



The effect of self-employed health insurance subsidies on self-employment[☆]

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ABSTRACT

This paper estimates the effect of an increase in the deductibility of health insurance premiums for self-employed individuals on the probability of being self-employed. Using a panel of tax returns from 1999 to 2004, we estimate fixed effects instrumental variable regressions for the probability of being self-employed, entering into self-employment, and exiting from self-employment. Our results suggest that this policy increased the probability of being self-employed by 1.5 percentage points, and increased the probability that a taxpayer would be primarily or exclusively self-employed by 1.1 and 0.35 percentage points respectively. These effects explain about a third to a half of the total increase in self-employment by these definitions over the sample period. We also find that the probability of entering self-employment increased by 0.8 percentage points and find suggestive evidence that the probability of exit decreased by 2.8 percentage points.

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1. Introduction

When potential entrepreneurs are deciding whether to leave their job and strike out on their own, the cost of health insurance can be an important consideration, since leaving a job often carries with it the loss of employer-sponsored health insurance. In addition, direct purchases of insurance while self-employed do not receive the same favorable tax treatment that is provided for purchases through an employer, and this differential treatment may decrease the likelihood that an individual would want to enter self-employment, or to remain self-employed, ultimately resulting in a lower level of entrepreneurship. This paper examines the extent to which making the cost of health insurance more favorable for the self-employed through changes in the tax code increases the level of self-employment in the United States.

In the United States, the after-tax cost of health insurance depends on whether the insurance is purchased through an employer or not for several reasons. First, purchases of employer-sponsored insurance (ESI) generally carry lower administrative costs due to lower expenditures on underwriting, advertising, and enrollment. Second, ESI premiums

reflect greater risk pooling, which lower the variance of medical claims and reduces the risk insurers face. Third, the types of policies available are often very different, with non-ESI policies generally providing less coverage and requiring larger out of pocket expenses. Finally, the tax treatment of ESI purchases is more favorable, since purchases through an employer are generally excluded from both payroll and income taxes, whereas purchases by the self-employed are not excluded from payroll taxes, and until 2003 were not fully deductible from income taxes.²

In recent years, policy changes have served to decrease the tax differential between employer-sponsored health insurance and health insurance purchases by the self-employed. The Tax Reform Act of 1986 (TRA86) included a provision that allowed the self-employed to deduct 25% of health insurance premiums. More recently, legislative changes in 1998 increased the deductibility of health insurance premiums for self-employed individuals for federal income tax purposes from 60% in 1999 to 70% in 2002 and to 100% in 2003, which further reduced the after-tax price of health insurance while self-employed. A number of papers, including Gruber and Poterba (1994), Selden (2009), and Heim and Lurie (2009) each examine the effect of a subset of these tax changes on the take-up of health insurance among the self-employed and find significant effects on the decision to purchase health insurance.³ Heim and Lurie (2009) additionally find a significant effect of the tax change on the amount of insurance purchased.

The exogenous change in the cost of health insurance induced by these changes in tax policy also provides a natural experiment to

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² Non-ESI purchases by taxpayers who are not self-employed are only deductible if the taxpayer itemizes deductions, and only to the extent that total health expenditures exceed 7.5% of AGI.

³ On the other hand, Gumus and Regan (2008) do not find a significant effect in a recent working paper.

assess the sensitivity of the self-employment decision to health insurance prices.⁴ Two working papers have examined the effect of these tax policy changes on the propensity to be self-employed. [Velamuri \(2008\)](#) uses CPS data to examine the effect of TRA86 on the decision of employed women to become self-employed, and finds that the rate of self-employment among women who were not covered under a spousal plan rose by between 14% and 25% after TRA86. [Gumus and Regan \(2009\)](#) also use CPS data, and find small effects of the 1997–2006 expansion of the self-employed health insurance deduction on entry, but no significant effects on exit from self-employment or the likelihood of being self-employed.^{5,6}

It is important to note that the responsiveness of self-employment behavior to changes in the after-tax price of health insurance could take several forms. An employee of a firm that offers health insurance may decide to leave their wage and salary employment altogether to start an independent business when the increased deductibility of premiums lowers the cost of health insurance. A taxpayer that is partially self-employed and receives health insurance from their employer may decide to decrease or eliminate their wage employment, becoming primarily or exclusively self-employed with insurance purchased on their own. In addition, the lowered cost of health insurance may induce individuals to experiment with self-employment. A part-time worker who already purchases insurance in the individual market may decide to start up a side business, since any profits up to the cost of their health insurance policy are effectively exempt from income taxes. Or, a worker who is not covered by insurance may decide to start a small business, and also purchase health insurance because of the increased deduction.⁷

This study, then, examines self-employment behavior using a panel of tax returns from over 236,000 taxpayers that spans from 1999 to 2004. It advances the literature in at least three ways. First, because it uses a panel in which the self-employed are followed for up to six years, it is possible to include fixed effects to account for unobserved characteristics that are correlated with the regressor of interest and outcome variables. Second, the paper examines whether the impact of the policy differs depending on the intensity of self-employment under examination (whether the taxpayer has at least a minimal amount of self-employment income, whether the majority of their income flows come from self-employment, or whether all of the taxpayer's earned income comes self-employment). Third, since the tax data reports whether the self-employed health insurance deduction was claimed, it is possible to test whether any responsiveness to the policy change is centered among those who actually claim

the deduction, which would be expected if any estimated effect is indeed due to the policy change.

Three limitations to this study should be noted. First, unlike the Current Population Survey, which has often been used in studies of self-employment, tax data does not contain information on whether taxpayers identify themselves as self-employed. Thus, we must resort to using information on the amount of reported self-employment income at the tax unit level to create measures that attempt to ascertain whether the taxpayer is self-employed. Second, because eligibility to claim the self-employed health insurance deduction depends in part on whether the taxpayer is offered health insurance by an employer, which is not observed in tax data, we cannot account for this in our key independent variable, the after-tax price of self-employed health insurance. Because this is more likely to be a problem for married taxpayers (for whom an offer of family health insurance for one spouse can make the other spouse ineligible to claim the deduction), we report some results separately by marital status. Third, the effect of the deduction may differ across taxpayers depending on a number of characteristics, some of which (such as the desire to have children or health status) are unobserved in tax data. We are able, however, to examine whether the estimated effect differs along observable dimensions (such as marital status and the age of the taxpayer).

Using fixed effect instrumental variable models, we estimate the extent to which the level of self-employment is related to the after-tax price of health insurance. Our results suggest that the decline in the tax price of health insurance while self-employed between 1999 and 2004 increased the probability of being self-employed by about 1.5 percentage points. We also find significant effects on different intensities of self-employment, with an increase in the probability that a taxpayer would be primarily or exclusively self-employed by 1.1 and 0.35 percentage points respectively. These effects explain about a third to a half of the total increase in self-employment by these definitions over the sample period. As would be expected, we find that this increase in the propensity to be self-employed is centered among those who claimed the self-employed health insurance deduction. We also find this decrease in price increased the probability of entering self-employment by 0.8 percentage points, and find suggestive evidence that the decrease in price decreased the probability of exiting self-employment by 2.8 percentage points.

The paper proceeds as follows. [Section 2](#) describes tax policy toward health insurance for the self-employed. In [Section 3](#), the estimation strategy is outlined, and [Section 4](#) describes the panel of tax returns that is used in this study. [Section 5](#) presents the estimation results, and [Section 6](#) concludes.

2. Tax policy toward self-employed health insurance

The federal deduction for self-employed health insurance originated as part of the Tax Reform Act of 1986 (TRA86). Prior to TRA86, the self-employed could deduct health insurance premiums only if the taxpayer itemized deductions and only to the extent that total health expenditures exceeded 5% of their adjusted gross income (AGI).⁸ The passage of TRA86 allowed the self-employed to deduct 25% of their premiums, regardless of whether the taxpayer itemized deductions, starting in 1987. A self-employed taxpayer is eligible to take the deduction if the taxpayer has a net profit from self-employment⁹ and the primary filer (and the secondary filer, if the taxpayer is married filing jointly) is not eligible to participate in an ESI plan. The self-employed health insurance

⁴ This paper is also related to the literature that began with [Madrian \(1994\)](#) examining the effect that ESI has on various work margins. [Gruber and Madrian \(2002\)](#) provide a nice survey of this “job-lock” literature. Several papers, including [Holtz-Eakin et al. \(1996\)](#), [Madrian and Lefgren \(1998\)](#), [Wellington \(2001\)](#), [Fairlie et al. \(2008\)](#), and [Gumus and Regan \(2009\)](#) have examined the effect of ESI on the decision to be self-employed, though with mixed results.

⁵ [Gurley-Calvez \(forthcoming\)](#), uses a small sample of tax returns from 1988–90 to estimate the propensity to exit self-employment as a function of whether a self-employed taxpayer claimed the health insurance deduction. She does not, however, examine whether self-employment behavior changes when tax policy changes.

⁶ On a related topic, [DeCicca \(2007\)](#) estimates the effect of an individual health insurance market reform in New Jersey in 1993 on the probability of being self-employed. The New Jersey reform included a large set of provisions which were intended to increase access to the individual health insurance market, including providing a set menu of policies, mandating guaranteed issue and renewability of policies, and pure community rating. DeCicca finds that the reform increased self-employment levels by 15% to 25%. Community rating and guaranteed issue have been shown to reduce individual coverage for healthy individuals ([LoSasso and Lurie 2009](#)) which would suggest that the New Jersey reform should have a negative effect on self-employment for them.

⁷ In addition, it is possible that taxpayers could switch from a corporate business form that is subject to the corporate income tax to a form of business that is taxed at the individual level in response to the policy change. Unfortunately, to examine whether this is the case, we would need a dataset that contains matched corporate-individual tax forms, which we do not have.

⁸ TRA86 increased the threshold for itemizing medical expenses to 7.5% of AGI.

⁹ Greater than 2% shareholders of an S corporation that receive wages are also eligible for the deduction. The IRS defines an S corporation as a corporation that elects to pass corporate income, losses, deductions and credit through to their shareholders for federal tax purposes. This income is then reported on the shareholders' individual tax returns.

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