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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. Up to 1993, all taxpayers 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% in 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%. 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 This paper analyzes the role of information returns, tax filing requirements, and pre-population on tax enforcement for the Swedish wealth tax. The tax enforcement literature has shown that information returns provided by third-parties – such as employers and financial institutions – to both the tax authority and the taxpayer can greatly improve tax enforcement. With information returns, the government can target audits on taxpayers reporting less than third-party reports making such tax evasion too risky for taxpayers. However, if the government does not use information returns to target audits and taxpayers understand this, the deterrence effect may not operate. There is less work analyzing filing requirements and pre-population, or the interactions between such enforcement mechanisms (see below for a short literature review placing our study in context).

Our paper uses sharp reforms in the Swedish wealth tax administration to cast light on these mechanisms. 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 return. 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. Effects on taxpayers with wealth above twice the exemption threshold are minimal. Overall, the total number of wealth taxpayers declines by about 20%. This large change in compliance happens despite no changes in information returns.

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.

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

Overall, the total number of wealth taxpayers increases by about 20%.

How can we explain such findings? When taxpayers are not required to fill wealth information below a certain threshold, many taxpayers somewhat above the threshold 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 likely exceeds the threshold. When everybody is required to 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 more reluctant to do so and this leads to a dramatic improvement in compliance. A simple hassle cost of tax filing could explain why pre-population works but cannot explain why a universal filing requirement works so much better than a filing requirement only above the exemption threshold. Filing requirements and pre-population achieve similar enforcement success but pre-population also saves taxpayers filing costs.

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 is small. The number of taxpayers between the exemption threshold and twice the exemption threshold increases by less than 10% following this change.

Therefore information returns alone are insufficient for effective enforcement as further administrative efforts, such as broadening filing requirements and pre-populating tax returns, can significantly improve compliance. This happened likely because Swedish tax authorities lacked the infrastructure to systematically trigger audits whenever third-party-reported wealth exceeded the threshold but the taxpayer reported less wealth. 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 was a rational strategy for Swedish wealth taxpayers slightly above the threshold, consistent with Allingham and Sandmo's (1972) classical rational model of tax evasion. But interestingly, this was true in all three regimes and that is why the large effects we find cannot be fully explained by rational tax evasion and filing costs but require some additional aversion to reporting explicitly false information.

Contribution to the literature. The literature has shown that information returns help with tax enforcement. Descriptively, income components with information returns have less tax evasion than self-reported income (see Kleven et al. 2011 for Denmark and IRS 2019 for the US). Causally, the expansion of third-party reports has also been shown to increase reporting (see Slemrod et al., 2017 for credit card reporting for small US businesses and Johannesen et al. 2020 for foreign income). However, there is also evidence that third party reports are more effective when combined with credible enforcement (see Carillo et al. (2017) and Almunia and Lopez-Rodriguez (2018) for such findings in the corporate tax context). This is consistent with our findings that information returns with no additional audit targeting may not improve compliance very much.

Kotakorpi and Laamanen (2017) find almost no effect of introducing pre-population for wage income in Finland in a situation where wage income was already third-party reported. This is likely because those third-party reports were already used for enforcement (in contrast to our setting). Van Dijk et al. (2020) designed a lab experiment showing that correctly prefilled returns improve compliance but incorrectly prefilled returns worsen it consistent with our results. Bott et al. (2020) show that sending letters to taxpayers informing them about foreign income information known by the Norwegian tax authority improves compliance consistent with our finding that pre-population improves compliance because it makes government knowledge more salient to taxpayers.

Gilitzer and Skov (2017) show that introducing at the same time third-party reporting and pre-population for charitable contributions in Denmark actually increases the deductions reported as many taxpayers did not claim their charitable contributions when they had to self-report them showing that filing costs and/or inattention also play a role over and above financial incentives.

To our knowledge, there is no direct evidence showing effects of a pure change in the filing threshold like in our study. The closest evidence is Garbinti et al. (2023) who show that asking taxpayers for the bottom brackets of the french wealth tax to report only total net wealth (instead of every wealth component separately) worsens compliance. Relevant to and consistent with our findings, various studies have also shown that taxpayers are eager to avoid burdensome filing requirements above thresholds with evidence of missing mass just above the threshold and bunching below the threshold. See e.g. Garbinti et al. (2023) for the wealth tax in France,

Aghion et al. (2022) for the self-employed in France, Tazhitdinova (2018) and Benzarti (2020) for US charitable contributions, Lobel, Scot, and Zuniga (2024) for corporations in Honduras.

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

2 Institutional Framework and Data

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.² Financial wealth included cash, checking and saving accounts, bonds, publicly listed stocks (stocks were 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 on 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 in the first tax bracket 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 above which the first bracket tax rate of 1.5% applies.

Filing requirements. During our period of interest 1984-1999, 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

²Stock holdings of large shareholders involved in management received additional exemptions for both private and publicly traded corporations.

1994, only individuals with net wealth above the exemption threshold were required to fill in their wealth information on the tax return. We analyze this change in Section 3.1.

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 our 1984-1999 period of study. 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 tax 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 for each financial asset, but not the end-of-year values relevant for the wealth tax. The valuation had to be figured out and reported by taxpayers themselves, using supplementary information on asset prices provided by the tax administration in the tax filing documentation. We analyze this 1986 third-party reporting expansion in Section 3.3.

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.³ 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. We analyze this pre-population reform in Section 3.2.

³We show in appendix Figure A.3 that the impact of the introduction of pre-population is virtually the same for gross wealth as for net wealth implying that pre-population of debt has minimal impact on our results.

Audits and enforcement. During our period of interest, the tax administration never developed a “match-and-audit” system (our term) whereby taxpayers who under-report relative to their third-party-reported wealth would receive an automatic letter from the tax administration asking to explain the discrepancy (effectively a form of audit). Instead, the Swedish tax administration focused its limited audit budget on taxpayers most likely to have significant tax under-payments and hence likely to be well above the exemption threshold. Hence, taxpayers below or slightly above the threshold based on their third-party reported wealth had a strong incentive to under-report to rationally evade taxes as in the standard Allingham-Sandmo model. This was equally true during universal filing requirement 1984-1993, filing above threshold 1994-1996, or pre-populated returns 1997-1999.

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). They also include data on third-party-reported wealth and its components.

3 Empirical Results

3.1 Weakening the filing requirements

As mentioned in Section 2, Sweden loosened its filing requirements for wealth information in 1994. The effects of this policy reform are analyzed in Figure 1.

Qualitative analysis. Figure 1(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 and the 90th percentile of the net wealth distribution). The threshold 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 complete densities that decline 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 missing mass of taxpayers indicates a strong behavioral response whereby many taxpayers with wealth slightly above the threshold opt not to report it anymore, effectively escaping wealth taxation, when the filing requirement is loosened.⁴ 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.⁵

By 1991-1996, third-party reporting systems were already well-developed, covering both financial and real estate wealth (see Table 1). Appendix Figure A.1 shows that the density of third-party reported wealth is actually slightly higher than the density of reported net wealth above the exemption threshold as many taxpayers adjust the pre-populated wealth down on their tax return.⁶ This shows that the wealth components not covered by third-party reporting (e.g., personal wealth in the form of vehicles, horses, and jewelry; cash held outside financial institutions; and wealth held abroad) were a relatively minor component of reported wealth either because they are small or because they are largely under-reported.⁷ Therefore, the received wisdom from the literature suggests that tax 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

⁴Longitudinal analysis presented in appendix Figure A.2 confirms that about half of taxpayers with wealth slightly above the threshold in 1993 stop filling in their wealth information in year 1994.

⁵This reflects neither tax evasion nor avoidance but simply filing costs consistent with Benzarti (2020)'s analysis of US charitable contributions or privacy concerns of taxpayers as discussed in Slemrod (2025).

⁶Appendix Figure A.1 uses year 1999 – the first year that Statistics Sweden compiles and keeps record of third-party party gross wealth and debts.

⁷Alstadsaeter, Johannesen, Zucman (2019) document substantial foreign wealth underreporting in Scandi-

France, however, a missing mass is not quite as surprising because France does not have third-party reports for wealth making it much harder for the tax administration to identify taxpayers who should have filed and paid wealth taxes.

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 Table 1).⁸ 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 2(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. Our analysis relies on the assumption that, absent the reform, the two densities would have been identical. As Figure 1(a) indicates, slight annual increases in densities arise from population changes, inflation, and economic growth. However, these gradual shifts are minor compared to the enormous change when the filing requirement changes. As a result, for simplicity, we do not adjust our estimate to account for such natural annual drifts, making the estimated effect slightly lower than the true causal effect.

The results indicate a 32.9% 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 32.9% reduction translates into a fall of 22% of the *total* number of wealth taxpayers above the exemption threshold – a quantitatively very large aggregate response.⁹

For comparison, bunching at the exemption threshold observed in 1993 (analyzed in Seim,

navia.

⁸Third-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.

⁹The corresponding fall in wealth tax revenue is naturally much more modest as the wealth tax is proportional to wealth above the threshold.

2017, for the years 2000-2006) produces an excess mass (depicted in red) that is only 8.9% 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) and which is driven by non-third-party reported wealth components. Garbinti et al. (2023) also show that the behavioral response to the filing requirement in France dwarfs the response to changes in the wealth tax rate.

3.2 Introducing pre-populated wealth on tax returns

In 1997, the tax administration began pre-populating gross wealth and debts on tax returns using third-party reports. 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 3.

Qualitative analysis. Figure 3(a) 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. 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.

The sharp increase in the taxable net wealth densities in panel (a) from 1996 to 1997 above the threshold provides strong evidence of a 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 1997 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.

The large response for reported wealth, documented in panel (a), contrasts sharply with

¹⁰The exemption threshold was increased from 800K SEK to 900K SEK in 1996 in part to compensate

the complete stability of wealth densities derived from third-party reports. Figure 3(b) depicts 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 2(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 2(b) compares 1996, the final year without pre-populated wealth, with 1997, the first year of pre-population. Our analysis relies again on the assumption that, absent the reform, the two densities would have been identical. As shown in Figure 3(a), 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 the introduction of pre-population. As above, for simplicity, we do not adjust our estimate for such annual drifts, making our estimate slightly higher than the true causal effect.

Under our identification assumption, 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 is reduced by 22.4% (depicted in dark grey), with a larger fall of about 50% just above the threshold and minimal changes above twice the threshold. The 22.4% decrease 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 in panel (a).

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 3(a).

3.3 Expanding third-party reporting

As mentioned in Section 2, 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.

Figure 4(a) 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 (relative to 1985) and 1988 (relative to 1987) 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 8.9%.¹¹

¹¹The 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.

This corresponds to an increase of 7% of taxpayers above the exemption threshold.

This finding relies on a strong identification assumption. Specifically, absent the reform, the wealth density is assumed to have increased from 1985 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).

4 Interpretation

Filing requirements. In a rational model, filing requirements should not influence the decision to evade taxes, as taxpayers could misreport their wealth regardless of filing obligations. However, in practice, evading taxes under a universal filing requirement requires taxpayers to explicitly falsify 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 the Swedish tax

system, misreporting or failing to report that results in tax underpayment upon audit carries a 40% surtax on the tax underpaid so that the legal consequences are actually the same. The psychology literature has documented that individuals cheat more when it requires passively accepting a default incorrect answer (cheating by omission) than when it requires voluntarily giving an incorrect answer (commission) (see Mazar and Hawkins 2015 for an experimental study).

Filing taxes can also impose additional costs on taxpayers, beyond the wealth tax itself.¹² Consequently, taxpayers may prefer evading taxes through non-reporting rather than by falsifying figures. When everybody was required to file wealth information, if a taxpayer left the wealth boxes blank, the system coded them as zeros. If true wealth was non-zero, this was technically considered misreporting but it did not automatically trigger an audit as the administration focused audits on taxpayers expected to be well above the threshold. Therefore, a rational taxpayer with time and effort costs of filing and low wealth should have rationally left the boxes blank even in the pre-1993 period, showing that a rational model with filing costs cannot fully explain our results.

Pre-population. In a rational model, pre-populating wealth should not impact the decision to evade either 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 makes taxpayers more acutely aware that the tax administration knows their wealth is quite possibly above the threshold. It also requires taxpayers to explicitly falsify figures on their return to evade taxes, making non-compliance more overt and hence psychologically more difficult.¹³ 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.

The pre-population effects, in isolation, could also be simply explained by high filing costs whereby a number of taxpayers follow the default (not filing any information before 1997 and

¹²Benzarti (2020) provides compelling evidence of such filing costs in the case of U.S. itemized deductions using the missing mass in the density of charitable giving just above the threshold where such giving provides a tax benefit implying that taxpayers forgo tax savings to avoid filing costs.

¹³The study by Mazar and Hawkins (2015) cited above show that overriding a default correct answer is even harder psychologically than voluntarily giving an incorrect answer.

not modifying pre-populated figures after). But as we argued above, high filing costs cannot explain our earlier symmetrical results on filing requirements. This is why we think that it is the combination of filing costs and psychological costs of providing explicitly false information that can best explain all our results.

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.¹⁴ 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. Pre-population also makes taxpayers more acutely aware that the tax administration possesses relevant information to enhance tax compliance.

Information returns. We conjecture that the extension of information returns did not generate a large improvement in tax enforcement because Sweden did not use them systematically to audit taxpayers reporting less, especially for taxpayers with third-party reported wealth only slightly above the exemption threshold. As a result, from a rational evader taxpayer perspective, the risk of being caught upon evading did not increase drastically with the introduction of information returns. Generally, information returns are used to systematically target audits to taxpayers reporting less than the amounts on information returns hence deters rational tax evasion.¹⁵

When information returns are not used systematically to audit taxpayers under-reporting wealth and taxpayers understand it, their deterrence effect on compliance is lost and significant evasion may result. In such a situation, our paper has shown that additional tax administration features – filing requirements and pre-populated returns – can have a large positive impact on compliance.

¹⁴See OECD (2008) for a discussion of the Danish and Swedish experiences.

¹⁵In the United States, reporting wage and pension income below third-party reports triggers automatically an audit, which likely explains why compliance for such income components is so high (IRS, 2019). Third-party reporting may not be as effective in middle income countries due to collusion between employers and employees to hide wages (Feinmann, Rocha, and Lauletta 2024).

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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 (3)	Yes (4)

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).

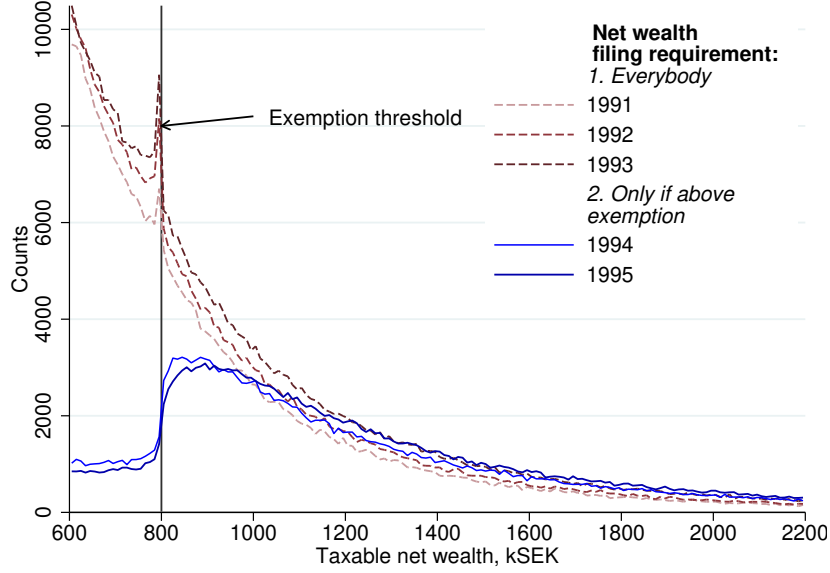
(3) Cadastral values for real estate start being prepopulated on tax returns for the administration of the property tax in 1995 (but not for the wealth tax until 1997, see (4)).

(4) 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.

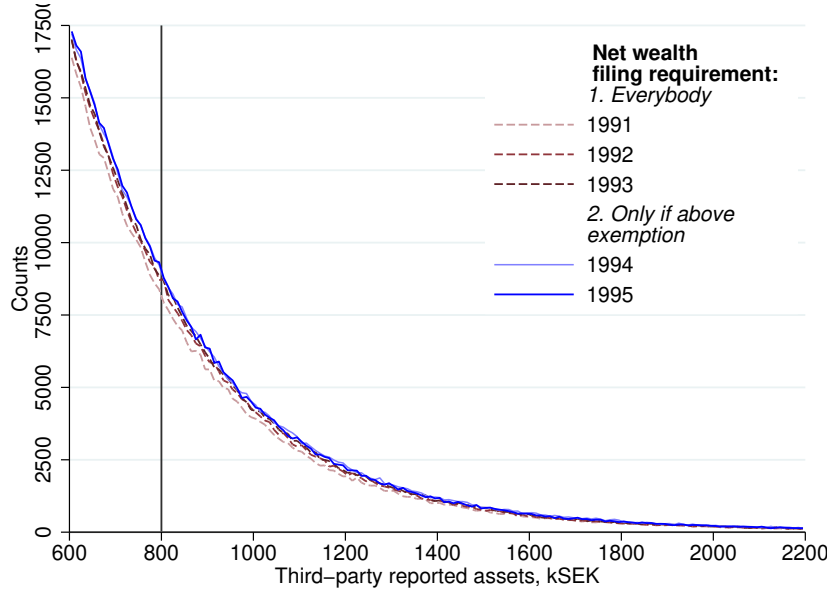
The tax administration is able to compute values for stocks and mutual funds using third-party reports on quantity of securities owned combined with end of year values for each type of security.

Figure 1: Increasing the Filing Requirement Net Wealth Threshold

(a) Densities of Reported Taxable Net Wealth



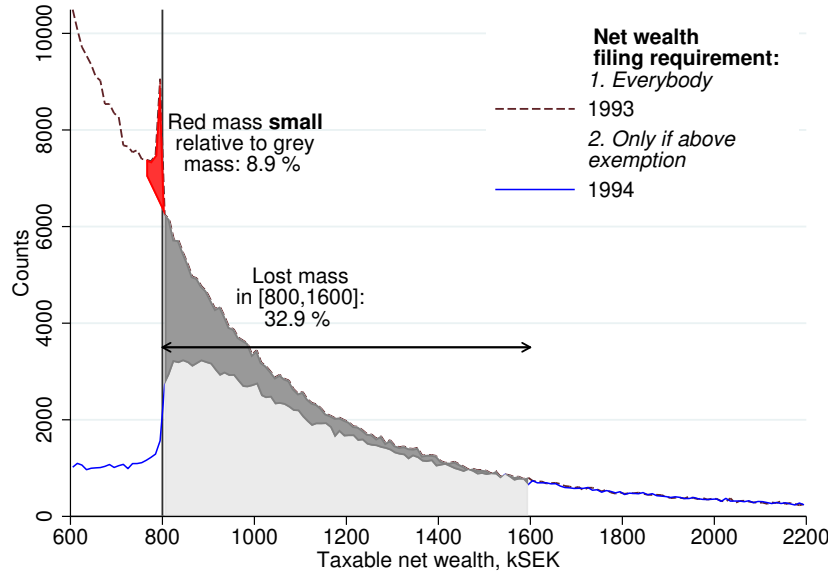
(b) Densities of Third Party Reported Gross Wealth



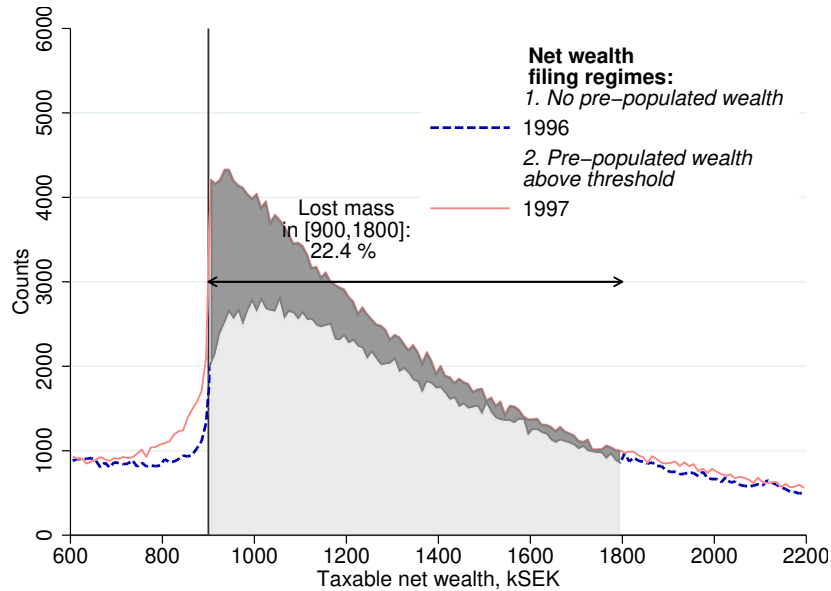
Notes: Panel (a) plots the nominal net reported wealth densities for the full population by 10K SEK bins for each year from 1991 to 1995 for the Swedish wealth tax around the exemption threshold of 800K SEK (approximately US \$100K), which is fixed in nominal terms for these years (see Table 1). In these 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 exemption threshold is evidence of a strong behavioral response. The bunching of taxpayers just below the exemption 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: Estimating the Tax Evasion Responses

(a) Response to introducing a filing threshold in 1994

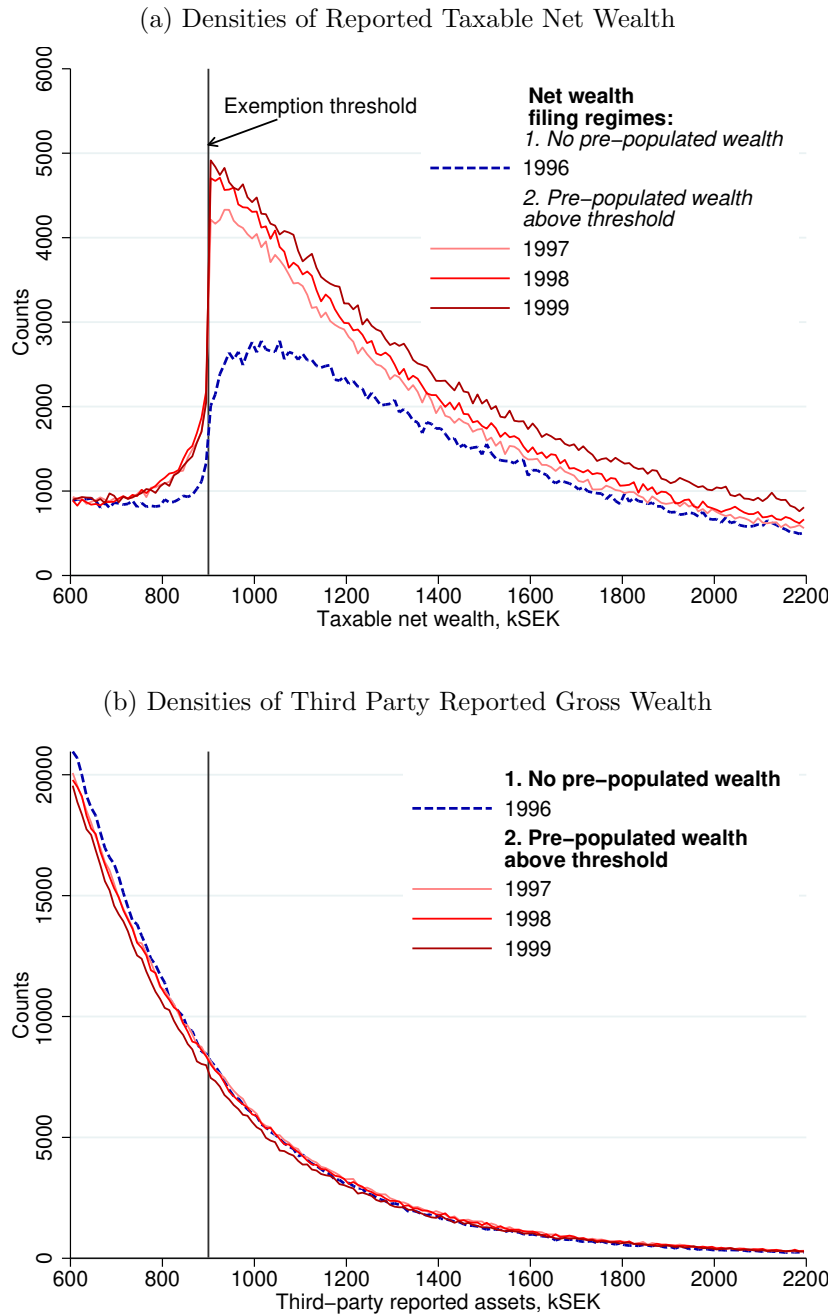


(b) Response to introducing pre-populated wealth in 1997



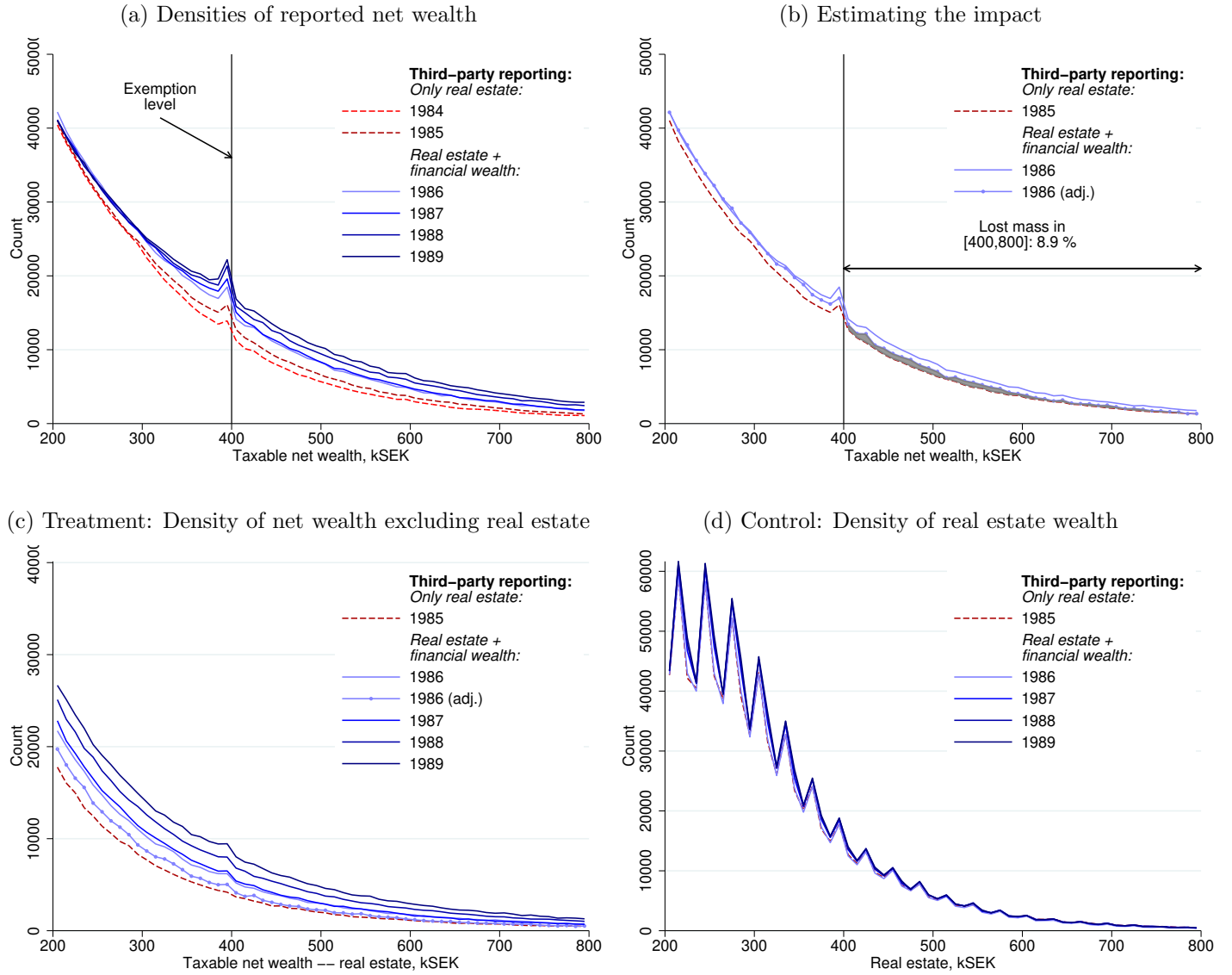
Notes: This figure displays the estimation of the impact of introducing a filing threshold in 1994 in panel (a) and introducing pre-populated wealth in 1997 in panel (b) on the number of taxpayers between the exemption threshold and twice the exemption threshold. In panel (a), we compare year 1993 (last 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 of relaxing the filing requirement. The mass of taxpayers between the exemption threshold and twice the exemption threshold falls by 32.9% (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 8.9% of the dark grey area corresponding to mass lost 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. With no pre-population, the mass of taxpayers between the exemption threshold and twice the exemption threshold is 22.4% lower (dark grey mass) with a larger fall of about 50% just above the threshold and minimal change above twice the threshold).

Figure 3: Introducing Pre-Population for Wealth on Tax Returns



Notes: Panel (a) plots the nominal reported net wealth densities for the full population by 10K SEK bins 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 to pre-population. 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 4: The Impact of Introducing Third-Party Reports in 1986



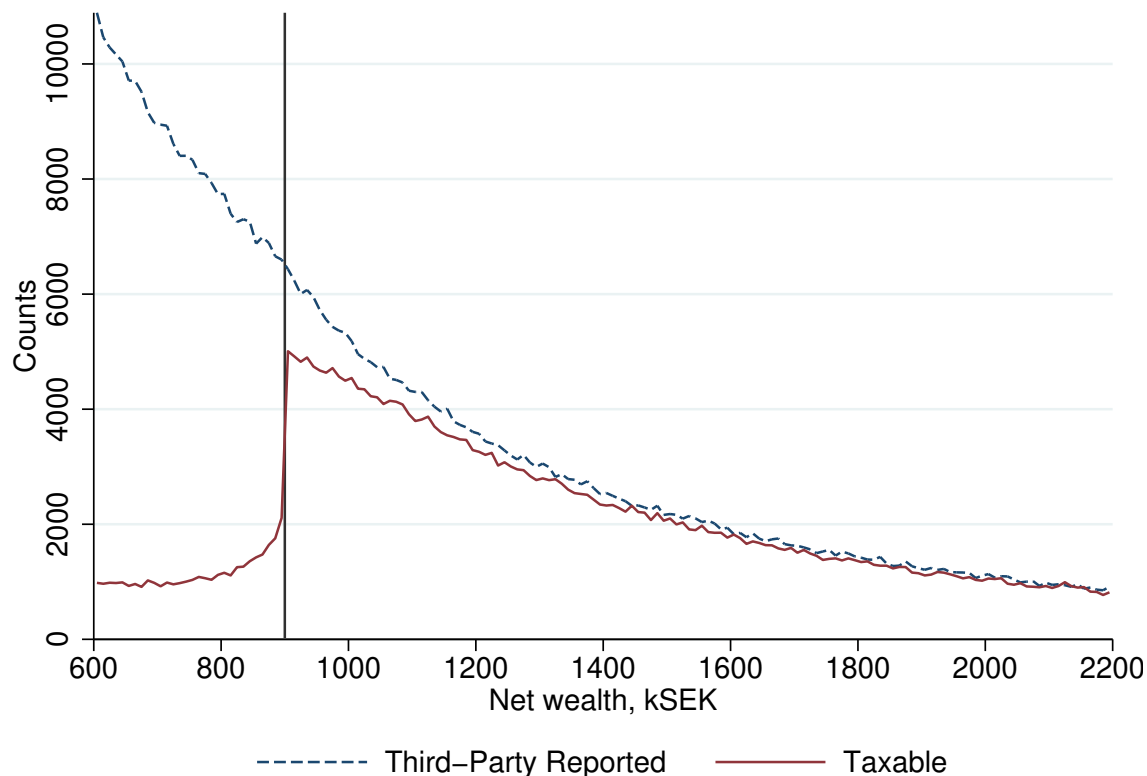
Notes: Panel (a) plots the nominal reported net wealth densities for each year from 1985 to 1989 for the Swedish wealth tax by 10K SEK bins. The exemption threshold was 400K SEK (approximately US \$50K), depicted in a vertical line, with a 1.5% marginal tax rate in the first bracket above the exemption 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 declined 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 (relative to 1985) and 1988 (relative to 1987). 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 8.9%. 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 for which third-party reports were introduced 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.

Online Appendix of:

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

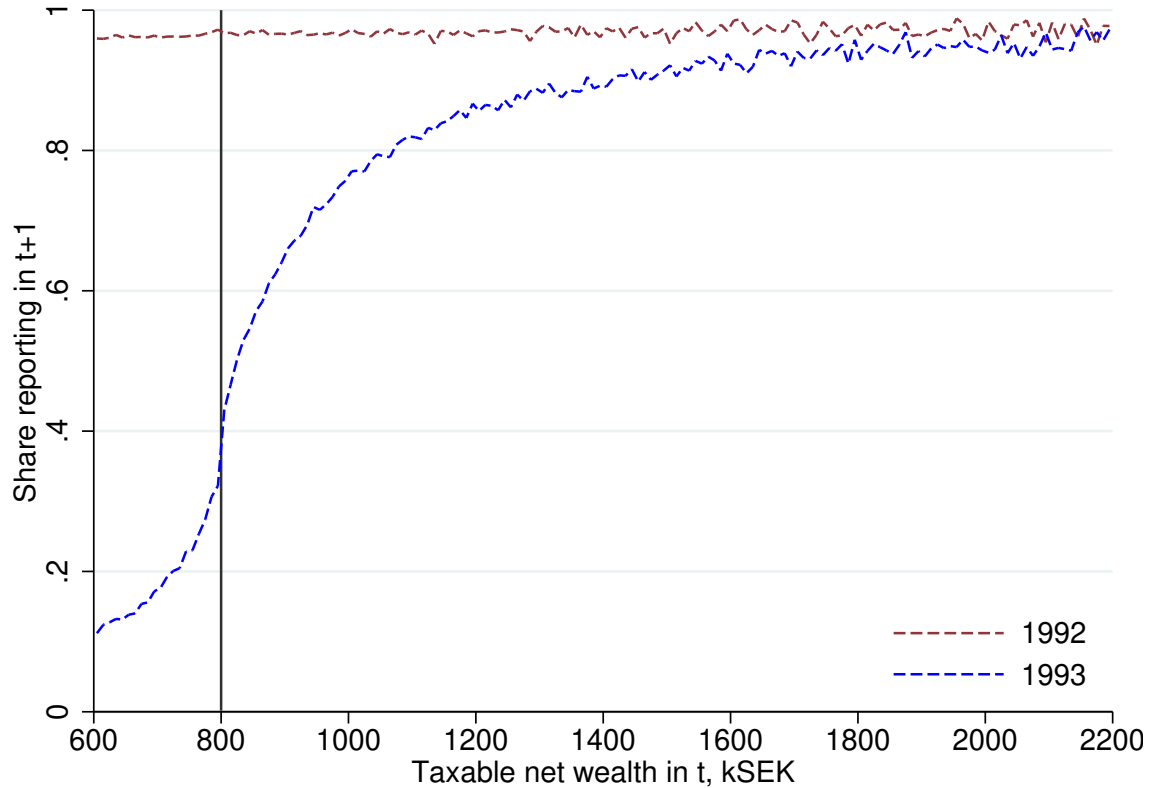
by Emmanuel Saez and David Seim

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



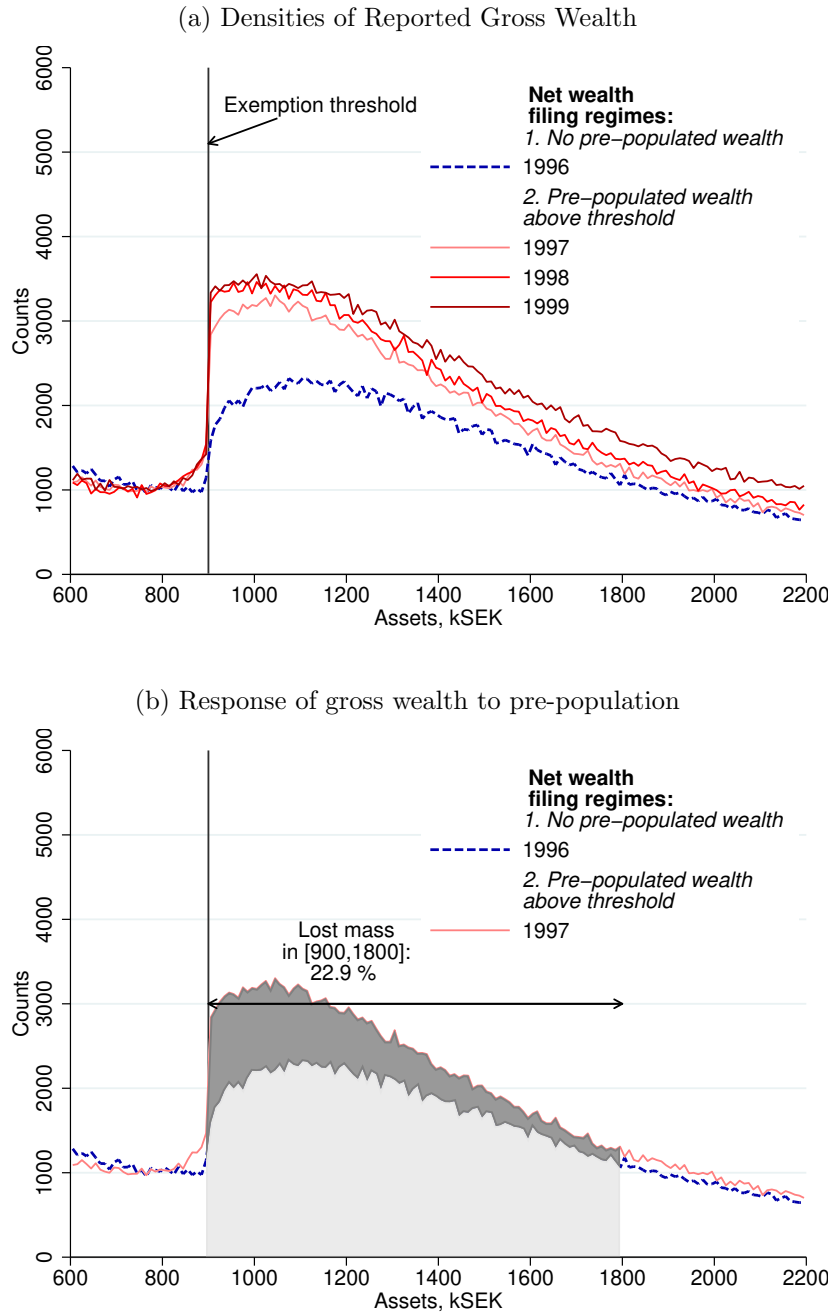
This figure reports the density of reported net wealth and third-party reported net wealth in 1999. In 1999, the wealth tax is a single 1.5% marginal tax rate on net wealth in excess of an exemption threshold of 900K SEK (approximately US \$110K), depicted in a vertical line. In 1999 (and since 1986), 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 fairly close to the density of reported net wealth above the exemption threshold, suggesting that third-party wealth reporting captured total net reported wealth well and hence that self-reported wealth components were small on net. 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).

Figure A.2: Longitudinal Evidence around Filing Requirement Change



This figure reports the share of taxpayers reporting non-zero net wealth on their (joint) income and wealth tax return in year $t + 1$ based on their reported taxable net wealth in year t for years $t = 1992$ and $t = 1993$. Year 1992 on the graph is a placebo test as everybody has to fill in their wealth information in years 1992 and 1993. Indeed, the figure shows that about 95% of taxpayers fill in a non-zero wealth amount and this is true for all wealth levels the year prior with no discontinuity at the taxable threshold depicted in vertical line. Year 1993 on the graph is the reform year as everybody has to fill in their wealth information in 1993 but in 1994 only those above the exemption threshold of 800K SEK (depicted in vertical line) have to fill in their wealth information. The graph shows that wealth filing in 1994 is sharply increasing with wealth in 1993 with a clear discontinuity at the exemption threshold. About half of taxpayers with wealth slightly above the threshold in 1993 do not fill their wealth information in year 1994. This is consistent with our main text interpretation that a large fraction of taxpayers with wealth slightly above the exemption threshold stop filling in their wealth information in 1994. In contrast taxpayers with wealth well above the exemption threshold continue filling in their wealth information.

Figure A.3: Pre-Population and Gross Wealth: Robustness to excluding Debt



Notes: This figure repeats Figures 3(a) and 2(b) for gross wealth (instead of net wealth) to assess the robustness of our findings on introducing pre-population in 1997 with respect to debt. Debt starts being third-party reported in 1997 (see Table 1) which could reduce debt over-reporting and hence increase reported net wealth potentially shifting the density independently of the introduction of pre-population. Panel (a) plots the nominal reported gross wealth densities for each year from 1996 to 1999 for the Swedish wealth tax. By definition gross wealth does not deduct any debt and hence is not affected by changes in debt reporting. Yet, the jump up in densities from 1996 to 1997 and after is almost identical to the one reported in Figure 3(a). Quantitatively, we estimate the increase in density from 1996 in panel (b) following the methodology of Figure 2. We find that the density of gross wealth between the threshold and twice the threshold increases by 22.9% which is almost identical to the increase of 22.4% of net wealth documented in Figure 2(b). Therefore, this figure shows that the jump in density is the same for gross wealth as for net wealth and hence that the introduction of third-party reports for debt cannot explain the jump in net wealth density documented in the main text.