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Effects of dependent coverage mandate on household precautionary savings: Evidence from the 2010 Affordable Care Act

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HIGHLIGHTS

- The Affordable Care Act (ACA) of 2010 implemented the dependent coverage mandate.
- The ACA affected households with employer-sponsored health insurance and dependents.
- The dependent coverage mandate lowered those households' precautionary savings.
- Specifically, those households reduced liquid assets after the implementation of ACA.
- They however did not reduce savings in tax-deferred accounts or real estate assets.

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ABSTRACT

This article examines the effects of the health insurance coverage mandate for young adults on household precautionary savings by focusing on the Affordable Care Act (ACA) of 2010. The ACA dependent coverage mandate allows young adults to remain on their parents' health insurance plans until their 26th birthday. Using the Survey of Income and Program Participation data, I find that the ACA mandate reduced precautionary savings for households with both parental employer-sponsored health insurance and dependent children aged 19–25 years. These households significantly reduced liquid assets by $897 after ACA, but they did not reduce savings in tax-deferred accounts or real estate assets.

1. Introduction

To alleviate high uninsured rates for older dependent children aged 19–25 years, the Affordable Care Act (ACA) of 2010 allowed these young adults to remain on their parents' health insurance plans until they turn 26 years of age.[1] Recent studies have found that the ACA dependent mandate significantly reduced young adults' uninsured rates (Akosa Antwi et al., 2013), increased their health insurance coverage (Cantor et al., 2012; Jhamb et al., 2015; Sommers et al., 2013; Sommers and Kronick, 2012), and led them to switch from public health insurance or their own private health insurance to their parents' employer-sponsored health insurance (ESHI) plans as dependents (Akosa Antwi et al., 2013). Moreover, studies have shown that the dependent coverage mandate significantly reduced the out-of-pocket costs of medical treatment for young adults (Busch et al., 2014; Chua and Sommers, 2014).

However, no research has examined whether the ACA dependent coverage mandate reduces households' precautionary savings. Because the ACA dependent coverage mandate significantly increased health insurance coverage and reduced medical care expenditures of dependent children aged 19–25 years, households with these dependent children were able to lower their risk of future consumption shock than before. As a result, this paper demonstrates that households with mandate-eligible dependents should reduce their precautionary savings after the ACA mandate provision. According to the standard theory of "precautionary sav-

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[1] Abbreviations—ACA: Affordable Care Act, DD: Difference-in-Differences, DDD: Difference-in-Difference-in-Differences, ESHI: Employer-Sponsored Health Insurance, SIPP: Survey of Income Program and Participation, TDAs: Tax-Deferred Accounts.

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ings", health-related risks encourage households to accumulate assets against uncertain future consumption (Kimball, 1990; Leland, 1968; Sandmo, 1970). Ceteris paribus, households with uninsured family members face greater uncertainty about health care costs than their insured counterparts and thus hold higher savings levels to buffer consumption shock in case of sickness (Starr-McCluer, 1996).

To provide a comprehensive understanding of how the dependent coverage mandate had a negative effect on household precautionary savings, this article investigates the policy effects on four different types of savings: (1) liquid assets, defined as savings in banking and interest-bearing accounts; (2) savings in tax-deferred accounts (TDAs), such as individual retirement accounts, Keogh accounts, and Thrift and 403(b) plans; (3) total wealth, including liquid assets, savings in TDAs, and real estate; and (4) total net worth for total wealth including debts and liabilities. The savings in liquid assets are most easily converted to cash to deal with adverse consumption shocks, whereas savings in TDAs or real estate have relatively low liquidity to be converted into cash.[2] Therefore, when uninsured dependent children aged 19–25 years become entitled to health insurance through their parental ESHI due to the ACA mandate, households with these dependent children are more likely to reduce savings in liquid assets rather than the three other types of savings.

Using the 2008 Survey of Income Program and Participation (SIPP) data with the difference-in-difference-in-differences (DDD) framework (i.e., dependent children age, period before and after the ACA mandate, and parental ESHI availability), I find that households with both parental ESHI coverage and dependent children aged 19–25 years significantly reduced their savings in liquid assets by $897 after the ACA mandate. However, there was no significant reduction in savings in TDAs, total wealth, or total net worth.

This article makes three major contributions to the literature. First, this study reveals the effect of *private* health insurance on US household precautionary savings. Although some prior studies have shown a negative effect of *public* health insurance on household precautionary savings (Chou et al., 2003; Engen and Gruber, 2001; Gruber and Yelowitz, 1999; Kantor and Fishback, 1996; Kuan and Chen, 2013; Levin, 1995), no studies have found any evidence of a negative effect of *private* health insurance on household precautionary savings because they suffered from self-selection bias (Guariglia and Rossi, 2004; Starr-McCluer, 1996). This paper overcomes the self-selection issue by exploiting the structural changes of the health insurance policy by the ACA.

Second, to the best of my knowledge, this article is the first to investigate the impact of the ACA dependent coverage mandate on household financial decisions, especially precautionary savings. Households' savings directly affect their consumption and, thus, future welfare. According to the 2011 Medical Expenditure Panel Survey data, approximately 40% of heads of households below age 60 faced difficulties in paying medical bills or filed medical bankruptcy. Thus, it is important to understand how households manage their savings in response to the specific health insurance mandate policy.

Third, the DDD framework used in this study addresses the methodological concerns that Slusky (2014) raises. Specifically, Slusky notes that the ACA mandate effects on health insurance coverage or labor supply of young adults that previous research found using the difference-in-differences (DD) framework could simply reflect dynamics in the age–time structure of health insurance or labor markets for young adults. Using the same DD framework, Slusky still produced significant ACA mandate "placebo" effects on health insurance coverage or labor supply of young adults over placebo dates (i.e., long period before the ACA implementation). In contrast, the empirical results in this article suggest that there is no placebo effect under the DDD framework.

2. Dependent coverage mandate and its implications for precautionary savings

2.1. ACA and dependent coverage mandate

The ACA was enacted on March 23, 2010, and it included three key mandate provisions to expand health insurance coverage to universal levels: (1) employers with more than 50 full-time employees must offer affordable health coverage options to their employees, (2) individuals are required to hold "qualifying" health insurance, and (3) private health insurers must allow older dependent children to stay on their parents' health insurance plans until their 26th birthday. If employers, individuals, or insurance companies elect not to comply with these mandates, they must pay a penalty. The dependent coverage mandate was the first to take effect, on September 23, 2010. Because the dependent coverage mandate became effective on the next plan renewal after September 22, 2010, health insurers and group plans were required to offer that plan no later than September 22, 2011.

2.2. Conceptual framework and hypothesis

According to the stochastic life-cycle model (Blanchard and Fischer, 1989; Deaton, 1992), households facing uncertainty in future medical expenditures maximize their lifetime expected utility by choosing the optimal consumption (and, thus, savings). Specifically, households first spend out-of-pocket medical expenditure E_t in period t and then choose the consumption level, C_t, and future consumption, $(C_{t+1}, \ldots, C_T)$. To express the solution for optimal consumption in a closed form, the utility function is assumed to exhibit absolute risk aversion (Caballero, 1990; Kimball and Mankiw, 1989; Weil, 1993). At $t = 0$, the household maximizes

$$
\begin{aligned}
&E\left[\sum_{t=0}^{T}\beta^t\left(-\frac{1}{\eta}\right)\exp\left(-\eta C_t\right)\right]\\
&s.t.\quad \tilde{C}_{t+1} = \tilde{Y}_{t+1} + R\cdot\left(Y_t - E_t - C_t\right) - \tilde{E}_{t+1}, \qquad (1)\\
&Y_t = Y_{t-1} + \zeta_t, \quad \ln\zeta \sim N\left(0, \sigma_Y^2\right),\\
&E_t = E_{t-1} + \varepsilon_t, \quad \ln\varepsilon \sim N\left(0, \sigma_E^2\right),\\
&Y_t \quad \text{and} \quad E_t \geq 0, \quad \textit{for } \forall t,
\end{aligned}
$$

where β is the time preference rate, η is the degree of absolute prudence as well as the degree of absolute risk aversion, R is the gross interest rate, and Y_t is income in period t. Then, the optimal solution for consumption is $C_t = \frac{\eta R}{\eta(1+R)}\left(Y_t - E_t\right) + \frac{1}{1+R}\left\{\left(\mu_Y + \mu_E\right) - \frac{1}{2}\eta\left(\sigma_Y^2 + \sigma_E^2\right)\right\} - \frac{1}{\eta(1+R)}\log\beta R$. This equation suggests that the lower risk of future medical expenditure $\left(\sigma_E^2\right)$ would increase consumption and thus reduce precautionary savings $(=Y_t - E_t - C_t)$.

With the ACA dependent coverage mandate both increasing health insurance coverage and reducing out-of-pocket medical costs of young adults aged 19–25 years, households with these dependent children faced the lower risk of future consumption shock associated with medical expenditures than before. As a result, I expect that they reduced precautionary savings after the ACA mandate. Because liquid assets are easily converted into cash and thus are held for precautionary reasons, households likely would have reduced their liquid assets after ACA, rather than

[2] For savings in TDAs or real estate assets, several restrictions exist on liquidation, such as 10% penalty for early withdrawal from TDAs.