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Income Inequality and Campaign Contributions: Evidence from the Reagan Tax Cut

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Abstract. What is the relationship between economic and political inequality? Campaign contributions are often mentioned among the possible channels creating opportunities for richer people to exert disproportionate influence on policymakers. At the same time, by exacerbating economic disparities, public policies that favour the wealthy might also give them a greater relative weight in the donor pool, hence creating a self-reinforcing spiral between material wealth and political influence. We study the effect of the 1986 Tax Reform Act, a remarkable tax cut that, following the prevailing doctrine about optimal income taxation at the time, decreased the marginal tax rates disproportionately at the top of the income distribution. Using data at the census tract level, we show that this policy decision caused a spike in contributions from the groups of citizens that benefited the most from it, namely the top ten percent of the income distribution. The increase in individual donations regards both parties with similar magnitudes and it does not display any heterogenous effect with respect to other observable characteristics of recipients of contributions. This finding is entirely driven by the extensive margin, namely new donors who started to donate after the tax reform, and it holds for donations for House, Senate and Presidential races. Our conclusion is that the erosion of tax progressivity has contributed to rise the political clout of wealthy individuals, via campaign donations, and that the Tax Reform Act, a landmark policy of the second Reagan administration, has been a crucial step in the spiral between economic inequality and uneven political influence of the last four decades.

1 Introduction

Modern democracies are based, in principle, on the idea that all citizens should be politically equal and carry the same weight in the processes that lead to public policy formation. In practice, however, political influence can be heavily asymmetric for various reasons which can be traced back to differences in wealth, in networking opportunities or in political awareness. Since electoral campaigns are costly, their financing represent one avenue through which wealthy donors can try to influence policy-makers and, in some cases, gain access to them. It is not surprising then to observe the study of campaign contributions receiving increasing attention, particularly in the United States, where the transparency of the funding system offers ample opportunities for data analysis (e.g., Cagé, 2020).

As a starting point, individuals can donate to political campaigns for a number of reasons. For example, contributions have been modeled as a form of ideological consumption, distinct from policy influence (e.g., Ansolabehere et al., 2003). Nonetheless, recent studies have confirmed that contributions also work as an instrumental way of gaining leverage on political decisions (e.g, Fouirnaies, 2018). Consistently with the view that richer citizens exert disproportionate influence, public policy appears to be responsive to the policy preferences of Americans in the top ten percent of the income distribution but virtually uncorrelated with the preferences of the remaining ninety percent of the population (Gilens, 2012). Indeed, several studies about economic and political inequality in the United States indicates campaign contributions as one of the channels through which wealthy elites obtain political influence (Bartels 2008; Hacker and Pierson 2010; Gilens 2012). More recent works focus on how members of Congress respond to donations, showing that legislators cater to the political preferences of wealthy donors more than to their

broad electoral constituencies (Canes-Wrone and Gibson, 2019; Canes-Wrone and Miller, 2021). These findings become especially relevant since preferences of rich voters tend to be more liberal than those of the remaining population on social issues like abortion and gay rights and more conservative on economic issues, like taxation, social spending and market regulation (Page et al, 2013; Broockman and Malhotra, 2018). Hence, if campaign contributions provide political influence, then rich voters can steer economic policy in a direction which potentially creates greater economic inequality. In turn, greater economic inequality might induce even further concentration in campaign contributions and political influence. This means that, even in democratic systems, economic inequality and political inequality can mutually reinforce each other in a vicious spiral leading to increasing concentration of both economic and political power in the hands of a small oligarchy. For the spiralling to take place we need both an impact of campaign contributions on public policy and an impact of public policy on campaign contributions. On the first link, convincing causally identified evidence is gradually emerging (Brookman and Kalla, 2014; Fournaies, 2018). We are not aware, however, of any work directly addressing the second link: does increased economic inequality (and particularly policy-induced inequality) cause an increase in the concentration of campaign contributions? If the idea of a spiral of inequality is certainly not novel (see, e.g., Kelly 2021) and can be traced back to a Krugman (1996) article with this title, the empirical study at micro level of this link represent, to the best of our knowledge, an advancement in the literature. In this paper, we first carry out a descriptive analysis of campaign donations patterns. We will ask if the pattern of campaign contributions from different income groups vary over time and, if so, what correlates with this variation. Studying the period 1985-2014 we show that the richest ten percent donates a large share of campaign contributions and that this share has increased over time. Then, we analyze the evolution of campaign contributions after

a tax policy decision that benefited disproportionately wealthy citizens, greatly increasing their disposable income. We find that the 1986 Tax Reform Act (TRA) adopted by the second Reagan administration, cutting taxes disproportionately for citizens at the top of the income distribution, caused a remarkable increase in political donations from these groups. Using data at the census tract level, we show that the TRA has led to an increase in contributions from individuals that belonged to the richest part of the population. We use a generalized difference-in-differences estimation with an intensity of treatment that varies with the percent of income saved along the income distribution as a consequence of the reform. We then create different intensity of treatment variables accounting for the top 10, middle 40 and bottom 50 parts of the income distribution, finding that only the richest group increased their donations after the TRA. We believe these findings fill an important gap in the literature on the increased political influence of moneyed elites in American politics. We show that policy decisions, such as tax cuts, magnify the political clout of economic elites who already derived policy influence from their material wealth (e.g., Hacker and Pierson, 2020). In simple words, very rich citizens favour tax cuts that increase their disposable income and their potential contributions to aligned legislators. In turn, this makes contributions even more concentrated at the top of the income distribution, thus making the preferences of the wealthiest groups even more important than before. The paper proceeds as follows. Section 2 discusses the importance of individual campaign contributions in relation to policy decisions. Section 3 describes the data and provides an historical overview of the distribution of campaign contributions across US census tracts. Section 4 discusses the history of tax cuts in the United States and describes the main features of the TRA. Section 5 reports our main results on the impact of the tax cut on campaign contributions. Section 6 elaborates on the main findings, performing a series of robustness checks. Section 7 concludes.

2 Campaign Contributions and Economic Inequality

Since the 1980s, when data on campaign contributions from the Federal Election Commission started to be reliable, political scientists have extensively studied political donations in the United States (e.g., Austen-Smith, 1995). While seminal accounts of the evolution of economic inequality in the United States (e.g., Bartels 2008; Hacker and Pierson 2010; Gilens 2012) suggest that contributions might be one of the most relevant channels through which wealthy elites and interest groups influence policy decisions, empirical evidence on this link has been rather sketchy so far.

The concentration of campaign contribution has risen in recent decades. Bonica et al. (2013) find that the number of individuals donating to campaigns has markedly increased from 1980 to 2012, but inequality in contributions has risen as well, so that 0.01 percent of the voting age population accounted for more than 40 percent of total contributions in 2012. Barber et al. (2017) show, based on a donors' survey, that the size of the donation depends on a donor's income, after other factors linked to legislative behaviour are taken into account. Bonica and Rosenthal (2018) analyse the contributions of members of Forbes 400, finding that they correlate with increases in wealth inequality. This evidence suggests that the increase in top contributions could be linked with the rise of economic inequality, creating a vicious circle where "established wealth may contribute to preserve or increase wealth by items like the carried interest deduction, the diminished estate tax, and special treatment for the fossil fuels sector" (Bonica and Rosenthal, 2018, p. 43).

Digging into this relationship is especially important since the richest Americans tend to be consistently more conservative on economic issues than the usually surveyed top 10 percent, particularly on matters related to redistribution (Page et al., 2013; see also Page et al. 2018). A more specific survey of big donors similarly shows that Republican

contributors are significantly more conservative on economic issues than Republican voters and this difference increases for top 1 percent donors (Broockman and Malhotra, 2018).

To sum up, campaign contributions patterns might induce legislators to overweight the political preferences of economic elites, which tend to be more conservative than the rest of the population on economic and fiscal matters. We are not aware, however, of any detailed study concerning the other side of the vicious spiral between material wealth and political influence. When legislators respond to the political preferences of their donors, they will be more likely to implement policies that might increase the political clout of economic elites, hence leading to further concentration of political influence and more policies aimed at protecting the interests of the wealthiest. A tax cut is a paradigmatic example of this mechanism. Regressive tax cuts have never been a popular policy favoured by a majority of the population (Saez and Zucman, 2019). Nevertheless, there have been at least five tax cuts in the last forty years in the United States which have mostly benefited the richest income groups. A possible consequence of larger available income for individuals benefiting from tax cuts could be an increase in their campaign contributions, making politicians depending even further on fewer donors. We show that this has been the case for the TRA, the largest tax cut of the top marginal tax rate in the history of the United States, and one of the largest in the democratic world (Saez and Zucman, 2019).

3 Data and Descriptive Analysis

Our main sources of data are the DIME database and the Census Bureau. The DIME database contains amount, date and donor characteristics for each individual donation between 1979 and 2014. We include all registered individual contributions, including

the ones directed to PACs and not-PACs committees.[1] Crucially, the DIME database also includes census tract localization of nearly all individual donations. As Urban and Niebler (2013) argue for zip codes, employing a unit of analysis smaller than the county is crucial for studying the evolution of campaign contributions, given the stark differences in donation patterns of census tracts (or zip codes) within the same county. Census tracts are smaller and more uniform than zip codes. There are more than 70 thousand tracts in the United States, with population between 1200 and 8000 people. We will merge the information from DIME with Census Bureau data at census tract level from decennial censuses from 1980 to 2010, and then annually from 2011 to 2014. In some of the descriptive analyses, we group contributions around the decennial Census year: 1979 to 1984 for the 1980 Census, 1985 to 1994 for the 1990 Census, 1995 to 2004 for the 2000 Census and 2005 to 2014 for the 2010 Census.[2]

From Census Bureau (Geolytics re-adaptation), we get the number of families in small income ranges from \$5,000 to \$200,000 dollar in each census tract.[3] From this data, we can reconstruct the entire income distribution of each tract, assuming a uniform distribution within each range. The few existing studies show that inequality between census tracts is very high (Gaubert et al., 2021a) and that the concentration of poverty in tracts appear higher than in counties (Gaubert et al., 2021b; Reardon and Bischoff, 2011).

To the best of our knowledge, this paper is the first to study the evolution of individual campaign contributions and income at the census tract level. First, we describe graph-

[1] We do not consider contributions under 200\$ that have not been recorded by the FEC. Bouton et al., 2022 show this type of contributions started to rise dramatically after the end of the period of study in this work.

[2] The 1990 Census is the first one in which the entire country was divided into tracts. The 1980 Census includes tracts only for urban areas, which means we have about 25 percent fewer observations in 1980. We rely on Geolytics data for tract remapping over time between decennial Censuses. Data on campaign contributions before the 1980 electoral cycle is known to be not reliable.

[3] The number and width of income ranges vary slightly between decennial Censuses. Figure A1 in the Appendix provides an example for the 1990 Census.

ically the concentration over time of campaign contributions at the top of the income distribution and then we run some regressions to show that this finding holds including control variables and across various specifications (including using census tract fixed effects).

Figure 1: Contributions by census tract percentiles in average income (as percent of total contributions in each election cycle)

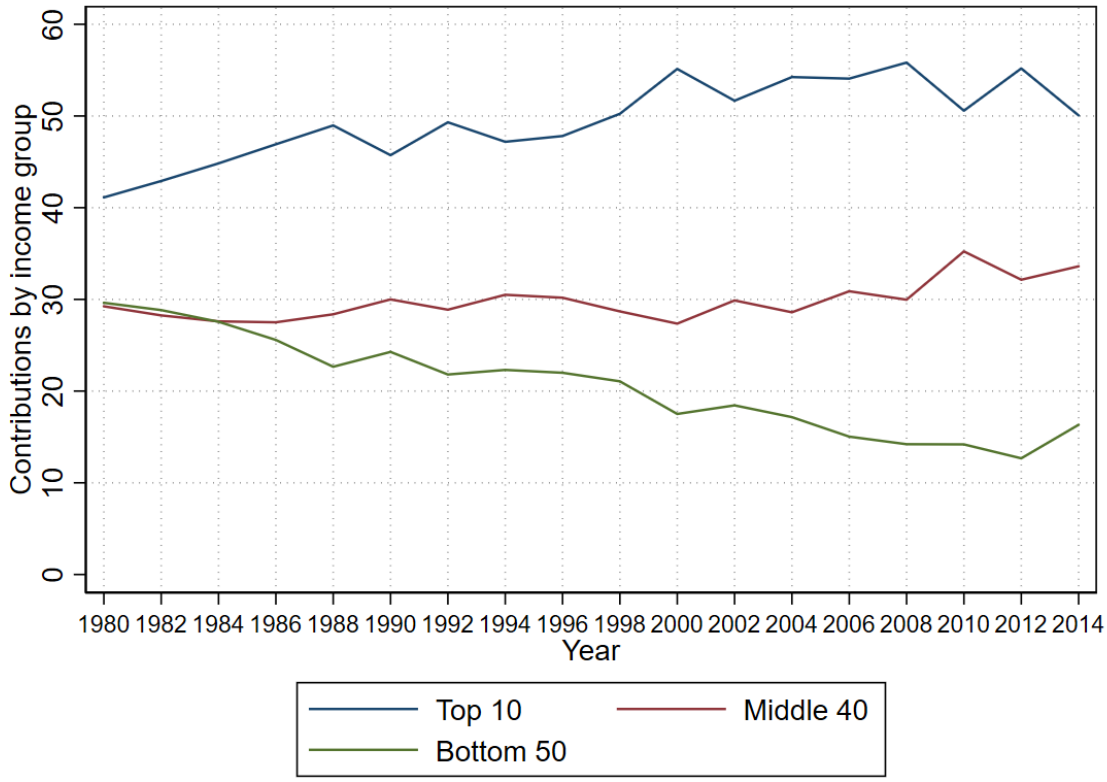
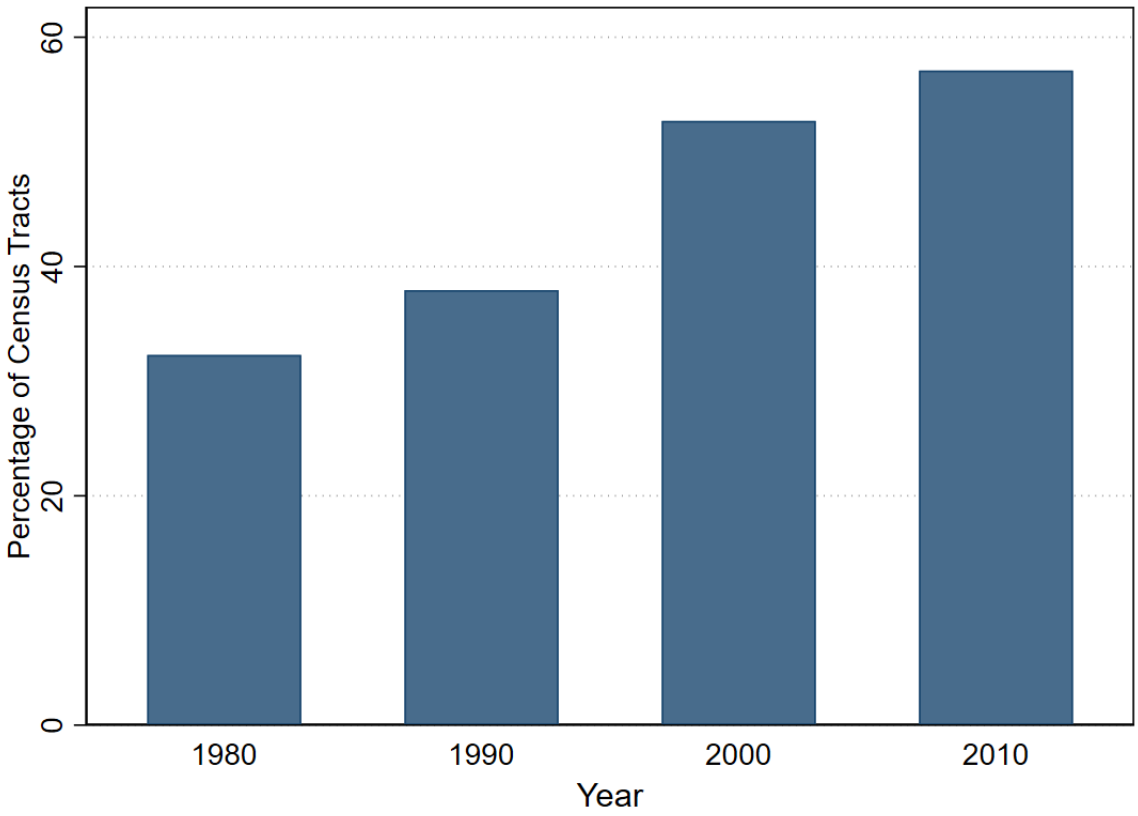


Figure 1 shows the evolution over time (for each two-year electoral cycle from 1980 to 2014) of the share of campaign donations coming from, respectively, the top 10, middle 40 (from the median to the 90th percentile) and bottom 50 percent of census tracts ranked according to their average income.[4] We find a clear rise in the share of donations from the

[4]Except for 2012 and 2014, we do not have income data at the census tract level in non-decennial

top 10 census tracts that increased by 10 percentage points, from around 40 percent of the total in 1980 to around 50 percent in the 2010s. During the same period, the share of contributions from the poorest half of census tracts decreases substantially from around 30 percent to 15 percent of the total, with a modest increase for the middle 40.

Figure 2: Concentration of census tracts at the top of the income distribution and at the top of the distribution of contributions



Zooming on the top 10 percent richest census tracts, figure 2 shows the percent of tracts that are both in the top 10 of the income distribution and in the top 10 percentiles of the distribution of donations for each decade. In the 1980s only around one third of

Census years. We linearly interpolate them given the available data.

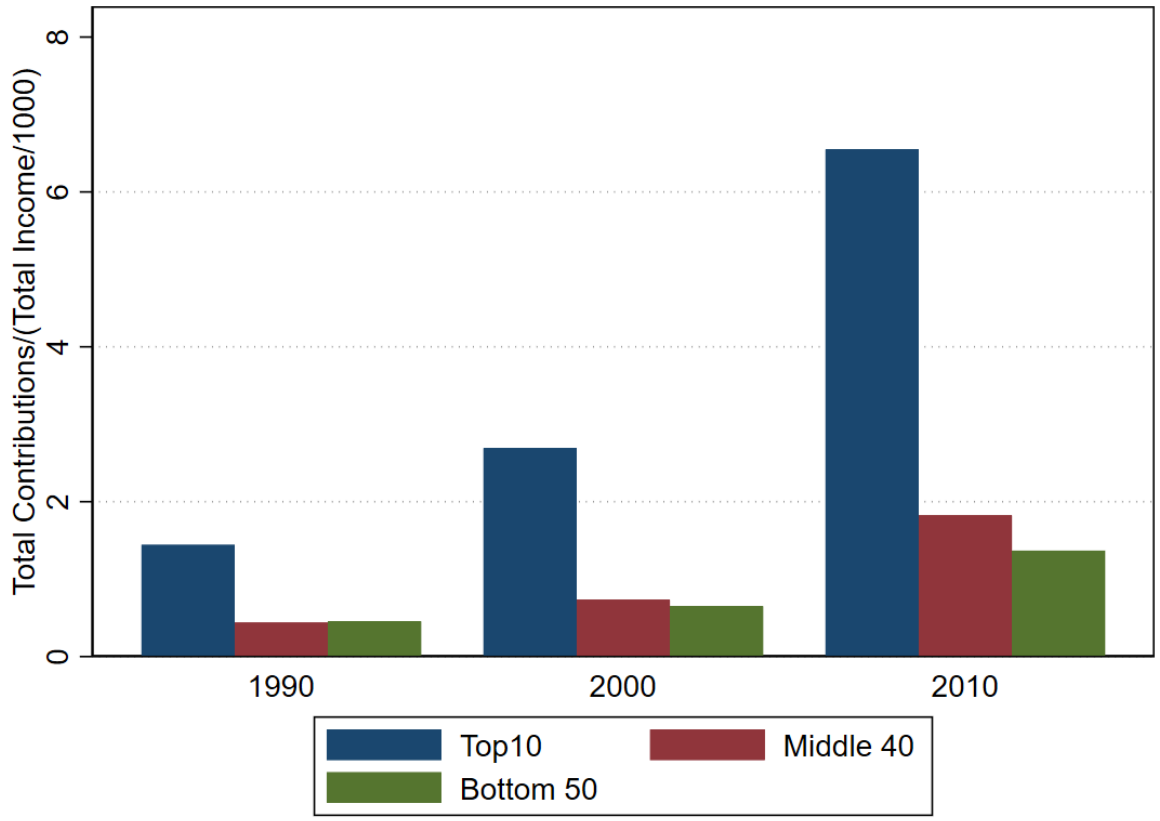
the census tracts in the top 10 percent of contributors were also the 10 percent richest ones. In 2010 this amount almost reaches 60 percent.[5]

Figure 3 shows the ratio of total contributions to total income by census tract. In the 1990s, the average richest tract in the top 10 percent has donated slightly more than 1.5 thousandth of total aggregate income; in the 2010s this figure amounts to almost 6.5 thousandth. The bottom 50 and the middle 40 donate a lower share of their incomes. Hence, richest tracts donate a larger share of an higher income compared with the rest of the population. Although the share of income donated increases for all groups proportionally, the absolute distance between the top 10 and the rest increases, making census tracts in the top 10 relatively more important in the donor pool.

Overall, these three figures exhibit a visible increasing trend in contributions for all groups, but with a clear divergence between the richest census tracts and the others. In regression analysis we add a battery of covariates that have been proven to be relevant in the campaign contribution literature. This rich set of controls at the census tract level include population, gender ratio, share of adults, share of children and importantly share of Hispanic and black population, since the racial context has been shown to have a crucial relevance in political participation (Hersh and Nall, 2015). We also include unemployment rate, the share of graduates and the share of managers, to further take into account the social and professional characteristics of a census tract. The importance of these control variables is confirmed by Cho and Gimpel (2010), who find that at the micro level campaign contributions in Texas display a quite heterogeneous pattern along many dimensions. Table A1 in the Appendix displays summary statistics for this section.

[5]In the interest of showing the evolution of contributions for the longest possible period, Figure 1 and 2 include data for the 1980s, even if only around 80 percent of the United States, corresponding to the urban part of the country, were tracted at that time. If anything, we expect that this limitation in the data in the 1980s would overestimate the share of the top ten percent relative to the other two groups, thus masking an even bigger increasing trend.

Figure 3: Ratio of total contributions to total income by census tract (total income divided by 1000)



First of all, we regress the logarithm of the average household contributions on the logarithm of average household income. The unit of observation is then a census tract in a decade; due to data limitations explained above, we utilize three Censuses (1990, 2000, 2010) and contribution data from 1985 to 2014. All regressions include state per Census-year fixed effects. Unsurprisingly, Table 1 displays in the first column a positive and strongly significant association between income and contributions. Using a log-log specification means that coefficients can be interpreted as elasticities. In column 2, we add all the mentioned controls, which behave as expected. In column 3, we add census

Table 1: Descriptive Analysis: Logarithm of Contributions by family in 1985-2014

	(1)	(2)	(3)	(4)	(5)
Log Average Income	1.51***	0.49***	0.10***	-0.01	-0.01
	(0.03)	(0.03)	(0.02)	(0.03)	(0.03)
Share Top10				0.23***	-0.19***
				(0.04)	(0.05)
Share Top10*Time					0.19***
					(0.01)
Share Black		-0.09**	-0.34***	-0.35***	-0.27***
		(0.04)	(0.02)	(0.02)	(0.02)
Share Hispanic		-0.20**	-0.77***	-0.79***	-0.65***
		(0.09)	(0.03)	(0.03)	(0.03)
Share Adult		3.52***	0.96***	0.98***	1.15***
		(0.18)	(0.09)	(0.09)	(0.09)
Share Manager		0.30***	-0.17**	-0.16**	-0.15**
		(0.09)	(0.07)	(0.07)	(0.07)
Gender Ratio		0.64***	0.36***	0.37***	0.40***
		(0.19)	(0.11)	(0.11)	(0.11)
Share unemployed		-0.00***	-0.00***	-0.00***	-0.00***
		(0.00)	(0.00)	(0.00)	(0.00)
Share Graduates		3.28***	1.14***	1.14***	1.02***
		(0.09)	(0.06)	(0.06)	(0.06)
State*year Fixed Effects	X	X	X	X	X
Census Tract Fixed Effects			X	X	X
Observations	216521	198487	198487	198487	198487
R^2(within)	0.59	0.60	0.61	0.61	0.61
Mean Dep Variable	3.12	3.14	3.14	3.14	3.14

Standard errors clustered at the county level in parenthesis.

tract fixed effects, a quite demanding specification which exploits only within-tract variation. The implied elasticity of contributions to income is substantially smaller in this specification but remains nevertheless positive and statistically significant. To investigate whether the impact of top incomes on contributions has risen over time, we now consider not only average income but also the distribution of income in a census tract. To do this,

first of all we calculate the cutoffs for the three groups (top 10, middle 40, bottom 50) at the federal level. Then, using the Geolytics data described above, we build variables that represent the share of income that belongs to the federal top 10, middle 40 and bottom 50 groups, for each census tract. The share of income that belongs to the top 10 constitutes on average 23.5 percent of the income in a tract (the median is 17.3 percent), with some tracts having no household in the federal top 10 and others having 100 percent of their income belonging to the federal top 10. In column 4 we add this variable (the share of income in each census tract belonging to citizens who are in the top decile of the federal income distribution), and we then interact it with a time indicator in column 5. We find that this variable is strongly significant and positive, absorbing entirely the effect of average income. The interaction is also positive, indicating an increasing importance of the top 10 over time.

4 The 1986 Tax Reform Act

"*Trickle-down economics has never worked.*" President Joe Biden, 28 April 2021.

The Tax Reform Act was signed into law on October 22, 1986 during the second Reagan administration. Among many other provisions, the act slashed the highest marginal tax rate from 50 to 28 percent, the lowest value in democratic countries at that time. It followed the Economic Recovery Tax Act (ERTA) of 1982, the first tax cut by the first Reagan administration that decreased it from a 70 percent to a 50 percent rate. For a married individual, an individual income of at least $29750 (around $65000 adjusted in 2018 dollars) qualified for the highest income bracket at 28 percent rate. Above this figure, everyone paid the same marginal rate. The decrease in the tax rates went along with the stark simplification of just two income brackets at 15 and 28 percent rates, and

a higher threshold for personal exemptions and standard deductions that excluded a few million citizens from the tax roll.[6] Figure 1 compares the marginal tax rates before and after the TRA.[7]

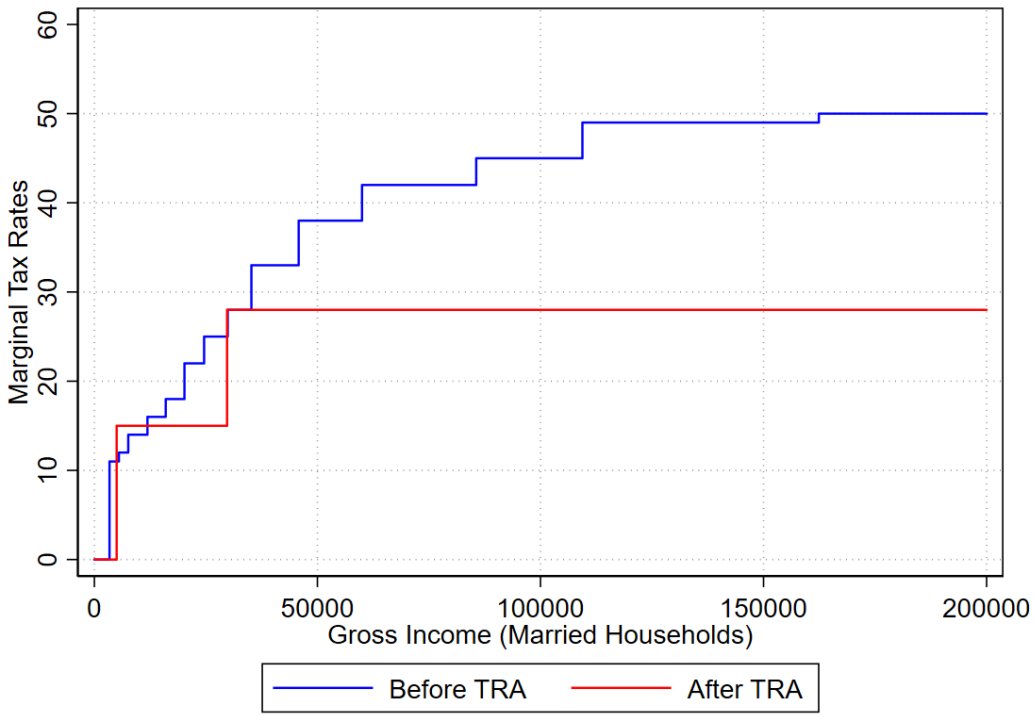


Figure 4: Marginal tax rates before and after TRA

At the same time, one of the most important objectives of the reform was to expand the tax base by fully taxing capital gains (previously only 40 percent of capital gains were taxable),[8] by reducing the scope of tax credits and by closing various loopholes (Saez

[6]Estimates diverge, but the figure probably amounted to around five million citizens (Auerbach and Slemrod, 1997). This provision was largely intended to adjust the threshold for the rampant inflation of the 1970s and 1980s.

[7]Given the mentioned interventions for low income owners, the left part of the graph should be interpreted with caution.

[8]For capital gains taxed at the highest marginal rate this amounted to an increase in taxation from 20 (a 50 percent tax rate applied to a 40 percent of capital gains) to 28 percent (a marginal rate of 28 percent applied to 100 percent of capital gains).

and Zucman 2019, pp. 51-54). The effectiveness of this increase in the tax base is still object of debate today, with moderate base broadening being the most common findings (Bakija and Steuerle, 1991; Gravelle and Hungerford, 2012). The TRA also decreased the statutory tax rate for corporate taxable income from 46 to 34 percent, at the same time expanding the base of corporate taxes by eliminating the investment tax credit and lengthening depreciation rates. Finally, the reform eliminated the so-called passive loss provision and a number of favorable tax provisions for specific industries, many of them created by the previous reform enacted in 1982. Overall, the aim of the TRA was to be revenue neutral.

The final legislative passage of the bill in Congress had ample bipartisan majority, with votes in favour by all powerful Democratic legislators, including future Presidential candidates Al Gore and John Kerry, and future President Joe Biden. Perhaps more surprisingly, it was difficult to find dissenting voices in academic circles. The prevalent ideas from optimal taxation theory would recommend precisely a broadening of the tax base and a decrease in marginal tax rates, particularly at the top, with the aim of minimizing allocative distortions and supply-side disincentives. Concerns about the reduced progressivity of the tax schedule were often deemed of second order importance at the time. In the very first issue of the Journal of Economic Perspectives, leading economists and tax specialists discussed the Tax Reform Act, mainly acclaiming this policy as a positive revolution in fiscal matters (Stiglitz et al., 1987; Aaron, 1987) and praising the tax reduction for the average citizen. Joseph Pechman, for example, while expressing "serious reservations on the elimination of graduation at the top of the income scale", commended the act as a policy that "improves the fairness of the tax system and removes major distortions from the economy" (Pechman, 1987, pp. 22, 17). The beneficial effects to the working poor (who were removed from the pool of taxpayers) and the elimination

of tax shelters for real estates encouraged analysts to even claim that the overall effect of the tax would have been progressive.

The assessment of this policy has changed over time, with more nuanced views expressed by influential academics around a decade after the TRA (eg, Slemrod, 1995). Auerbach and Slemrod (1997) analyze the effect of the TRA on pre-tax income for rich individuals in the following year, finding a substantial increase and concluding that it is not possible to distinguish between tax shifting and labour supply increase. While they still defend the overall rationale of TRA, they admit that there is "little hard evidence of the fruits of this effort" (p.628) and show that public opinion judgement in 1986 on the law was very far from the almost unanimous votes of members of Congress and the robust support from specialists in academia. By 1990 the public perception of the reform was even less positive: 37 percent of respondents in 1990 said that the fairness of the tax system had decreased as a consequence of TRA (the corresponding figure in 1986 to the same Gallup question was 20 percent), and only 9 percent said that it had increased (27 percent in 1986). Most people did not see much difference in both years (36 percent in 1986, 40 percent in 1990).

During the discussion in Congress, approval rates of this policy in the public were at best tepid, between 22 and 40 percent (Saez and Zucman, 2019, p.45). In general, the very differentiated views about tax cuts among the public is confirmed by a large-scale survey administered in 2012 (CCES). Only 25% of the general public supported the extension of the Bush-era tax cuts for everyone, including the richest Americans, but the approval rate was substantially bigger among Republicans, though still not reaching the majority of them (42%). The difference is striking with Republican donors: 62% favoured the proposal, and this percentage arrived at 80% for Republican donors with incomes in excess of $250,000 a year. President Trump experienced similar lukewarm support his

2018 tax cuts, despite the massive support by political groups affiliated with the Koch brothers (McCormick, 2019).

Until recently, tax cuts have been largely thought to have a positive effect on economic growth. This would amount to an efficiency gain due to behavioural responses of high-income individuals that increase their labour supply. Reduced taxation at the top of the income distribution would then "trickle down" to other income groups. Ultimately, economic growth would "lift all boats". The consensus has shifted in more recent years, with convincing evidence showing how middle class income has stagnated while income inequality increased. Recent works demonstrate that the fall in tax progressivity has been a major cause of the increase of wealth and income inequality (Hubmer et al., 2017; Piketty et al., 2018). A couple of recent papers analyze major tax reforms that have reduced progressivity. Rubolino and Wallerstrom (2020) analysed three reforms in the '80s in Australia, New Zealand and Norway using a synthetic control methodology. They find that the reduction of top marginal tax rates had a positive effect on the income share of the top percentile. Hope and Limberg (2020) find that major tax cuts on the rich implemented in 18 OECD countries in the last half century did not increase economic growth and did not decrease unemployment. In their study, they take a new approach to identify major tax reductions for high income individuals, based on a Bayesian latent variable that takes into account many different indicators related to taxes on the richest part of society. They found thirty country-year observations in their sample that meet their definition of large tax cut (two standard deviation shock to the latent variable). For the United States, the authors classify as major tax cuts the ERTA of 1982 and the TRA, object of this study.

5 The Effect of TRA on Campaign Contributions

The TRA is a complex policy with many provisions, as discussed above. We focus here on the large and heterogenous cut to income tax rates, and we build treatment variables that correspond to the tax reduction experienced by the population of every tract as a consequence of the tax cut enacted by the TRA. This variable is constructed by using the difference in tax rates for each income range. We then use this variable as an intensity of treatment in a standard difference-in-differences specification.

The TRA entailed a reduction of the tax burden for nearly every taxpayer, but the advantage varied substantially along the income distribution. Figure 2 displays this difference using two of the income ranges made available by Geolytics. It is evident that citizens earning a gross income between 25,000 and 27,500 dollar a year (the income range more on the left) have a smaller net advantage than rich citizens earning 125,000 to 150,000 dollars a year (the income range more on the right). In the graph, the increase in disposable income of the first group of citizens is the blue area, namely the integral of the difference of the two marginal tax rates until the 27,500 dollar line, while the net advantage for the richer group of citizens is the sum of the blue and the orange area, namely the integral of the difference until 150,000 dollar line[9].

To build the intensity of treatment variables we assume a uniform distribution within each income range in each unit of observation and then calculate the average federal income tax reduction for each range. The last range, including the families with income above $150,000 dollars, does not have an upper limit (and obviously does not have a midpoint). However, we can still calculate total tax savings for this group since we know

[9]Given that the TRA includes many other provisions for low income owners, while we focus only on the cut on the federal income tax rates, we exclude incomes below 15,000 dollar. Moreover, this group of citizens likely do not contribute much on average

the aggregate income of the tract. Note that this is a very conservative assumption, since distributions of income are known to be skewed toward the right tail.

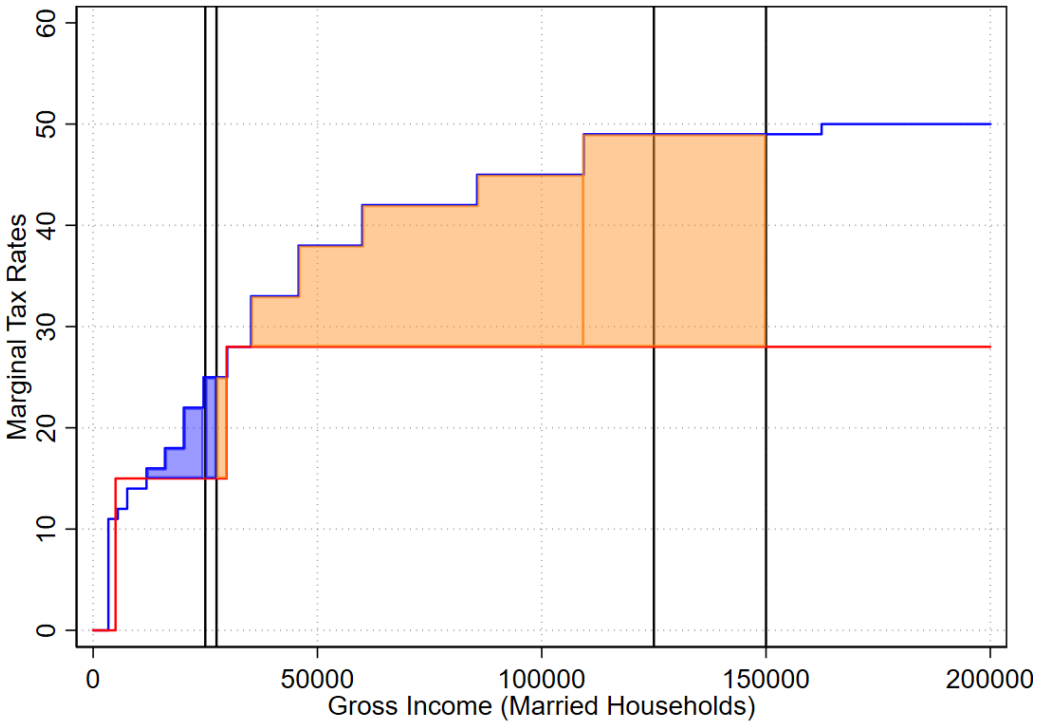


Figure 5: Tax reduction for different income ranges due to the TRA

In the main specification, we consider four election cycles, from 1983-1984 to 1989-90, with the first two constituting the pre-treatment and the last two the post-treatment period.[10] Alternatively, we collapse the two periods before and after and we take the difference of contributions as dependent variable. This specification absorbs census tract fixed effects, considering two comparable four-year periods, each one including a congressional and a presidential election. We build two versions of the intensity of treatment variable using information from the 1980 and 1990 decennial Censuses which asked questions about income in the year before. Ideally, we would need this variable for year 1986.

[10]Contribution amounts are adjusted by inflation, with base year 1989.

In the absence of this information, we calculate the intensity of treatment using the 1980 Census and the 1990 Census and we interpolate for year 1986. We are able to do that only for around 80 percent of census tracts which are included in the 1980 Census. The excluded areas are more rural than average. We then construct an intensity of treatment variable using only the 1990 Census. This assumes that the census tract level gross income in 1989 was the same as the gross income in 1987.

Figure 6: Parallel Trends Assumption

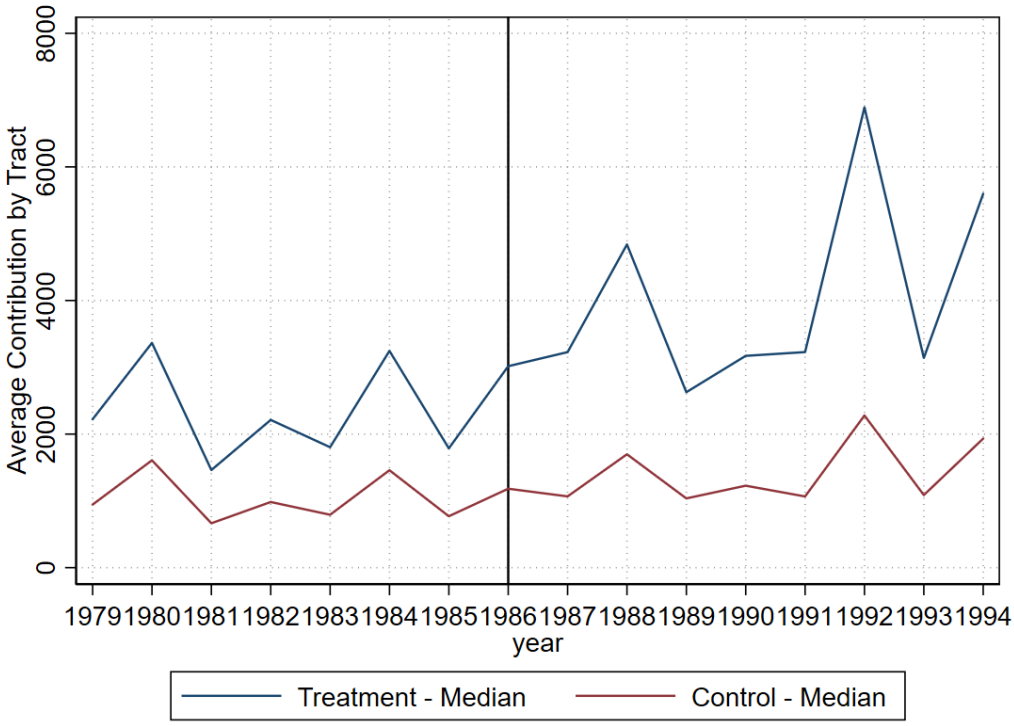
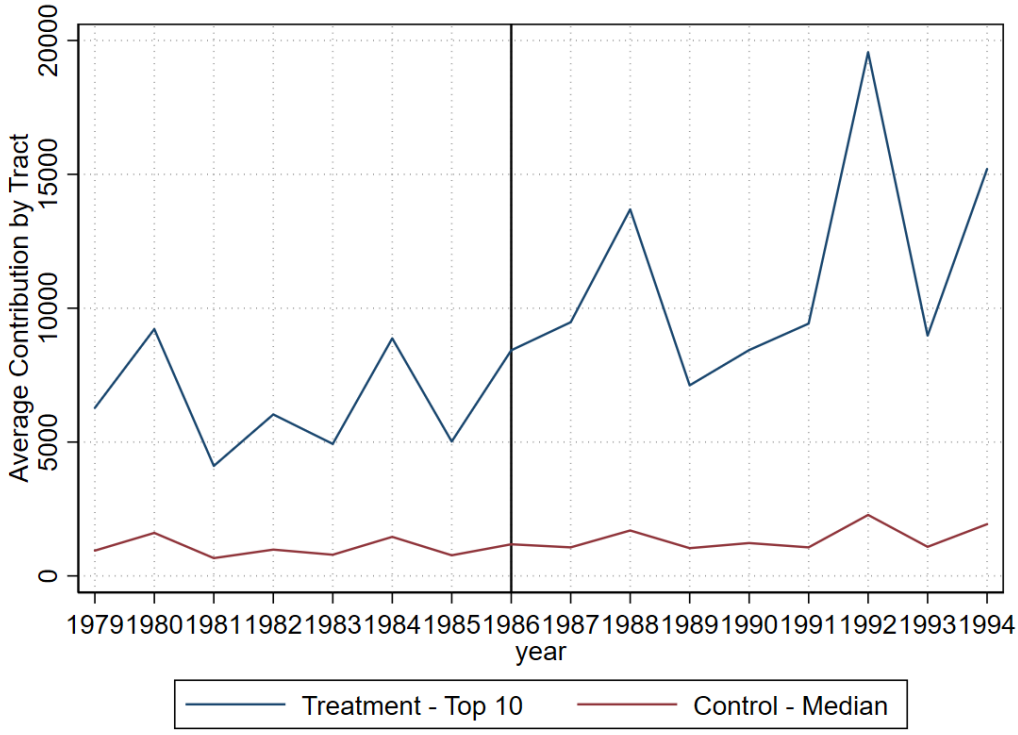


Figure 3 shows that the parallel trend assumption holds. We divide the sample in two using the median value of the intensity of treatment variable. We then compute the annual average contributions for these two groups and display their evolution over time. While the two lines proceed broadly in parallel until 1986, with predictable spikes in election years (particularly pronounced for presidential elections), there is a clear divergence

Figure 7: Parallel Trends Assumption - Top10



starting in 1987, a non-election year. This divergence appears to persist until 1994. While contributions tend to increase for all income groups, the rise has been more pronounced in tracts with above median values of the intensity of treatment.

Figure 4 shows a comparable pattern comparing the top ten and the bottom fifty percentiles of tracts, based on the distribution of the intensity of treatment variable.

The main regression estimates the following panel specification:

$$Y_{it} = \alpha PostTRA_t + \beta Treatment_i + \gamma PostTRA_t * Treatment_i + \eta_t M_i + \delta_{jt} + \epsilon_{it},$$

where Y_{it} is the amount of individual contributions from census tract i during legislature t excluding pivotal legislators and Congress leaders, $PostTRA_t$ is a dummy variable

equal to one from 1987 onwards, Treatment $_i$ is one of the two versions of the intensity of treatment variable for census tract i and M_i is a vector of controls for census tract i at baseline year 1990 (or 1980) interacted with two-year electoral cycle fixed effect. Control variables should ideally be predetermined with respect to the treatment. As explained above, using 1980 Census controls entails losing more than 20 percent of sample observations. Moreover, given that the Census Bureau created census tracts starting from more urban areas, these lost observations would surely be non-random. For this reason we show the main result using the first intensity of treatment variable (calculated for year 1986), with control variables from 1980 and replicate them with the other version of the intensity of treatment (calculated for year 1989), in the full sample of US census tracts, using 1990 controls. The difference between these set of estimates is always rather minor.

Table 2: Campaign contributions: the effect of TRA

	(Contr)	(Contr)	(Contr)	($\Delta Contr$)	($\Delta Contr$)	($\Delta Contr$)
PostTRA	16170.80***	9611.00	16324.85***			
	(3943.06)	(6181.76)	(3882.01)			
Treatment	1.50***	1.23***	1.06***	1.53***	1.20***	1.11***
	(0.18)	(0.12)	(0.09)	(0.30)	(0.29)	(0.23)
PostTRA × Treatment	0.77***	0.60***	0.55***			
	(0.15)	(0.15)	(0.12)			
Treatment 1986	X			X		
Treatment 1989		X	X		X	X
Controls Census 1980	X		X	X		X
Controls Census 1990		X			X	
State*year Fixed Effects	X	X	X			
State Fixed Effects				X	X	X
Observations	200696	289820	201464	50174	72455	50366
R^2	0.12	0.11	0.11	0.11	0.10	0.10
Dep Var: Mean	4734.43	4025.78	4730.92	2910.59	2505.47	2910.78
Dep Var: N Zeros	121,982	175,634	122,604	18,940	26,185	19,069

Standard errors clustered at the county level in parenthesis.

Being the dependent variable measured at a quite small level of geographical aggre-

gation, namely census tract, it includes a high number of zeros (around 60 percent of the total). All results hold excluding those observations from the sample, with unaltered significance and slightly bigger point estimates. Table A2 in the Appendix displays summary statistics for this section. Finally, δ_{jt} is a set of state per cycle fixed effects to absorb state variation in the contribution patterns potentially related to the varying relevance of different states in different election cycles. Standard errors are clustered at the county level.[11]

The choice of the dependent variable merits a further note. According to detailed accounts, a small number of politicians played a decisive part to approve the TRA after a troubled history in Congress. These legislators, especially if sitting in the critical Senate Finance Committee, chaired by Bob Packwood, experienced a sharp rise in donations in 1985, during the discussion of the tax bill. Senator C. Grassley (IA, R), when asked about the surge in giving between 1983 and 1985: "We didn't have a tax bill in 1983. Now people are anticipating a major tax bill." (Birnbaum and Murray 1987, p.180). This spike in donations would certainly have the objective of influenceing the drafting of the tax bill, especially for special interests that were trying to defend their tax breaks through PAC donations. As Birnbaum and Murray (1987, p.183) writes, this type of donations were not only coming from PACs, as groups like Alignpac "managed to circument the federally-imposed $ 5,000-per-election limit on PAC-giving by urging its members to make checks directly to Packwood rather than to the PAC". This lobbying effort by special interest groups involving rich individual contributions is probably introducing a downward bias in the empirical analysis. Nonetheless, we are interested in estimating the effect of the TRA

[11] Alternative specifications that add county fixed effects, or that alternatively control for county per cycle fixed effects, which are very computationally requiring, do not change at all the significance of the results. Also the point estimates remain virtually unchanged. The same is true for clustering at the census tract instead of county level. The statistical significance is also unchanged when we exclude or winsorize one or five percent outliers in the dependent and treatment variables.

on the flow of individual contributions, after its implementation, and not the lobbying before the approval of the tax bill. Then, we exclude contributions to those legislators as well as Congress leaders, potential beneficiaries of contributions with the same logic, in the main specification.[12] To be sure, the change in the dependent variable is minimal, and all results hold including these contributions in the dependent variable (see Table A6).[13]

Table 2 shows that the TRA caused an increase in donations coming from the census tracts that benefited the most from the tax cut. The first column displays results of a regression with control variables for the 1980 Census and intensity of treatment calculated for 1986 with the interpolation described above; the second column shows results of a regression with control variables for the 1980 Census and intensity of treatment calculated for 1989; finally the third column exhibits results of a regression similar to the second one but with 1980 control variables. The same applies to the other three regressions with change in contributions as dependent variable. To ease the interpretation of the coefficients, here we consider the intensity of treatment variable as the amount of the cut in tax rates divided by 1000. We can then conclude that out of 1,000 dollar saved due to the TRA, a tract donates on average between 0.57 and 0.79 dollars more in each election cycle after 1986. Note also that the use of the two different sets of controls changes only marginally the magnitude of the coefficients. Table A3 in the Appendix displays similar results when the dependent variable and the intensity of treatment variables are measured as logarithm of the amount. This table shows that, when the coefficients can be interpreted as elasticities, the difference between the three specification employed in incredibly small

[12]These are, for the House, the Speaker, majority and minority leaders and whips, Chief Deputy Majority Whip, Democratic Campaign Committee Chairman, Republican Conference Chairman, Policy Committee Chairman and Campaign Committee Chairman; and for the Senate, majority and minority leaders and whips, Republican National Senatorial Committee Chair and Policy Committee Chairman, and Democratic Campaign Committee Chairman.

[13]Note that we could not run the regression with contributions to these two groups of politicians only as dependent variables, because the aggregation at the census tract level would result in too many zeros.

(less than one percentage point). As these variables include a high number of zeros, we also employ the inverse hyperbolic sine (IHS) transformation and we confirm the results (Table A3).

Table 3: The effect of TRA on Campaign contributions: Placebo Estimations

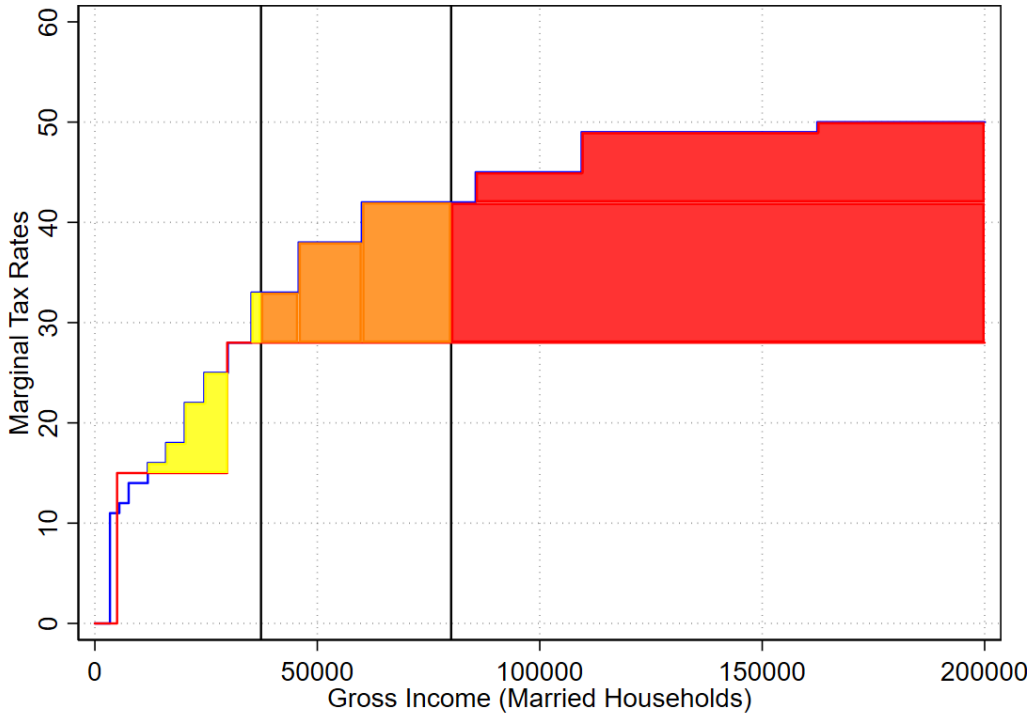
	(Contr)	(Contr)	(Contr)	(Contr)	(Contr)	(Contr)
Placebo Before	2869.93	7870.66**	2976.77			
	(3044.77)	(3943.87)	(2965.89)			
Placebo After				15705.41***	15130.95***	14353.02***
				(2365.58)	(2908.20)	(2352.55)
Treatment	1.48***	1.23***	1.05***	2.66***	2.14***	1.90***
	(0.16)	(0.14)	(0.09)	(0.26)	(0.25)	(0.16)
Placebo Before × Treatment	0.04	-0.00	0.03			
	(0.09)	(0.08)	(0.06)			
Placebo After × Treatment				-0.79***	-0.63***	-0.57***
				(0.13)	(0.07)	(0.08)
Treatment 1986	X			X		
Treatment 1989		X	X		X	X
Controls Census 1980	X		X	X		X
Controls Census 1990		X			X	
State*year Fixed Effects	X	X	X	X	X	X
Observations	100348	144910	100732	100348	144910	100732
R^2	0.10	0.09	0.09	0.14	0.13	0.13
Dep Var: Mean	4006.78	3399.42	4003.22	5462.07	4652.15	5458.61
Dep Var: N zeros	68,460	98,952	68,789	53,522	76,682	53,815

Standard errors clustered at the county level in parenthesis.

To further corroborate the evidence on parallel trends, we carry out placebo tests to rule out that the findings were due to some unobserved confounding shocks which happened in the 'treated' period. The results are reported in Table 3.

We now build intensity of treatment variables for three different income groups (top 10, middle 40, bottom 50) where the thresholds are calculated at the federal level. Figure 5 displays graphically the income saving for the three groups. The overall tax saving for the bottom 50 percent of the income distribution is represented in the yellow area. For the middle 40 the tax saving is instead given by the yellow and the orange areas, while

Figure 8: The different treatment of the TRA for the top 10, middle 40 and bottom 50 groups of income owners



the top 10 saves the yellow, the orange and the red areas.

Table 4: Tax savings per household due to the TRA

	Mean	Std Dev
Top 10 percent (share of income)	22.52	15.19
Middle 40 percent (share of income)	4.73	0.73
Bottom50 percent (share of income)	1.11	0.54
Top 10 total (average amount per CT)	1,487,970	3,443,782
Middle 40 total (average amount per CT)	761,490.3	547,584.8
Bottom50 total (average amount per CT)	92,170.03	53,458.98
Top 10 (per household)	12,755	9,320
Middle 40 (per household)	2,175	296
Bottom50 (per household)	211	73

Table 4 quantifies the average tax savings for the different income groups, respectively as a percentage of total income, as a total per census tract and as an average per household. Households in the top 10 save on average 12,739 $ (versus 211 $ for households below the median), or more than 22 percent of their income (versus slightly more than 1 percent for the bottom 50). [14]

Table 5: The effect of TRA on Contributions: Top 10, Middle 40 and Bottom 50 Income Owners

	(Amount)	(Log)	(IHS)
Post TRA	13642.19***	4.03***	4.50***
	(4470.53)	(0.53)	(0.55)
Treatment Top10	1.34***	0.33***	0.37***
	(0.17)	(0.03)	(0.03)
PostTRA × Treatment Top10	0.66***	0.09***	0.10***
	(0.13)	(0.01)	(0.01)
Treatment Middle40	-6.19***	-0.18**	-0.27***
	(1.10)	(0.08)	(0.06)
PostTRA × Treatment Middle40	-2.50***	-0.04	-0.03
	(0.88)	(0.03)	(0.02)
Treatment Bottom 50	-3.34	-0.49***	-0.29***
	(5.46)	(0.05)	(0.03)
PostTRA × Treatment Bottom 50	4.34	0.04	0.01
	(3.13)	(0.03)	(0.02)
Treatment 1986	X	X	X
Controls Census 1980	X	X	X
State*year Fixed Effects	X	X	X
Observations	197276	196984	197276
R^2	0.15	0.18	0.17
Dep Var: Mean	4685.07	3.14	3.41
Dep Var: N Zeros	119,566	119,451	119,566

Standard errors clustered at the county level in parenthesis.

[14] As we mentioned before, the TRA included an increase in capital gains taxation and many other provisions. We are therefore unable, as previous analyses have similarly underlined, to give a comprehensive and precise account of the consequences of the TRA on the income distribution.

Table 5 reports our results when we use average tax saving per income group as our treatments. In this case, we choose the specification with the treatment measured at year 1986, to minimize the measurement error of the treatment variables calculated separately for the bottom 50, middle 40 and top 10 percent of the census tract income distribution.[15] Overall, we observe a positive and significant effect of the top 10 treatment variable and largely no effect for the other two groups of income owners, whose coefficients are almost always not significant. The other specifications employed with the full sample do not substantively change the results of the top 10 treatment variable, while they display inconsistent coefficients of the treatment variables for the middle 40 and bottom 50 groups of income owners (see Table A4).

In the next section, we study the heterogeneity of the results with respect to the recipients of the donations, to better understand the political dynamics behind our results.

6 Heterogeneity: Recipients of Donations

In the previous section, we have shown that the TRA has led to a notable increase in contributions from the richest income groups. Here, we investigate whether this effect has had any implication for the distribution of campaign contributions across the two main parties. Perhaps surprisingly, we find that contributions to both parties (or party members) have risen in almost identical ways as a consequence of TRA.

Table 6 displays these estimates with the intensity of treatment as the normalized amount of income saved in each tract in the first two columns, and as the normalized amount of income saved for each of the three income groups in the last two columns.

[15] As emphasized above, the treatment variable does not take into account many provisions of the TRA which favoured the bottom half of income owners, beyond the change in the marginal tax rates. The smaller precision might also explain the inconsistency of the coefficients in different specifications.

Table 6: Campaign contributions: the effect of TRA, by party

	(Rep)	(Dem)	(Rep)	(Dem)
PostTRA	9008.91***	2147.15	7521.21***	1718.17
	(2592.63)	(1339.81)	(2138.20)	(1255.35)
Treatment	0.69***	0.49***		
	(0.08)	(0.08)		
PostTRA × Treatment	0.23***	0.33***		
	(0.06)	(0.06)		
Treatment Top10			0.62***	0.44***
			(0.07)	(0.07)
PostTRA × Treatment Top10			0.20***	0.28***
			(0.05)	(0.05)
Treatment Middle40			-2.90***	-1.97***
			(0.42)	(0.45)
PostTRA × Treatment Middle40			-0.47*	-1.21***
			(0.25)	(0.32)
Treatment Bottom 50			-2.69	-1.02
			(2.64)	(1.88)
PostTRA × Treatment Bottom 50			2.67**	0.00
			(1.29)	(1.24)
Controls Census 1980	X	X	X	X
Treatment 1986	X	X	X	X
State*year Fixed Effects	X	X	X	X
Observations	200696	200696	197276	197276
R^2	0.11	0.11	0.13	0.14
Dep Var: Mean	2165.68	1593.58	2151.63	1577.15
Dep Var: N Zeros	146,466	151,961	143,718	149,210

Standard errors clustered at the county level in parenthesis.

From this regression onward, we use the regression with 1980 Census controls and the intensity of treatment variable calculated for year 1986 interpolating data of the 1980 and 1990 Censuses.[16] The coefficients of interest for both parties are significant in both

[16]As noted above, this specification has a smaller sample with around 80 percent of Census tracts in more urban areas, but has the double advantage of discarding the assumption of no change in income between 1987 and 1989 and excluding bad controls. To be sure, the two other specifications always deliver qualitatively indistinguishable results, as in previous tables.

specifications, and very similar in magnitude. Overall, the TRA caused a rise in donations to both the Democratic and the Republican party, and for both parties the increase is exclusively coming from the richest top ten percent of the income distribution. Out of one thousand dollar savings the TRA delivered to a census tract, slightly more than thirty cents were donated to one of the two main parties in the two election cycles after this tax reform.

On the one hand this finding might seem surprising, given that the TRA has been one of the flagship policies of the Reagan administration. On the other hand, many legislative passages of the TRA, including the vote on the final bill, have been of a bipartisan nature. The approval of the TRA required the support of members of the Democratic party both in the Senate and in the House of Representative, which had a strong democratic majority at that time. In the House, the TRA passed with 292 votes in favour, of which 176 were Democrats and 116 Republicans, and 136 votes against, of which 74 were Democrats and 62 Republicans. One possibility, then, is that legislators might have been rewarded independently of partisanship but rather in function of their support for the bill. However, when we split the contributions to legislators according to their final votes in Congress, we do not find any clear pattern in our regressions (Table 7). We also analyze the potential effect of the TRA on the ideology of contributions, making use of the CFscore measures by Bonica (2014), as well as the classic DWNominate measure of ideology for members of Congress. For the subsample of donations for which we could recover an ideology measure, we rescale the ideology of all donations in each tract with amounts as weight, to obtain an ideological score of tract donations. We do not find any significant coefficient for these regressions, as an additional confirmation of a simple income effect (results not reported).[17] Additionally, we consider the possibility that the TRA increased the

[17]Bonica (2014) developed a fixed measure of ideology for active donors and recipients, and a measure

polarization of donations, by making it more extreme for both sides of the ideological spectrum. We do not find any support for this hypothesis (results not reported).

Table 7: Campaign Contributions: the effect of TRA, to recipients that voted yes and no in the final Congress vote

	(VoteYes)	(VoteNo)	(VoteYes)	(VoteNo)
PostTRA	-259.82	-395.39***	-216.16	-447.69***
	(318.11)	(112.46)	(359.94)	(125.10)
Treatment	0.16***	0.01***		
	(0.04)	(0.00)		
PostTRA × Treatment	0.02	-0.00		
	(0.02)	(0.00)		
Treatment Top10			0.14***	0.01***
			(0.03)	(0.00)
PostTRA × Treatment Top10			0.02	-0.00
			(0.02)	(0.00)
Treatment Middle40			-0.52***	-0.03**
			(0.13)	(0.02)
PostTRA × Treatment Middle40			-0.12	-0.00
			(0.08)	(0.02)
Treatment Bottom50			0.14	-0.16*
			(0.69)	(0.09)
PostTRA × Treatment Bottom50			-1.28**	0.19**
			(0.52)	(0.08)
Controls Census 1980	X	X	X	X
Treatment 1986	X	X	X	X
State*year Fixed Effects	X	X	X	X
Observations	200696	200696	197276	197276
R^2	0.05	0.02	0.05	0.02
Dep Var: Mean	459.69	69.61	461.52	69.76
Dep Var: N Zeros	180,156	194,782	176,993	191,430

Standard errors clustered at the county level in parenthesis.

While we have shown that the effect of the TRA on contributions regards both parties

for very active recipients that vary by electoral cycles. Results are unaffected if we use the other rescaled CFscores as dependent variables.

and does not seem to be related to the legislative history of the tax bill itself, it could perhaps be concentrated in some electoral races. Since we have information about the recipient of each donation, we can distinguish between donations to Presidential, House and Senate candidates, as well as political committees. Notably, the TRA has an impact on all these possible groups of donations, with similar coefficients for Congressional, Committee and Presidential donations (see Table A5). Overall, in this section we find that the tax cut implemented in 1986 causes an increase in donations that does not vary with the the type of recipients of donations, thus appearing to be compatible with an income shock that augmented the political influence of the richest top percent of income owners, who received the biggest fiscal advantage.

In the next section, we study the heterogeneity of the findings with respect to the individual donors, to investigate more deeply who are the contributors that drive the results.

7 Heterogeneity: Donors

A natural question arises from the main findings: who are the donors that drive this increase in contributions as a consequence of the cut to the individual federal income rates? On one hand, one might expect that existing donors who experienced a tax reduction would contribute more after the implementation of the TRA, especially those in the top ten percent of income owners who benefited the most from it. On the other hand, individuals who have never donated before and enjoyed a notable tax cut might now have the desire to contribute to politics, perhaps after the realization that tax policies can indeed have a substantial impact on their disposable income.

To distinguish between the former and the latter case, namely the intensive margin

Table 8: The effect of TRA on Contributions: Intensive and Extensive Margin

	(Int Mar)	(Int Mar)	(Int Mar)	(Ext Mar)	(Ext Mar)	(Ext Mar)
PostTRA	17487.71***	19811.56***	16294.05***			
	(5914.82)	(5877.77)	(5632.29)			
Treatment	1.59***	1.30***	1.13***	0.91***	0.77***	0.65***
	(0.19)	(0.13)	(0.10)	(0.07)	(0.10)	(0.05)
PostTRA × Treatment	-0.06	-0.11	-0.04			
	(0.15)	(0.07)	(0.11)			
Treatment 1986	X			X		
Treatment 1989		X	X		X	X
Controls Census 1980	X		X	X		X
Controls Census 1990		X			X	
State*year Fixed Effects	X	X	X			
State Fixed Effects				X	X	X
Observations	200696	289820	201464	100348	144910	100732
R^2	0.11	0.10	0.10	0.12	0.11	0.11
Dep Var: Mean	3575.71	3001.70	3574.07	2743.33	2404.41	2739.20
Dep Var: N Zeros	140,309	204,119	140,967	59,506	85,464	59,817

Standard errors clustered at the county level in parenthesis.

and the extensive margin, we adapt the main specification to dependent variables that represents, respectively, the amount of contributions by census tract from donors that have donated at least once between 1979 and 1986, and the amount of contributions by census tract from donors that have never donated between 1979 and 1986. Table 8 shows that the main result remains significant only for the extensive margin, in all three different specifications. The regressions for the intensive margin actually exhibit even negative coefficients, albeit insignificant. The same decomposition of the intensity of treatment variable to the share of income saved for the top ten, middle forty and bottom 50, displayed in Table 5 for the main result, confirms that the effect remains positive and significant only for new donors that belong to the group with the highest income. The extensive margin regressions deliver significant coefficients for both parties, with a slightly bigger size for the Republican party (results not reported). We have so far established

that new donors have increased their donations in a substantial manner after the 1986 tax reform. Ideally, we would like to discover who these new donors are, at least in terms of their occupation. Unfortunately, the data on the occupation of donors is very imprecise, especially for the electoral cycle of 1990, with around 90 percent of individual donors not indicating their profession. We could theoretically compare the electoral year of 1986 and 1988, respectively before and after treatment, but the scattered nature of the data does not allow us to employ the same design at the census tract level. Then, we preliminarily describe existing and new donors before and after the TRA in different occupations, grouping them in 'politically salient' occupations[18] and medical professions.[19] In this fashion, we observe a spike in donations for medical professions, which is not matched by any notable increase in the 'politically salient' professions. In 1988, more than 3.6 thousands of new donors work in the medical sector (with 1.1 thousands existing donors in the same category), while in 1986 and 1984 the new donors in this industry were 1.8 and 0.8 thousands, respectively (with 0.7 and 0.3 thousands existing donors in the same categories). Even if these two electoral cycles include a midterm and a presidential election, we consider this large rise in the number of high-salary, non-politically involved category of donors in 1988, as suggestive evidence in favor of the interpretation of an income shock that rise donations for reasons that are orthogonal to policy influence.

Detailed accounts of the troubled legislative history of the second major tax reform under the second term of the Reagan presidency, reveal that the drastically regressive cut to the individual federal income tax rates went along with a series of provisions that would have the scope of closing loopholes that benefited exclusively very wealthy people

[18]Those include legal occupations such as lawyers, attorneys; financial occupations; managers; executives; individuals working in real estate and insurance companies. The rationale of this classification rests on the idea that the importance of regulation for these sectors make them politically salient.

[19]Those include psychiatrists, psychotherapists, psychologists, ophthalmologists, medical doctors, dentists, chiropractors and anesthesiologists.

(some of them created by the first tax reform under the same president). These parts of the reform were instrumental to strike a balance between the requests of some Democratic members of Congress, both in the Finance Committee and in the House, and the desire of the President to reduce individual taxation as much as possible. As Birnbaum and Murray write regarding the so called passive-loss provision, this policy "would reduce the amount of tax cut that upper-income people received, despite the drastic reduction in the top tax rate" and that strategy was the "key to the political success of the tax-reform plan" (Birnbaum and Murray, p. 219). Assuming that all high-income owners would have been hurt in the same way by this set of provisions, this would create a downward bias that would go against finding an effect of the TRA. It is still possible, however, that census tracts with many high donors whose income mostly come from investments and real estates bias the results. In order to rule out this possibility, we exploit Census data that provides the aggregate income in each census tract from different sources: wage or salary, self-income, and financial income. Then, we create intensity of treatment variables with the same strategy as before that adjust for the fact that salary income owners received a favorable treatment from the TRA, namely the striking regressive cut to marginal tax rates, but self income and financial income owners were arguably hurt by these closing-loophole provisions.

Table 9 shows the results using these new treatment variables, the interpolation for year 1986 and 1980s controls (the other two specifications deliver qualitatively unchanged results). In the first column, the original intensity of treatment is multiplied by one minus the share of aggregate income from financial and self income in a tract; in the second column it is multiplied by the share of aggregate income from wage and salary; in the third column we combine the two previous conditions. These three increasingly stringent regressions deliver significant coefficients with increasingly big magnitude, as

Table 9: The effect of TRA: Intensity of Treatment by Source of Income

	(Contr)	(Contr)	(Contr)
PostTRA	16278.13***	16202.78***	15618.72***
	(4007.11)	(3977.72)	(4013.53)
Treatment No Fin	1.78***		
	(0.23)		
PostTRA x Treatment No Fin	0.98***		
	(0.18)		
Treatment Wage		1.92***	
		(0.24)	
PostTRA x Treatment Wage		1.04***	
		(0.20)	
Treatment Wage No Fin			1.91***
			(0.26)
PostTRA x Treatment Wage No Fin			1.09***
			(0.20)
Treatment 1986	X	X	X
Controls Census 1980	X	X	X
State*year Fixed Effects	X	X	X
Observations	199996	199996	199996
R^2	0.10	0.10	0.09
Dep Var: Mean	3581.57	3581.57	3581.57
Dep Var: N Zeros	139,766	139,766	139,766

Standard errors clustered at the county level in parenthesis.

expected. We interpret these results as a confirmation that our identification strategy captures the extent to which each census tract benefits from the TRA. In other words, the measurement error does not seem to bias the result in a systematic fashion.

8 Conclusion

The interplay between economic disparities and uneven political influence is a central topic in the study of political economy in the United States. As many other works have

shown, campaign contributions could transform economic power into political influence. Economic elites can then use their political clout to steer public policy decisions in their favour, thus creating a spiral between higher economic inequality and greater political power of a small fraction of very rich citizens. In this paper, we study the least explored part of the spiral, showing that a regressive tax policy inducing a big rise in income inequality, augments the concentration of donations at the top of the income distribution. We find that the tax savings delivered by the Tax Reform Act, one of the biggest tax cuts in the history of the United States, have determined an increase in campaign contributions. We also show that this increase comes from the richest ten percent of the income distribution, which has seen its tax burden decrease by more than twenty percentage points on average. We show that this spike in contributions concerned both parties with similar magnitudes and that it did not constitute a reward to key players in the legislative process or to members of Congress that voted in favour of the tax bill. Finally, we find that this effect is entirely driven by new donors, and we show suggestive evidence that many of them work in non-politically salient occupations. The main findings are robust to a number of alternative specifications, including an adaptation of the main treatment variable to other provisions of the TRA that might bias our main findings.

Overall, our results show that the reduction in progressive taxation has not only increased income inequality but has also been instrumental in augmenting the political clout of the wealthiest Americans, at least for what concerns their relative weight in the pool of campaign contributors. At the same time, the system of campaign contributions, in which economic elites can donate almost unlimited amounts to politics, provide clear opportunities to convert material wealth into political power. Overall, the combination of a regressive policy decision and a lax system of politics finance contributes to create a spiral in which economic disparities and unequal political influence mutually reinforce

each other.

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Appendix Figures and Tables

Table A1: Summary Statistics - Descriptive

	Obs.	Mean	Std Dev	Min	Max
Contr by tract	198,487	115,394	798,872	0	1.24e+08
Contr by tract pro family	198,487	233.91	5,436.48	0	1,465,964
Average income	198,487	62,612.63	36,666.8	4,260	875,266.7
Total Population	198,487	3725	1903	2	101300
Share Black	198,487	0.13	0.20	0	1
Share Hispanic	198,487	0.11	0.18	0	1
Share Graduates	198,487	0.24	0.17	0	1
Share Manager	198,487	0.13	0.07	0	1
Unemployment	198,487	0.07	2.24	0	0.96
Share Adult	198,487	0.75	0.07	0.35	1
Gender Ratio	198,487	0.48	0.04	0.01	0.999

Table A2: Summary Statistics - Reagan Tax Cut

	Obs.	Mean	Std Dev	Min	Max
Contr by tract - '80s	200,696	4,986.49	29877.41	0	2,746,543
Contr by tract - '90s	289,820	4235.87	27,684.76	0	2,746,543
Diff contr by tract - '80s	50,174	2,957.72	22,974.66	-1,079,549	996,763.8
Diff contr by tract - '90s	72,455	2,557.49	21,309.23	-1,079,549	1,211,387
Treatment 1986 (amount)	200,696	3124.34	5015.38	-69.81	199477.8
Treatment 1989 (amount)	289,820	3645.98	5879.42	-29.02	343646.4
Population - '80s	200,696	2908.79	1640.57	1	36157
Number Families - '80s	200,696	753.99	431.67	1	9769
Share Black - '80s	200,696	0.11	0.23	0	1
Share Hispanic - '80s	200,696	0.07	0.15	0	1
Share Graduates - '80s	200,696	0.18	0.13	0	1
Share Manager - '80s	200,696	0.11	0.06	0	1
Unemployment - '80s	200,696	0.06	0.05	0	1
Share Adult - '80s	200,696	0.71	0.12	0.00	1
Gender Ratio - '80s	200,696	0.48	0.04	0	1
Population - '90s	289,820	3429.87	1818.45	1	98443
Number Families - '90s	289,820	897.77	478.39	1	22448
Share Black - '90s	289,820	0.12	0.13	0	0.86
Share Hispanic - '90s	289,820	0.09	0.13	0	0.98
Share Graduates - '90s	289,820	0.19	0.16	0	1
Share Manager - '90s	289,820	0.12	0.06	0	1
Unemployment - '90s	289,820	0.06	0.05	0	0.61
Share Adult - '90s	289,820	0.74	0.07	0.35	1
Gender Ratio - '90s	289,820	0.48	0.04	0.03	1

Table A3: The effect of TRA: Logarithmic and Inverse Sine Transformation Specifications

	(Log Contr)	(Log Contr)	(Log Contr)	(IHS)	(IHS)	(IHS)
PostTRA	3.05***	2.39***	3.11***	3.77***	3.53***	4.08***
	(0.57)	(0.51)	(0.59)	(0.59)	(0.56)	(0.60)
Log Treatment	0.41***	0.70***	0.45***			
	(0.03)	(0.04)	(0.04)			
PostTRA × Log Treatment	0.16***	0.16***	0.16***			
	(0.02)	(0.02)	(0.02)			
IHS Treatment				0.31***	0.52***	0.31***
				(0.05)	(0.05)	(0.04)
PostTRA × IHS Treatment				0.14***	0.12***	0.11***
				(0.02)	(0.02)	(0.02)
Treatment 1986	X			X		
Treatment 1989		X	X		X	X
Controls Census 1980	X		X	X		X
Controls Census 1990		X			X	
State*year Fixed Effects	X	X	X	X	X	X
Observations	200632	289712	201356	200696	289820	201464
R^2	0.17	0.15	0.16	0.16	0.15	0.16
Dep Var: Mean	3.18	3.14	3.17	3.45	3.41	3.44
Dep Var: N Zeros	120,956	174,125	121,559	120,980	174,168	121,602

Standard errors clustered at the county level in parenthesis.

Table A4: The effect of TRA on Contributions: Top 10, Middle 40 and Bottom 50 Income Owners. Other specifications

	(Amount)	(Log)	(IHS)	(Amount)	(Log)	(IHS)
PostTRA	12378.06**	3.69***	4.01***	13424.59***	4.06***	4.35***
	(5414.21)	(0.45)	(0.48)	(3896.54)	(0.50)	(0.54)
Treatment Top10	0.93***	0.10***	0.11***	0.86***	0.10***	0.12***
	(0.09)	(0.01)	(0.01)	(0.08)	(0.01)	(0.01)
PostTRA × Treatment Top10	0.44***	0.02***	0.02***	0.43***	0.02***	0.02***
	(0.11)	(0.00)	(0.00)	(0.09)	(0.01)	(0.01)
Treatment Middle40	-2.44***	-0.12***	-0.10***	-3.05***	0.09***	-0.17***
	(0.46)	(0.04)	(0.03)	(0.47)	(0.02)	(0.03)
PostTRA × Treatment Middle40	-1.10***	0.08***	0.08***	-1.18***	0.09***	0.09***
	(0.39)	(0.02)	(0.02)	(0.35)	(0.02)	(0.02)
Treatment Bottom 50	12.56**	0.00	-0.05**	11.57**	-0.11***	-0.12***
	(5.03)	(0.03)	(0.02)	(5.25)	(0.04)	(0.03)
PostTRA × Treatment Bottom 50	5.05***	-0.02	-0.01	7.09***	-0.04**	-0.03**
	(1.43)	(0.01)	(0.01)	(2.60)	(0.02)	(0.01)
Treatment 1989	X	X	X	X	X	X
Controls Census 1980				X	X	X
Controls Census 1990	X	X	X			
State*year Fixed Effects	X	X	X	X	X	X
Observations	290116	289720	290116	201680	201344	201680
R^2	0.15	0.16	0.16	0.12	0.16	0.16
Dep Var: Mean	4025.23	3.09	3.37	2507.44	3.12	3.39
Dep Var: N Zeros	175,884	175,682	175,884	122,788	122,631	122,788

Standard errors clustered at the county level in parenthesis.

Table A5: Campaign contributions to different campaigns: the effect of TRA

	(Pres)	(House)	(Senate)	(Congress)	(Committee)
PostTRA	3746.21***	1251.50	1596.90	2848.10*	5566.06***
	(1313.30)	(895.01)	(1265.69)	(1673.91)	(1877.64)
Treatment	0.12***	0.24***	0.41***	0.65***	0.74***
	(0.02)	(0.02)	(0.05)	(0.07)	(0.10)
PostTRA × Treatment	0.19***	0.13***	0.12***	0.25***	0.26***
	(0.02)	(0.02)	(0.03)	(0.04)	(0.06)
Controls Census 1980	X	X	X	X	X
Treatment 1986	X	X	X	X	X
State*year Fixed Effects	X	X	X	X	X
Observations	200696	200696	200696	200696	200696
R^2	0.12	0.12	0.10	0.12	0.10
Dep Var: Mean	452.85	920.77	1167.69	2087.42	2154.86
Dep Var: N Zeros	180,428	154,398	157,914	139,683	150,913

Standard errors clustered at the county level in parenthesis.

Table A6: Campaign contributions: the effect of TRA, including Congress leaders and pivotal legislators

	(Contr - All)	(Contr)	(Contr - All)	(Contr)
PostTRA	17280.22***	16170.80***	14648.14***	13642.19***
	(3908.99)	(3943.06)	(4516.59)	(4470.53)
Treatment	1.64***	1.50***		
	(0.19)	(0.18)		
PostTRA × Treatment	0.79***	0.77***		
	(0.16)	(0.15)		
Treatment Top10			1.47***	1.34***
			(0.18)	(0.17)
PostTRA × Treatment Top10			0.68***	0.66***
			(0.14)	(0.13)
Treatment Middle40			-6.70***	-6.19***
			(1.20)	(1.10)
PostTRA × Treatment Middle40			-2.53***	-2.50***
			(0.90)	(0.88)
Treatment Bottom 50			-2.97	-3.34
			(5.89)	(5.46)
PostTRA × Treatment Bottom 50			4.57	4.34
			(3.30)	(3.13)
Controls Census 1980	X	X	X	X
Treatment 1986	X	X	X	X
State*year Fixed Effects	X	X	X	X
Observations	200696	200696	197276	197276
R^2	0.09	0.09	0.07	0.07
Dep Var: Mean	4986.49	4734.43	4934.64	4685.07
Dep Var: N Zeros	120,980	121,982	118,580	119,566

Standard errors clustered at the county level in parenthesis.