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WEALTH TAX ENFORCEMENT IN SWEDEN:
FILING REQUIREMENTS AND PRE-POPULATED RETURNS

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Wealth Tax Enforcement in Sweden: Filing Requirements and Pre-Populated Returns
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ABSTRACT

This paper shows that two features of wealth tax administration in Sweden—(1) filing requirements and (2) pre-populated returns—have a large impact on compliance even in an environment with highly-developed third-party reporting through information returns, challenging the conventional wisdom that third-party information returns are a silver bullet for successful tax enforcement. Up to 1993, everybody had to fill in wealth information when filing the (joint) income and wealth tax return. In 1994-1996, only those with net wealth above the exemption threshold (approximately the top 10%) needed to fill in wealth information. This leads to a very large reduction of about half of the number of taxpayers slightly above the wealth tax exemption threshold, and a reduction of about 20% of the total number of wealth taxpayers above the threshold. Starting in 1997, Sweden began pre-populating wealth information on tax returns for taxpayers with third-party-reported net wealth above the exemption threshold. Symmetrically, this immediately doubles the number of taxpayers slightly above the threshold and increases the number of all wealth taxpayers by almost 20%. We also show that the introduction of information returns for financial wealth in 1986 had a comparatively small impact on wealth reporting.

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1 Introduction

Wealth taxation for the rich has received significant attention in the academic and policy debates, with most controversy focusing on whether such taxes can be successfully enforced.[1] The prevailing view in the income and wealth tax enforcement literature is that information returns provided by third-parties – such as employers and financial institutions – to both the tax authority and the taxpayer are crucial for successful enforcement (see e.g., Kleven et al. 2011, Carrillo et al., 2017, Slemrod et al., 2017, IRS, 2019, Johannesen et al. 2020).

Our paper examines the Swedish wealth tax and demonstrates that the prevailing view on enforcement needs to be qualified. While Sweden has had extensive information reporting since 1986, we find that two administrative features – filing requirements and pre-populated tax returns – have a substantial additional impact on compliance. Up to 1993, everybody was required to fill in their wealth information when filing their (joint) income and wealth tax returns. In 1994-1996, only those with net wealth above the exemption threshold (approximately the top 10%) had to fill in their wealth information. This reform results in a large reduction of about half of the number of wealth taxpayers slightly above the exemption threshold and a one-third decrease in taxpayers between the threshold and twice the threshold. This large change happens despite no changes in information returns. Effects on taxpayers with wealth above twice the exemption threshold are minimal. Overall, the total number of wealth taxpayers declines by about 20%.

Starting in 1997, Sweden began pre-populating wealth information on tax returns for all taxpayers whose net wealth based on third-party information exceeded the exemption threshold. Symmetrically to the above, this change immediately doubles the number of taxpayers slightly above the threshold, increases significantly the number of taxpayers between the exemption threshold and twice the exemption threshold with minimal effects above twice the threshold. Overall, the total number of wealth taxpayers increases by about 20%.

The likely mechanism behind these results can be explained as follows: When taxpayers are not required to fill wealth information below a certain threshold, many taxpayers somewhat above the threshold may default to not reporting, i.e. effectively pretending that their net wealth falls below the threshold. This occurs despite the government having access to third-party returns that indicate that their net wealth exceeds the threshold. When everybody is required to

[1] Saez and Zucman (2019) and Scheuer and Slemrod (2021) provide recent surveys and discussions.

fill in wealth amounts, or when the government pre-populates these amounts, taxpayers cannot ignore third-party reporting without explicitly reporting false wealth numbers. Taxpayers are likely reluctant to do so and this leads to a dramatic improvement in compliance.

We show that the introduction of third-party information returns for financial wealth – saving and checking accounts, publicly held stocks, bonds, and mutual funds – in 1986 has a comparatively modest impact on the density of reported wealth. Although we observe a slight increase in the density of reported wealth in 1986 compared to other years, the quantitative effect – estimated using a basic difference-in-differences identification approach – is small. The number of taxpayers between the exemption threshold and twice the exemption threshold increases by less than 10% following this change. It is important to note that the identification design is not as compelling as for the previous analyses, as the expansion of third-party reporting is universal (rather than applicable to those with wealth above a certain threshold), so that teasing out causal effects from unrelated year-to-year variations is more challenging.

Nevertheless, in contrast to the received wisdom, our analysis demonstrates that information returns alone are insufficient for effective enforcement. In spite of extensive information returns, simple administrative nudges, such as broadening filing requirements and pre-populating tax returns, can significantly improve compliance. This result is likely to arise because the Swedish tax authorities initially lacked the infrastructure to reliably and automatically trigger audits whenever third-party-reported wealth exceeded the threshold. There was not any wealth tax withholding either compelling taxpayers to report their wealth explicitly to receive a tax refund. As a result, evading the wealth tax remained a rational strategy for Swedish wealth taxpayers slightly above the threshold, consistent with Allingham and Sandmo's (1972) classical rational model of tax evasion. Once Sweden developed such an infrastructure, it implemented pre-populated tax returns, which dramatically increased compliance.

Link to previous work. There is a recent burgeoning literature on behavioral responses to wealth taxes (see Saez and Zucman, 2019 and Advani and Tarrant, 2021 for recent surveys). Among those, two studies are most closely related to ours.

Garbinti et al. (2023) study the French wealth tax and analyze the impact of reducing self-reporting requirements for lower tax brackets wealth taxpayers. Their reduced-form evidence also identifies a missing mass in the density of reported wealth just above the exemption thresh-

old, consistent with our findings, albeit less pronounced than in Sweden. However, France has no third-party information returns for its wealth tax and therefore, their finding cannot speak to the value of third-party information returns for successful enforcement.

Londono-Velez and Avila-Mahecha (2024) find large behavioral responses to the notched wealth tax in Colombia but find that taxpayers primarily misreport non-third-party-reported business assets and inflate interpersonal debts rather than failing to file in their wealth information, as we do.

Benzarti (2020) uncovers a missing mass in the distribution of itemized deductions just above the standard deduction threshold for the US individual income tax. This suggests that taxpayers forgo tax savings to avoid filing the detailed itemized deduction worksheet.[2] Similarly, we observe a missing mass in our analysis, but in our case, it arises from tax evasion rather than taxpayers foregoing potential tax savings.

Numerous studies on simplified tax regimes for individual income and corporate income taxes also provide evidence of bunching at thresholds below which the simplified regime applies. Aghion et al. (2022) investigate a simplified income tax regime for the self-employed, identifying bunching at the qualifying threshold. Tazhitdinova (2021) shows bunching in charitable contributions at the threshold below which U.S. taxpayers are not required to provide detailed information on their charitable contributions. Lobel, Scot, and Zuniga (2024) reveal that corporations in Honduras bunch to meet a gross revenue requirement for a simplified corporate tax regime.

However, unlike the Swedish case, all these studies examine contexts without third-party information returns, where detecting evasion relies on costly individual audits.

Our findings also resonate with research on nudges and tax compliance. De Neve et al. (2021) demonstrate through a large randomized experiment in Belgium that tax simplification enhances compliance.

Our paper is organized as follows. Section 2 outlines the institutional framework and data. Section 3 presents the empirical results. Section 4 concludes.

[2] In the United States, taxpayers can choose either a fixed standard deduction or to itemize various deductions, whichever is larger.

2 Institutional Framework and Data

2.1 Wealth Tax in Sweden

The Swedish progressive wealth tax on individuals was in place annually from 1911 to 2007 (Du Rietz and Henrekson 2014 provide a comprehensive history). Table 1 outlines the key features of the tax during our study period, 1984-1999.

Since the 1970s, the tax base included the cadastral value of real estate, personal wealth (vehicles, horses, jewelry, but not furniture nor art), financial wealth, and private business wealth (only until 1990), net of debts. Private business wealth was included but valued at only 30% of the net book value.[3] Financial wealth included cash, checking and saving accounts, bonds, publicly listed stocks (valued at 80% of market value), and mutual funds. Pension wealth, however, was always excluded from the tax base. The wealth tax in year t was based on the value of wealth on December 31 of year t and was reported to the tax administration of a joint income and wealth tax return filed in year $t + 1$.

The tax unit was the family, with couples taxed based on their total net worth. The tax applied above an exemption threshold, which was uniform for singles and couples during our study period. Approximately the wealthiest 10% of families were liable for the tax during these years. The marginal tax rate just above the exemption threshold was 1.5%. A single tax rate was introduced in 1992, replacing the graduated rates in place until 1991. However, our analysis always focuses on the exemption threshold, where only the first bracket tax rate of 1.5% applies.

Filing requirements. During our period of interest, the wealth tax was integrated into the individual income tax system, requiring taxpayers to file a joint income and wealth tax return. From 1984 to 1993, all taxpayers were obligated to report their wealth on the tax return, even if their net wealth was below the exemption threshold. Since nearly everyone filed a tax return, this effectively meant that wealth reporting was almost universal. However, starting in 1994, only individuals with net wealth above the exemption threshold were required to fill in their wealth information on the tax return. This change marks the first administrative reform analyzed in this study.

[3] Stock holdings of large shareholders involved in management received additional exemptions for both private and publicly traded corporations.

Third-party information returns. In 1984-1985, third-party reporting of wealth information was limited to real estate. Real estate values for wealth tax purposes were determined by the cadastral values dictated by the tax administration, which were also used for property tax purposes. These cadastral values, fixed in nominal terms, were updated infrequently to align partially with market values. Such updates took place in 1984, 1991, and 1996 during the period of interest. As a result, cadastral values lag behind market values. Taxpayers received these values on information returns from the tax administration with instructions for how to report values on their income and wealth returns.

In 1986, third-party reporting was expanded to include financial wealth. Financial institutions, such as banks, generated these reports and sent them both to the tax authority and to the taxpayers. The reports covered bank account balances, interest-bearing assets (e.g., bonds), and traded securities. For stocks and mutual funds, the reports included the number of shares and identifying information of the financial asset, but not the end-of-year values relevant for the wealth tax. The valuation had to be assessed and reported by taxpayers themselves, using supplementary information on asset prices provided by the tax administration in the tax filing documentation. This expansion of third-party reporting forms another critical part of the analysis in this study.

Pre-populated wealth. In 1997, the tax administration began pre-populating gross wealth and debt on tax returns, using all the third-party reports for wealth. This initiative was enabled by the introduction of new third-party reports for debt.[4] The tax administration developed a computerized system that combined third-party reports on the quantity of securities owned with end-of-year prices to calculate stock and mutual fund valuations. The sum of these values were then incorporated and pre-populated on the tax return. A similar procedure was performed for liabilities. Pre-population was applied only to taxpayers whose total third-party-reported net wealth exceeded the exemption threshold or who had been liable for the wealth tax in the preceding year. Our study further examines the effects of pre-population.

[4]Our unreported analysis suggests that the impact of this introduction on reported debt was minimal, indicating that, prior to 1997, taxpayers were not significantly exaggerating their debt to evade wealth taxation. We exclude these analyses because of space constraints and because data limitations do not provide sharp and compelling identification (only those above the exemption threshold report debt).

2.2 Data

For our analysis, we use administrative tax data for the full population maintained by Statistics Sweden. These data include gross wealth and debts as reported on the tax return when this information is filled in by the taxpayer (or if it is pre-populated by the tax administration with no further change from the taxpayer). Additionally, we use data on third-party-reported wealth and its components.

3 Empirical Results

3.1 Weakening the filing requirements

As mentioned in Section 2.1, the wealth tax was administered as part of the individual income tax system through a joint income and wealth tax return. Between 1984 and 1993, all taxpayers were required to report their wealth on tax returns, even if their wealth fell below the exemption threshold. As almost everybody had to file a tax return, nearly everybody provided wealth information. Beginning in 1994, only individuals with net wealth above the exemption threshold were required to fill in their wealth information on the tax return. This change resulted in a significant reduction in compliance for taxpayers slightly above the exemption threshold. The effects of this policy reform are analyzed in Figure 1.

Qualitative analysis Panel (a) of Figure 1 plots the nominal reported net wealth densities for each year from 1991 to 1995 for the Swedish wealth tax around the exemption threshold of 800K SEK (approximately US $100K), which remained fixed in nominal terms during this period (see Table 1). In these years, the marginal tax rate above the exemption threshold was 1.5%.

In 1991-1993, all tax filers were required to fill in wealth information on their income and wealth tax return, even if their net wealth fell below the threshold. As a result, panel (a) shows a complete density that declines with wealth both below and above the threshold. Notably, there is slight bunching at the exemption threshold, indicating a behavioral response to the wealth tax. This phenomenon was analyzed in detail by Seim (2017) for later years of the Swedish wealth tax (2000-2006).

From 1994 to 1996, only individuals with net wealth exceeding the 800K SEK exemption

threshold were required to report their wealth. This change leads to a sharp decline in the taxable net wealth densities from 1993 to 1994. Interestingly, this drop is observed not only at the threshold but also above it. For instance, the density falls by about half just above the threshold, and the decline in density extends visibly to about twice the exemption threshold (1600K SEK). This indicates a strong behavioral response, where many taxpayers with wealth above the threshold opt not to report it, effectively escaping wealth taxation when the filing requirement is loosened.[5]

By 1991-1996, third-party reporting systems were already well-developed, covering both financial and real estate wealth (see Table 1). The wealth components not covered by third-party reporting were relative minor (e.g., personal wealth in the form of vehicles, horses, and jewelry; cash held outside financial institutions; and wealth held abroad). Appendix Figure A.1 shows that the density of third-party reported wealth is very close to the density of reported net wealth above the exemption threshold, showing that third-party wealth reporting was very extensive and captured total net wealth well.[6] Therefore, the received wisdom from the literature suggests that enforcement would have been quite successful and that loosening the filing requirement should not generate a significant response. Our results, however, clearly contradict this expectation.

In the case of the French wealth tax, Garbinti et al. (2023) similarly identify a missing mass in the density of reported wealth just above the exemption threshold (their Figure 2). While consistent with our findings, the magnitude of the missing density above the threshold is much smaller in France and does not extend as far above the exemption threshold. In the case of France, however, a missing mass is not quite as surprising because France does not have third-party reports for wealth. Hence, their study is silent about the received wisdom regarding third party reports, which is our core contribution.

It is useful to contrast the large response for reported wealth in panel (a) with the complete stability of the wealth density obtained from third-party-reports. Panel (b) presents the nominal third-party reported gross wealth densities, sourced from third-party information returns sent to the tax authority and taxpayers. During 1991-1996, third-party reports included deposits, interest-bearing accounts, bonds, and the assessed cadastral value of real estate property (see

[5]In contrast, the drop in the number of taxpayers below the threshold reflects the fact that most taxpayers, when not required to report their wealth, do not do so. This reflects neither tax evasion nor avoidance.

[6]Appendix Figure A.1 uses year 1999 – the first year that Statistics Sweden compiles and keeps record of

Table 1).[7]

Panel (b) demonstrates that third-party reported wealth densities remain very stable between 1991 and 1995. This stability suggests that the behavioral responses observed in panel (a) are primarily attributable to tax evasion rather than fluctuations in actual wealth.

Quantitative analysis Figure 3(a) quantifies the effect of introducing a filing threshold in 1994 on the number of taxpayers reporting wealth between the exemption threshold and twice that amount. We compare 1993, the final year when everybody was required to report wealth, with 1994, the first year when only those above the exemption threshold were mandated to report wealth. Assuming that, absent the reform, the two densities would have been identical, the observed difference in densities identifies the causal effect of relaxing the filing requirement.

The results indicate a 33% reduction in the mass of taxpayers between the exemption threshold and twice that threshold (shown in dark grey), with a more pronounced fall of approximately 50% just above the threshold. Notably, no changes are observed beyond twice the threshold. This 33% reduction translates into a fall of 22% of the *total* number of wealth taxpayers above the exemption threshold – a quantitatively very large aggregate response.

For comparison, bunching at the exemption threshold observed in 1993 (analyzed in Seim, 2017, for the years 2000-2006) produces an excess mass (depicted in red) that is only 9.2% of the lost mass (dark grey) due to relaxing the filing requirement. Thus, the behavioral response to the filing requirement change is substantially larger than the bunching response documented by Seim (2017).

As Figure 1 indicates, slight annual increases in densities arise from population changes, inflation, and economic growth. However, these gradual shifts are minor compared to the enormous impact triggered by the filing requirement change. As a result, for simplicity, we do not adjust our estimate to account for such natural annual drifts, making the estimates a slightly conservative lower bound on the true causal effect.

Behavioral explanation How can these findings be explained? In a purely rational model, filing requirements should not influence the decision to evade taxes, as taxpayers could misreport

third-party party gross wealth and debts.

[7] Third-party reports for debt were introduced in 1997. Additionally, third-party reports for tradable stocks and mutual funds provided the number of shares for each security but not the tax-relevant value. Consequently, these securities are excluded from the depicted densities.

their wealth regardless of filing obligations. However, in practice, evading taxes under a universal filing requirement requires taxpayers to explicitly falsifying figures on the tax return, making non-compliance more overt. Conversely, when filing requirements are limited to those above a threshold, taxpayers can evade taxes simply by not reporting their wealth, rather than actively reporting false numbers. In such cases, they may also argue that they mistakenly believed that their net wealth was below the threshold. Legally, however, failing to report wealth above the threshold constitutes tax evasion, just as underreporting does.

Filing taxes can also impose additional costs on taxpayers, beyond the wealth tax itself.[8] Consequently, taxpayers may prefer evasion through non-reporting rather than by falsifying figures. If these costs are purely related to the time and effort of filing, our findings could be consistent with rational behavior, suggesting that universal filing requirements, as imposed under the pre-1993 regime, placed an onerous burden on taxpayers. We revisit this issue when analyzing the introduction of pre-populated wealth returns.

3.2 Introducing pre-populated wealth on tax returns

As mentioned in Section 2.1, in 1997, the tax administration began pre-populating gross wealth and debts on tax returns using third-party reports.[9] Pre-population was applied only if total third-party reported net wealth exceeded the exemption threshold or if the taxpayer had been liable for the wealth tax the previous year. We analyze this change in Figure 2.

Qualitative analysis Panel (a) of Figure 2 plots the nominal reported net wealth densities for each year from 1996 to 1999 for the Swedish wealth tax. During these years, the wealth tax applied a single 1.5% marginal tax rate on net wealth exceeding an exemption threshold of 900K SEK (approximately US $110K), depicted as a vertical line.[10]

In 1996, only tax filers with net wealth above the 900K SEK exemption threshold are required to report their wealth information. Starting in 1997, the tax authority pre-populates wealth information using third-party reports for all taxpayers whose net third-party reported wealth exceeds 900K SEK or who had a positive wealth tax liability in the prior year.

[8]Benzarti (2020) provides compelling evidence of such filing costs in the case of U.S. itemized deductions.

[9]Such pre-population was made possible by introducing third-party reports for debt and by combining third-party quantity reports for stocks and mutual funds with end-of-year prices.

[10]The exemption threshold was increased from 800K SEK to 900K SEK in 1996 in part to compensate taxpayers for an update in cadastral values that year. This adjustment explains the rightward shift in densities from 1995 to 1996, comparing the densities across Figures 1(a) and 2(a).

The sharp increase in the taxable net wealth densities in panel (a) from 1996 to 1997 above the threshold provides strong evidence of a behavioral response. Many tax filers whose wealth exceeds the threshold do not report their wealth information in 1996 and, hence, escape wealth taxation. However, they become taxpayers in 1996 when their wealth is pre-populated. This confirms our earlier findings from Figure 1, demonstrating substantial under-reporting during 1994-1996, when only those above the threshold were required to report, and the tax administration was not yet pre-populating wealth on tax returns. This is particularly striking in an environment with well-developed third-party reporting.

The large response for reported wealth, documented in panel (a), contrasts sharply with the complete stability of wealth densities derived from third-party reports. Panel (b) of Figure 2 illustrates the nominal third-party reported gross wealth densities, sourced from third-party information returns sent to both the tax authority and taxpayers. From 1997 to 1999, third-party reports began including debt, although debt values are excluded from panel (b) to remain consistent over the analysis period. Additionally, third-party reports for tradable stocks and mutual funds exclude asset prices and, consequently, the values of these securities. Hence, they are not depicted in panel (b) (consistent with Figure 1(b)). Unlike panel (a), panel (b) reveals that third-party reported wealth densities remain remarkably stable from 1996 to 1999, strongly suggesting that the behavioral response observed in panel (a) is attributable to reduced tax evasion.

Quantitative analysis Figure 3(b) displays estimates of the impact of introducing pre-populated returns for wealth in 1997 on the number of taxpayers with wealth between the exemption threshold and twice the threshold. Figure 3(b) compares 1996, the final year without pre-populated wealth, with 1997, the first year of pre-population. Assuming that, absent the reform, the densities would have been identical, the difference in densities identifies the causal effect of introducing pre-populated wealth on tax returns. Without pre-population, the mass of taxpayers between the exemption threshold and twice the threshold falls by 23% (depicted in dark grey), with a larger fall of about 50% just above the threshold and minimal changes above twice the threshold. The 23% fall translates into a 20% drop in the total number of wealth taxpayers above the exemption threshold. This response is therefore large in aggregate and is symmetric to the response of relaxed filing requirement, studied above.

As shown in Figure 2, slight upward shifts in densities from year to year are evident due to population growth, inflation, and economic trends, particularly in 1998 and 1999 when stock prices rose sharply. However, these natural annual shifts are very small compared to the substantial change triggered by introduction of pre-population. As above, for simplicity, we do not adjust our estimate for such annual drifts, making our estimate a slight upper bound on the true causal effect.

Behavioral explanation How can these findings be accounted for? In a purely rational model, pre-populating wealth should not impact the decision to evade because taxpayers are aware that the tax administration has access to third-party reported wealth information regardless of pre-population. In practice, however, pre-populating net wealth above the exemption threshold requires taxpayers to explicitly falsify figures on their return to evade taxes, making non-compliance more overt. In contrast, prior to pre-population, taxpayers could evade taxes by simply failing to report their wealth, a less explicit form of non-compliance. Taxpayers in such cases can also invoke the excuse that they thought their net wealth was below the threshold.

Interestingly, with pre-population, there is no additional filing cost for taxpayers, unlike the pre-1994 regime. The finding that a similarly large behavioral response occurs here effectively rules out the rational filing cost explanation discussed above.

Pre-population achieves compliance levels comparable to those under universal filing requirements while reducing filing costs for a very large number of tax filers both below and above the tax threshold. Recall that 90% of all income tax filers are not liable for the wealth tax due to wealth below the exemption threshold and yet had to fill in their wealth information in the pre-1994 regime. Implementing pre-population requires a one-time investment in information technology infrastructure, which can then be scaled nationally. Consequently, pre-population is a net societal gain if taxpayer filing costs are substantial, as evidenced by the well-identified study of Benzarti (2020), in the case of the United States itemized deductions for the income tax.

3.3 Expanding third-party reporting

As mentioned in Section 2.1, in 1986, new third-party reports were introduced for financial wealth. These reports included the value of bank accounts and interest-paying assets, such as

bonds. For publicly traded stocks and mutual funds, third-parties reported only the number of shares and the identifiers for the securities, but did not report their end-of-year prices, and, hence, values, which were relevant for wealth tax purposes. Figure 4 analyzes this expansion of third-party reporting.

Panel (a) of Figure 4 plots the nominal reported net wealth densities for each year from 1985 to 1989. During this period, the exemption threshold was 400K SEK (approximately US $50K), depicted as a vertical line, with a 1.5% marginal tax rate in the first bracket above the exemption threshold. In 1984-1985, third-party reports existed only for real estate. In 1986, third-party reports were expanded to include financial wealth (see Table 1). Panel (a) shows a steady increase in wealth densities over the years, with the increase in 1986 being slightly larger than in other years. Fluctuations in the stock market likely drive much of the year-to-year variation, and 1986 was an exceptionally strong year for the Swedish stock-market.

Panel (b) compares empirical wealth densities from 1985 and 1986 and constructs an adjusted 1986 density to control for changes in wealth unrelated to the expansion of third-party reporting, such as stock market trends. The Swedish stock market increased by 51% in 1986 and by 52% in 1988, almost identical percent changes (see Edvinsson, Jacobson, and Waldenstrom 2014 for historical stock market statistics in Sweden). Therefore, absent third-party report expansion, it is reasonable to assume that the densities would have increased by the same percent both in 1986 and 1988 allowing to construct a counterfactual adjusted 1986 density. The adjusted 1986 density, depicted with connected circles in panel (b), is calculated by scaling the 1986 density using the ratio of densities from 1987 to 1988. Under the traditional parallel trend assumption for difference-in-differences identification, the difference between the adjusted 1986 density and the 1985 density is attributed entirely to the expansion of third-party reporting. Panel (b) shows that this expansion increased the number of taxpayers between the exemption threshold and twice the exemption threshold by 8.6%.[11] This corresponds to an increase of 7% of taxpayers above the exemption threshold.

As a caveat, it is important to note that this finding relies on a strong identification assumption. Specifically, absent the reform, the wealth density is assumed to have increased from 1985

[11]The adjusted 1986 density also shows an increase in wealth density below the exemption threshold. This suggests that third-party reporting also increases reporting below the exemption threshold, i.e. for taxpayers who are not liable for the wealth tax. This is consistent with a cost of filing wealth information for taxpayers. Once third-party-reports are created, taxpayers either find it easier to fill in their wealth information or feel that the tax authority is more likely to complain about an absence of wealth filing.

to 1986 by the same percentage, bin-by-bin, as it did from 1987 to 1988. While the stock market rose by almost the same percentage in both 1986 and 1988, other factors, such as changes in bond prices or increases in savings, may also influence the wealth density. However, two reassuring features should be noted.

First, the stock market declined slightly in 1987, and there is almost no shift in wealth density between 1986 and 1987, suggesting that stock market prices are a primary driver of shifts in the wealth density from year to year.

Second, the adjustment for wealth below 370K SEK (i.e., slightly below the 400K SEK exemption threshold) is minimal, consistent with the fact that lower-wealth households are less likely to own stock.

We can further test our causal interpretation by breaking down real estate wealth (not affected by third-party report expansion) and other wealth (affected). Panel (c) plots the nominal reported densities of net wealth excluding real estate for each year from 1985 to 1989 for the Swedish wealth tax. This wealth component includes financial wealth that received the third-party introduction treatment in 1986. Panel (d) plots the nominal reported densities of real estate wealth over the same period. Unlike financial wealth, this wealth component serves as a control group, as it was consistently subject to third-party reporting during this period. Consistent with our causal interpretation, the shift in density from 1985 to 1986 is observed exclusively in net wealth excluding real estate, while real estate wealth densities remain unchanged. This stability of real estate wealth in nominal terms reflects that real estate was assessed using cadastral values created by the tax administration, which remained fixed in nominal terms during this period (updates took place in 1984 and 1991).

To be sure, the identification of the effects of this third-party report expansion to financial wealth is not as compellingly identified as our previous analyzes of filing requirements and pre-population. This is because the expansion happens across the board rather than just above a specific wealth threshold. However, even if we discount our estimates of this expansion, the conclusion from the earlier changes stands. Under extensive third-party reporting for wealth, small nudges such as filing requirements or pre-population have a large positive impact on tax enforcement, implying that third-party reports are not sufficient by themselves for successful enforcement.

4 Conclusion

Using the Swedish wealth tax context, our paper challenges the received wisdom in the tax enforcement literature that third-party reporting serves as a silver bullet for effective tax compliance.[12]

Although the Swedish wealth tax had extensive third-party reporting in place since 1986, our findings demonstrate that two key administrative features – filing requirements and pre-populated returns – have substantial additional effect on compliance. Specifically, limiting the filing requirement to individuals with wealth above the threshold dramatically reduces compliance. We estimate a sharp and large reduction of approximately 50% in the number of wealth taxpayers slightly above the exemption threshold, and a 33% decrease in the number of taxpayers between the exemption threshold and twice that amount. Conversely, pre-populating tax returns with third-party-reported wealth information for taxpayers with third-party reported net wealth above the exemption threshold immediately doubles the number of taxpayers slightly above the threshold, with minimal effects above twice the threshold.

In contrast, we find that the introduction of third-party reporting of financial wealth in 1986 has a comparatively modest effect on compliance. While this result is less certain as the previous ones because of the need for stronger identification assumptions, it supports our broader conclusion: third-party reporting alone is insufficient for enforcement. Simple nudges, such as broadening filing requirements or pre-populating tax returns, can have substantial additional impacts on compliance.

The simplest way to reconcile our findings with the received wisdom is as follows: third-party reporting can indeed achieve excellent enforcement, but it requires complementary features. In the Swedish wealth tax context, this means requiring all individuals to file or implementing pre-populated tax returns. Pre-population not only reduces filing burdens for taxpayers but also makes taxpayers acutely aware that the tax administration possesses relevant information to enhance tax compliance.

Withholding taxes is a classical tool of tax administrations to complement third-party reporting. With withholding taxes, failing to file a tax return implies that the withholding tax is still collected. If the withholding tax is set at or slightly above the expected final tax, not filing

[12] Recently, Feinmann, Rocha, and Lauletta (2024) question this view as well in the context of off-the-books wage payments to formal employees in Brazil.

is no longer a valuable tax evasion strategy.[13]

We also conjecture that another enforcement strategy using third-party reports – "match-and-audit" (our term) – can be effective. In this approach, the tax administration automatically matches tax returns against third-party reports ex-post and initiates audits if discrepancies are found. This method is particularly effective for wealth (or income) categories that are always positive, such as wage income.[14]. Pre-population is more effective than "match-and-audit" because it reduces the filing cost for taxpayers.

Notably, Sweden did not employ tax withholding nor a match-and-audit strategy for its wealth tax. Consequently, taxpayers could rationally fail to report as they faced a low detection probability if their third-party-reported wealth modestly exceeded the exemption threshold as in the classic tax evasion theory of Allingham and Sandmo (1972).[15]

[13]Most tax administrations in rich countries combine third-party reporting with withholding taxes for wage income both to ensure proper enforcement and to make sure credit-constrained taxpayers have the funds to pay the tax. Credit constraints are less relevant for wealthy taxpayers.

[14]For instance, the United States uses a match-and-audit approach for wage and pension income, achieving excellent compliance rates (IRS, 2019)

[15]According to discussions with tax administration officials from that period, Sweden did not systematically audit taxpayers whose third-party-reported wealth exceeded the threshold, especially those whose wealth was only slightly above the threshold.

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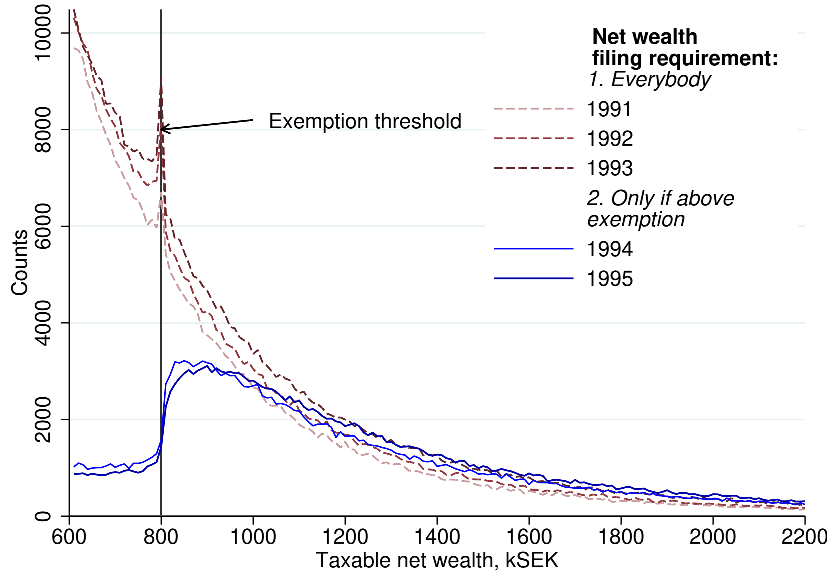
Table 1. Sweden Wealth Tax Parameters and Administration, 1984-1999

Time periods	1984-1985	1986-1989	1990-1993	1994-1996	1997-1999
A. Wealth tax parameters					
Exemption threshold (same for singles and couples)	400 kSEK	400 kSEK	800 kSEK	800 kSEK (900 kSEK in 1996)	900 kSEK
Bottom bracket tax rate	1.5%	1.5%	1.5%	1.5%	1.5%
Top tax rate	3%	3%	1.5% (3% in '90, 2.5% in '91)	1.5%	1.5%
Filing requirements	All	All	All	**Net wealth above exemption**	Net wealth above exemption
B. Third party reporting					
Real estate (1)	Yes	Yes	Yes	Yes	Yes
Bank accounts and interest paying assets	No	**Yes**	Yes	Yes	Yes
Tradable corporate stocks, and mutual funds (2)	No	**Yes-(no value)**	Yes-(no value)	Yes-(no value)	Yes-(no value)
Debts	No	No	No	No	Yes
C. Pre-populated wealth on tax return	No	No	No	No	**Yes (3)**

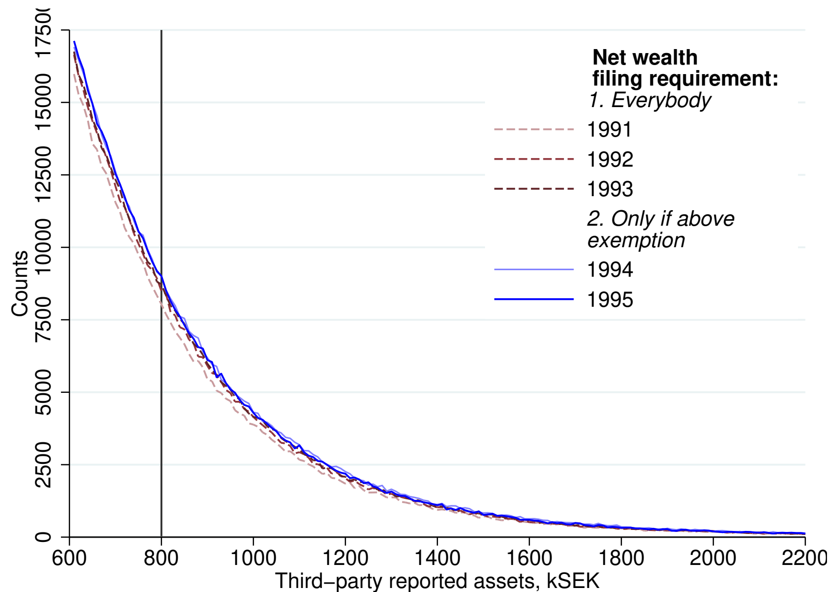
This table displays the key features of the Swedish wealth tax parameters and administration by time periods and highlights in red bold the three changes used in the analysis.
The wealth tax is based on the total net wealth of the family. Couples are taxed based on the sum of their wealth.
The tax base includes cadastral value of real estate (see below), personal wealth (vehicles, horses, jewelry but not furniture nor art), financial wealth, and private business wealth (only up to 1990), net of debts.
Financial wealth includes cash, checking and saving accounts, bonds, publicly listed stocks (80% of market value), and mutual funds. Pension wealth is entirely excluded.
Private business wealth was included up to 1990 and valued at 30% of net book value. Stock of large shareholders involved in management received additional exemptions.
Additional explanatory notes:
(1) Tax agency knows ownership of real estate (land and buildings) and creates cadastral values.
These cadastral values lag market prices, they are fixed in nominal terms, except for irregular updates in 1984, 1991, and 1996 (in the period 1984-1999).
(2) Third-party reports on tradable corporate stock include stocks from publicly traded Swedish companies and also foreign stock when owned through a Swedish financial institution.
Mutual funds include both stock funds and bond funds. These third party reports only report the number of shares and the identifier of the stock or mutual fund.
They do not report the end-of-year value relevant for the wealth tax (values have to be reported by taxpayers themselves).
(3) Wealth is prepopulated on tax returns if total third party reported net wealth exceeds exemption threshold or if taxpayer was liable for the wealth tax the year before.
The tax administration is able to compute values for stocks and mutual funds using third-party reports on quantity of securities owned combined with end of year values for each type of security.

Figure 1: Increasing the Filing Requirement Net Wealth Threshold

(a) Densities of Reported Taxable Net Wealth



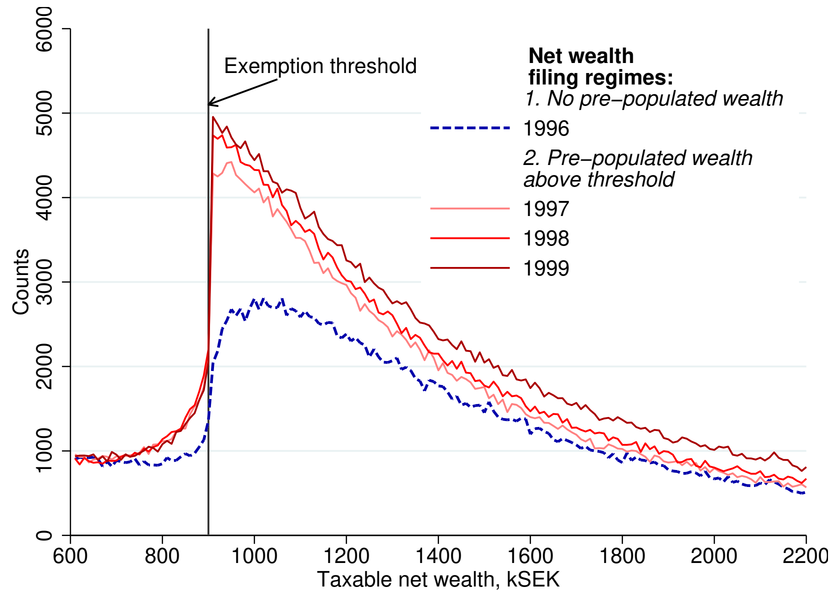
(b) Densities of Third Party Reported Gross Wealth



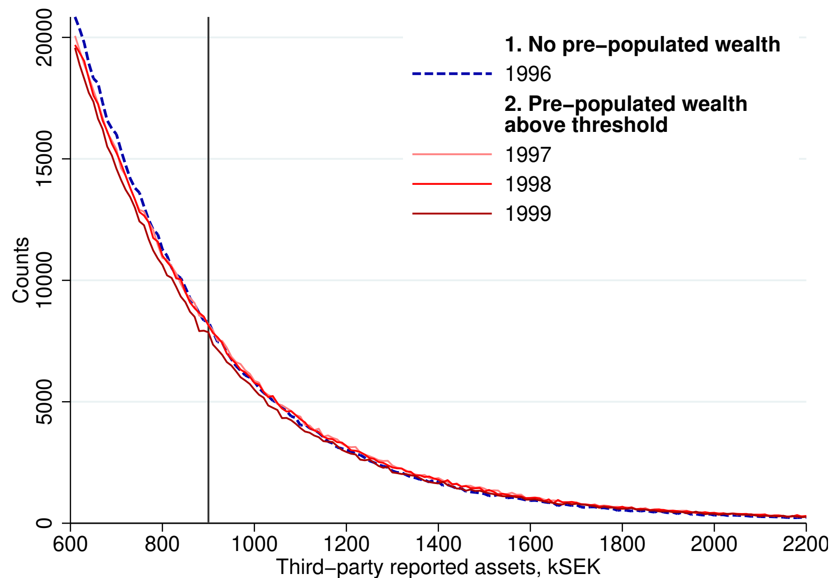
Notes: Panel (a) plots the nominal reported net wealth densities for each year from 1991 to 1995 for the Swedish wealth tax around the exemption threshold of 800K SEK (approximately US $100K), which is fixed in nominal terms for these years (see Table 1). In these years, the marginal tax rate above the exemption threshold is 1.5%. In 1991-1993, all tax filers were required to file their wealth information on their income and wealth tax return even if their net wealth is below the threshold. In 1994-1996, only tax filers with net wealth above the 800K SEK exemption threshold are required to report their wealth. Panel (b) plots the nominal third party reported gross wealth densities, obtained from third-party information returns sent to both the tax authority and to taxpayers. In 1991-1996, third party reports include deposits, interest paying accounts, bonds, and the assessed cadastral value of real estate property (see Table 1). Third party reports for debt do not exist until 1997. There are also third-party reports for tradable stocks and mutual funds but they only report the number of shares for each security (and not the value for tax purposes) and hence are not included in the depicted densities. The sharp drop in the taxable net wealth densities of panel (a) from 1993 to 1994 above the threshold is evidence of a strong behavioral response where many tax filers whose wealth is above the threshold do not report their wealth information and hence escape wealth taxation when the filing requirement is loosened. The bunching of taxpayers just below the threshold in 1991-1993 is consistent with a much smaller behavioral response to avoid the tax (which is studied in detail for later years in Seim 2017). In contrast, panel (b) shows that third-party reported wealth densities are very stable from 1991 to 1995 implying that the response in panel (a) is due to increased tax evasion.

Figure 2: Increasing the Filing Requirement Net Wealth Threshold

(a) Densities of Reported Taxable Net Wealth



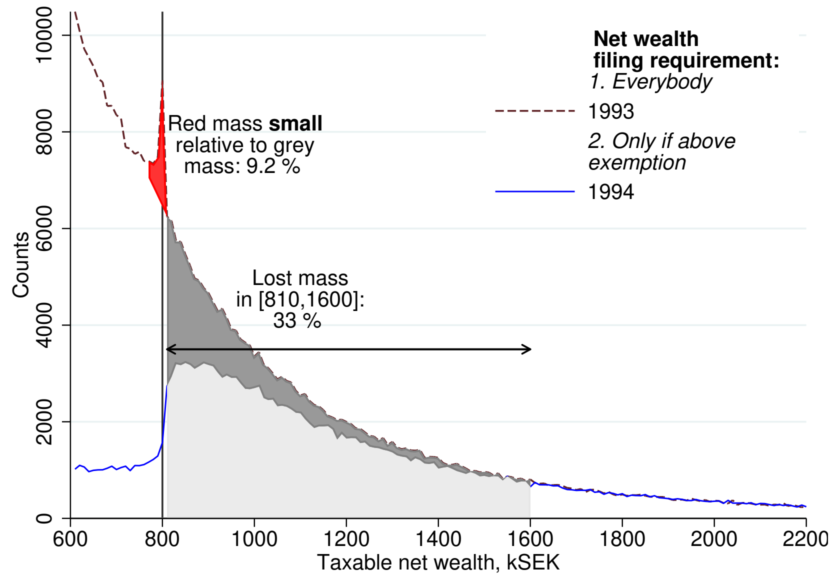
(b) Densities of Third Party Reported Gross Wealth



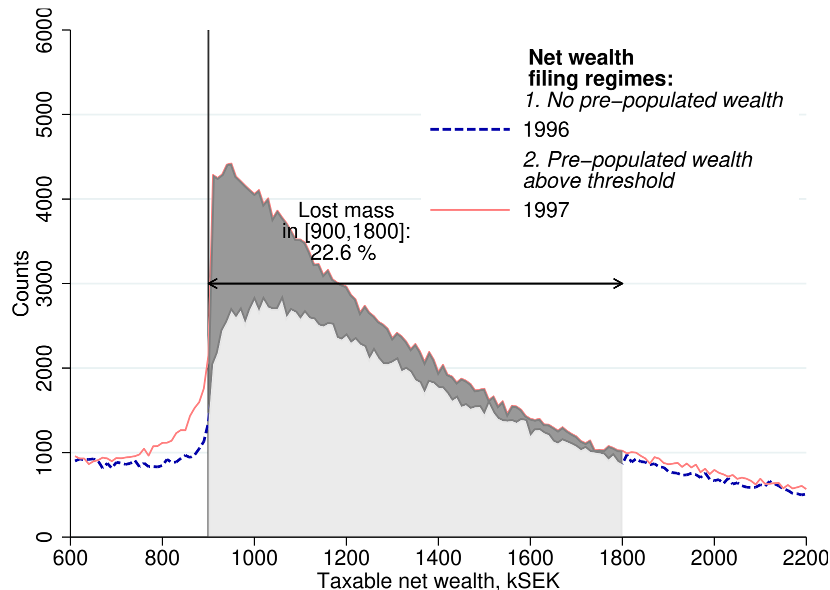
Notes: Panel (a) plots the nominal reported net wealth densities for each year from 1996 to 1999 for the Swedish wealth tax. The wealth tax is a single 1.5% marginal tax rate on net wealth in excess of an exemption threshold of 900K SEK (approximately US $110K), depicted in a vertical line. In 1996, only tax filers with net wealth above the 900K SEK exemption threshold are required to file their wealth information. Starting in 1997, the tax authority pre-populates the wealth with third party reports for all taxpayers with net third party reported wealth in excess of 900K SEK and for taxpayers who had a positive wealth tax liability in the prior year. Panel (b) plots the nominal third party reported gross wealth densities, obtained from third-party information returns sent to both the tax authority and to taxpayers. In 1997-1999, third party reports start including debt (but we do not include it in panel (b)). Third-party reports for tradable stocks and mutual funds do not include the value of the securities and hence are not depicted on panel (b) (consistently with Figure 1(b)). The sharp increase in the taxable net wealth densities of panel (a) from 1996 to 1997 above the threshold is evidence of a strong behavioral response where many tax filers whose wealth is above the threshold did not file their wealth information and hence escaped wealth taxation in 1996 but become taxpayers when their wealth is pre-populated. In contrast, panel (b) shows that third-party reported wealth densities are very stable from 1996 to 1999, implying that the response in panel (a) is due to reduced tax evasion.

Figure 3: Estimating the Tax Evasion Responses

(a) Response to introducing a filing threshold in 1994

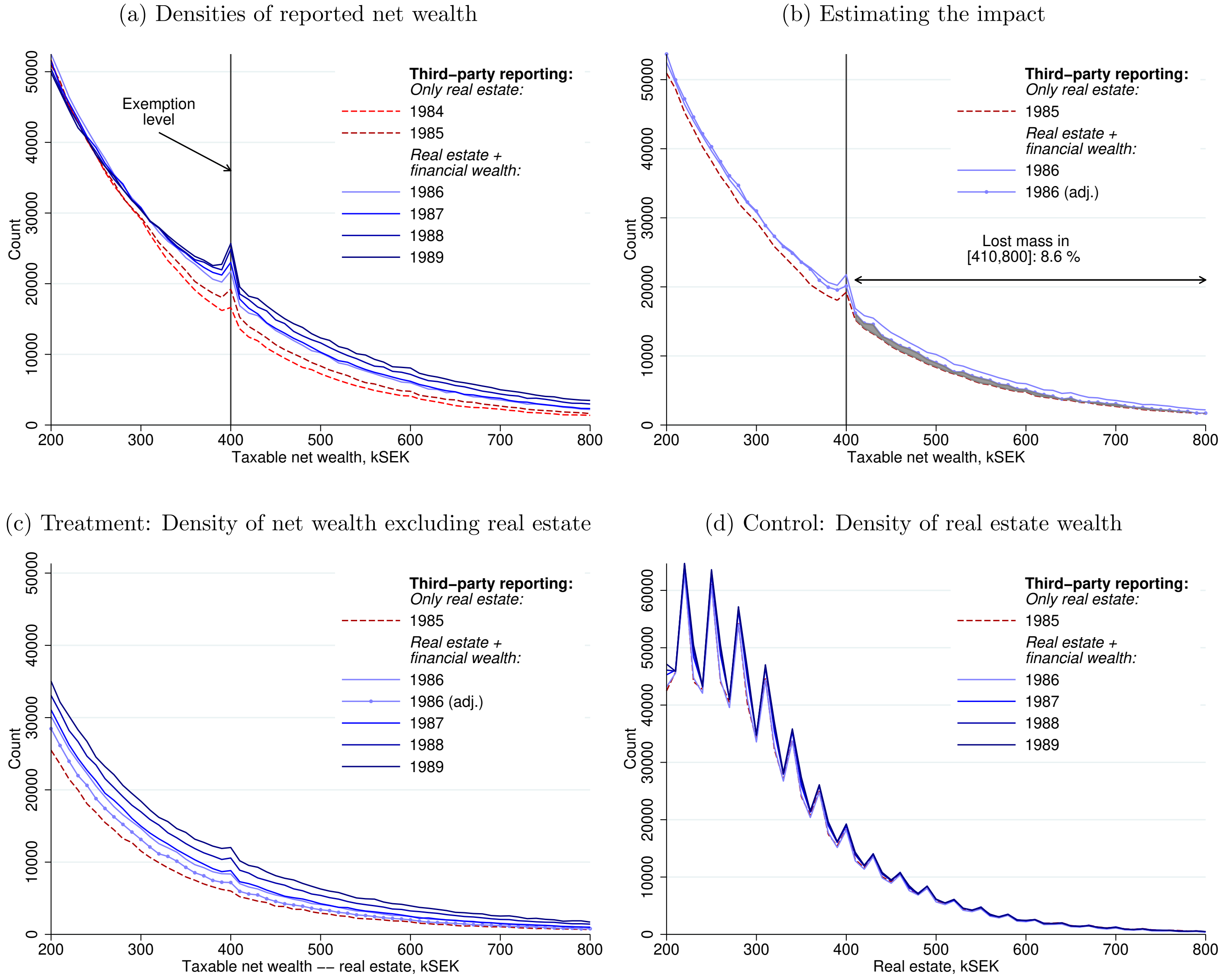


(b) Response to introducing pre-populated wealth in 1997



Notes: This figure displays the estimation of the impact of introducing a filing threshold in 1994 in panel (a) and introducing pre-populated wealth in 1997 in panel (b) on the number of taxpayers between the exemption threshold and twice the exemption threshold. In panel (a), we compare year 1993 (last year when everybody was required to report wealth) and year 1994 (first year when only those above the exemption threshold had to report wealth). Assuming that, absent the reform, the two densities would have been identical, the difference in densities identifies the causal effect on relaxing the filing requirement. The mass of taxpayers between the exemption threshold and twice the exemption threshold falls by 33% (depicted in dark grey) with a larger fall of about 50% just above the threshold and no change above twice the threshold. For comparison, the bunching at the exemption threshold observed in 1993 (analyzed in Seim 2017) produces an excess mass depicted in red that is only 9.2% of mass lost (dark grey) due to relaxing the filing requirement. In panel (b), we compare year 1996 (last year with no pre-populated wealth) and year 1997 (first year with pre-populated wealth). Assuming that, absent the reform, the two densities would have been identical, the difference in densities identifies the causal effect of introducing pre-populated wealth on tax returns. The mass of taxpayers between the exemption threshold and twice the exemption threshold falls by 23% depicted in dark grey with a larger fall of about 50% just above the threshold and minimal change above twice the threshold).

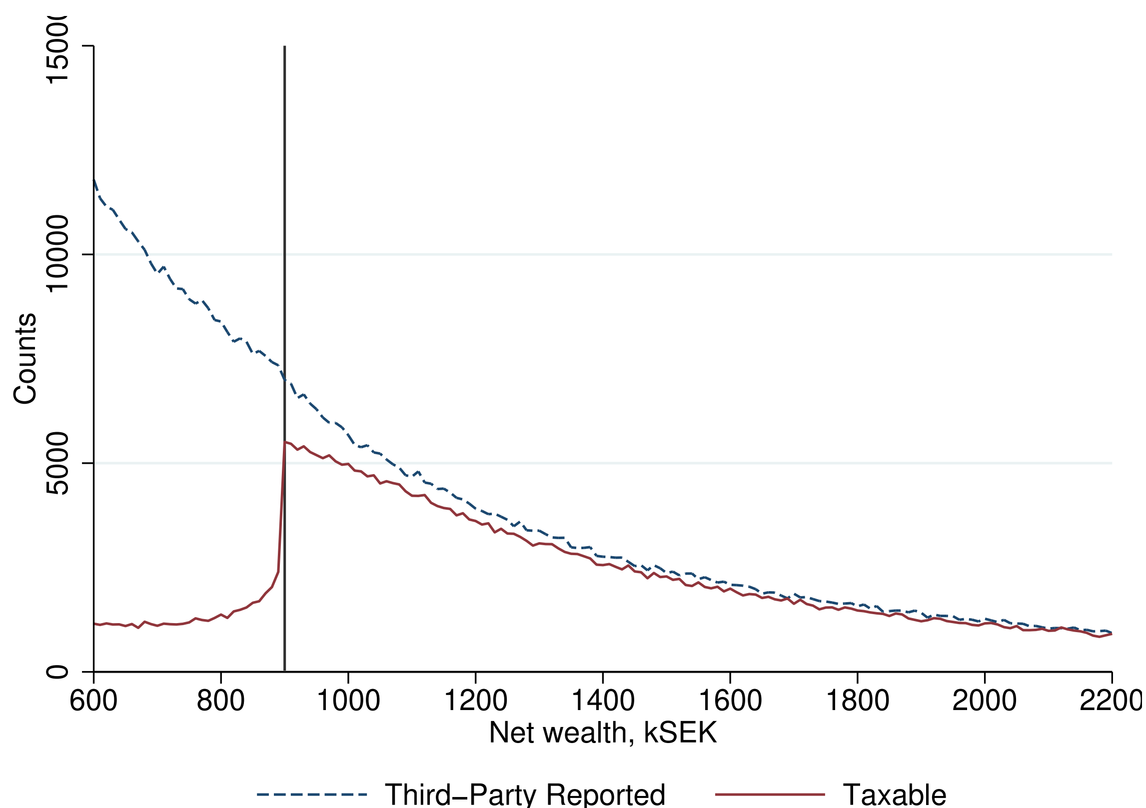
Figure 4: The Impact of Introducing Third-Party Reports in 1986



Notes: Panel (a) plots the nominal reported net wealth densities for each year from 1985 to 1989 for the Swedish wealth tax. The exemption threshold was 400K SEK (approximately US $50K), depicted in a vertical line, with a 1.5% marginal tax rate in the first bracket above the exemption threshold (see Table 1). In 1984-1985, third-party reports existed only for real estate. In 1986, third party reports were introduced for financial wealth including deposits, interest paying accounts, bonds, and for tradable stocks and mutual funds (see Table 1). Panel (a) shows that there is an increase in the wealth densities each year and that the increase in 1986 is slightly larger than for other years. Fluctuations in the stock-market are likely the main driver of the year-to-year changes. Panel (b) plots the empirical wealth densities in 1985 and 1986 and constructs an adjusted 1986 density that controls for changes in density unrelated to third party reports expansions, as follows. The Swedish stock-market increased by 51% 1986 and 52% in 1988 (and decline by 8% in 1987). Therefore, we assume that absent third-party reports, the wealth density at each bin would have increased by the same percent in both 1986 and 1988 (relative to the prior year). Therefore, the 1986 (adj.) density in panel (b) – depicted with connected circles – adjusts the 1986 density by the ratio of densities from 1987 to 1988. Under the traditional parallel trend assumption for difference-in-differences identification, the difference between the 1986 (adj.) density and the 1985 density is entirely driven by the expansion of third-party reporting. Panel (a) shows that expanding third-party reporting increased the number of taxpayers between the exemption threshold and twice the exemption threshold by 9%. Panel (c) plots the nominal reported densities of net wealth excluding real estate for each year from 1985 to 1989 for the Swedish wealth tax. This wealth component includes financial wealth that received the third-party introduction treatment in 1986. Panel (d) plots the nominal reported densities of real estate wealth for each year from 1985 to 1989. This wealth component is the control group, which always had third-party reports throughout the period. Consistent with our causal interpretation, the jump in density from 1985 to 1986 is concentrated in net wealth excluding real estate with no change in real estate wealth.

Appendix

Figure A.1: Reported vs. Third-Party Net Wealth in 1999



This figure reports the density of reported net wealth and third-party reported net wealth in 1999. In 1999, the wealth tax is a single 1.5% marginal tax rate on net wealth in excess of an exemption threshold of 900K SEK (approximately US $110K), depicted in a vertical line. In 1999 (and since 1986), third party reports include cadastral value of real estate, financial wealth (checking and savings accounts and tradable securities owned through Swedish financial institutions), and debt held through Swedish financial institutions (see Table 1). Starting in 1997, the tax administration pre-populates wealth on tax returns using third party reports for all taxpayers with net third party reported wealth in excess of 900K SEK and for taxpayers who had a positive wealth tax liability in the prior year. Tax filers need to adjust their net wealth if it is not the same as pre-populated wealth due to assets or debts that are not included in third-party reports. Starting in 1999, Statistics Sweden compiles all third-party information returns into a measure of gross wealth and gross debt for all individuals (regardless of net wealth and filing status). We use these data to create the third-party reported net wealth on the figure. The figure shows that the density of third-party reported wealth is very close to the density of reported net wealth above the exemption threshold, suggesting that third-party wealth reporting was very extensive in 1999 and captured total net wealth well. The density of third-party reported net wealth is even slightly higher than reported net wealth due to taxpayers adjusting the pre-populated wealth down on their tax return (as shown in Seim, 2017).