statistics from the probit regression for the probability of being insured for the native-born are shown in Table XXXI. Statistical significance and sign are the same for both genders, except that the number of own children in the household is insignificant for men. Many coefficient values are very similar by sex, but economic magnitude is discerned best in Table XXXII. The reference individuals have the same observable characteristics, differing only by gender. They are high school graduates, married with one child and represent typical individuals within that economic strata. With this mix of characteristics, there is only a one percent point difference in the probability of being uninsured, but values vary somewhat as characteristics shift.

Variations in personal income, age, and educational attainment have equal or nearly equal effects on insurance status for men and women. The effect of not being

TABLE XXX: MEANS AND STANDARD DEVIATIONS, FOREIGN-BORN ADULTS AGED 25-64, 1996-2000

	All Adults		Males		Females	
	Mean	SD	Mean	SD	Mean	SD
Demographic variables						
Personal income (previous year) (thousands of $)	21.29	24.61	28.70	27.81	14.32	18.65
Age	40.72	10.54	40.23	10.41	41.17	10.64
Education (years)	11.41	4.65	11.52	4.78	11.31	4.52
Married (%)	71.93	*	73.13	*	69.57	*
One or more children under age 18 (%)	54.81	*	52.43	*	56.74	*
Self-reported health status excellent or very good (%)	58.44	*	61.17	*	55.87	*
Work-related variables (previous year)						
Not in labor force	23.90	*	9.43	*	36.38	*
Among the labor force[a] (%)						
Part-time[b]	12.29	*	5.94	*	20.79	*
Service industry[c]	35.33	*	24.93	*	49.24	*
Union covered (current year)	2.12		2.11	*	2.12	*
Self employed[d]	6.45		7.20	*	5.45	*
Firm size (%)						
Under 10	23.86	*	24.41	*	23.11	*
10-24	11.26	*	12.72	*	9.25	*
25-99	15.43	*	16.79	*	13.61	*
100-499	14.60	*	14.42	*	14.85	*
500-999	5.18	*	4.71	*	5.81	*
1000+	29.67	*	26.90	*	33.37	*
Immigrant-related variables						
Naturalized citizen (%)	35.47	*	34.67	*	36.22	*
Years since migration	19.04	11.44	18.84	11.27	19.24	11.59
Mexican (%)	32.74	*	35.48	*	30.17	*

Source: March CPS 1996-2000

Note: N: total = 48,043, male = 23,288 female = 24,755

* denotes 'not applicable'

a: percentages excludes adults not in the labor force

b: part or full year

c: Of the 14 major industry classifications for the longest job held in the previous year, service industries include: personal services including private household, business and repair, other professional and related services, and public administration.

d: unincorporated only, due to CPS coding

TABLE XXXI: COEFFICIENTS (T-STATISTICS IN PARENTHESES) FROM PROBIT ANALYSIS, DEPENDENT VARIABLE: PROBABILITY OF BEING INSURED, NATIVE-BORN ADULTS

	Men	Women
Demographic Variables		
Personal income (previous year)	0.013 (51.2)	0.016 (44.4)
Age	0.032 (9.0)	0.023 (7.0)
Age2	-0.206 (-5.0)	-0.166 (-4.5)
Male		
Education years	0.044 (22.6)	0.057 (29.3)
Married	0.541 (49.6)	0.518 (56.6)
Number of children under 18 years	-0.004 (-0.9)*	0.044 (10.4)
Self-reported health status:		
1 = excellent, 5= poor	-0.032 (-6.9)	-0.026 (-6.2)
Work-related Variables (previous year)		
Not in labor force	-0.340 (-18.5)	-0.192 (-12.6)
Part-time	-0.284 (-15.8)	-0.049 (-4.1)
Service industry	0.027 (2.3)	0.053 (5.2)
Union covered (current year)	0.341 (10.1)	0.297 (7.6)
Self-employed	-0.097 (-5.6)	-0.079 (-3.8)
Firm size		
under 10	-0.844 (-56.5)	-0.546 (-36.8)
10-24	-0.592 (-33.4)	-0.413 (-22.8)
25-99	-0.323 (-19.4)	-0.244 (-14.8)
100-499	-0.162 (-9.4)	-0.110 (-6.8)
500-999	-0.047 (-1.8)*	-0.012 (-0.5)*
log likelihood	-47364.96	-54821.900
Constant	-0.784 (-10.1)	-0.709 (-9.7)
Sample size	135769	147828

*statistically insignificant at the 5% level

Source: March CPS 1996-2000

TABLE XXXII: PREDICTED PROBABILITIES BASED ON PROBIT ANALYSIS FROM TABLE XXXI: NATIVE-BORN ADULTS

	Male Uninsured	Female Uninsured
Native-born reference case[a]	0.06	0.05
Selected cases[b]		
Demographics variables		
Personal income (previous year)		
$19.72K	0.07	0.07
$39.72K	0.04	0.04
Age		
32	0.08	0.07
54	0.04	0.04
Education years		
10 years	0.07	0.07
14 years	0.05	0.04
Not married	0.15	0.14
Children under 18 years		
no child	*	0.06
2 children	*	0.05
Self-reported health status		
good	0.06	0.06
excellent	0.05	0.05
Work-related variables (previous year)		
Not in labor force	0.11	0.08
Part-time	0.10	0.06
Service industry	0.05	0.05
Union covered (current year)	0.03	0.03
Self-employed[c]	0.26	0.16
Firm size (1,000+ benchmark)		
under 10	0.23	0.14
10-24	0.16	0.11
25-99	0.11	0.09
100-499	0.08	0.07
500-999	*	*

*statistically insignificant

a: The reference case has the following characteristics: personal income $29,720, 42 years old, 12 years of schooling, married, 1 child under 18, very good health, employed full-time at a firm with 1,000+ workers.

b: These differ from the reference person in only one characteristic, as shown in stub. These changes generally represent one standard deviation from the mean.

c: Self-employed generally are sole employees: firm size also changes from large to under 10.

Source: March CPS 1996-2000

married is almost identical for men and women, suggesting that marital status is not more important for women. While the number of young children is statistically significant for women and not men, there is no economic difference in coverage odds for those with up to two children.

Among the work-related variables, gender differences are more apparent. With the exception of industry type and union coverage, changes in work-related characteristics have a greater impact on health insurance coverage status for men than women. Health insurance coverage for men is tied more closely to work, but the link for women is weaker because of the gender effect. The difference in coverage by gender due to self-employment is ten percentage points. Both men and women see the biggest increase in the odds of being uninsured with small firm self-employment, but the proportional change is larger for men.[27] All the coefficients for firm size are larger for men, and their odds of being uninsured increase more the smaller the firm. The gender gap in coverage is largest in firms with less than ten workers, and gender differences decrease as firm size increases.

Results by gender among the foreign-born have a pattern similar to the native-born but are more pronounced. The reference immigrants in Table XXXIV have the same observable characteristics as the native-born in Table XXXII, with the exception of being in America for 16 years, but have a coverage difference by gender of six percentage points suggesting gender plays a bigger role for immigrants.[28] Unlike the native-born, immigrants' coverage rates do differ by gender for the demographic variables. The initial

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[27] Women's probability of being uninsured increases three fold and men's probability quadruples.

[28] While mean characteristics vary some by nativity, characteristics are the same for all the reference individuals in order to ease interpretation.

TABLE XXXIII: COEFFICIENTS (T-STATISTICS IN PARENTHESES) FROM PROBIT ANALYSIS, DEPENDENT VARIABLE: PROBABILITY OF BEING INSURED, FOREIGN-BORN ADULTS

	Men	Women
Demographic Variables		
Personal income (previous year)	0.014 (26.1)	0.019 (21.7)
Age	0.005 (0.6)*	0.004 (0.6)*
Age2	-0.032 (-0.4)*	-0.004 (0.0)*
Male		
Education years	0.034 (13.9)	0.036 (15.5)
Married	0.359 (15.3)	0.333 (17.0)
Number of children under 18 years	0.041 (4.8)	0.090 (11.3)
Self-reported health status:		
1 = excellent, 5= poor	0.008 (0.8)*	0.003 (0.3)*
Work-related Variables (previous year)		
Not in labor force	-0.463 (-11.6)	-0.254 (7.8)
Part-time	-0.174 (-4.3)	-0.010 (0.3)*
Service industry	0.075 (3.1)	0.024 (1.0)*
Union covered (current year)	0.413 (5.1)	0.199 (2.1)
Self-employed	-0.204 (-5.0)	-0.106 (-2.0)
Firm size		
under 10	-0.966 (-31.0)	-0.726 (-21.6)
10-24	-0.724 (-21.1)	-0.515 (-12.3)
25-99	-0.485 (-15.2)	-0.343 (-9.2)
100-499	-0.237 (-7.0)	-0.137 (-3.7)
500-999	-0.031 (-0.6)*	-0.069 (-1.2)*
Immigrant-related Variables		
YSM	0.016 (14.7)	0.017 (16.7)
Natcit	0.182 (8.0)	0.162 (7.3)
MX	-0.318 (-14.2)	-0.394 (-18.3)
log likelihood	-12080.26	-13463.62
Constant	-0.735 (-4.6)	-0.677 (-4.5)
Sample size	23288	24755

*statistically insignificant at the 5% level

Source: March CPS 1996-2000

TABLE XXXIV: PREDICTED PROBABILITIES BASED ON PROBIT ANALYSIS FROM TABLE XXXIII: FOREIGN-BORN ADULTS

	Male Uninsured	Female Uninsured
Foreign-born reference case[a]	0.17	0.11
Selected cases[b]		
Demographics variables		
Personal income (previous year)		
$19.72K	0.21	0.15
$39.72K	0.14	0.08
Age		
32	*	*
54	*	*
Education years		
10 years	0.19	0.12
14 years	0.16	0.09
Not married	0.28	0.18
Children under 18 years		
No children	0.18	0.12
2 children	0.16	0.09
Self-reported health status		
good	*	*
excellent	*	*
Work-related variables (previous year)		
Not in labor force	0.32	0.16
Part-time	0.22	*
Service industry	0.15	*
Union covered (current year)	0.09	0.07
Self-employed[c]	0.59	0.34
Firm size (1,000+ benchmark)		
under 10	0.51	0.30
10-24	0.41	0.23
25-99	0.32	0.18
100-499	0.24	0.13
500-999	*	*
Immigrant-related variables		
Years since migration		
In US 8 years	0.22	0.14
In US 30 years	0.13	0.08
Naturalized citizen	0.13	0.08
Mexican immigrant	0.27	0.20

*statistically insignificant

a: The reference case has the following characteristics: personal income $29,720, 42 years old, 12 years of schooling, married, 1 child under 18, very good health, employed full-time at a firm with 1,000+ workers, in America 19 years.

b: These differ from the reference person in only one characteristic, as shown in stub. These changes generally represent one standard deviation from the mean.

c: Self-employed generally are sole employees: firm size also changes from large to under 10.

Source: March CPS 1996-2000

separation of six percentage points remains by and large the same. A change from married to not married results in the biggest demographics-related drop in odds of coverage for both adults and leaves a ten point gap by gender.

Changes in work-related characteristics vary even more by sex for the foreign-born. Men are affected more than women by changes in labor force status and working for firms with less than ten employees. The gap alternates from two points (union covered job) to twenty-five points (self-employment), a variability not observed among the native-born in Table XXXII. As with the native-born, small firm self-employment results in the largest drop in coverage, and the gender difference in coverage by firm size lessens as size increases.

Differences by gender for immigrant-related variables are in a similar five to eight range as with the demographic variables. The gender difference is largest (eight points) for those immigrants here for eight years. Mexican nativity effects the biggest immigrant-related fall in coverage for both genders.

8.2 Native and Foreign-born Single Adults, No Children

The relatively small variation in health insurance coverage by gender in the general population may be due in part to specialization within a household unit that occurs with marriage.[29] Married couples may view themselves as an insured unit, a decision that can have health insurance consequences even if the union dissolves, as seems evident in Table XXXV. The positive association with health insurance coverage and being married is clear. On the other hand, never married singles are hypothesized to

[29] Even though marital status was controlled for, a change of status to "not married" includes the divorced and widowed who may still receive health insurance coverage because of a former marriage.

have lower rates of health insurance coverage because they do not experience a marital effect, are younger and may have riskier lifestyles.

Theory predicts higher coverage rates among women, but whether the gender effect for singles is greater (differences by sex increase) or smaller (differences decrease) is uncertain. Women who have never been married have an incentive to specialize in market activities, and as most insurance coverage variation between genders is observed in work-related characteristics, gender differences would then decrease. Conversely, if single women decide to insure more often than single men, as opposed to joint decision making that takes place in marriage, more differences by gender are expected.

TABLE XXXV: HEALTH INSURANCE BY MARITAL STATUS AGED 24-64, 1996-2000

Status	Insured
Married*	86.3%
Separated	75.7%
Divorced	76.4%
Widowed	67.6%
Never married	70.6%

* includes spouses in the Armed Forces

Source: March CPS 1996-2000

Note: N = 331,640

8.2.1 The Explanatory Variables

The means and standard deviations of the independent variables for native-born adults who have never been married and have no children are shown in Table XXXVI.[30] Among singles, there is little disparity by gender. There is now almost no difference in the personal incomes of men and women, an average of $26,780. The mean personal income drop among single men is considerable a 30% whereas single women enjoy a 20% increase. The typical single is in his or her mid-30s, several years younger than the average adult. Singles have more education, and women have more schooling than men. Single women are slightly more likely to report a positive health status than single men. Perhaps without a wife to offer home medical care, as suggested by Sindelar (1982), single men feel they are not as healthy. Women, the providers of care, are better off.

An equal portion of single men and women are out of the labor force. It seems probable that some of these individuals not in the labor force are students. Due to an error in CPS reporting, the variable that would have coded any students over the age of 24 is not available. Thus it is not possible to identify older students in this sample, though we may assume that all students have health insurance either through a parent or their educational institution. The vast majority of singles do work, and most are full-time. The service industry is the predominant sector for women. The overall level of self-employment is lower among singles, and twice as many men work for themselves. Theory is ambiguous here: on the one hand, since self-employment is riskier, fewer singles may engage in self-employment as they lack spousal support. Conversely, singles

[30] While race is typically controlled for in examining outcomes by marital status, variations by race among never married singles with no children are very small, except for the group containing American Indians and Eskimos, so this variable is not included here.

TABLE XXXVI: MEANS AND STANDARD DEVIATIONS, NATIVE-BORN ADULTS, NEVER MARRIED, NO CHILDREN AGED 25-64, 1996-2000

	All Adults		Men		Women	
	Mean	SD	Mean	SD	Mean	SD
Demographic variables						
Personal income (previous year) (thousands of $)	26.78	23.29	27.30	24.47	26.01	21.40
Age	35.96	9.53	35.55	9.18	36.57	10.00
Education (years)	13.80	2.88	13.56	2.83	14.17	2.91
Self-reported health status excellent or very good (%)	65.08	*	64.90	*	65.98	*
Work-related variables (previous year)						
Not in labor force (%)	14.54	*	14.49	*	14.61	*
Among the labor force[a] (%)						
Part-time[b]	11.33	*	10.35	*	12.77	*
Service industry[c]	40.51	*	31.66	*	53.58	*
Union covered (current year)	3.42	*	3.34	*	3.55	*
Self employed[d]	5.26	*	6.67	*	3.19	*
Firm size (%)						
Under 10	17.63	*	20.41	*	13.53	*
10-24	9.03	*	10.12	*	7.58	*
25-99	13.24	*	14.13	*	11.88	*
100-499	14.54	*	14.13	*	15.14	*
500-999	5.71	*	5.29	*	6.34	*
1000+	39.84	*	35.98	*	45.53	*

Source: March CPS 1996-2000

Note: N: total = 38,578, male = 22,989 female = 15,589

* denotes 'not applicable'

a: percentages excludes adults not in the labor force

b: part or full year

c: Of the 14 major industry classifications for the longest job held in the previous year, service industries include: personal services including private household, business and repair, other professional and related services, and public administration.

d: unincorporated only, due to CPS coding

can also take greater risks. The empirical association with lower levels of insurance among the self-employed is clear.[31] The familiar pattern of firm size distribution remains: a smaller percent of women work for very small firms and a greater number for big companies.

Trends among foreign-born singles are similar. The personal income gap decreases dramatically, with women reporting only 16% less income than men. The fall in single immigrant male incomes is not as pronounced as for single native-born men, under 20%, and single immigrant women see a gain of close to 40%. As with the native-born, immigrant singles have more education and women have more schooling than men. Unlike their native-born counterparts, foreign-born women are less likely to report a favorable health status than men, but the overall levels are higher among singles than the general immigrant population.

The portion of single immigrants out of the labor force mirrors the native-borns'. Approximately the same percent of single immigrants is out of the labor force as among native-born singles. While the share of single women who are out of the labor force is smaller than for the general immigrant population, it is still double that of men. Three times as many foreign-born working women are employed part-time compared to men. Fewer working immigrant singles are in union jobs or self-employed. Just over 20% of all foreign-born singles work for very small employers. Yet among companies with 1,000 employees or more, a slight gender difference surfaces: 36.5% of working women are employed in very large firms compared to 29% of men.

Since singles are a younger group, the naturalized segment is smaller than for the

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[31] Recently Wellington (2001) finds spousal health coverage increases the probability of self-employment from 1.2-4.6%.

TABLE XXXVII: MEANS AND STANDARD DEVIATIONS, FOREIGN-BORN ADULTS, NEVER MARRIED, NO CHILDREN AGED 25-64, 1996-2000

	All Adults		Men		Women	
	Mean	SD	Mean	SD	Mean	SD
Demographic variables						
Personal income (previous year) (thousands of $)	21.86	22.20	23.23	22.93	19.56	20.74
Age	34.28	9.19	33.16	8.07	36.15	10.53
Education (years)	12.34	4.43	12.13	4.47	12.70	4.36
Self-reported health status excellent or very good (%)	65.22	*	67.33	*	61.70	*
Work-related variables (previous year)						
Not in labor force (%)	15.99	*	11.99	*	22.70	*
Among the labor force[a] (%)						
Part-time[b]	11.51	*	8.74	*	28.23	*
Service industry[c]	37.62	*	28.63	*	54.76	*
Union covered (current year)	1.77	*	1.67	*	1.98	*
Self employed[d]	3.73	*	4.09	*	3.06	*
Firm size (%)						
Under 10	21.95	*	21.89	*	22.05	*
10-24	11.28	*	12.55	*	8.88	*
25-99	16.01	*	17.84	*	12.52	*
100-499	14.34	*	14.22	*	14.56	*
500-999	5.07	*	4.84	*	5.51	*
1000+	31.35	*	28.66	*	36.49	*
Immigrant-related variables						
Naturalized citizen (%)	29.28	*	26.74	*	33.53	*
Years since migration	15.66	10.28	15.19	10.05	16.44	10.60
Mexican (%)	27.19	*	30.68	*	21.35	*

Source: March CPS 1996-2000

Note: N: total = 5,771, male = 3,612 female = 2,159

* denotes 'not applicable'

a: percentages excludes adults not in the labor force

b: part or full year

c: Of the 14 major industry classifications for the longest job held in the previous year, service industries include: personal services including private household, business and repair, other professional and related services, and public administration.

d: unincorporated only, due to CPS coding

general immigrant population. One third of foreign-born single women have American citizenship compared to just over one quarter of the men. The rate of naturalization among single men is 23% lower than for all foreign-born men. The percent of Mexicans is somewhat lower among single immigrants with a marked difference by gender. One in four single female immigrants are Mexican, compared to almost one-third of men.

8.2.2 Empirical Findings

The coefficients and t-statistics from the probit regression for the probability of being insured for native-born single adults are shown in Table XXVIII. The size of the coefficient on personal income suggests income is a more important determinant of health insurance coverage for singles than the general population. Age is insignificant for men, and health status is statistically insignificant for both sexes, perhaps because singles are a healthier group. There are no large changes in the expected sign or significance of work-related variables, except that both service industry and self-employment are statistically insignificant for single women. The firm size coefficients are almost the same as men's and larger for single women than for all women, indicating firm size has a greater effect on single female coverage status. Yet the coefficients on firm size for single men and all men are very similar.

As predicted, Table XXXIX shows that the odds of being uninsured are higher for these single reference individuals than the adult individuals in Table XXXII. Although singles do have $3,000 less personal income and are six years younger, the probability of being uninsured has doubled for women and almost tripled for men compared to the general population. A larger gender effect is evident among native-born singles as there is now a five percent point difference in the probability of being insured, though the

TABLE XXXVIII: COEFFICIENTS (T-STATISTICS IN PARENTHESES) FROM PROBIT ANALYSIS, DEPENDENT VARIABLE: PROBABILITY OF BEING INSURED, CHILDLESS NATIVE-BORN ADULTS, NEVER MARRIED

	Men	Women
Demographic Variables		
Personal income (previous year)	0.021 (34.0)	0.028 (26.2)
Age	0.009 (1.2)*	0.023 (2.3)
Age2	0.112 (1.1)*	-0.131 (-1.1)*
Male		
Education years	0.019 (5.1)	0.018 (6.2)
Self-reported health status:		
1 = excellent, 5= poor	0.012 (1.2)*	0.011 (0.9)*
Work-related Variables (previous year)		
Not in labor force	-0.262 (-7.3)	-0.180 (-10.4)
Part-time	-0.288 (-8.9)	-0.292 (-7.8)
Service industry	0.102 (4.4)	0.040 (1.4)*
Union covered (current year)	0.387 (5.4)	0.240 (2.5)
Self-employed	-0.116 (-2.5)	-0.032 (-0.4)*
Firm size		
under 10	-0.840 (-26.7)	-0.771 (-18.3)
10-24	-0.580 (-16.2)	-0.509 (-10.4)
25-99	-0.332 (-10.1)	-0.297 (-6.8)
100-499	-0.171 (-5.0)	-0.134 (-3.2)
500-999	-0.077 (-1.5)*	-0.007 (-0.1)*
log likelihood	-11727.67	-6691.01
Constant	-0.374 (-2.3)	-0.371 (-1.8)*
Sample size	22989	15589

*statistically insignificant at the 5% level

Source: March CPS 1996-2000

TABLE XXXIX: PREDICTED PROBABILITIES BASED ON PROBIT ANALYSIS FROM TABLE XXXVIII: CHILDLESS NATIVE-BORN ADULTS, NEVER MARRIED

	Male Uninsured	Female Uninsured
Native-born reference case[a]	0.16	0.11
Selected cases[b]		
Demographics variables		
Personal income (previous year)		
$16.78K	0.22	0.17
$36.78K	0.11	0.06
Age		
26	*	0.14
46	*	0.09
Education years		
11 years	0.18	0.12
17 years	0.15	0.10
Self-reported health status		
good	*	*
excellent	*	*
Work-related variables (previous year)		
Not in labor force	0.24	0.16
Part-time	0.25	0.17
Service industry	0.14	*
Union covered (current year)	0.09	0.07
Self-employed[c]	0.49	*
Firm size (1,000+ benchmark)		
under 10	0.45	0.32
10-24	0.35	0.23
25-99	0.26	0.17
100-499	0.21	0.13
500-999	*	*

*statistically insignificant

a: The reference case has the following characteristics: personal income $26,780, 36 years old, 14 years of schooling, very good health, employed full-time at a very large firm.

b: These differ from the reference in only one characteristic, as shown in stub. These changes generally represent one standard deviation from the mean.

c: Self-employed generally are sole employees: firm size also changes from large to under 10.

Source: March CPS 1996-2000

magnitude is still small in economic terms. This five point spread holds for changes in income and years of education, though proportionally women are affected more by changes in these variables than men. Changes in personal income have a slightly larger effect on coverage than education and, for women, age.

The difference in coverage status by gender varies considerably more for the work-related variables, a range of two points (union covered) to thirteen points (firm size under ten). While men have consistently lower odds of coverage, proportional changes in most work characteristics are the same for males and females. As with other groups, small firm self-employment is most detrimental to the reference male's insurance status. Single men and women with employers who have less than ten workers are three times as likely to be uninsured compared to workers for very large companies. As with the general population, gender differences for singles by firm size shrink as the size of the employer grows.

The probit results for foreign-born singles are in Table XL. All statistically significant signs are the same as for the native-born. Age is statistically insignificant for both genders. Health status matters for immigrant women but not men. The sign on the health status variable is now positive, meaning women with a lower self-reported health status are more likely to have insurance. Several work-related factors are statistically insignificant for foreign-born women: industry, union jobs, and self-employment, the latter also insignificant for immigrant men. The coefficient on firm size under ten is very large for foreign-born men. Firm size ceases to have a statistically significant influence for either sex for companies with 100 workers or more. Naturalization is statistically

TABLE XL: COEFFICIENTS (T-STATISTICS IN PARENTHESES) FROM PROBIT ANALYSIS, DEPENDENT VARIABLE: PROBABILITY OF BEING INSURED, CHILDLESS FOREIGN-BORN ADULTS, NEVER MARRIED

	Men	Women
Demographic Variables		
Personal income (previous year)	0.020 (12.8)	0.025 (10.1)
Age	-0.036 (-1.7)*	-0.029 (-1.2)*
Age2	0.489 (1.8)*	0.440 (1.5)*
Male		
Education years	0.036 (5.5)	0.022 (2.6)
Self-reported health status:		
1 = excellent, 5= poor	0.031 (1.2)*	0.077 (2.5)
Work-related Variables (previous year)		
Not in labor force	-0.553 (-18.6)	-0.409 (-3.8)
Part-time	-0.248 (-2.7)	-0.480 (-5.0)
Service industry	0.140 (2.3)	0.048 (0.7)*
Union covered (current year)	0.545 (2.4)	0.189 (0.7)*
Self-employed	-0.150 (-1.1)*	-0.121 (-0.6)*
Firm size		
under 10	-1.001 (-12.6)	-0.868 (-8.7)
10-24	-0.702 (-8.4)	-0.424 (-3.3)
25-99	-0.435 (-5.6)	-0.425 (-3.7)
100-499	-0.149 (-1.8)*	-0.075 (-0.7)*
500-999	0.114 (-0.9)*	0.139 (0.1)*
Immigrant-related Variables		
YSM	0.019 (6.5)	0.014 (3.9)
Natcit	0.153 (2.5)	0.121 (1.6)*
MX	-0.386 (-6.3)	-0.281 (-3.6)
log likelihood	-1895.23	-1156.01
Constant	-0.146 (-0.3)*	-0.112 (-0.2)*
Sample size	3612	2159

*statistically insignificant at the 5% level

Source: March CPS 1996-2000

insignificant for women. Being Mexican appears to decrease coverage odds more for single men than single women.

Predicted probabilities in Table XLI reveal that the reference foreign-born singles who have been in the United States for 16 years and have the same observable characteristics as the native-born singles in Table XXXIX are twice as likely to be uninsured. Relative changes in personal income affect all singles similarly while differences in education affect immigrants slightly more. In contrast to the native-born, a slight decline in coverage differences by gender is evident, primarily among work-related variables. Alterations in the work-related variables for labor force status, part-time and firm size result in less coverage for immigrants compared to the native-born, though proportionally the change is not always bigger for immigrants. The largest immigrant-related change in coverage occurs with Mexican nativity. Note the probability of being uninsured for the reference male who has been in America 30 years: 19%. For the native-born male in Table XXXIX the value is a very close 16%. Were a male who immigrated as a child of 6 years also naturalized, his probability of being uninsured would fall to 15%, no different from the native-born male. This finding offers support to the hypothesis that cultural differences – many which are unobservable and fewer for the foreign-born raised in American - explain much of the variation in health insurance by nativity that is unaccounted for by observable characteristics.

8.3 Conclusions

An examination of differences by gender supports the hypothesis that women have a higher demand for health insurance. For the general population, observable

TABLE XLI: PREDICTED PROBABILITIES BASED ON PROBIT ANALYSIS FROM TABLE XL: CHILDLESS FOREIGN-BORN ADULTS, NEVER MARRIED

	Male Uninsured	Female Uninsured
Foreign-born reference case[a]	0.27	0.22
Selected cases[b]		
Demographic variables		
Personal income (previous year)		
$16.78K	0.34	0.30
$36.78K	0.21	0.16
Age		
26	*	*
46	*	*
Education years		
11 years	0.31	0.24
17 years	0.24	0.20
Self-reported health status		
good	*	0.20
excellent	*	0.24
Work-related variables (previous year)		
Not in labor force	0.48	0.36
Part-time	0.36	0.32
Service industry	0.23	*
Union covered (current year)	0.12	*
Self-employed[c]	*	*
Firm size (1,000+ benchmark)		
under 10	0.65	0.54
10-24	0.54	0.36
25-99	0.43	0.36
100-499	*	*
500-999	*	*
Immigrant-related variables		
Years since migration		
In US 8 years	0.32	0.25
In US 30 years	0.19	0.16
Naturalized citizen	0.22	*
Mexican immigrant	0.41	0.31

*statistically insignificant

a: The reference case has the following characteristics: personal income $26,780, 36 years old, 14 years of schooling, very good health, employed full-time at a firm with 1,000+ workers, in America 16 years.

b: These differ from the reference in only one characteristic, as shown in stub. These changes generally represent one standard deviation from the mean.

c: Self-employed generally are sole employees: firm size also changes from large to under 10.

Source: March CPS 1996-2000

differences between men and women are mainly income and work-related. There are variations in health insurance status by gender, but for the native-born most coverage differences are very small, one percentage point. Immigrants have more differences, and larger differences, in coverage by gender but the gap for typical immigrants is only six percentage points. A weak gender effect may be due to decisions within a household unit that occur with marriage. Even though marital status is controlled for, a change of status to "not married" includes the divorced and widowed who may receive health insurance coverage because of their former marital state.

Compared to the general population, never married native-born singles with no children have a greater disparity in health insurance coverage by gender – now five percentage points - despite more comparable observable characteristics. As hypothesized, coverage rates are lower among singles. Changes in firm size and, for men, self-employment status affect the largest changes in health insurance status for singles. Coverage rates among single immigrants are lower still. In addition to small firm size, labor force status and Mexican nativity (but not self-employment) are important indicators of coverage status. Unlike for the native-born, differences by gender among immigrant singles appear unchanged or even to fall slightly from the general foreign-born population, suggesting a weaker gender effect for this singles group.

9. CONCLUSIONS, POLICY SIGNIFICANCE AND FURTHER RESEARCH QUESTIONS

9.1 Summary

The mix of characteristics an individual has is very important for determining health insurance status. If the combination is favorable, the individual has a high probability of being insured. There are several characteristics that exert a particularly strong influence on the probability of coverage. Firm size, personal income, nationality and marital status are the best predictors of who has health insurance in the United States. The impact of firm size on coverage status is so great that for some of the population, the odds of having health insurance are greater for those out of the labor force than for employees of firms with less than ten workers. At incomes in the $20,000-$30,000 range the economic significance of other demographic factors – age, gender, education, perceived health status, number of children – is small or negligible, as is labor force and union participation, working part-time or in the service industry.

Immigrants are less likely than native-born Americans to have health insurance. There are demographic and work-related differences between the native and foreign-born that explain much of their lower coverage rates. On average immigrants have less personal income and less education. Immigrants tend to work for smaller employers, and a tiny portion hold union-covered jobs. Yet even controlling for an extensive set of observable characteristics, the foreign-born have lower rates of health insurance coverage. At higher incomes the nativity differences are fairly small. The odds of coverage for immigrant men with an income of $28,500 are 84%, nine to ten percentage points below native-born males. The difference between women is slightly less: the odds

of coverage for foreign-born women are generally seven percentage points below native-born females. Years since migration and citizenship both increase the odds of coverage, usually by five percentage points.

9.1.1 Low personal income

The odds of coverage fall dramatically for most adults reporting low personal incomes, the exception being non-working native-born women whose coverage chances fall to 82% from 90%. Native-born males see their odds of coverage cut in half. The insurance gap between the native and foreign-born is much more pronounced at low personal income levels. Foreign-born women working for small employers have a 38% chance of coverage and immigrant men odds of 23%. Working, low-income Mexicans have a mere 14% chance of having health insurance. Labor force status is particularly important for the low-income group since entrance into the work force effectively eliminates Medicaid eligibility. Marital status, firm size and working in union-covered jobs are important coverage characteristics for this group, as is gender for the foreign-born.

9.1.2 Source region effects

Immigrants from source countries that are culturally and economically similar to America - Canadians and Europeans - have coverage rates nearly identical to the native-born and are, *ceteris paribus*, more likely to have health insurance than other immigrants. The coverage gap between western first-world immigrants and Asians is small - three or four percentage points – and for immigrants from Central and South American and the Caribbean the difference increases to seven percentage points. Mexicans, the largest

group from a single country, are consistently the least likely to have insurance, a difference of 11%-16% from western first-world immigrants. Geographical proximity and plans for temporary U.S. stays may explain some of this disparity.

9.1.3 Gender and marital status

There is a gender effect in favor of women's coverage, but for most of the native-born population the effect is weak, one percentage point. This is probably due to the joint decision making that occurs within marriage. The gap grows to five percentage points among childless, never married singles. The foreign-born have a five to six percentage point difference in coverage odds by gender that is essentially invariant with marital status.

9.2 Policy Implications

Clarifying the persistence and magnitude of the nativity effect is not easy. The hypothesis that cultural background explains part of why immigrants have less health insurance coverage while in this country receives support from this research. If immigrants prefer not to insure and seek jobs without health insurance, lower coverage rates could be viewed as an efficient outcome from rational decision making. Given the positive association with length of stay in the United States and citizenship to insurance coverage, it appears that those immigrants who demand health insurance eventually move into jobs that offer it.

Access to coverage is a problem for most employees in small firms, and smaller firms are where immigrants tend to work. Health insurance is typically considered expensive, so small employers who do not qualify for lower group coverage rates will

either ask their workers to pay for most or all of the premium directly or indirectly with lower wages, or simply not offer insurance at all. In April 2002 the *Chicago Tribune* printed an article concerning a protest for cheaper health insurance by janitors employed with a cleaning firm based in Lisle, Illinois (Lynch, 2002). The janitors make $7.65 an hour and if they opt into the company's Blue Cross/Blue Shield plan the monthly employee contributions would be between $100 and $180. In the face of other demands on their income, it is understandable that a worker earning approximately $13,000 a year is not willing to pay almost $1,700 annually for health insurance.[32] It is also understandable that not having insurance is worrisome for the worker and public policy makers.

Currently the most popular policy plans involve tax credits for health insurance. Taxpayers who buy insurance would receive a credit to apply against their federal and payroll taxes, releasing funds to pay for health insurance. The credit effectively reduces the price of insurance and, proponents argue, would increase voluntary coverage among low-income and high-risk populations (Pauly and Hoff, 2002). Since cost is the reason most commonly given for not having insurance, tax credits may lead to a small reduction in the uninsured. But while this research has not examined price effects, it has shown that relative changes in income, even on a scale of $10,000, have a very small effect on coverage status, including those reporting low personal incomes. Unless tax credits cover all insurance costs, claims are weak that credits or voucher programs would stimulate the purchase of insurance. This finding supports prior research noted in Chapter Two.

America is the sole industrialized nation that has retained its primarily free

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[32] These figures are very similar to those provided by the Robert Wood Johnson Foundation who report that family policies cost on average $130 a month in jobs where the typical wage is $7.50 an hour (2002).

market, privately provided health care system. Any discussion of mandating coverage meets with great political resistance from medical and business communities. But as long as America has a voluntary insurance system, there will always be those who decide not to participate. Most of America's uninsured work in small firms or have low incomes, or both. In addition to firm size and income, immigrants have more characteristics that tend to further depress their coverage rates: language difficulties, confusion about the American health care system and different views regarding medical care. Thus, encouraging uninsured immigrants to opt into health plans voluntarily will remain a challenge for policy makers.

9.3 Further Research Possibilities

Several issues are worthy of further exploration. Instead of using personal income as the independent variable, personal earnings or familial income may yield slightly different results. Firm size is the primary indicator of coverage status, and the foreign-born are less likely to work for very large employers. How workers sort themselves by firm size, in particular immigrants, is uncharted in economics. Self-employment decreases coverage odds, but this may be less of an issue than in the past. Today there seem to be more substitutes for firm-based group insurance than ten or twenty years ago: professional associations, alumni groups, or club-based plans. While the percent of self-employed that is uninsured is high relative to other types of workers, has this number fallen?

Several sub-groups of the population provide possible areas for future research. A sample composed exclusively of those living below the poverty level (as opposed to reporting low personal incomes) may give a clearer picture of why the probability of

insurance among native-born women remains high despite low personal income. Other gender-related topics include separate examinations of coverage differences among separated, divorced, widowed and single parents. Among foreign-born women in America, nativity appears to influence health insurance coverage more than the gender effect. There is a myriad of issues surrounding immigrant health insurance patterns, and economists still have much to uncover.

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HEALTH INSURANCE COVERAGE IN AMERICA: ARE IMMIGRANTS DIFFERENT?

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This research examines health insurance coverage in the United States among civilian adults aged 25 to 64 using information contained in the March 1996-2000 Current Population Surveys. Particular attention is given to immigrant coverage patterns as this group is over-represented among the uninsured. The demand for health insurance depends on risk adversion, demand for health care, tax advantages and immigrant influences. Probit and multinomial logit regressions that control for a rich set of economic, demographic, and immigrant-related variables reveal that immigrants are consistently less likely to be insured than the native-born. Immigrant odds of coverage are typically 10% lower than native-born counterparts', but the nativity gap widens considerably for adults reporting low personal incomes. Work-related characteristics, particularly firm size, as well as personal income, marital status and nativity are the important coverage indicators for most of the sample. Longer duration in the United States and citizenship positively effect immigrants' coverage rates. While the absolute level of personal income matters for coverage, marginal changes in income on the magnitude of up to $10,000 do little to affect coverage status regardless of nativity. This finding is consistent with previous literature and rejects the use of tax credits or vouchers as an effective way to decrease the number of uninsured. Why, *ceteris paribus*, immigrants have lower coverage rates is unclear. There appears to be sorting among immigrants into jobs without health insurance. While access to coverage is a problem for workers in certain industries and small firms, if immigrants prefer not to insure then their lower coverage rates result from rational decision making and are an efficient outcome. Encouraging uninsured immigrants to opt into health plans voluntarily will remain a challenge for policy makers.