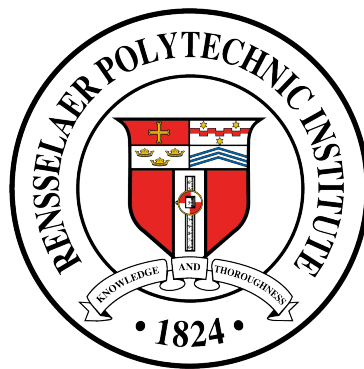


The Effect of Framing on Health Insurance Uptake

Literature Survey and Policy Proposal

Max Troeger

ECON 6270 - Behavioral Economics
Dr. Ian Chadd



Department of Economics
Rensselaer Polytechnic Institute
Troy, NY, USA
14 Apr. 2025

Contents

1 Literature Review	2
1.1 Deviations From Expected Utility Theory	2
1.2 The Patient Protection and Affordable Act of 2010	2
1.3 The Breakdown of Mandated Health Insurance	4
2 Policy Proposal	6
References	10

1 Literature Review

Friedman (1974) discusses how the selection of one insurance package out of a choice set of alternative contracts reveals an agent's risk preferences through revealed choice. In particular, he builds on the work of Arrow (1963) by doing away with the assumption that illness does not affect utility directly; moreover, Friedman (1974) articulates a theory of insurance take-up based on an expected utility maximization subject to some acuteness of illness and a typical budget constraints that limits plan selection. An agent's aversion to risk determines their sensitivity to the acuteness of illness, and maximizes their utility as usual.

1.1 Deviations From Expected Utility Theory

Although it is a sensible assumption that choice is a maximization process, Kahneman and Tversky (1986) write that real observable actions deviate fundamentally from normative models of choice like that constructed by Friedman (1974). In particular, Kahneman and Tversky (1986) find that, "variations in the framing of decision problems," i.e., whether decisions problems are presented as *positive* or *negative*, "produce systematic violations of invariance and dominance that cannot be defended on norma-

tive grounds."

Rabin and Thaler (2001) quite starkly claim that the observation that, "risk aversion pertains to large stakes and not small stakes isn't merely an artifact of the structure of expected utility theory—it is the central premise of the theory." Given the objections of Kahneman and Tversky (1986) and Rabin and Thaler (2001) to risk aversion and utility maximization as candidates to explain health insurance selection, Rabin and Thaler (2001) offer myopic loss aversion (i.e., aversion to short-term losses) as a more complete explanation of observed suboptimal insurance selection. They predict that an economy full of myopic loss averters would result in insurance markets predominantly offering small-scale coverages with high prices, Rabin and Thaler (2001) subsequently identify that health insurance policies are of precisely that variety, having low deductibles and low limits. Furthermore, "people's choices can vary depending on the wording (or 'framing') of a problem, rather than its objective features" (Rabin and Thaler, 2001).

1.2 The Patient Protection and Affordable Act of 2010

According to Auerbach et al. (2010), the 2010 Patient Protection and Affordable Care Act (ACA) individual insurance mandate would, by 2014, impose

a penalty in the range of \$695–\$12,500 for not holding health insurance, and—in combination with the Health Care and Education Reconciliation Act of 2010 (HCERA)—would create, “\$900 billion in subsidies, including a substantial expansion of Medicaid and the creation of tax credits for low and middle-income families” (Auerbach et al., 2010). Behavioral economics implies that, given loss aversion and status quo bias, conventional framing of insurance may lead people to avoid obtaining insurance, seeing the premiums as a loss given an underweighting of the probability of a health event. The authors indicate that, “a penalty has a larger effect on demand for insurance than a subsidy of equal value” and, moreover, “mandates may effectively change the status quo, by increasing the certain costs associated with being uninsured (via the penalty)” (Auerbach et al., 2010). Thus, given conventional framing, a tax penalty can obviate the status quo bias that creates private suboptimal insurance take-up.

Congdon et al. (2009) discuss tax efficiency and tax incidence, dedicating part of their discussion to the interaction of the United States taxation system with the expansion of health insurance coverage. In particular, the authors indicate that using tax returns to facilitate enhanced coverage is attractive because tax returns already contain the information

necessary to assess Medicaid eligibility, and states like Massachusetts had already implemented such a system (Congdon et al., 2009). Tax compliance then is an important issue. Auerbach et al. (2010) report that the net misreporting rate for income reported by third-parties does not exceed 5%, but the misreporting rate for self-reported income exceeds 50%. The tendency to nonconform depends on the strength of the enforcement mechanism and the unpredictability of IRS enforcement, whereas voluntary conformity depends on social norms (Auerbach et al., 2010). Therefore, implementing health insurance expansion through an existing taxation infrastructure, though convenient, requires additional oversight.

Baicker et al. (2012) write that in 2010, 50 million people in the United States—roughly one in six—lacked health insurance, primarily because of affordability issues; and, in 2011, the average annual employer-sponsored family health insurance premium exceeded \$15,000. Moreover, “[roughly] two-thirds of the uninsured are in households with a below-median income...” and most of them are adults (Baicker et al., 2012). The ACA was predicted to reduce the number of uninsured to 23 million by the end of the decade (Auerbach et al., 2010) by addressing insurance affordability concerns, but Baicker et al. (2012) indicate that, of those with-

out private coverage who were *already eligible* for state or federal relief, 15% of children and 50% of adults were not enrolled. This behavior violates traditional theories of expected utility maximization (Friedman, 1974; Rabin and Thaler, 2001), and prominent means by which expected behavior varies from observed insurance take-up include an information, “transaction cost associated with learning about, applying for, and collecting benefits” (Baicker et al., 2012), social stigmas surrounding welfare participation, and limited scope of benefits offered by national programs.

1.3 The Breakdown of Mandated Health Insurance

The work of Krueger and Reinhardt (1994) makes clear that, barring a health insurance mandate, people would choose to remain uninsured. Nevertheless, a fully tax-funded, portable health insurance plan à la Canada is not politically feasible (Krueger and Reinhardt, 1994). So, Krueger and Reinhardt (1994) propose two alternatives: an “employer mandate” (as in Massachusetts) and an “individual mandate” (as in the ACA). It is also evident that employers participating in an employer health insurance mandate, “recoup their outlays, dollar for dollar, either in the form of higher prices for consumption goods or through reductions in take-home pay to employee,”

and, Baicker et al. (2012) write, as state mandated health insurance requires employer contributions to health insurance premiums, “the standard models predict that the employer’s share of health insurance premiums is ultimately borne by the workers themselves in the form of lower wages.” Paradoxically, “those who decline employer coverage are implicitly accepting a lower wage in the long run for no benefit” (Baicker et al., 2012).

Baicker et al. (2012) identify one avenue for explaining this behavior as choice overload: as the size of a choice set increases, so does the likelihood of choosing nothing. To this end, Domurat et al. (2021) investigate the impact of experimentally varying information mailed to California households and identify insurance enrollment frictions. They identify that, “informational search costs and psychological frictions...” such as, “Consumers’ lack of awareness of plan attributes, choice complexity, choice overload, and inertia... can result in higher equilibrium pricing... and adverse selection welfare loss.”

Based off data from the Massachusetts health-care insurance marketplace, Finkelstein et al. (2019) offer the additional explanation that marginal enrollees have a willingness-to-pay (WTP) for insurance coverage that falls below their marginal health-care costs, so they choose to remain uninsured *de-*

spite their eligibility for subsidies. The gap between WTP and marginal cost is so extreme that, “across the entire distribution [...] enrollees’ willingness to pay is always less than half of their own expected costs that they impose on the insurer.” Finkelstein & al. also identify an extreme price elasticity of insurance premiums for subsidy-eligible individuals: “As subsidies decline, insurance take-up falls rapidly, dropping about 25 percent for each \$40 increase in monthly enrollee premiums.”

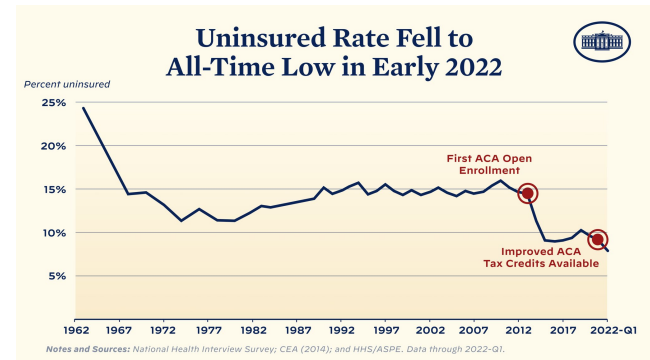
The higher equilibrium pricing and substantially low WTP drive individuals away from insurance coverage despite subsidy eligibility. To solve this, Epstein et al. (2022) experimentally research ways of increasing insurance uptake through moral framing and find that conventional framing—i.e., presenting insurance coverage as being the smart, self-interested choice with attractive subsidies—in advertisements performs *worse* at the $p = 0.01$ level than “moral” framed advertisements (e.g., featuring language about supporting the community). Baicker et al. (2012) emphasize that the former, usual framing of insurance encourages risk taking, status quo bias, and discourages take up.

2 Policy Proposal

As of 2023, 7.6% Americans do not carry any form of health insurance (CDC, 2024), and, since the year 2000, this population is responsible for incurring in excess of \$745 billion in uncompensated hospital care costs (“Fact Sheet: Uncompensated Hospital Care Cost”, 2022). It is evident that increasing the number of Americans carrying health insurance would reduce the negative externality on the US healthcare system associated with low health insurance uptake.

To this end, Epstein et al. (2022) write that, “increased subsidies, with the effect of reduced policy cost, have been shown to improve insurance uptake.” Nevertheless, Auerbach et al. (2010) indicates that, “a penalty has a larger effect on demand for insurance than a subsidy of equal value.” The optimal scheme for increasing insurance uptake is then the intersection of these two: namely, to mandate health insurance—uninsurance being subject to some penalty optimally collected through existing tax infrastructure—and increase health insurance subsidies overall (Auerbach et al., 2010; Congdon et al., 2009). This optimal policy, however, was already implemented under the ACA, with the individual penalty being repealed in 2018 under the Trump administration. Reimplementing such a policy under the current administration would thus be

a political impossibility. Furthermore, health uninsurance persists despite the 2022 expansion of ACA subsidies.



To increase health insurance enrollment, we recommend that state and federal governments leverage behavioral biases—through nudges and framing—to increase the evaluation of the benefit of carrying health insurance by uninsured households.

Epstein et al. (2022) indicate that health insurance advertising usually takes the following *self-interest* form:

1. “Pay less for health plans due to the new Covid relief law.”
2. “You can pay less for health coverage.”
3. “For less than \$14 a month, I’m covered—doctors visits, meds, vision & dental.”
4. “Keep kids healthy throughout the school year with *free* and *low* cost health insurance.”

where individuals shopping for insurance encounter framing that appeals to *rational* (i.e., cost minimizing) decision making. As we have seen, however, deviations from optimal insurance uptake are due to *irrational* behavior. Consequently, the investigation by Epstein et al. (2022) into different possible framings of health insurance advertisements reveals that “responsibility” framing is especially effective in increasing the incidence of advertising responses (measured through the number of clicks on ads) for health insurance packages. Unlike self-interest framing, responsibility framing in health insurance advertising takes the form of

1. “Do not make others have to cover your costs when you get sick: get health insurance.”
2. “When you need healthcare, who do you expect to pay for it? Get covered.”

The authors document that framing which includes language about helping one’s community or about matching one’s own insurance premiums for patients with pre-existing conditions (i.e., *moral* framing) similarly increases advertisement click through. Community and moral framing, however, do not as strongly influence advertisement response behavior as responsibility framing (Epstein et al., 2022), and the political unfeasibility of matching insurance con-

tributions between any two parties is clear.

In order for health insurance plans to be available in state health insurance marketplaces and on HealthCare.gov, health insurance providers are required by the Department of Health and Human Services (HHS) to seek Qualified Health Plan (QHP) certification. Although the constitutionality of compelled corporate speech is ambiguous (Joo, 2015; Ribstein, 1995; Winkler, 2006), QHP certification requires, in part, that insurance providers make cost summary information, “available to [individuals] through an internet website and through other means for individuals without access to the internet” with simple wording so as to reduce complexity (HHS, 2020). HHS further requires that, “people will receive the summary when shopping for coverage, enrolling in coverage, at each new plan year, and within seven business days of requesting a copy from their health insurance issuer or group health plan” (CMS, 2024). It is clear, therefore, that health insurance markets are sufficiently regulated to enable mandatory framing. Thus, we recommend that HHS require insurance companies include responsibility framing in their advertising and mandatory summaries. Principally, we suggest that all mandatory summaries include the following text at the beginning of the document:

As of 2023, the Centers for Disease Control and Prevention (CDC) reports that 7.6% of Americans do not have health insurance.

When everyone is insured, we all benefit. Do not make others have to cover your costs when you get sick. Get health insurance.

We pull this responsibility framed wording directly from Epstein et al. (2022) because its efficacy in increasing response activity has been documented: Epstein et al. (2022) state that, “Assuming that \$100 million in online advertisements targeting higher income consumers based on the Self-Oriented theme were instead switched to the Responsibility theme, the improved strategy could cause an additional 3.52 million users to click.” Clearly, clicks do not map perfectly to insurance uptake; but, the significant correlation between responsibility framing and *attention* is salient.

In a further discussion of the value of mandatory summaries we present the work of Domurat et al. (2021): the authors document the efficacy of messaging interventions in increasing health insurance uptake among the uninsured. In particular, they find that sending targeted informational nudges to uninsured households in California increases insur-

ance enrollment by 16%—equivalent to a monthly subsidy of \$25–\$53. They increase enrollment by reducing cognitive frictions that make purchasing insurance difficult by sending letters that informed households of the state uninsured tax penalty, of enrollment deadlines, of estimated subsidies available to each household, and of plans offered in the state insurance marketplace. As many households which are not carrying health insurance are, paradoxically, subsidy eligible (Baicker et al., 2012), we suggest leveraging state or federal tax returns—which are themselves used to assess eligibility—to identify households suitable for an information package and, with the existing HHS infrastructure for information dissemination, send suitable households information about subsidies and marketplace health care plans. Although this would not cover all uninsured parties, it would reach a significant proportion of the uninsured population: nearly 50% of state or federal subsidy eligible adults (Baicker et al., 2012).

If, for the purposes of nudging uninsured households towards insurance uptake, we construct an information package as described in Domurat et al. (2021) with the same featured text we recommended be present in the HHS mandated summaries, we would diminish the power of behavioral frictions present among the (specifically subsidy eligi-

ble) uninsured *and* expose this uninsured population *which is not already looking for insurance* to the responsibility framing that would otherwise only affect those whom Epstein et al. (2022) document *are* looking for insurance packages (i.e., those responsive to advertising).

The net effect of our recommended policy would therefore be that those without insurance, assessed as predominantly being those who are subsidy eligible, receive an information nudge containing responsibility framing in the mail. Consecutively, uninsured individuals looking to purchase health insurance would encounter responsibility framing in HHS mandated cost summaries and in regulated advertising. Given the state of the literature, we claim that such an approach would augment insurance enrollment. The theoretical efficacy of this approach notwithstanding, the current administration's reduction of HHS staff by approximately 25% and propensity toward funding cuts—particularly toward medical research and offices—makes such an intervention unfeasible at the federal level (Luján, 2025). We could instead leverage state tax returns to acquire a list of subsidy eligible people to send informational nudges to. Rather than requiring HHS increase QHP certification requirements by mandating the addition of the responsibility framing in cost summaries, state

Medicaid agencies could instead require that our recommended phrase be added in order to participate in state health insurance marketplaces. A state, rather than federal, approach also restores the political feasibility of imposing an individual penalty for health uninsurance. Several states, including Massachusetts and California, have both implemented their own individual penalties. Given the political heterogeneity of the United States (Kirkland, 2014), it is likely best that such an apportioning be made as it would permit those states that do not want to impose a mandate the freedom not to without precluding those states that wish to from doing so.

Despite our policy proposal's emphasis on framing and penalties, we do not suggest that such an approach replace subsidies. Although we cite the finding of Auerbach et al. (2010) that penalties are more effective than subsidies, we cannot discount that subsidies are valuable in increasing uptake in health insurance (Epstein et al., 2022). Given how relatively inexpensive sending letters and mandating framing likely would be in decreasing the negative externality of health uninsurance, we instead recommend that our policy be used in conjunction with subsidies and penalties.

References

- Arrow, K. J. (1963, January). Uncertainty and the welfare economics of medical care notes on contributors. In *Moral hazard in health insurance*. Columbia University Press. <https://doi.org/10.7312/fink16380-007>
- Auerbach, D., Holtzblatt, J., Jacobs, P., Minicozzi, A., Moomau, P., & White, C. (2010). Will health insurance mandates increase coverage? synthesizing perspectives from health, tax, and behavioral economics. *National Tax Journal*, *63*(4.1), 659–679. <https://doi.org/10.17310/ntj.2010.4.03>
- Baicker, K., Congdon, W. J., & Mullainathan, S. (2012). Health insurance coverage and take-up: Lessons from behavioral economics. *The Milbank Quarterly*, *90*(1), 107–134. <https://doi.org/10.1111/j.1468-0009.2011.00656.x>
- CDC. (2024, June). U.s. uninsured rate drops by 26% since 2019. https://www.cdc.gov/nchs/pressroom/nchs_press_releases/2024/20240618.htm
- CMS. (2024, September). Summary of benefits & coverage & uniform glossary. <https://www.cms.gov/marketplace/health-plans-issuers/summary-benefits-coverage>
- Congdon, W. J., Kling, J. R., & Mullainathan, S. (2009). Behavioral economics and tax policy. *National Tax Journal*, *62*(3), 375–386. <https://doi.org/10.17310/ntj.2009.3.01>
- Domurat, R., Menashe, I., & Yin, W. (2021). The role of behavioral frictions in health insurance marketplace enrollment and risk: Evidence from a field experiment. *American Economic Review*, *111*(5), 1549–74. <https://doi.org/10.1257/aer.20190823>
- Epstein, W. N., Robertson, C. T., Yokum, D., Ko, H., Wilson, K. H., Ramos, M., Kettering, K., & Houtz, M. (2022). Can moral framing drive insurance enrollment in the united states? *Journal of Empirical Legal Studies*, *19*(4), 804–843. <https://doi.org/https://doi.org/10.1111/jels.12334>
- Fact sheet: Uncompensated hospital care cost. (2022, February). <https://www.aha.org/fact-sheets/2020-01-06-fact-sheet-uncompensated-hospital-care-cost>
- Finkelstein, A., Hendren, N., & Shepard, M. (2019). Subsidizing health insurance for low-income adults: Evidence from massachusetts. *American Economic Review*, *109*(4), 1530–67. <https://doi.org/10.1257/aer.20171455>

- Friedman, B. (1974). Risk aversion and the consumer choice of health insurance option. *The Review of Economics and Statistics*, 56(2), 209. <https://doi.org/10.2307/1924441>
- HHS. (2020, October). Transparency in coverage. <https://www.cms.gov/CCIIO/Resources/Regulations-and-Guidance/Downloads/CMS-Transparency-in-Coverage-9915F.pdf>
- Joo, T. W. (2015). Corporate speech & the rights of others. *Const. Comment.*, 30, 335. https://heinonline.org/hol-cgi-bin/get_pdf.cgi?handle=hein.journals/ccum30%5C§ion=20
- Kahneman, D., & Tversky, A. (1986). Rational choice and the framing of decisions. *The Journal of Business*, 59(4), S251–S278. Retrieved March 28, 2025, from <http://www.jstor.org/stable/2352759>
- Kirkland, J. H. (2014). Ideological heterogeneity and legislative polarization in the united states. *Political Research Quarterly*, 67(3), 533–546. <https://doi.org/10.1177/1065912914532837>
- Krueger, A. B., & Reinhardt, U. E. (1994). The economics of employer versus individual man-
dates. *Health Affairs*, 13(2), 34–53. <https://doi.org/10.1377/hlthaff.13.2.34>
- Luján, S. B. R. (2025, March). Luján statement on trump administration gutting hhs by cutting nearly quarter of workforce, abruptly canceling funding for new mexico state health services. <https://www.lujan.senate.gov/newsroom/press-releases/lujan-statement-on-trump-administration-gutting-hhs-by-cutting-nearly-quarter-of-workforce-abruptly-canceling-funding-for-new-mexico-state-health-services/>
- Rabin, M., & Thaler, R. H. (2001). Anomalies: Risk aversion. *Journal of Economic Perspectives*, 15(1), 219–232. <https://doi.org/10.1257/jep.15.1.219>
- Ribstein, L. E. (1995). The constitutional conception of the corporation. *Supreme Court Economic Review*, 4, 95–140. <https://doi.org/10.1086/scer.4.1147081>
- Winkler, A. (2006). Corporate personhood and the rights of corporate speech. *Seattle UL Rev.*, 30, 863. https://heinonline.org/hol-cgi-bin/get_pdf.cgi?handle=hein.journals/sealr30%5C§ion=38