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Behavioral Responses to the Norwegian Wealth Tax

by

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1. Abstract

In this thesis I use a bunching design and regression discontinuity to examine how the Norwegian wealth tax affect taxpayers' portfolio composition. The hypothesis is that taxpayers change the composition of their investment portfolios to minimize or avoid wealth taxation. Using Norwegian tax data from 2009 to 2016 I estimate bunching around the wealth tax threshold and investigate discontinuities in ownership of different asset classes among taxpayers above and below the threshold. I expect to see some degree of bunching below the tax threshold, and to see a discontinuity in ownership of assets with high valuation discounts in the wealth tax system. The results show no evidence for bunching, and no significant discontinuities in ownership of any asset classes. These results implies that taxpayers do not take measures to avoid wealth taxation, which has implications for optimal capital taxation.

2. Introduction

The Norwegian wealth tax is widely debated. Argument against wealth taxation points on its effects on businesses. Effects like reduced liquidity, investments, and innovation. The most common argument for taxation of wealth says it reduce inequality. In my research I investigate how the investor is affected by the wealth tax, and in what degree he/she take measures to avoid the tax.

My motivation for studying this topic is first and foremost an interest in the Norwegian wealth taxation and the debate about its effects. Both sides of the debate are convinced about their view and refer to studies supporting their opinions. I experience the debate as confusing and want to contribute with evidence to support the facts. Another motivating factor is that I have seen the effect on business owners, and how the wealth tax forces them to take capital out of the business to pay their personal wealth tax.

This is an important study, because it will analyse if the wealth tax changes the behaviour of investors. By change in behaviour, I mean changes in their portfolios to minimize their taxable net wealth, and thereby minimize wealth tax. The changes in behaviour due to taxation is normally reducing the efficiency of the economy. For example, the income tax makes us work less than we would if there was no income tax. Taxation reduces the personal profit of socio-economic behaviour. An efficient taxation is a tax with a wide base, and a low rate. This makes the effect on behaviour small, because it is hard to avoid taxation, and the effect per taxpayer is small. The cost of avoiding the tax is larger than the profit of avoiding it. The Norwegian wealth tax has a relatively narrow tax base, and relatively few taxpayers pay a large amount. Using the logic explained above, the wealth taxation does not meet the criteria to be an efficient tax.

Investors are interested in minimizing taxes to reinvest as much of their profit as possible. This includes the wealth tax. One of the basics about taxes is that it affects behaviour. Tax avoidance is especially common amongst the wealthy.

Research question: Does taxpayers bunch below the wealth tax threshold, and how do the wealth tax affect investors portfolio composition?

Hypothesis: The taxation of wealth affect investors' choice of instruments. Investors around the tax threshold invest in instruments with a high tax value discount.

Tax planning is proven by a relatively large number of individuals reporting wealth right below the tax threshold. We can investigate their portfolios to find any discontinuities around the wealth tax threshold. I study discontinuity in value held in different assets. Individuals near the tax threshold typically hold assets with a lower taxable value than the fair market value.

In this study I first use bunching estimation to investigate if taxpayers bunch below the wealth tax threshold. The wealth tax gives taxpayers around the threshold incentive to reduce their taxable net wealth, and a bunching approach expose if this is done.

The literature distinguishes between two conceptually different bunching designs. One type of design is based on kink points. That is small changes in the curves direction and was developed by Saez (2010) and Chetty et al. (2011). The other type of design is based on notch points, which is small jumps in the curve. This was developed by Kleven & Waseem (2013). When investigating the Norwegian wealth tax it is relevant to use a kink design. All individuals above the threshold are liable to wealth taxation. Therefore we have a change in the direction of the curve at the tax threshold.

To investigate discontinuities in value held in different asset classes, I use regression discontinuity design on datasets consisting of taxpayers with a net wealth around the threshold. Regressions are run separately for the different assets classes and separate for every year. This is to get as accurate results as possible.

The regression discontinuity design has been known for over sixty years but has not attracted much attention until the last twenty-thirty years. Jinyong Hahn, Petra Todd and Wilbert van der Klaauw (2001) recognized that RD design require mild assumptions compared to those needed for other nonexperimental approaches.

One of the assumptions is that the objects are not able to manipulate their own taxable net wealth. This assumption is violated, but in this study, this is exactly what I am interested in

investigating. I want to find out how taxpayers select to be on different sides of the threshold.

If we can assume that all factors other than wealth taxation are affecting portfolio composition in a ‘’smooth’’ way with respect to net wealth, we can estimate a causal relationship between wealth taxation and portfolio composition. This is a key assumption of a valid regression discontinuity design. Hahn, Todd and Klaauw (2001) described the assumption that ‘’all other factors’’ were ‘’continuous’’ with respect to X. (Hahn et al., 2001)

In RD design we cannot observe treatment and non-treatment for the same value of X, but we can observe the two outcomes for values of X around the threshold that are arbitrarily close to each other. Since individuals just above or below the threshold essentially are treated equal other than that the ones above the threshold are liable to wealth taxation, we have a locally randomized experiment around the threshold.

In my first analysis I want to find out if the taxpayers bunch below the wealth tax threshold. The hypothesis is that there is some degree of bunching around the threshold. The results show that total bunching ‘B’ range from -0,119 to 0,136. None of the estimations show any evidence of bunching around the wealth tax threshold.

In my second analysis I investigate if there is any discontinuity in the value held in different assets for taxpayers around the wealth tax threshold. I analyse the value held in listed stocks, unlisted stocks, bank deposits and primary residence. The hypothesis is that taxpayers liable to wealth tax holds a significantly higher value in unlisted stocks and in primary residence. This is because of the favourable taxation of those assets in relation to other assets. The results show no significant effect from wealth taxation on taxpayers portfolio composition.

With this study I contribute to the existing literature on the topic of wealth tax in the way that I investigate the effect on taxpayers portfolio composition. I exploit the wealth tax systems different valuation discounts and methods for different assets and investigate if the taxpayers change portfolio composition in response to the wealth tax. I do not analyse the entire wealth taxation system but focuses on the private taxpayers and their portfolios. I do not investigate the effect on businesses and cannot comment on that. That is a topic for other studies.

I analyse a large dataset, with relatively new data. In this study I investigate the whole population and can therefore with high certainty conclude on the results. During the period from 2009-2016 there were not major changes in the wealth tax, and there have not been major changes since 2016. That makes this study relevant in today's tax system.

2.1 Review of existing literature

Wealth taxation is complex, and the literature has a large variety of topics. Below I review some relevant literature for this thesis. The findings are in some studies conflicting, which shows the complexity of the wealth taxation.

Daniel Seim finds in his study in 2014 with evidence from Sweden that the wealth tax is likely to stimulate evasion rather than deter saving. He uses data from 2000-2006 to estimate bunching around the wealth tax threshold and exploits changes in the threshold to estimate behavioural responses. Seim find significant bunching around the wealth tax threshold. (Seim, 2014) Sweden has a higher tax rate at 1.5 percent, which gives a higher incentive for taxpayers to take measures. I distinguish my work from Seim's work in the way that I investigate the effects on portfolio composition. Many studies estimate the effects on savings, but not on the kind of savings. I will contribute on this matter.

Marius Ring (2020) find no evidence of an effect by wealth taxation on share of wealth invested in risky assets. He uses Norwegian data from Statistics Norway, like financial data, real estate data and other. Ring (2020) also find that exposure to wealth taxes has a positive effect on savings, like Seim (2014) does. Ring uses a change in the model to assess the housing wealth to investigate how households respond to taxation. The change led to geographic discontinuities. Ring uses a boundary discontinuity approach to estimate the effects of the wealth tax. (Ring, 2020)

Floris Zoutman (2018) study the effect of wealth taxation on savings using evidence from the Netherlands. He uses a tax reform to as a quasi-experiment and finds that a 0.1 percentage point increase in the wealth tax leads to a savings reduction of 1.38 percent. The study uses data from 1995-2004 and investigate with a difference-in-difference approach how households highly affected by the tax reform reacted in comparison with households not

so much affected. (Zoutman, 2018) These results are contradictory to the results of Ring (2020) and Seim (2014).

Durán-Cabré et al. investigate in their paper from 2019 the behavioural responses to the wealth tax in Spain. The wealth tax was reintroduced in Spain after years of economic crisis. The study uses this reform to investigate how individuals reacted with regards to wealth reporting and tax avoidance. The results show that the wealth tax encourage individuals to change their asset and income composition to take advantage of the wealth tax threshold. They find that a 0.1 percentage point increase in the average wealth tax rate leads to a reduction in taxable wealth of 3.24 percent over four years. (Durán-Cabré, 2019)

Brülhart et al. use in their study from 2016 evidence from Switzerland and find that taxpayers bunch below the tax threshold. They find that responses to wealth taxation are driven by changes in wealth holdings. This means taxpayers do take measures to avoid the wealth tax. In the study they estimate that a 0.1 percentage-point rise in the wealth tax rate lowers reported wealth by 3.5 percent. (Brülhart et. al., 2016) What distinguish Switzerland from Norway is the tax rate. Switzerland has the highest rate on wealth taxation in the developed world and has a model with varying rates across locations and time. Increased rates give a larger incentive to avoid the taxation. With a lower tax rate, it is not surprising to see a different result with evidence from Norway.

Bruer-Skarsbø investigate data from Norway and found in 2015 that the wealth tax does not discourage savings. (Bruer-Skarsbø, 2015) He uses a regression discontinuity design and a difference-in-difference approach. The data used in the study is wealth and income data from 2008-2011. My work distinguishes from the work of Bruer-Skarsbø in the way that I investigate the effect on the composition of savings. While Bruer-Skarsbø estimate the effect on saving, I am interested in finding if the wealth taxation discourages or encourage saving in certain assets.

Jakobsen et al. (2019) study behavioural responses to wealth taxation amongst the wealthiest in Denmark. Denmark had one of the worlds highest wealth tax rates until 1989. A large reduction in the rate in 1989 make it possible for Jakobsen et al. to use a quasi-experiment approach. In the study they find large effects on the wealthiest segments of the population, and a smaller effect on the moderately wealthy. (Jakobsen et al., 2019) This is in line with the fact that the wealthiest have the biggest profit from tax avoidance and planning.

In 2019 Alstadsæter, Johannesen and Zucman used a unique dataset of leaked customer lists from offshore financial institutions matched to administrative wealth records in Scandinavia to study tax evasion. They find high rates of tax evasion at the top distribution of wealth. The 0.01 percent richest households evade about 25 percent of their taxes. In comparison, tax evasion in a random sample throughout the distribution is less than 5 percent. (Alstadsæter et. al., 2019) This is a very interesting finding, and one aspect of tax avoidance that is not covered in this thesis. However, it proves taxpayers are willing and able to take measures to avoid taxation. In this study tax planning is proven if taxpayers liable to wealth tax holds a larger value in assets with a high tax valuation discount.

This thesis proceeds as follows. Section 3 presents relevant theoretical framework related to the Norwegian wealth tax, valuation discounts for different assets, tax rates, the effect on return and tax avoidance. Section 4 describes the econometric models and estimation methods used in the study. Section 5 presents the data, and how the sample selections are done. Section 6 presents the results, and I conclude and discuss the results in section 7.

3. Theoretical framework

This section covers the theoretical framework for the study. I explain the history of the wealth taxation, both in international terms and in terms of rate and threshold in the Norwegian tax system. Next, I cover the valuation discount for different assets in the wealth tax system. Lastly, I describe the effects of taxes on return using the capital asset pricing model, and briefly explain tax avoidance.

3.1 The history of the wealth tax

Historically, the wealth tax has been widespread in the OECD. The characteristics of the tax makes it well suited to reduce wealth inequality among the population.

The number of OECD countries with a wealth tax has dropped from 12 in 1990 to 4 in 2017. In 2017, the only OECD countries with a wealth tax were France, Norway, Spain, and Switzerland. The main arguments for repealing the wealth tax relate to their efficiency costs and the risks of capital flight. The wealth tax often failed to meet its redistributive goal because of a narrow tax base and tax avoidance. (OECD, 2018)

Many OECD countries instead levy inheritance tax, that has some of the same distribution effects as the wealth tax. (OECD, 2021)

The wealth inequality among the population has increased dramatically the last decades, and some countries show a renewed interest in wealth taxes to address this inequality.

In Norway, the wealth tax is widely debated and researched. Publications show contradictory results. Bjørneby, Markussen and Røed found in October 2020 a positive causal relationship between a household's wealth tax and the employment growth of the company of which the household controls. (Bjørneby et al., 2020) At the same time, Berzins, Bøhren and Stacescu (2020) shows that an increase in the wealth tax increase dividends and salary, and decrease investments, sales growth, and profitability in private firms. Contradictory results like this makes us uncertain about the real effects of the wealth taxation on innovation, growth, and employment.

3.1.1 Tax rate and threshold

Statistics from SSB shows a clear development in the Norwegian wealth tax the last 20 years. In 1999 the average amount of paid wealth tax was 5 TNOK, and the tax base was 1.2 million taxpayers (28 percent of the population). In 2019, 20 years later, approximately 10 percent of the Norwegian population paid wealth tax (500.000 taxpayers), and the average amount paid was 30.5 TNOK. The average amount paid has increased 600 percent, and the number of taxpayers has been more than cut in half. The total wealth tax paid has increased with 260 percent. Fewer taxpayers paying more is in line with the wealth distribution goal of the wealth tax. (Statistikkbanken, 2020)

Figure A.1-A.3 shows how the taxbase, average amount paid, and total wealth tax paid has changed the last 20 years.

The threshold and taxrate is set by the government for each year. The threshold has been gradually increased, while the taxrate has been reduced. In 2007 and 2008 there were two different thresholds and taxrates. In 2007, the taxpayers with a net wealth above 220.000 NOK paid 0.9 percent tax, and the taxpayers with more than 540.000 NOK in net wealth paid 1.1 percent wealth tax. This system was reformed in 2009, into one threshold and one taxrate. The threshold was 470.000 NOK, and the taxrate was 1.1 percent. In the years following, the threshold and rate was changed almost every year. In 2020 the threshold was 1.5 MNOK and the rate was 0.85 percent. See table 1 below for an overview of the threshold and taxrate for every year since 2007.

Year	Threshold	Rate	Threshold	Rate
2007	220.000-540.000	0,90 %	540.000-	1,10 %
2008	350.000-540.000	0,90 %	540.000-	1,10 %
2009	470.000	1,10 %		
2010	700.000	1,10 %		
2011	700.000	1,10 %		
2012	750.000	1,10 %		
2013	870.000	1,10 %		
2014	1.000.000	1,00 %		
2015	1.200.000	0,85 %		
2016	1.400.000	0,85 %		
2017	1.480.000	0,85 %		
2018	1.480.000	0,85 %		
2019	1.500.000	0,85 %		
2020	1.500.000	0,85 %		
2021	1.500.000	0,85 %		

Table 1

3.2 Definition and model

A wealth tax is a capital tax based on the taxpayer's total wealth net of dept. The taxpayer is liable to wealth tax on the net wealth above a certain threshold at a certain taxrate. In the Norwegian tax system this threshold was 1.5 MNOK, and the taxrate was 0.85 percent in 2020. In a formula, the wealth tax can be explained like this:

$$wtax_t = \tau_t(TNW_t - Threshold_t)$$

where $wtax_t$ is the amount of wealth taxes due in year t+1, τ_t is the taxrate in year t, TNW_t is the taxable net wealth in year t, and $Threshold_t$ is the threshold for wealth taxation for year t according to the tax law.

To minimize taxation, investors want to minimize $wtax_t$. The taxrate and the threshold is set by law, so the only controllable variable is the taxable net wealth. Taxable net wealth in year t is given by the simplified equation below.

$$TNW_t = C_t + LS_t(1-\gamma_{LS}) + B_t(1-\gamma_B) + PR_t(1-\gamma_{PR}) + SR_t(1-\gamma_{SR}) - D_t$$

The assets in the equation are cash (C), listed stocks (LS), bonds (B), primary residence (PR) and secondary residence (SR). To find taxable value of the assets, the value is factored with the valuation discount for each asset (γ). The total taxable wealth is then net of total dept in year t (D).

To minimize the taxable net wealth, more wealth should be allocated to assets with a high value discount.

3.3 Different asset classes

In the Norwegian tax system, there are different value discounts for certain asset classes. For example, real estate is known to be favourably taxed in Norway. The hypothesis is that these differences affect the composition of investment portfolios held by individuals around or over the wealth tax threshold. Below I describe different asset classes and their value discount in the Norwegian wealth tax system.

Bank deposits are cash held in a bank account. This is the most liquid asset and is held by every taxpayer to meet short term commitments. There is no valuation discount on bank deposits, and low interest rates. That makes the asset class less suited to minimize wealth taxation. Therefore, it is not expected to see taxpayers around the wealth tax threshold holding a large portion of their wealth in bank deposits.

Listed stocks are shares of a company listed on a stock exchange. The allocation of equity into businesses contributes to general economic growth and is therefore encouraged by the government. The shares are given a valuation discount, decreasing taxable wealth in comparison to holding 100 percent cash. The valuation discount was 25 percent in 2019, and was increased to 35 percent in 2020, encouraging taxpayers to allocate even more of their

wealth to stocks. In this thesis I analyse data from 2009 to 2016. During this period there was no valuation discount for listed stocks, and I do therefore not expect to see any discontinuity around the wealth tax threshold for any year.

Bonds are equally valued and discounted as listed stocks. Bonds are publicly traded, and the market value is known. There is no incentive to hold bonds over listed stocks when it comes to wealth taxation. In this study, bonds and listed stocks are therefore combined and analysed as one variable.

Unlisted stocks are also given a valuation discount at the same rates as listed stocks, but since the stocks are not publicly listed, the market value is not as accurate. The valuation of unlisted stocks is based on the taxable value of the wealth of the company 1st of January the year before the tax year. In a growth company, the value can increase drastically in one year. This valuation method can therefore be preferable for investors trying to minimize or avoid wealth taxation. Even though there was no valuation discount in the time covered by the dataset, the valuation method can lead to a discontinuity around the threshold.

Primary residence is the asset in the Norwegian tax law with the highest valuation discount. The tax value of primary residence is 25 percent of the market value. A 75 percent valuation discount is a large incentive to have a large portion of the personal wealth placed in primary residence. On the other side, it is most common in Norway to look at the primary residence as a home, not an investment. It is a good opportunity to allocate capital to reduce taxable wealth. I expect to see taxpayers near the threshold holding a high value in primary residence.

The tax law has been reformed several times with regards to valuation discounts. In 2005, with effect from 1st of January 2006 the valuation of listed and unlisted stocks was changed. The valuation discount was reduced from 35 percent to 15 percent. That means the taxable wealth of taxpayers holding stocks increased. In 2007 the valuation discount was further reduced to 0 percent. From 2008 until 2017, the taxable value of stocks was equal to their market value. From 2017 the valuation discount has increased again. (Skatteloven, 2000) I am not able to investigate if these tax reforms have had an impact on the taxpayers' investments and if the reforms have changed the distribution of taxable wealth because my data only stretches from 2009 to 2016. This can be a topic for further studies.

3.4 Tax rates

The rates of the wealth tax are closely connected to the threshold. Combined they decide who are liable to the tax, and how much they need to pay in tax. As mentioned, the tax rate has been reduced and the threshold has been increased the last years. This has led to less taxpayers paying more.

Tax rates are set by the government for each year. The wealth tax is a part of a larger and more complex tax system. The setting of threshold and rates are therefore a small piece in a carefully thought-out tax strategy by the government. Isolating the effects of the wealth taxation can be hard in this tightly connected system.

The wealth tax rates has been gradually decreased since 2009. From 1.1 percent to .85 percent. The revenue from the wealth tax is divided between the state and the municipality. This gives the municipality an extra incentive to facilitate for growth and employment to increase tax income. Of the taxable net wealth, .7 percent goes to the municipality and .15 percent goes to the state.

Spain and France have progressive rates from .2 to 1.5 percent in France, and .5 to 3.75 percent in Spain. In France the wealth tax is only applicable to individuals with a net taxable wealth in real estate properties above £800.000. In Spain the tax base differs between regions. Compared to these tax systems, the Norwegian model with one rate and one threshold appears much simpler, and easier to administrate. Knowing administration costs is one of the arguments against the wealth tax, it can look like the Norwegian government uses a more favourable model. (OECD, 2018)

3.5 The effect of taxes on return

Most investors are risk averse and allocate capital in a way to maximize return relative to risk. The role of taxes in this equation is to make some of the return on capital go to the government to finance public services. Taxes are therefore a cost to the investor. Costs should be minimized, and taxes therefore need to be a factor to take into consideration when allocating capital. It is in the self-interest of investors to avoid taxes. There are many ways to avoid taxes. Some are legal, some are illegal. Tax havens have been broadly debated in the

Norwegian national media lately. The simplest and most common way to minimize the wealth tax is by portfolio composition. Allocation to assets with a high value discount gives a large difference between market value and taxable value. I will use the capital asset pricing model (CAPM) to visualize how the tax affect return. This is how taxes in general affect returns. Remember with regards to wealth taxation this is only applicable to those taxpayers liable to wealth tax. The CAPM show what return is needed from a project or an investment, given a predetermined risk, represented by beta (β) in the model. A higher rate in CAPM means that we need a higher cash flow to get a positive net present value. In other words, a higher rate represents increased costs for the investor.

$$CAPM = r_E = r_f(1-t) + \beta_E\left(r_m - r_f(1-t)\right)$$

Risk-free rate (rf) and market return (rm) in the equation are constants, and similar for every investment and asset. We therefore extract those from the equation, and are left with the following:

$$(1-t) + \beta_E(1+t)$$

For assets or investments with any unsystematic risk, the beta value will be larger than 1. The effect of the tax in the equation is that the required return increases. Wealth taxation is no different than other taxes in this respect. A taxpayer liable to wealth taxation have a higher total taxrate, and the effect on required return is increased. That means the incentive to minimize taxes are increased.

3.6 Tax avoidance

Tax avoidance is difficult to define. OECD defines it as ‘’the arrangement of a taxpayer’s affairs that is intended to reduce his tax liability and that although the arrangement could be strictly legal it is usually in contradiction with the intent of the law it purports to follow.’’ Tax evasion is on the other hand illegal arrangements where liability to tax is hidden or ignored. This can be hiding of income or information from the tax authorities. (OECD, 2021)

Avoidance and evasion make the investigation of wealth tax effects even harder. Causality of the results are harmed by the fact that taxpayers take measures to avoid or evade wealth tax. Seim (2014) argues that an increase in the wealth tax is likely to stimulate evasion rather than deter savings.

Taxpayers around and right above the wealth tax threshold have the largest incentive to take measures to reduce or avoid taxation. Provided tax avoidance do occur, we expect to see bunching around the threshold. Bunching is evidence for avoidance and evasion. I investigate if Norwegian taxpayers do bunch around the threshold.

4. Econometric models and estimation methods

This section explains and describes the models and methods used in the study. The methods are widely known and considered to be well suited for the purpose of this study. I use two different design methods for analysis in the study, bunching estimation and regression discontinuity.

4.1 Bunching

The bunching estimation design is relatively new in econometric analysis. It was developed by Saez (2010) and Chetty et al. (2011) and has been popular from the start, especially in the field of taxes. Bunching happens when many people select to be on a specific place of a range of some variable. In this study bunching happens when many people choose to stay below the wealth tax threshold. If this happens, we see in a histogram a ‘’bunch’’ of people right below the threshold. Below is an illustration of how bunching looks like in a histogram. Bunching is shown by the bin at the kink point marked with a black dotted line.

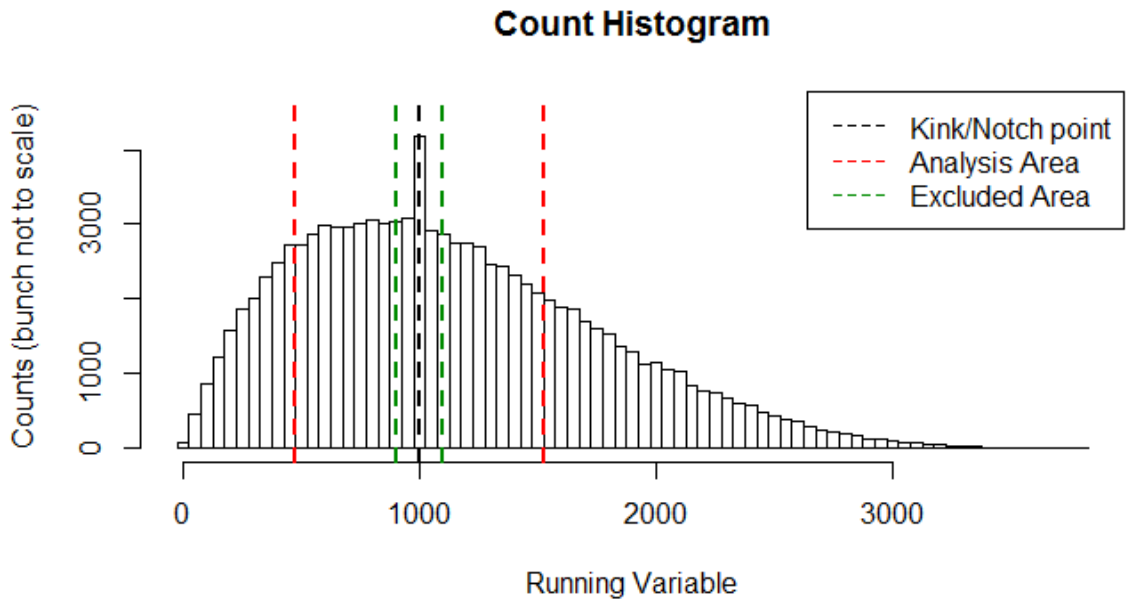


Illustration of bunching (Trilnick, 2016)

There are two types of bunching designs. A ‘’kink’’ design is when the slope suddenly changes direction, and a ‘’notch’’ design is when we have a jump or a drop in the slope. (Trilnick, 2016) The Norwegian wealth tax is a kink because the taxpayer is only liable to wealth taxation on the amount above the threshold. The marginal tax will increase for taxpayers above the threshold. If the case was that taxpayers would be liable to wealth taxation on their whole wealth if they crossed the threshold, we would have a notch design because their average tax would change. Taxpayers would then have avoided the threshold and we would see a drop in a histogram.

The large amount of data collected has made bunching design a more relevant method. Bunching requires large datasets to give accurate estimations. The bunching design requires the object to be able to manipulate their outcome. (Kleven, 2015) This assumption is fulfilled with regards to the wealth taxation. In my study I use the bunching approach on the net wealth distribution, with the assumption that taxpayers can take measures to change their reported net wealth. The wealth tax gives taxpayers around the threshold incentive to reduce their taxable net wealth, and a bunching approach will expose if this is done.

In the Norwegian wealth taxation, a convex kink is introduced at the wealth tax threshold w*. The kinked tax function is given by

$$T(w) = \max(0, t(w - w^*))$$

Where T(w) is wealth tax, t is wealth tax rate, w is taxable net wealth, and w^* is wealth tax threshold. When the kink is introduced, the individual initially located at $w^* + \Delta w$ moves down to the kink. This is the marginal bunching individual. This behaviour produces excess bunching in the wealth distribution around the wealth tax threshold. (Kleven, 2015)

Having the response of the marginal buncher, we can estimate the elasticity. The marginal buncher has a taxable net wealth right above the threshold and is liable to a small amount of wealth tax. This being a fact, we can define the elasticity as

$$e = \frac{\Delta w / w^*}{t}$$

The elasticity is proportional to the amount of bunching. We now want to link the marginal bunchers response Δw to the amount of bunching. Total bunching B will be

$$B = \int_{w^*}^{w^*+\Delta w} h_0(w)dw \cong h_0(w^*)\Delta w$$

Where the approximation assumes that the baseline density $h_0\ (w)$ is constant on the bunching segment (w*, w* + Δw). (Kleven, 2015)

4.1.1 Assumptions

The estimation of elasticities from a bunching design is based on a set of assumptions.

Smoothness in the non-bunching part of the distribution is the main assumption. That means there cannot be any other parameters changing at the same threshold as the wealth tax. That would make it impossible to isolate the effect of the wealth tax. The threshold can neither be a reference point for taxpayers. (Blomquist et al. (2019)

Estimation of the elasticity baased on a bunching design can create an aggregation bias. The estimate is the elasticity at the average response, it is not the average elasticity. (Kleven, 2015) Knowing responses to wealth taxation can vary a lot along the distribution, the estimated elasticity is only applicable to individuals near the threshold.

4.2 Regression discontinuity

In this study I use regression discontinuity (RD) design to analyse the relation between wealth taxation and portfolio composition. I use the threshold for wealth taxation to analyse this effect.

The regression discontinuity design has been known for over sixty years but has not attracted much attention until the last twenty-thirty years. It was first introduced by Thistlethwaite and Campbell (1960) in their study of the impact of merit awards on future academic outcome of students. (Thistlethwaite and Campbell, 1960) Below is an illustration of a regression

discontinuity. We see a discontinuity in the assignment variable between objects with and without treatment. The cutoff point is marked with the vertical black line at X = 50.

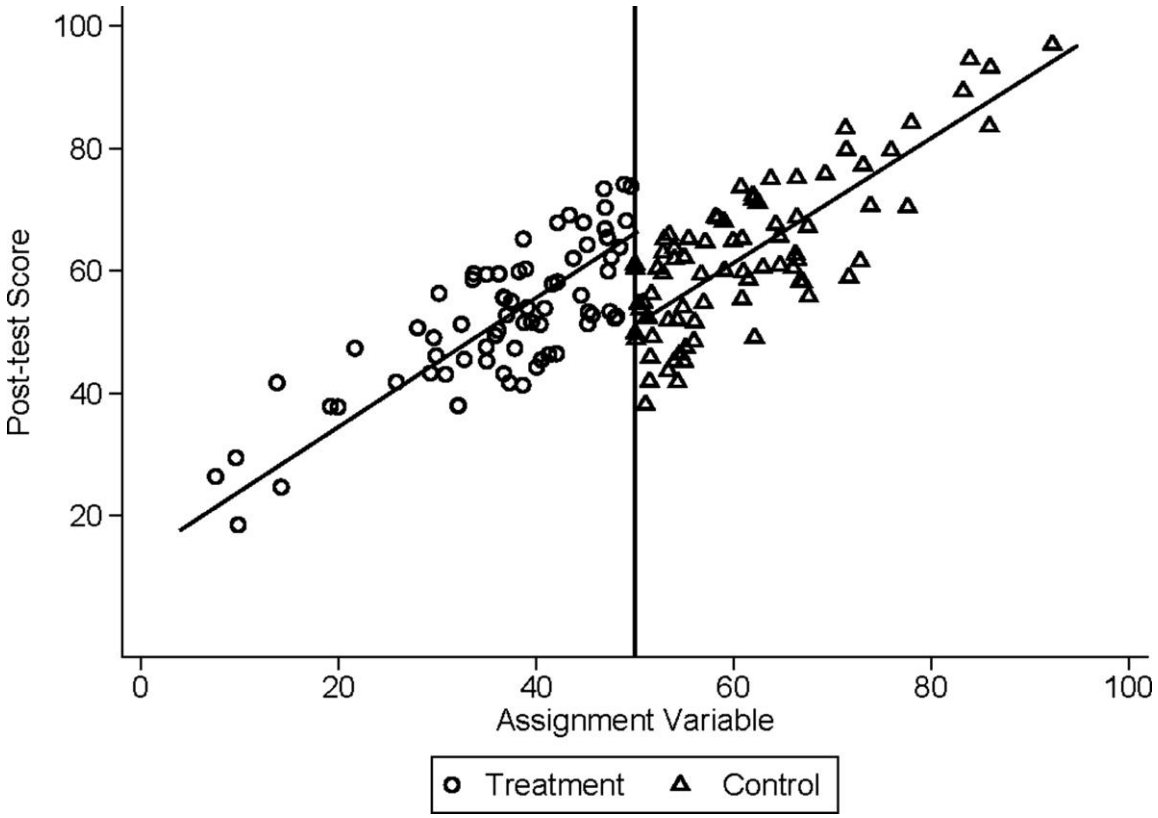


Illustration of Regression Discontinuity (Nakamoto et al., 2017)

Jinyong Hahn, Petra Todd and van der Klaauw (2001) recognized that RD design require mild assumptions compared to those needed for other nonexperimental approaches. They even state that causal conclusions from RD designs are potentially more credible than those from typical ‘’natural experiment’’ strategies (e.g., difference-in-difference or instrumental variables). (Hahn et al., 2001)

In my study individuals with a net wealth X, above a certain threshold c, are liable to wealth taxation, while those below the threshold do not pay wealth tax. The ‘’treatment’’ in my case is liability to wealth taxation. Let the receipt of treatment be denoted by the dummy variable $D \in \{0,1\}$, so that we have $D = 1$ if $X \geq c$ and $D = 0$ if $X < c$.

Y is the function of ownership in certain assets. This simple reasoning suggests attributing the discontinuous jump in Y at c to the causal effect of the wealth taxation. Assuming the

relationship between Y and X is otherwise linear, a simple way of estimating the treatment effect τ is by fitting the linear regression

$$Y = \alpha + D\tau + X\beta + \varepsilon,$$

RD estimates should use observations close to the threshold. At the same time, we need to examine a larger area to have enough data to make a reasonable guess for the treated and untreated states at X=c. We know that the best linear unbiased estimation of τ is the coefficient on D from OLS estimation of the equation above. (Lee and Lemieux, 2010)

If we can assume that all factors other than wealth taxation are affecting portfolio composition in a ‘’smooth’’ way with respect to net wealth, we can estimate a causal relationship between wealth taxation and portfolio composition. This is a key assumption of a valid RD design. Hahn, Todd and Klaauw (2001) described the assumption that ‘’all other factors’’ were ‘’continuous’’ with respect to X. (Hahn et al., 2001)

In RD design we cannot observe treatment and non-treatment for the same value of X, but we can observe the two outcomes for values of X around the threshold that are arbitrarily close to each other. Since individuals just above or below the threshold essentially are treated equal other than that the ones above the threshold are liable to wealth taxation, we have a locally randomized experiment around the threshold.

We have a local randomization if individuals do not have control over X. Then there will be now difference between the individuals on either side of X=c, and the treatment is ‘’as good as’’ randomly assigned around the threshold. This means that the fact that individuals cannot precisely manipulate their net wealth around the threshold makes the treatment locally randomized. (Lee and Lemieux, 2010) With regards to the net wealth, it is controllable by the taxpayer, and the assumption of no control is violated. In my study of the discontinuity in value held in different assets, this is exactly what I am interested in examining. I want to see how individuals select to be on either side of the threshold.

4.2.1 Interpretation

If we have heterogenous treatment effects, the discontinuity in an RD design can be interpreted as a weighted average treatment effect across all individuals. This is the case of the Norwegian wealth tax where a higher net wealth means a higher wealth tax. It would be tempting to conclude that the results from the RD design are only applicable to the few individuals at or around the threshold, but this is not the case. The treatment effect estimated using a RD design is averaged over a larger population than one would have thought. This understanding highlight that RD causal evidence is not fundamentally disconnected from the average treatment effect that is often of interest to researchers. (Lee and Lemieux, 2010)

4.2.2 Visual presentation

Graphing

A big advantage of the RD design is its transparency. It Is easy to illustrate results using graphical methods. The assignment variable can be divided into bins and graphed in a histogram.

To graph the data before starting to run regressions can be smart. A graph is a simple way of visualizing what the functional form of the regression function looks like on either side of the threshold point. It is also possible to see at the means just to the left and right of the threshold to perhaps get an indication of the magnitude of a discontinuity. If there is no visual evidence of a discontinuity in a simple graph, it is unlikely the formal regression methods discussed below will result in a significant treatment effect.

A simple graph also shows whether there are unexpected discontinuities at other points in the distribution. If these discontinuities cannot be explained, it questions the interpretation of the discontinuity at the threshold point as the causal effect of the treatment. (Lee and Lemieux, 2010)

Choice of the regression model

In general, there is no reason to believe that the true model is linear. Misspecification of the functional form generates a bias. A simple solution is to include polynomial functions of X

in the regression model. However, this estimates the regression function over all values of X. RD design depends on local estimates of the regression function around the threshold point. Hahn, Todd, and van der Klaauw (2001) suggests as a solution to run local linear regressions to a narrower window of observations around the threshold. That is less likely to result in large biases in the RD estimates. The choice of the size of the estimation window is a trade-off between precision and bias. A larger window can bias the estimate of the treatment effect because the linear specification is less likely to be accurate, while a smaller window gives less accurate estimates because less observations are available. (Lee and Lemieux, 2010)

Estimating the regression

A direct way of estimating the treatment effect is to run a pooled regression on both sides of the threshold point:

$$Y = \alpha + \tau D + \beta(X - c) + \beta D(X - c) + \varepsilon$$

Where τ is the treatment and D is a dummy variable with the value 1 if the individual has a net wealth above the threshold c, and the value 0 if the individual is not liable to wealth tax. The coefficient of the treatment variable τ will show the effect of the wealth tax.

As usual, it is recommended to use heteroskedasticity-robust standard errors instead of standard least squares standard errors. (Lee and Lemieux, 2010)

5. Data

In this section I explain the data source and describe the sample selection for both the bunching analysis and the analysis of regression discontinuity. I describe variables used in analysing the data, together with a brief process description of the analysis. Lastly, I present descriptive statistics of the different data frames.

5.1 Data source

In this study I use data from the tax form of the Norwegian population in the time frame 2009-2016. In total the data set consists of 31.804.386 observations and 22 variables. Before I get access to the data, some objects are removed. This is to ensure it is impossible to identify any of the objects in the dataset. The first action is to remove all individuals who reported more than 5 million NOK in wealth in the period 2009-2016. This concerns around 1.5 percent of the sample. These objects are not very important for my analysis since these households are far from the wealth tax threshold. The second action is to remove all individuals who reported more than 1.5 million NOK in income. This is about 0.5 percent of the sample.

In the sample all monetary amounts are represented in ten thousand of NOK. That means an individual with 1.000.000 NOK in net wealth, have a net wealth in the sample of $\frac{1.0000.000}{10.000} = 100$. All tables, graphs and histograms have numbers shown in ten thousand. Interpretation of coefficients from the regression analysis is also affected. This is thoroughly explained in the result section of the thesis.

5.2 Sample selection

The large size of the dataset makes it hard to handle for analysis. It is therefore necessary to remove irrelevant variables and observations to be able to run any code on the data. I use the

RStudio software for data preparation and analysis. Below I describe the main parts of the sample selection and preparation.

5.2.1 Bunching data

I run two separate codes on the data: one for the bunching analysis, and one for the regression discontinuity. To be able to analyse the data in RStudio, I reduce the size of the dataset by removing variables I don't need for the analysis. Net wealth, year and person ID is the only relevant variables for the bunching estimation.

Common for both the bunching dataset and the regression discontinuity is that I separate couples and singles in two different data frames. This is because married couples report combined taxable net wealth and have twice the wealth tax threshold of single individuals. The sample for couples is made by matching the variables for ''person ID'', and ''person ID samboer''. I create a new variable and set it to be the highest value of the ''person ID'' and ''person ID samboer'', and match observations that have the same value in this variable.

The observations with no value in the variable ''person ID samboer'' make up the dataset for singles. Since I am interested in net wealth around the threshold and value held in assets, I remove negative values. I also make a separate data frame for every year in both analyses. This means it is made sixteen datasets in total for the bunching analysis. Eight for couples, and eight for singles. Below is descriptive statistics for the datasets. The bunching estimation is done for every dataset. Chosen bandwidth is larger in the latest years because of larger values. In the bunching estimation, one bin below the threshold is included in the bunching mass because I want to estimate if taxpayer's bunch below the threshold.

Descriptive statistics for the sixteen datasets are presented in table 2 and 3 below. For all datasets we have a large number of observations, and good conditions for a bunching estimation. We can already see of the mean values that most of the observations are in the lower end of the distribution. Since I want to estimate bunching around the wealth tax threshold, I am most interested in the observations around the threshold. A visual of the wealth distributions for each dataset is presented in figures B.1-B.16.

Couples

	N	Mean	Sd	Min	Max
Couples 2009	38.185	62,0	72,544	1	826
Couples 2010	43.669	70,7	79,557	1	694
Couples 2011	45.171	74,4	82,486	1	742
Couples 2012	34.753	91,5	94,617	1	769
Couples 2013	36.162	101,0	103,170	1	798
Couples 2014	39.936	107,3	110,928	1	864
Couples 2015	42.645	119,9	122,503	1	936
Couples 2016	44.785	136,2	137,337	1	985

Table 2

Singles

	N	Mean	Sd	Min	Max
Singles 2009	1.901.285	48,3	58,494	1	500
Singles 2010	1.978.595	54,7	62,545	1	500
Singles 2011	2.004.805	56,7	65,216	1	500
Singles 2012	2.065.681	59,7	68,216	1	500
Singles 2013	2.103.038	63,3	72,787	1	500
Singles 2014	2.149.533	66,0	76,333	1	500
Singles 2015	2.183.366	71,2	82,087	1	500
Singles 2016	2.142.475	79,5	89,977	1	500

Table 3

5.2.2 Regression discontinuity data

For the regression discontinuity analysis of the portfolios of taxpayers around the threshold I do not remove as many variables as with the bunching data. I am left with 5 variables to analyse; net wealth, listed stocks, unlisted stocks, bank deposits and primary residence. For the couples-dataset I sum up the partners wealth, listed stocks and bonds, unlisted stocks, bank deposits and share of taxable value of primary residence to get a total for every variable.

I also make separate data frames for every year for this analysis. In total I have sixteen data frames here as well. In addition, I limit the samples to five hundred thousand NOK in net wealth below and over the threshold for every year both for couples and for singles.

To estimate the regression, I make a dummy variable ‘’D’’ that has the value 1 if the tax object is liable to wealth taxation i.e., has a net wealth above the threshold for that year. I estimate regression discontinuity for the four asset classes for every year for both couples and singles. In total 64 regressions are run with heteroskedastic robust standard errors.

Descriptive statistics for the data frames for couples and singles are presented in table 4 and 5 below. This is the data frames from before dividing them into years.

Couples

	N	Mean	St. Dev.	Min	Max
Net wealth	325.300	95,7	105,973	1	985
Primary residence	325.300	70,3	82,769	0	2.435
Listed stocks	325.300	10,3	29,616	0	1.558
Unlisted stocks	325.300	11,6	49,314	0	1.690
Bankdeposits	325.300	52,1	64,013	0	1.257

Table 4

Singles

	N	Mean	St. Dev.	Min	Max
Net wealth	16.528.671	62,8	73,705	1	500
Primary residence	16.528.671	32,2	46,611	0	3.719
Listed stocks	16.528.671	3,9	16,572	0	2.222
Unlisted stocks	16.528.671	2,4	20,776	0	4.374
Bankdeposits	16.528.671	29,1	45,581	0	3.164

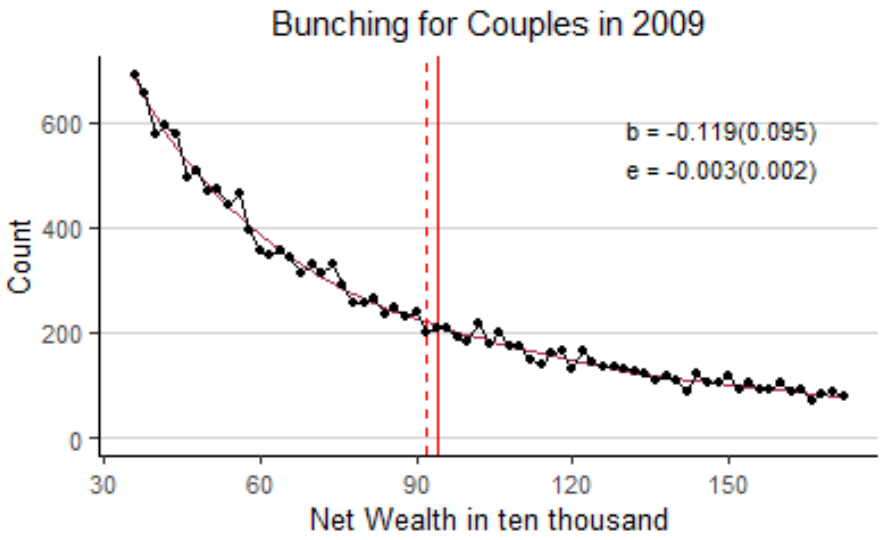
Table 5

6. Results

In this section I present the results for the two parts of my study. I first present my findings from the bunching analysis of net wealth for couples and singles in the period 2009-2016. Second, I exhibit the results from my discontinuity analysis of asset values for individuals around the wealth taxation threshold.

6.1 Bunching Analysis

In my first analysis I want to find out if the taxpayers bunch below the wealth tax threshold. The hypothesis is that there is some degree of bunching around the threshold. I use the bunching package in RStudio to estimate the bunching for every year separate for couples and singles. Total bunching B, range from -0,119 to 0,136. None of the estimations show any evidence of bunching around the wealth tax threshold. Below is the figure for bunching estimation of singles in 2009. This estimation shows a small, non-significant negative bunching below the tax threshold. Figure C.1 to C.16 in the appendix give a visual presentation of the estimations for every dataframe.



6.1.1 Causality

The result is interesting because it proves that there is no bunching around the wealth tax threshold. This means taxpayers liable to wealth tax on average does not make investments decisions to avoid wealth taxation. The analysis is simple and do undoubtedly investigate what is intended. All individuals with a net wealth around the tax threshold is included in the dataset. I can with high confidence say that there is no bunching around the wealth taxation threshold. In no year there is found bunching.

6.1.2 Significance

Neither on the average level nor on the individual year level, there is a significant amount of bunching. I would not expect to see large differences between the dataframes. There is no reason why there should be more bunching amongst singles than amongst couples, or the opposite. There is neither any reason why there should be large differences between the years. There is no surprise to see no bunching in the dataframes.

6.2 Discontinuity Analysis

In my second analysis I investigate if there is any discontinuity in the value held in different assets for taxpayers above the wealth tax threshold. I analyse the value held in listed stocks, unlisted stocks, bank deposits and primary residence. The hypothesis is that taxpayers liable to wealth tax hold a significantly higher value in unlisted stocks and maybe in primary residence because of the favourable taxation of those assets in relation to other assets. There is defined a dummy variable with the value 1 if the taxpayer was liable to wealth tax. The coefficient of that variable tells me how the wealth tax affects the value held in one specific asset. Figure E.1 to E.16 summarize the results for every dataset. The coefficient of the dummy variable is not significant for any of the regression estimations, and I can reject the hypothesis. There is no evidence for wealth taxation affecting portfolio compositions.

6.2.1 Causality

The analysis is based on differences in tax valuation of different assets. In the Norwegian wealth taxation, primary residence and stocks are beneficially valuated. The hypothesis is to see a discontinuity in holding value for these assets for taxpayers around the wealth tax threshold. The fact that every asset is analysed in separate regressions increases the causality. However, none of the coefficients are significant, and it is not relevant to discuss causality further.

6.2.2 Significance

None of the regression analyses result in significant coefficients. This means I can conclude that taxpayers do not change investment portfolio composition to avoid or minimize wealth taxation. No regression discontinuity means the wealth tax does not on average affect investment choices.

7. Conclusions

In this section I conclude the study and comment the results. I explain if this study contributes to existing literature on the topic. Lastly, I cover the sources of error in the study, and if there is something that needs to be further investigated.

7.1 Discussion of the results

The initial hypothesis was that I would find taxpayers bunching below the wealth tax threshold because of measures made to minimize or avoid taxation. I do not find any signs of bunching in any of the years investigated. Even though I find no evidence for bunching, it is an interesting finding. Absence of bunching indicates that the wealth taxation does not have as negative impact as expected. I can conclude that taxpayers on average do not take measures to avoid wealth tax. This means that the threshold and the taxrate is at a level that do not affect taxpayers behaviour in this term.

In addition to the bunching analysis, I investigate if there are any significant differences in portfolio composition between wealth taxpayers and non-wealth taxpayers. Specifically, I run a regression discontinuity on value held in different assets for taxpayers around the wealth tax threshold. The hypothesis was that I would find a discontinuity in the assets with the highest valuation discount. I expected to find the largest discontinuity in value held in unlisted stocks because of the valuation method of such stocks. The results show that there is no significant discontinuity for any of the selected assets in any of the years analysed. This means I can conclude that taxpayers on average do not make investment decisions with the purpose of reducing wealth taxes.

The result from the bunching analysis is in line with existing literature. Seim (2014) find evidence for bunching using data from Sweden, but a very tiny elasticity. Considering the Swedish taxrate on wealth is 1.5 percent compared to the Norwegian .85 percent, our findings are not conflicting. I also find no evidence for an effect from the wealth tax on portfolio composition. Ring (2020) find no evidence for an effect on share of wealth invested in risky assets. This is also just in line with my findings. While Ring investigated share of wealth invested in the stock market, I investigate allocation to a set of different assets.

Despite this more thorough investigation of portfolio composition, I find no effects in any of the asset classes investigated.

7.2 Sources of error

There are often things not included in the analysis and estimations that would have impacted the results in some way if they were included. In this study I investigate taxpayers wealth and investment portfolios. The data is based on tax forms, which are filled in separate for every year. I do not investigate changes in wealth year to year for individual taxpayers.

Divorces and marriages affect net wealth in great manner. Married couples report wealth together. When couples get divorced, it is most common to split the values in half. In that case it would not affect my analysis in other ways than the taxpayers would move from the couple-dataset to the single-dataset. If they do not split the common values in half though, it would affect the results of my study. One of the taxpayers would get a higher net wealth than the year before, and the other one would get a lower net wealth, simply because of the divorce, and not because of investment choices. In the same way, a marriage would affect the results in the way that two taxpayers would get an average of their net wealth, simply because they got married. In that way, to get married can be a good way to minimize wealth taxation, but that is a digression.

Another aspect not considered in this study is taxpayers moving abroad. The taxpayer would then not be liable to wealth tax in Norway. Absence of bunching, and no significant discontinuity around the wealth tax threshold for any of the assets makes it unlikely that moving abroad to avoid wealth taxation is done in great extent. I do not consider this to be a big source of error, and think my results are not affected by this.

One of the big issues with the wealth taxation is the difficulty of valuing assets precisely. There is often a large difference between reported wealth and actual wealth. Other taxes, like the income tax is very easy to estimate and control. Wealth tax on the other hand, and actual value of certain assets can be hard to estimate. Therefore, reported net wealth is often not accurate, and the wealth tax is estimated on wrong terms. The valuations and estimations are most often biased towards a lower value than actual and real market value.

7.3 Topics for further studies

Wealth taxation is a topic with a lot of sides and perspectives. As much as my conclusion is clear, we need to remember that the study covers a small portion of a larger system. An aspect of the wealth taxation widely discussed is its effect on the growth ability of businesses. The taxation is based on the balance sheet of businesses, and not on the result as other taxes are. Even with a loss, the owners must pay the wealth tax. This can lead to businesses being forced to either sell assets or take on dept to pay the tax. This study only covers the net wealth and investment of private investors, and do not include the business aspect of the wealth taxation. I cannot comment the effect of wealth taxation on businesses without investigating it in detail. There is not necessarily correlation between the effect on private persons and businesses.

The data investigated in this study consist of tax data in the period from 2009 to 2016, which do not include material tax reforms. To analyse the effect of tax reforms with a difference in difference abroach can be a good study to find a causal relationship between the wealth taxation and reported wealth. That could be a topic for further studies. The hypothesis would then be that the taxpayers would change their portfolio composition to utilize the tax reforms. If the valuation discount on stocks were increased, we would expect an increase in stock holdings for taxpayers liable to wealth tax.

7.4 The meaning, scope and effect of the results.

Results from the bunching analysis and the regression discontinuity show us that taxpayers do not on average bunch below the wealth tax threshold, and do not on average make investment choices to avoid wealth tax. This means the wealth taxation do not affect capital allocation on the private taxpayer level, and do not on average create a socio-economic loss on this area.

Since the results are based on an analysis of data from Norwegian taxpayers, and on the Norwegian wealth tax system, the study is relevant only in Norway. The wealth tax systems

of different countries can be quite unlike with regards to taxrate, valuation discounts, threshold and more. It is natural to believe the taxrate to be the most important variable when it comes to bunching and tax avoidance. A higher tax rate increases the incentive to avoid taxation.

With the results in mind, it can look like increasing the total wealth taxation would be rational from a governmental perspective. This can be done by increasing the taxrate, decreasing the tax threshold, or a combination of the two. We need to remember that this study does only cover the effect on private taxpayers and does not analyse the effect on businesses or the economy in total. That means we cannot conclude on an increase in wealth taxation to be socio economic efficient. This study needs to be seen in combination with other studies on other aspects of the Norwegian wealth taxation.

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Figures

General figures on wealth taxation in Norway

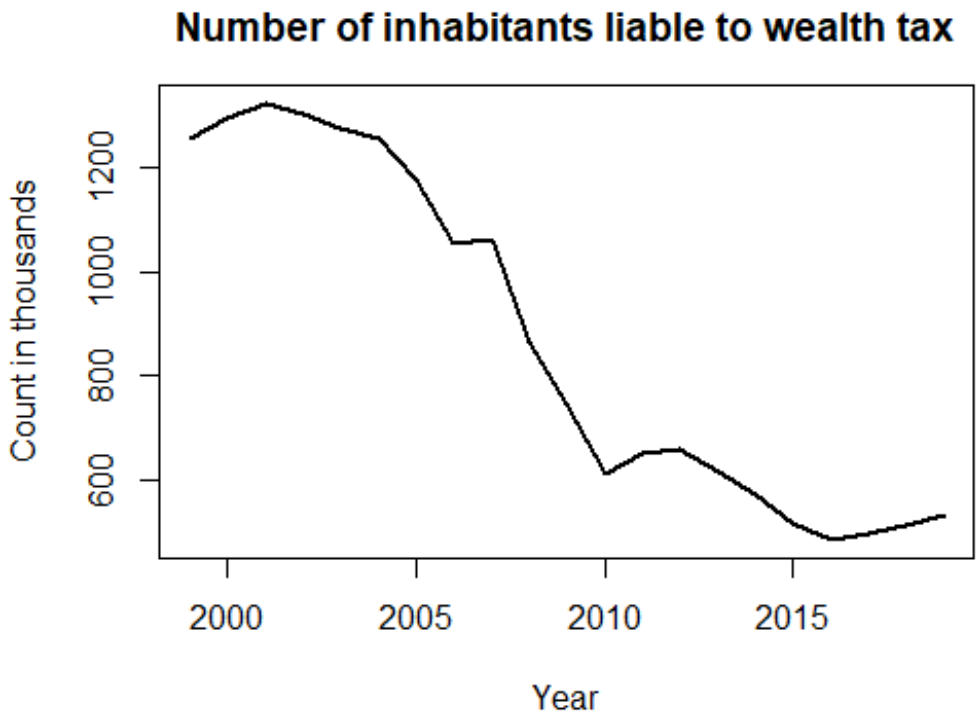

Figure A.1: Number of inhabitants liable to wealth tax in Norway per year

This figure shows how the development in the number of taxpayers paying wealth tax has been the last two decades. The count is in thousands, and the x-axis displays years. The steep decrease in 2008-2009 is most likely because of the financial crisis, and the reduction in value of most asset classes.

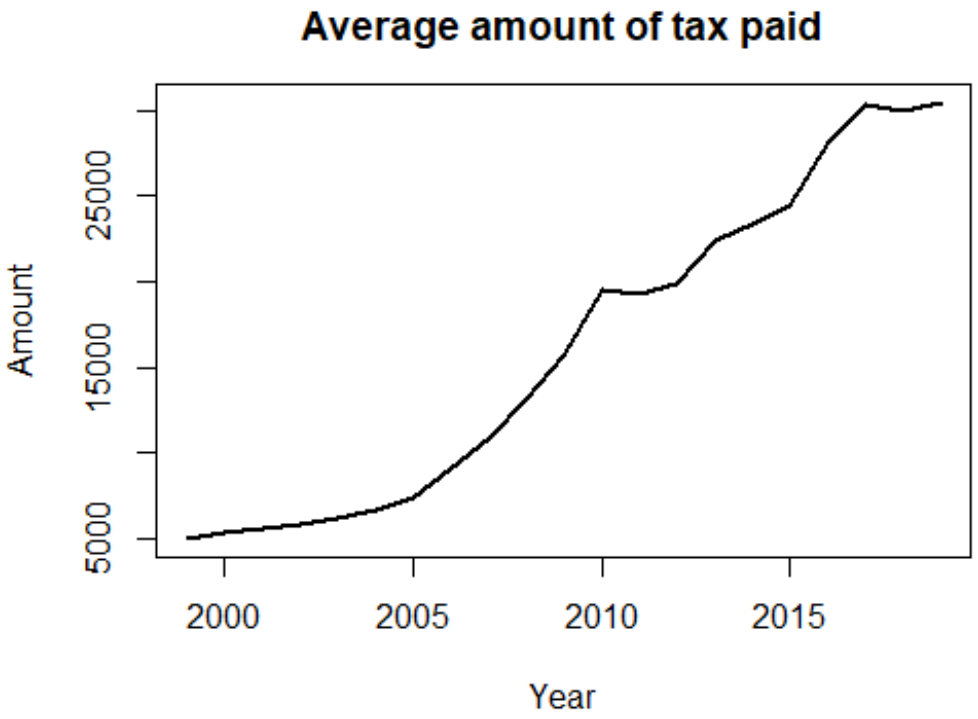

Figure A.2: Average amount of wealth tax paid per taxpayer per year

The figure present how the average amount of wealth tax paid has developed the last two decades. It has increased almost every year. It stagnated in 2010, right after the financial crisis. Perhaps there was so many new taxpayers liable to wealth tax these years because of the large growth after the crisis. That would have led to a decreased average amount, because a large portion of the taxpayers would be near the threshold. Amount is in NOK, and the x-axis show years.

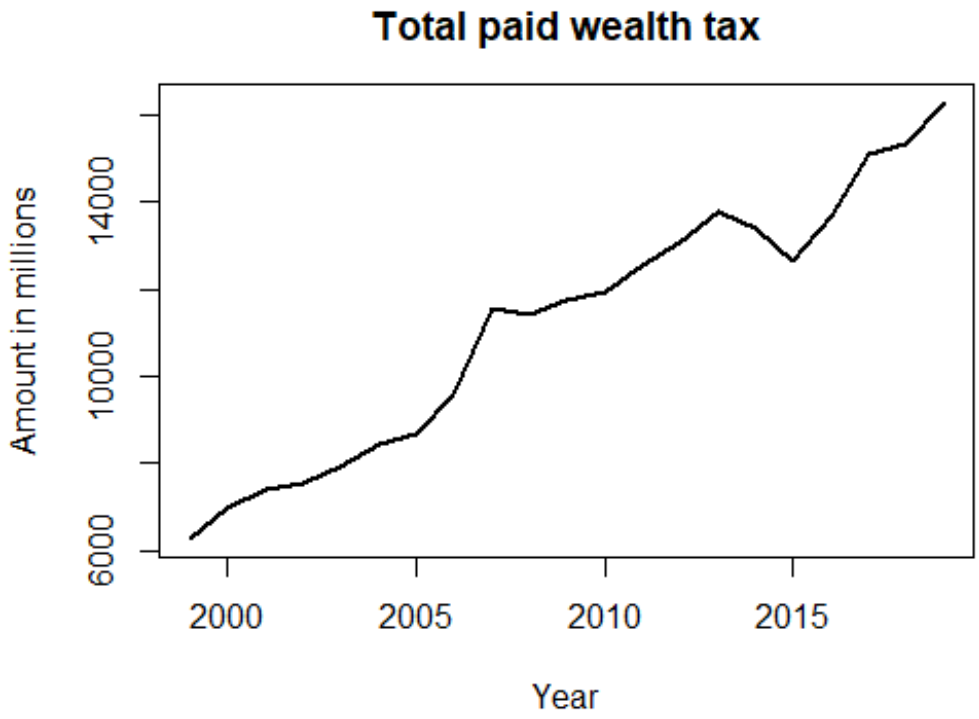

Figure A.3: Total paid wealth tax per year

This figure is the product of figure A.1 and A.2. It shows that the state income from wealth tax has mostly increased the last two decades. From 2013 to 2015 there was a reduction, which I cannot explain. From year 2000 the total income from wealth tax has almost increased 300%. The amount on the y-axis is in millions NOK.

Histograms showing the distribution of net wealth

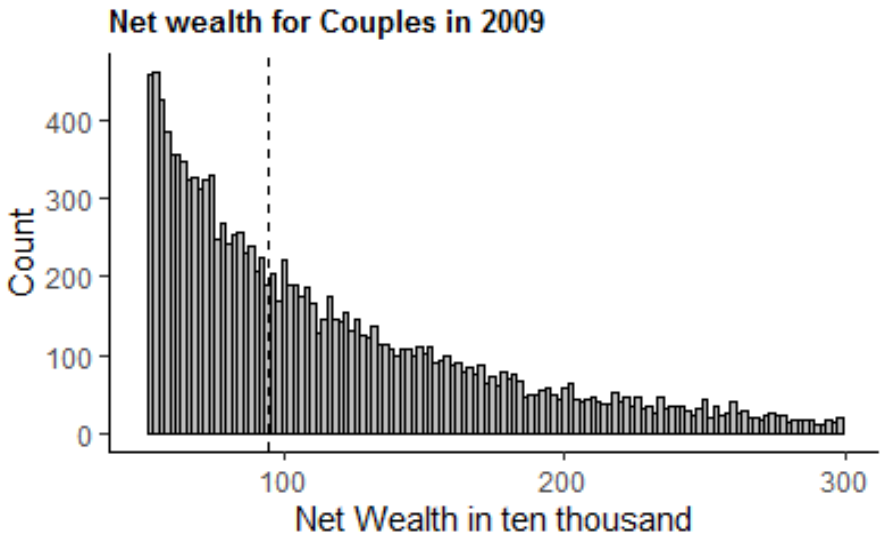

Figure B.1: Distribution of net wealth for couples in Norway for 2009

The histogram shows the distribution of net wealth among couples in 2009. There are no signs of bunching around the tax threshold. Net wealth is displayed in ten thousand NOK. The wealth tax threshold is shown by the dotted line.

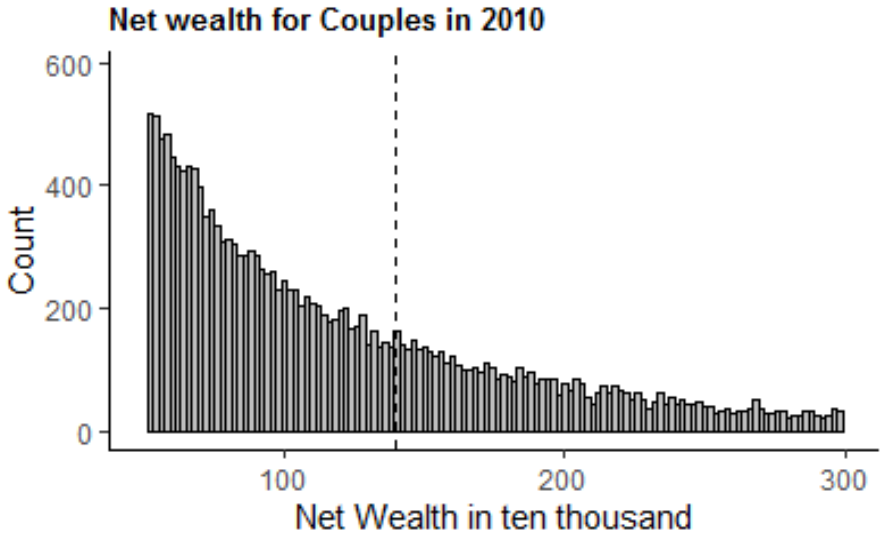

Figure B.2: Distribution of net wealth for couples in Norway for 2010

The histogram shows the distribution of net wealth among couples in 2010. There are no signs of bunching around the tax threshold. Net wealth is displayed in ten thousand NOK. The wealth tax threshold is shown by the dotted line.

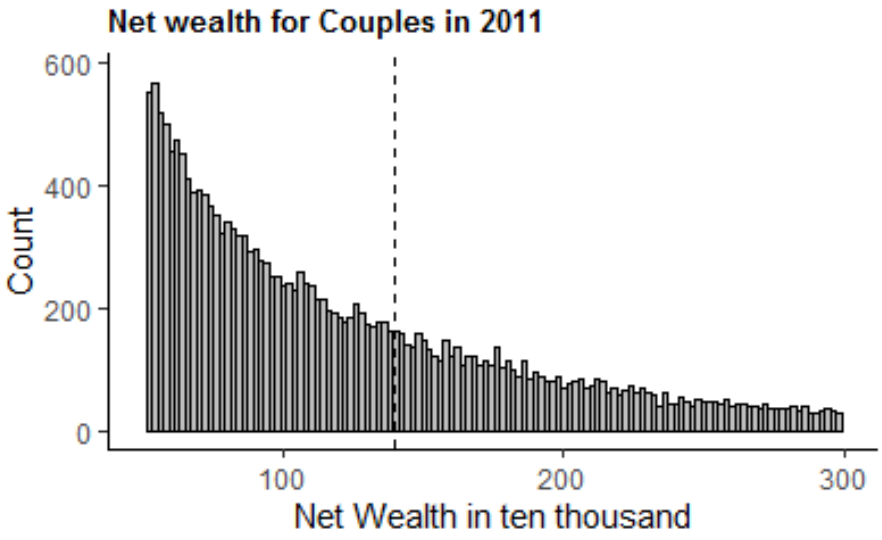

Figure B.3: Distribution of net wealth for couples in Norway for 2011

The histogram shows the distribution of net wealth among couples in 2011. There are no signs of bunching around the tax threshold. Net wealth is displayed in ten thousand NOK. The wealth tax threshold is shown by the dotted line.

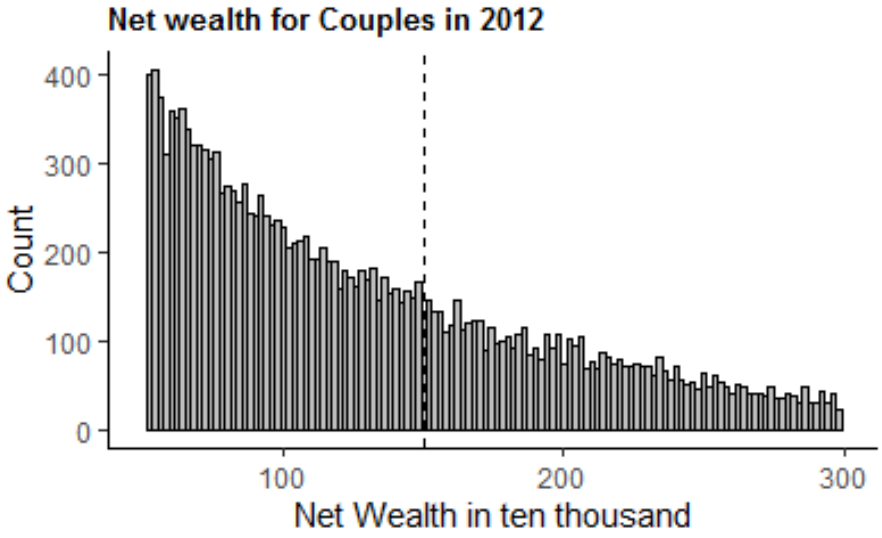

Figure B.4: Distribution of net wealth for couples in Norway for 2012

The histogram shows the distribution of net wealth among couples in 2012. There are no signs of bunching around the tax threshold. Net wealth is displayed in ten thousand NOK. The wealth tax threshold is shown by the dotted line.

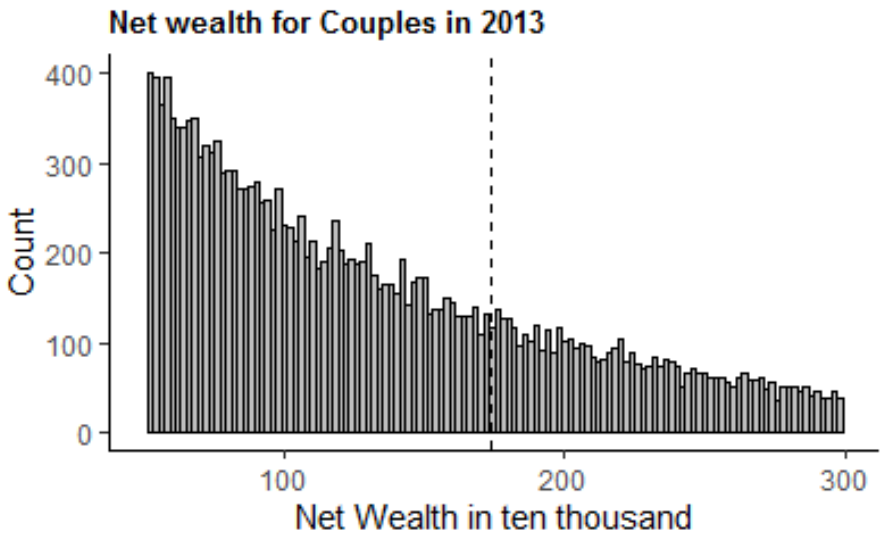

Figure B.5: Distribution of net wealth for couples in Norway for 2013

The histogram shows the distribution of net wealth among couples in 2013. There are no signs of bunching around the tax threshold. Net wealth is displayed in ten thousand NOK. The wealth tax threshold is shown by the dotted line.

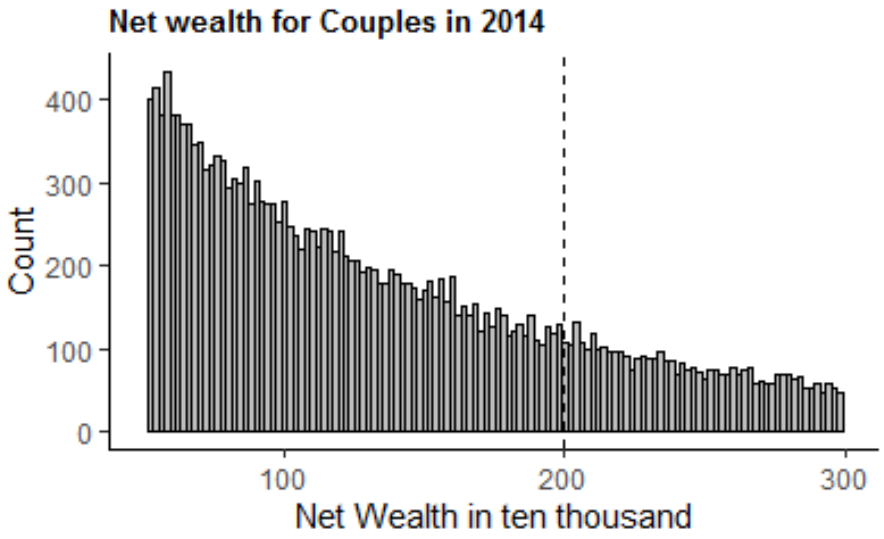

Figure B.6: Distribution of net wealth for couples in Norway for 2014

The histogram shows the distribution of net wealth among couples in 2014. There are no signs of bunching around the tax threshold. Net wealth is displayed in ten thousand NOK. The wealth tax threshold is shown by the dotted line.

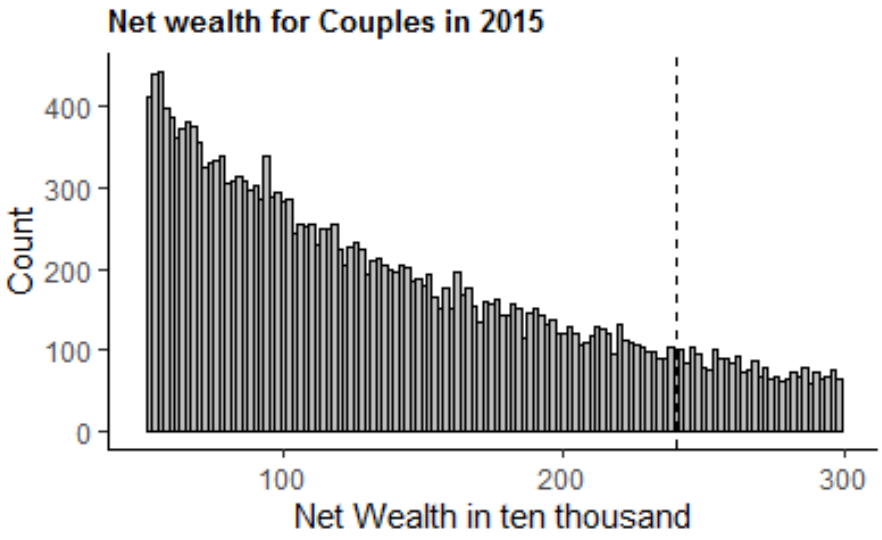

Figure B.7: Distribution of net wealth for couples in Norway for 2015

The histogram shows the distribution of net wealth among couples in 2015. There are no signs of bunching around the tax threshold. Net wealth is displayed in ten thousand NOK. The wealth tax threshold is shown by the dotted line.

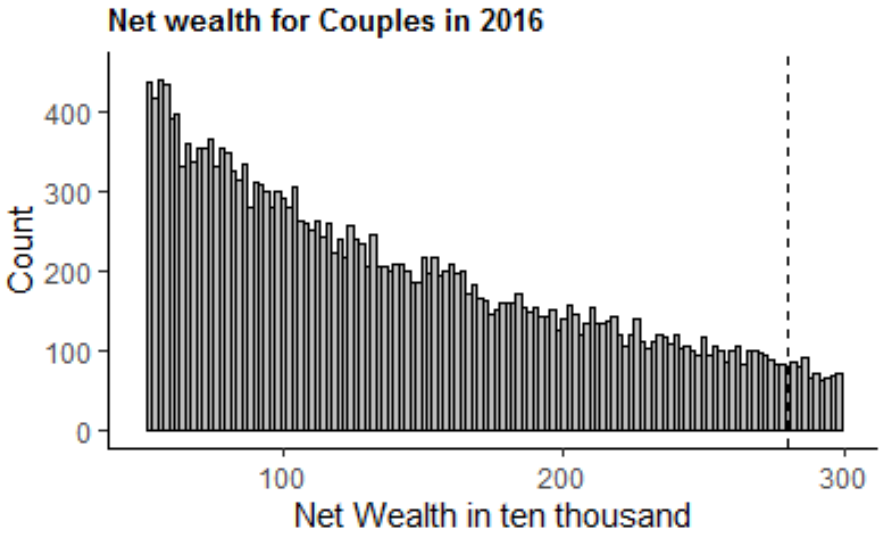

Figure B.8: Distribution of net wealth for couples in Norway for 2016

The histogram shows the distribution of net wealth among couples in 2016. There are no signs of bunching around the tax threshold. Net wealth is displayed in ten thousand NOK. The wealth tax threshold is shown by the dotted line.

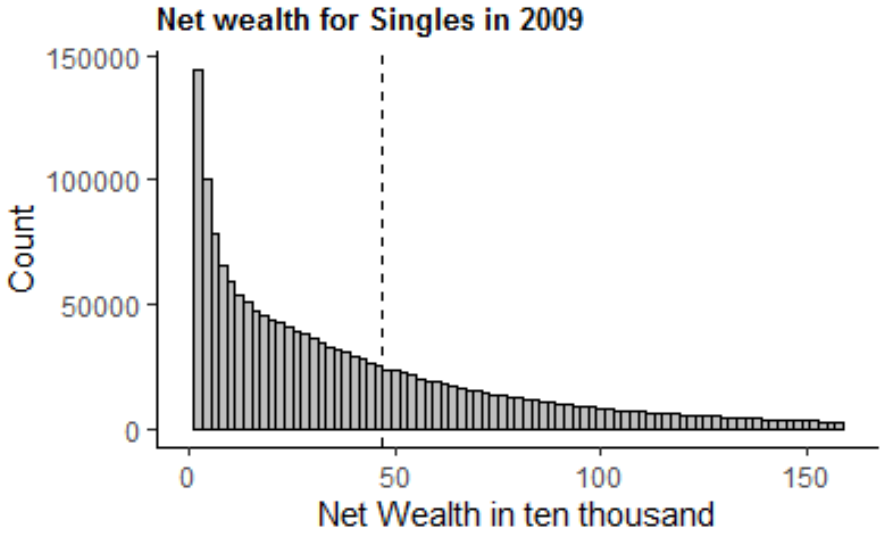

Figure B.9: Distribution of net wealth for singles in Norway for 2009

The histogram shows the distribution of net wealth among singles in 2009. There are no signs of bunching around the tax threshold. Net wealth is displayed in ten thousand NOK. The wealth tax threshold is shown by the dotted line.

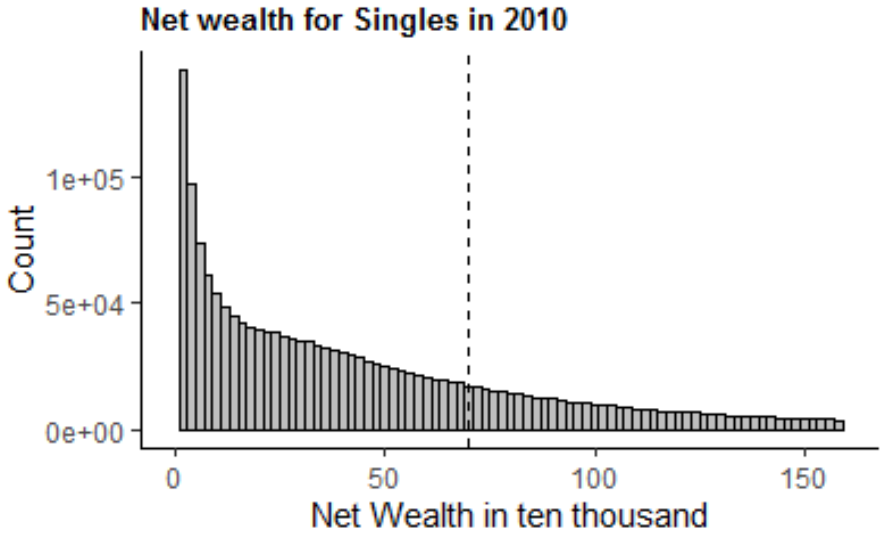

Figure B.10: Distribution of net wealth for singles in Norway for 2010

The histogram shows the distribution of net wealth among singles in 2010. There are no signs of bunching around the tax threshold. Net wealth is displayed in ten thousand NOK. The wealth tax threshold is shown by the dotted line.

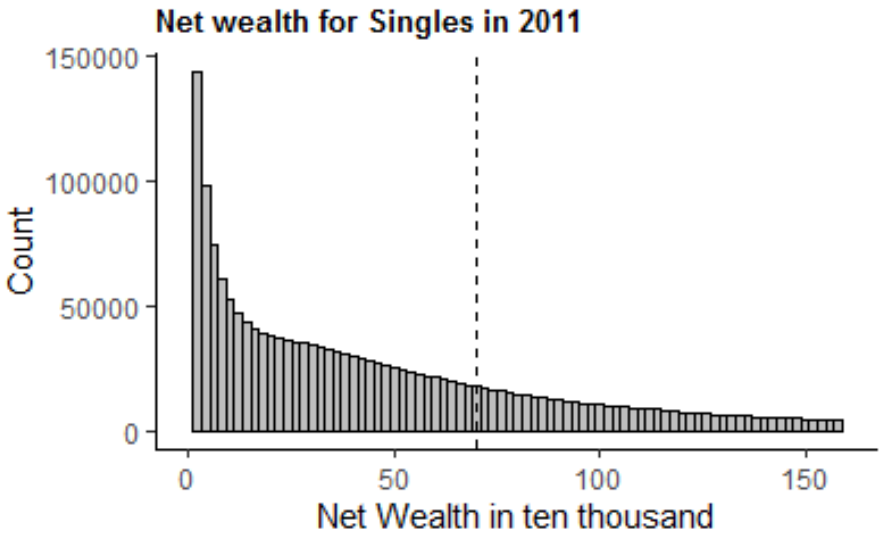

Figure B.11: Distribution of net wealth for singles in Norway for 2011

The histogram shows the distribution of net wealth among singles in 2011. There are no signs of bunching around the tax threshold. Net wealth is displayed in ten thousand NOK. The wealth tax threshold is shown by the dotted line.

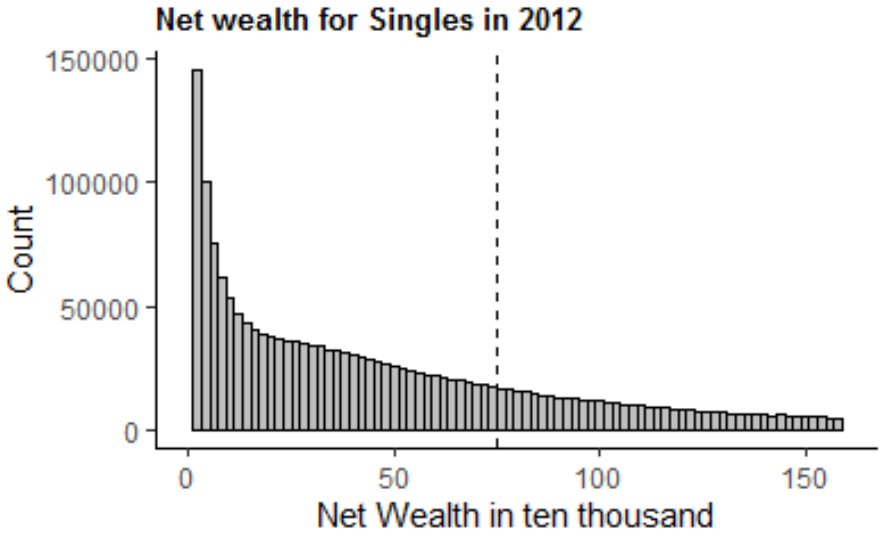

Figure B.12: Distribution of net wealth for singles in Norway for 2012

The histogram shows the distribution of net wealth among singles in 2012. There are no signs of bunching around the tax threshold. Net wealth is displayed in ten thousand NOK. The wealth tax threshold is shown by the dotted line.

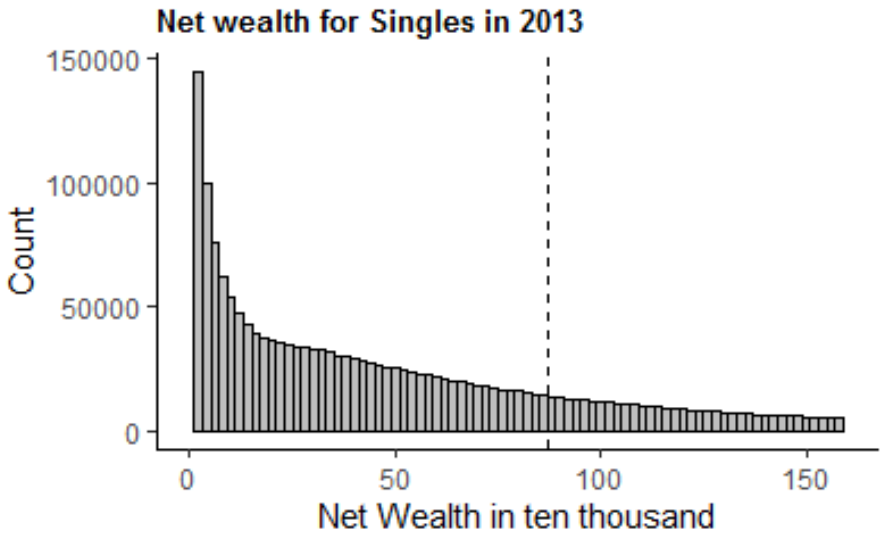

Figure B.13: Distribution of net wealth for singles in Norway for 2013

The histogram shows the distribution of net wealth among singles in 2013. There are no signs of bunching around the tax threshold. Net wealth is displayed in ten thousand NOK. The wealth tax threshold is shown by the dotted line.

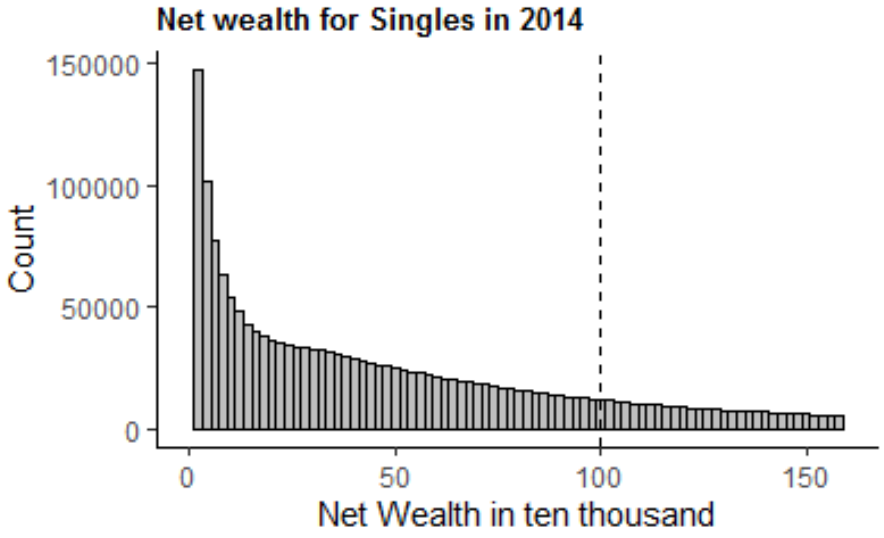

Figure B.14: Distribution of net wealth for singles in Norway for 2014

The histogram shows the distribution of net wealth among singles in 2014. There are no signs of bunching around the tax threshold. Net wealth is displayed in ten thousand NOK. The wealth tax threshold is shown by the dotted line.

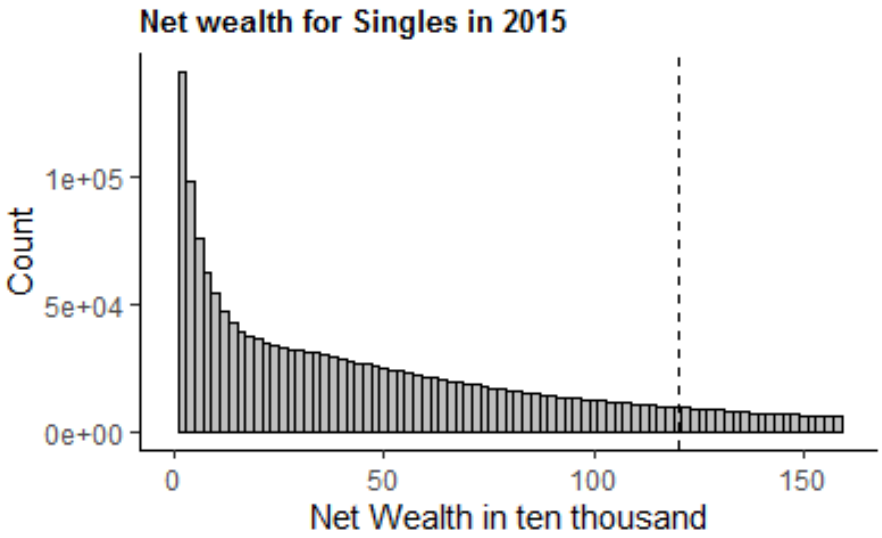

Figure B.15: Distribution of net wealth for singles in Norway for 2015

The histogram shows the distribution of net wealth among singles in 2015. There are no signs of bunching around the tax threshold. Net wealth is displayed in ten thousand NOK. The wealth tax threshold is shown by the dotted line.

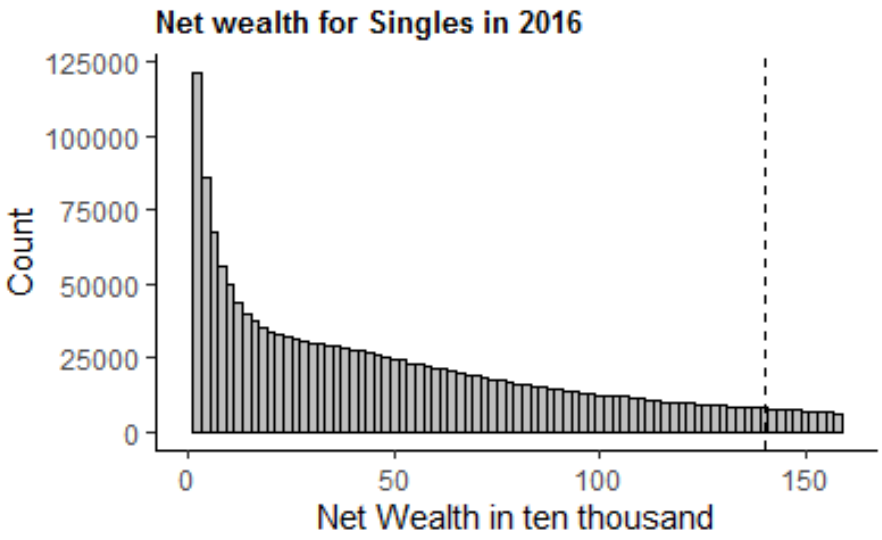

Figure B.16: Distribution of net wealth for singles in Norway for 2016

The histogram shows the distribution of net wealth among singles in 2016. There are no signs of bunching around the tax threshold. Net wealth is displayed in ten thousand NOK. The wealth tax threshold is shown by the dotted line.

Graphs showing bunching per year for couples and singles

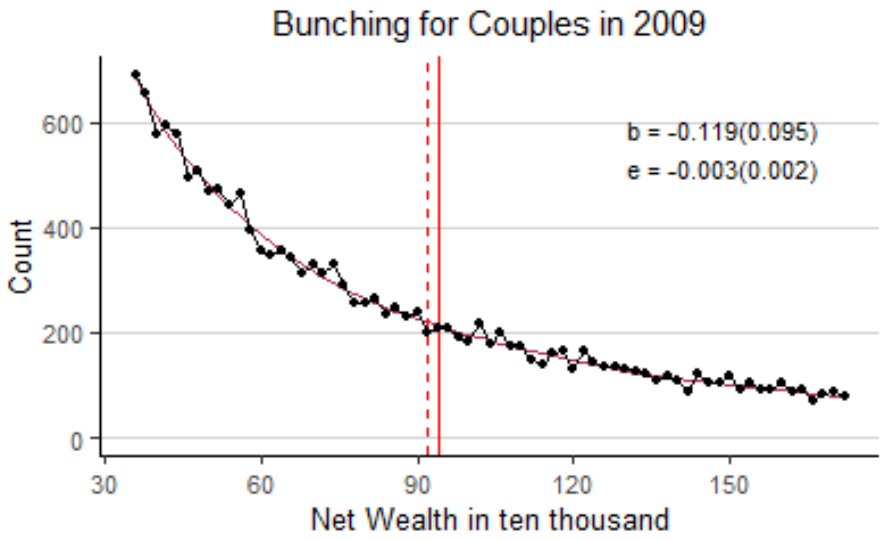

Figure C.1: Bunching around wealth tax threshold for couples in 2009

The graph shows an estimation of bunching of net wealth around the tax threshold. Total bunching is non-existent both visually and mathematically. Tax threshold is shown by the red line, with the dotted line showing the bin below the threshold included in the bunching estimation.

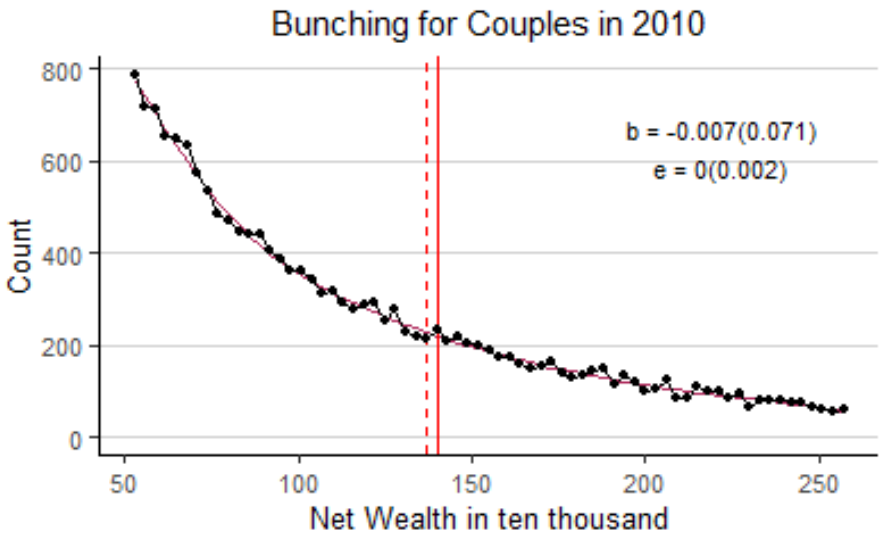

Figure C.2: Bunching around wealth tax threshold for couples in 2010

The graph shows an estimation of bunching of net wealth around the tax threshold. Total bunching is non-existent both visually and mathematically. Tax threshold is shown by the red line, with the dotted line showing the bin below the threshold included in the bunching estimation.

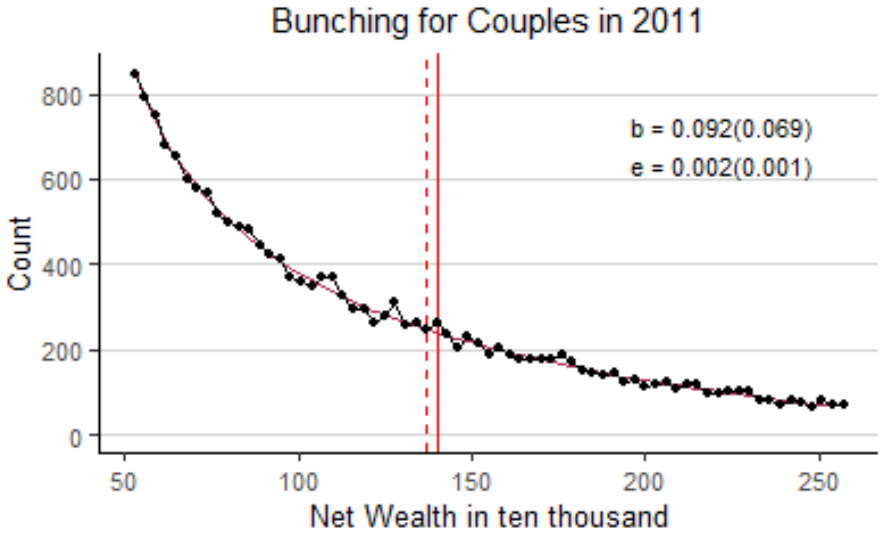

Figure C.3: Bunching around wealth tax threshold for couples in 2011

The graph shows an estimation of bunching of net wealth around the tax threshold. Total bunching is non-existent both visually and mathematically. Tax threshold is shown by the red line, with the dotted line showing the bin below the threshold included in the bunching estimation.

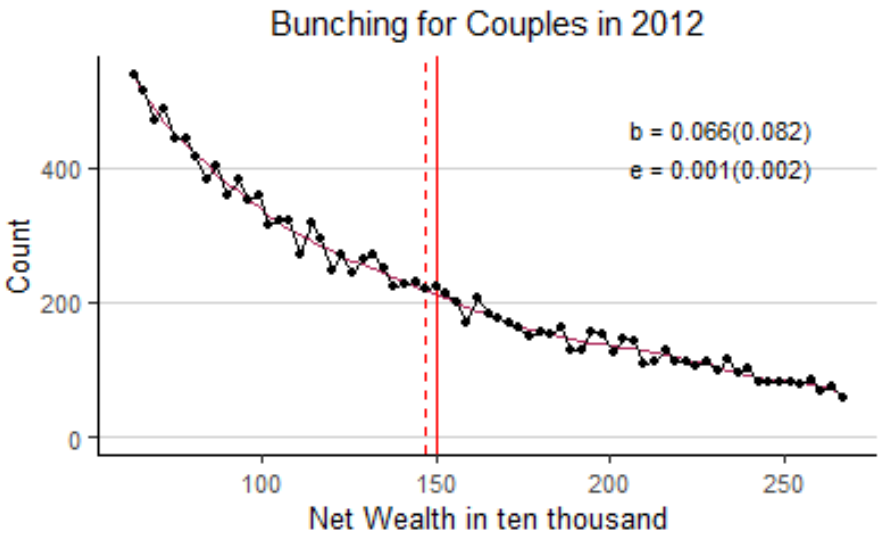

Figure C.4: Bunching around wealth tax threshold for couples in 2012

The graph shows an estimation of bunching of net wealth around the tax threshold. Total bunching is non-existent both visually and mathematically. Tax threshold is shown by the red line, with the dotted line showing the bin below the threshold included in the bunching estimation.

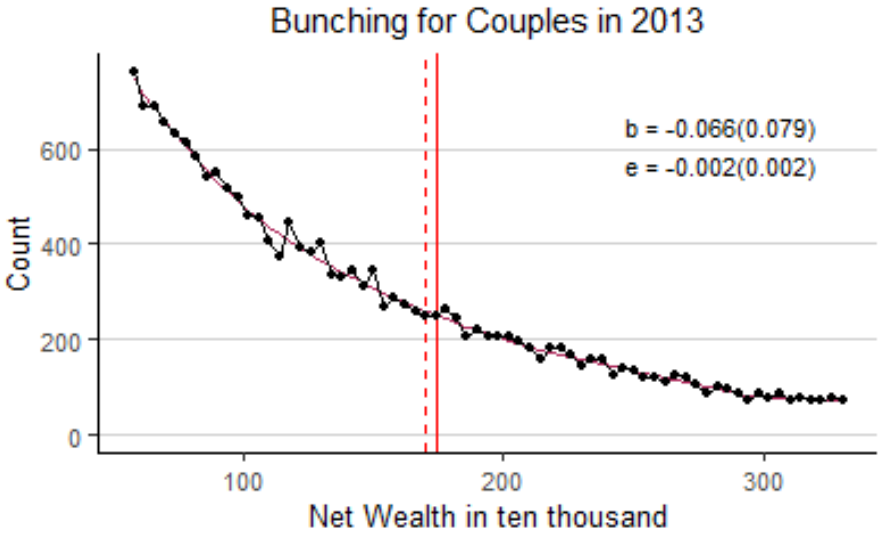

Figure C.5: Bunching around wealth tax threshold for couples in 2013

The graph shows an estimation of bunching of net wealth around the tax threshold. Total bunching is non-existent both visually and mathematically. Tax threshold is shown by the red line, with the dotted line showing the bin below the threshold included in the bunching estimation.

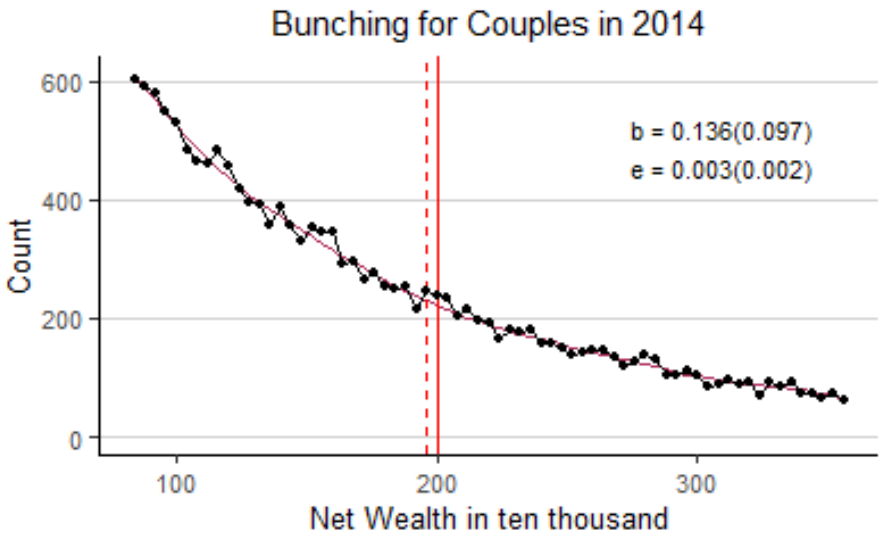

Figure C.6: Bunching around wealth tax threshold for couples in 2014

The graph shows an estimation of bunching of net wealth around the tax threshold. Total bunching is non-existent both visually and mathematically. Tax threshold is shown by the red line, with the dotted line showing the bin below the threshold included in the bunching estimation.

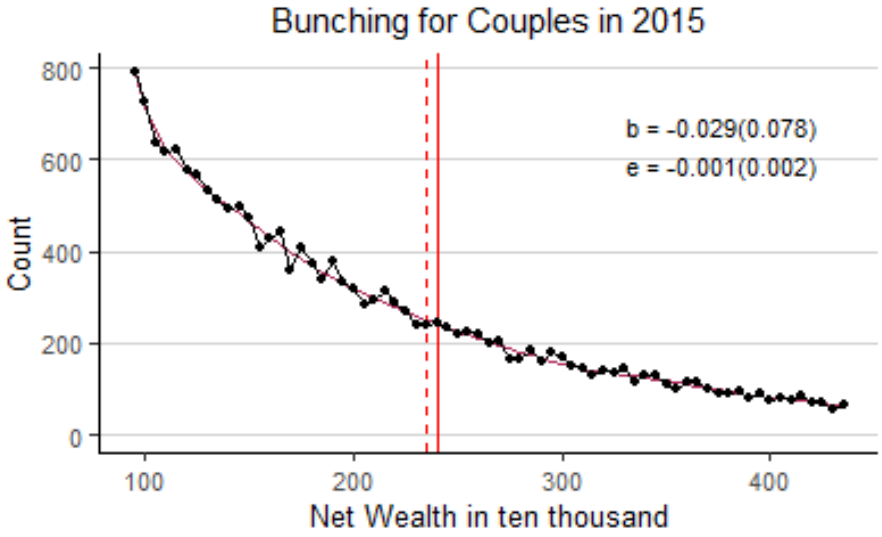

Figure C.7: Bunching around wealth tax threshold for couples in 2015

The graph shows an estimation of bunching of net wealth around the tax threshold. Total bunching is non-existent both visually and mathematically. Tax threshold is shown by the red line, with the dotted line showing the bin below the threshold included in the bunching estimation.

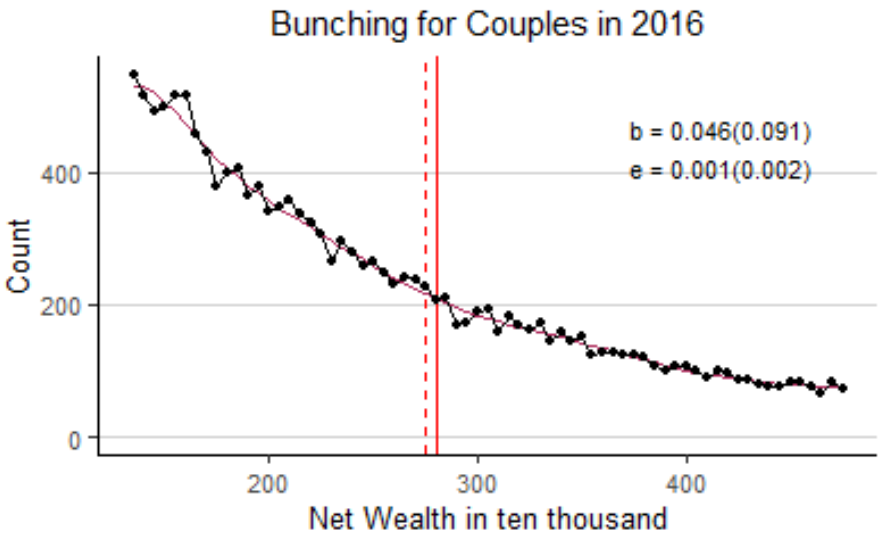

Figure C.8: Bunching around wealth tax threshold for couples in 2016

The graph shows an estimation of bunching of net wealth around the tax threshold. Total bunching is non-existent both visually and mathematically. Tax threshold is shown by the red line, with the dotted line showing the bin below the threshold included in the bunching estimation.

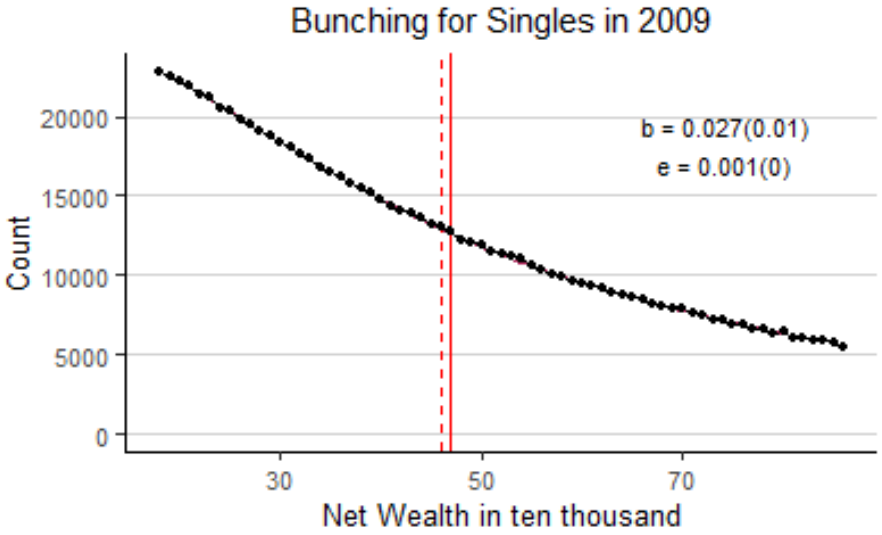

Figure C.9: Bunching around wealth tax threshold for singles in 2009

The graph shows an estimation of bunching of net wealth around the tax threshold. Total bunching is non-existent both visually and mathematically. Tax threshold is shown by the red line, with the dotted line showing the bin below the threshold included in the bunching estimation.

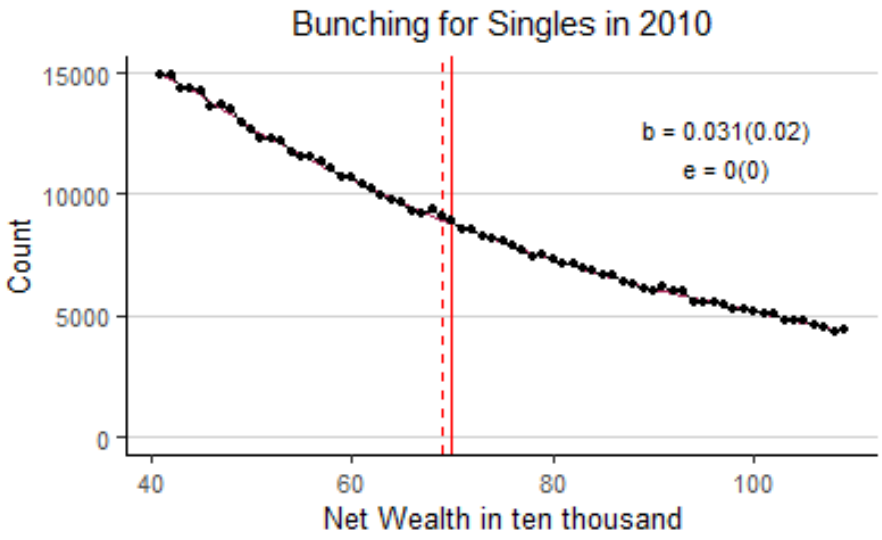

Figure C.10: Bunching around wealth tax threshold for singles in 2010

The graph shows an estimation of bunching of net wealth around the tax threshold. Total bunching is non-existent both visually and mathematically. Tax threshold is shown by the red line, with the dotted line showing the bin below the threshold included in the bunching estimation.

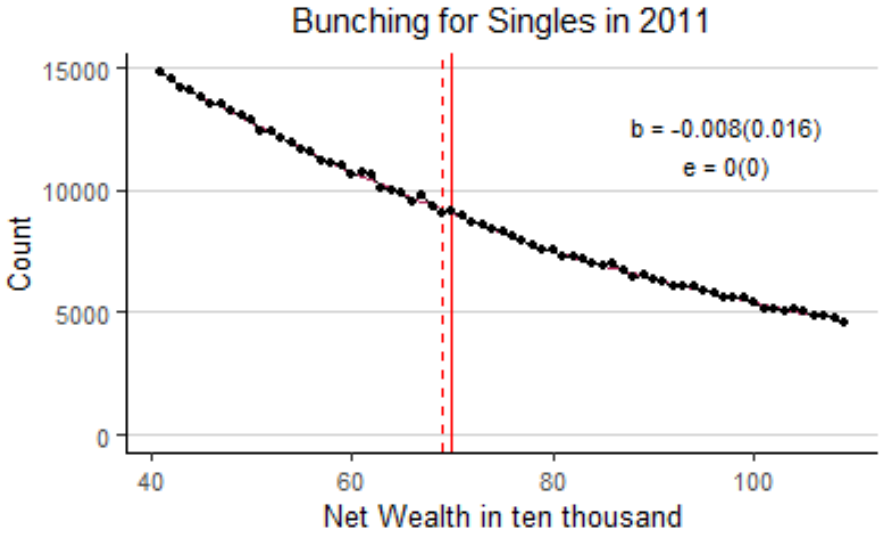

Figure C.11: Bunching around wealth tax threshold for singles in 2011

The graph shows an estimation of bunching of net wealth around the tax threshold. Total bunching is non-existent both visually and mathematically. Tax threshold is shown by the red line, with the dotted line showing the bin below the threshold included in the bunching estimation.

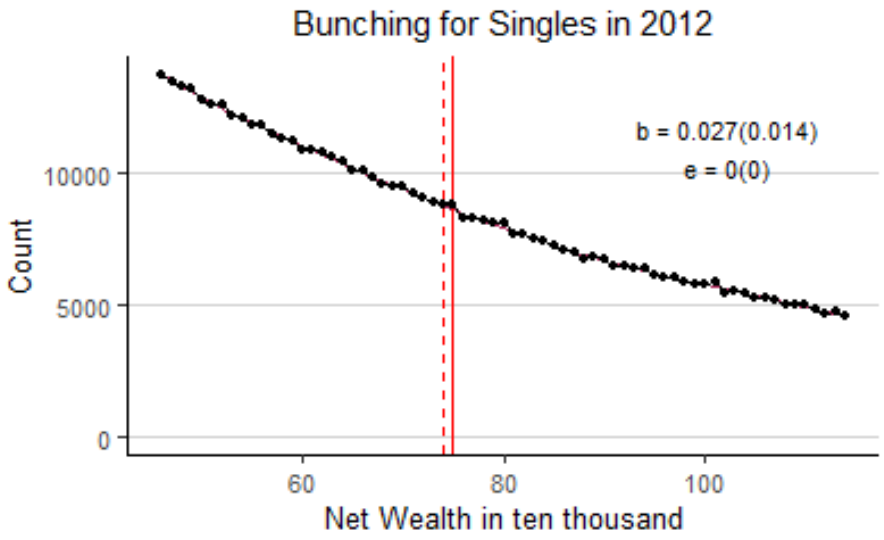

Figure C.12: Bunching around wealth tax threshold for singles in 2012

The graph shows an estimation of bunching of net wealth around the tax threshold. Total bunching is non-existent both visually and mathematically. Tax threshold is shown by the red line, with the dotted line showing the bin below the threshold included in the bunching estimation.

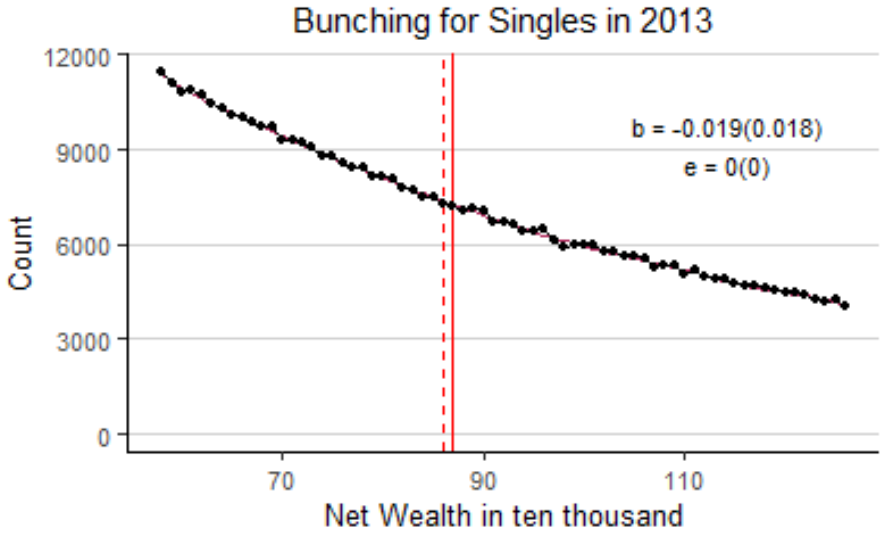

Figure C.13: Bunching around wealth tax threshold for singles in 2013

The graph shows an estimation of bunching of net wealth around the tax threshold. Total bunching is non-existent both visually and mathematically. Tax threshold is shown by the red line, with the dotted line showing the bin below the threshold included in the bunching estimation.

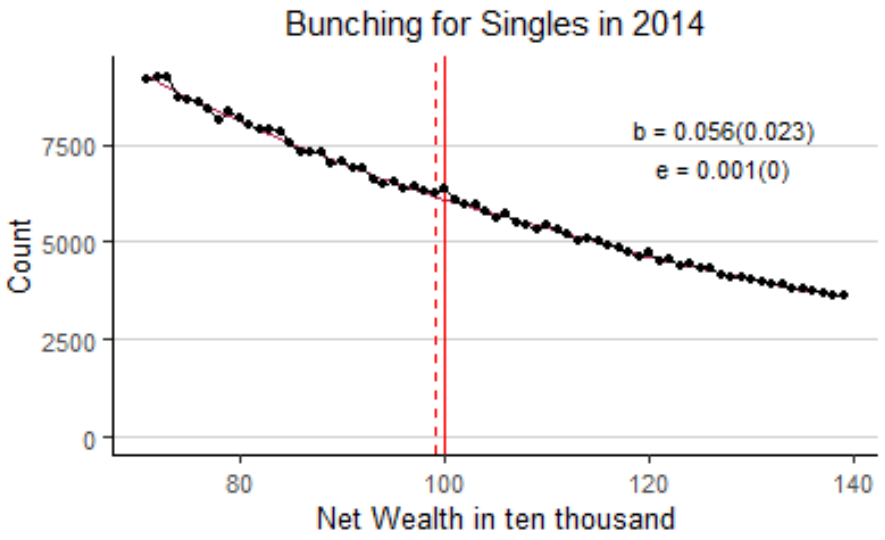

Figure C.14: Bunching around wealth tax threshold for singles in 2014

The graph shows an estimation of bunching of net wealth around the tax threshold. Total bunching is non-existent both visually and mathematically. Tax threshold is shown by the red line, with the dotted line showing the bin below the threshold included in the bunching estimation.

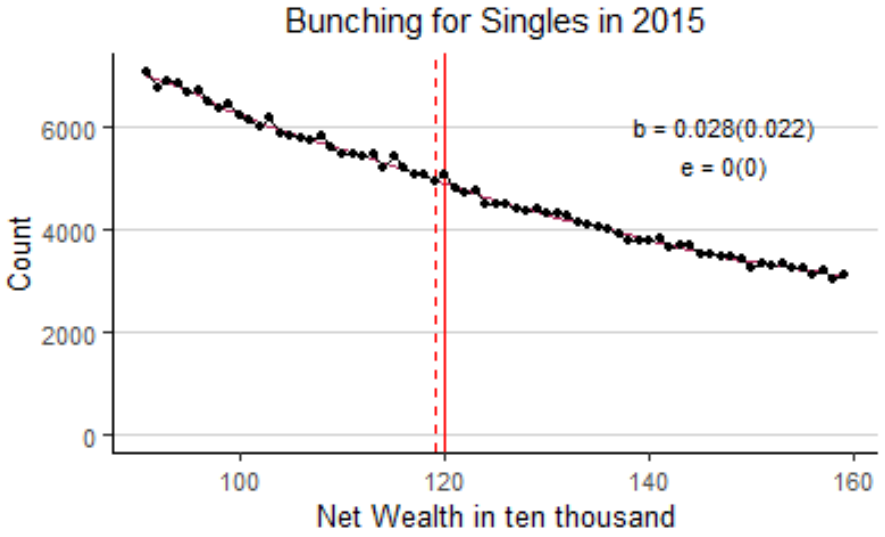

Figure C.15: Bunching around wealth tax threshold for singles in 2015

The graph shows an estimation of bunching of net wealth around the tax threshold. Total bunching is non-existent both visually and mathematically. Tax threshold is shown by the red line, with the dotted line showing the bin below the threshold included in the bunching estimation.

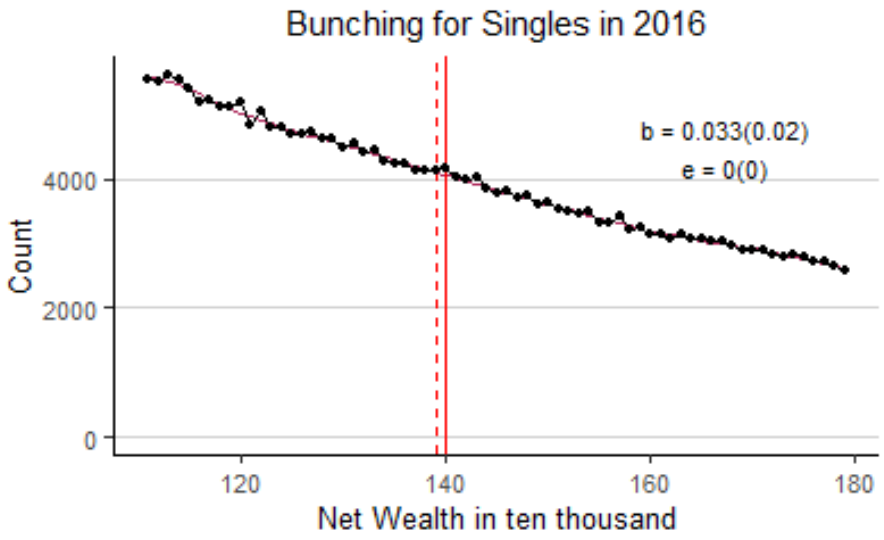

Figure C.16: Bunching around wealth tax threshold for singles in 2016

The graph shows an estimation of bunching of net wealth around the tax threshold. Total bunching is non-existent both visually and mathematically. Tax threshold is shown by the red line, with the dotted line showing the bin below the threshold included in the bunching estimation.

Visualization of regression discontinuity per asset for couples and singles per year

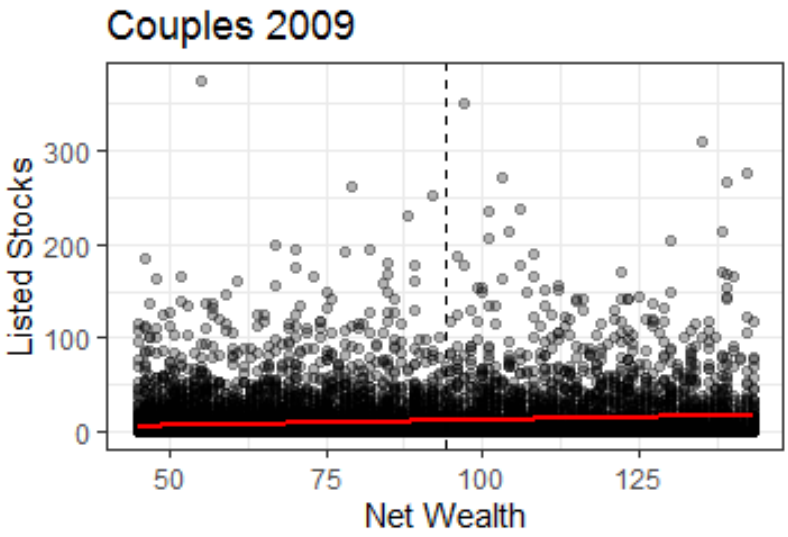

Figure D.1: Regression discontinuity for value in listed stocks for couples in 2009

This plot shows the value in listed stocks held by couples which has a net wealth of +/- 500 thousand NOK around the wealth tax threshold. Amounts on the axes are in ten thousand NOK. The dotted line represents the wealth tax threshold, and the solid red line is a linear regression showing that there are no signs of discontinuity in this data.

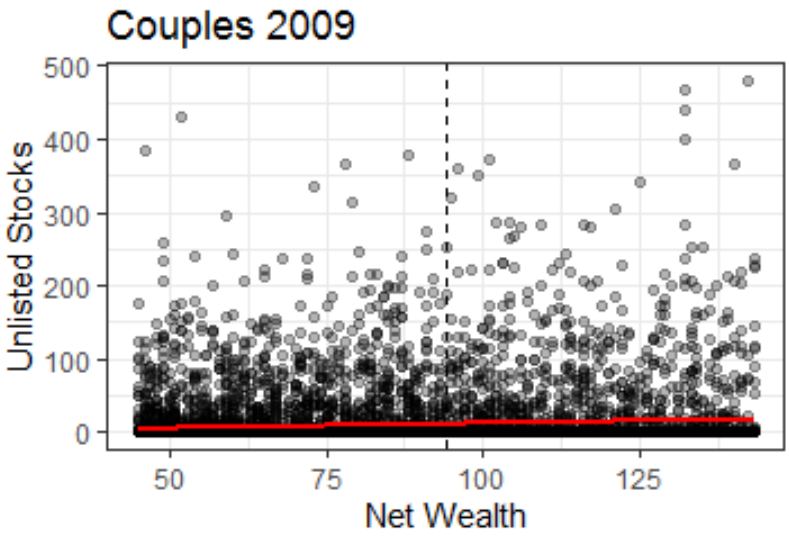

Figure D.2: Regression discontinuity for value in unlisted stocks for couples in 2009

This plot shows the value in unlisted stocks held by couples which has a net wealth of +/- 500 thousand NOK around the wealth tax threshold. Amounts on the axes are in ten thousand NOK. The dotted line represents the wealth tax threshold, and the solid red line is a linear regression showing that there are no signs of discontinuity in this data.

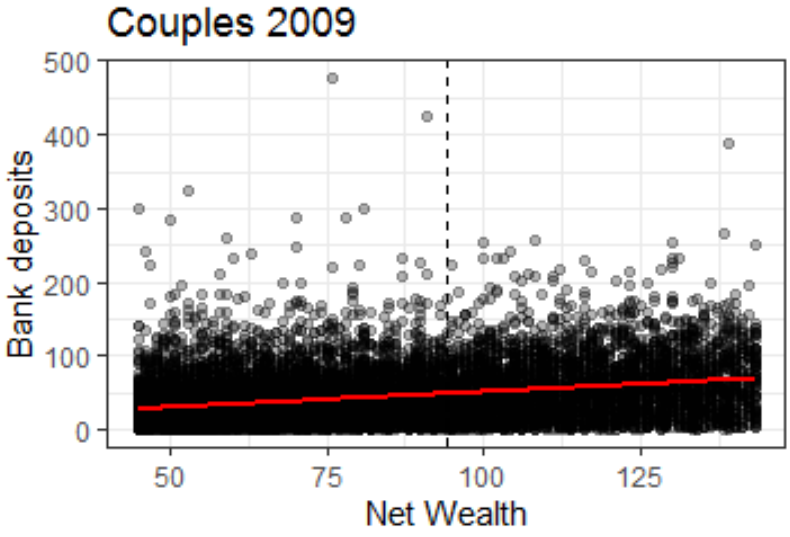

Figure D.3: Regression discontinuity for value in bank deposits for couples in 2009

This plot shows the value in bank deposits held by couples which has a net wealth of +/- 500 thousand NOK around the wealth tax threshold. Amounts on the axes are in ten thousand NOK. The dotted line represents the wealth tax threshold, and the solid red line is a linear regression showing that there are no signs of discontinuity in this data.

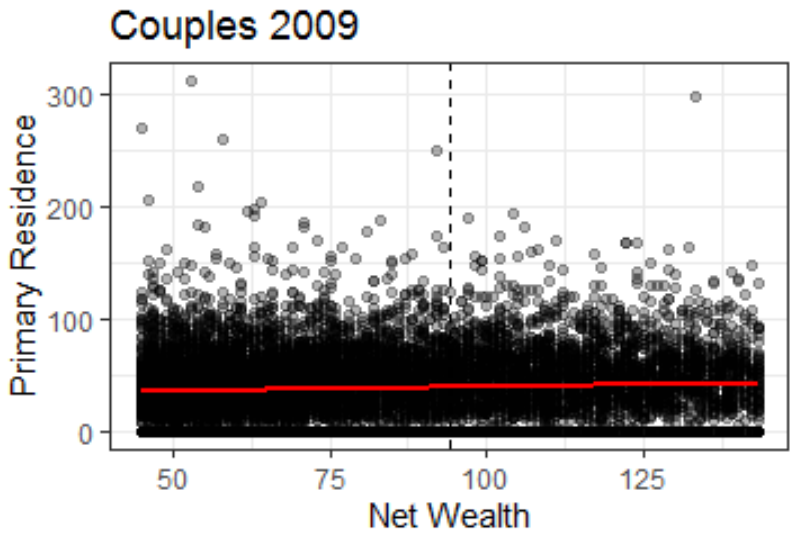

Figure D.4: Regression discontinuity for value in primary residence for couples in 2009

This plot shows the value in primary residence held by couples which has a net wealth of +/- 500 thousand NOK around the wealth tax threshold. Amounts on the axes are in ten thousand NOK. The dotted line represents the wealth tax threshold, and the solid red line is a linear regression showing that there are no signs of discontinuity in this data.

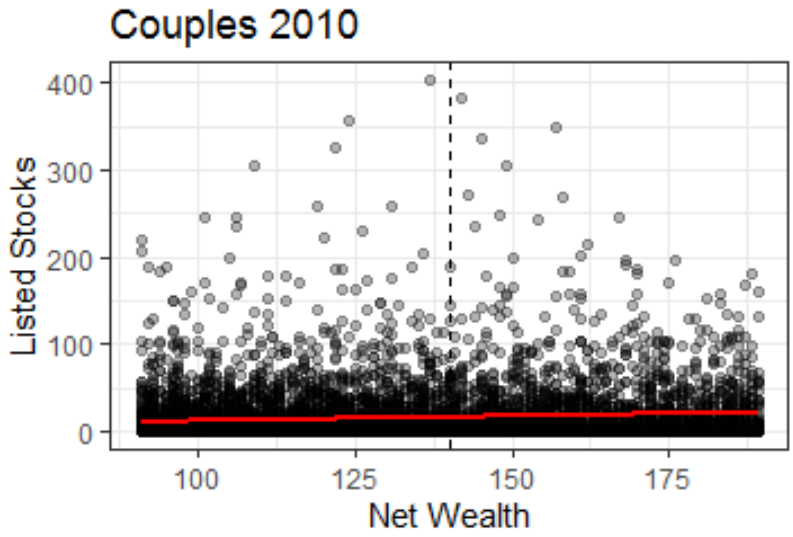

Figure D.5: Regression discontinuity for value in listed stocks for couples in 2010

This plot shows the value in listed stocks held by couples which has a net wealth of +/- 500 thousand NOK around the wealth tax threshold. Amounts on the axes are in ten thousand NOK. The dotted line represents the wealth tax threshold, and the solid red line is a linear regression showing that there are no signs of discontinuity in this data.

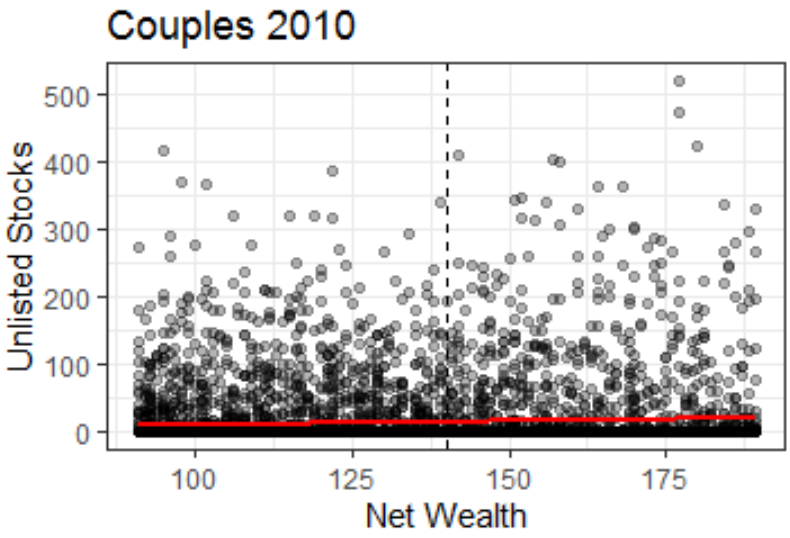

Figure D.6: Regression discontinuity for value in unlisted stocks for couples in 2010

This plot shows the value in unlisted stocks held by couples which has a net wealth of +/- 500 thousand NOK around the wealth tax threshold. Amounts on the axes are in ten thousand NOK. The dotted line represents the wealth tax threshold, and the solid red line is a linear regression showing that there are no signs of discontinuity in this data.

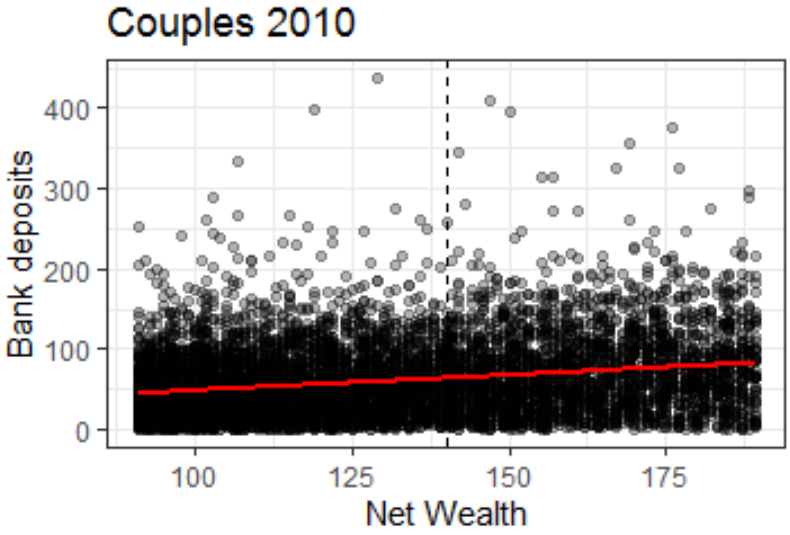

Figure D.7: Regression discontinuity for value in bank deposits for couples in 2010

This plot shows the value in bank deposits held by couples which has a net wealth of +/- 500 thousand NOK around the wealth tax threshold. Amounts on the axes are in ten thousand NOK. The dotted line represents the wealth tax threshold, and the solid red line is a linear regression showing that there are no signs of discontinuity in this data.

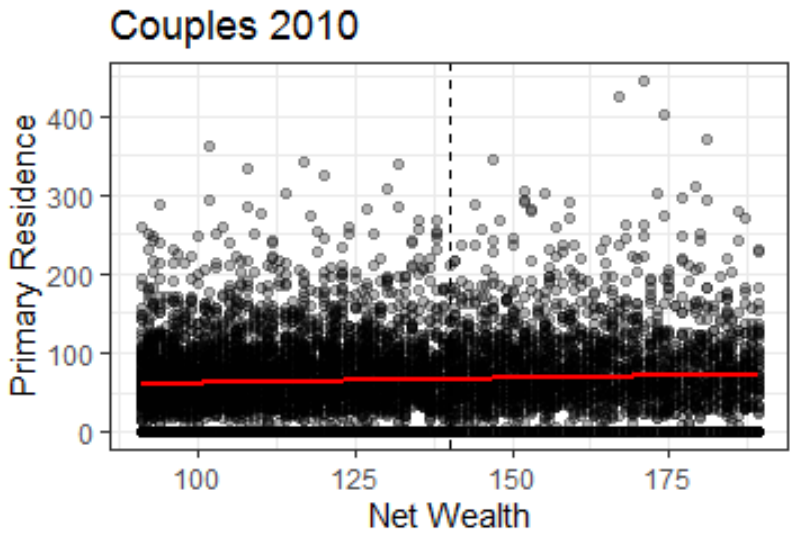

Figure D.8: Regression discontinuity for value in primary residence for couples in 2010

This plot shows the value in primary residence held by couples which has a net wealth of +/- 500 thousand NOK around the wealth tax threshold. Amounts on the axes are in ten thousand NOK. The dotted line represents the wealth tax threshold, and the solid red line is a linear regression showing that there are no signs of discontinuity in this data.

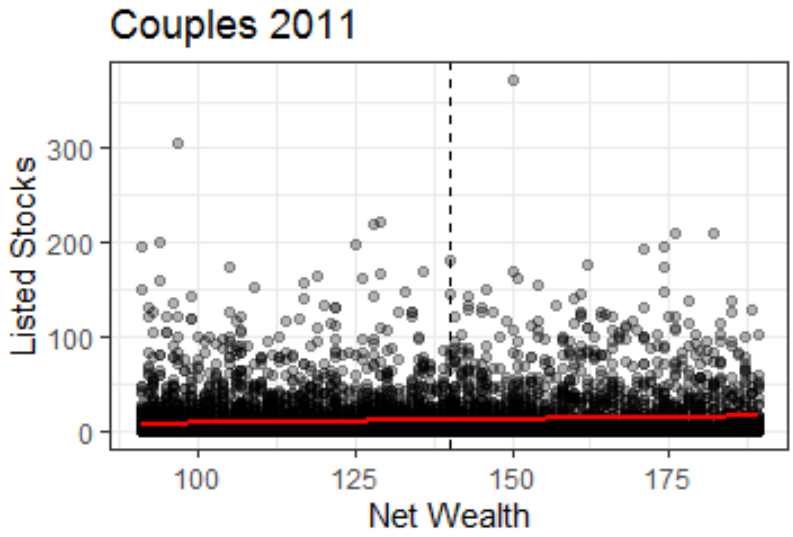

Figure D.9: Regression discontinuity for value in listed stocks for couples in 2011

This plot shows the value in listed stocks held by couples which has a net wealth of +/- 500 thousand NOK around the wealth tax threshold. Amounts on the axes are in ten thousand NOK. The dotted line represents the wealth tax threshold, and the solid red line is a linear regression showing that there are no signs of discontinuity in this data.

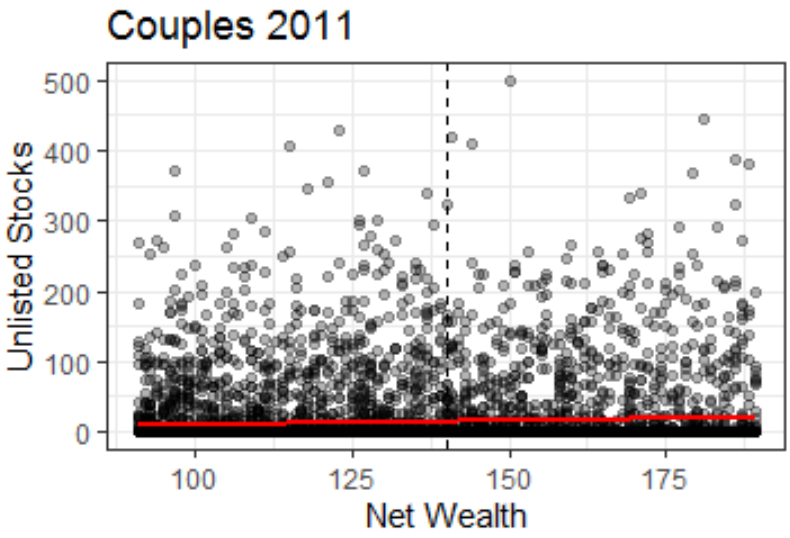

Figure D.10: Regression discontinuity for value in unlisted stocks for couples in 2011

This plot shows the value in unlisted stocks held by couples which has a net wealth of +/- 500 thousand NOK around the wealth tax threshold. Amounts on the axes are in ten thousand NOK. The dotted line represents the wealth tax threshold, and the solid red line is a linear regression showing that there are no signs of discontinuity in this data.

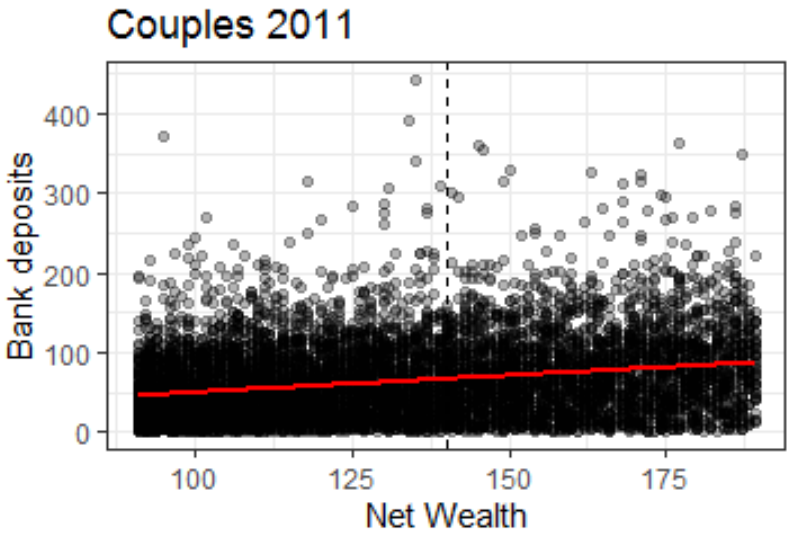

Figure D.11: Regression discontinuity for value in bank deposits for couples in 2011

This plot shows the value in bank deposits held by couples which has a net wealth of +/- 500 thousand NOK around the wealth tax threshold. Amounts on the axes are in ten thousand NOK. The dotted line represents the wealth tax threshold, and the solid red line is a linear regression showing that there are no signs of discontinuity in this data.

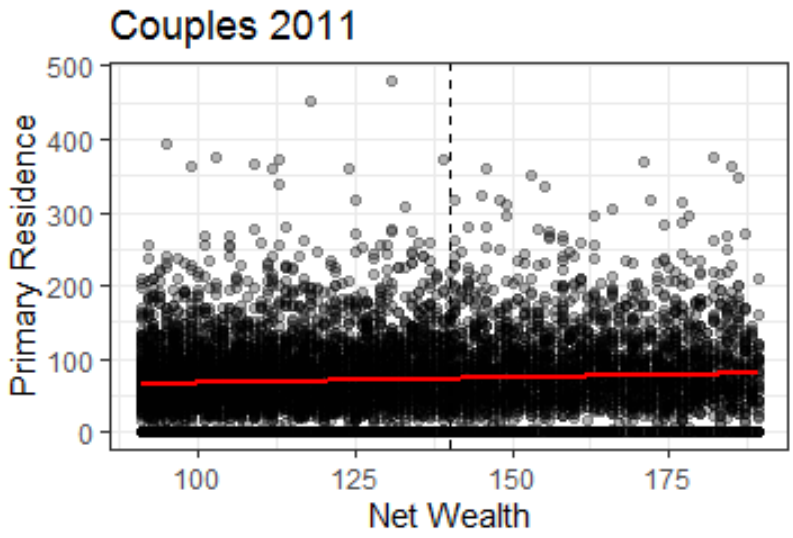

Figure D.12: Regression discontinuity for value in primary residence for couples in 2011

This plot shows the value in primary residence held by couples which has a net wealth of +/- 500 thousand NOK around the wealth tax threshold. Amounts on the axes are in ten thousand NOK. The dotted line represents the wealth tax threshold, and the solid red line is a linear regression showing that there are no signs of discontinuity in this data.

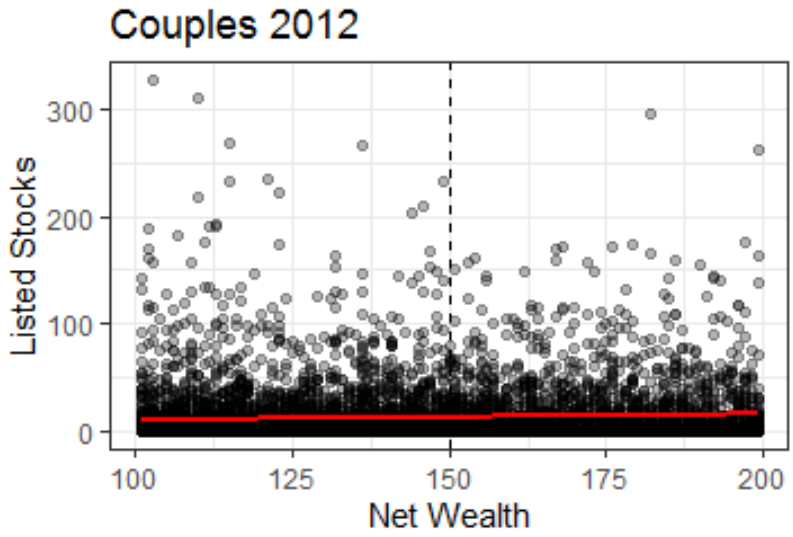

Figure D.13: Regression discontinuity for value in listed stocks for couples in 2012

This plot shows the value in listed stocks held by couples which has a net wealth of +/- 500 thousand NOK around the wealth tax threshold. Amounts on the axes are in ten thousand NOK. The dotted line represents the wealth tax threshold, and the solid red line is a linear regression showing that there are no signs of discontinuity in this data.

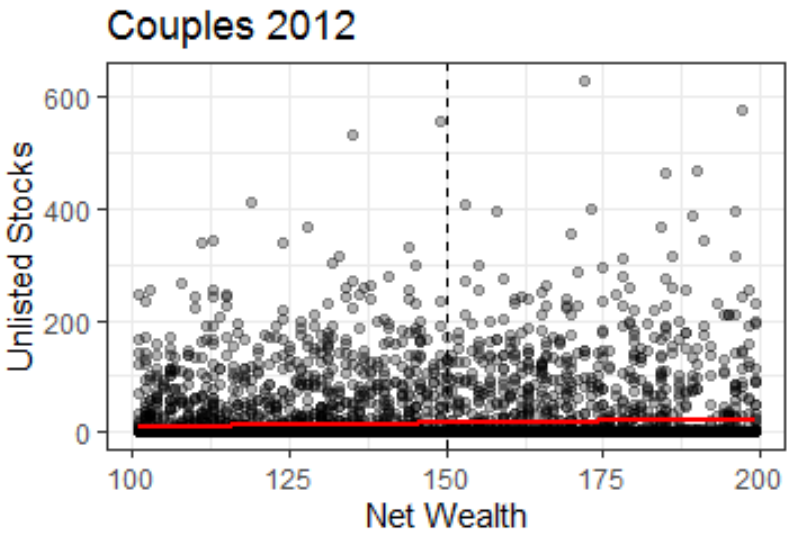

Figure D.14: Regression discontinuity for value in unlisted stocks for couples in 2012

This plot shows the value in unlisted stocks held by couples which has a net wealth of +/- 500 thousand NOK around the wealth tax threshold. Amounts on the axes are in ten thousand NOK. The dotted line represents the wealth tax threshold, and the solid red line is a linear regression showing that there are no signs of discontinuity in this data.

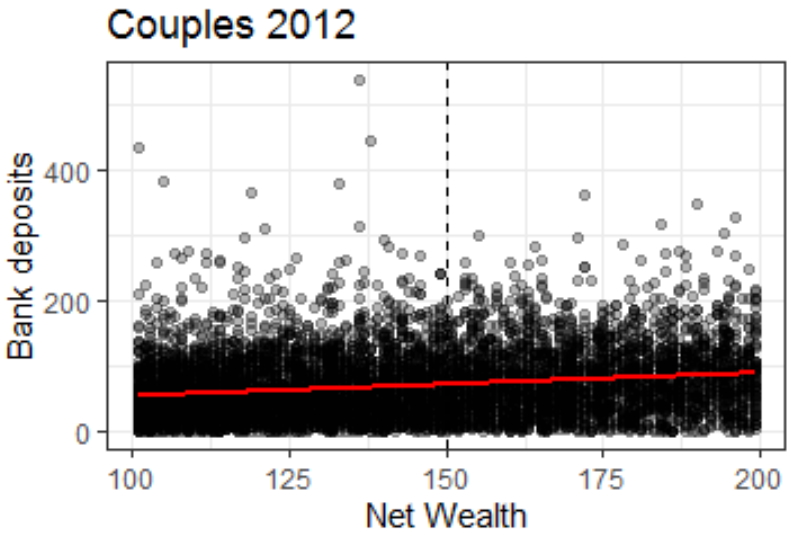

Figure D.15: Regression discontinuity for value in bank deposits for couples in 2012

This plot shows the value in bank deposits held by couples which has a net wealth of +/- 500 thousand NOK around the wealth tax threshold. Amounts on the axes are in ten thousand NOK. The dotted line represents the wealth tax threshold, and the solid red line is a linear regression showing that there are no signs of discontinuity in this data.

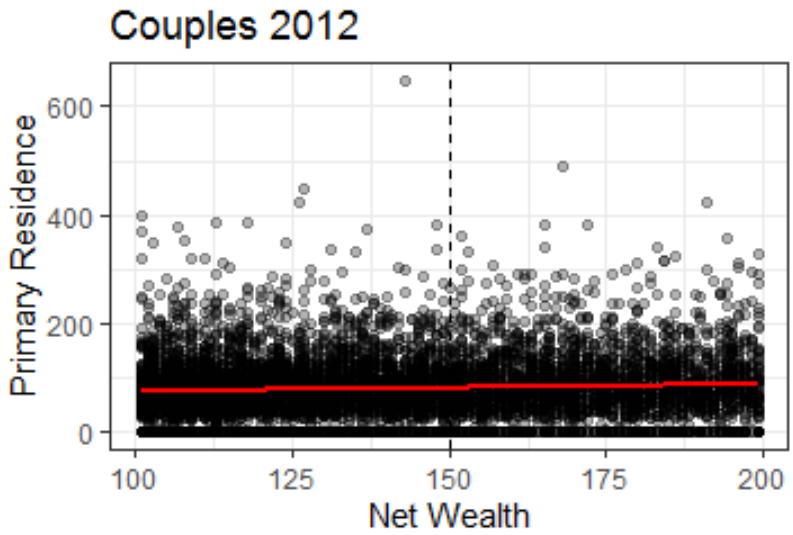

Figure D.16: Regression discontinuity for value in primary residence for couples in 2012

This plot shows the value in primary residence held by couples which has a net wealth of +/- 500 thousand NOK around the wealth tax threshold. Amounts on the axes are in ten thousand NOK. The dotted line represents the wealth tax threshold, and the solid red line is a linear regression showing that there are no signs of discontinuity in this data.

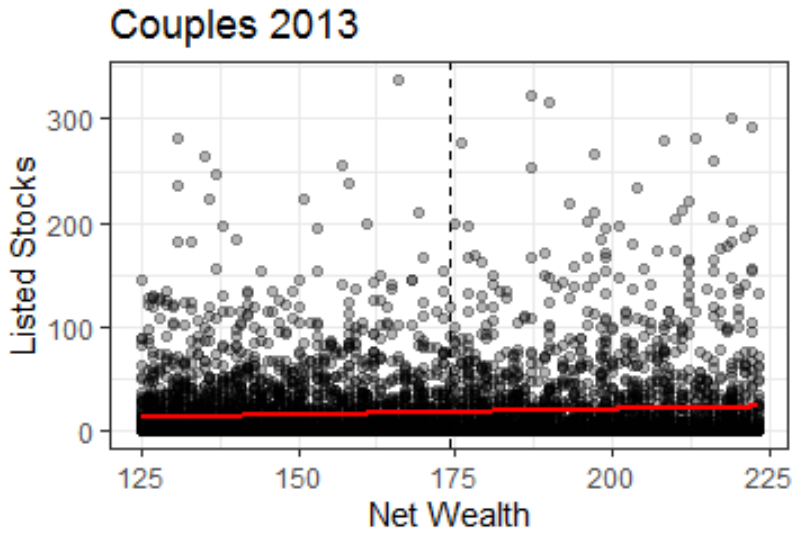

Figure D.17: Regression discontinuity for value in listed stocks for couples in 2013

This plot shows the value in listed stocks held by couples which has a net wealth of +/- 500 thousand NOK around the wealth tax threshold. Amounts on the axes are in ten thousand NOK. The dotted line represents the wealth tax threshold, and the solid red line is a linear regression showing that there are no signs of discontinuity in this data.

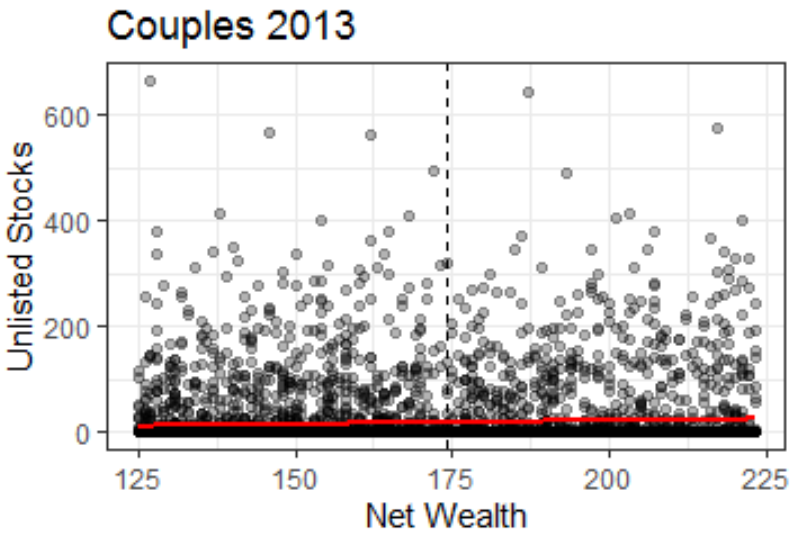

Figure D.18: Regression discontinuity for value in unlisted stocks for couples in 2013

This plot shows the value in unlisted stocks held by couples which has a net wealth of +/- 500 thousand NOK around the wealth tax threshold. Amounts on the axes are in ten thousand NOK. The dotted line represents the wealth tax threshold, and the solid red line is a linear regression showing that there are no signs of discontinuity in this data.

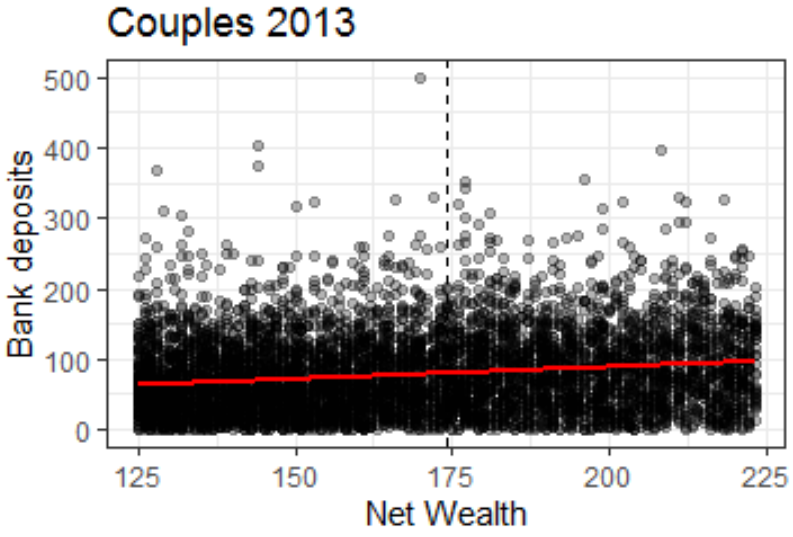

Figure D.19: Regression discontinuity for value in bank deposits for couples in 2013

This plot shows the value in bank deposits held by couples which has a net wealth of +/- 500 thousand NOK around the wealth tax threshold. Amounts on the axes are in ten thousand NOK. The dotted line represents the wealth tax threshold, and the solid red line is a linear regression showing that there are no signs of discontinuity in this data.

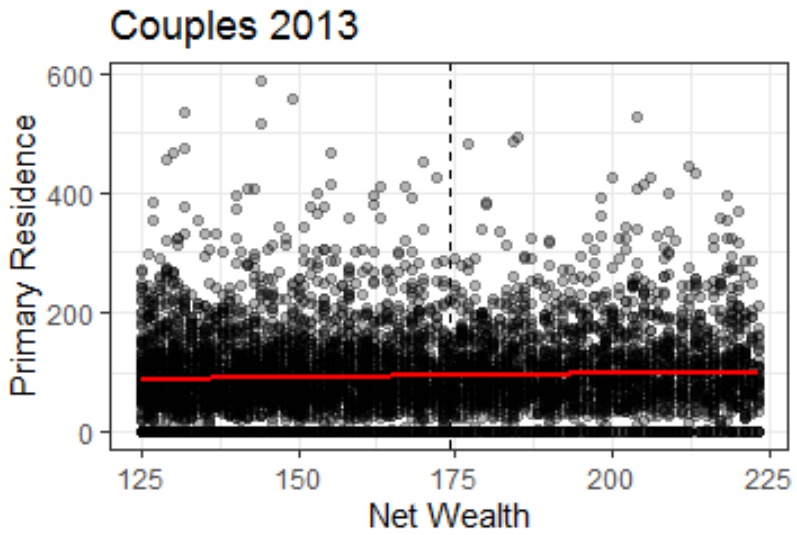

Figure D.20: Regression discontinuity for value in primary residence for couples in 2013

This plot shows the value in primary residence held by couples which has a net wealth of +/- 500 thousand NOK around the wealth tax threshold. Amounts on the axes are in ten thousand NOK. The dotted line represents the wealth tax threshold, and the solid red line is a linear regression showing that there are no signs of discontinuity in this data.

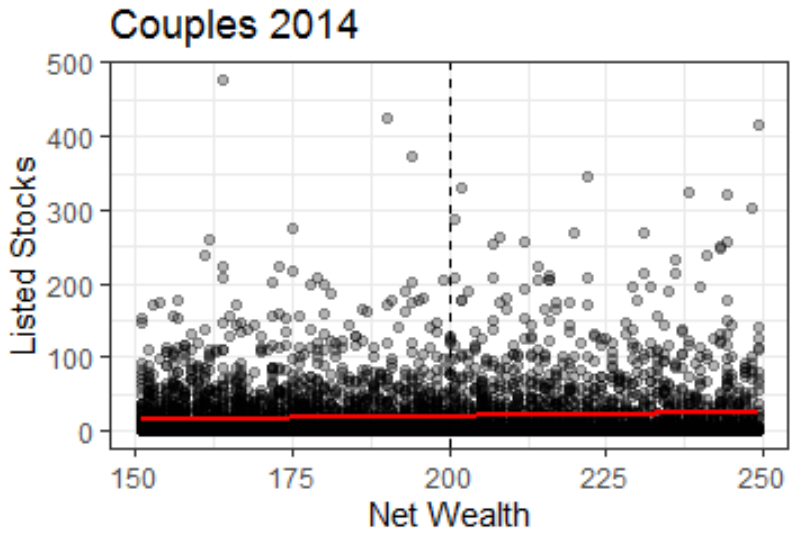

Figure D.21: Regression discontinuity for value in listed stocks for couples in 2014

This plot shows the value in listed stocks held by couples which has a net wealth of +/- 500 thousand NOK around the wealth tax threshold. Amounts on the axes are in ten thousand NOK. The dotted line represents the wealth tax threshold, and the solid red line is a linear regression showing that there are no signs of discontinuity in this data.

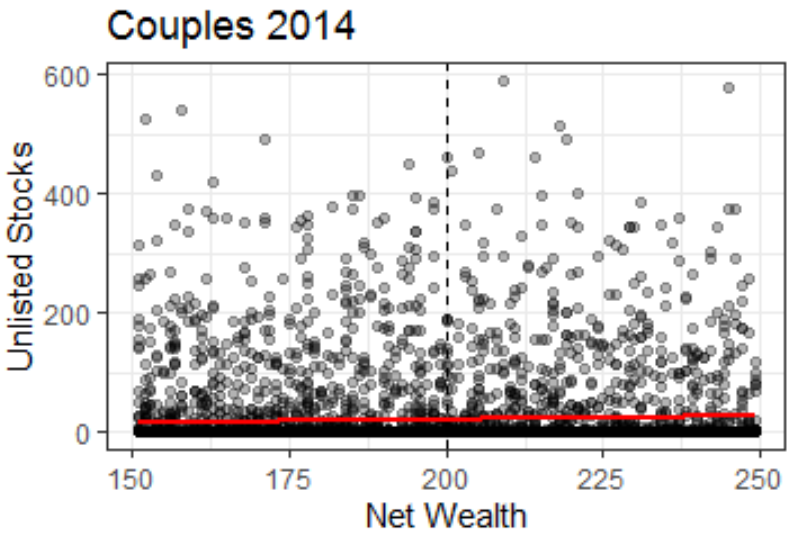

Figure D.22: Regression discontinuity for value in unlisted stocks for couples in 2014

This plot shows the value in unlisted stocks held by couples which has a net wealth of +/- 500 thousand NOK around the wealth tax threshold. Amounts on the axes are in ten thousand NOK. The dotted line represents the wealth tax threshold, and the solid red line is a linear regression showing that there are no signs of discontinuity in this data.

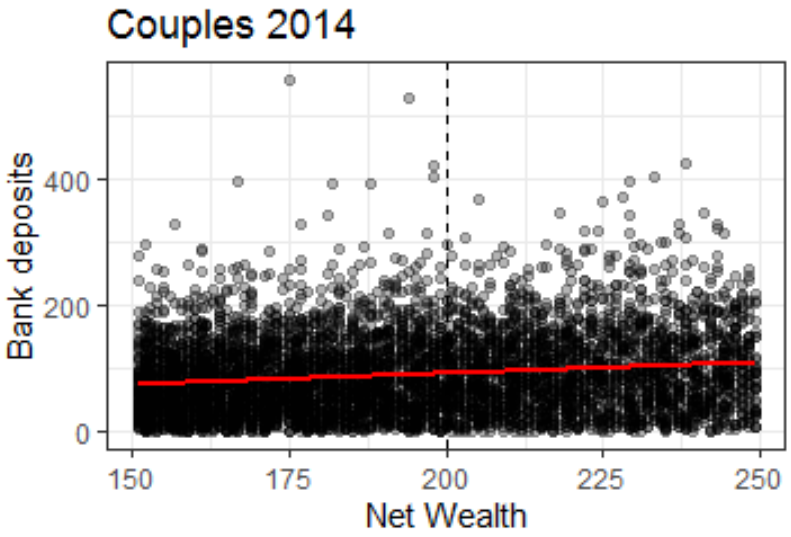

Figure D.23: Regression discontinuity for value in bank deposits for couples in 2014

This plot shows the value in bank deposits held by couples which has a net wealth of +/- 500 thousand NOK around the wealth tax threshold. Amounts on the axes are in ten thousand NOK. The dotted line represents the wealth tax threshold, and the solid red line is a linear regression showing that there are no signs of discontinuity in this data.

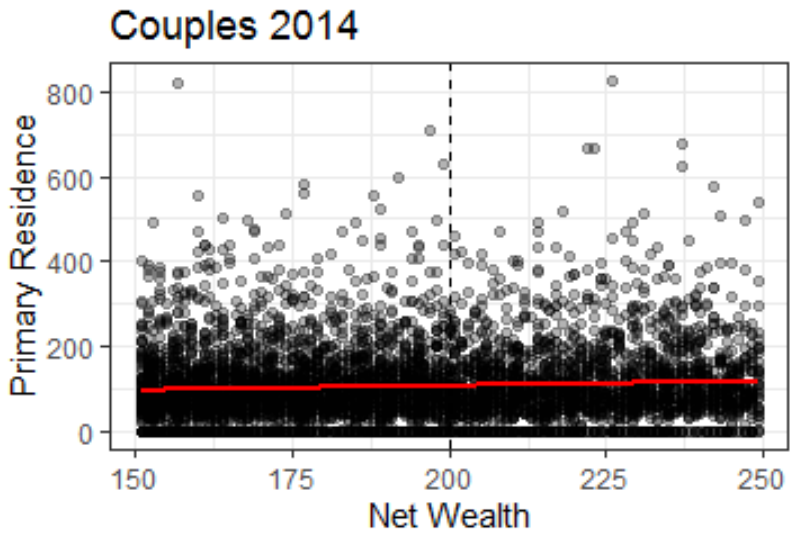

Figure D.24: Regression discontinuity for value in primary residence for couples in 2014

This plot shows the value in primary residence held by couples which has a net wealth of +/- 500 thousand NOK around the wealth tax threshold. Amounts on the axes are in ten thousand NOK. The dotted line represents the wealth tax threshold, and the solid red line is a linear regression showing that there are no signs of discontinuity in this data.

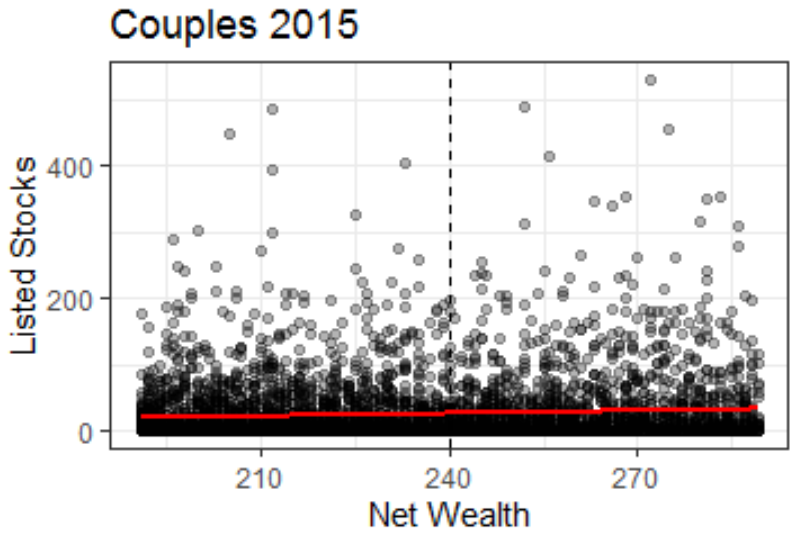

Figure D.25: Regression discontinuity for value in listed stocks for couples in 2015

This plot shows the value in listed stocks held by couples which has a net wealth of +/- 500 thousand NOK around the wealth tax threshold. Amounts on the axes are in ten thousand NOK. The dotted line represents the wealth tax threshold, and the solid red line is a linear regression showing that there are no signs of discontinuity in this data.

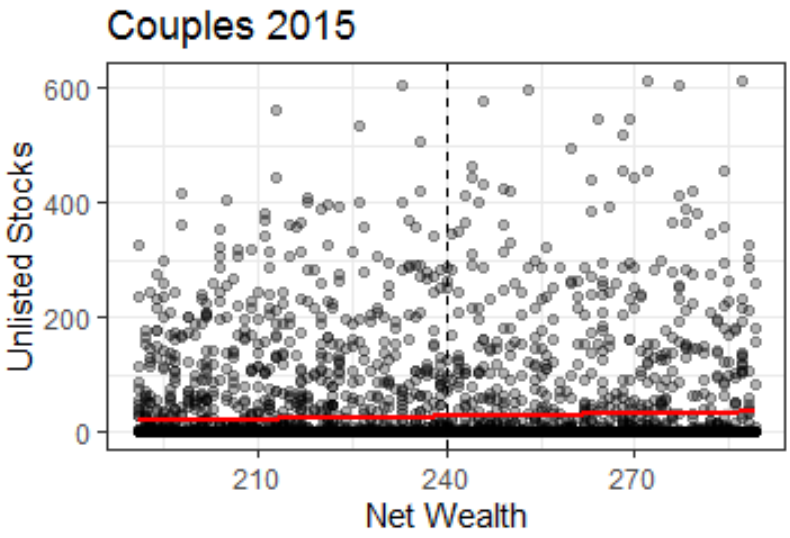

Figure D.26: Regression discontinuity for value in unlisted stocks for couples in 2015

This plot shows the value in unlisted stocks held by couples which has a net wealth of +/- 500 thousand NOK around the wealth tax threshold. Amounts on the axes are in ten thousand NOK. The dotted line represents the wealth tax threshold, and the solid red line is a linear regression showing that there are no signs of discontinuity in this data.

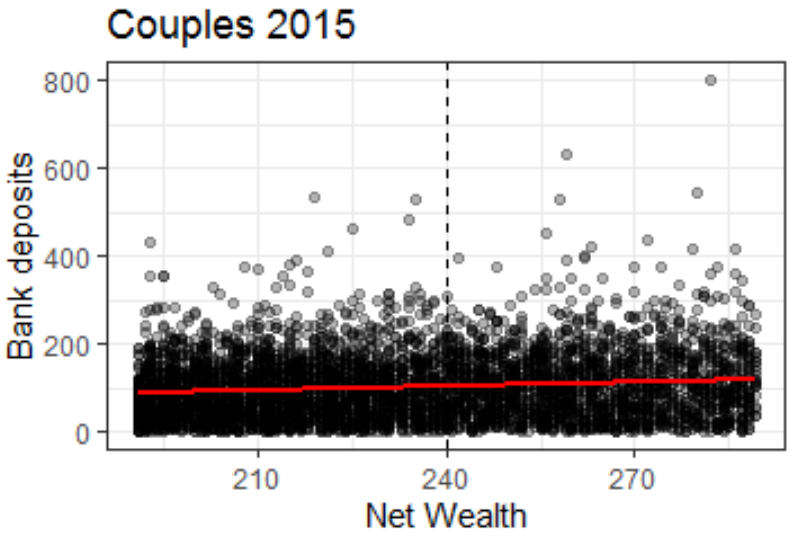

Figure D.27: Regression discontinuity for value in bank deposits for couples in 2015

This plot shows the value in bank deposits held by couples which has a net wealth of +/- 500 thousand NOK around the wealth tax threshold. Amounts on the axes are in ten thousand NOK. The dotted line represents the wealth tax threshold, and the solid red line is a linear regression showing that there are no signs of discontinuity in this data.

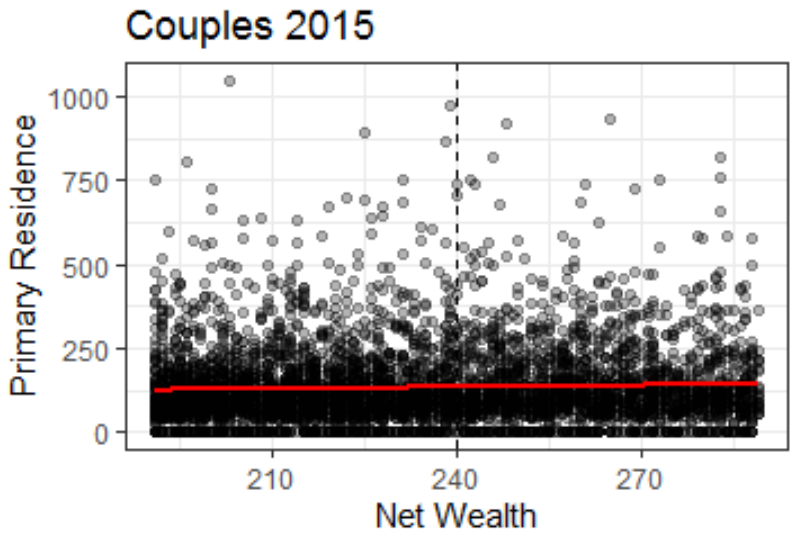

Figure D.28: Regression discontinuity for value in primary residence for couples in 2015

This plot shows the value in primary residence held by couples which has a net wealth of +/- 500 thousand NOK around the wealth tax threshold. Amounts on the axes are in ten thousand NOK. The dotted line represents the wealth tax threshold, and the solid red line is a linear regression showing that there are no signs of discontinuity in this data.

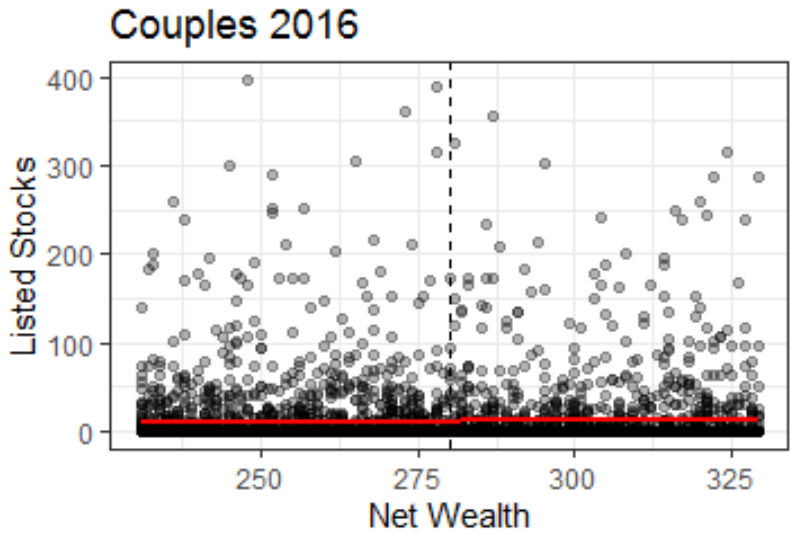

Figure D.29: Regression discontinuity for value in listed stocks for couples in 2016

This plot shows the value in listed stocks held by couples which has a net wealth of +/- 500 thousand NOK around the wealth tax threshold. Amounts on the axes are in ten thousand NOK. The dotted line represents the wealth tax threshold, and the solid red line is a linear regression showing that there are no signs of discontinuity in this data.

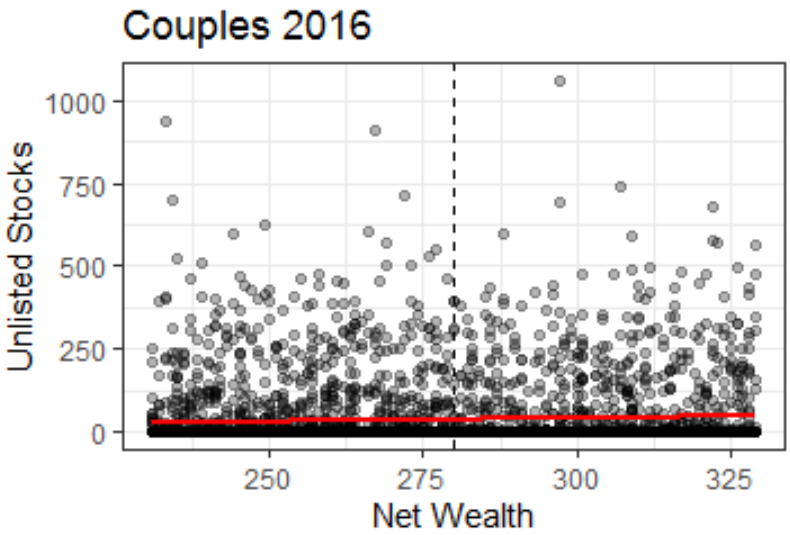

Figure D.30: Regression discontinuity for value in unlisted stocks for couples in 2016

This plot shows the value in unlisted stocks held by couples which has a net wealth of +/- 500 thousand NOK around the wealth tax threshold. Amounts on the axes are in ten thousand NOK. The dotted line represents the wealth tax threshold, and the solid red line is a linear regression showing that there are no signs of discontinuity in this data.

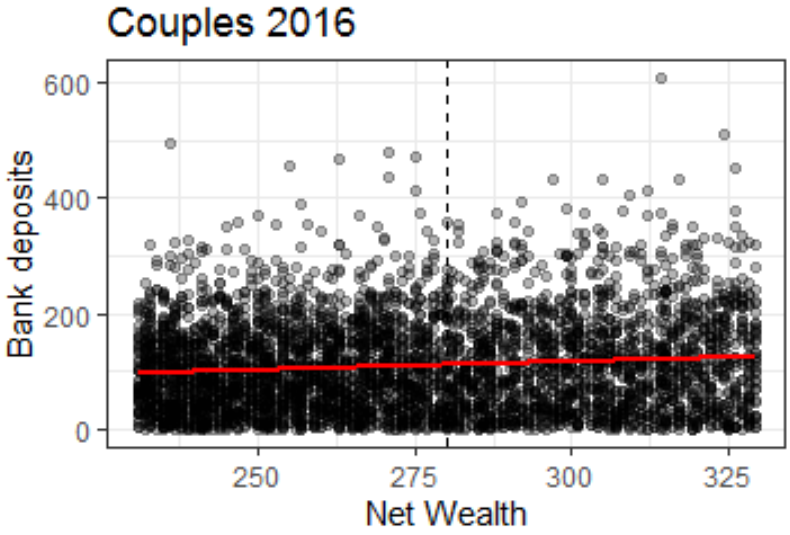

Figure D.31: Regression discontinuity for value in bank deposits for couples in 2016

This plot shows the value in bank deposits held by couples which has a net wealth of +/- 500 thousand NOK around the wealth tax threshold. Amounts on the axes are in ten thousand NOK. The dotted line represents the wealth tax threshold, and the solid red line is a linear regression showing that there are no signs of discontinuity in this data.

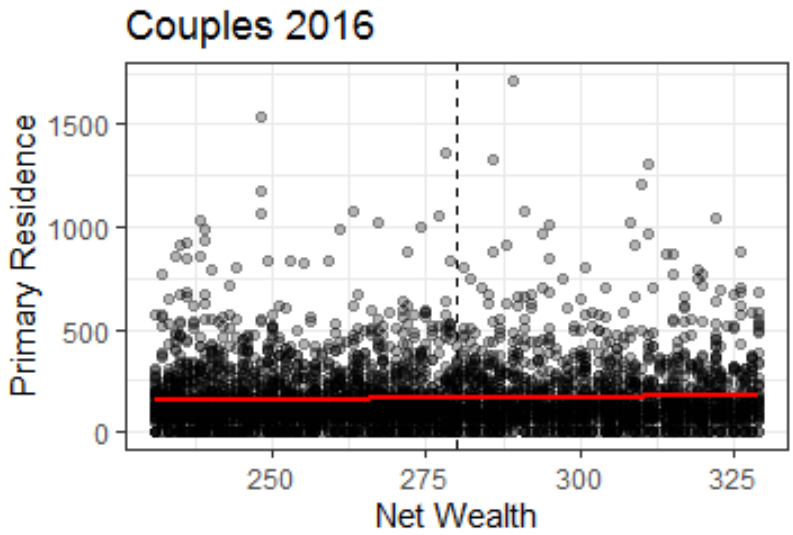

Figure D.32: Regression discontinuity for value in primary residence for couples in 2016

This plot shows the value in primary residence held by couples which has a net wealth of +/- 500 thousand NOK around the wealth tax threshold. Amounts on the axes are in ten thousand NOK. The dotted line represents the wealth tax threshold, and the solid red line is a linear regression showing that there are no signs of discontinuity in this data.

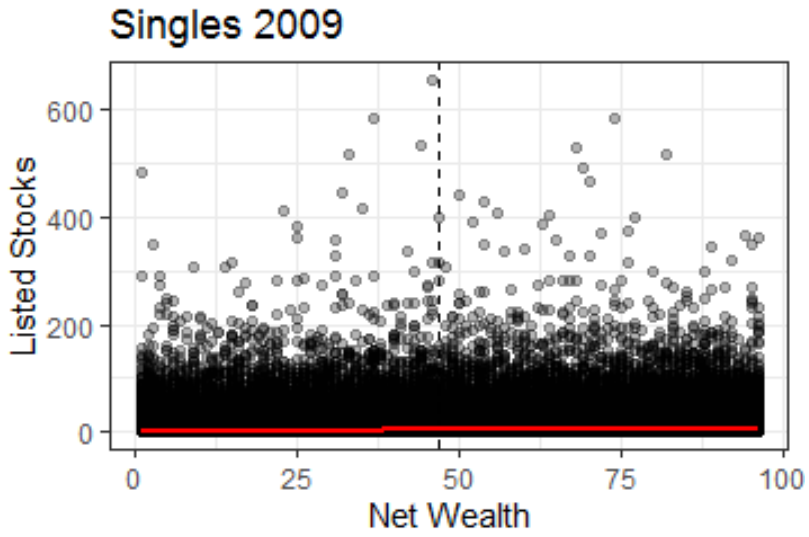

Figure D.33: Regression discontinuity for value in listed stocks for singles in 2009

This plot shows the value in listed stocks held by singles which has a net wealth of +/- 500 thousand NOK around the wealth tax threshold. Amounts on the axes are in ten thousand NOK. The dotted line represents the wealth tax threshold, and the solid red line is a linear regression showing that there are no signs of discontinuity in this data.

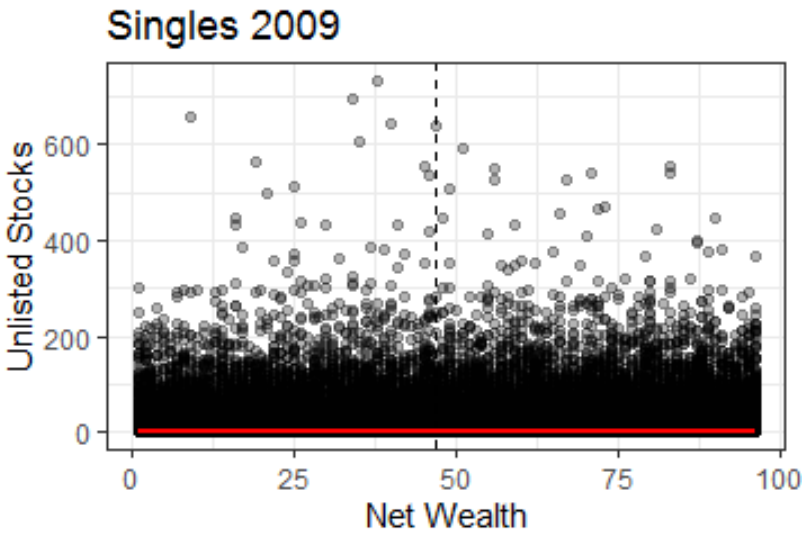

Figure D.34: Regression discontinuity for value in unlisted stocks for singles in 2009

This plot shows the value in unlisted stocks held by singles which has a net wealth of +/- 500 thousand NOK around the wealth tax threshold. Amounts on the axes are in ten thousand NOK. The dotted line represents the wealth tax threshold, and the solid red line is a linear regression showing that there are no signs of discontinuity in this data.

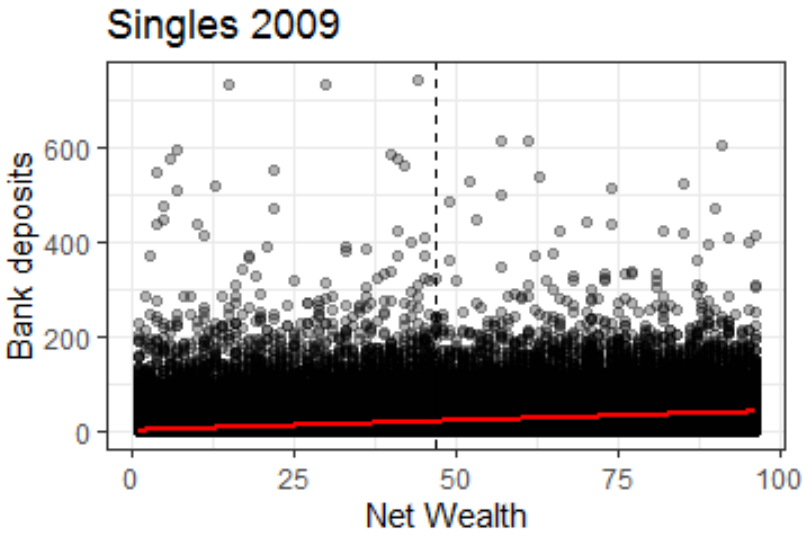

Figure D.35: Regression discontinuity for value in bank deposits for singles in 2009

This plot shows the value in bank deposits held by singles which has a net wealth of +/- 500 thousand NOK around the wealth tax threshold. Amounts on the axes are in ten thousand NOK. The dotted line represents the wealth tax threshold, and the solid red line is a linear regression showing that there are no signs of discontinuity in this data.

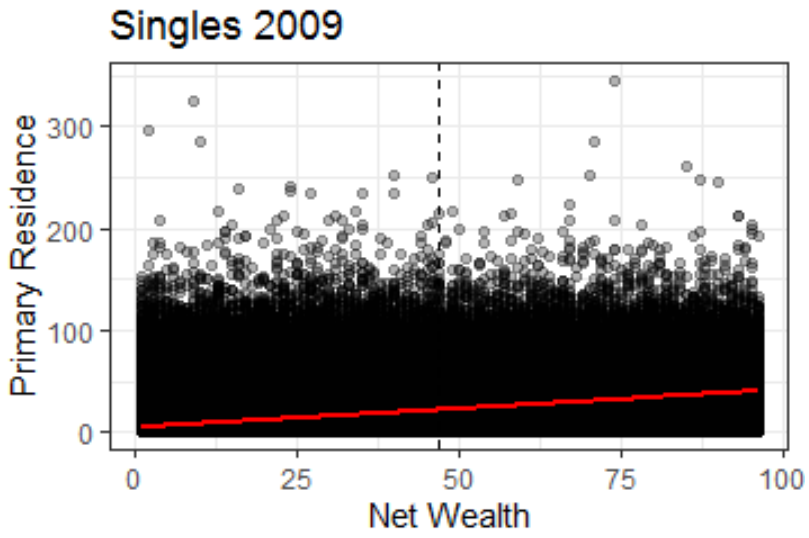

Figure D.36: Regression discontinuity for value in primary residence for singles in 2009

This plot shows the value in primary residence held by singles which has a net wealth of +/- 500 thousand NOK around the wealth tax threshold. Amounts on the axes are in ten thousand NOK. The dotted line represents the wealth tax threshold, and the solid red line is a linear regression showing that there are no signs of discontinuity in this data.

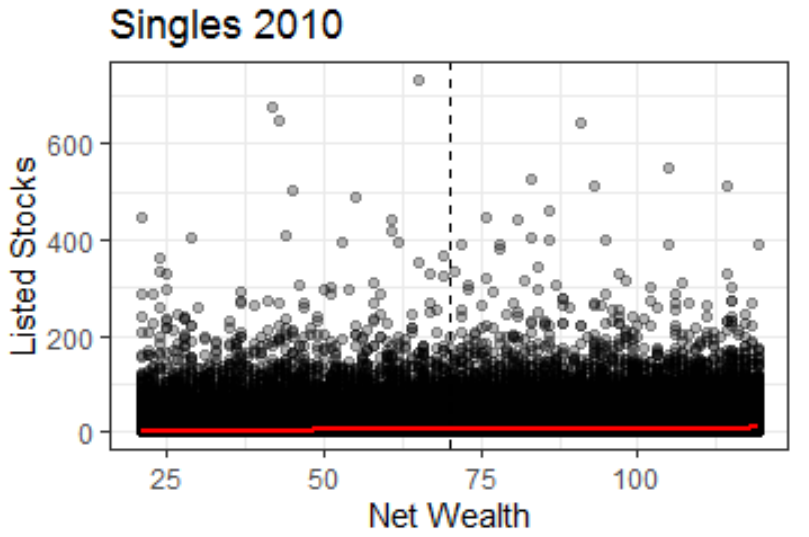

Figure D.37: Regression discontinuity for value in listed stocks for singles in 2010

This plot shows the value in listed stocks held by singles which has a net wealth of +/- 500 thousand NOK around the wealth tax threshold. Amounts on the axes are in ten thousand NOK. The dotted line represents the wealth tax threshold, and the solid red line is a linear regression showing that there are no signs of discontinuity in this data.

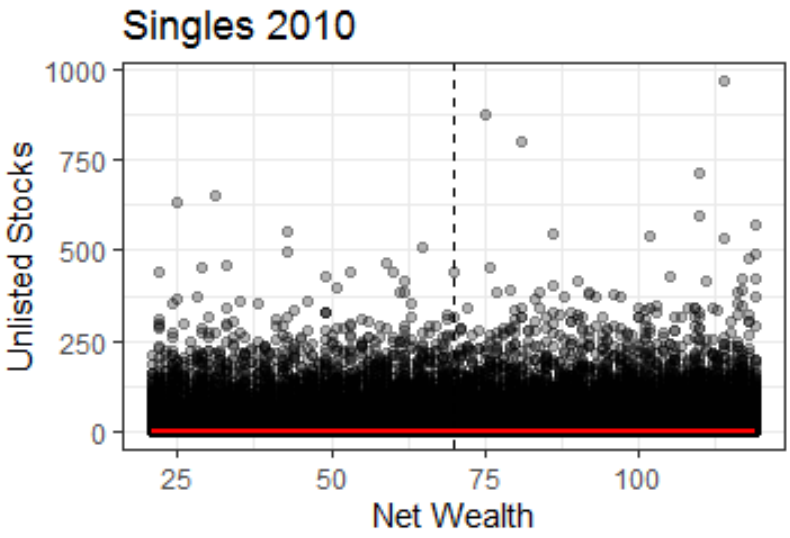

Figure D.38: Regression discontinuity for value in unlisted stocks for singles in 2010

This plot shows the value in unlisted stocks held by singles which has a net wealth of +/- 500 thousand NOK around the wealth tax threshold. Amounts on the axes are in ten thousand NOK. The dotted line represents the wealth tax threshold, and the solid red line is a linear regression showing that there are no signs of discontinuity in this data.

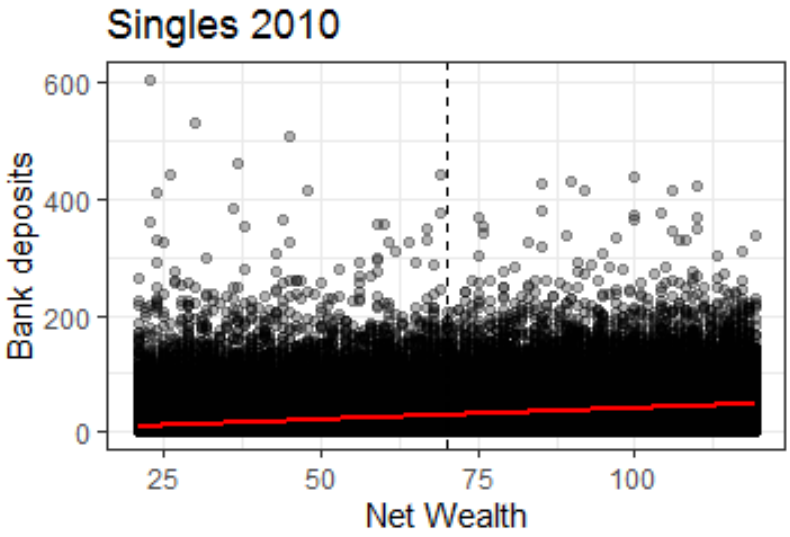

Figure D.39: Regression discontinuity for value in bank deposits for singles in 2010

This plot shows the value in bank deposits held by singles which has a net wealth of +/- 500 thousand NOK around the wealth tax threshold. Amounts on the axes are in ten thousand NOK. The dotted line represents the wealth tax threshold, and the solid red line is a linear regression showing that there are no signs of discontinuity in this data.

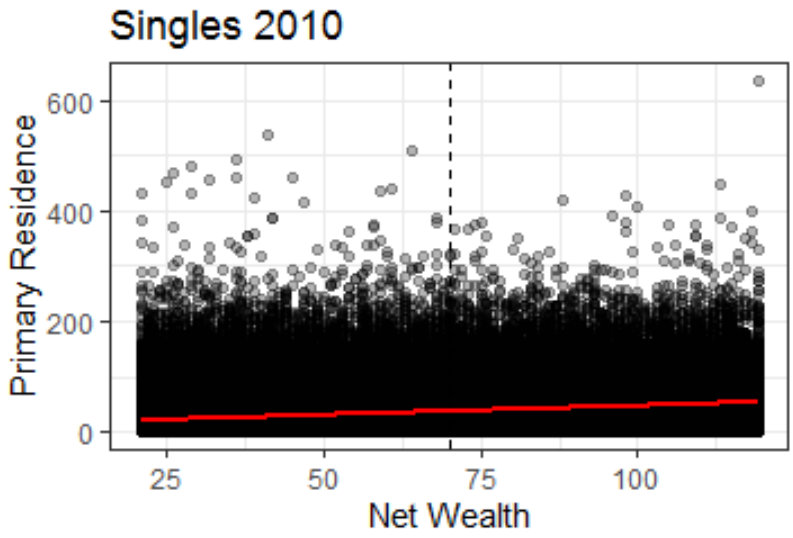

Figure D.40: Regression discontinuity for value in primary residence for singles in 2010

This plot shows the value in primary residence held by singles which has a net wealth of +/- 500 thousand NOK around the wealth tax threshold. Amounts on the axes are in ten thousand NOK. The dotted line represents the wealth tax threshold, and the solid red line is a linear regression showing that there are no signs of discontinuity in this data.

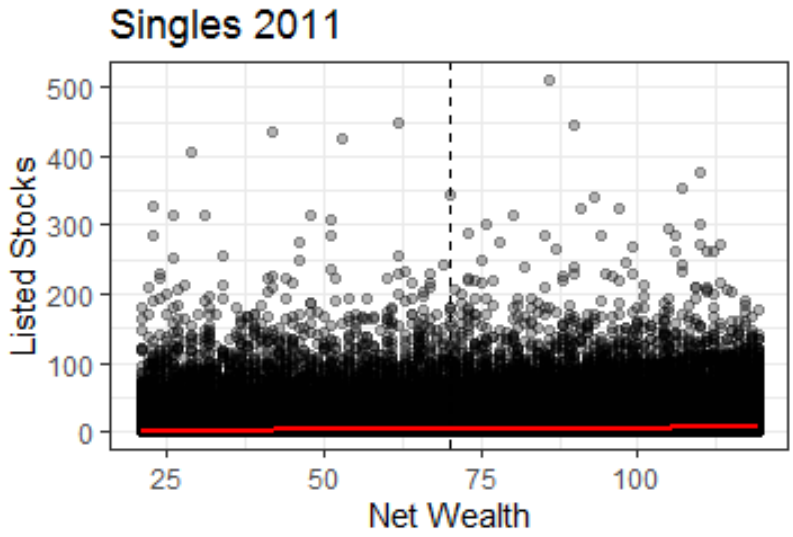

Figure D.41: Regression discontinuity for value in listed stocks for singles in 2011

This plot shows the value in listed stocks held by singles which has a net wealth of +/- 500 thousand NOK around the wealth tax threshold. Amounts on the axes are in ten thousand NOK. The dotted line represents the wealth tax threshold, and the solid red line is a linear regression showing that there are no signs of discontinuity in this data.

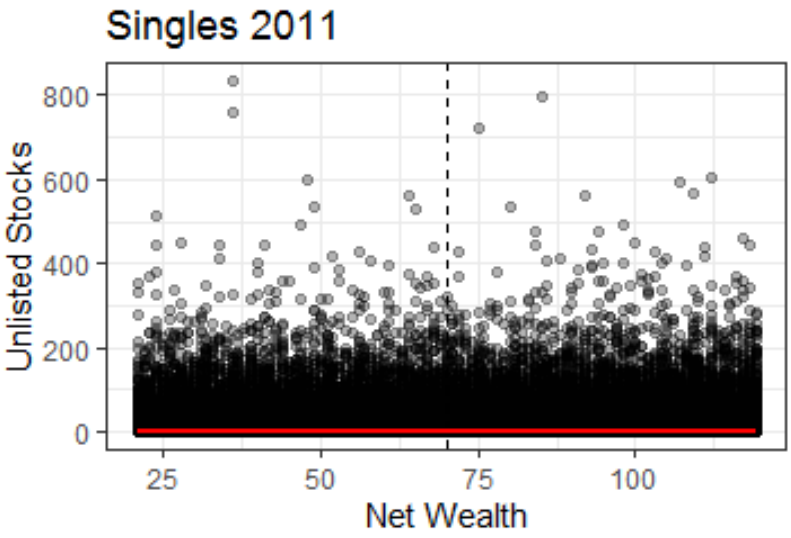

Figure D.42: Regression discontinuity for value in unlisted stocks for singles in 2011

This plot shows the value in unlisted stocks held by singles which has a net wealth of +/- 500 thousand NOK around the wealth tax threshold. Amounts on the axes are in ten thousand NOK. The dotted line represents the wealth tax threshold, and the solid red line is a linear regression showing that there are no signs of discontinuity in this data.

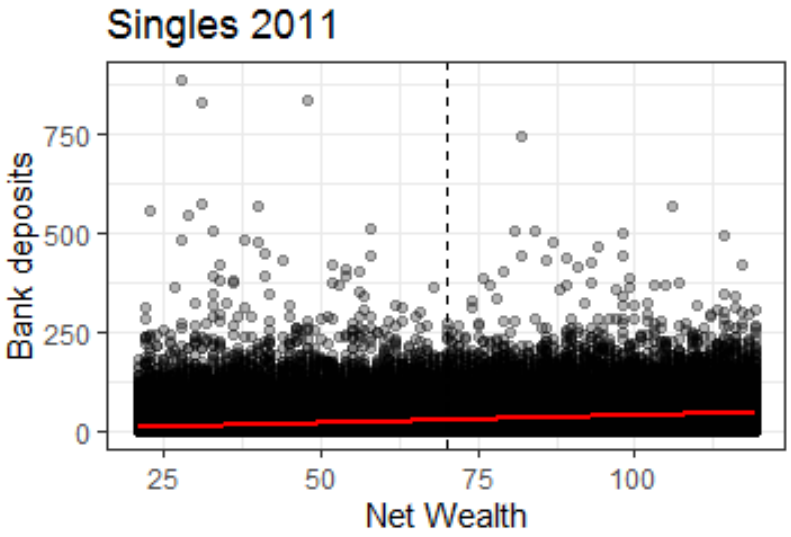

Figure D.43: Regression discontinuity for value in bank deposits for singles in 2011

This plot shows the value in bank deposits held by singles which has a net wealth of +/- 500 thousand NOK around the wealth tax threshold. Amounts on the axes are in ten thousand NOK. The dotted line represents the wealth tax threshold, and the solid red line is a linear regression showing that there are no signs of discontinuity in this data.

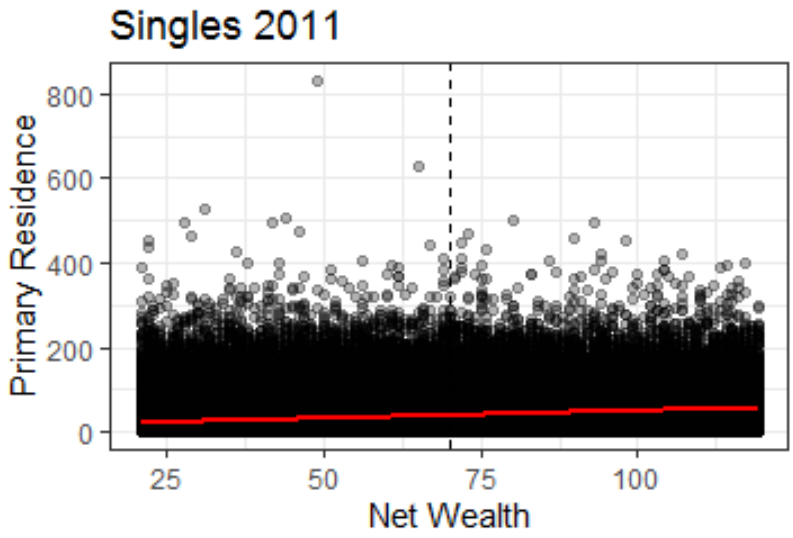

Figure D.44: Regression discontinuity for value in primary residence for singles in 2011

This plot shows the value in primary residence held by singles which has a net wealth of +/- 500 thousand NOK around the wealth tax threshold. Amounts on the axes are in ten thousand NOK. The dotted line represents the wealth tax threshold, and the solid red line is a linear regression showing that there are no signs of discontinuity in this data.

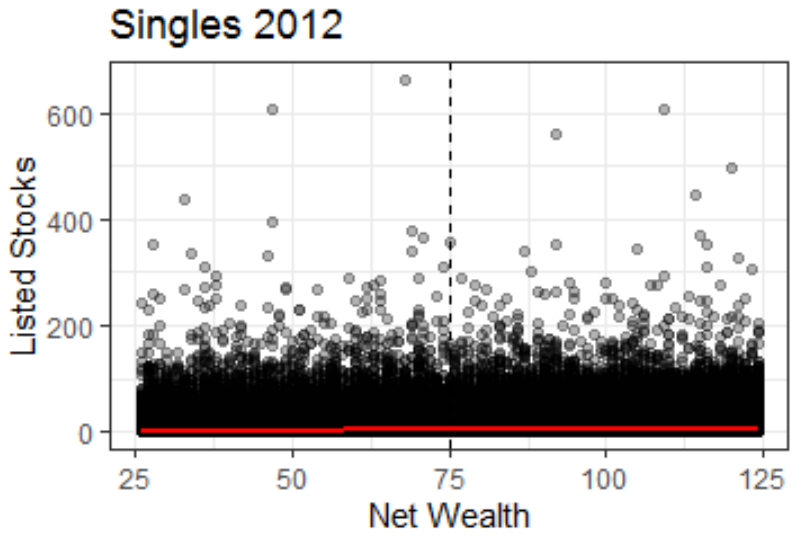

Figure D.45: Regression discontinuity for value in listed stocks for singles in 2012

This plot shows the value in listed stocks held by singles which has a net wealth of +/- 500 thousand NOK around the wealth tax threshold. Amounts on the axes are in ten thousand NOK. The dotted line represents the wealth tax threshold, and the solid red line is a linear regression showing that there are no signs of discontinuity in this data.

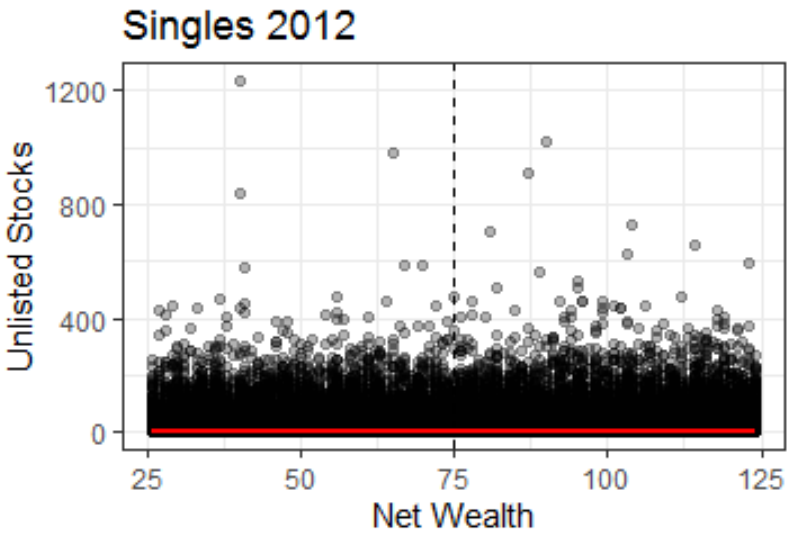

Figure D.46: Regression discontinuity for value in unlisted stocks for singles in 2012

This plot shows the value in unlisted stocks held by singles which has a net wealth of +/- 500 thousand NOK around the wealth tax threshold. Amounts on the axes are in ten thousand NOK. The dotted line represents the wealth tax threshold, and the solid red line is a linear regression showing that there are no signs of discontinuity in this data.

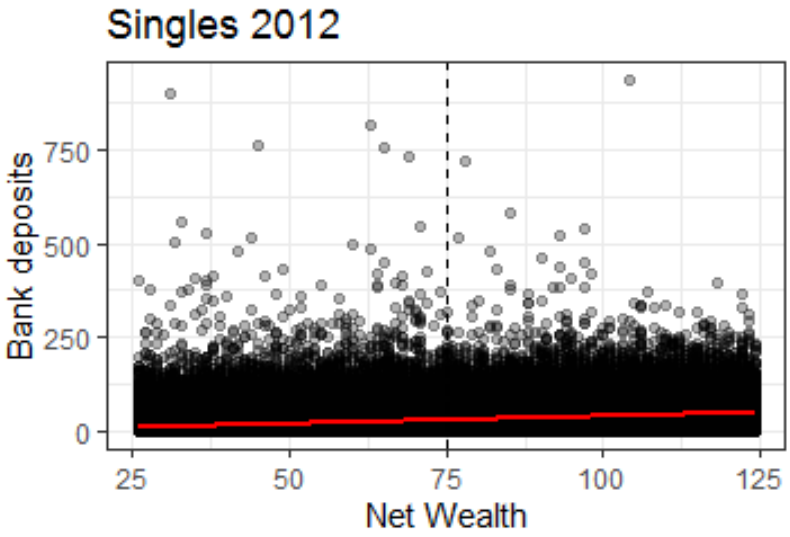

Figure D.47: Regression discontinuity for value in bank deposits for singles in 2012

This plot shows the value in bank deposits held by singles which has a net wealth of +/- 500 thousand NOK around the wealth tax threshold. Amounts on the axes are in ten thousand NOK. The dotted line represents the wealth tax threshold, and the solid red line is a linear regression showing that there are no signs of discontinuity in this data.

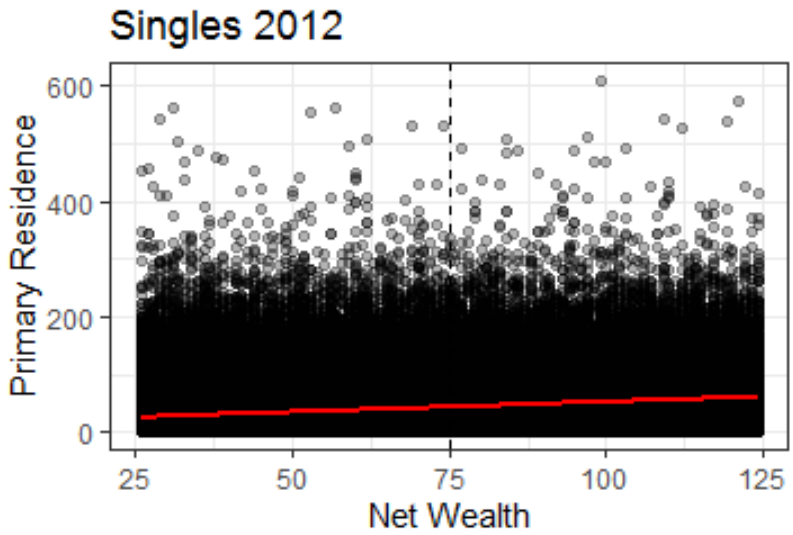

Figure D.48: Regression discontinuity for value in primary residence for singles in 2012

This plot shows the value in primary residence held by singles which has a net wealth of +/- 500 thousand NOK around the wealth tax threshold. Amounts on the axes are in ten thousand NOK. The dotted line represents the wealth tax threshold, and the solid red line is a linear regression showing that there are no signs of discontinuity in this data.

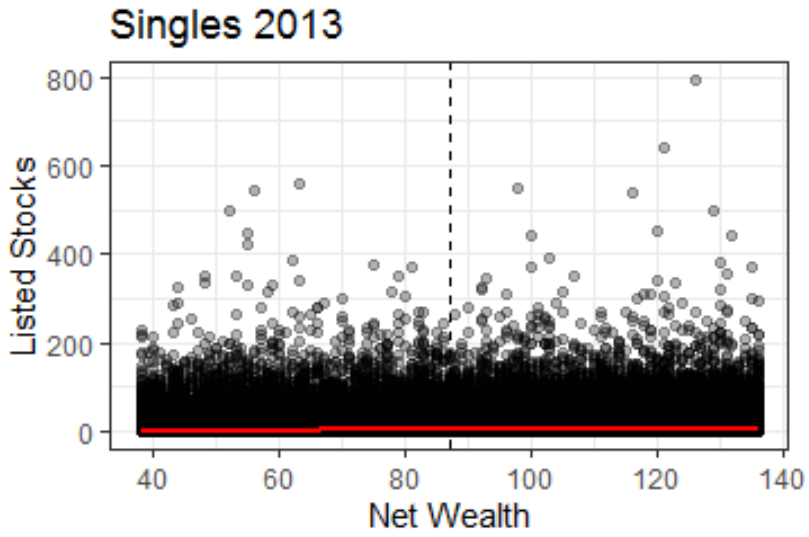

Figure D.49: Regression discontinuity for value in listed stocks for singles in 2013

This plot shows the value in listed stocks held by singles which has a net wealth of +/- 500 thousand NOK around the wealth tax threshold. Amounts on the axes are in ten thousand NOK. The dotted line represents the wealth tax threshold, and the solid red line is a linear regression showing that there are no signs of discontinuity in this data.

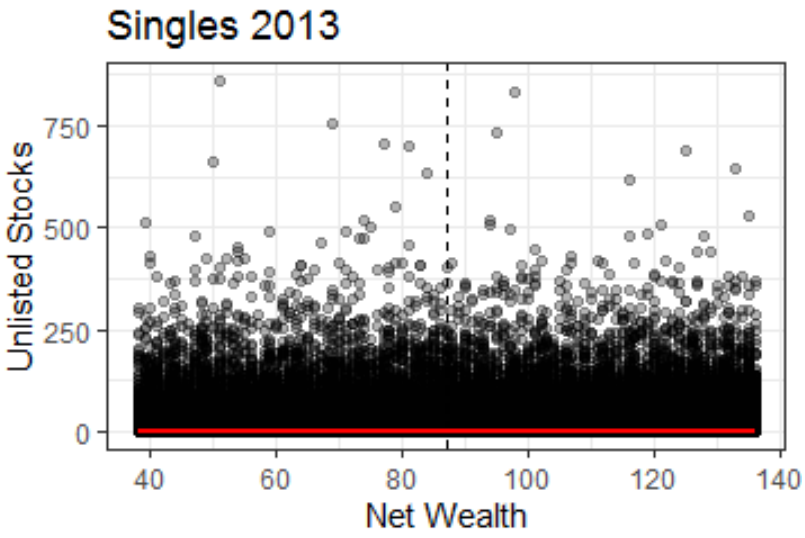

Figure D.50: Regression discontinuity for value in unlisted stocks for singles in 2013

This plot shows the value in unlisted stocks held by singles which has a net wealth of +/- 500 thousand NOK around the wealth tax threshold. Amounts on the axes are in ten thousand NOK. The dotted line represents the wealth tax threshold, and the solid red line is a linear regression showing that there are no signs of discontinuity in this data.

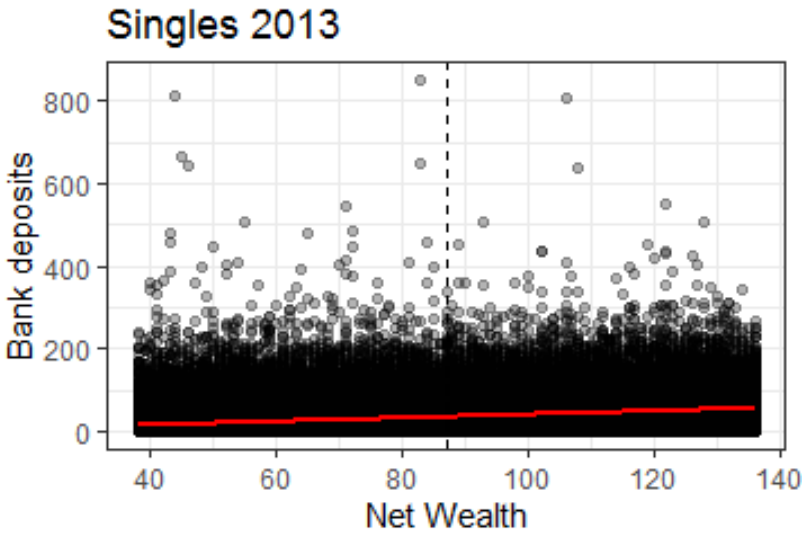

Figure D.51: Regression discontinuity for value in bank deposits for singles in 2013

This plot shows the value in bank deposits held by singles which has a net wealth of +/- 500 thousand NOK around the wealth tax threshold. Amounts on the axes are in ten thousand NOK. The dotted line represents the wealth tax threshold, and the solid red line is a linear regression showing that there are no signs of discontinuity in this data.

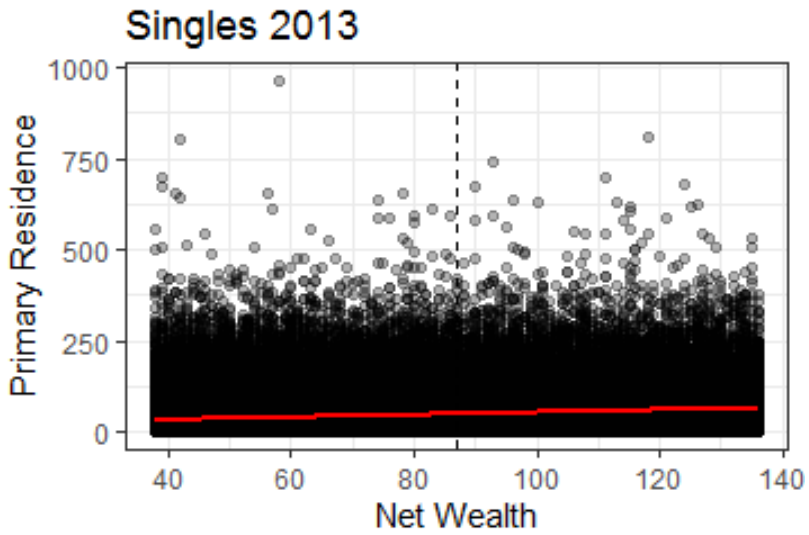

Figure D.52: Regression discontinuity for value in primary residence for singles in 2013

This plot shows the value in primary residence held by singles which has a net wealth of +/- 500 thousand NOK around the wealth tax threshold. Amounts on the axes are in ten thousand NOK. The dotted line represents the wealth tax threshold, and the solid red line is a linear regression showing that there are no signs of discontinuity in this data.

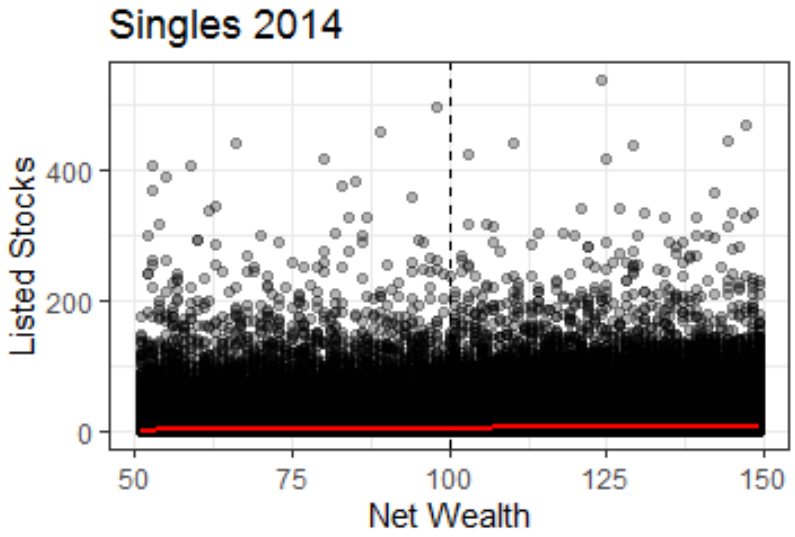

Figure D.53: Regression discontinuity for value in listed stocks for singles in 2014

This plot shows the value in listed stocks held by singles which has a net wealth of +/- 500 thousand NOK around the wealth tax threshold. Amounts on the axes are in ten thousand NOK. The dotted line represents the wealth tax threshold, and the solid red line is a linear regression showing that there are no signs of discontinuity in this data.

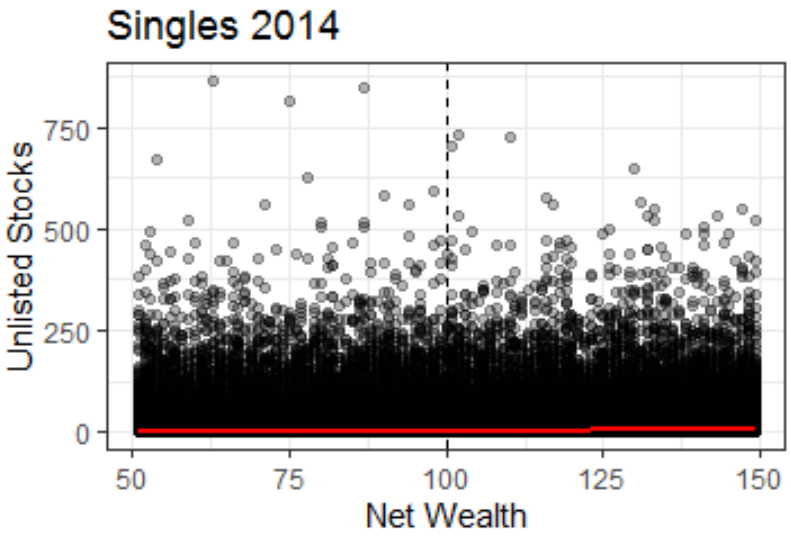

Figure D.54: Regression discontinuity for value in unlisted stocks for singles in 2014

This plot shows the value in unlisted stocks held by singles which has a net wealth of +/- 500 thousand NOK around the wealth tax threshold. Amounts on the axes are in ten thousand NOK. The dotted line represents the wealth tax threshold, and the solid red line is a linear regression showing that there are no signs of discontinuity in this data.

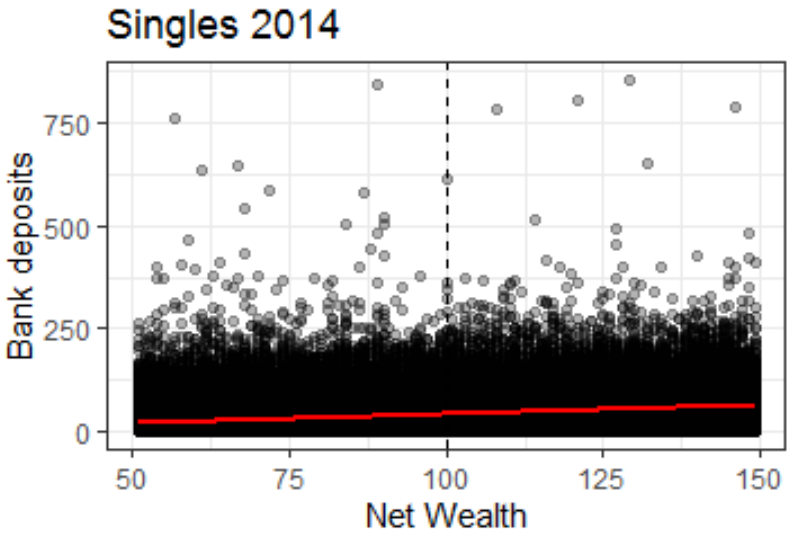

Figure D.55: Regression discontinuity for value in bank deposits for singles in 2014

This plot shows the value in bank deposits held by singles which has a net wealth of +/- 500 thousand NOK around the wealth tax threshold. Amounts on the axes are in ten thousand NOK. The dotted line represents the wealth tax threshold, and the solid red line is a linear regression showing that there are no signs of discontinuity in this data.

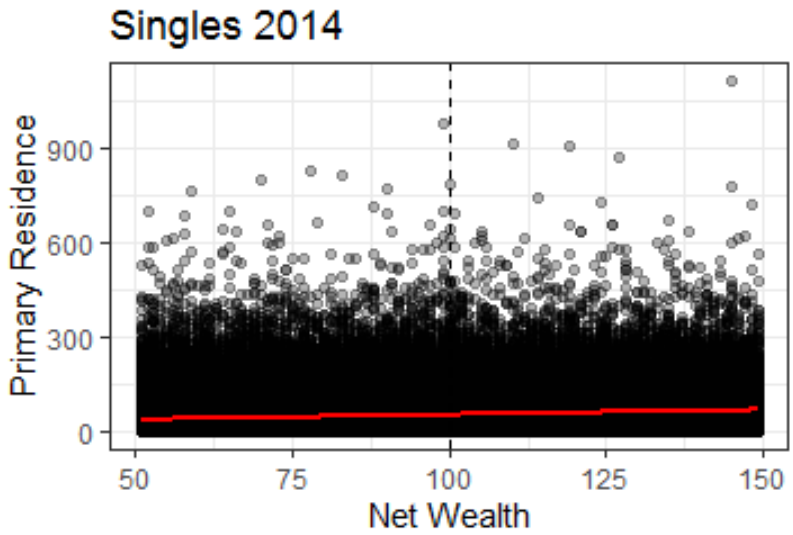

Figure D.56: Regression discontinuity for value in primary residence for singles in 2014

This plot shows the value in primary residence held by singles which has a net wealth of +/- 500 thousand NOK around the wealth tax threshold. Amounts on the axes are in ten thousand NOK. The dotted line represents the wealth tax threshold, and the solid red line is a linear regression showing that there are no signs of discontinuity in this data.

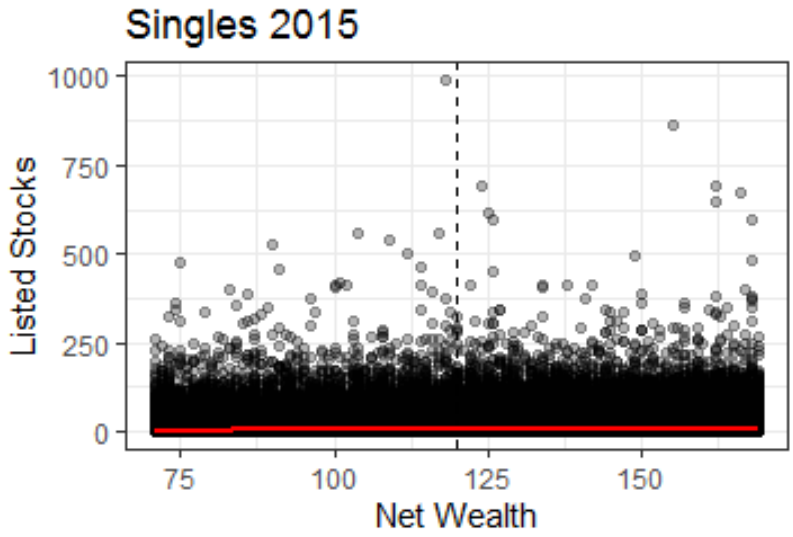

Figure D.57: Regression discontinuity for value in listed stocks for singles in 2015

This plot shows the value in listed stocks held by singles which has a net wealth of +/- 500 thousand NOK around the wealth tax threshold. Amounts on the axes are in ten thousand NOK. The dotted line represents the wealth tax threshold, and the solid red line is a linear regression showing that there are no signs of discontinuity in this data.

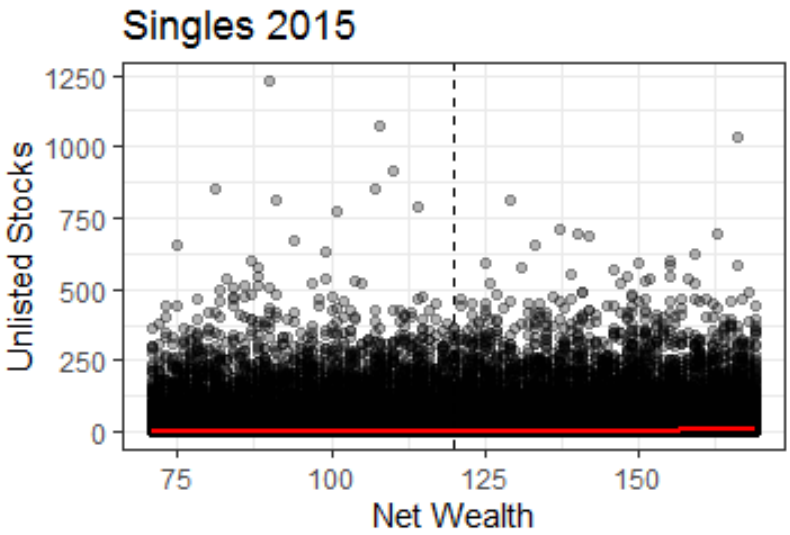

Figure D.58: Regression discontinuity for value in unlisted stocks for singles in 2015

This plot shows the value in unlisted stocks held by singles which has a net wealth of +/- 500 thousand NOK around the wealth tax threshold. Amounts on the axes are in ten thousand NOK. The dotted line represents the wealth tax threshold, and the solid red line is a linear regression showing that there are no signs of discontinuity in this data.

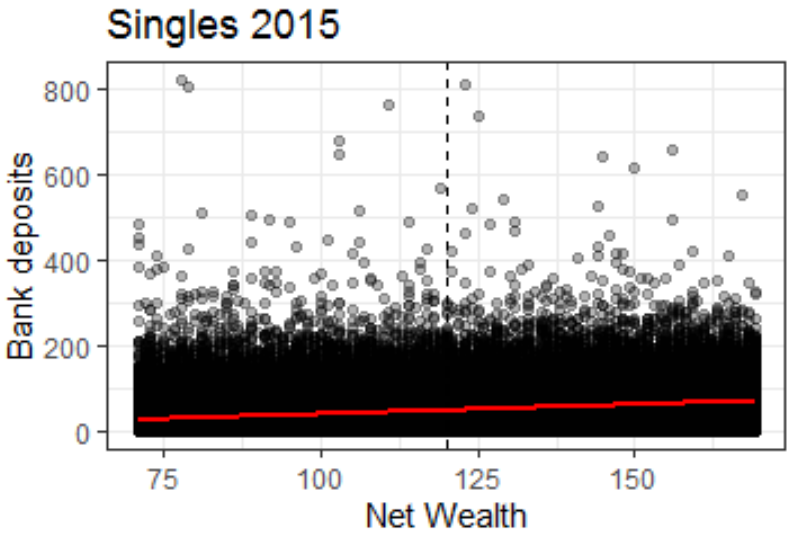

Figure D.59: Regression discontinuity for value in bank deposits for singles in 2015

This plot shows the value in bank deposits held by singles which has a net wealth of +/- 500 thousand NOK around the wealth tax threshold. Amounts on the axes are in ten thousand NOK. The dotted line represents the wealth tax threshold, and the solid red line is a linear regression showing that there are no signs of discontinuity in this data.

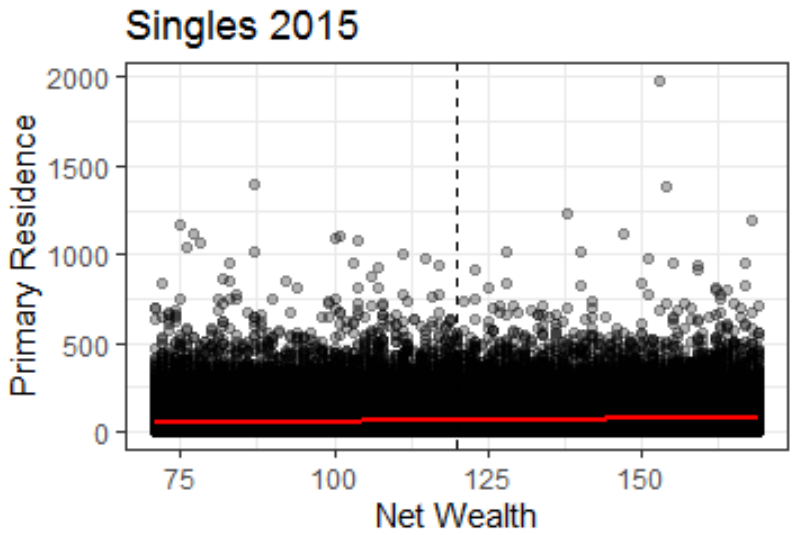

Figure D.60: Regression discontinuity for value in primary residence for singles in 2015

This plot shows the value in primary residence held by singles which has a net wealth of +/- 500 thousand NOK around the wealth tax threshold. Amounts on the axes are in ten thousand NOK. The dotted line represents the wealth tax threshold, and the solid red line is a linear regression showing that there are no signs of discontinuity in this data.

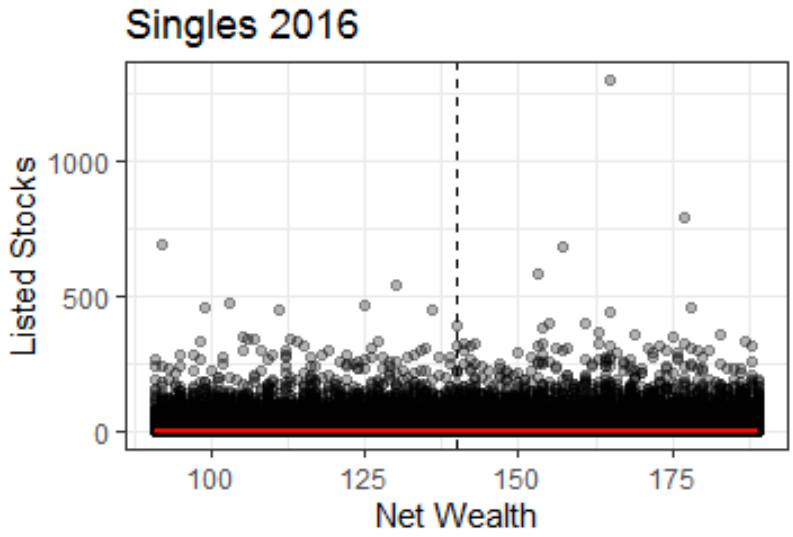

Figure D.61: Regression discontinuity for value in listed stocks for singles in 2016

This plot shows the value in listed stocks held by singles which has a net wealth of +/- 500 thousand NOK around the wealth tax threshold. Amounts on the axes are in ten thousand NOK. The dotted line represents the wealth tax threshold, and the solid red line is a linear regression showing that there are no signs of discontinuity in this data.

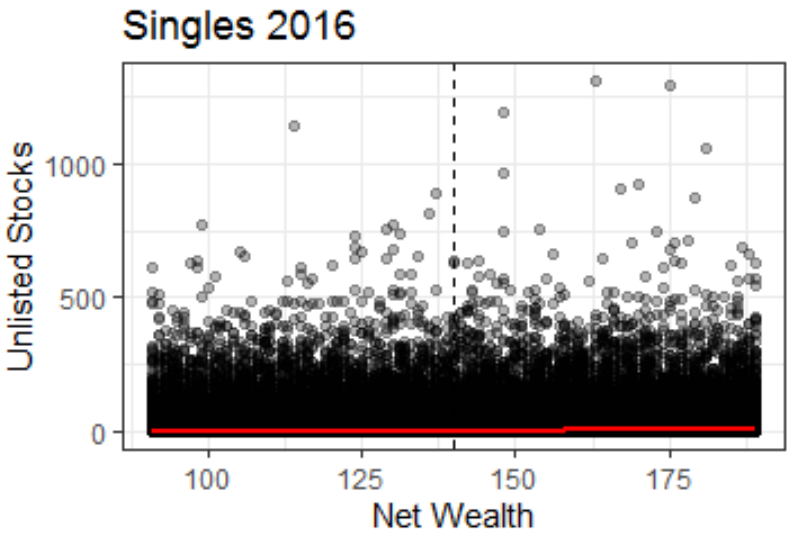

Figure D.62: Regression discontinuity for value in unlisted stocks for singles in 2016

This plot shows the value in unlisted stocks held by singles which has a net wealth of +/- 500 thousand NOK around the wealth tax threshold. Amounts on the axes are in ten thousand NOK. The dotted line represents the wealth tax threshold, and the solid red line is a linear regression showing that there are no signs of discontinuity in this data.

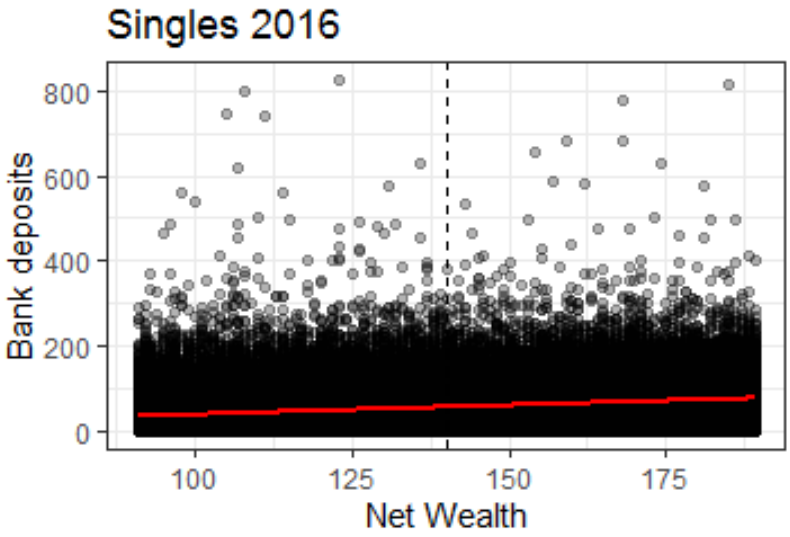

Figure D.63: Regression discontinuity for value in bank deposits for singles in 2016

This plot shows the value in bank deposits held by singles which has a net wealth of +/- 500 thousand NOK around the wealth tax threshold. Amounts on the axes are in ten thousand NOK. The dotted line represents the wealth tax threshold, and the solid red line is a linear regression showing that there are no signs of discontinuity in this data.

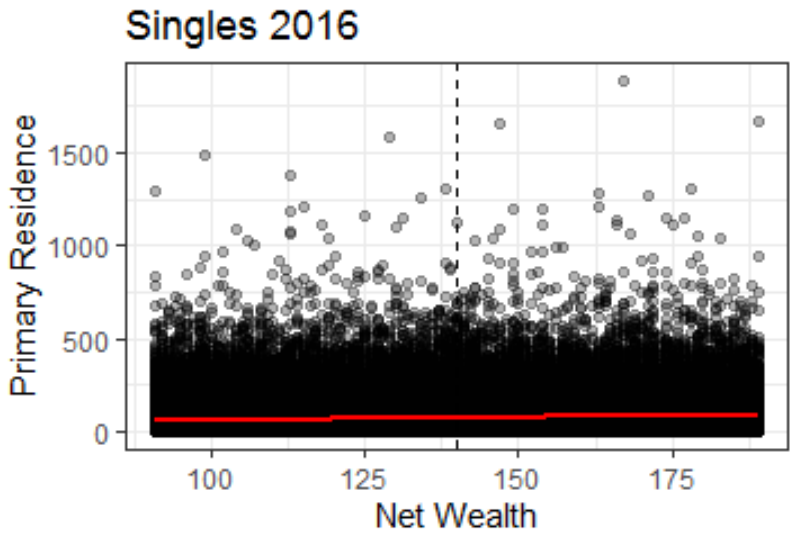

Figure D.64: Regression discontinuity for value in primary residence for singles in 2016

This plot shows the value in primary residence held by singles which has a net wealth of +/- 500 thousand NOK around the wealth tax threshold. Amounts on the axes are in ten thousand NOK. The dotted line represents the wealth tax threshold, and the solid red line is a linear regression showing that there are no signs of discontinuity in this data.

Tables showing results from estimation of regression discontinuity

Regression discontinuity for couples in 2009

	Dependent variable:			
	Listed stocks	Unlisted stocks	Bankdeposits	Primary Residence
	(1)	(2)	(3)	(4)
D	1.219	-0.348	-0.042	-1.308
	(1.219)	(-0.348)	(-0.042)	(-1.308)
I(netwealth - 94)	0.105	0.138	0.418	0.096
	(0.105)	(0.138)	(0.418)	(0.096)
Constant	11.428	11.004	48.806	40.202
	(11.428)	(11.004)	(48.806)	(40.202)
Robust standard errors				
Observations	12,047	12,047	12,047	12,047
Adjusted R2	0.020	0.012	0.092	0.005
Note:			*p<0.1; **p<0.05; ***p<0.01	

Figure E.1: Regression discontinuity estimation for asset classes held by couples in 2009

The table shows the results from estimation of regression discontinuity in the value held in listed stocks, unlisted stocks, bankdeposits and in primary residence by couples in 2009. The sample consists of taxpayers with a net wealth of +/- 500 thousand NOK around the wealth tax threshold. We can see in the table that there are no significant coefficients for any of the regressions. The dummy variable D shows the difference between taxpayers liable and not liable to wealth tax. A positive D coefficient indicate that taxpayers liable to wealth tax holds a larger value in the asset. Remember that the sample only include taxpayers around the threshold.

Regression discontinuity for couples in 2010

	Dependent variable:			
	Listed stocks	Unlisted stocks	Bankdeposits	Primary Residence
	(1)	(2)	(3)	(4)
D	-1.048	1.958	3.275	-1.346
	(-1.048)	(1.958)	(3.275)	(-1.346)
I(netwealth - 140)	0.126	0.086	0.335	0.144
	(0.126)	(0.086)	(0.335)	(0.144)
Constant	17.142	13.736	62.420	67.295
	(17.142)	(13.736)	(62.420)	(67.295)
Robust standard errors				
Observations	7,733	7,733	7,733	7,733
Adjusted R2	0.010	0.005	0.054	0.004
Note:				*p<0.1; **p<0.05; ***p<0.01

Figure E.2: Regression discontinuity estimation for asset classes held by couples in 2010

The table shows the results from estimation of regression discontinuity in the value held in listed stocks, unlisted stocks, bankdeposits and in primary residence by couples in 2010. The sample consists of taxpayers with a net wealth of +/- 500 thousand NOK around the wealth tax threshold. We can see in the table that there are no significant coefficients for any of the regressions. The dummy variable D shows the difference between taxpayers liable and not liable to wealth tax. A positive D coefficient indicate that taxpayers liable to wealth tax holds a larger value in the asset. Remember that the sample only include taxpayers around the threshold.

Regression discontinuity for couples in 2011

	Dependent variable:			
	Listed stocks	Unlisted stocks	Bankdeposits	Primary Residence
	(1)	(2)	(3)	(4)
D	1.959	-3.334	0.389	-0.840
	(1.959)	(-3.334)	(0.389)	(-0.840)
I(netwealth - 140)	0.061	0.177	0.409	0.160
	(0.061)	(0.177)	(0.409)	(0.160)
Constant	11.640	16.601	66.150	73.036
	(11.640)	(16.601)	(66.150)	(73.036)
Robust standard errors				
Observations	8,411	8,411	8,411	8,411
Adjusted R2	0.010	0.007	0.056	0.005

Note: *p<0.1; **p<0.05; ***p<0.01

Figure E.3: Regression discontinuity estimation for asset classes held by couples in 2011

The table shows the results from estimation of regression discontinuity in the value held in listed stocks, unlisted stocks, bankdeposits and in primary residence by couples in 2011. The sample consists of taxpayers with a net wealth of +/- 500 thousand NOK around the wealth tax threshold. We can see in the table that there are no significant coefficients for any of the regressions. The dummy variable D shows the difference between taxpayers liable and not liable to wealth tax. A positive D coefficient indicate that taxpayers liable to wealth tax holds a larger value in the asset. Remember that the sample only include taxpayers around the threshold.

Regression discontinuity for couples in 2012

	Dependent variable:			
	Listed stocks	Unlisted stocks	Bankdeposits	Primary Residence
	(1)	(2)	(3)	(4)
D	-0.454	-0.293	0.878	0.369
	(-0.454)	(-0.293)	(0.878)	(0.369)
I(netwealth - 150)	0.070	0.142	0.339	0.125
	(0.070)	(0.142)	(0.339)	(0.125)
Constant	13.988	15.630	71.772	81.068
	(13.988)	(15.630)	(71.772)	(81.068)
Robust standard errors				
Observations	7,166	7,166	7,166	7,166
Adjusted R2	0.004	0.007	0.038	0.003
Note:				*p<0.1; **p<0.05; ***p<0.01

Figure E.4: Regression discontinuity estimation for asset classes held by couples in 2012

The table shows the results from estimation of regression discontinuity in the value held in listed stocks, unlisted stocks, bankdeposits and in primary residence by couples in 2012. The sample consists of taxpayers with a net wealth of +/- 500 thousand NOK around the wealth tax threshold. We can see in the table that there are no significant coefficients for any of the regressions. The dummy variable D shows the difference between taxpayers liable and not liable to wealth tax. A positive D coefficient indicate that taxpayers liable to wealth tax holds a larger value in the asset. Remember that the sample only include taxpayers around the threshold.

Regression discontinuity for couples in 2013

	Dependent variable:			
	Listed stocks (1)	Unlisted stocks (2)	Bankdeposits (3)	Primary Residence (4)
D	2.440	-2.595	3.687	4.667
	(2.440)	(-2.595)	(3.687)	(4.667)
I(netwealth - 174)	0.085	0.173	0.280	0.069
	(0.085)	(0.173)	(0.280)	(0.069)
Constant	17.292	18.966	78.246	92.098
	(17.292)	(18.966)	(78.246)	(92.098)
Robust standard errors				
Observations	6,380	6,380	6,380	6,380
Adjusted R2	0.009	0.005	0.028	0.003
Note:			*p<0.1; **p<0.05; ***p<0.01	

Figure E.5: Regression discontinuity estimation for asset classes held by couples in 2013

The table shows the results from estimation of regression discontinuity in the value held in listed stocks, unlisted stocks, bankdeposits and in primary residence by couples in 2013. The sample consists of taxpayers with a net wealth of +/- 500 thousand NOK around the wealth tax threshold. We can see in the table that there are no significant coefficients for any of the regressions. The dummy variable D shows the difference between taxpayers liable and not liable to wealth tax. A positive D coefficient indicate that taxpayers liable to wealth tax holds a larger value in the asset. Remember that the sample only include taxpayers around the threshold.

Regression discontinuity for couples in 2014

	Dependent variable:			
	Listed stockss	Unlisted stocks	Bankdeposits	Primary Residence
	(1)	(2)	(3)	(4)
D	2.417	-2.847	-1.752	-6.612
	(2.417)	(-2.847)	(-1.752)	(-6.612)
I(netwealth - 200)	0.067	0.164	0.381	0.303
	(0.067)	(0.164)	(0.381)	(0.303)
Constant	18.780	22.460	93.031	111.596
	(18.780)	(22.460)	(93.031)	(111.596)
Robust standard errors				
Observations	5,738	5,738	5,738	5,738
Adjusted R2	0.006	0.003	0.025	0.004
Note:				*p<0.1; **p<0.05; ***p<0.01

Figure E.6: Regression discontinuity estimation for asset classes held by couples in 2014

The table shows the results from estimation of regression discontinuity in the value held in listed stocks, unlisted stocks, bankdeposits and in primary residence by couples in 2014. The sample consists of taxpayers with a net wealth of +/- 500 thousand NOK around the wealth tax threshold. We can see in the table that there are no significant coefficients for any of the regressions. The dummy variable D shows the difference between taxpayers liable and not liable to wealth tax. A positive D coefficient indicate that taxpayers liable to wealth tax holds a larger value in the asset. Remember that the sample only include taxpayers around the threshold.

Regression discontinuity for couples in 2015

	Dependent variable:			
	Listed stocks	Unlisted stocks	Bankdeposits	Primary Residence
	(1)	(2)	(3)	(4)
D	-2.408	-3.921	-0.494	-0.428
	(-2.408)	(-3.921)	(-0.494)	(-0.428)
I(netwealth - 240)	0.176	0.238	0.317	0.181
	(0.176)	(0.238)	(0.317)	(0.181)
Constant	27.336	28.886	103.288	133.447
	(27.336)	(28.886)	(103.288)	(133.447)
Robust standard errors				
Observations	4,849	4,849	4,849	4,849
Adjusted R2	0.007	0.004	0.014	0.001
Note:				*p<0.1; **p<0.05; ***p<0.01

Figure E.7: Regression discontinuity estimation for asset classes held by couples in 2015

The table shows the results from estimation of regression discontinuity in the value held in listed stocks, unlisted stocks, bankdeposits and in primary residence by couples in 2015. The sample consists of taxpayers with a net wealth of +/- 500 thousand NOK around the wealth tax threshold. We can see in the table that there are no significant coefficients for any of the regressions. The dummy variable D shows the difference between taxpayers liable and not liable to wealth tax. A positive D coefficient indicate that taxpayers liable to wealth tax holds a larger value in the asset. Remember that the sample only include taxpayers around the threshold.

Regression discontinuity for couples in 2016

	Dependent variable:			
	Listed stocks	Unlisted stocks	Bankdeposits	Primary Residence
	(1)	(2)	(3)	(4)
D	-0.325	-6.820	-6.660	16.935
	(-0.325)	(-6.820)	(-6.660)	(16.935)
I(netwealth - 280)	0.050	0.315	0.402	-0.010
	(0.050)	(0.315)	(0.402)	(-0.010)
Constant	12.258	40.768	115.223	156.145
	(12.258)	(40.768)	(115.223)	(156.145)
Robust standard errors				
Observations	4,260	4,260	4,260	4,260
Adjusted R2	0.001	0.004	0.011	0.002
Note:				*p<0.1; **p<0.05; ***p<0.01

Figure E.8: Regression discontinuity estimation for asset classes held by couples in 2016

The table shows the results from estimation of regression discontinuity in the value held in listed stocks, unlisted stocks, bankdeposits and in primary residence by couples in 2016. The sample consists of taxpayers with a net wealth of +/- 500 thousand NOK around the wealth tax threshold. We can see in the table that there are no significant coefficients for any of the regressions. The dummy variable D shows the difference between taxpayers liable and not liable to wealth tax. A positive D coefficient indicate that taxpayers liable to wealth tax holds a larger value in the asset. Remember that the sample only include taxpayers around the threshold.

Regression discontinuity for singles in 2009

	Dependent variable:			
	Listed stocks	Unlisted stocks	Bankdeposits	Primary Residence
	(1)	(2)	(3)	(4)
D	0.027	0.055	0.538	-4.755
	(0.027)	(0.055)	(0.538)	(-4.755)
I(netwealth - 47)	0.066	0.023	0.400	0.438
	(0.066)	(0.023)	(0.400)	(0.438)
Constant	3.391	1.168	21.601	24.048
	(3.391)	(1.168)	(21.601)	(24.048)
Robust standard errors				
Observations	1,626,156	1,626,156	1,626,156	1,626,156
Adjusted R2	0.040	0.006	0.307	0.222
Note:				*p<0.1; **p<0.05; ***p<0.01

Figure E.9: Regression discontinuity estimation for asset classes held by singles in 2009

The table shows the results from estimation of regression discontinuity in the value held in listed stocks, unlisted stocks, bankdeposits and in primary residence by singles in 2009. The sample consists of taxpayers with a net wealth of +/- 500 thousand NOK around the wealth tax threshold. We can see in the table that there are no significant coefficients for any of the regressions. The dummy variable D shows the difference between taxpayers liable and not liable to wealth tax. A positive D coefficient indicate that taxpayers liable to wealth tax holds a larger value in the asset. Remember that the sample only include taxpayers around the threshold.

Regression discontinuity for singles in 2010

	Dependent variable:			
	Listed stocks	Unlisted stocks	Bankdeposits	Primary Residence
	(1)	(2)	(3)	(4)
D	0.447	0.090	2.382	-3.032
	(0.447)	(0.090)	(2.382)	(-3.032)
I(netwealth - 70)	0.060	0.026	0.360	0.378
	(0.060)	(0.026)	(0.360)	(0.378)
Constant	4.381	1.652	27.357	38.633
	(4.381)	(1.652)	(27.357)	(38.633)
Robust standard errors				
Observations	987,125	987,125	987,125	987,125
Adjusted R2	0.024	0.004	0.181	0.090
Note:			*p<0.1; **p<0.05; ***p<0.01	

Figure E.10: Regression discontinuity estimation for asset classes held by singles in 2010

The table shows the results from estimation of regression discontinuity in the value held in listed stocks, unlisted stocks, bankdeposits and in primary residence by singles in 2010. The sample consists of taxpayers with a net wealth of +/- 500 thousand NOK around the wealth tax threshold. We can see in the table that there are no significant coefficients for any of the regressions. The dummy variable D shows the difference between taxpayers liable and not liable to wealth tax. A positive D coefficient indicate that taxpayers liable to wealth tax holds a larger value in the asset. Remember that the sample only include taxpayers around the threshold.

Regression discontinuity for singles in 2011

	Dependent variable:			
	Listed stocks	Unlisted stocks	Bankdeposits	Primary Residence
	(1)	(2)	(3)	(4)
D	0.380	0.134	2.361	-2.912
	(0.380)	(0.134)	(2.361)	(-2.912)
I(netwealth - 70)	0.046	0.023	0.357	0.402
	(0.046)	(0.023)	(0.357)	(0.402)
Constant	3.446	1.568	27.755	40.600
	(3.446)	(1.568)	(27.755)	(40.600)
Robust standard errors				
Observations	991,015	991,015	991,015	991,015
Adjusted R2	0.020	0.003	0.170	0.094
Note:			*p<0.1; **p<0.05; ***p<0.01	

Figure E.11: Regression discontinuity estimation for asset classes held by singles in 2011

The table shows the results from estimation of regression discontinuity in the value held in listed stocks, unlisted stocks, bankdeposits and in primary residence by singles in 2011. The sample consists of taxpayers with a net wealth of +/- 500 thousand NOK around the wealth tax threshold. We can see in the table that there are no significant coefficients for any of the regressions. The dummy variable D shows the difference between taxpayers liable and not liable to wealth tax. A positive D coefficient indicate that taxpayers liable to wealth tax holds a larger value in the asset. Remember that the sample only include taxpayers around the threshold.

Regression discontinuity for singles in 2012

	Dependent variable:			
	Listed stocks	Unlisted stocks	Bankdeposits	Primary Residence
	(1)	(2)	(3)	(4)
D	0.290	0.200	2.043	-2.438
	(0.290)	(0.200)	(2.043)	(-2.438)
I(netwealth - 75)	0.046	0.023	0.373	0.393
	(0.046)	(0.023)	(0.373)	(0.393)
Constant	3.493	1.655	29.932	44.116
	(3.493)	(1.655)	(29.932)	(44.116)
Robust standard errors				
Observations	940,753	940,753	940,753	940,753
Adjusted R2	0.018	0.003	0.159	0.081
Note:				*p<0.1; **p<0.05; ***p<0.01

Figure E.12: Regression discontinuity estimation for asset classes held by singles in 2012

The table shows the results from estimation of regression discontinuity in the value held in listed stocks, unlisted stocks, bankdeposits and in primary residence by singles in 2012. The sample consists of taxpayers with a net wealth of +/- 500 thousand NOK around the wealth tax threshold. We can see in the table that there are no significant coefficients for any of the regressions. The dummy variable D shows the difference between taxpayers liable and not liable to wealth tax. A positive D coefficient indicate that taxpayers liable to wealth tax holds a larger value in the asset. Remember that the sample only include taxpayers around the threshold.

Regression discontinuity for singles in 2013

	Dependent variable:			
	Listed stocks	Unlisted stocks	Bankdeposits	Primary Residence
	(1)	(2)	(3)	(4)
D	0.198	0.051	1.425	-1.737
	(0.198)	(0.051)	(1.425)	(-1.737)
I(netwealth - 87)	0.057	0.028	0.405	0.360
	(0.057)	(0.028)	(0.405)	(0.360)
Constant	4.467	2.130	35.054	49.920
	(4.467)	(2.130)	(35.054)	(49.920)
Robust standard errors				
Observations	790,894	790,894	790,894	790,894
Adjusted R2	0.017	0.003	0.143	0.055
Note:			*p<0.1; **p<0.05; ***p<0.01	

Figure E.13: Regression discontinuity estimation for asset classes held by singles in 2013

The table shows the results from estimation of regression discontinuity in the value held in listed stocks, unlisted stocks, bankdeposits and in primary residence by singles in 2013. The sample consists of taxpayers with a net wealth of +/- 500 thousand NOK around the wealth tax threshold. We can see in the table that there are no significant coefficients for any of the regressions. The dummy variable D shows the difference between taxpayers liable and not liable to wealth tax. A positive D coefficient indicate that taxpayers liable to wealth tax holds a larger value in the asset. Remember that the sample only include taxpayers around the threshold.

Regression discontinuity for singles in 2014

	Dependent variable:			
	Listed stockss	Unlisted stocks	Bankdeposits	Primary Residence
	(1)	(2)	(3)	(4)
D	0.349	0.186	1.158	-1.621
	(0.349)	(0.186)	(1.158)	(-1.621)
I(netwealth - 100)	0.059	0.035	0.434	0.337
	(0.059)	(0.035)	(0.434)	(0.337)
Constant	5.139	2.675	41.622	54.944
	(5.139)	(2.675)	(41.622)	(54.944)
Robust standard errors				
Observations	661,403	661,403	661,403	661,403
Adjusted R2	0.016	0.003	0.128	0.038
Note:				*p<0.1; **p<0.05; ***p<0.01

Figure E.14: Regression discontinuity estimation for asset classes held by singles in 2014

The table shows the results from estimation of regression discontinuity in the value held in listed stocks, unlisted stocks, bankdeposits and in primary residence by singles in 2014. The sample consists of taxpayers with a net wealth of +/- 500 thousand NOK around the wealth tax threshold. We can see in the table that there are no significant coefficients for any of the regressions. The dummy variable D shows the difference between taxpayers liable and not liable to wealth tax. A positive D coefficient indicate that taxpayers liable to wealth tax holds a larger value in the asset. Remember that the sample only include taxpayers around the threshold.

Regression discontinuity for singles in 2015

	Dependent variable:			
	Listed stocks	Unlisted stocks	Bankdeposits	Primary Residence
	(1)	(2)	(3)	(4)
D	0.338	0.021	0.058	-0.407
	(0.338)	(0.021)	(0.058)	(-0.407)
I(netwealth - 120)	0.067	0.043	0.448	0.325
	(0.067)	(0.043)	(0.448)	(0.325)
Constant	6.665	3.564	49.840	64.324
	(6.665)	(3.564)	(49.840)	(64.324)
Robust standard errors				
Observations	520,797	520,797	520,797	520,797
Adjusted R2	0.013	0.003	0.097	0.026
Note:			*p<0.1; **p<0.05; ***p<0.01	

Figure E.15: Regression discontinuity estimation for asset classes held by singles in 2015

The table shows the results from estimation of regression discontinuity in the value held in listed stocks, unlisted stocks, bankdeposits and in primary residence by singles in 2015. The sample consists of taxpayers with a net wealth of +/- 500 thousand NOK around the wealth tax threshold. We can see in the table that there are no significant coefficients for any of the regressions. The dummy variable D shows the difference between taxpayers liable and not liable to wealth tax. A positive D coefficient indicate that taxpayers liable to wealth tax holds a larger value in the asset. Remember that the sample only include taxpayers around the threshold.

Regression discontinuity for singles in 2016

	Dependent variable:			
	Listed stocks (1)	Unlisted stocks (2)	Bankdeposits (3)	Primary Residence (4)
D	0.043	0.191	0.277	-0.718
	(0.043)	(0.191)	(0.277)	(-0.718)
I(netwealth - 140)	0.027	0.047	0.427	0.362
	(0.027)	(0.047)	(0.427)	(0.362)
Constant	2.591	4.543	57.081	75.904
	(2.591)	(4.543)	(57.081)	(75.904)
Robust standard errors				
Observations	422,914	422,914	422,914	422,914
Adjusted R2	0.004	0.003	0.070	0.022
Note:				*p<0.1; **p<0.05; ***p<0.01

Figure E.16: Regression discontinuity estimation for asset classes held by singles in 2016

The table shows the results from estimation of regression discontinuity in the value held in listed stocks, unlisted stocks, bankdeposits and in primary residence by singles in 2016. The sample consists of taxpayers with a net wealth of +/- 500 thousand NOK around the wealth tax threshold. We can see in the table that there are no significant coefficients for any of the regressions. The dummy variable D shows the difference between taxpayers liable and not liable to wealth tax. A positive D coefficient indicate that taxpayers liable to wealth tax holds a larger value in the asset. Remember that the sample only include taxpayers around the threshold.