Democracy, Inequality, and Antitrust[1]

Michael O. Allen
Yale University
michael.allen@yale.edu

Kenneth Scheve
Yale University
kenneth.scheve@yale.edu

David Stasavage
New York University
david.stasavage@nyu.edu

Last revision:
February 3, 2023

Abstract

This paper investigates the relationship between democracy and antitrust policy. Strong antitrust policies advance the economic and political interests of most citizens, making their adoption more likely in institutional settings that weigh the interests of consumers. We examine the empirical relationship between democracy, inequality, and antitrust policies in a broad panel of countries from 1951 to 2010. Using a variety of empirical strategies, we find that democracy is predictive of stricter antitrust policies in countries with low but not high levels of inequality. This result accords with the idea that economic inequality can undermine the political forces that tend toward stronger antitrust policy in democracies. We then investigate a supposed exception to this pattern: the United States in the late 19th century. Through a mixed-methods analysis, we present evidence that democracy and inequality shaped the politics of antitrust in this era in a way that resonates with our cross-country analysis.

1   Introduction

In 1908, William Allen White published a series of essays for *American Magazine* under the title "The Old Order Changeth" that assessed the relationship between democracy and capitalism in American society. The title comes from Tennyson's poem "The Passing of Arthur" and White uses it to signal his overarching theme that American democracy would be triumphant and the country was in the midst of a revolution from "the control of capital to the control of men" (White, 1910, p. 234). While White's essays celebrate progressive era victories in regulating, or as he puts it "socializing," capitalism, the problem that pervades and animates them is the power of capital to shape and control politics. Late nineteenth century American politics is a place where "Money in politics was there for the purpose of protecting the rights of property under the law, as against the rights of men...The greed of capital was rampant, the force of democracy was dormant" (White, 1910, p. 21). The question at the heart of White's essays was whether democracy could shape markets so they served the broad interests of society in a context of economic interests with vast resources to influence politics.

These same questions confront contemporary analyses of antitrust policymaking. Why has the United States not adopted more aggressive antitrust policies and enforcement in an era of increasing economic concentration across the economy, especially in the technology industry? An intensely debated answer to this question involves the political influence of economic interests on policymaking. Economic inequality in the United States has increased to levels that rival those of the late nineteenth and early twentieth century period in which White wrote. Does inequality afford economic interests political power that undermines democratic regulation of market power?

To understand more systematically the relationship between democracy, inequality, and antitrust policy, this paper investigates their empirical relationship comparatively and historically. While we acknowledge that inequality and market concentration are related concepts, we argue that they ought to be treated as distinct phenomena. We then present two sets of analyses. We first describe the relationship between democracy, inequality, and antitrust policy in a broad panel of countries from 1951 to 2010. Using two-way fixed effects (TWFE) regressions, we offer descriptive evidence

that democracy is predictive of stricter antitrust policies in countries with low but not high levels of inequality. Our results hold when using an alternative difference-in-differences estimator robust to some potential sources of bias found with two-way fixed effects (Imai, Kim and Wang, 2021). These findings are consistent with the idea that strong antitrust policies are preferred by citizens and that they are more likely to see those preferences reflected in policy when ruled by democratic political institutions. This also accords with the idea that economic inequality can undermine the democratic processes that tend toward stronger antitrust policy.

Second, we investigate whether antitrust reforms in the United States during the progressive era constitute an exception to these global patterns. The adoption of antitrust reforms in the high-inequality context of the late nineteenth and early twentieth century American political economy seems inconsistent with the comparative data that we present as well as the contemporary U.S. experience. We suggest that the progressive era actually fits the larger pattern well. First, we present historical evidence suggesting that the Sherman Act itself was a weak law designed more to signal that politicians were doing something rather than to significantly regulate monopolies. The Sherman Act of 1890 is not really an exception. Later legislative and regulatory activity, like the Clayton Act of 1914, did introduce substantial reform. Even here though, we think the politics is well described by democratic institutions encouraging reform and high inequality making it less likely. We present evidence from Senate voting on the Clayton Act and the later Webb-Pomerene Act, which echo our comparative data in that Senators from states where democracy was impeded by either high inequality or the absence of direct Senatorial elections were less likely to support strong antitrust policies.

The results presented in this paper suggest a skeptical answer to the question of whether democratic political institutions are self-equilibrating in the sense that they tend to deliver policies that correct the excesses of capitalism and the threats of those excesses to democracy itself. Our evidence indicates that in the area of antitrust, whatever advantage democracies have over authoritarian regimes in responding to increases in market power is context specific. We tend to observe antitrust reforms in response to democratization where economic inequality is low but not

where it is high.

2 Antitrust Legislation

Antitrust law (also, competition law) refers to a diverse body of legislation designed to ensure the competitiveness of markets. In the early twentieth century, antitrust was largely an American phenomenon. In the late 1930s, the United States began encouraging its major trading partners to create US-style antitrust legislation as well. This effort picked up dramatically after World War II as international economic concentration was increasingly viewed in the United States as both a national security threat (e.g. if key military needs relied on one or two foreign producers) and as an important legal export in its efforts to entrench democracy abroad. Antitrust was thus sold as an important element of democratic reform. This was put into practice through the "decartelization" of post-War Germany and Japan as part of American democratization plans.[1] For Western Europe, the United States was an instrumental ally of Jean Monnet as he foisted competition rules on the original European Coal and Steel Community countries whose economies were highly concentrated and cartelized (Gillingham, 1991, Ch. 5). A growing body of reformers in the US and—after the US post-War push—abroad, viewed competition law through the lens of democratic politics animated by the fear that concentration might threaten the vitality and vibrancy of democratic discourse and practice.

In Figure 1a, we can see this increase in the rate of competition-related legislation after 1945 using new data on global competition legislation from the Comparative Competition Law (CCL) database (Bradford and Chilton, 2018). After the War, not only does legislative activity expand but we also see dramatic increases in the strength of antitrust laws globally, particularly in democracies. Figure 1b plots the mean stringency of competition laws as coded by the CCL separated by regime type (higher values indicate more strict competition rules, discussed in greater detail below). We see that democracies were especially likely to implement strict competition rules after the War.

---

[1]In the subsequent Cold War context, the United States backtracked somewhat allowing the reestablishment of certain industrial combines in Japan known as the *Zaibatsu*.
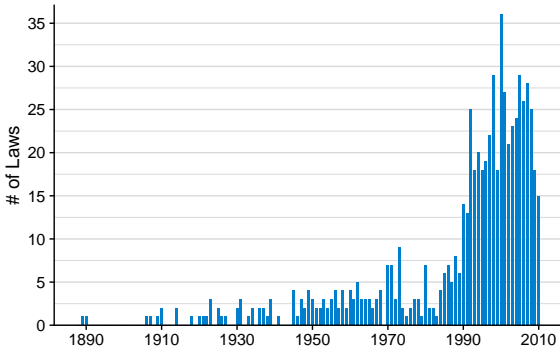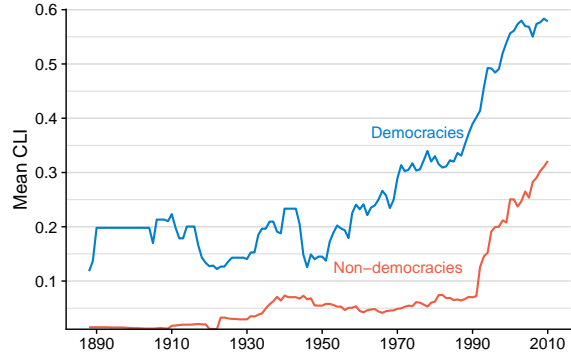
| (a) Competition Legislation | (b) Strength of Competition Laws |

Note: Data on competition legislation and substance are taken from the Comparative Competition Law database. "CLI" is an index running from 0 to 1 incorporating many aspects of a country's competition regime. Higher values indicate a more strict competition regime. Democracy is defined as a Polity5 score of 6 or greater.

Figure 1: Global Competition Legislation Over Time

As can also be seen in the figure, the average strictness of competition law remained very low in non-democracies until the early 1990s. After that point, there was a notable increase in the level of strictness in non-democracies, but still lagging what was seen in democracies. These descriptive plots align with the scholarly work identifying a positive relationship between democracy and the time-to-enactment of antitrust laws (Büthe and Minhas, 2015; Weymouth, 2016).

The framework we put forward for understanding the global expansion (or lack thereof) of antitrust rules can be summarized in two parts. First, we discuss the economic and political motivations behind popular demands for the regulation of big business. Second, we argue that we see these demands tend to be realized in democratic settings that are more sensitive to the demands of citizens. Specifically, high levels of economic inequality can hinder the *supply* of antitrust legislation by hampering democratic political representation. Below, we discuss each of these aspects of our argument in turn.

One primary motivation for antitrust reform comes from the harmful effects of excessive market concentration on a variety of economic outcomes to which consumers (and voters) are sensitive. For example, economic concentration has been shown to exhibit a variety of negative macro-economic outcomes, such as inhibiting economic growth by reducing innovation (Federico, Scott Morton

4

and Shapiro, 2019; Cunningham, Ederer and Ma, 2021; Callander and Matouschek, 2022) and investment (Gutiérrez and Philippon, 2017). In a recent analysis of US and global firms, Gutiérrez and Philippon (2020) find that, contrary to common wisdom, dominant firms' contribution to aggregate productivity growth has declined over the last two decades. Perhaps most importantly, antitrust laws are meant to prevent dominant firms from abusing their market power to increase prices above what would prevail in a competitive market. Indeed, recent advances of market concentration in the United States led to widespread increased markups and profitability (De Loecker, Eeckhout and Unger, 2020). Other studies have found that high levels of market concentration are associated with declines in the labor share of income (Barkai, 2020). In sum, noncompetitive markets hurt consumers by both weakening their individual buying power and earnings as well as macro-economic outcomes, such as innovation and growth, regardless of the type of political regime under which they live. And because in democracies consumers' votes matter, we expect democratic regimes to be more likely to enact stricter antitrust rules.

The politics of antitrust regulation is not limited to economic motivations alone, however. Another key concern behind antitrust regulation particular to democracies is the distorting effect of market concentration on political power (Khan, 2018). From the inception of the antitrust legal tradition in the late nineteenth century United States to the present, there has remained a strong undercurrent of legal thought that views antitrust as an essential bulwark against the threat posed by big business and economic concentration to democracy. Robert Pitofsky, a former head of the Federal Trade Commission (one of the US agencies tasked with antitrust enforcement), has referred to this element at the core of antitrust as its "political content" (as opposed to the "economic content" of antitrust) (Pitofsky, 1979). To Pitofsky, the political content of antitrust is best summed up by Learned Hand who wrote in his opinion for the Supreme Court in its landmark *Alcoa* decision (1945) that "great industrial consolidations are inherently undesirable" for democratic politics. On the Senate floor in 1890, John Sherman, the namesake of the US's first antitrust law, referred to industrial concentration in explicitly political terms as granting "a kingly prerogative, inconsistent

5

with our form of government."[2] The extreme levels of concentration witnessed at the time had, in Sherman's view, "agitated [the popular mind] with problems that may disturb social order, and among them all none is more threatening than the inequality of condition, of wealth, and opportunity that has grown...out of the concentration of capital into vast combinations."[3] Antitrust was thus from its inception seen as not only a legal mechanism for fostering competition and alleviating economic inequality, but also as a tool for promoting the political equality that is essential to a burgeoning democracy. And recent scholarship has come to similar conclusions. Zingales (2017) argues that there is a risk of a "Medici vicious circle" in which a firm's economic power from whatever source generates political power which in turn confers ever greater economic power for the firm. Callander, Foarta and Sugaya (2021) model the emergence and limits of such a positive feedback loop in an integrated political and economic model of competition policy. And in a recent working paper, Lancieri, Posner and Zingales (2022) argue that the decline of antitrust enforcement in the United States is driven by the influence of big business over key, non-democratically accountable enforcement institutions such as the federal judiciary and the Department of Justice.[4]

So both economic and political motivations for antitrust suggest democratic regimes may be better disposed towards competition laws. This is not to say, however, that we expect antitrust rules to be exclusive to democracies. As shown in Figure 1b the end of the Cold War brought with it a fairly large expansion of antitrust regulation in non-democracies. While autocratic antitrust is beyond the scope of the present paper, this trend is perhaps driven by the growth of more market-friendly authoritarian regimes (Bremmer, 2009). Such autocracies are increasingly reliant on law and courts for managing their complex market economies (Moustafa 2007, esp. Ch. 3 and 6; Root and May 2012; Wang 2015). It is also notable that after the Cold War, there was a sudden increase in the number of hegemonic- and multi-party authoritarian regimes (Reuter and Gandhi, 2011). Indeed, the authors show that elite defection from an authoritarian hegemonic party is significantly more

---

[2]*Congressional Record* vol. 21, part 3, p. 2457

[3]*Congressional Record* vol. 21, part 3, p. 2460

[4]This echoes our argument in Section 4 concerning the US Senate's decision to rely on common law formulations in the Sherman Anti-Trust Act (1890). We argue that such language represented a delegation of antitrust rule-making authority to a democratically unaccountable institution subject to the influence of economic elites: the federal judiciary.

likely in times of economic downturn. This may provide an incentive for elites within such an authoritarian regime to enact antitrust rules in order to help promote economic growth, despite the availability of illiberal or extra-legal means of regulating big business. Nevertheless, we expect either the ability of political elites to more easily reap the benefits from economic concentration in autocratic contexts or the availability of alternative means of managing the harmful effects of concentration to dampen the supply of antitrust laws relative to democratic settings that are sensitive to the interests of voters.

Not all democracies are equally disposed to acting on mass preferences, however. We argue that inequality disrupts the democratic process with respect to antitrust in that it tends to result in policy outcomes that benefit the wealthy (e.g., Bartels, 2008; Hacker and Pierson, 2010; Gilens, 2012). For example, inequality tends to result in gridlock as the wealthy block reforms that threaten their interests (Enns et al., 2014). Gridlock can also imply an erosion in the strength of antitrust laws as the law-on-the-books becomes increasingly out of step with modern business over time, what Hacker (2004) refers to as "policy drift." Given the economic benefits economic elites tend to enjoy from increased market concentration (Gans et al., 2019), we expect this dynamic to benefit dominant firms and therefore impede the enactment of stricter antitrust rules. We see a similar dynamic in the Acemoglu and Robinson (2008) concept of "invariance" whereby democratic transitions under conditions of high inequality (i.e. a small, more easily organized economic elite) generates political transitions that do not translate into economic liberalization.

In summary, a look at the above findings reveals an important tension in the relationship between democracy and antitrust: democracy will ease the translation of consumer preferences for increased competition into policy, but high inequality may give some individuals—those who derive their fortunes from economic concentration—a greater ability to block it.

It is important to note that our framework focuses on the interaction between political institutions and economic inequality and is agnostic regarding the underlying level of concentration within a given market. We note, however, that while the relationship between market concentration and inequality is contested, some recent scholarship suggests that there may be a causal connection

7

between market concentration and inequality (e.g., Philippon, 2019, 20-22). There are two primary mechanisms through which market concentration is thought to contribute to broader inequalities in wealth or income. The first derives from the rents that accrue to dominant firms which are then doled out to employees in those firms, entrenching and exacerbating between-firm wage inequality (Furman and Orszag, 2018). Second, high levels of market concentration and the rise of "superstar" firms have been found to contribute to the fall in the labor share of income in the United States (Autor et al., 2017, 2020). This finding suggests that market concentration could play a role in worsening societal-level economic inequality where individuals' reliance on labor versus capital income is correlated with income (Jacobson and Occhino, 2012; Erauskin, 2020). In summary, while there does not appear to be a necessary relationship between competition and income inequality, there do exist conditions under which the lack of competition will tend to increase inequality.

We also acknowledge important heterogeneities within the relationship between concentration, inequality and the demand for antitrust. First, while income may be concentrated in the hands of a relatively small group of elites, under certain circumstances those elites may see enforced competition as in their best interests (if, for example, they tend to own or manage firms that compete within the same industries). Second, labor groups that are able to benefit from monopoly rents may be less likely to support antitrust legislation the could threaten the market dominance of their employers (Weymouth, 2016). While these possibilities introduce preference variation among key actors, we nevertheless believe that our theory captures well average anti-trust preferences among workers/consumers and economic elites.

To illustrate the differential dynamics of democratic transitions at different levels of inequality as well as confirmation that concentration and inequality need not go together, consider South Korea and Chile. While Korea enacted its first competition law in 1980 (prior to democratization), enforcement was low as the enforcing agency, the Korean Fair Trade Commission (KFTC), was a subsidiary of the Economic Planning Board. Eight years later, Korea's democratic transition occurred when income inequality was quite low despite high levels of market concentration. During this period we see a marked increase in the rate of competition-related legislation (6 laws between

8

1990-2000 versus 2 in the prior decade). These laws created new powers for the government to regulate cross-debt guarantees between chaebol subsidiaries, inside-dealing between subsidiaries (Jung and Chang, 2006, 692) and prohibit "unnecessary" diversification of the largest conglomerates (Lee, 1998, 91). In 1990, as a means of increasing the independence of antitrust enforcement, decision-making authority was transferred from the Economic Planning Board to the chair for the KFTC (OECD, 2000, 6). And while enforcement reviews often did not result in sanctions, they successfully prevented chaebol from expanding into new sectors in an anti-competitive fashion (Graham, 2003, 92). The 1997 Asian financial crisis created political conditions that facilitated deeper competition reforms. The crisis further weakened the political position of the chaebol as many blamed the complex debt linkages between and within the chaebol for exposing Korea to the Asian financial crisis (Kalinowski, 2009). Since the crisis, competition policy enforcement has increased and the KFTC head was elevated to the cabinet level (Gerber, 2010, 219-22). Korea has since developed into a significant global actor within international competition policy circles, not simply as an advocate for competition policy, but providing a unique template for export to other jurisdictions (Cho and Büthe, 2021).

Contrast the Korean experience with that of Chile, which democratized under conditions of both high market concentration and high levels of income inequality. Rather that witnessing the growth of competition regulation as was the case in Korea, we find a reluctance to regulate big business, despite broad recognition of the harmful impact of insufficient competition (Bitran and Serra, 1998; Manzetti, 2000). Hindered by high levels of inequality, democratization failed to engender reform or enforcement. The weak regulatory environment after democratization enabled the continuation of rent-seeking behavior and of the revolving door between government office and the directorships of firms in recently privatized sectors—further limiting the prospects for reform. Observers in the early-90s attributed Chile's indecisive and loophole-riddled antitrust regime (and low prospects for reform) to the government's reluctance to "pick a battle with corporate interests, which comprise much of the right-wing opposition" (Jackson, 1996). Despite the reductions in poverty and strong economic growth of the 1990s, economic inequality became highly politically

salient during the 1999-2000 election and intersected with attitudes towards big business. A 1998 Chilean poll found 85% of respondents believed economic development primarily benefited the rich and two thirds responded that the government was overly influenced by big business (Figures cited in Angell and Pollack, 2000). After that election, the Lagos government introduced proposals for antitrust reform. Though the issue did not gain much traction until it was endorsed by Chile's largest trade association in 2001. The issue gained popular traction after the resignation of a member of Chile's competition authority in protest at governmental interference into a review of a case in the telecommunication sector (Agüero, 2016, 128-9). Thus, real reform came only in 2003, over a decade after democratization and after sustained declines in income inequality.

In sum, our theoretical framework focuses on how democracy influences the regulation of big business, conditional on the level of inequality. We assume that capitalist economies have enough concentration or the threat of concentration that competition regulation is preferred by voters. Our theoretical framework anticipates that democratization will make it more likely that countries adopt strict competition policy but only if pre-existing inequality is sufficiently low that concentrated economic interests are not able to dominate the policymaking process. In the next section, we turn to our quantitative analyses of democracy and antitrust law.

3 Democracy, Inequality, and Antitrust Policy, 1951–2010

In the previous, section we argued that while there are economic and political reasons to expect democratic societies to establish strong competition regimes, inequality could present an *obstacle* to competition reform. Our argument is that democratic institutions should lead to an increase in the stringency of antitrust law, but only when inequality is low. In this section we examine the relationship between democracy, inequality and antitrust in a cross-national context. We focus on the post-War period given the increase in international legislation driven by the growing recognition of the American antitrust policy "script."

3.1 Data & Methods

We obtained data covering global competition laws from the Comparative Competition Law (CCL) project (Bradford and Chilton, 2018; Bradford et al., 2019). The product of a large-scale, multi-year data collection effort, the CCL represents a dramatic improvement in the systematic description of antitrust legislation. In contrast to earlier projects that are limited in temporal and geographic scope, the CCL provides detailed data on the competition laws from over 200 countries between 1890 and 2010. This project codes not only the presence of a competition law, but also categorizes and codes common features of competition laws enabling inter-temporal and cross-national comparison of the stringency of competition laws across dozens of such features.

In our analysis below (and in Figure 1b above), we use the CCL's Competition Law Index (CLI), a unidimensoinal measure of the stringency of a country's antitrust regime. The CLI was constructed using a team of international law students from Columbia Law School with the requisite legal and language expertise to code all of the laws included in the dataset in their original language (Bradford and Chilton, 2018, 400-1). Specifically, coders were tasked with identifying the presence (or absence) of various common features of antitrust laws including various substantive provisions (such as rules governing mergers, price fixing, etc.) as well as the public and private legal authorities that facilitate enforcement (e.g. private rights of action, fines, damages, and so on. For a complete list see p. 402). The presence of each feature increases a country index by a fixed value. Some features result in a point reduction, such as an industry-level exemption from antitrust liability. The CLI is defined as the sum of each feature and transformed to range from 0 to 1. The CCL project took pains to incorporate legal nuances between countries as well. For example, a general abuse of dominance provision will increase a country's score by 2 points, though a country's score is adjusted for particular provisions found in the law. For example defining specific abusive acts (such as discriminatory pricing or tying) will increase the score by a quarter point per defined behavior, while allowing an efficiency defense reduces the score by half a point (p. 406). So while there certainly exist differences across jurisdictions in the particularities of each measured aspect of competition laws (like the specific requirements to notify competition authorities before a merger), we believe

the index nevertheless enables broad cross-national (and over-time) comparison of the stringency of competition regimes. We therefore deploy the CLI as our outcome measure in the analyses below.

The democracy data is taken from the Polity5 dataset. We create a binary variable equal to 1 if a country has a Polity score of 6 or higher in any given year and those with lower scores receive a 0.[5] We obtain cross-national inequality data from the World Inequality Database (WID). The WID is the premier source for directly comparable income share data. While top incomes tend to be highly correlated with other measures of inequality such as the Gini coefficient for income, we believe the top 1% income share is the superior measure of inequality for the purpose of this paper.[6] This is due to our interest in variation in the economic and political power of those at the top of the income distribution with the means to influence policy. The Gini coefficient may present problems for this purpose as it is more sensitive to changes in the middle of the income distribution than at the top (or bottom) (Atkinson, 2007). Due to intermittent missing data for various countries, we linearly interpolate missing observations. Results using observed-only data can be found in Table A.1. Finally, we exclude countries for which we have fewer than 20 annual observations.

We also include in some specifications a variety of control variables that have previously been found to correlate with antitrust legislation. These include data on GDP and GDP per capita (from Maddison Historical Statistics, see Bolt and van Zanden, 2020) as well as trade dependence,[7] because prior work has found trade to be correlated with the stringency of antitrust laws (Büthe, 2015; Bradford and Chilton, 2019). Economic crisis can spur demand for reform of competition rules (Palim, 1998). We therefore control for the incidence of economic crisis by including an indicator variable equal to 1 during the years in which a country experiences GDP growth of less than -3% and 0 otherwise.

---

[5]Results using the 21-point Polity measure can be found in Table B.3 and results using V-Dem's Liberal democracy index can be found in Table B.4. In Table D.1, we present results using an alternative dichotomous measure of democracy developed by Boix, Miller and Rosato (2013).

[6]Table B.2 presents results using the post-tax and post-transfer Gini coefficient from the Standardized World Income Inequality Database, Solt (2020).

[7]This is taken from the Penn World Tables (v7.1). The variable is defined as $\frac{\text{imports}+\text{exports}}{\text{GDP}} \times 100$

We use two estimation strategies. First, we estimate the following equation using TWFE OLS:

$$\text{CLI}_{it} = \beta_1 \text{Dem.}_{i,t-1} + \beta_2 \text{Top Income}_{i,t-1} + \beta_3 \text{Dem.}_{i,t-1} \times \text{Top Income}_{i,t-1} +$$

$$\rho X_{i,t-1} + \gamma_i + \omega_t + \varepsilon_{it}$$

X_{it} is a vector of control variables; γ_i and ω_t are unit- and period-fixed effects, respectively; β and ρ are coefficients to be estimated; and ε_{it} is the error term. All explanatory variables are lagged by one time-period. We present results from regressions in which we average all explanatory values over three-year periods. This allows us to incorporate a lagged structure without specifying precisely how long it takes for changes in inequality or democracy to influence competition policy. Importantly, our dependent variable, CLI_{it}, is not averaged and is equal to its value in the initial year of a given three-year period. That is, we regress a country's CLI in year t on the average of all independent variables from year $t-3$ to $t-1$. While this specification adjusts for common temporal shocks, invariant unit-characteristics and a variety of time-varying controls, there nevertheless may remain unobserved factors correlated with democracy and inequality driving the results. These could involve changes in the salience of fairness concerns or in the value of state intervention in the economy. Nonetheless, these estimates are informative as predictors of antitrust, but one should be cautious about giving them a causal interpretation.

Recent scholarship has demonstrated the potential for bias in TWFE analyses in settings such as ours with staggered treatment assignment (Borusyak and Jaravel, 2017; de Chaisemartin and D'Haultfœuille, 2020; Goodman-Bacon, 2021). We therefore also present a second analysis using a difference-in-differences estimator robust to these issues (Imai, Kim and Wang, 2021). This estimator accommodates treatment effects that are heterogeneous across units or time and prevents mismatched comparisons between already treated and newly treated units.

Following Imai, Kim and Wang (2021), we conduct this second analysis in two steps. First, for each instance of democratization[8] we construct a matched control group composed of all non-democratic countries over the period of our analysis (i.e. 5 years prior to democratization

---

[8]As above, we define a democracy as any country with a Polity score greater than or equal to 6.

and 10 years post). By limiting this control group to only the countries that are non-democratic for the period leading up to democratization and remain non-democratic for the duration of our analysis we avoid the mismatched comparisons that bias TWFE. To improve the comparability between each democratizing country and its control group, we weight the units in the control group by the similarity of their estimated propensity to democratize to that of the matched country that did democratize. Weighting the full set of non-democratizing countries versus matching on a fixed subset of those countries reduces the dependence of our results on our specification of the first step equation. For the second step, we subtract the differences between the trajectory of the democratizing countries' antitrust laws from that of their weighted control groups then take the average of those differences for each year under analysis (Imai, Kim and Wang, 2021). Given that it can take years for legislation to be prepared and passed, we explore the effect of democratization on the stringency of antitrust legislation for a decade after democratic transition. We estimate standard errors via clustered bootstrap.[9]

In Appendix G, we plot the improvement in covariate balance achieved after we refine each country's control group for each year prior to democratization. It is important to note the flat trajectory of our outcome variable, CLI, for the half decade prior to democratic transition. This lends credence to our identifying assumption that democratizing countries would not have experienced changes in their antitrust laws had they not in fact democratized.

Put formally, we estimate the average treatment effect on the treated $(\widehat{ATT_F})$ for F years after each instance of democratic transition contained in the set D_i:

$$\widehat{ATT_F} = \frac{1}{\sum D_i} \times \sum_{i \in D_i} \left((\mathrm{CLI}_{i,t_i+F} - \mathrm{CLI}_{i,t_i-1}) - \sum_{i' \in \mathcal{M}_i} \omega_i^{i'} (\mathrm{CLI}_{i',t_i+F} - \mathrm{CLI}_{i',t_i-1}) \right)$$

t_i represents the year of democratic transition. $\mathcal{M}_i$ refers to the matched set for transitioning country i which contains all i' control units that are weighted by $\omega_i^{i'}$. We estimate the weights using covariate balancing propensity scores proposed by Imai and Ratkovic (2014). To do so, we regress an indicator

---

[9]We implement this full procedure using the `PanelMatch` package for R developed by In Song Kim, Adam Rauh, Erik Wang, and Kosuke Imai.

of democratic transition on 5-year rolling means of logged GDP and per capita GDP, trade openness, the (interpolated) top 1% income share, and our outcome measure, the Competition Law Index (Bradford et al., 2019). To investigate the interaction between democracy and inequality, we estimate and compare the effect of democratization on two subsets of our data: a *low-inequality sample* in which we include only instances of democratization that occur while a country's top 1% income share is below the median; and a *high-inequality sample* restricted to countries that transition with inequality at or above the median. In the following subsection, we present the results from our TWFE specification before turning to the difference-in-difference estimates.

3.2 Results

The results are presented in Table 1. We initially include a regression without controls apart from period- and unit-fixed effects, finding a positive and highly significant association between democracy and the stringency of antitrust laws. After we introduce the interaction between inequality and democracy, we see the coefficient on democracy increase dramatically, while the coefficient on the interaction term is negative. This suggests that democracy is positively associated with antitrust when inequality is low, but higher levels of inequality are estimated to attenuate the effect of democracy. The coefficients on the variables of interest remain stable as we add economic control variables. Interestingly, we estimate a null relationship between economic crisis and CLI. This finding could be attributable to the difficulty in conceptualizing and measuring the nature of economic crisis as it relates to antitrust policy. To ease interpretation, we plot the estimated marginal effect of democracy conditional on varying levels of inequality in Figure 2 (based on Model 5). The downward slope on this line indicates that the association between democracy and antitrust falls to zero as inequality increases. We estimate that the association between democracy and CLI decreases by roughly 67% of a standard deviation with each log-point increase in inequality.

While we believe 3-year periods represent an adequate window, we also recognize that our selection of the period length is somewhat arbitrary. We therefore re-run our preferred model using a variety of other period lengths. Figure B.1 plots the conditional marginal effects across alternative

	DV: Competition Law Index				
	(1)	(2)	(3)	(4)	(5)
Democracy	0.126***	0.557***	0.570***	0.589***	0.574***
	(0.037)	(0.176)	(0.177)	(0.181)	(0.181)
ln Top 1% Income Share		0.113**	0.120**	0.123**	0.122**
		(0.055)	(0.058)	(0.059)	(0.059)
ln Top 1% Income Share × Democracy		-0.187***	-0.196***	-0.203***	-0.197***
		(0.061)	(0.061)	(0.062)	(0.062)
ln GDP			0.032	0.033	0.034
			(0.090)	(0.090)	(0.090)
ln GDP per cap.			-0.069	-0.075	-0.076
			(0.104)	(0.106)	(0.106)
Trade Openness				0.000	0.000
				(0.001)	(0.001)
Economic Crisis					0.050
					(0.058)
Period Length	3 years	3 years	3 years	3 years	3 years
Period FE?	Yes	Yes	Yes	Yes	Yes
Country FE?	Yes	Yes	Yes	Yes	Yes
# of Countries	97	97	96	96	96
Observations	1,591	906	900	886	885
Adjusted R^2	0.414	0.423	0.423	0.418	0.419

Notes: * $p < .1$, ** $p < .05$, *** $p < .01$. Standard errors clustered by country are reported in parentheses. All independent variables are lagged by one period. Income shares are linearly interpolated then logged. The R^2 for the model with only fixed effects is .39. See Table A.1 for results without interpolated data. A list of countries included in the analysis can be found in Table A.2. Results using the 21-point Polity measure can be found in Table B.3 and results using V-Dem's Liberal democracy index can be found in Table B.4.

Table 1: Cross-national Results, 1951–2010

specifications. These results show that the main finding presented in Figure 2 is robust to alternative period lengths. The slope on the marginal effect remains negative across all periods.

We now turn to the results from the difference-in-differences estimator presented in Figure 3. The results for the low-inequality sample are presented in Figure 3a. The plot suggests that new democracies tend to exhibit stricter antitrust laws. The estimate grows from no difference between treated and control units in the first couple of years after democratization to a substantively large and statistically significant effect (at the 95% level) after year three. We estimate a roughly .20 point increase after ten years, which is roughly equal to 68% of a standard deviation. Next, we re-run
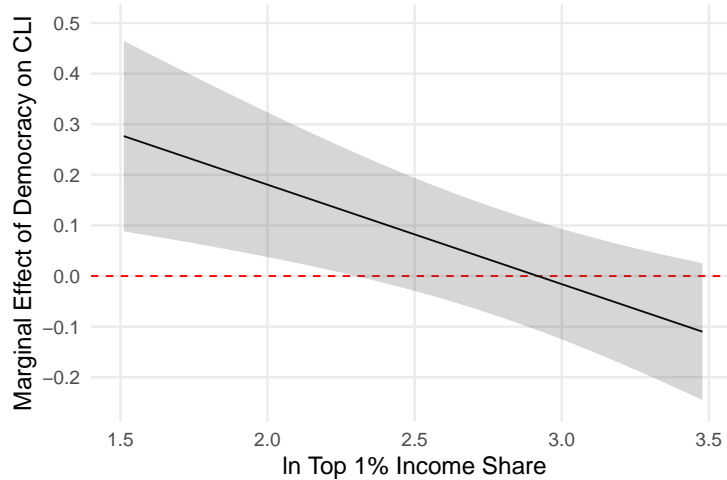
Figure 2: Conditional marginal effect of Democracy on CLI (Model 5)

the analysis except we restrict the sample of treated countries to those experiencing high levels of inequality. The results for this high-inequality sample are plotted in Figure 3b. Democratization is associated with an increase in CLI of essentially 0 after ten years and is at no point statistically distinguishable from zero at the 90% level. In the next section, we provide a case study of an important case found "off the regression line:" the late 19th and early 20th century United States, where the modern antitrust tradition was first given legislative expression.

4   Antitrust in the United States, 1888–1918

The US origin of antitrust represents an outlier to our analysis above. The late 19th and early 20th century was a period of high inequality in the United States (Lindert and Williamson, 2016) and yet it bred the legislative foundation of the American antitrust tradition: the Sherman Antitrust Act (1890) and the Clayton Act (1914). Moreover, this was also a period of deep anxiety about the state of American democracy and not only due to the sense of unfairness inspired by the increasing concentration of American industry. In this section, we explore the early US case further, demonstrating that the Sherman Act was a weak law even by the standards of the time and that reform
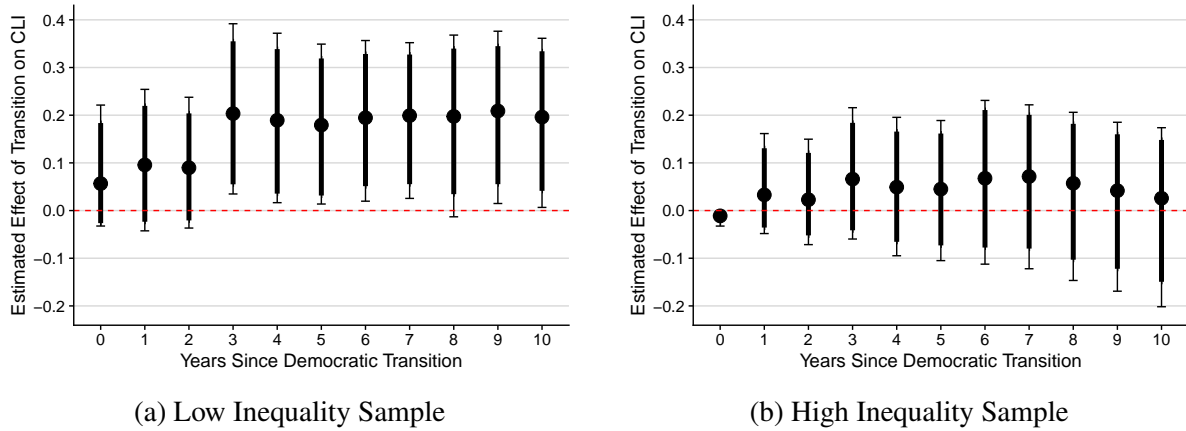
(a) Low Inequality Sample
(b) High Inequality Sample

Note: Plots the estimated average treatment effect on the treated. 90% and 95% confidence intervals estimated via bootstrap with 2,000 iterations. Low- and high-inequality subgroups are defined as a country with (interpolated) top 1% income shares either at or above, or below the median in the year of democratization. Results also reported in Table C.1. Results using democracy data from Boix, Miller and Rosato (2013) are presented in Figure D.1.

Figure 3: Democratization, Inequality and Antitrust

of the law through the Clayton Act, though successful, was opposed by Senators representing states beset by high inequality and weaker state-level democratic institutions. Importantly, passage of the Clayton Act was also aided by growth in the cohort of Senators who were popularly elected. Then, within just 4 years of passing the Clayton Act, Congress passed another bill, the Webb-Pomerene Act (1918), which curtailed the reach of the antitrust laws by exempting export cartels from antitrust liability. We first discuss the political context of the early American antitrust laws before presenting a quantitative analysis of vote choice on the Clayton and Webb-Pomerene Acts. We exploit state-level variation in the direct election of senators and state-level income inequality to assess the threat to reform posed by undemocratic institutions. In sum, we find that senators that were directly elected and represented states with lower income inequality were significantly more likely to support pro-antitrust legislation than otherwise.

Many trace the legal origins of antitrust back to the United States' Sherman Antitrust Act of 1890. That bill, however, represents an inauspicious origin for antitrust policy. Even by the standards of the time, the bill fell short of many of its proponents' aims. The impetus for antitrust legislation was that prior state-level efforts at combating the "trusts"—primarily through legal mechanisms found in corporation law or preexisting common law rules barring "restraints on trade"—had proven

ineffective. These failures were due in part to jurisdictional issues that came from the fact that trusts often spanned multiple states, but also that the common law turned out to be an ineffective tool. Rather than correct for deficiencies in the common law, the Sherman Act in large part enshrined these ineffective rules in a Federal statute. As John Sherman, the Senator responsible for shepherding the bill through the Senate and after whom the bill gets its name, said during the Congressional debate, the Antitrust bill "does not announce a new principle of law, but applies old and well-recognized principles of the common law to the complicated jurisdiction of our State and Federal Government" (Quoted in Letwin, 1956, 96).[10] The Democrats, fearing the conservative bent of the legal profession and judiciary that had hampered state-level efforts, sought to add more precise language to the bill in order to, as one House Democrat put it, "not leave it to the construction of the Supreme Court" (Quoted in Thorelli, 1955, 205). These amendments were ultimately voted down in the Senate and narrowly in the House.[11]

Senator Reagan, a Democrat from Texas, for example, introduced an amendment that defined what a "trust" is, seeking to clarify or supersede the common law understanding at the time. After deliberation and amendments, the bill was considered by many Senators as overly chaotic, so it was decided to transfer the bill back to committee. This time, however, the bill was sent to the Judiciary committee, not Sherman's Finance committee from which the original bill came. The resulting bill is largely acknowledged to be the product of Senator George Edmunds, a lawyer and Republican from Vermont.[12] Letwin (1956) argues that this reflects the legal profession's broad understanding at the time that the common law was on its own adequate for dealing with the the harms of the trusts. But, as we discuss in greater detail below, relying on the common law versus more specific legislative language had the practical effect of delegating a large degree of interpretive authority to the federal judiciary, which was generally understood to be an elitist and conservative force at the

---

[10]Hammering this message home Sherman later said, "Now, Mr. President, what is this bill? A remedial statute to enforce by civil process in the courts of the United States the common law against monopolies" (Thorelli, 1955, 181)

[11]After the most serious of such House amendments had been rejected by the Senate, the House voted to re-enter conference with the Senate but abandoned the amendment. This vote was only passed narrowly, 106 to 98, suggesting nearly half of the House still supported the amendment. (Thorelli, 1955, 209).

[12]See the introduction to Edmunds (1911, 51), "John Sherman was not the author of the famous Act of 1890 which bears his name...The law, as it now stands upon the statute-books, was drafted by George F. Edmunds, acting as Chairman of the Committee on the Judiciary of the Senate."

time (Gillman, 2002).

In the end, even Sherman was unconvinced of the law's utility. In remarks that were stricken from the Congressional Record but later reported by a correspondent of the New York Times, Sherman admitted that the tariff would only bear fruit if domestic manufacturers would "resist the temptation attaching to great agglomerations of capital to combine and advance prices" (Quoted in DiLorenzo, 1985, 83). DiLorenzo (1985) interprets these and other remarks by Sherman as evidence of that the Sherman Act was primarily about providing political cover for protectionist tariffs (which were generally seen at the time as contributing to the "trust problem") than promoting competition.

Situating the Sherman Act within broader context of popular agitation against big business in the late 19th century we can see why one early historian of the Sherman Act described it as the "safest" option available to Congress (Letwin, 1956, 255). The late-19th century saw a dramatic consolidation of American firms and centralization of firm management. These changes were driven by the development of new technologies that lowered the cost of long-distance communication and transport. Exposure to these technologies dramatically altered local economies. Once isolated markets were quickly integrating into an ever-expanding national marketplace. These abrupt changes are often argued to have motivated agrarian backlashes such as the Granger Movement that pushed for strict regulation of the railroad rates and large farms. These sentiments formed the political foundation that later expanded to encompass broad, popular reactions against the power of big business in the 1880s and into the future. Initially, state authorities sought to check the power of the trusts through through common law rules against unreasonable restraints on trade or by revoking corporate charters—but these efforts were largely ineffective. In light of these difficulties at the state-level and inaction at the federal level, over a dozen states enacted their own antitrust legislation prior to the Sherman Act (see Figure H.3). These laws often went beyond what would eventually become the Sherman Act. To give a few examples: all 13 established criminal sanctions for illegal participation in trusts; many explicitly defined harmful acts such as predatory pricing; prohibited corporations from participating in trusts; and established mechanisms of active information seeking by the state in order to identify firm involvement in trusts (Collins, 2013, 2335-9).

The bipartisan burst of state-level competition legislation reflects the dynamics of inequality and antitrust. While we see antitrust legislation passed in agrarian, less-urbanized Midwestern and Southern states like Iowa, Texas, and Alabama, no states in the more industrialized and unequal Northeast (outside of Maine) successfully passed antitrust laws. And this is not because those Eastern states did not try: after an antitrust bill introduced in the New York State legislature in February 1888 failed, the legislature established a committee to investigate the trusts.[13] The committee ultimately failed, however, due to interference from Republican committee members.[14] On May 10, 1889, the day after the committee filed its final report, the New York Times wrote: "The influences that controlled the trusts were too powerful to be disregarded by the so-called leaders of the Republican party in the State, and these gentlemen applied the screws to their dummies in the Legislature with such success that the investigation was abandoned." The geography of enactment suggests inequality may play some role here. While systematic data on income and wealth inequality from this era are hard to come by, Lindert and Williamson (2016, 174-8) estimate that inequality in this period was largely driven by urban growth. Their estimates of regional Gini coefficients from 1870 suggest that New England and the South Atlantic[15] were the most unequal regions while the central and southern regions were more equal. While the New York State Commission demonstrates the national appeal for trust legislation, the geography of reform suggests that states in agrarian regions with lower inequality were most successful at acting on popular demands.

While the letter of the Sherman Act was vague and weak, the Act was further rendered ineffective through a lack of enforcement and—confirming the fears of House Democrats noted above—narrow judicial construction. One case that would eventually become a landmark precedent under the

---

[13]See *No More "Trusts" Wanted: A Bill Which Will Be Presented to the Legislature* (1888)

[14]On March 5, 1888 in an article titled, "THE TRUST INVESTGIATION—Republicans accused of protecting the combinations," a New York Times reported put it this way:

> ...and then they [the Republicans] all chorused, 'We are not the friends of the trusts. We are the champions of the people's rights.' Talk is cheap. The actions of the majority show that most of its members are still browsing around in the same old pastures, playing the same old tricks, and actuated by the same old unworthy motives.

[15]Defined by the authors as the coastal states from Delaware and Maryland to Florida. Only one of which (North Carolina) enacted an antitrust law prior to the Sherman Act.

Sherman Act, the *Trans-Missouri Freight Association* case, almost did not occur due to lack of funds. The United States Attorney responsible for the case had to hire an assistant counsel out of his own pocket (Thorelli, 1955, 377-8). Subsequent administrations fared no better. The Attorney General under President Cleveland took a dim view of the law, consistent with the attitudes of big business (prior to being appointed AG, he represented the "Whiskey Trust"). His biographer put it this way, "Olney's estimate of the meaning of the [Sherman] Act corresponded with the better opinion of the Bar; but not with popular demand" (Thorelli, 1955, 385). In one early loss against the sugar trust, *US v. E.C. Knight Company* (1895), the Supreme Court ruled that the Sherman Act did not apply to manufacturing, despite the Court's acknowledgement that the trust had won control over 90% of the country's sugar refinement capacity (Phillips Sawyer, 2019). While the evidence is weak that the *Knight* decision *caused* the dramatic and sustained increase in mergers in the late 1890s, it is notable how little enforcement was undertaken during this period.

The "better opinion of the Bar" (and the bench) thus fed into popular fears of the undemocratic nature of the judiciary that were growing amongst labor advocates and Progressives at the time (Ross, 1994, 27-9). Purcell (2000, 320) suggests that a social mechanism—inflected by the politics of inequality—drove the ideological coherence between business and the federal bench during this period: "...the [Supreme Court] justices constituted a remarkably similar, if not insular, social group. Trained and experienced at the bar, steeped in the revered common law, and coming largely from the ranks of the corporate elite...They shared high social status, a cult of masculinity, and connections with powerful political and economic actors. Consequently, to varying degrees they began to share concerns about the dangerous potential of labor unions, 'populistic' democracy, rapacious legislatures..." One prominent advocate for increased democratic control over the judiciary, Gilbert Roe, cited the Supreme Court's Sherman Act rulings as a primary example of the undemocratic means by which the Court opposed popular demands by whittling away regulatory power over big business (Roe, 1912, 74-105). The judicial hostility to a strong anti-trust regime and stated intent of the Sherman Act is evident in the early decisions under the Sherman Act. Despite the widespread understanding at the time of enactment that labor unions were exempt from the Sherman Act, early

jurisprudence focused by and large on labor, rather than capital. It took 7 years for the activities of a business combination to be found in violation of the Sherman Act, while the activities of labor unions had been found in violation in 12 separate cases during that same period (Berman, 1930, 3-4). Later antitrust supporters sought to circumvent the courts altogether. President Roosevelt favored a regulatory approach which would allow for consolidation where it economic forces demanded, but enable the government to actively regulate in order to prevent anti-competitive abuses. A bill creating such a Commission was put before Congress in 1908, though it ultimately fizzled (Letwin, 1965, 247-50).

Big business was also adept at fighting enforcement. In his memoirs, Senator Richard Pettigrew (1922, 147) recounts a Sherman Act case in New York from which nearly all of the circuit court judges in the district had to recuse themselves due to their connections with the railway company: "The judge announced from the bench that he was disqualified from hearing the case because he was the owner of the stocks and bonds of the defendant railroad, and he said, in open court, that he believed every judge in the circuit was suffering from a like disqualification. The railroads had put their attorneys on the bench." The defendant later hired Senator Edmunds—generally recognized as the most influential author of the Sherman Act—to represent them before the Supreme Court. Tarbell (1904) documents a separate case by the Ohio Attorney General against the Standard Oil Company for violating the terms of its charter. Illustrating the importance of elite-networks, Rockefeller reportedly asked Mark Hanna, a politically-active, coal magnate in Ohio to intervene in the investigation. Hanna wrote to the AG, hinting that the AG's career prospects would be at risk if he continued to pursue the case (pp. 145-8). Hanna wrote what would become infamous in Ohio politics a few years later after the letter was made public, "You have been in politics long enough to know that no man in public office owes the public anything." Consistent with these journalistic accounts, an 1899 report by the Ohio AG office alleges 6 separate instances of attempted bribery. While these entreaties failed to deter the Ohio AG in this case, the case demonstrates the methods and resources large business (typically obscured from public view) could turn to to blunt the force of regulation.

Over a decade of weak enforcement of the Sherman Act along with a sustained period of industrial concentration after the 1893 financial crisis brought antitrust back into the mainstream policy agenda. Another important inflection point occurred with the Supreme Court's ruling in the *Danbury Hatter's* case which applied the Sherman Act to labor organizing. This inspired the Democratic party to add antitrust reforms into its 1908 platform (Kovner, 1947). The Democrat's focus on antitrust and labor resonated with the growing popular agitation against the judiciary as an anti-democratic institution (see esp. Ch. 6 Ross, 1994). In a speech to Congress soon after his election, President Woodrow Wilson outlined a plan for two major reforms to the antitrust laws. He proposed first establishing an agency for administering the antitrust laws (what would become the Federal Trade Commission) and, second, a bill to amend the Sherman Act to specify what conduct would be deemed anticompetitive more precisely, thereby reducing the judiciary's interpretive scope (Letwin, 1965, 271-4).

The latter bill would come to be know as the Clayton Act (1914). The Clayton Act debate was deeply partisan, though, as we show below, it was aided by a group of Republicans who went against their party. This kind of defection was becoming more common in this era due to the gradual introduction of direct Senatorial elections (Meinke, 2008). Tariff reductions in 1913 led to increased import competition within the United States. US exports also increased dramatically. Increasing reliance on foreign trade and exposure to the highly concentrated markets abroad increased the demand from domestic industry to alleviate their antitrust burdens. These efforts culminated in the Webb-Pomerene Act of 1918 which established a mechanism by which the exporters could combine in order to better compete in foreign markets. Critics of the measure portrayed the law as an abandonment of antitrust. One Senator said, "this bill authorizes the creation of trusts and combinations to control the foreign market of the United States; and whoever controls that foreign market, to wit, the surplus of the United States, will necessarily dominate and control in the United States" (*Congressional Record* vol.56-1, p. 173). And later the same Senator highlighted the role of the trusts in promoting the bill, "The fact is plain that back of this bill is not the demand of the small exporter, is not the demand of the small business man, but is the conspiracy of the great

24

trusts and combinations. We are presented with the spectacle of this powerful attack upon our trust legislation" (*Congressional Record* vol. 56-1, p. 178). This bill fits more squarely within our theoretical framework given that it was passed during a period of high inequality and limits the scope of antitrust enforcement. As we show below, though, Senators who had been directly elected or represented low-inequality states tended to oppose the bill. We now turn to our quantitative analysis of the influence of inequality and democratic reform on antitrust voting behavior on the two significant antitrust reforms from this era for which we have voting data: the Clayton Act and Webb-Pomerene Act.[16]

4.1 Data & Methods

In the cross-national analyses above, we demonstrate that the predictive power of democratic institutions for increased antitrust is moderated by high levels of income inequality. We attribute this to the disproportionate political power that accrues to those at the very top of the income distribution. In this section, we extend that framework to Senate voting patterns on antitrust legislation in the Progressive era.

Replicating our arguments above, we show that income inequality at the state-level is negatively associated with Senatorial support for antitrust legislation. This period in American history also enables us to examine an additional *political* influence on the level of democratic accountability: the staggered introduction of directly elected Senators. While Senators selected through their state legislatures were subject to indirect mechanisms of accountability, this accountability increased dramatically with the scattered introduction of direct elections in the early 1900s. Like inequality, legislative selection of Senators aligns the preferences of Senators with those of the political and economic elites because Senatorial careers rest on the approval of state legislatures, not voters. We therefore view the introduction of direct elections similarly as we view inequality: as a proxy for the underlying level of democratic accountability across the American states. This comports with

---

[16]We exclude the Sherman Act because it was nearly unanimous and the Federal Trade Commission Act because it was passed on a voice vote.

scholarly work finding that the introduction of direct elections helped push Senators' ideological positions closer towards the median voter. This was particularly true for Republicans, who shifted to the left (Bernhard and Sala, 2006). We expect therefore that Senators who enter the Senate through direct elections will be more supportive of antitrust legislation than their legislatively-selected counterparts because directly elected Senators are more exposed to the attitudes of consumers and mass publics.

In the analysis below, we include a dummy variable indicating whether a given Senator originally entered the Senate through either a direct election or through their state legislature. We derive this measure from Meinke (2008), who shows that Senator's original mode of election is predictive of their legislative behavior and partisan loyalty. Meinke's findings suggest that an incumbent's political coalition remains stable even if the underlying selection mechanisms shifts from legislative to popular election. If a Senator originally entered the Senate by a vote in their state legislature they are coded with a 1; those originally elected by direct election are assigned a 0.

Building off of our arguments in the cross-national analyses above, our second proposed measure of the extent of state-level democracy is economic inequality. To measure state-level income inequality, we obtained data on the share of total income going to the top 1% of the income distribution from the World Inequality Database. We use state-level inequality data from 1917 for both votes because, unfortunately, that is the earliest year for which we have state-level inequality data. While not ideal, we believe our decision to use 1917 data in our analysis of the Clayton Act vote (which occurred in 1914) is nevertheless a useful proxy.[17] While top 1% income shares do move from year to year, they tend to move quite slowly. Moreover, national level data for 1913-1917 shows that top 1% income shares are essentially flat.[18]

To begin, we present these data visually in Figure 4. These plots clearly suggest a relationship between low inequality and support for pro-antitrust legislation. While the vote for the Clayton Act was highly partisan, the only GOP defectors came from states that had low levels of inequality. The prospect of re-election may also have been playing a role. There were 7 Republican Senators

---

[17]While the Webb-Pomerene Act ultimately became law in 1918, it was passed in the Senate in December 1917.
[18]The national-level top 1% income share was 21.01% in 1914 and 21.39% in 1917.

(a) Clayton Act	(b) Webb-Pomerene Act
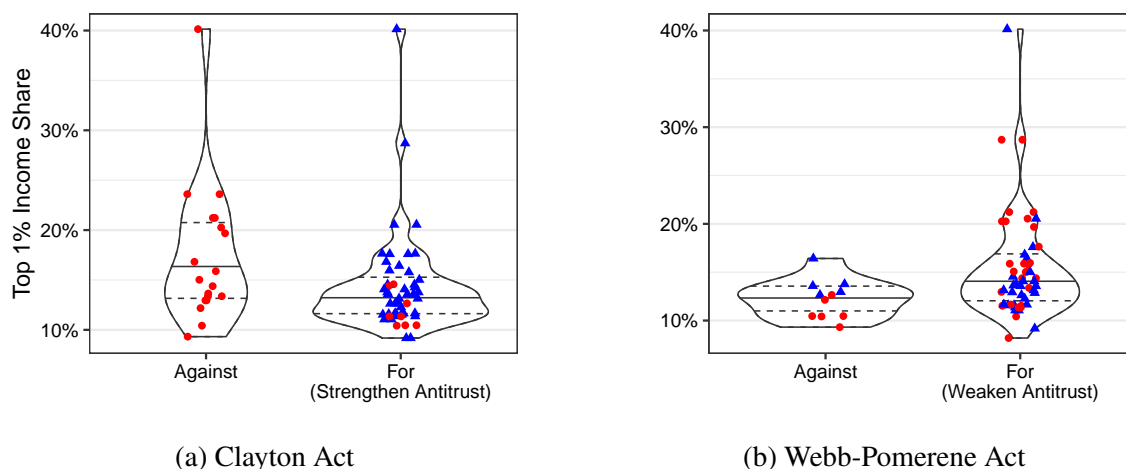
Note: Violin plots of Top 1% Income Share, subset by vote choice for/against antitrust legislation. Red circles and blue triangles represent Republican or Democratic Senator, respectively. Solid horizontal line represents median; dashed lines represent 25% and 75% quartiles.

Figure 4: Inequality, Partisanship and Antitrust Vote Choice

facing reelection in 1914 (and thus subject to direct election under the 17th amendment). Three supported the Clayton Act, four opposed. Interestingly the three who supported it were from some of the most equal states in the country,[19] while those who opposed were from states with inequality generally above the national median of 13.6%.[20] Similarly, we see that the only Senators opposed to the Webb-Pomerene Act came from low-inequality states. Across both votes, the 75th percentile (indicated by the dashed horizontal lines) of inequality amongst the pro-antitrust vote (i.e. for Clayton and against Webb-Pomerene) is roughly in line with the median among the group opposed to antitrust. We also only see defections into the pro-antitrust group amongst senators in low-inequality states for both GOP and Democratic Senators.

Because voters from states with higher manufacturing activity might demand increased antitrust enforcement, we include a control variable measuring state-level data on the total value of manufactured products.[21] These data come from the Census of Manufacturers survey, which the Census conducted every 5 years. We linearly interpolate between data observed in 1914 and 1919 to estimate the level of value of manufactured products for 1917. Finally, in order to account for party

---

[19]Idaho, Iowa and Washington with top 1% income shares of 10.4%, 10.5%, and 11.4%, respectively

[20]New Hampshire, Ohio, Utah, Vermont with top 1% income shares of 15%, 16.8%, 13%, 15.9%, respectively.

[21]These data were obtained from the *Statistical Abstract of the United States* (1921), p. 249-255, Table No. 161

Panel A: Clayton Act

	(1)	(2)	(3)	(4)	(5)
Selected by leg.	-1.56***		-1.55***	-1.53***	-0.04
	(0.49)		(0.52)	(0.49)	(1.02)
ln Top 1% Inc. Share$_{1917}$		-1.16*	-1.16*	-1.20	-6.93***
		(0.59)	(0.65)	(0.75)	(1.98)
ln Manufac. Prod.				0.03	0.67**
				(0.15)	(0.31)
Observations	71	71	71	71	27
Log-likelihood	-34.04	-38.89	-31.94	-31.92	-9.80

Panel B: Webb-Pomerene Act

	(1)	(2)	(3)	(4)	(5)
Selected by leg.	0.69		0.81*	0.82*	0.85**
	(0.43)		(0.43)	(0.44)	(0.43)
ln Top 1% Inc. Share$_{1917}$		2.14**	2.41**	2.31*	2.13**
		(0.91)	(1.07)	(1.21)	(1.05)
ln Manufac. Prod.				0.03	0.06
				(0.18)	(0.18)
Democrat					0.21
					(0.38)
Observations	65	65	65	65	65
Log-likelihood	-28.12	-26.68	-25.06	-25.05	-24.94

Note: * $p < .1$, ** $p < .05$, *** $p < .01$. Table reports coefficients from Probit regressions with robust standard errors in parentheses. Because no Democrat voted against the measure, Model 5 of Panel A is estimating GOP votes only.

Table 2: Senate Roll Call Votes on Clayton and Webb-Pomerene Acts

effects, we also include a dummy variable equal to 1 if a Senator is a Democrat and 0 otherwise.

4.2 Results

Panel A of Table 2 presents the results for the Clayton Act vote. We can see that inequality is negative though only weakly associated with a vote for the Clayton Act, while being selected by the legislature (i.e. they were not directly elected) has a sizable, negative and significant association with support for the Clayton Act. Controlling for manufacturing levels has little effect on the results. In Model 5 we control for partisanship. Because no Democrat voted against the measure, we limit

the sample to the GOP only. Here we replicate our interpretation of the data presented in Figure 4: Republicans from more equal states are more likely to vote in favor of the Clayton Act than those who are from high inequality states. We now turn to Panel B, which presents the results for the Webb-Pomerene Act. This bill likely presents a better test of our political and economic measures of democratic accountability because the debate surrounding it was less politically charged than the Clayton Act's. Senators were therefore more free to vote the interests of their constituents. Because the Webb-Pomerene Act *reduced* antitrust enforcement against export-oriented firms, we expect the signs on the coefficients to flip. We again find that members who were selected by their state legislatures are more likely to vote for the Webb-Pomerene Act than those who were directly elected. Senators from high inequality states are similarly more likely support the bill (Models 1-3). These estimates are robust to the inclusion of manufacturing levels and partisanship (Models 4 and 5). In sum, while the politics of high inequality are undeniable in the Progressive era these results suggest that inequality was also a hindrance to antitrust reform. Implementing antitrust reforms beyond the minimal measures in the Sherman Act was put at some risk due to the prevalence of elite influence and unequal access to political resources.

5   Conclusion

When people lament the fact of high and rising concentration in the United States today, they often refer to lessons from the past, and to cases like the Progressive Era where it seems like something was done to contain growing concentration of economic resources. Reforms like antitrust legislation at this time were seen not only as ways of dealing with imbalances in market power, but more fundamentally as ways to stabilize democracy itself. This simplified story of the Progressive Era invites us to imagine that democracy may come with a sort of automatic adjustment mechanism; as the power of big business goes up, there will be increasing demands to do something about it. We show that the problem with this argument is that if inequality is high, the prospects that democratization will lead to meaningful reform decline.

Using both cross-country data and evidence from US states, we find little evidence of any inherent adjustment mechanism whereby democracies adopt antitrust reforms when inequality is high. We do find that democracies, on average, are more likely than autocracies to adopt antitrust. This may suggest that antitrust is more likely to be present in democracies because of popular desires. In non-democracies it may in turn be the case that antitrust is less likely to be present either because autocrats benefit economically or politically from economic concentration, or also because they would rather deal with sectors they see as overly concentrated through direct executive action of the sort that is now happening in China, as opposed to through an independent body of the sort that would typically manage antitrust policy.

While we find that democracy does seem to matter for antitrust policy, it is above all democracies with low inequality—in other words, those where the unequal distribution of economic resources has not eroded the democratic process—that are driving our cross country empirical results. Turning to evidence from US senate votes in the early twentieth century we see a similar pattern. When the workings of democracy are blocked—in this case by high inequality or senators selected by a state legislature—senators are less likely to support strong anti-trust legislation.

Our results suggest a very important implication. Instead of seeing the United States today as an outlier where—unlike in the Progressive Era—rising concentration has failed to lead to antitrust reform, it may actually be much closer to a norm where high inequality democracies get stuck with weak anti-trust legislation and enforcement. This touches on the much broader question of whether modern democracy with a market economy is an institutional arrangement that can sustain itself.

References

Acemoglu, Daron and James A. Robinson. 2008. "Persistence of Power, Elites, and Institutions." *The American Economic Review* 98(1):267–293.

Agüero, Francisco. 2016. "Chilean Antitrust Policy: Some Lessons Behind Its Success." *Law and Contemporary Problems* 79(4):123–154.

Angell, Alan and Benny Pollack. 2000. "The Chilean Presidential Elections of 1999-2000 and Democratic Consolidation." *Bulletin of Latin American Research* 19:357–378.

Atkinson, Anthony B. 2007. Measuring Top Incomes: Methodological Issues. In *Top Incomes over the Twentieth Century: A Contrast Between European and English-Speaking Countries*, ed. Anthony B Atkinson and Thomas Piketty. Oxford, UK: Oxford University Press pp. 18–42.

Autor, David, David Dorn, Lawrence F Katz, Christina Patterson and John Van Reenen. 2017. "Concentrating on the Fall of the Labor Share." *American Economic Review* 107(5):180–5.

Autor, David, David Dorn, Lawrence F Katz, Christina Patterson and John Van Reenen. 2020. "The Fall of the Labor Share and the Rise of Superstar Firms." *The Quarterly Journal of Economics* 135(2):645–709.

Barkai, Simcha. 2020. "Declining Labor and Capital Shares." *The Journal of Finance* 75(5):2421–2463.

Bartels, Larry M. 2008. *Unequal Democracy: The Political Economy of the New Gilded Age*. Princeton: Princeton University Press.

Berman, Edward. 1930. *Labor and the Sherman Act*. New York: Harper & Brothers Publishers.

Bernhard, William and Brian R. Sala. 2006. "The Remaking of an American Senate: The 17th Amendment and Ideological Responsiveness." *The Journal of Politics* 68(2):345–357.

Bitran, Eduardo and Pablo Serra. 1998. "Regulation of Privatized Utilities: The Chilean Experience." *World Development* 26(6):945–952.

Boix, Carles, Michael Miller and Sebastian Rosato. 2013. "A Complete Data Set of Political Regimes, 1800–2007." *Comparative Political Studies* 46(2):1523–1554.

Bolt, Jutta and Jan Luiten van Zanden. 2020. Maddison Style Estimates of the Evolution of the World Economy. A New 2020 Update. Working Paper WP-15 The Maddison Project.

Borusyak, Kirill and Xavier Jaravel. 2017. Revisiting Event Study Designs. Working Paper.

Bradford, Anu and Adam S Chilton. 2018. "Competition Law Around the World from 1889 to 2010: The Competition Law Index." *Journal of Competition Law & Economics* 14(3):393–432.

Bradford, Anu and Adam S Chilton. 2019. "Trade Openness and Antitrust Law." *Journal of Law and Economics* 62:29–65.

Bradford, Anu, Adam S Chilton, Christopher Megaw and Nathaniel Sokol. 2019. "Competition Law Gone Global: Introducing the Comparative Competition Law and Enforcement Datasets." *Journal of Empirical Legal Studies* 16(2):411–443.

Bremmer, Ian. 2009. "State Capitalism Comes of Age: The End of the Free Market?" *Foreign Affairs* 88(3):40–55.

Büthe, Tim. 2015. The Politics of Market Competition: Trade and Antitrust in a Global Economy. In *The Oxford Handbook of the Political Economy of International Trade*, ed. Lisa L. Martin. Oxford University Press pp. 213–227.

Büthe, Tim and Shahryar Minhas. 2015. "The Global Diffusion of Competition Laws: A Spatial Analysis.".

Callander, Steven, Dana Foarta and Takuo Sugaya. 2021. Market Competition and Political Influence: An Integrated Approach. Working Paper.

Callander, Steven and Niko Matouschek. 2022. "The Novelty of Innovation: Competition, Disruption, and Antitrust Policy." *Management Science* 68(1):37–51.

Cho, Moohyung and Tim Büthe. 2021. "From Rule-Taker to Rule-Promoting Regulatory State: South Korea in the Nearly-Global Competition Regime." *Regulation & Governance* .

Collins, Wayne D. 2013. "Trusts and the Origins of Antitrust Legislation." *Fordham Law Review* 81(5):2279–2348.

Cunningham, Colleen, Florian Ederer and Song Ma. 2021. "Killer Acquisitions." *Journal of Political Economy* 129(3):649–702.

de Chaisemartin, Clément and Xavier D'Haultfœuille. 2020. "Two-Way Fixed Effects Estimators with Heterogeneous Treatment Effects." *American Economic Review* 110(9):2964–2996.

De Loecker, Jan, Jan Eeckhout and Gabriel Unger. 2020. "The Rise of Market Power and the Macroeconomic Implications." *The Quarterly Journal of Economics* 135(2):561–644.

DiLorenzo, Thomas J. 1985. "The Origins of Antitrust: An Interest-Group Perspective." *International Review of Law and Economics* 5(1):73–90.

Edmunds, George F. 1911. "The Interstate Trust and Commerce Act of 1890." *The North American Review* 194(673):801–817.

Enns, Peter K., Nathan J. Kelly, Jane Morgan, Thomas Volscho and Christopher Witko. 2014. "Conditional Status Quo Bias and Top Income Shares: How U.S. Political Institutions Hvae Benefited the Rich." *Journal of Politics* 76(2):289–303.

Erauskin, Iñaki. 2020. "The Labor Share and Income Inequality: Some Empirical Evidence for the Period 1990-2015." *Applied Economic Analysis* 28(84):173–195.

Federico, Giulio, Fiona Scott Morton and Carl Shapiro. 2019. Antitrust and Innovation: Welcoming and Protecting Disruption. Working Paper 26005 NBER.

Furman, Jason and Peter Orszag. 2018. A Firm-Level Perspective on the Role of Rents in the Rise in Inequality. In *Toward a Just Society*. New York: Columbia University Press pp. 19–47.

Gans, Joshua, Andrew Leigh, Martin Schmalz and Adam Triggs. 2019. "Inequality and Market Concentration, When Shareholding Is More Skewed than Consumption." *Oxford Review of Economic Policy* 35(3):550–563.

Gerber, David. 2010. *Global Competition: Law, Markets, and Globalization*. Oxford University Press.

Gilens, Martin. 2012. *Affluence and Influence: Economic Inequality and Political Power in America.* Princeton: Princeton University Press.

Gillingham, John. 1991. *Coal, Steel, and the Rebirth of Europe, 1945-1955: The Germans and French from Ruhr Conflict to Economic Community.* Cambridge: Cambridge University Press.

Gillman, Howard. 2002. "How Political Parties Can Use the Courts to Advance Their Agendas: Federal Courts in the United States, 1875-1891." *American Political Science Review* 96(3):511–524.

Goodman-Bacon, Andrew. 2021. "Difference-in-Differences with Variation in Treatment Timing." *Journal of Econometrics* 225(2):254–277.

Graham, Edward M. 2003. *Reforming Korea's Industrial Conglomerates.* Washington, DC: Institute for International Economics.

Gutiérrez, Germán and Thomas Philippon. 2017. Declining Competition and Investment in the U.S. Working Paper 23583 NBER.

Gutiérrez, Germán and Thomas Philippon. 2020. Some Facts about Dominant Firms. Working Paper 27985 NBER.

Hacker, Jacob. 2004. "Privatizing Risk without Privatizing the Welfare State: The Hidden Politics of Social Policy Restrenchment in the United States." *American Political Science Review* 98(2):243–260.

Hacker, Jacob and Paul Pierson. 2010. "Winner-Take-All Politics: Public Policy, Political Organization, and the Precipitous Rise of Top Incomes in the United States." *Politics & Society* 38(2):152–204.

Hainmueller, Jens, Jonathan Mummolo and Yiqing Xu. 2018. "How Much Should We Trust Estimates from Multiplicative Interaction Models? Simple Tools to Improve Empirical Pracitce." *Political Analysis* 27(2):163–192.

Imai, Kosuke, In Song Kim and Erik Wang. 2021. "Matching Methods for Time-Series Cross-Section Data." *American Journal of Political Science* .

Imai, Kosuke and Marc Ratkovic. 2014. "Covariate Balancing Propensity Score." *Journal of the Royal Statistical Society* 76(1):243–263.

Jackson, Susan. 1996. "Playing Monopoly." *Business Latin America* p. 3.

Jacobson, Margaret and Filippo Occhino. 2012. Labor's Declining Share of Income and Rising Inequality. Economic Commentary 2012-13 Federal Reserve Bank of Cleveland.

Jung, Youngjin and Seung Wha Chang. 2006. "Korea's Competition Law and Policies in Perspective." *Northwestern Journal of International Law & Business* 26(3):687–728.

Kalinowski, Thomas. 2009. "The Politics of Market Reforms: Korea's Path from Chaebol Republic to Market Democracy and Back." *Contemporary Politics* 15(3):287–304.

Khan, Lina M. 2018. "The New Brandeis Movement: America's Antimonopoly Debate." *Journal of European Competition Law & Practice* 9(3):131–132.

Kovner, Joseph. 1947. "The Legislative History of Section 6 of the Clayton Act." *Columbia Law Review* 47(5):749–765.

Lancieri, Filippo, Eric A. Posner and Luigi Zingales. 2022. The Political Economy of the Decline of Antitrust Enforcement in the United States. Working Paper 30326 NBER.

Lee, Kyu Uck. 1998. *Competition Policy, Deregulation and Economic Development: The Korean Experience*. Seoul: Korea Institute for Industrial Economics & Trade.

Letwin, William. 1956. "Congress and the Sherman Antitrust Law: 1887-1890." *University of Chicago Law Review* 23(2):221–258.

Letwin, William. 1965. *Law and Economic Policy in America: The Evolution of the Sherman Antitrust Act*. New York: Random House.

Lindert, Peter H. and Jeffrey G. Williamson. 2016. *Unequal Gains: American Growth and Inequality since 1700*. Princeton University Press.

Manzetti, Luigi. 2000. The Political Economy of Regulatory Policy. In *Regulatory Policy in Latin America: Post-Privatization Realities*, ed. Luigi Manzetti. North-South Center Press.

Meinke, Scott R. 2008. "Institutional Change and the Electoral Connection in the Senate." *Political Research Quarterly* 61(3):445–457.

Moustafa, Tamir. 2007. *The Struggle for Constitutional Power: Law, Politics, and Economic Development in Egypt*. Cambridge: Cambridge University Press.

No More "Trusts" Wanted: A Bill Which Will Be Presented to the Legislature. 1888. *New York Times* .

OECD. 2000. *Korea: The Role of Competition Policy in Regulatory Reform*. Paris: OECD Publications.

Palim, Mark. 1998. "The Worldwide Growth of Competition Law: An Empirical Analysis." *The Antitrust Bulletin* 43(1):105–146.

Pettigrew, Richard F. 1922. *Triumphant Plutocracy: The Story of American Public Life from 1870 to 1920*. New York: The Academy Press.

Philippon, Thomas. 2019. *The Great Reversal: How American Gave Up on Free Markets*. Cambridge: Harvard University Press.

Phillips Sawyer, Laura. 2019. US Antitrust Law and Policy in Historical Perspective. Working Paper 19-110 Harvard Business School.

Pitofsky, Robert. 1979. "Political Content of Antitrust." *University of Pennsylvania Law Review* 127(4):1051–1075.

Purcell, Jr., Edward A. 2000. *Brandeis and the Progessive Constitution: Erie, the Judicial Power, and the Politics of the Federal Courts in Twentieth-Century America*. New Haven, CT: Yale University Press.

Reuter, Ora John and Jennifer Gandhi. 2011. "Economic Performance and Elite Defection from Hegemonic Parties." *British Journal of Political Science* 41(1):83–110.

Roe, Gilbert E. 1912. *Our Judicial Oligarchy*. New York: B. W. Huebsch.

Root, Hilton L. and Karen May. 2012. Judicial Systems and Economic Development. In *Rule by Law: The Politics of Courts in Authoritarian Regimes*. Cambridge: Cambridge University Press pp. 304–325.

Ross, William G. 1994. *A Muted Fury: Populists, Progressives and Labor Unions Confront the Courts, 1890-1937*. Princeton, NJ: Princeton University Press.

Solt, Frederick. 2020. "Measuring Income Inequality Across Countries and Over Time: The Standardized World Income Inequality Database." *Social Science Quarterly* 101(3):1183–1199.

Tarbell, Ida. 1904. *The History of the Standard Oil Company*. Vol. 2 New York: McClure, Phillips and Co.

Thorelli, Hans B. 1955. *The Federal Antitrust Policy: Origination of an American Tradition*. Baltimore, MD: Johns Hopkins University Press.

Wang, Yuhua. 2015. *Tying the Autocrat's Hands: The Rise of the Rule of Law in China*. New York, NY: Cambridge University Press.

Weymouth, Stephen. 2016. "Competition Politics: Interest Groups, Democracy, and Antitrust Reform in Developing Countries." *The Antitrust Bulletin* 61(2):296–316.

White, William Allen. 1910. *The Old Order Changeth*. New York: The MacMillan Company.

Zingales, Luigi. 2017. "Towards a Political Theory of the Firm." *Journal of Economic Perspectives* 31(3):113–130.

Online Appendix for "Democracy, Inequality, and Antitrust"

A Table 1 without interpolated data

	(1)	(2)	(3)	(4)	(5)
Top 1% Income Share$_{\text{Observed}}$	0.107*	0.115**	0.118**	0.061	0.117**
	(0.055)	(0.058)	(0.059)	(0.084)	(0.059)
Democracy	0.554***	0.568***	0.587***	0.531**	0.573***
	(0.177)	(0.177)	(0.182)	(0.223)	(0.183)
Top 1% Income Share$_{\text{Observed}}$ × Democracy	-0.183***	-0.192***	-0.200***	-0.160*	-0.194***
	(0.061)	(0.061)	(0.062)	(0.091)	(0.063)
ln GDP		0.038	0.039	0.144	0.042
		(0.091)	(0.091)	(0.130)	(0.091)
ln GDP per cap.		-0.076	-0.081	-0.225	-0.085
		(0.106)	(0.107)	(0.171)	(0.107)
Trade Openness			0.000	0.002*	0.000
			(0.001)	(0.001)	(0.001)
Crisis$_{\text{RR}}$				0.022	
				(0.028)	
Crisis$_{\text{GDP -3\%}}$					0.038
					(0.060)
Period Length	3 years	3 years	3 years	3 years	3 years
Year FE?	Yes	Yes	Yes	Yes	Yes
Country FE?	Yes	Yes	Yes	Yes	Yes
Observations	890	884	871	549	870
Adjusted R^2	0.424	0.424	0.420	0.482	0.420

Standard errors in parentheses

* $p < .1$, ** $p < .05$, *** $p < .01$

Table A.1: Re-run of Table 1 with no interpolated inequality data

Country	Obs.	First Year	Country	Obs.	First Year
Algeria	7	1989	Lesotho	8	1986
Angola	6	1992	Liberia	6	1992
Argentina	19	1950	Libya	6	1992
Australia	20	1950	Lithuania	5	1995
Austria	10	1980	Luxembourg	8	1986
Bahrain	6	1992	Madagascar	10	1980
Belgium	10	1980	Malawi	6	1992
Benin	6	1992	Mali	6	1992
Botswana	8	1986	Mauritania	7	1989
Bulgaria	10	1980	Mauritius	6	1992
Burkina Faso	6	1992	Moldova	6	1992
Burundi	6	1992	Morocco	8	1986
Cameroon	6	1992	Mozambique	6	1992
Canada	20	1950	Namibia	6	1992
Cent. African Rep.	6	1992	Netherlands	20	1950
Chad	6	1992	New Zealand	20	1950
Chile	6	1992	Niger	6	1992
China	10	1980	Nigeria	8	1986
Comoros	6	1992	Norway	20	1950
Congo	6	1992	Oman	6	1992
Cyprus	6	1992	Poland	9	1983
Denmark	20	1950	Portugal	10	1980
Djibouti	6	1992	Qatar	6	1992
Egypt	6	1992	Russia	6	1992
Equatorial Guinea	6	1992	Saudi Arabia	6	1992
Estonia	6	1992	Senegal	6	1992
Ethiopia	5	1983	Sierra Leone	7	1989
Finland	20	1950	Singapore	15	1965
France	20	1950	South Africa	19	1953
Gabon	6	1992	South Korea	11	1977
Gambia	6	1992	Spain	10	1980
Germany	6	1971	Sudan	6	1992
Germany	6	1992	Swaziland	6	1992
Ghana	7	1989	Sweden	20	1950
Greece	14	1968	Switzerland	19	1953
Guinea	6	1992	Syria	6	1992
Guinea-Bissau	6	1992	Taiwan	11	1977
Hungary	13	1971	Tanzania	6	1992
India	19	1953	Togo	6	1992
Iran	6	1992	Tunisia	8	1986
Iraq	5	1992	Turkey	6	1992
Ireland	11	1977	Uganda	7	1989
Italy	12	1974	UAE	6	1992
Japan	19	1953	UK	20	1950
Jordan	6	1992	USA	20	1950
Kenya	6	1992	Yemen	6	1992
Kuwait	6	1992	Zambia	6	1992
Latvia	5	1995	Zimbabwe	6	1992
Lebanon	1	2007			

Table A.2: List of countries included in Model 5, along with number of observations and year each enters the analysis

B Alternative Specifications

B.1 Alternative Period-Lengths
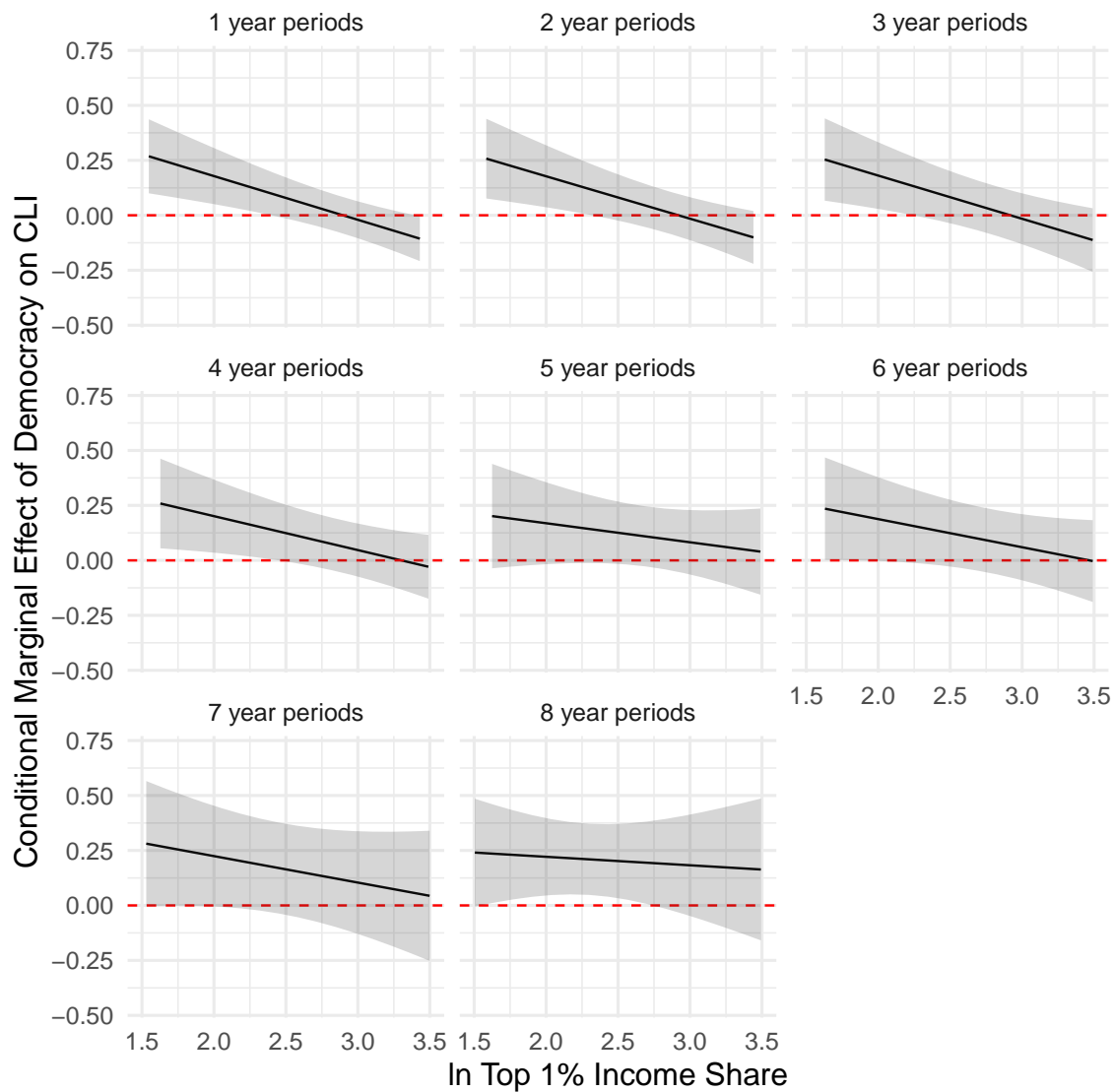
Note: This figure plots the marginal effects of Democracy on CLI across a variety of period-duration lengths. Each specification is otherwise equivalent to Table 1, Model 5. Shaded region plots the 95% confidence interval.

Figure B.1: Robustness to alternative period lengths

B.2 Table 1, with unlogged top 1% income share data

	(1)	(2)	(3)	(4)
Democracy	0.273***	0.270***	0.272***	0.270***
	(0.097)	(0.098)	(0.102)	(0.101)
Top 1% Income Share	0.185	0.190	0.192	0.190
	(0.509)	(0.524)	(0.533)	(0.539)
Top 1% Income Share × Democracy	-1.288***	-1.297**	-1.321**	-1.289**
	(0.488)	(0.501)	(0.523)	(0.515)
ln GDP		-0.007	-0.004	-0.002
		(0.090)	(0.091)	(0.091)
ln GDP per cap.		-0.019	-0.027	-0.030
		(0.104)	(0.107)	(0.107)
Trade Openness			0.000	0.000
			(0.001)	(0.001)
Crisis$_{GDP -3\%}$				0.051
				(0.058)
Period Length	3 years	3 years	3 years	3 years
Year FE?	Yes	Yes	Yes	Yes
Country FE?	Yes	Yes	Yes	Yes
# of Countries	97	96	96	96
Observations	906	900	886	885
Adjusted R^2	0.423	0.423	0.418	0.419

Standard errors in parentheses

* $p < .1$, ** $p < .05$, *** $p < .01$

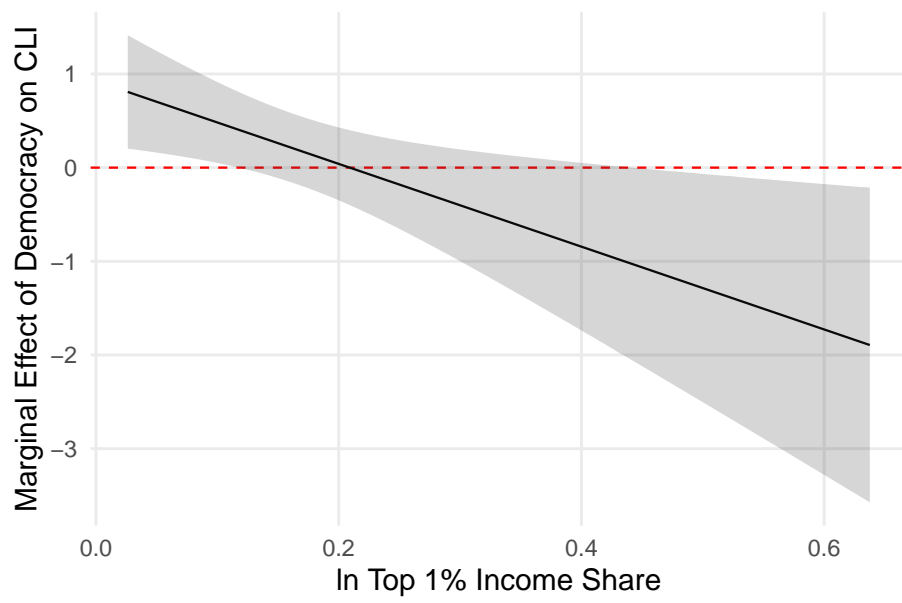Table B.1: Replication of Table 1 with unlogged inequality data

Figure B.2: Marginal effect of Democracy conditional on top 1% income share (based on Table B.1, Model 4)

B.3 Measure Inequality with SWIID Gini Coefficient

In the table below, we replicate Table 1 from the main text using the post-tax and post-transfer Gini coefficient from the Standardized World Income Inequality Database (Solt, 2020).

	(1)	(2)	(3)	(4)
Democracy	0.510***	0.477***	0.474***	0.470***
	(0.171)	(0.166)	(0.173)	(0.170)
$\text{Gini}_{\text{post-transfer}}$	0.001	0.001	0.000	0.000
	(0.007)	(0.006)	(0.006)	(0.006)
$\text{Gini}_{\text{post-transfer}} \times \text{Democracy}$	-0.011**	-0.010**	-0.011**	-0.010**
	(0.004)	(0.004)	(0.004)	(0.004)
ln GDP		0.076	0.116	0.112
		(0.114)	(0.120)	(0.120)
ln GDP per cap.		0.000	-0.050	-0.045
		(0.115)	(0.125)	(0.125)
Trade Openness			0.001	0.001
			(0.001)	(0.001)
$\text{Crisis}_{\text{GDP -3\%}}$				0.072
				(0.061)
Period Length	3 years	3 years	3 years	3 years
Year FE?	Yes	Yes	Yes	Yes
Country FE?	Yes	Yes	Yes	Yes
Observations	792	790	777	777
# of Countries	94	93	93	93
Adjusted R^2	0.392	0.398	0.401	0.402

Note: * $p < .1$, ** $p < .05$, *** $p < .01$. Clustered standard errors in parentheses.

Table B.2: Replication of Table 1 with SWIID Inequality Data

B.4 21-point Polity Scale

	(1)	(2)	(3)	(4)	(5)
Polity	0.006**	0.031***	0.032***	0.034***	0.033***
	(0.002)	(0.011)	(0.011)	(0.012)	(0.012)
ln Top 1% Income Share$_{\text{Interp.}}$		0.047	0.051	0.053	0.054
		(0.053)	(0.054)	(0.056)	(0.056)
ln Top 1% Income Share$_{\text{Interp.}}$		-0.010**	-0.011**	-0.011**	-0.011**
$\times$ Polity		(0.004)	(0.004)	(0.004)	(0.004)
ln GDP			0.041	0.037	0.042
			(0.097)	(0.097)	(0.097)
ln GDP per cap.			-0.082	-0.083	-0.089
			(0.113)	(0.114)	(0.114)
Trade Openness				0.000	0.000
				(0.001)	(0.001)
Crisis$_{\text{GDP -3\%}}$					0.042
					(0.056)
Period Length	3 years	3 years	3 years	3 years	3 years
Year FE?	Yes	Yes	Yes	Yes	Yes
Country FE?	Yes	Yes	Yes	Yes	Yes
Observations	1,588	907	901	886	885
# of Countries	97	97	96	96	96
Adjusted R^2	0.401	0.416	0.417	0.412	0.414

Standard errors in parentheses

* $p < .1$, ** $p < .05$, *** $p < .01$

Table B.3: Replication of Table 1 with the 21-point polity scale

B.5   V-Dem's Electoral democracy index (continuous, 0-1)

	(1)	(2)	(3)	(4)
Polyarchy	0.784***	0.816***	0.703**	0.672**
	(0.281)	(0.280)	(0.285)	(0.287)
ln Top 1% Income Share$_{\text{Interp.}}$	0.195***	0.208***	0.149*	0.144*
	(0.064)	(0.069)	(0.079)	(0.079)
ln Top 1% Income Share$_{\text{Interp.}}$ × Polyarchy	-0.259**	-0.280**	-0.233*	-0.219*
	(0.112)	(0.115)	(0.122)	(0.122)
ln GDP		0.038	0.048	0.049
		(0.102)	(0.105)	(0.106)
ln GDP per cap.		-0.096	-0.106	-0.108
		(0.119)	(0.125)	(0.125)
Trade Openness			0.001	0.001
			(0.001)	(0.001)
Crisis$_{\text{GDP -3\%}}$				0.043
				(0.054)
Period Length	3 years	3 years	3 years	3 years
Year FE?	Yes	Yes	Yes	Yes
Country FE?	Yes	Yes	Yes	Yes
Observations	963	953	916	915
# of Countries	102	101	99	99
Adjusted R^2	0.436	0.436	0.407	0.408

Standard errors in parentheses

* $p < .1$, ** $p < .05$, *** $p < .01$

Table B.4: Replication of Table 1 with V-Dem's Polyarchy Index

C Full Table for Figure 3

Table C.1 reports the results plotted in Figure 3 in the main text. Standard errors are estimated using a clustered bootstrap with 2,000 iterations.

t	(1)	(2)
0	0.057	-0.011
	(0.070)	(0.008)
1	0.096	0.033
	(0.075)	(0.057)
2	0.090	0.023
	(0.068)	(0.057)
3	0.203	0.066
	(0.090)	(0.071)
4	0.189	0.049
	(0.09)	(0.072)
5	0.179	0.045
	(0.086)	(0.073)
6	0.195	0.068
	(0.086)	(0.087)
7	0.199	0.071
	(0.085)	(0.086)
8	0.198	0.057
	(0.0950)	(0.087)
9	0.209	0.042
	(0.092)	(0.087)
10	0.196	0.026
	(0.092)	(0.094)
Sample	Low	High

Table C.1: Full Results from Figure 3

D   Boix-Miller-Rosato Democracy Data

The following table and figure replicate the main results presented in the main text using the 2015 update of the Political Regimes Dataset developed by Boix, Miller and Rosato (2013).[1]

	(1)	(2)	(3)	(4)	(5)
Democracy$_{BMR}$	0.107***	0.422***	0.444***	0.443***	0.427***
	(0.035)	(0.148)	(0.147)	(0.157)	(0.157)
ln Top 1% Income Share$_{Interp.}$		0.125**	0.133**	0.123*	0.121*
		(0.058)	(0.062)	(0.062)	(0.062)
ln Top 1% Income Share$_{Interp.}$ ×		-0.144***	-0.155***	-0.158***	-0.152**
Democracy$_{BMR}$		(0.054)	(0.055)	(0.059)	(0.059)
ln GDP			0.032	0.049	0.051
			(0.103)	(0.104)	(0.105)
ln GDP per cap.			-0.083	-0.111	-0.114
			(0.122)	(0.126)	(0.127)
Trade Openness				0.001	0.001
				(0.001)	(0.001)
Crisis$_{GDP -3\%}$					0.035
					(0.057)
Period Length	3 years	3 years	3 years	3 years	3 years
Year FE?	Yes	Yes	Yes	Yes	Yes
Country FE?	Yes	Yes	Yes	Yes	Yes
Observations	1685	945	939	911	910
Adjusted R^2	0.406	0.407	0.409	0.405	0.406

Standard errors in parentheses

* $p < .1$, ** $p < .05$, *** $p < .01$

Table D.1: Robustness to alternative democracy data

---

[1]The updated dataset can be found here: https://dataverse.harvard.edu/dataset.xhtml?persistentId=doi:10.7910/DVN/FJLMKT
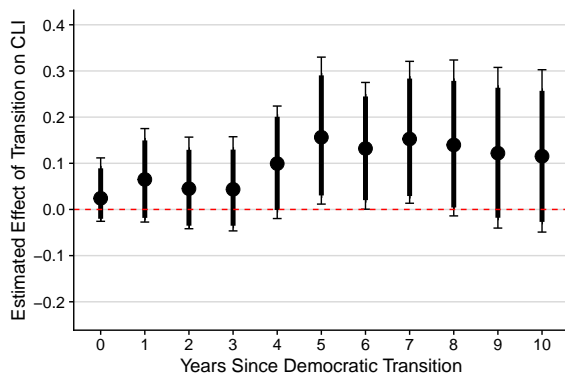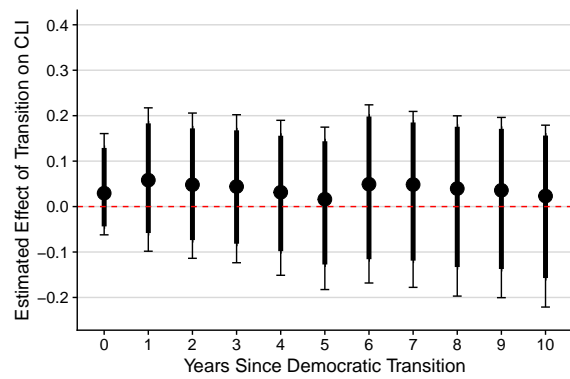
(a) Low Inequality Sample

(b) High Inequality Sample

Note: Plots the estimated average treatment effect on the treated. 90% and 95% confidence intervals estimated via bootstrap with 2,000 iterations. Low and high inequality subgroups are defined as a country with top 1% income shares either at or above, or below the median in the year of democratization. Democracy data taken from Boix, Miller and Rosato (2013).

Figure D.1: Robustness to alternative democracy data

E Parallel Trends, TWFE model

(a) Democracy

(b) Top 1% Inequality

(c) Democracy × Top 1% Inequality
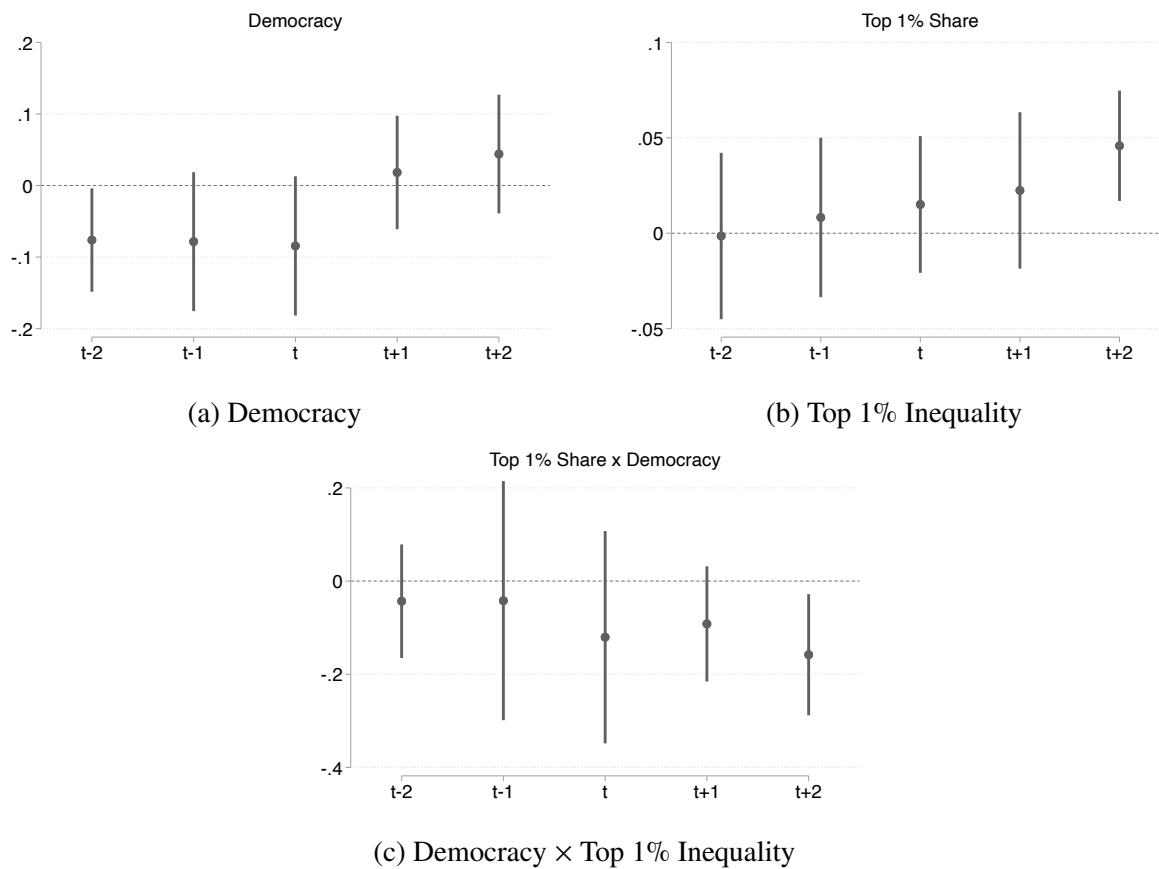
Figure E.1: Cross-national Analysis, Parallel Trends

To assess the parallel trends assumption we constructed dichotomized versions of the main independent variables. Democracy is equal to 1 if in the period a country transitioned from a non-democracy to democracy. For inequality we construct an indicator variable equal to 1 if the average percentage change in inequality in the period is greater than 1 standard deviation ($\approx 4.8\%$). We then included dummy variables for the 2 periods leading up to and lagging behind this indicator. We re-ran the main model (Model 5) with this set of dummy variables and plot the coefficients with 90% confidence intervals in the figure above.

F   Assessing Linearity of Interaction Effect

In this section we assess the linearity of the interaction between democracy and inequality. Figure F.1 presents the results from the binning estimator proposed by Hainmueller, Mummolo and Xu (2018). This method estimates a slight degree of non-linearity in the top tercile of inequality, though the binned estimates (in red) largely track those of the pooled interaction effect. We further assess this assumption in Figure F.2. This figure plots an estimate of the marginal effect from a semiparametric kernel smoothing estimator with the bandwidth selected by cross-validation. Here the estimated effect appears to exhibit a high degree of linearity. Both of these tests were estimated using the `interflex` package for STATA developed by Yiqing Xu, Jens Hainmueller, Jonathan Mummolo, and Licheng Liu.
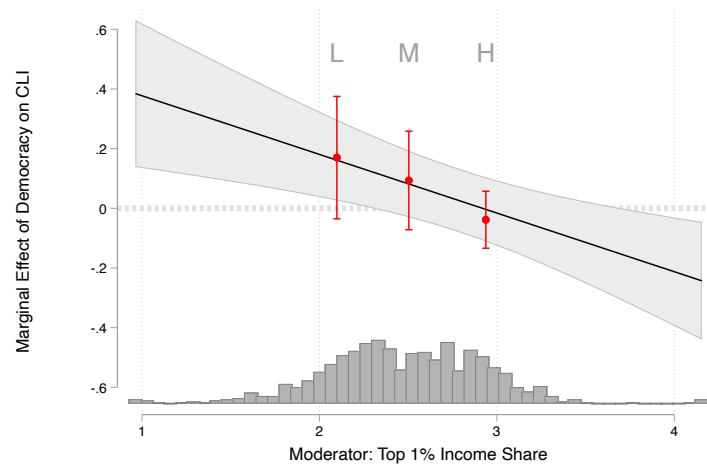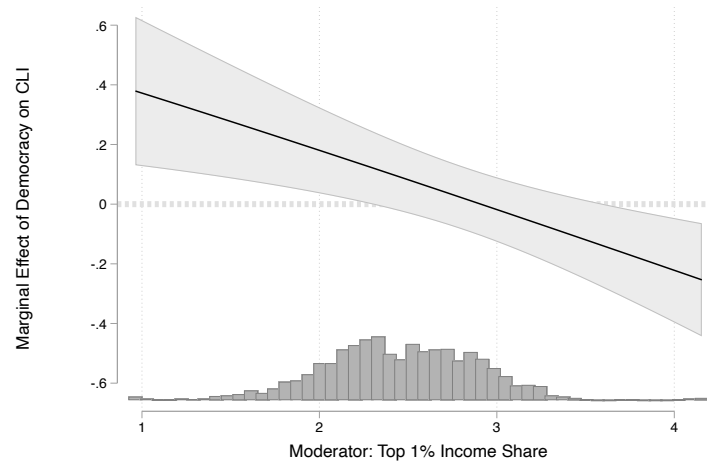
Figure F.1: Binning Estimator

Figure F.2: Kernel Estimator

14

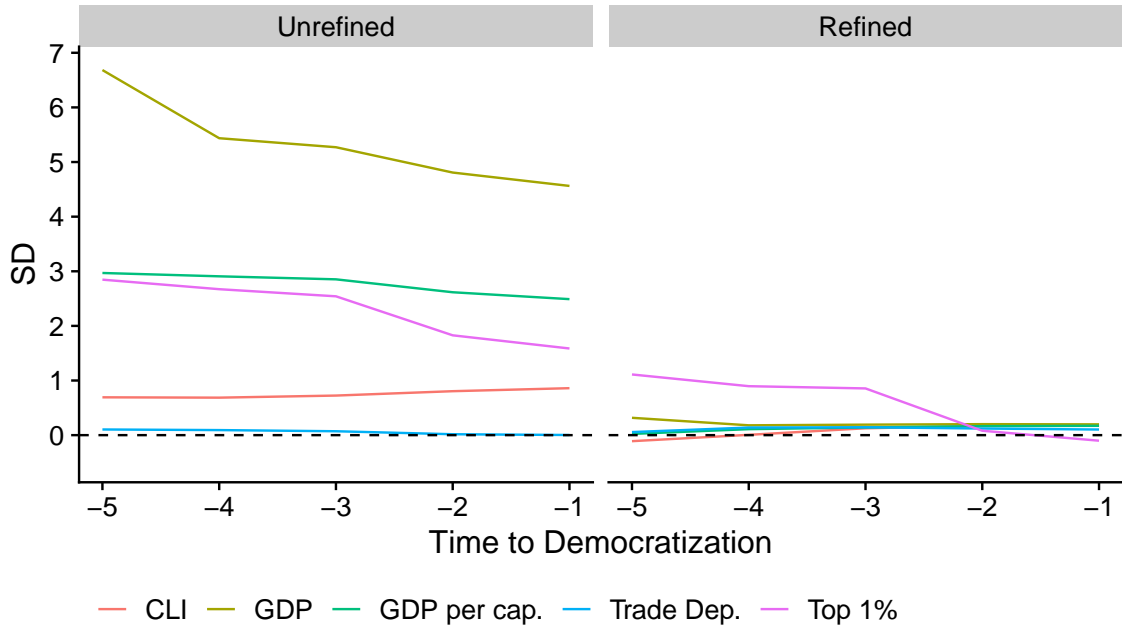# G   Parallel Trends, Democratization Analysis

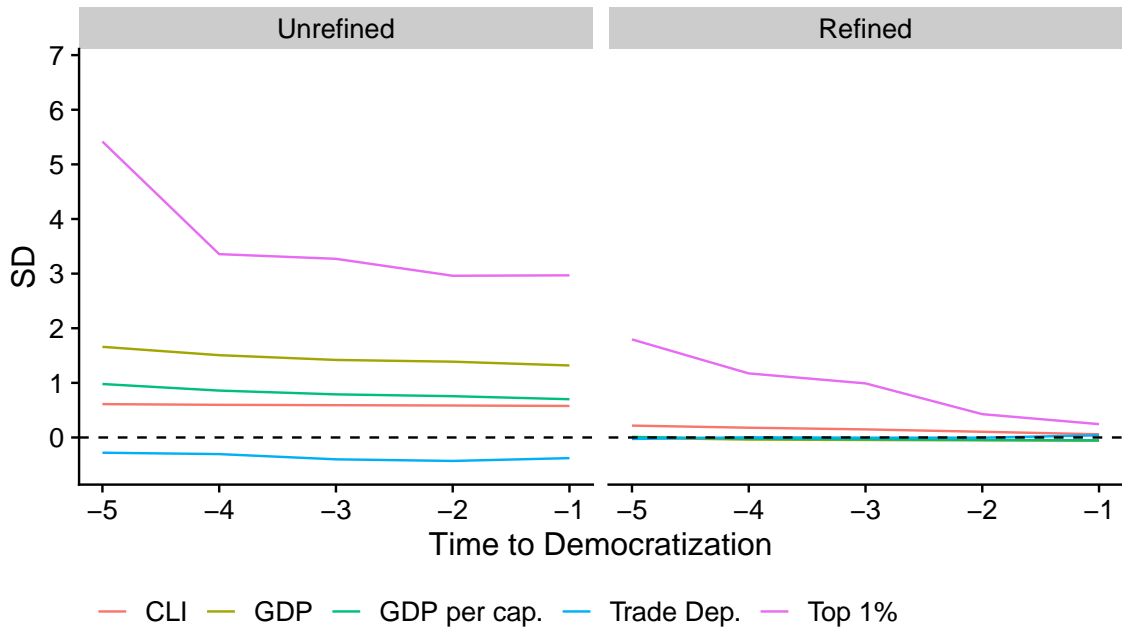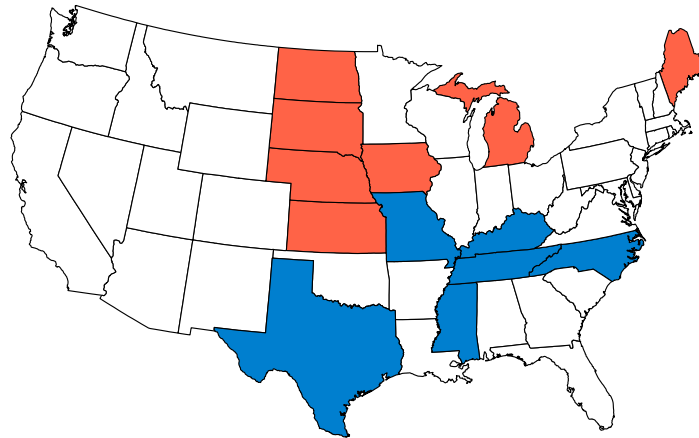Figure G.1: Low Inequality Sample

Figure G.2: High Inequality Sample

15

H   State-level Antitrust Legislation Prior to the Sherman Act

Note: Red or blue fill indicates that a state passed an antitrust law during this period. Red fill represents a GOP-controlled legislature; blue fill represents Democratic control.

Figure H.3: State-level Precursors to the Sherman Antitrust Act, 1888–1890