Does Age-Based Public Health Insurance Eligibility Save

Medicaid Divorce? Regression Discontinuity Evidence at Age 65

Jiacheng He\*

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Abstract

To get a divorce, split the joint assets, and allocate most of the assets to the

healthy spouse is a strategy to help the sick spouse financially qualify for Medicaid

coverage. The exogenous age-based increase in eligibility for Medicare and Medicaid

reduces the incentive for people crossing the 65-threshold to implement Medicaid

divorce. Using regression discontinuity design, I estimate a 4.1 percent discrete

decrease in the prevalence of divorce at the 65-threshold. By examining how the

magnitude of the divorce gap is associated with the state-level variation in Medi-

caid asset test, I argue that the divorce gap at age 65 measures the reduction in

Medicaid divorce. In addition, the heterogeneity analysis indicates that the divorce

gap is significantly larger for women, which suggests that Medicaid divorce is more

prevalent when the sick spouse is the wife.

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\*Department of Economics, University of Kansas, jiacheng.he@ku.edu

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# 1 Introduction

Consider a couple at their late 50s or early 60s. If one of the spouse suddenly gets chronically sick and needs expensive medical treatments, then the couple have to face large medical bills and increasing health insurance premium. In order to prevent the couple from spending down their retirement savings to the medical bills, they might be advised by their lawyer to implement a Medicaid divorce. After divorce and allocating most of their joint assets to the healthy spouse, the sick spouse then becomes financially poor enough to qualify for Medicaid coverage. Then the sick spouse's medical use will be paid by Medicaid. Many elder law professionals think Medicaid divorce is a strategic option to avoid the increasing medical expenditures accompanied by aging.<sup>2</sup>

However, if the sick spouse is over 65 years old, then Medicaid divorce is less necessary. First, seniors aged over 65 are under the cover of Medicare. Medicare is the largest public health insurance program in the United States. People automatically become eligible for Medicare when they cross the 65-threshold. According to their needs, people can choose to enroll in a combination of affordable health insurance plans within the Medicare systems. Medicare does not charge higher premium or even decline coverage based on health conditions.

Second, "seniors aged over 65" by itself is a Medicaid eligibility category. The financial restriction for Medicaid qualification is more lenient for seniors than for many of the categories of people aged below 65. In many states, the asset limit and income limit are set higher for seniors. As a consequence, after crossing the 65-threshold, it is easier for the sick spouse to show financially poor and meet the Medicaid financial eligibility, even

<sup>&</sup>lt;sup>1</sup>Michael L. Olver and Christopher C. Lee, "Medicaid Divorce: An Overview." *Helsell Fetterman*, December 13, 2010

<sup>&</sup>lt;sup>2</sup>Amy Ziettlow, "Is Divorce the Best Option for Older Americans?" Huffington Post, May 16, 2015

without divorce and asset splitting.

These increases in public health insurance eligibility at age 65 is systematic, exogenous, and purely age based. I hypothesize that the incentive for Medicaid divorce will also systematically decrease at age 65 because of the increasing eligibility. To examine my hypothesis, I use regression discontinuity design with pooled 2008-2015 American Community Survey (ACS) data. Assuming age as an assignment variable, I find a divorce gap at the 65-threshold: Divorce rate (the prevalence of divorce) discretely jump down by 0.7 percentage points at age 65, which accounts for a 4.1 percent decrease.

In the literature, many papers exploit the age-based and birth-date-based variation in health insurance eligibility and use regression discontinuity design the study the impact of health insurance coverage. Among many of the papers, Card, Dobkin and Maestas (2008), Card, Dobkin and Maestas (2009) are the most related to my research. They investigate the impact of the universal coverage of Medicare at 65-threshold on medical utilization and mortality. But they do not take into consideration that the eligibility for Medicaid also increases at the 65-threshold. Anderson, Dobkin and Gross (2012) find that the young adults crossing the 19-threshold "age out" of their parents' insurance plans, which leads to reduction in ED visits and inpatient hospital admissions. More broadly, Carpenter and Dobkin (2009) exploit the minimum drinking age threshold at 21 and find legal access to alcohol increased alcohol related death among young adults.

To my best knowledge, my paper is the first to use regression discontinuity design to exploit the age based eligibility for health insurance and study its impact on divorce behavior and family structure. Chen (2017) uses difference-in-difference design and finds that Medicare unlocks the "marriage lock" of the spousal dependent employer-based health insurance. Literature on Medicaid divorce is also rare. Slusky and Ginther (2017)

provide quasi-experimental evidence to show that the ACA Medicaid expansion reduced the divorce rate by 5.6 percent in expanded states among 50-64 cohorts.

To accurately measure the quantity of Medicaid divorce is difficult, since people usually do not reveal their true motivation of divorce. It remains to be an open question in the literature. This paper and Slusky and Ginther (2017) try to estimate the change in divorce prevalence due to the exogenous change in public health insurance coverage, under different contexts. I argue that I at least partly capture the "lower bound" of the quantity of Medicaid divorce.

The main purpose of Medicaid divorce is to make the sick spouse to pass the asset test. To validate my argument that the divorce gap at age 65 is the reduction in Medicaid divorce, I further exploit other sources of exogenous state-level variation in asset tests. First, each state has its own Medicare savings programs. Medicare savings program is partial Medicaid benefit package which help financially poor seniors aged over 65 to cover the out-of-pocket (OOP) expenditure of Medicare. In eight states <sup>3</sup>, there are no asset tests for these programs. The incentive for post-65 Medicaid divorce should be further reduced in these eight states. I compare the divorce gap in the states that do not impose asset tests for Medicare savings programs with those states do impose, and I do find statistically larger divorce gap in no-test states (1.1 percentage points v.s. 0.5 percentage points). To my best knowledge, my paper is the first in economics literature to study the state-level variation in Medicare savings programs.

Second, 2014 ACA Medicaid expansion reduced the incentive for people aged below 65 to implement Medicaid divorce. This will "close down" the divorce gap. I do find the divorce discontinuity estimate in expanded states after 2014 to be statistically insignificant. The empirical evidence that the magnitude of the age-based divorce gap is associated

<sup>&</sup>lt;sup>3</sup>Alabama, Arizona, Connecticut, Delaware, DC, Mississippi, New York, and Vermont

with the state-level asset tests supports my hypothesis.

Different subgroups might have different degree of willingness to implement Medicaid divorce. This can be reflected in the heterogeneous magnitude of the divorce gap at age 65. My subgroup heterogeneity analysis indicates that the divorce gap is more significant and larger for women (0.9 percentage points) and African Americans (1.4 percentage points). There are no statistically significant difference between noncollege population and people with a college degree.

Karraker and Latham (2015) uses Health and Retirement Study (HRS) data to study the relation between spouse's physical illness and the subsequent divorce behavior of the couple. Their descriptive analysis shows that wife's illness onset are associated with elevated risk of divorce, while there is no such association between husband's illness and divorce. My finding on the larger divorce gap for women and insignificant divorce gap for men provides indirect explanation to this phenomenon: Medicaid divorce is more prevalent when the wife gets sick.

The remaining parts of this paper are structured as follows: Section 2 elaborates the institutional background of Medicaid divorce and age based increased eligibility for Medicare and Medicaid. Section 3 elaborates my regression discontinuity design and details on econometric methods. Section 4 briefly introduces data. Main empirical results are presented in Section 5. Finally, Section 6 concludes.

# 2 Backgrounds

#### 2.1 Medicaid Divorce

Medicaid is a public health insurance program jointly administered and funded by both federal government and states government. The federal Centers for Medicare and Medicaid Services (CMS) monitors the state-run programs and sets up general requirements for service delivery, quality, funding, and eligibility standards. The primary goal of Medicaid is to secure the right of individuals with limited resources to obtain medically necessary health care. It was introduced in 1965 and majorly reformed recently in 2014 under the Affordable Care Act (ACA). Individuals who have financial difficulties and fall in certain categories are eligible for Medicaid coverage. The categories include children, pregnant women, parents, disable individuals, individuals receiving Supplemental Security Income, elderly senior aged over 65, medically needy individuals, and individuals who need long-term care, etc. The precise covered categories and financial eligibility slightly vary from states to states. States have the option to expand the qualified categories. Medicaid covers the recipients' most of the spending on qualifying medical care, like doctor visits and hospital costs, long-term care services in nursing homes, and long-term care services provided at home, such as visiting nurses and assistance with personal care.

Each state sets up its own income test and asset test for Medicaid financial eligibility. Categorically qualifying individuals have to prove they are in financial difficulties by meeting the limit. When it comes to financial eligibility, married couple is counted as a unit, so income and asset jointly held by a couple are taken into consideration. There are special rule for couples to meet these tests.

Some states apply the same income requirement for Medicaid as for Social Security

Disability (SSD) benefits. In these states SSD benefit recipients are automatically eligible for Medicaid. In other states, the income requirement is more restrictive. Most states set up the income limit as a certain percentage of Federal Poverty Line (FPL). In most states, the asset limit is \$2000 for an individual and \$3000 for a couple. Assets that fall into certain categories are exempted, such as principal residence home, one motor vehicle, clothing, furniture, jewelry, prepaid funeral plans, and life insurance, etc. All non-exempted, excess assets of the couple are required to be spent down in order to obtain Medicaid eligibility for either spouse, regardless of whether the asset is registered under the healthy spouse's name or under the sick spouse's name. Therefore, transfer from the sick spouse to the healthy spouse does not work.

Technically, the couple can transfer the excess assets to their children, siblings, parents and relatives so that the excess assets will be ruled out from their account. Then they can fall below the asset limit. However, state will look at all transfers made within five years before the applicant applies for Medicaid. A penalty period when the individuals are temporarily ineligible for Medicaid is determined if suspicious transfers are detected during the five-year look back period. The length of the penalty period depends on the precise amount of the assets being transferred. Therefore, asset transfer might not be the optimal strategy for those whose wealth is far above the limit and have urgent need for Medicaid coverage.

Instead, couples in such situations might be advised by their lawyer and financial planner to implement a divorce. Divorce is a legal way to separate assets between the sick spouse and the healthy spouse. After divorce and allocating most of the assets to the healthy spouse, the sick spouse will be counted as an individual and will have assets below the limit when applying for Medicaid. Such asset separation due to divorce is not

subject to the penalty period. At a practical standpoint, such Medicaid divorce can be viewed as a welfare optimization and strategic response to the eligibility policy, rather than end of love, commitment and responsibility.

To implement Medicaid divorce in a legal, efficient manner requires professional expert and specialized knowledge in various areas. A successful Medicaid divorce often relies on the joint effort by an elder law attorney, an estate planner, and a divorce lawyer, etc.

To empirically measure the magnitude of Medicaid divorce is one of the objectives of this paper. In fact, being divorced is positively correlated with having Medicaid. I plot the correlation coefficients between being divorced and being covered by Medicaid among age cohorts in Figure 1. We can see a clearly invert U-shape structure. Before 65, the correlation between divorce and being covered by Medicaid is increasing as age increases. The upward trend starts to get steeper since about 50-year-old cohort, and the correlation reaches the peak at 64-cohort. At 65-year-old cohort, the correlation discontinuously drops, then starts to go down. Of course, there might be common confounding factors which affect both divorce status and Medicaid eligibility, so part of the correlation might be spurious. But it still offers suggestive evidence to a possible explanation: as people aging, there is an increasing trend for individuals to implement Medicaid divorce in order to get Medicaid coverage. That's why we see stronger and stronger correlation. But after 65, suddenly people don't need Medicaid divorce any more. So the correlation starts to decline. At a preview of Figure 2, we can see a similar picture: The divorce rate also discontinuously drops at 65, then gradually goes down.

#### 2.2 Medicare

Medicare, administered solely by federal government, is an age-based public health insurance program. Elderly seniors aged over 65 are automatically eligible for Medicare coverage. Unlike Medicaid, there is no big difference in many of the institutional settings of Medicare across states. Medicare coverage is divided into many parts. Some of them are free, and some of them charge premium and are optional. Elderly seniors who (whose spouse) have been working and paying Medicare taxes for at least 10 years are covered by Medicare Part A without paying premium. Medicare Part A covers inpatient hospital care, skilled nursing facility care, and hospice care. Medicare Part B covers preventive service, clinical research, ambulance service, durable medical equipment (DME), mental health, etc, most of which are in outpatient basis. Typically, people have to pay for Part B. The standard premium in 2017 is \$134 per month. Part A and Part B together are usually called "Original Medicare". Both Part A and Part B provide standardized, uniform coverage to each Medicare beneficiaries.

Medicare beneficiaries can also optionally purchase Part D. Part D mostly covers prescription drugs. Unlike Original Medicare, Part D is not standardized. People can choose one of the Part D drug plans depending on their needs. Each drug plan has its own list of covered drugs. The monthly premium also differ among drug plans.

Compared with Medicaid, Medicare is less generous. In fact, the share cost of Medicare is high. For example, in 2017, there is \$1316 deductible for a hospital stay of days 1-60. The co-pay for days 61-90 is \$322 per day and the co-pay for days 91-150 is \$658 per day. There is no deductible and co-pay for the first 20 days of skilled nursing care. But the co-pay is \$164.5 per day for days 21-100. The yearly deductible for Medicare Part B is \$183. After the deductible is met, people still need to pay 20% co-insurance.

Original Medicare does not include out-of-pocket (OOP) limit. It does not cover nursing home care and custodial care if they are the only medical service needed. For those elderly seniors in great demand for long-term daily care, the coverage of Original Medicare is very limited. Original Medicare beneficiaries still face the stress of high OOP expenditure.

Original Medicare beneficiaries can also optionally purchase Medicare Supplement Insurance (usually called Medigap). Medigap supplements Original Medicare, and pays for the share cost of Original Medicare such as deductibles, co-payment, and co-insurance. Medigap policies are sold by private companies, but they are strictly regulated by federal and states. Companies are prohibited to make extra charge or decline coverage based on client's medical answers, and are prohibited to decline renewing the policy due to health issues. All Medigap policies offer basic standardized benefits, and some provide additional benefits. The main purpose of Medigap is to help beneficiaries to fill in the financial holes of Original Medicare. Some Medigap policies cover all Original Medicare OOP expenditure and provide complete financial security.

Alternatively, Original Medicare beneficiaries can choose to switch and enroll in Medicare Advantage Plan (sometimes called Part C, but it is somewhat misleading since Medicare Advantage Plan and Original Medicare operate in different systems). Medicare Advantage Plan basically covers what is covered by Original Medicare. But people can pay extra premium to obtain extra content, such as out-of-pocket expenditure limit, dental care, vision care, annual physicals, etc. The precise amount of premium differs among plans. The OOP limit is especially useful for those elderly seniors in great demand for regular medical service and treatments. Through the system of Medicare Advantage Plan, beneficiaries must go to only a select network of health care providers.

During 2008-2015, 95.13% of the elderly seniors aged between 65 and 75 receive Medicare. The Medicare coverage rate jumps from only 16.77% for the 64-cohort, to as large as 86.09% for the 65-cohort (based on author's own calculation from ACS data). Medicare does not discriminate pre-existing conditions. To some extent, the Original Medicare is an affordable health insurance plan charges uniform premium on all beneficiaries (Premium differs slightly depending on beneficiary's income status). Therefore, Medicare partly substitutes Medicaid and other private health insurance at age 65. But Original Medicare alone is far from a perfect substitute for Medicaid due to its limited coverage and lack of out-of-pocket expenditure limit. However, the problem of no OOP limit can be mitigated by purchasing Medigap policies or enrolling in Medicare Advantage Plan, at the expense of paying extra but probably still affordable premium.

### 2.3 Dual Eligibility and Medicare Savings Program

After an individual reaches 65, he/she would almost certainly be eligible for Medicare. But the likelihood of obtaining some Medicaid coverage also increases. That is because: First, "elderly seniors aged over 65" by itself is one of the Medicaid recipient categories. Second, the Medicaid eligibility financial limit for elderly seniors is somewhat more lenient than for those who are aged below 65, depending on states. Third, even an elderly senior is financially non-eligible for Medicaid full benefits, he/she might still qualify for a partial Medicaid benefit package.

Those who are eligible for both Medicare and Medicaid are often referred to "dualeligible" beneficiaries. Dual-eligible beneficiaries receive either Medicaid full benefit package or Medicaid partial benefit package. Full benefit recipients receive the entire range of Medicaid benefits, including those health care service not covered by the Original Medicare such as long-term nursing home care and personal custodial care. Dual eligibility helps fill in the financial holes of Medicare, as the OOP expenditure of the Original Medicare is infamously uncapped. If a certain category of health care service is in the Medicare-Medicaid-dual-covered list, Medicare will pay for the medical bill first, then Medicaid will cover the remaining OOP cost left by Medicare.

Elderly seniors older than 65 who cannot qualify for Medicaid full benefit might still have a chance to enroll in one of the Medicare Savings Programs. Medicare Savings Programs include Qualified Medicare Beneficiary (QMB) Program, Specified Low-Income Medicare Beneficiary (SLMB) Program, Qualifying Individual (QI) Program, and Qualified Disabled and Working Individuals (QDWI) Program. Regardless of the name, the benefits of Medicare Savings Programs is actually drawn from Medicaid. So there is slight difference across states in financial eligibility rules and precise benefits. But the difference is somewhat smaller than the difference in normal Medicaid. In general, these Medicare Savings Programs help enrollees pay for their Medicare Part A premium, Part B premium, deductibles, co-payments, and co-insurance. The income and asset limit of these programs are set more lenient than the limit for the Medicaid full benefit package. For example, the QI Program covers individuals whose household income up to 135% FPL. More importantly, in Alabama, Arizona, Connecticut, Delaware, DC, Mississippi, New York, and Vermont, there are no asset limits for participating in these programs.

The relaxation of Medicaid eligibility requirement at age 65 helps fill in the financial holes of Medicare and reimburse the expenditure on medical bills. Based on author's own calculation with ACS data, the share of individuals having Medicaid coverage is 12.13% among 65-cohort during 2008-2015. The combination of Medicare and Medicaid makes elderly seniors less necessary to implement Medicaid divorce. In those states where no

asset test is imposed for Medicare Savings Program, the incentive for post-65 Medicaid divorce is further reduced.

### 2.4 Affordable Care Act and Medicaid Expansion

The Patient Protection and Affordable Care Act (ACA) was signed into law in 2010. Many of the policies became effective since 2014. The federal and state government established health insurance exchange, a large online open health insurance marketplace. According to the premium and out-of-pocket spending requirement, the health insurance plans sold in the exchange are categorized into four tiers: bronze, silver, gold, and platinum. All tires of the plans offer the essential health benefits. Within each tier, the premium must be determined solely on the basis of age and residence location. Insurance companies in the exchange are prohibited to decline coverage or charge extra premium due to pre-existing conditions. The maximum premium the insurance companies are allowed to charge the oldest age group cannot exceed three times of the premium charged on the youngest age group. What's more, each health insurance plan must contain maximum out-of-pocket (MOOP) payment cap. Once the annual MOOP cap is reached, the insurance company must pay the remaining costs.

In addition to the reform of health insurance market, ACA also expanded Medicaid. The decision of whether joining the Medicaid expansion was left to states. Federal government is responsible for most of the Medicaid funding in those expanded states for the first few years. The states that expanded Medicaid are required to provide full Medicaid coverage to adults whose income are below 133% of FPL. Asset tests and categorical eligibility were canceled in expanded states. Those states opted out the Medicaid expansion retain asset tests and relatively low income limit.

Federal government also offer tax credit as subsidy to individuals who purchase private health insurance in the exchange, if their income are between 100% FPL (138% FPL if living in non-expanded states) and 400% FPL. The precise amount of subsidy depends on the precise income of the individual. Individuals who fall in this income category are ineligible for Medicaid. But the tax subsidy fills in the gap financially.

In summary, younger elderly people (aged 50-64) might benefit from ACA. First, affordable health insurance plans are now available in the exchange. The ACA is against discrimination on pre-existing conditions so those who have chronic diseases and need long-term health care now can purchase health insurance in the private market in a relatively cheaper price than before. Second, as long as an individual lives in an expanded states, it is now much easier for him/her to qualify and receive Medicaid in terms of both categorical eligibility and financial eligibility. Because of these benefits, younger elderly people have less incentive and necessity for a Medicaid divorce. I raise a hypothesis that the divorce gap at 65 should be smaller in post-ACA era than in pre-ACA era.

As elaborated above, the existence of asset limit and income limit is the main reason for Medicaid divorce. Thus the Medicaid expansion created a natural experiment. We can compare the divorce gap between expanded states and non-expanded states to infer the effect of the asst test cancellation.

# 2.5 Social Security Retirement Benefit

For individuals born in 1929 or later, as long as they had been working under Social Security for at least 10 years, they have an option to start to claim Social Security Retirement (SSR) benefit 3 months before their 62nd birthday, and start to receive the benefit payment at 62. SSR benefit helps seniors to better plan their post-retirement life. The

full retirement age varies from person to person, according to the year of birth. Typically the full retirement age increases as a person was born in a later year. For example, the full retirement age of individuals born in 1937 or earlier is 65. For those who were born in 1960 or later, the full retirement age is 67.

Rigorously speaking, if a person do not claim the SSR payment as early as 62 and wait until he/she reaches the full retirement age, he/she can receive the full amount of SSR benefit. Early application at 62 is subject to a discount. For example, for individual whose full retirement age is 65, if he/she starts to claim SSR payment at 62, then he/she can only receive 80% of the full monthly benefit for the rest of his/her life. Since people have different retirement plan and different life expectancy, they choose the starting age of claiming SSR benefit strategically.

After an individual starts to receive benefits, his/her spouse who are aged over 62 can also apply for at most one half of the same benefits, even if the spouse has not established sufficient working history. However, the spouse must be married to the benefit recipient for at least one year before the spouse qualify for the benefit. In addition, individuals who lack working history and are currently divorced can also receive SSR benefits based on the working record of the ex-spouse. It requires that the former marriage with the ex-spouse must last for at least 10 years.

The rules of claiming spouse dependent SSR benefits and ex-spouse dependent benefits should not cause a divorce gap at 65. First, people are not encouraged to suddenly want to keep a broken marriage at 65 only because the spouse without working history wants to keep the spouse dependent SSR benefits. As long as the couple have been married for at least 10 years, the no-working spouse can still receive SSR payment in the form of ex-spouse dependent benefits.

Second, there is no large incentive for an immediate remarriage at 65 only because a no-working single individual wants to get spouse dependent SSR benefits. The one-year marriage duration requirement mentioned above offsets this incentive. Besides, the starting age is 62 for the first claim of SSR payment. Why people have to instantaneously get married at precisely 65? In conclusion, SSR benefits should not be majorly responsible for a divorce discontinuity at 65. Though the income effect of SSR benefit might have a continuous impact.

### 3 Econometric Method

Age is the most important factor to determine whether an individual qualifies for Medicare coverage, other insurance plans supplement to Medicare, and Medicare-Medicaid dual-eligibility. My identification strategy relies on age as an exogenous assignment variable. Those who are just above the 65-year-old threshold are assigned the eligibility for these Medicare related benefits. Following standard settings of regression discontinuity design (RDD) (see Lee and Lemieux (2010)), it is assumed that the counterfactual divorce behavior is continuous in age at 65, if the eligibility for these public health insurance benefits never expands at 65 (or expanded all the time). In the context of this paper, the discontinuity in divorce rate at 65 potentially reflects the amount of Medicaid divorce which were avoided due to the exogenous occurrence of these insurance benefits.

Formally, the regression model is written as:

$$y_{i} = \alpha + \theta \cdot 1(age_{i} \ge 65) + \sum_{k=1}^{p} \beta_{1k} \cdot age_{i}^{k} + \sum_{k=1}^{p} \beta_{2k} \cdot age_{i}^{k} \cdot 1(age_{i} \ge 65) + X_{i}\gamma + \epsilon_{i} \quad (1)$$

 $y_i$  is the outcome variable, indicator of divorce.  $age_i$  is the assignment variable,

 $1(age_i \ge 65)$  is the cutoff variable (an indicator equals 1 if the assignment variable exceeds the 65-threshold, equals zero otherwise).  $X_i$  are a set of covariate controls.  $\epsilon_i$  is a mean zero regression error term. Since  $age_i$  is a discrete variable, nonparametric identification is infeasible in this case. I use p-order polynomial of  $age_i$ , fully interacted with the cutoff variable, to approximate the true continuous function. With good enough statistical performance evaluated by certain goodness-of-fit tests, such as Lee-Card test and AIC statistic, the optimal polynomial order p is chosen (see Lee and Lemieux (2010), Lee and Card (2009)). Lee and Card (2009) also suggests to use robust standard error clustered at age to adjust for potential parametric misspecification error.

Following the tradition of empirical papers that implement RDD, the assignment variable  $age_i$  is normalized by subtracting 65 form the real age (in years). That is,  $age_i = 0$  if individual i is 65,  $age_i = 1$  if individual i is 66, and  $age_i = -1$  if individual i is 64, etc. Therefore, in the baseline regression model which excludes controls variables  $X_i$ , the intercept  $\alpha$  captures the predicted conuterfactual divorce rate (as a benchmark level) at 65. I report the intercept estimate from the control-free baseline models. When control variables are included in the regression, the meaning of the intercept is ambiguous hence it is not reported.

The reduced-form parameter  $\theta$  is our parameter of interest. It captures the discontinuity of divorce rate at 65, which might reflect the existence of a divorce gap and potentially measures the reduction of Medicaid divorce (as an impact) due to the occurrence of Medicare at 65. By comparing the RD estimate  $\theta$  with the intercept  $\alpha$ , we can draw conclusion on the relative change (change in percent) of the divorce rate.

Social Security Retirement (SSR) benefit by its claiming rules should not have discontinuous effect on divorce behavior at 65. But the income effect of SSR payment might

have a continuous impact. I will also run RD regressions of Social Security Income to test its continuity. Besides, in order to control for the continuous income effect, I add Social Security Income into the regression as a control variable. Other control variables include year effect, state effect, gender, race, and education level.

### 4 Data

2008-2015 American Community Survey (ACS) is the major data source in this paper. ACS is an annual interview survey which records 1% national representative random sample each year. The pooled ACS data set documents almost six million observations and collects rich information about the interviewees such as their marital status, health insurance status, geographic identifiers, and a large number of other demographic and economic variables. In regression analysis, our full sample is restricted to individuals aged between 55 and 75. Age is measured in terms of years. The full sample size is 5894947. Within each age cohort cell, the number of observations range from 168377 (75-cohort) to 377064 (55-cohort). Given the large within-cell sample size, the sample divorce rate and other summary statistics by age cohort should be asymptotically quite accurate. The large number of observations also allows us to use high-order polynomial (up to 4th order) to approximate the true continuous trend of divorce rate over age. Although the number of observations is clearly decreasing as age increases, mortality should not confound my result as long as mortality does not discontinuously jump at age 65.

Table 1 presents summary statistics of 62-67 cohorts. Notice that health insurance coverage rate increases dramatically at age 65. There is also obvious decrease in divorce rate at 65. The comprehensive analysis result are presented in Section 5.

Heterogeneous effect might exist across different subgroups. In order to identify het-

erogeneous effects, I stratify the full sample into subsample based on gender, race, and education level. Besides, as mentioned in Section 2.4, in Alabama, Arizona, Connecticut, Delaware, DC, Mississippi, New York, and Vermont, there are no asset tests for participating in Medicare Savings Programs. Thus I also stratify the sample based on whether the observed individuals resided in these no-limit states or in states that impose asset limit. To examine whether ACA and Medicaid expansion had significant impact to reduce Medicaid divorce, I split the sample into subsamples which respectively cover individuals in pre-ACA period (2008-2013), post-ACA period (2014-2015) in expanded states, and post-ACA period in non-expanded states.

# 5 Results

#### 5.1 Baseline Results and Robustness Checks

In RDD regression analysis, choice of polynomial order is a critical issue. Suggested by Lee and Lemieux (2010), I select the optimal polynomial order based on Lee-Card Test statistic and AIC statistic. Table 2 presents the RD coefficient estimates in divorce rate at 65 from various polynomial specifications. In both of first, second, and third order polynomial regression, the Lee-Card Tests all reject the null hypothesis at 0.1 significance level. In fourth order polynomial regression, the null hypothesis is not rejected by the Lee-Card Test. Besides, the fourth order polynomial regression has the smallest AIC statistic. Therefore, fourth order polynomial is chosen and considered optimal.

In fact, the RD estimates are all significant and negative regardless of the polynomial order, indicating that the divorce gap does exist in the full sample and the result is robust.

According to the optimal fourth order regression, the predicted counterfactual divorce rate

is 17.22 percentage points in 65-cohorts. But the divorce rate discretely drops by 0.709 percentage points, which accounts for a 4.1 percent decrease.

I also follow Lee and Lemieux (2010) and calculate the robust standard error clustered at age. Table 3 Column (2) reports the result. The significance of the RD estimate is not affected. I also include demographic controls and SSI controls into the regression model. Both the point estimate and the clustered standard error do not change a lot, as shown in Column (3) and (4). The point estimate is -0.678 in the full model in column (4).

Then I vary the RD bandwidth from 2 years to 5 years. Table 4 shows that all estimates are robustly and significantly negative.

Figure 3 presents the graphical illustration of the discontinuity in Medicare coverage rate and Medicaid coverage rate at 65. Table 5 reports the RD estimates. The proportion of population being covered by Medicare discretely increased by 63.57 percentage points at 65. The Medicaid coverage rate also jumped by 1.97 percentage points, which accounts for a 19.4 percent increase. As a consequence, the overall insured rate also discontinuously increased by 8.28 percentage points.

Table 6 presents the RD estimates in Social Security Income, retirement income, personal total income, wage income, employment rate, and weekly working hours. None of these estimates are significant. Figure 4 shows the continuity of these variables. It strongly suggests that the divorce gap at 65 is not caused by these potential confounders. As already clarified above, the rules of claiming Social Security Retirement (SSR) spouse dependent benefit or ex-spouse dependent benefit neither discourage divorce at 65 nor encourage immediate remarriage at 65. The RD estimates and the pictures indicate that the average amount of Social Security Income is also continuous at 65. In the context of RDD, the income effect of SSI on divorce is at most continuous. Thus I control for these

continuous income effect by adding SSI as a control covariate into the regression model.

### 5.2 Divorce Gap Heterogeneity

The divorce gap varies across subpopulation. Splitting the full sample by gender, the RD estimate is -0.250 for men and -0.967 for women, as presented in Table 7. The divorce gap for men is statistically insignificant, while the women experienced a 4.94 percent significant decrease in divorce. Adding controls has little impact on the significance and magnitude of the RD estimate. The gender difference of the divorce gap might suggest that Medicaid divorce is more prevailing when the sick spouse is female. This result parallels with the descriptive analysis of Karraker and Latham (2015), which finds that the wife's illness onset are more likely to incur divorce, while such association did not exist when the husband got sick.

Huge heterogeneity also exists by race. The RD estimate is insignificant for white people. However, for black people, the point estimate of the divorce gap is as large as -1.427 percentage points. which accounts for a 6.11 percent decrease. The point estimate is about twice of the full-sample estimate. The divorce gap is significant for Asians but insignificant for Hispanics.

Surprisingly, the heterogeneity by education level seems minimum. For those seniors without a college degree, the point estimate of divorce gap is -0.752. For college educated people, the estimate is -0.643. They are both significantly nonzero but statistically indistinguishable from each other.

#### 5.3 Discussion: Asset Test

The main purpose for Medicaid divorce is to help the sick spouse to pass the asset test for public health insurance program eligibility. Since the divorce gap at age 65 measures the discrete reduction in Medicaid divorce, the magnitude of the divorce gap should be associated with states' settings of the asset test.

Here I consider two scenarios: Medicare savings programs and 2014 ACA Medicaid expansion. First, for a couple aged over 65, it is more likely to get coverage by Medicare savings program if they reside in states that do not impose asset limit for their Medicare savings programs, rather than in states that do impose. Thus in states with asset limit, the incentive for a post-65 Medicaid divorce should be smaller, which drags down the divorce rate among post-65 cohorts. As a consequence, we should see a larger divorce gap in these states.

Second, in states expanded Medicaid after 2014, adults aged below 65 can qualify for Medicaid coverage as long as they earn an income below 133% FPL, regardless of their asset levels and categories. The cancellation of the asset test reduced the prevalence of divorce among 50-64 cohorts in expanded states (see Slusky and Ginther (2017)). Since the divorce rate was dragged down for pre-65 cohorts, we should see a smaller or even insignificant divorce gap in expanded states after 2014.

As expected, whether states have asset test for Medicare Savings Program plays an important role in the post-65 reduction of Medicaid divorce. The RD estimates across states are reported in Table 10. In states that does not impose asset test for participating in post-65 Medicare Savings Programs, the divorce gap estimate is as large as -1.122 percentage points. In states do have an asset limit, the divorce gap estimate is only -0.498. Both the estimates are significantly nonzero. And two estimates are also significantly

different from each other. The difference between the divorce gap is graphically obvious, as seen in Figure 8. It suggests that the absence of asset tests in these no-limit states is one of the key drivers to reduce Medicaid divorce.

Table 11 presents the estimates by ACA period and Medicaid expansion states. Prior to 2014, the divorce gap estimate is -0.749 percentage points, which accounts for a 4.39 percent decrease. The divorce gap estimate is -0.570 in non-expanded state after 2014. Although it is slightly smaller than the pre-ACA divorce gap, it is still significant and these two estimates are statistically indistinguishable. Not surprisingly, the divorce gap estimate is insignificant in those post-ACA expanded states. Although the point estimate is actually of considerable scale, but the standard error is almost identical to the point estimate. As a consequence, the t-statistic is not large enough to reject the nonzero null hypothesis. The absence of evidence for divorce gap in post-ACA expanded states suggestively indicates that Medicaid divorce is reduced due to the asset test cancellation and enhanced income limit.

Separated couples are still legally married. Separation do not influence the asset level of the sick spouse. I find no evidence of "separation gap" at the 65-threshold, as indicated in Table 12.

# 6 Conclusion

In this paper I address the question about how age-based public health insurance eligibility can possibly affect divorce behavior and family structure. Once an individual reaches 65, he/she can access uniform and affordable Original Medicare coverage. Besides, seniors are offered a menu of Medigap policies, Medicare Advantage plans, Medicare savings programs, and Medicaid-Medicare dual eligibility, which further reduce and cap the out-

of-pocket expense on health care. These public health insurance benefits shield the risk of spend down hence offset the incentive and necessity for Medicaid divorce. Based on this idea, my empirical analysis finds the divorce rate decreased by about 0.7 percentage points at 65 in the entire United States during 2008-2015.

My heterogeneity analysis suggests that Medicaid divorce is more prevalent for black couples. Also, if the female spouse is the sick spouse, a Medicaid divorce would be more likely to happen.

This study has several policy implications. As many studies have pointed out, the rules of Medicaid eligibility for couples is flawed (see Miller (2015)). The restrictive financial requirement (especially the asset test) is the main reason to cause Medicaid divorce. Although Medicaid divorce is, to some extent, "fake" divorce, it undoubtedly incurs welfare loss <sup>4</sup>. A revised system of eligibility rules which relax the restriction for the healthy spouse is called for. Policies like Affordable Care Act and Medicaid expansion which aim at expanding the provision of low-cost health insurance plans and expanding the coverage range of public health insurance might significantly improve the marriage welfare of nearly elderly couples.

<sup>&</sup>lt;sup>4</sup>Kristof, Nicholas. "Until Medical Bills Do Us Part," The New York Times, Aug 29, 2009

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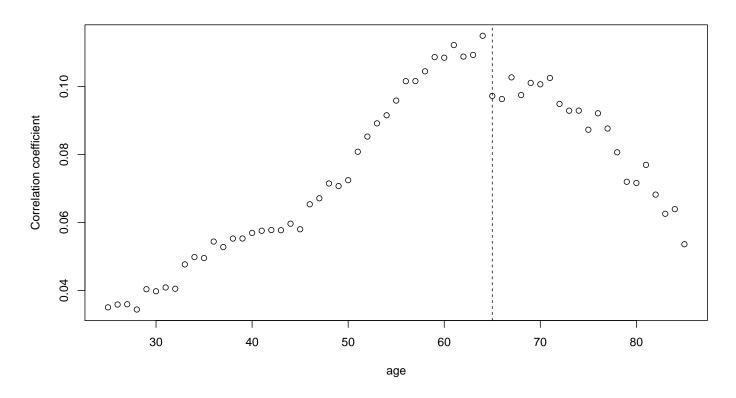


Figure 1: Correlation Coefficient between Being Divorced and Being Covered by Medicaid, from 25-cohort to 85-cohort

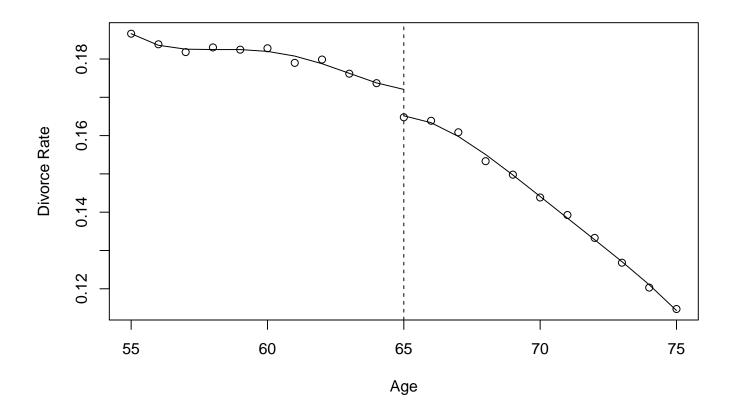
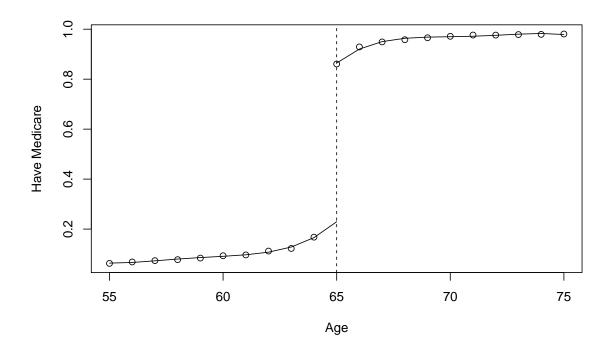


Figure 2: Regression Discontinuity in Divorce Rate at 65



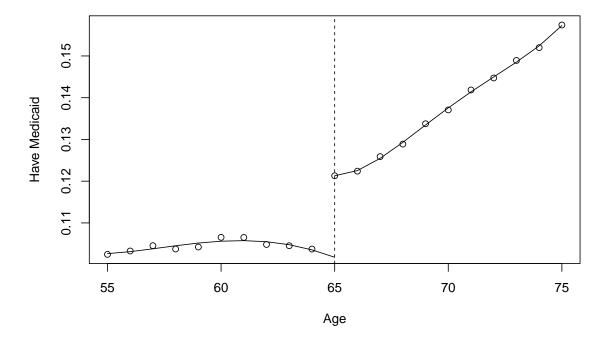


Figure 3: Regression Discontinuity in Medicare Coverage Rate and Medicaid Coverage Rate at  $65\,$ 

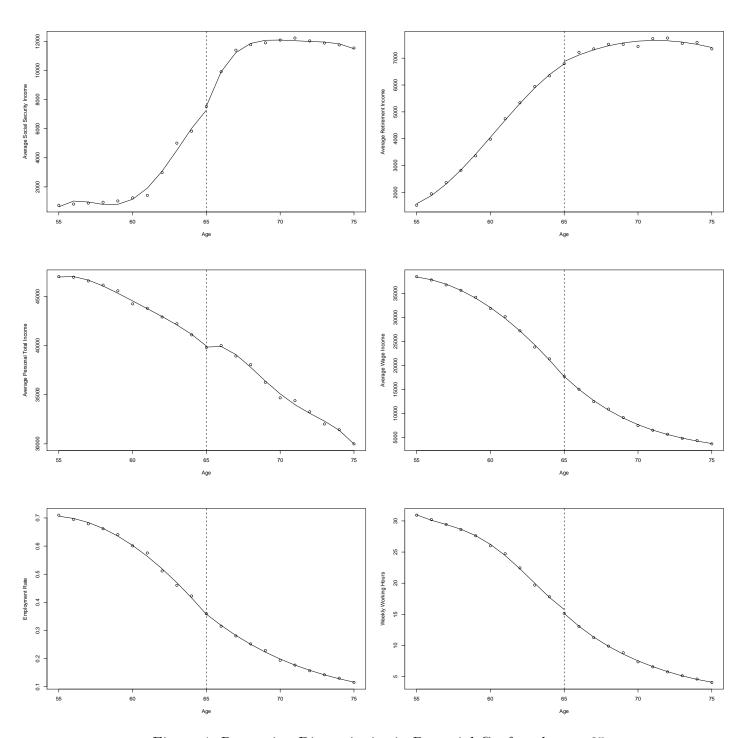
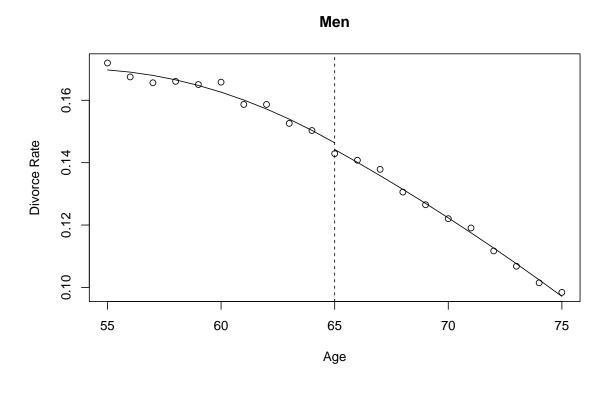


Figure 4: Regression Discontinuity in Potential Confounders at 65



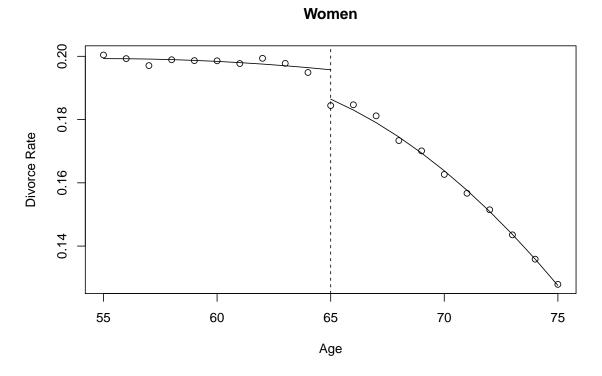


Figure 5: Regression Discontinuity in Divorce Rate at 65, by Gender

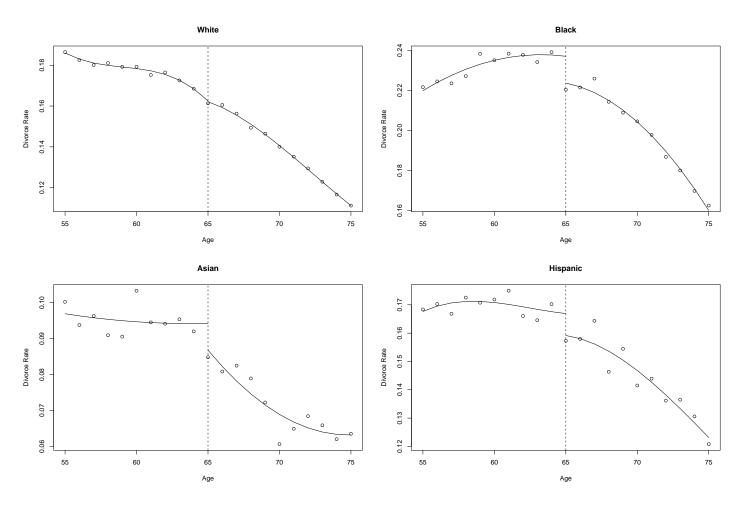
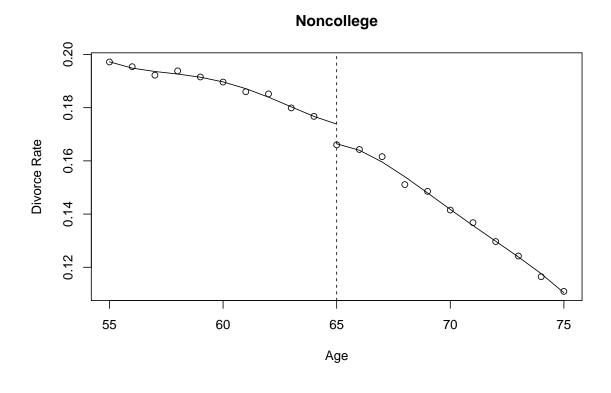


Figure 6: Regression Discontinuity in Divorce Rate at 65, by Race



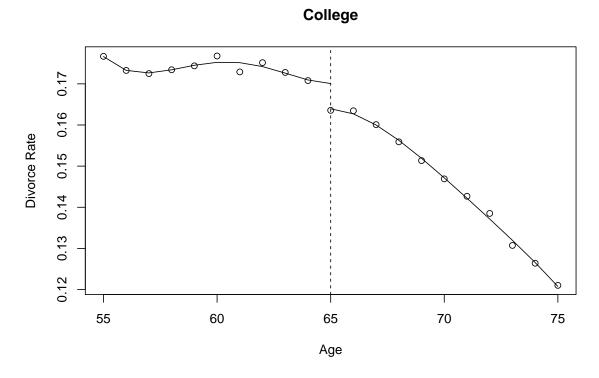
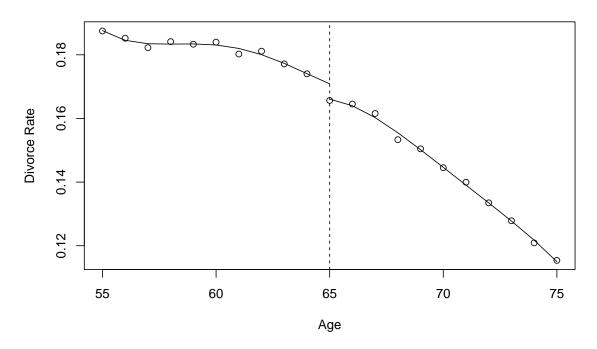


Figure 7: Regression Discontinuity in Divorce Rate at 65, by Education

# **Limit States**



### No-limit States

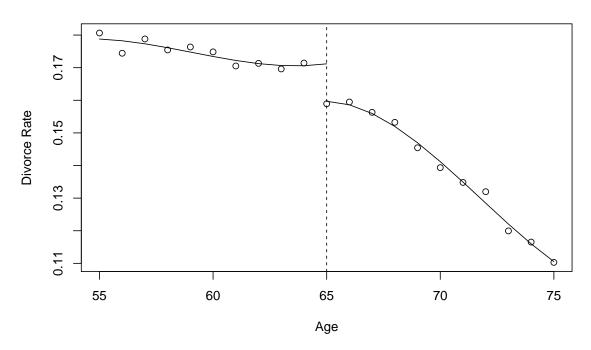


Figure 8: Regression Discontinuity in Divorce Rate at 65, by Whether States Impose Asset Limit

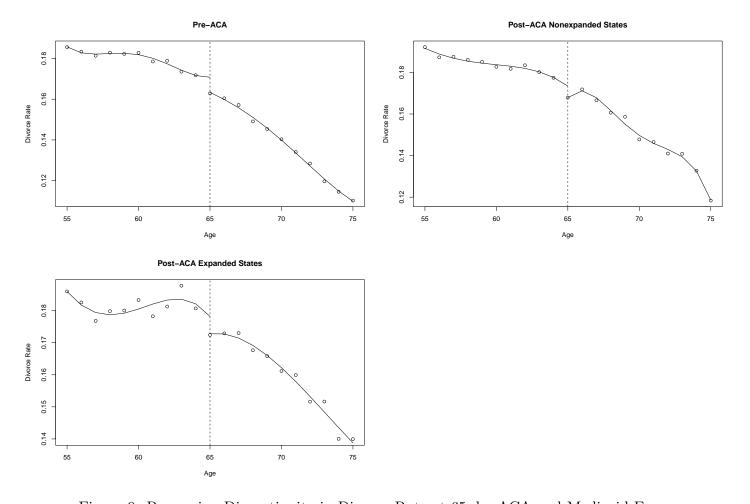


Figure 9: Regression Discontinuity in Divorce Rate at 65, by ACA and Medicaid Expansion  $\,$ 

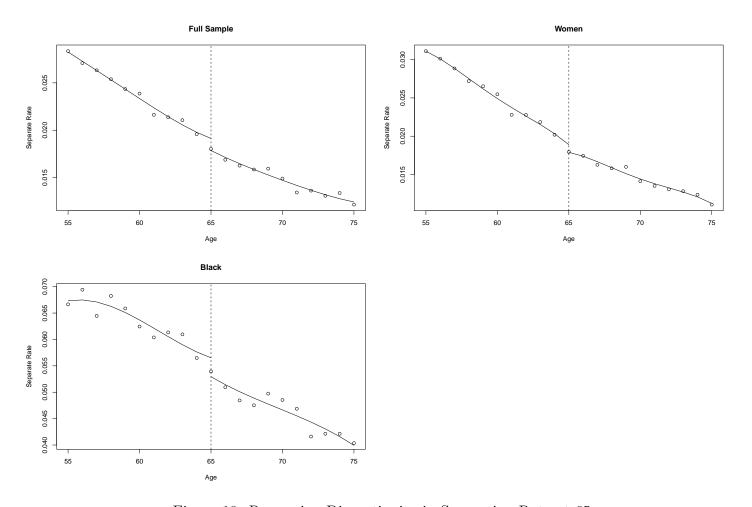


Figure 10: Regression Discontinuity in Separation Rate at 65

Table 1: Summary Statistics of Age 62-67 Cohorts

	Age					
	62	63	64	65	66	67
# Observations	326836	311471	300366	296878	277405	262717
Divorce Rate	17.99	17.62	17.37	16.48	16.39	16.09
Health Insurance:						
Insured Rate	89.17	89.30	89.62	97.87	98.59	98.72
Medicare Coverage	11.21	12.26	16.77	86.09	92.91	94.92
Medicaid Coverage	10.48	10.45	10.37	12.13	12.24	12.59
Demographic Covariates:						
Female	52.07	52.18	52.46	52.69	52.60	53.12
White	81.08	81.58	81.83	82.02	82.94	83.17
Black	10.40	10.20	10.02	9.83	9.39	9.31
College	52.93	52.36	51.18	49.98	49.29	47.85
Employment and Income Covariates:						
Employed	51.15	46.04	42.26	35.97	31.53	28.07
Weekly Work Hours	22.45	19.69	17.83	15.16	13.05	11.25
Wage Income	27226	23838	21377	17744	15049	12478
Retirement Income	5338	5943	6344	6798	7216	7345
Personal Total Income	42906	42223	41089	39809	39998	38936
Social Security Income	2895	5009	5833	7523	9922	11399

Table 2: Discontinuity Estimates in Divorce Rate at Age 65, with Different Polynomial Order Specifications

	Full Sample						
	Г	Dependent variable:	Indicator for divorc	ce			
_	(1)	(2)	(3)	(4)			
$Age \ge 65 \text{ cutoff}$	-0.608***	-0.624***	$-0.249^*$	$-0.709^{***}$			
	(0.061)	(0.095)	(0.143)	(0.228)			
Intercept	17.470***	17.251***	16.801***	17.217***			
	(0.045)	(0.078)	(0.129)	(0.218)			
Polynomial Order	1	2	3	4			
Lee-Card Test	0.000	0.003	0.081	0.162			
AIC	14585755	14585702	14585680	14585675			
N	5894947	5894947	5894947	5894947			

<sup>\*</sup> The estimates are reported in terms of percentage points. The models include polynomial of age, fully interacted with indicator  $1(age \ge 65)$ . The estimates are based on pooled 2008-2015 ACS data. All regressions are weighted by personal sampling weight. OLS standard errors are reported in parentheses. (\* 0.1, \*\* 0.05, \*\*\* 0.01)

Table 3: Discontinuity Estimates in Divorce Rate at Age 65

		Full S	ample	
	De	ependent variable:	Indicator for divor	rce
•	(1)	(2)	(3)	(4)
$Age \ge 65$ cutoff	$-0.709^{***}$	$-0.709^{***}$	-0.673***	-0.678***
	(0.228)	(0.185)	(0.185)	(0.185)
Intercept	17.217***	17.217***		
	(0.218)	(0.182)		
Clustered SE	No	Yes	Yes	Yes
Demographic Controls	No	No	Yes	Yes
SSI Control	No	No	No	Yes
N	5894947	5894947	5894947	5894947

<sup>\*</sup> The estimates are reported in terms of percentage points. The basic model includes quartic polynomial of age, fully interacted with indicator  $1(age \ge 65)$ . Demographic control variables include indicators for year, state, gender, race, and education. The estimates are based on pooled 2008-2015 ACS data. All regressions are weighted by personal sampling weight. Standard errors are reported in parentheses. (\* 0.1, \*\* 0.05, \*\*\* 0.01)

Table 4: Discontinuity Estimates in Divorce Rate at Age 65, with Different Bandwith Specifications

Dependent variable: Indicator for divorce								
Age range:	63 - 67		62 -	62 - 68 61 -		61 - 69		70
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Age $\geq 65$ cutoff	$-0.611^{**}$ (0.039)	$-0.587^{**}$ $(0.056)$	$-0.421^{**}$ $(0.133)$		$-0.587^{***}$ $(0.160)$	$-0.578^{**}$ $(0.168)$	$-0.508^{***}$ $(0.159)$	$-0.514^{**}$ $(0.166)$
Intercept	17.122*** (0.000)		17.039*** (0.037)		17.236*** (0.086)		17.202*** (0.054)	
Clustered SE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Controls	No	Yes	No	Yes	No	Yes	No	Yes
N	1448837	1448837	2022191	2022191	2586022	2586022	3161120	3161120

<sup>\*</sup> The estimates are reported in terms of percentage points. The models include a linear term of age, fully interacted with indicator  $1(age \ge 65)$ . The estimates are based on pooled 2008-2015 ACS data. All regressions are weighted by personal sampling weight. Robust standard errors clustered at age are reported in parentheses. (\* 0.1, \*\* 0.05, \*\*\* 0.01)

Table 5: Discontinuity Estimates in Insurance Coverage at Age 65

		Full Sample	
Dependent variable:	Medicare Coverage	Medicaid Coverage	Any Insurance Coverage
	(1)	(2)	(3)
Age $\geq 65$ cutoff	63.572***	1.971***	8.283***
	(0.980)	(0.157)	(0.290)
Intercept	22.820***	10.155***	89.630***
	(0.922)	(0.157)	(0.285)
Clustered SE	Yes	Yes	Yes
Controls	No	No	No
N	5894947	5894947	5894947

<sup>\*</sup> The estimates are reported in terms of percentage points. The models include polynomial of age, fully interacted with indicator  $1(age \ge 65)$ . The estimates are based on pooled 2008-2015 ACS data. All regressions are weighted by personal sampling weight. Robust standard errors clustered at age are reported in parentheses. (\* 0.1, \*\* 0.05, \*\*\* 0.01)

Table 6: Discontinuity Estimates in Potentially Confounding Covariates at Age 65

	Full Sample						
Dependent variable:	Social Security Income	Retirement Income	Total Income	Wage Income	Employed	Weekly Working Hours	
	(1)	(2)	(3)	(4)	(5)	(6)	
Age $\geq 65$ cutoff	110 (756)	44 (104)	-537 (360)	103 (525)	0.002 (0.015)	-0.65 (0.45)	
Clustered SE	Yes	Yes	Yes	Yes	Yes	Yes	
Controls	Yes	Yes	Yes	Yes	Yes	Yes	
N	5894947	5894947	5894947	5894947	5894947	5894947	

<sup>\*</sup> The models include polynomial of age, fully interacted with indicator  $1(age \ge 65)$ . Control variables include year effect, state effect, gender, race, and education. The estimates are based on pooled 2008-2015 ACS data. All regressions are weighted by personal sampling weight. Robust standard errors clustered at age are reported in parentheses. (\* 0.1, \*\* 0.05, \*\*\* 0.01)

Table 7: Discontinuity Estimates in Divorce Rate at Age 65, by Gender

	I	Dependent variable:	Indicator for divorce	e
	M	en	Wor	men
_	(1)	(2)	(3)	(4)
$Age \ge 65 \text{ cutoff}$	-0.250	-0.197	-0.967***	-1.063***
	(0.164)	(0.191)	(0.217)	(0.193)
Intercept	14.656***		19.596***	
	(0.138)		(0.165)	
Clustered SE	Yes	Yes	Yes	Yes
Controls	No	Yes	No	Yes
N	2788260	2788260	3106687	3106687

<sup>\*</sup> The estimates are reported in terms of percentage points. The models include polynomial of age, fully interacted with indicator  $1(age \ge 65)$ . Control variables include year effect, state effect, gender, race, education, and Social Security Income. The estimates are based on pooled 2008-2015 ACS data. All regressions are weighted by personal sampling weight. Robust standard errors clustered at age are reported in parentheses. (\* 0.1, \*\* 0.05, \*\*\* 0.01)

Table 8: Discontinuity Estimates in Divorce Rate at Age 65, by Race

	Dependent variable: Indicator for divorce							
	White		Black A		Asi	an	Hispanic	
	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Age $\geq 65$ cutoff	-0.036 (0.164)	0.062 $(0.164)$	$ \begin{array}{c} -1.427^{***} \\ (0.375) \end{array} $	$-1.493^{***}$ $(0.360)$	$-0.829^{**}$ $(0.388)$		-0.720 $(0.619)$	-0.422 (0.624)
Intercept	16.243*** (0.146)		23.374*** (0.306)		9.476*** (0.353)		16.586*** (0.602)	
Clustered SE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Controls	No	Yes	No	Yes	No	Yes	No	Yes
N	4916158	4916158	539317	539317	214664	214664	426896	426896

<sup>\*</sup> The estimates are reported in terms of percentage points. The models include polynomial of age, fully interacted with indicator  $1(age \ge 65)$ . Control variables include year effect, state effect, gender, race, education, and Social Security Income. The estimates are based on pooled 2008-2015 ACS data. All regressions are weighted by personal sampling weight. Robust standard errors clustered at age are reported in parentheses. (\* 0.1, \*\* 0.05, \*\*\* 0.01)

Table 9: Discontinuity Estimates in Divorce Rate at Age 65, by Education

	Dependent variable: Indicator for divorce						
	None	college	Col	lege			
_	(9)	(10)	(11)	(12)			
$Age \ge 65 \text{ cutoff}$	-0.752***	$-0.723^{***}$	-0.643***	-0.601***			
	(0.202)	(0.205)	(0.197)	(0.179)			
Intercept	17.386***		17.025***				
	(0.197)		(0.195)				
Clustered SE	Yes	Yes	Yes	Yes			
Controls	No	Yes	No	Yes			
N	3006951	3006951	2887996	2887996			

<sup>\*</sup> The estimates are reported in terms of percentage points. The models include polynomial of age, fully interacted with indicator  $1(age \ge 65)$ . Control variables include year effect, state effect, gender, race, education, and Social Security Income. The estimates are based on pooled 2008-2015 ACS data. All regressions are weighted by personal sampling weight. Robust standard errors clustered at age are reported in parentheses. (\* 0.1, \*\* 0.05, \*\*\* 0.01)

Table 10: Discontinuity Estimates in Divorce Rate at Age 65, by Whether States Sets Up MSP Asset Limit

	Dependent variable: Indicator for divorce					
	With-Lin	nit States	No-Limi	t States		
_	(1)	(2)	(3)	(4)		
$Age \ge 65 \text{ cutoff}$	-0.498**	-0.468**	-1.122***	-1.029***		
	(0.201)	(0.200)	(0.265)	(0.305)		
Intercept	17.095***		17.080***			
	(0.197)		(0.256)			
Clustered SE	Yes	Yes	Yes	Yes		
Controls	No	Yes	No	Yes		
N	5140290	5140290	754657	754657		

<sup>\*</sup> The estimates are reported in terms of percentage points. The models include polynomial of age, fully interacted with indicator  $1(age \ge 65)$ . Control variables include year effect, state effect, gender, race, education, and Social Security Income. The estimates are based on pooled 2008-2015 ACS data. All regressions are weighted by personal sampling weight. Robust standard errors clustered at age are reported in parentheses. (\* 0.1, \*\* 0.05, \*\*\* 0.01)

Table 11: Discontinuity Estimates in Divorce Rate at Age 65, by ACA Period and Medicaid Expansion States

	Dependent variable: Indicator for divorce						
	Pre-A	ACA	Post-ACA 1	Nonexpanded	Post-ACA Expanded		
	(1)	(2)	(3)	(4)	(5)	(6)	
$Age \ge 65$ cutoff	$-0.749^{***}$	-0.679**	$-0.570^*$	-0.633**	-0.631	-0.760	
	(0.241)	(0.251)	(0.276)	(0.250)	(0.634)	(0.565)	
Intercept	17.070***		17.369***		17.897***		
	(0.237)		(0.274)		(0.633)		
Clustered SE	Yes	Yes	Yes	Yes	Yes	Yes	
Controls	No	Yes	No	Yes	No	Yes	
N	4285358	4285358	962974	962974	646615	646615	

<sup>\*</sup> The estimates are reported in terms of percentage points. The models include polynomial of age, fully interacted with indicator  $1(age \ge 65)$ . Control variables include year effect, state effect, gender, race, education, and Social Security Income. The estimates are based on pooled 2008-2015 ACS data. All regressions are weighted by personal sampling weight. Robust standard errors clustered at age are reported in parentheses. (\* 0.1, \*\* 0.05, \*\*\* 0.01)

Table 12: Discontinuity Estimates in Separation Rate at Age 65

	Dependent variable: Indicator for separation						
	Full Sample Women Black						
	(1)	(2)	(3)				
Age $\geq 65$ cutoff	-0.094	-0.047	-0.349				
	(0.068)	(0.076)	(0.309)				
Clustered SE	Yes	Yes	Yes				
Controls	Yes	Yes	Yes				
N	5894947	3106687	539317				

<sup>\*</sup> The estimates are reported in terms of percentage points. The models include polynomial of age, fully interacted with indicator  $1(age \ge 65)$ . The estimates are based on pooled 2008-2015 ACS data. All regressions are weighted by personal sampling weight. Robust standard errors clustered at age are reported in parentheses. (\* 0.1, \*\* 0.05, \*\*\* 0.01)