

# WHO DID THE AFFORDABLE CARE ACT HELP AND WHO DID IT FAIL?

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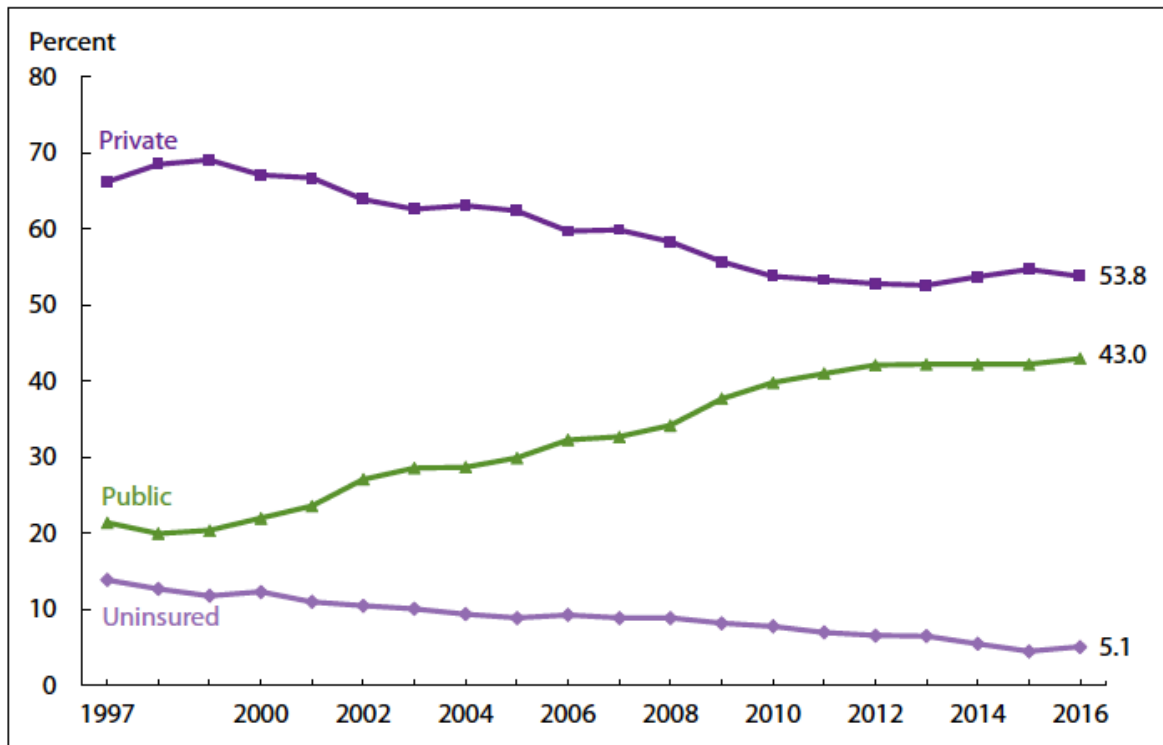
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*SUMMARY: This study uses the 2007 and 2013 Annual Social and Economic Supplement of the Current Population Survey to examine the effect of the Affordable Care Act (ACA) on health insurance coverage among adults in the U.S. It finds that the ACA has improved coverage for men, youth, minorities, and low-income and less-educated individuals. However, those who are self-employed or do not work full-time have been negatively impacted. We analyze these results and discuss business and policy implications.*

## Introduction

The Patient Protection and Affordable Care Act of 2010 (ACA) has been a contention for policymakers since its inception. While evidence on actual health outcomes is still sparse, a few studies have shown a decrease in the number of the uninsured. A study done by Sommers, Buchmueller, Decker, Carey, and Kronick (2013) found sizable coverage gains for adults aged 19–25. The gains continued to grow throughout 2011, with the largest gains seen in unmarried adults, non-students, and men. According to Sommers, Gunja, and Finegold (2015), low-income adults within the states that expanded Medicaid reported significant gains in insurance coverage and access compared with adults within the states that did not expand Medicaid. Moreover, Sommers, Maylone, Blendon, Orav, and Epstein (2017) assessed changes in health care use and self-reported health after three years of the ACA's coverage expansion, using survey data collected from low-income adults through the end of 2016 in two states (Arkansas and Kentucky) that expanded coverage, and Texas that did not expand coverage. By the end of 2016, the uninsurance rate in the two expansion states had dropped by more than 20 percentage points relative to the non-expansion state. Finally, Figure 1 shows the percentage of adults aged 18–64 who were uninsured or had private or public coverage at the time of interview in the U.S. between 1997–2016.

After the main ACA provisions went into effect in 2014, racial disparities in coverage declined slightly as the percentage of adults who were uninsured decreased by 7.1 percentage points for Hispanics, 5.1 percentage points for Blacks, and 3 percentage points for Whites (Buchmueller et al., 2016). McMorro, Long, Kenny, and Anderson (2015) found significant improvements in insurance coverage for all racial and ethnic groups between the second and third quarters of 2013 as well as 2014, which translated into reductions in absolute disparities in the uninsurance rates for Blacks and Hispanics in both expansion and non-expansion states. Furthermore, Chen, Vargas-Bustamante, Mortensen, and Ortega (2016) demonstrated that racial and ethnic disparities in access had been reduced significantly during the initial years of the ACA implementation.



NOTE: Data are based on household interviews of a sample of the civilian noninstitutionalized population.  
SOURCE: NCHS, National Health Interview Survey, 1997–2016, Family Core component.

*Figure 1.* Percentages of adults aged 18–64 who were uninsured or had private or public coverage at the time of interview: United States, 1997–2016

Despite coverage improvement for men, single adults, and minorities, the ACA had a negative effect on other subpopulations. For example, Blumberg, Corlette, and Lucia (2014) roughly estimated that the number of uninsured self-employed individuals and entrepreneurs would relatively increase by more than 11% following the ACA.

Against the above background, the present study applies a probit regression separately to the 2007 and 2013 Annual Social and Economic Supplement of the Current Population Survey (ASEC CPS). It then compares the effects of main demographic traits and socioeconomic factors on health insurance coverage in the U.S. for adults across all ages before and after the signing of the ACA. We find that the coverage has improved for men, youth, minorities, and low-income and less-educated individuals, while adversely impacting those who are self-employed or do not work full-time. These findings are largely consistent with the existing studies. Thus, this study makes two major contributions to the literature. First, it adds more empirical evidence regarding the impact of the ACA on health insurance coverage for the adult population in the U.S. Second, it provides practical policy and business insights by identifying specific groups which policymakers and practicing managers should focus on extending the insurance coverage to in the post-ACA era.

The rest of the paper proceeds as follows. We describe the data and the econometric model, explain the regression results, and then present the concluding remarks as well as policy and business recommendations.

## Empirical Strategy

The ASEC CPS is a rich dataset that has detailed information on employment, demographics, and health insurance. The data used in this study are extracted from its 2007 and 2013 series, marking the three years before and after the signing of the ACA. After removing missing values and restricting respondents to civilians aged 18–79, the number of individual observations in our final sample is 247,943 (125,851 for 2007 and 122,092 for 2013).

The dataset has a constructed variable that indicates whether a respondent had any health insurance coverage (private or public) in the previous year. This study considers a respondent covered by health insurance if the answer is yes, and not covered by health insurance if the answer is no. Per this definition, about 82% of our sample had health insurance (83% for 2007 and 82% for 2013). Clearly, not everyone was covered even three years after the ACA was signed into law. This highlights the relevance and importance of studying the determinants of health insurance coverage in the post-ACA era. All statistics reported in this study are appropriately weighted.

Existing studies on the determinants of health insurance coverage typically employ a binary response model (i.e., logit or probit regression). For example, Gius (2010) used the 2008 National Health Interview Survey and adopted a logit regression to examine the determinants of health insurance coverage for young adults. Cantiello, Fottler, Oetjen, and Zhang (2015) used the 2005 and 2008 Medical Expenditure Panel Survey to investigate the factors that influence young adults' decisions to have private health insurance. They incorporated structural equation modeling into a standard logit regression.

Following those studies, we apply the probit regression below to the 2007 and 2013 data separately. A comparison of results from these two years would enable us to examine the effect of the ACA on adult health insurance coverage in the U.S.

$$\text{covered}_i = \alpha + \beta_1 \text{age}_i + \beta_2 \text{male}_i + \beta_3 \log\_income_i + \beta_4 \text{fulltime}_i + \beta_5 \text{self\_emp}_i \\ + \beta_6 \text{highschool}_i + \beta_7 \text{college}_i + \beta_8 \text{graduate}_i + \beta_9 \text{white}_i + u_i,$$

where  $\text{covered}_i$  is a dummy variable that takes 1 if individual  $i$  has health insurance coverage and 0 otherwise,  $\text{age}_i$  denotes the individual's age,  $\text{male}_i$  is a dummy variable that takes 1 if the individual is male and 0 otherwise,  $\log\_income_i$  denotes the individual's logged annual pre-tax wage and salary income,<sup>1</sup>  $\text{fulltime}_i$  is a dummy variable that takes 1 if the individual has a full-time job and 0 otherwise,  $\text{self\_emp}_i$  is a dummy variable that takes 1 if the individual is self-employed and 0 otherwise,  $\text{highschool}_i$  is a dummy variable that takes 1 if the individual has completed 12 years of schooling or received a high school diploma and 0 otherwise,  $\text{college}_i$  is a dummy variable that takes 1 if the individual has some college education or received an Associate's or a Bachelor's degree and 0 otherwise,  $\text{graduate}_i$  is a dummy variable that takes 1 if the individual has a Master's degree or above and 0 otherwise,  $\text{white}_i$  is a dummy variable that takes 1 if the individual is White and 0 otherwise, and  $u_i$  denotes the standard classical error term. Therefore, our analysis takes into account both basic demographic traits (i.e., age, gender, and race) and various socioeconomic factors (i.e., income, employment, and educational attainment). Table 1 describes the summary statistics of all the variables.

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<sup>1</sup> The income amounts have been adjusted for inflation using the Consumer Price Index (1999 = 100). Also, striving for the maximum number of observations, we use log (inflation-adjusted income + 0.1) to account for income value of zero.

Table 1  
*Summary Statistics*

VARIABLE	2007				2013			
	MEAN	SD	MIN	MAX	MEAN	SD	MIN	MAX
covered	0.83	0.38	0	1	0.82	0.39	0	1
age	44.14	16.03	18	79	45.05	16.40	18	79
male	0.49	0.50	0	1	0.49	0.50	0	1
log_income	5.99	5.80	-2.30	13.16	5.55	5.91	-2.30	13.80
fulltime	0.57	0.50	0	1	0.51	0.50	0	1
self_emp	0.08	0.26	0	1	0.07	0.25	0	1
highschool	0.33	0.47	0	1	0.31	0.46	0	1
college	0.46	0.50	0	1	0.49	0.50	0	1
graduate	0.09	0.29	0	1	0.10	0.31	0	1
white	0.81	0.39	0	1	0.79	0.41	0	1

Notes. SD = standard deviation.

## Results

Table 2 shows the average marginal effects estimated using the probit regression model for the 2007 and 2013 data, respectively. The estimates suggest that all marginal effects are highly statistically significant. The age and gender gap in health insurance coverage has shrunk. A one year decrease in age reduced the average probability of having health insurance by 0.54 percentage point in 2007, but by 0.50 percentage point in 2013. The probability of adult males having health insurance was 3.32 percentage points lower than that of adult females in 2007; this number dropped to 2.99 in 2013.

Table 2  
*Average Marginal Effects of Probit Model, 2007 vs. 2013*

VARIABLE	2007 (N = 125,851)		2013 (N = 122,092)	
	MARGINAL EFFECTS	STANDARD ERRORS	MARGINAL EFFECTS	STANDARD ERRORS
age	0.0054***	7.30e-05	0.0050***	7.28e-05
male	-0.0332***	0.0025	-0.0299***	0.0025
log_income	0.0031***	0.0003	0.0007**	0.0003
fulltime	0.0040	0.0034	0.0330***	0.0034
self_emp	-0.0859***	0.0044	-0.1130***	0.0047
highschool	0.0884***	0.0033	0.0801***	0.0037
college	0.1850***	0.0033	0.1780***	0.0036
graduate	0.2890***	0.0069	0.2740***	0.0064
white	0.0391***	0.0029	0.0368***	0.0029

Notes. \* p < 0.1. \*\* p < 0.05. \*\*\* p < 0.01.

The race and income gap in health insurance coverage has also shrunk. For example, Whites were 3.91 percentage points more likely to have health insurance than non-Whites in 2007, but were 3.68 percentage points more likely in 2013. A 10% decrease in income reduced the

average probability of having health insurance by 0.031 percentage point in 2007, but by 0.007 percentage point in 2013.

In addition, the education gap in health insurance coverage has shrunk. High school graduates were 8.84 percentage points more likely to have health insurance than those with below high school education in 2007; this number fell to 8.01 in 2013. For college-educated individuals, the probability of having health insurance was 18.5 percentage points higher than those who did not go to college in 2007, but were 17.8 percentage points higher in 2013. Individuals with graduate degrees or higher were 28.9 percentage points more likely to have health insurance than those who did not have graduate degrees in 2007; this number fell by 1.5 in 2013.

Unfortunately, health insurance coverage has deteriorated for individuals who are self-employed or do not have full-time jobs. The self-employed were 8.59 percentage points less likely to have health insurance than their non-self-employed counterparts in 2007, but were 11.3 percentage points less likely in 2013. For people without full-time jobs, they were 0.4 percentage point less likely to have health insurance than full-time job holders in 2007, but were 3.3 percentage points less likely in 2013. These two marginal effect changes are the biggest among all the factors examined.

Lastly, despite the changes observed between 2007 and 2013, the magnitudes of most changes are fairly small. Also, men, minorities, and young people are still less likely to have health insurance, so are low-income and less-educated individuals as well as those who are self-employed or do not have full-time jobs.

### **Discussion of Implications**

This study examines the determinants of adult health insurance coverage in the U.S. between 2007 (pre-ACA) and 2013 (post-ACA). We find that after the signing of the ACA, health insurance coverage has improved among males, youth, minorities, and low-income and less-educated individuals, but deteriorated for people who are self-employed or do not work full-time.

While the first set of findings is encouraging, the observed changes are still rather small. Moreover, the ACA did not expand health insurance coverage as fast and drastically as expected. Perhaps more public outreach and education are needed to magnify the positive impact. Also, future research should re-examine this topic when more recent data become available.

The second set of findings is troubling. In light of these findings, we make the following recommendations to policymakers and practicing managers. For policymakers, we suggest that future policies offer companies more incentives to provide their part-time employees with health insurance. Also, policymakers should pay more attention to people who are self-employed by encouraging them to obtain coverage and making health insurance more affordable to them. This group of people will grow rapidly in size in the near future as technology advancement makes freelancing and entrepreneurship more accessible to the general public.

For practicing managers, as internet-based technology progresses further, freelancing will become the future of work either by workers' choice or due to business contingency. Currently, freelancers are considered as self-employed and are responsible for their medical and dental insurance entirely on their own. While this group of people is largely neglected by policymakers, one wonders if there is a solution in the private sector. For example, businesses could offer to partially contribute to a freelancer's health insurance, if the freelancer agrees to pay into the company's account reserved for covering the benefits of their regular employees. Given our

findings, this approach would not only demonstrate a company's commitment to social responsibility, but would potentially make itself more attractive to certain freelancers.

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