

Hager, Anselm; Hennicke, Moritz; Krause, Werner; Mergele, Lukas

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Privatizations Spark Socialist Backlash: Evidence from East Germany's Transformation

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Anselm Hager, Moritz Hennicke, Werner Krause, Lukas Mergele

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Poschingerstr. 5, 81679 Munich, Germany

Telephone +49 (0)89 2180-2740, Telefax +49 (0)89 2180-17845, email office@cesifo.de

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Privatizations Spark Socialist Backlash: Evidence from East Germany's Transformation

Abstract

The fall of the Berlin Wall in 1989 brought the end of socialism, yet pro-socialist sentiment regained momentum surprisingly quickly across Eastern Europe. Why did voters move back to an ideology that was associated with unfree elections and lackluster economic performance? This paper points to the rushed privatization of East European economies as one plausible driver of the revival of socialist voting. Using micro-level data from East Germany, we show that firm privatizations led to a marked resurgence of the former Socialist Unity Party. We argue that this effect is likely due to perceived inequity: Socialist voting thrived whenever firms were sold to Western elites, which East Germans took as a sign that capitalism was not meritocratic.

Keywords: privatization, socialist backlash, structural change, democratization.

Anselm Hager
Humboldt University Berlin / Germany
anselm.hager@hu-berlin.de

Moritz Hennicke
Université Libre de Bruxelles / Belgium
moritz.hennicke@ulb.be

Werner Krause
University of Vienna / Austria
werner.krause@univie.ac.at

Lukas Mergele
*ifo Institute – Leibniz Institute for Economic
Research at the University of Munich
Munich / Germany*
mergele@ifo.de

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1 Introduction

One of the more surprising byproducts of the revolutions of 1989 is the survival of socialist preferences across the Eastern Bloc. After decades of unfree elections and lackluster economic performance, democracy and capitalism were the victors of the Cold War. But in spite of rising standards of living and new freedoms, socialist preferences did not wither away, but rather, experienced an unlikely comeback in a number of post-communist countries (Grzymala-Busse, 2002; Nalepa, 2010; Tavits, 2013). What explains the revival of socialist preferences across the Eastern Bloc?

This paper points to the privatization of formerly state-run firms as a likely driver for the pro-socialist revival. We argue that there were two theoretically plausible channels through which privatizations could have sparked socialist voting. First, privatizations were conducted in a non-transparent, at times corrupt manner. They thus arguably sowed mistrust toward the new democratic political system, making the old socialist regime the fallback option. Second, sales of formerly state-run firms often benefited a small elite. Ordinary people stood little chance to obtain a stake in the means of production. Privatizations thus plausibly undermined support for capitalism and its supposed benefits of rewarding hard work.

To empirically trace these conjectures, we draw on untapped firm-level data on privatizations from the early 1990s in East Germany. After mass protests and the fall of the Berlin Wall in 1989, the German Democratic Republic was subsumed by the Federal Republic of Germany in 1990. All formerly state-owned East German firms were given to a public trust, the *Treuhand*, which was in charge of selling the firms to willing investors or shutting them down. Important for our case: The former ruling East-German *Socialist Unity Party* was never abolished, but simply renamed and reorganized itself as *Party of Democratic Socialism* in 1990.¹ East Germany thus

¹We should note that the Socialist Unity Party, which gave up its monopoly of power in 1989, was taken over by reformist forces from within the party, which pushed the party to rename itself into PDS in February 1990 and began to espouse democracy. Moreover, the PDS did expel some

offers us the unique opportunity to cleanly measure pro-socialist preferences before and after privatizations were implemented by analyzing support for this political party.

Using a difference-in-differences design, we show that privatizations led to a marked increase in pro-socialist voting between 1990 and 1994. Municipalities exposed to privatizations became 1.5 percentage points more likely to vote for the Party of Democratic Socialism. In other words, privatizations backfired as early as 1994. We buttress the robustness of this finding by i) testing for non-parallel trends in pre-treatment periods, ii) demonstrating that the results hold both at the municipality- as well as at the district-level, and iii) showcasing a number of robustness tests, controlling i.a. for out-migration and job loss.

Why did privatizations lead East Germans back to the socialists? We argue that the most plausible causal mechanism is widespread discontent that privatizations almost exclusively benefited a small (Western) elite, thus sowing mistrust toward capitalism. To empirically trace this channel, we study whether privatizations did *not* spark pro-socialist voting when firms were taken over by East Germans. To do so, we focus on so-called management buyouts, which were practically the only way for East Germans to acquire formerly state-owned firms. Using rich data on the distribution of firm ownership, we find that management buyouts do not positively predict pro-socialist voting, while “regular” privatizations (which largely benefited Western elites) do. These findings thus showcase that antipathy toward Western elites—popularly argued to have ‘unfairly benefited’ from privatizations—was likely behind the socialist revival in East Germany.

We also rule out three alternative causal channels. First, we revisit the argument that privatizations were implemented in a nontransparent, corrupt manner and may thus have undermined support for the new regime, leading citizens to move back to so-

prominent pre-1989 leaders from its ranks. That said, the PDS remained the legal, ideological, and moral heir of the Socialist Unity Party’s legacy. The PDS also took over the Socialist Unity Party’s apparatus, and many former GDR regime supporters remained members of the PDS.

cialist parties. To test this channel, we look for heterogeneous effects in local branches of the privatization agency that saw high-profile corruption cases. Interestingly, we do *not* find evidence that privatizations sparked socialist voting more significantly where corruption was rampant. Second, it is well-known that privatizations caused significant job loss. The accompanying frustration and hardship may then have sparked a desire to bring back socialism. We do not, however, observe that the positive effect of privatizations on pro-socialist voting was more widespread in municipalities, which experienced larger job losses due to the privatization program. We further corroborate this null finding with an event study of the impact of individuals' first unemployment experience on the likelihood to vote pro-socialist after the end of communist job guarantees. Third, we show that the effect of privatizations on pro-socialist voting cannot be explained by emigration. In particular, we do not find that privatization efforts drove anti-socialist voters out of municipalities, thus explaining a revival of the socialist camp. The three null findings thus corroborate the argument that privatizations revived pro-socialist voting via a broader channel, namely, by sowing mistrust toward Western elites and capitalism more broadly.

Our evidence adds to three core debates across the social sciences. First, we contribute to a debate on communist successor party survival in Eastern Europe. Rather than die out, communist successor parties gained surprising ground throughout the 1990s and 2000s. Prior literature has attributed this revival to successor parties' organizational strength (Curry and Urban, 2004; Tavits, 2012, 2013), their existing political resources, which they used to reshape their appeal and personnel and streamline their operations (Grzymala-Busse, 2002), institutional legacies (Geddes, 1995) as well as the strategic use of transitional justice legislation (Nalepa, 2010). Our evidence does not dispute these arguments. But we contend that "the vicissitudes of the transition and its economic consequences," as Grzymala-Busse (2002, 4) puts it, *did* play a role: We find clear evidence that local-level privatizations allowed the former Socialist Unity Party to regain electoral momentum.

Second, we add to the debate on post-communist market reforms (Przeworski, 1991). Much has been written about the determinants of the fall of the Iron Curtain (Hager and Krakowski, 2021; Kuran, 1991; Opp and Gern, 1993). We also know that socialist rule, in East Germany and elsewhere, left a deep imprint on its citizens (De Vries and O'Brien, 2021; Neundorf, 2010; Neundorf and Pop-Eleches, 2020). Analyses of the immediate repercussions of the transformation and, in particular, privatization are relatively scarce, however, particularly at such fine-grained levels. While the economic repercussions of privatization have received significant scrutiny (Collier and Siebert, 1991; Mergele et al., 2020), we are the first to show that privatization efforts led to an immediate resurgence of pro-socialist voting.²

Third and more broadly, we add to a debate on the interplay of capitalist reform and democracy. It is often argued that capitalism strengthens democracy and vice versa (Almond, 1991; Fukuyama, 1992). We partly question this link, at least in the context of transformations from socialism to capitalism. When both systems, capitalism and democracy, are introduced at the same time, the ensuing privatization of firms seems to have an unintended side-effect: it revives pro-socialist voting. The driver behind this negative effect is the perceived inequity of how economic assets are distributed in capitalist systems. Citizens of socialist states are used to relatively low levels of inequality. The perceived benefits of democratic governance thus fade in comparison to new forms of economic inequality, where (“foreign”) elites take over most firms. As such, our evidence also speaks to a broad debate on economic reforms across the world and their imprint on democratic governance (Centeno and Cohen, 2012; Gans-Morse and Nichter, 2008; Stokes, 2001).

²Interestingly, Kellermann (2021) finds that Treuhand activities predict “radical voting” in 2017, which includes the far-right AfD.

2 Theoretical Background

How might the privatization of a formerly state-run economy revive socialist preferences and voting behavior? In what follows, we study the case of East Germany and lay out two political channels for how privatizations may have sparked pro-socialist voting. The first channel captures the intransparent, top-down, and partly corrupt manner in which privatizations were implemented, which plausibly eroded trust in the new political system. The second channel picks up on the fact that firms were largely sold to (Western) elites, which likely undermined support for capitalism and the popular narrative that it rewards effort. We should note that there are undoubtedly alternative *economic* channels that link privatizations to socialist voting, e.g., migration and job loss. We revisit these channels in Section 5.3 and provide evidence that they are not active in our setting. Before delving into both political mechanisms, we first set the stage by describing the economic status quo of the early 1990s in East Germany.

2.1 Context: Privatizing East Germany

The German Democratic Republic (henceforth, GDR) was established in 1949. Starting in 1952, the GDR began to collectivize virtually all companies, including the agricultural sector. State-owned firms were given precise quotas on what and how much to produce. Leaving aside rampant inefficiencies, in theory, profits accrued to everyone, given that the state owned the means of production. Political power was in the hands of the Socialist Unity Party, which periodically confirmed its popular mandate in unfree elections.

In 1990, the GDR was incorporated into West Germany, following a wave of street protests in 1989. Formerly state-owned East German companies therefore simply switched state owners. In particular, East German firms were transferred into a public corporation called the *Treuhand*. On July 1990, the Treuhand owned around 8,500 companies, a number which further increased over time due to split-ups of firms.

Initially, the firms collectively employed 4.1 million people or roughly one in four inhabitants of East Germany. Given Germany's capitalist constitution, the German government signed a law mandating the Treuhand with the privatizing of all East German companies. Paragraph 1 of the Treuhand-law stated: "Nationally owned property is to be privatized."³

The Treuhand's privatization efforts resulted in one of three major outcomes. First, an East German firm could successfully be sold to a private entity (*privatization*), which was the desired outcome for the Treuhand. Of the total number of firms, 57 percent were successfully privatized (see Section 3.1). Second, firms could be restituted to former owners who had been expropriated during the Third Reich or one of the GDR's expropriation campaigns (*restitution*). This special case of privatization happened in 15 percent of all cases. Third, an East German firm could be shut down because there was no buyer and the German government saw no strategic need to keep it running (*liquidation*). 28 percent of firms ended up in liquidation.⁴

2.2 The Politicization of Firm Privatizations

While German reunification was popular, the Treuhand was not. Protests against privatizations began as early as 1990. The famous Monday demonstrations, which helped bring down the GDR, changed their focus in 1990 and started protesting against the Treuhand. In Leipzig, for instance, steelworkers protested against layoffs and demanded that the German government invest 90 million Euros to keep the company afloat. In Eisenach, workers of the local automobile manufacturing plant blocked highways after the Treuhand decided to close the plant in 1991, which affected 4,500 employees. Overall, between 1990 and 1993, 1,032 protests took place – the majority of

³All German translations are by the authors.

⁴Note that East German firms could also remain in government ownership (*nationalization*). A small number of firms, around 260, were nationalized or remunicipalized. We do not take this form of transformation into account as it was only applied to public services firms, such as utilities. For the small number of cases, we cannot expect to identify a local effect on pro-socialist voting.

which opposed the privatizations pursued by the Treuhand (Ekiert and Kubik, 1998). The protests culminated in the unsolved assassination of the Treuhand's chairman, Detlev Rohwedder, on April 1, 1991.

Two major critiques were leveled against the Treuhand. These critiques, to our mind, make it plausible that the Treuhand's privatization efforts led some voters to become skeptical of the new democratic and capitalist order and ultimately led them back to the former Socialist Unity Party.

2.2.1 Channel 1: Privatizations unfairly benefited Western elites

The first major critique leveled against the Treuhand was that it unfairly favored West German companies and individuals. This critique came in two variants. First, the Treuhand was criticized not only for shutting down non-profitable firms, but *also* for liquidating profitable firms in order to benefit West German companies. A famous case in point was the closing of the potash factory in Bischofferode, Thuringia. Established in 1909, the mine was one of the GDR's internationally successful firms. In 1991, the Treuhand decided to merge the company with a West German competitor, K+S, which was headquartered just 30km west of Bischofferode. K+S then decided to close the mine. While it is unclear just how profitable the mine was, miners and local residents argued that the closing was akin to a "killer acquisition." That is, K+S bought and then closed the mine in order to remove competition from its backyard. To prevent the liquidation, the miners went on a public hunger strike. Their slogan was "Bischofferode is everywhere," suggesting that the Treuhand sold out East Germany to benefit West German companies.

Second, the Treuhand was criticized for prioritizing West German investors, even when East Germans put in a competitive bid. 51 percent of companies were sold to West German investors, especially the largest and most productive ones (Mergele et al., 2020). In some instances, the sales price amounted to a symbolic 1 Deutsche Mark. In other cases – as in the example of Carl Zeiss Jena – the German government sold the

company and put an additional subsidy of 2.4 billion Deutsche Mark on top. Another example is the VEB Fleischwirtschaft (meat industry) in the city of Greifswald. In 1990, the director and technical manager of the firm, Walter Kienast and Gerhard Dobbratz, wanted to take over the company through a management buyout. Yet, despite them knowing the company inside out and obtaining credit approval from a local bank, the Treuhand sold it to a West German investor. This does not imply that management buyouts did not take place. Indeed, roughly 3,000 firms were sold to East Germans (see below). That said, management buyouts mostly took place in small companies. By contrast, large firms – which generated significant public attention – were almost exclusively sold to West German investors. A survey by Goschler and Böick (2017) finds that 18 percent of East Germans associate the Treuhand with the term “sell out,” underlining the impression that privatizations did not benefit East German residents.

Both narratives – the liquidation of profitable East German companies to aid West German competitors as well as the nearly exclusive sale to West German investors – arguably led to a profound disenchantment with capitalism amongst East Germans. That is, capitalism was partly advertised to East Germans as a system that rewards effort; a system where the government works to achieve fair competition between firms and individuals. For instance, (West-)Germany’s then-chancellor, Helmut Kohl, gave a noteworthy speech on October 4, 1990, where he said that “the unification treaty has laid the foundation for growth and prosperity in all of Germany. What remains essential is that we [...] hold onto what has proven successful for over forty years: a free economic and social order that opens up opportunities for achievement”. This theoretical proposition stood in contrast to the first impression (some) East Germans had with capitalism: Companies were not sold to individuals who put in the best bid, but to investors who came from the right side of Germany. The supposed benefits of capitalism also counteracted the idea that profitable businesses should be able to compete and not be shut down so that West German companies had less competition.

As a consequence, East-Germans' perceptions of effort-dependent success in capitalism arguably declined throughout the early 1990s, which may have led them to move back to socialist parties.

2.2.2 Channel 2: Privatizations were nontransparent and top-down

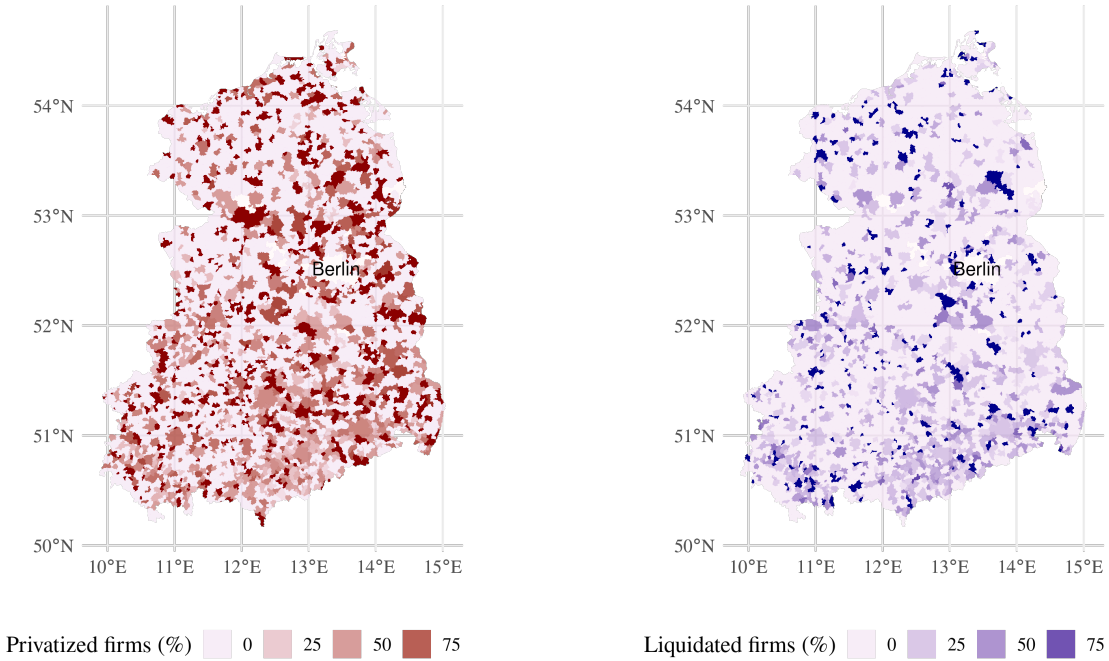
The second major critique leveled against the Treuhand was that its decision-making did not follow core democratic principles, including transparency and equality. This critique had two distinct dimensions. First, there was a widespread narrative that the Treuhand's decision making was *nontransparent* and partly corrupt, which belied ideals about democratic transparency and accountability. Indeed, survey evidence shown in Goschler and Böick (2017) indicates that 24 out of 238 East Germans predominantly associate the Treuhand with the term "fraud," underlining the impression that privatizations did not benefit ordinary citizens. A lucid example for this critique was the sale of the VEB Kombinat Minol, an oil refinery in Leuna, Saxony-Anhalt. Rather than engage in an open bidding process, the company was sold to a French competitor under much political pressure (more details below). It later became clear that bribes amounting to 47 million Euros were paid, allegedly made possible by the Treuhand's nontransparent decision-making. In addition, frequent corruption scandals undermined the perceived fairness of the Treuhand's decision making. Another infamous example was the leader of the Treuhand's Halle branch. The director sold properties below market value to pre-selected buyers and received more than 4.5 million Deutsche Mark in kickbacks (Spiegel, 1998). In other cases, Treuhand employees were paid excessively high salaries. For example, the lawyer Karl Tynek received up to 25 million Deutsche Mark for the liquidation of 29 companies, according to contemporary media reports (TAZ, 1994).

Second, the Treuhand was criticized for pursuing privatizations in a top-down manner, which belied democratic ideals that the median voter is in charge. The aforementioned case of the VEB Kombinat Minol oil refinery is a striking example for this

critique. The oil refinery was a prime case of a relatively profitable East German firm. Rather than selling it to the highest bidder, however, German chancellor Helmut Kohl and French president François Mitterrand lobbied to sell the company to Elf Aquitaine, a French oil conglomerate. The sale was advertised as a symbol for France's investment in East Germany. Despite other interested investors and popular demands to keep the company German-owned, it was ultimately sold to the French competitor. The sale thus countered the democratic ideal of having the people decide.

Both critiques – the intransparent decision-making as well as lobbying from the top against popular demands – may arguably have sparked dissatisfaction among East Germans with the new democratic ‘experiment’. The GDR, to recall, was not democratic, despite contrary claims in its constitution. Elections were not free and there was effectively only one party to vote for, the Socialist Unity Party. Democratic governance was an explicit reason for reunification. As then-chancellor Helmut Kohl, in a speech to East Germans in 1991, stated that “self-determination means [...] that we respect your opinion. We do not want and we will not patronize anyone. We respect what you decide for the future of the country” (Bundesregierung, 1989). The Treuhand, so the popular narrative went, discredited these ideals by i) letting officials overrule popular will when deciding how to privatize, and ii) by conducting privatizations in a non-transparent and (at times) corrupt manner. As a result, the Treuhand may have, perplexingly so, strengthened pro-socialist voting.

Figure 1: The privatization of East Germany



Notes: The Figures map the percentage of local firms, which were privatized (left) or liquidated (right), separated into four bins. The unit is the East German municipality, harmonized to the 2002 geometries.

3 Design

To explore whether the privatization of East Germany’s economy revived pro-socialist voting, we draw on unique micro-level data. We make use of the fact that privatization, liquidation, and restitution decisions varied substantially across municipalities (see Figure 1). This enables us to employ a difference-in-differences design. What is more, East Germany is unique in that the former Socialist Unity Party was never banned (it was merely renamed and reorganized in 1990). As stated, the party had begun to espouse democracy by 1990 although scholars disagree on how sincere this transformation was, particularly in the early days. But, most importantly, the party continued to embrace socialism, which offers us the unique opportunity to cleanly measure pro-socialist preferences – before and after privatizations were implemented. In what follows, we introduce our data sources as well as our empirical strategy.

3.1 Data

3.1.1 Treatment: Privatizations and Liquidations

Our explanatory variables are the shares of companies in East German municipalities that were privatized, liquidated, and restituted by the privatization agency. The starting point of our data collection is an administrative list of all Treuhand firms by the “Federal Agency for Special Unification Related Tasks”⁵ (BvS), the legal successor of the Treuhandanstalt, obtained through a Freedom of Information Request (Bundesanstalt für vereinigungsbedingte Sonderaufgaben, 2016). We match this list with biannual surveys of Treuhand firms conducted by the SOESTRA institute on behalf of the Treuhandanstalt and the Federal Employment Agency. They were implemented since April 1991 and provide a unique insight into firm’s employment during the transition process. Previous work by Mergele et al. (2020) demonstrates that said biannual surveys are representative for the universe of East-German firms in terms of

⁵Original name: Bundesanstalt für vereinigungsbedingte Sonderaufgaben.

privatization status and regional distribution.

The data set includes the municipality identifier for 92 percent of all Treuhand-owned firms. Using these identifiers is complicated by the fact that municipalities were merged, redrawn and recoded to a large extent in the 1990s. In the case where municipalities were merged, the aggregate in older periods can be matched to the merged entity in the more recent period. If a municipality was split, weights must be used to link parts of the old municipality to multiple new municipalities. We therefore use the cross-walks by the German “Federal Institute for Research on Building, Urban Affairs and Spatial Development”⁶ (BBSR) to harmonize the territorial boundaries of municipalities to the end of 2002 (Bundesinstitut für Bau-, Stadt- und Raumforschung, 2020).

Using municipality codes, we calculate the share of companies in a given municipality, that were i) privatized, ii) liquidated, and iii) restituted, respectively. The resulting variables thus capture the intensity of the Treuhand privatization efforts across municipalities. The liquidation and privatization variables are mapped in Figure 1. As can be seen, the data are not only highly granular, but there is also significant geographic variation, which alleviates concerns about spatial autocorrelation. Moreover, the Figure shows that the Treuhand managed at least one firm in more than 32% of 4493⁷ East German municipalities.

Our combined data sources allow us to identify the month in which the privatization decision was made by the agency. Crucially, Figure A1 (Appendix) shows that only a negligible fraction (5.4%) of privatization decisions were taken in 1990. Therefore, we use the 1990 Federal general election on December 2 as our pre-treatment baseline and focus on the 1994 Federal general election in October as our first post-treatment outcome year.

⁶Original name:

⁷This figure reflects the number of municipalities in 2002 after numerous territorial changes and reforms since 1990.

Our core sample is defined as follows: We only use municipalities where the privatization agency had at least one company in its portfolio. Doing so ensures that we compare municipalities with differing degrees of privatization intensity (*intensive margin*), alleviating concerns about wrongly comparing industrialized areas to non-industrialized ones.⁸

3.1.2 Outcome: Socialist voting

In the theory section, we hypothesized that the privatization of East German firms would lead residents to become discontent with capitalism and democracy, making them susceptible to socialism. To the best of our knowledge, there are no geo-coded public opinion surveys capturing antipathy toward the new Western system. Fortunate for our case, there was a historic peculiarity in East Germany, which we can exploit: Unlike in other countries of the Eastern Bloc, the East German Socialist Unity Party was never banned. Rather, it renamed and reorganized itself in 1990 as the *Party of Democratic Socialism* (PDS) and carried on the socialist ideas of its predecessor party. This holds particularly true in the elections in 1994 and, to a lesser extent, in 1998—which is why we focus on this early time period (more reasons below).

To measure pro-socialist voting, we collected municipality-level election results across five elections. We relied on official election statistics of the German federal elections in 1990, 1994, and 1998. In addition, to assess differences in socialist voting *before* the Treuhand privatized firms, we collected the election results of the March 1990 East German elections to the *Volkskammer* (the GDR’s main parliament)⁹ as well as results from the regional elections of state parliaments in October 1990, which were all held on the same date. We make use of this data—as well as the 1990 federal election data—to test for pre-treatment differential trends in socialist voting between

⁸We also exclude Berlin from the following analyses as East and West Berlin cannot be sufficiently separated in terms of elections outcomes and PDS support.

⁹We thank Andreas Stegmann for generously sharing this data at the municipality level with us (Stegmann, 2019).

municipalities which later experienced more or less activity by the privatization agency.

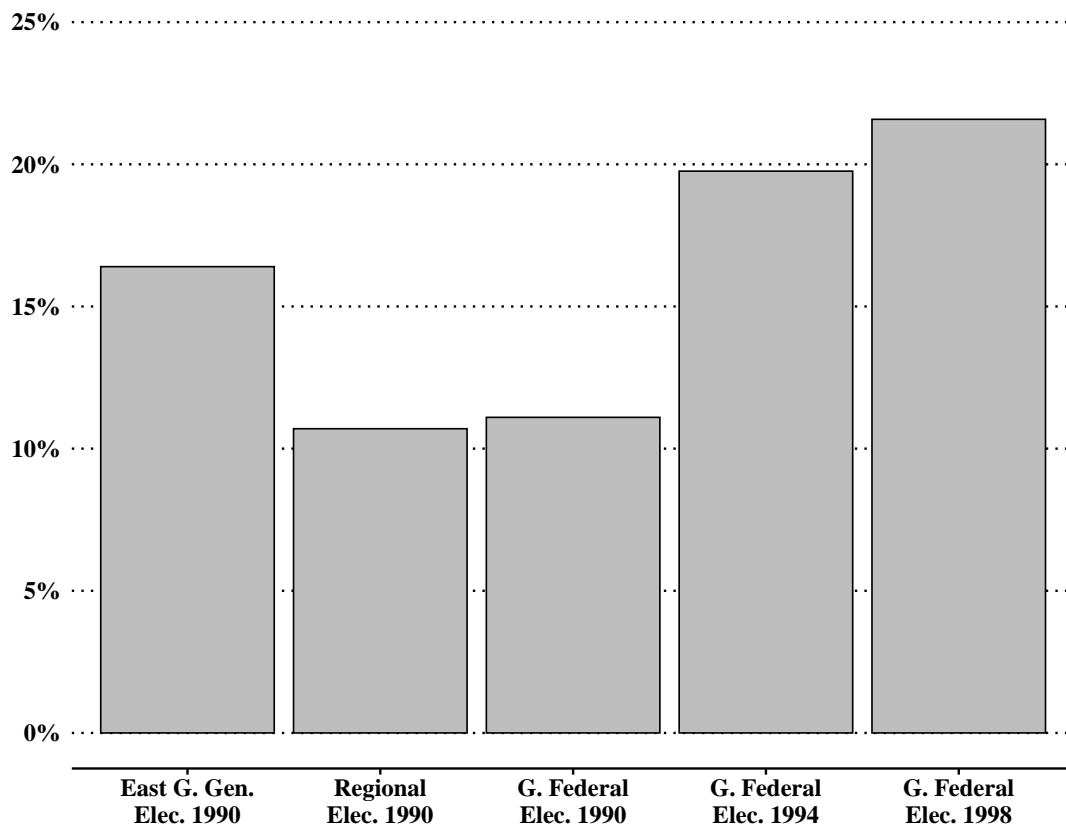
To ensure comparability of the election results over time, we again use the cross-walk provided by the BBSR to account for municipalities' territorial changes (Bundesinstitut für Bau-, Stadt- und Raumforschung, 2020).

Figure 2 shows the overall development of socialist voting in East Germany. Immediately after the German unification in October 1990, the party had substantial difficulties in attracting voters. While its electoral support in West Germany was close to nonexistent, it gained about 10% of the East German votes in regional and federal elections in 1990. In the subsequent elections, however, the PDS regained substantial electoral support. Most interesting to this paper's research question, the party's support nearly doubled from 11% to nearly 20% in 1994, i.e. after the majority of East-German companies were privatized, liquidated, or restituted. It remains open to which extent this substantial rise in public support can be explained by the Treuhand's activities.

3.1.3 Control variables

We use a battery of control variables throughout different specifications to account for potential confounding factors. In our baseline specifications we use state trends and the size of the initial electorate. Moreover, for robustness checks, we digitized a firm and production plant census from 1987 that was recompiled and published at the district-level by the Joint Statistical Office of the East German Federal states after unification (Gemeinsames Statistisches Amt, 1987). We use a pre-unification measure of labor productivity and railway infrastructure from the census to capture the local development of production and infrastructure. To control for potential spatial confounders, we control for the distance from a unit's centroid to the inner-German border. We also use the share of employment in agriculture in 1989 from Rudolph (1990) and the vote share of the Communist Party of Germany (KPD) in 1933 from King et al. (2008) that we both retrieved from Lichter et al. (2021).

Figure 2: Socialist voting in East Germany, 1990-1998



Notes: Figure 2 shows the electoral support for the Party of Democratic Socialism in East Germany across five elections. The time line starts with the March 1990 federal election in East Germany as it was considered the first (and only) free and fair election before German unification on October 3, 1990. The second bar shows the aggregate electoral support for the PDS in all regional elections that took place on October 14, 1990. The third, fourth, and fifth bars give the party's East German electoral support in the corresponding all-German elections to the national parliament. All numbers are based on the corresponding proportional components.

3.2 Estimation

To examine the effect of privatizations on pro-socialist voting, we make use of a difference-in-differences design (DiD) often labelled as event study. In particular, we estimate the following equation:

$$\begin{aligned} \text{Socialist}_{i,t} = & \sum_{t=-3, t \neq -1}^1 \beta_t \text{Privatized}_i \times \nu_t + \sum_{t=-3, t \neq -1}^1 \gamma_t \text{Liquidated}_i \times \nu_t \\ & + \lambda_1 \mathbf{X}_i \times \nu_t + \nu_t + \delta_i + \epsilon_{i,t}, \end{aligned} \quad (1)$$

where i indexes geographic entities and t denotes elections. The outcome *Socialist* is the vote share of the former Socialist Unity Party, the Party of Democratic Socialism (PDS). We present results for both the municipality and the district level (see below). *Privatized* and *Liquidated* are the continuous treatment variables, which depict the shares of firms in a given municipality that were privatized or liquidated. Our main sample comprises only municipalities with at least one Treuhand firm. As privatization, liquidation and restitution shares therefore sum up to one, the share of restitutions constitutes the base category. Since these measures are time-invariant, we interact each of the two measures with ν_t — dummy variables representing the elections under study. The data encompasses three elections in the pre-treatment period (general and state elections before 1994) and two elections in the post-treatment period (general elections in 1994 and 1998). We estimate dynamic coefficients of two pre-treatment and two post-treatment elections, referencing the 1990 general election in unified Germany. Next, δ_i and ν_t serve as municipality and time fixed effects, respectively. By using two-way fixed effects, we control for any time- or municipality-invariant confounders. \mathbf{X}_i indicates a vector of pre-treatment control variables. In our main specification, we introduce state dummies. Thereby, we control for the possibility that – due to the federal structure of the German political system – municipalities in different East-German states are affected by diverging trends that are not captured by the municipality fixed effects. Furthermore, we also control for the size of the electorate in the East-German

Volkskammer election and, again, interact this variable with time. Thus, we account for the possibility that smaller and larger municipalities followed different trends. Finally, $\epsilon_{i,t}$ is the error term. We cluster the standard errors at the unit level to account for the fact that the error terms are plausibly correlated within municipalities. Since the size of municipalities differs considerably (from small villages to large cities), we weigh the regression according to the size of the electorates.

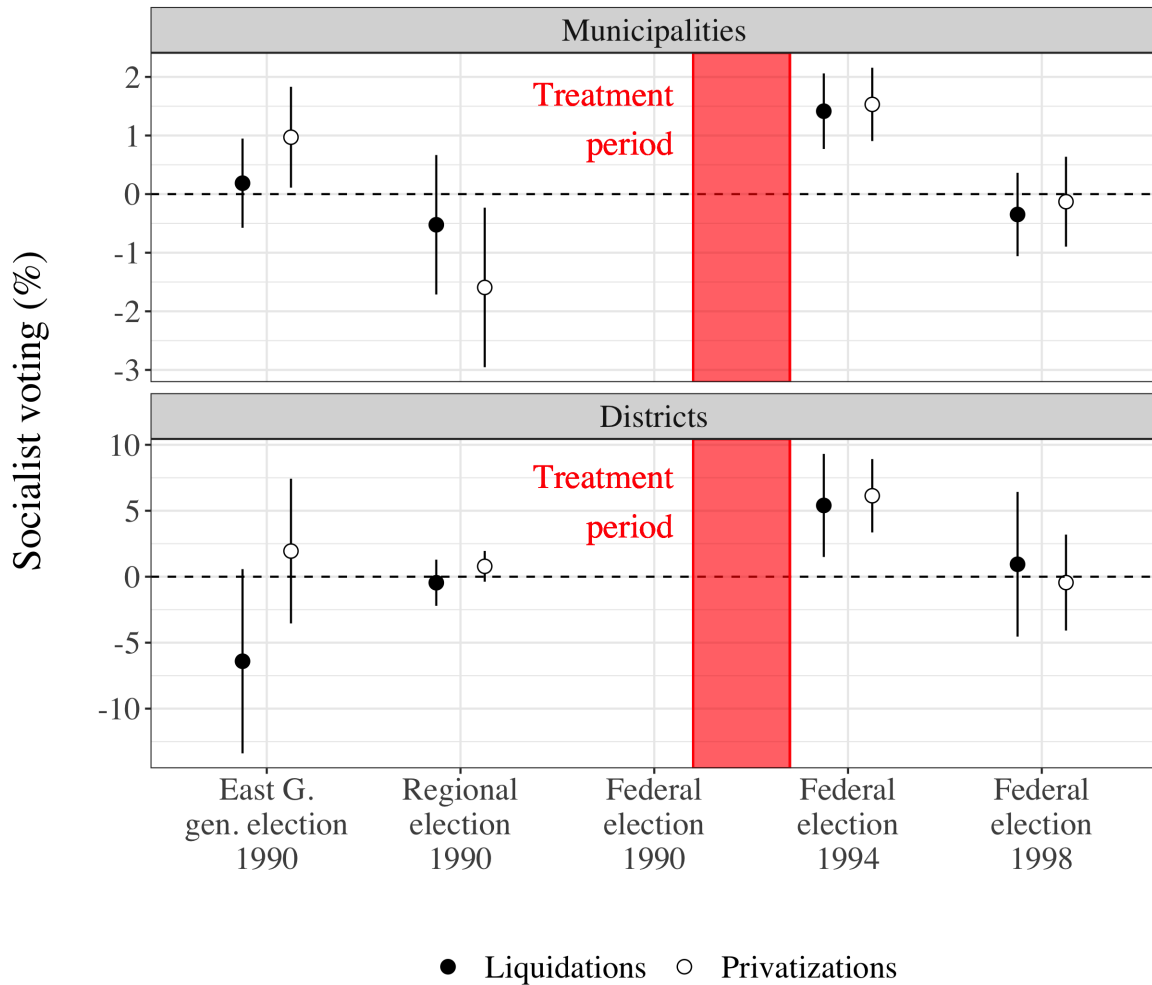
3.3 Difference-in-differences assumptions

Difference-in-differences designs are able to estimate average treatment effects on the treated under the assumption of parallel trends. Given that our measures for privatization are continuous shares, we estimate the average treatment effect of a certain dosage $ATT(d|d)$ of the respective privatization treatment. The principal assumption to identify $ATT(d|d)$ says that if treated municipalities at dosage d had not been treated, they would have been on the same path of outcomes as untreated municipalities. Since there is consensus on which type of tests can lend credibility to this assumption, we conduct standard pre-treatment tests using three different pre-treatment elections: the 1990 federal election, the 1990 state-level elections and the 1990 (free) election to the East German parliament. (We cannot use elections from the GDR before 1989 to assess parallel trends because these elections were neither free nor fair.) We show that our treatments by and large do not explain significant differences in voting prior to the treatment period.

Another assumption implicit in difference-in-differences designs is that there are no treatment spillovers between units. To rule out spillover effects, we need to assume that voters are only sensitive to privatizations that occur in their municipality whenever the municipality is the unit of observation. As municipalities are rather small in East Germany with large variations in population size, commuting to work across municipality borders might create spillovers across units. Therefore, we additionally report regressions at the level of districts, which are used to delineate commuting

zones in East Germany (Kosfeld and Werner, 2012). However, aggregation comes at the expense of statistical power, which increases the risk of obtaining the wrong sign (Type S error) or exaggeration of magnitudes (Type M) even when estimated effects are significant (Gelman and Carlin, 2014).

Figure 3: Effect of privatizations on socialist voting



Notes: Figure 3 plots point estimates and 95 percent confidence intervals from two-way fixed effect regressions of the socialist vote share on the share of privatized / liquidated firms omitting the share of restituted firms in a given municipality / district, following equation 1. Specifications control for differential trends in states and for variation in the size of the initial electorate. The red area indicates the treatment period, i.e. the years of the privatization program. Full regression results are reported in Table A1.

4 Results

Figure 3 shows the estimates of our main regression. We find clear evidence that privatizations and liquidations by the privatization agency raised the vote share of the former Party of Democratic Socialism in the 1994 general election. Simultaneously, restitutions to former owners as the omitted base category, led to lower vote shares. The upper panel shows the regression estimates using municipality level data. Here, we estimate a positive and significant effect of privatizations *and* liquidations on the socialist vote share. In Figure 3, we also aggregate the data at the district level. Aggregation comes at the expense of power, but with the potential gain that districts in East Germany are more homogeneous in demographic characteristics than municipalities and are typically characterized by less commuting across borders. Again, we find a positive and statistically significant effect for the 1994 general election. The coefficients in both specifications also imply substantially large effect sizes. At the municipality level, a one standard deviation increase in the share of privatizations (that coincides with a decrease in the restitution share) causes an increase in the socialist vote share of $0.38 * 1.53 = 0.58$ percentage points in 1994. At the district level, the effect size is comparable for privatizations where an increase by one standard deviation in privatizations leads to an increase of the PDS vote share of $0.11 * 6.14 = 0.63$ percentage points in 1994. For liquidations, a one standard deviation increase implies an effect of 0.48 percentage points at the municipality level and 0.34 percentage points at the district level. Hence, there is credible evidence that privatization and liquidation led to a socialist revival.

Using the sample including all municipalities, the coefficients of the shares are estimated with additional variation along the extensive margin. We can therefore include the share of restitutions as an additional treatment. Figure A3 in the Appendix shows the coefficients of this regression. Despite the fact that restituted firms also switched from public to private ownership (albeit to former owners), we see no meaningful rise in socialist voting. If anything, the effect is negative, suggesting a positive attitude

toward restituted owners. This piece of evidence is interesting since restituted firms also suffered from economic repercussions. Still, socialist voting did not go up. We revisit this finding in section 5 (“Mechanism”).

Perhaps surprisingly, the privatizations effect does not seem to matter for the 1998 election. Our preferred explanation is based on the fact that the privatization agency was shut down in a televised event on December 31, 1994, in response to public discontent. Even though most of the privatization decisions had been taken at that moment, ongoing liquidations had to be accompanied and privatization contracts, which often implied legal obligations of employment and investment guarantees, needed to be monitored and sometimes renegotiated. To oversee the remaining tasks, the institution was rebranded but existed on the same legal basis. According to a top bureaucrat, the successor organization’s name “Federal Agency for Special Unification Related Tasks” (Bundesanstalt für vereinigungsbedingte Sonderaufgaben) was deliberately chosen to sound opaque and remove privatization policy from the public spotlight (Kufus et al., 2012). It is possible that the communication strategy helped to shift voters’ attention away from the privatizations, even though the privatization decisions were likely to be persistent.

4.1 Robustness

As noted above, using fixed effects at the unit- and the time-level already controls for any time- or unit-invariant differences in our main sample. To further ensure that the results shown in Figure 3 are not driven by some third, confounding type of factors, we re-run our models with additional covariates. Specifically, we add control variables that capture economic and structural differences prior to treatment between the units under study. First, we add spatial distance from a unit’s centroid to the inner-German border. Second, we control for the work force productivity before re-unification at the district-level. For that purpose, we use the value of produced goods divided by the number of employees in manufacturing in 1987. Third, East-German regions differ in

the development of their infrastructure. To control for these differences, we use the total number of direct railway connections of production plants per district in 1987. Fourth, we control for the share of the agricultural sector of total value added in 1989 at the district level. Fifth, it might be possible that different regions are characterized by different traditions of socialist voting. Therefore, we also control for the vote share obtained by the Communist Party of Germany (KPD) in 1933 –the last multi-party elections held in East Germany until 1990–.

Figure A2 shows the regression results when including the comprehensive set of controls. Reassuringly, the results are not substantially different from the results shown in Figure 3. The only difference is that neither the privatization nor the liquidation share had a significant impact on the pro-socialist voting in the pre-treatment period. This further supports the assumption that there were no relevant pre-trends affecting the vote share of the PDS in 1994.

5 Mechanism

We have estimated a positive association between Treuhand’s privatization efforts and socialist voting. What mechanisms are behind this association? Why, in other words, did privatizations create socialist backlash? In the theoretical section, we put forth two channels. First, we argued that privatizations were (at times) implemented in a nontransparent, corrupt manner and may thus have reduced trust in the new political system. Second, we hypothesized that privatizations were perceived as unfairly benefiting West German investors, undermining support for capitalism, which was advertised to East Germans as a system that rewards merit. We revisit both channels in turn.

5.1 Nontransparent and top-down decision-making

Did privatizations spark socialist voting because the decisions whether and how to privatize were undertaken in a nontransparent and corrupt manner? To devise a test for this proposed channel, we scrutinize whether we see a more pronounced socialist backlash in regions where corruption was most visible for East-German citizens. Likely the most infamous case was the Treuhand's Halle branch in the state of Saxony-Anhalt. The branch saw a number of high-profile cases where firms were sold off to insiders or significant kickbacks were paid. Indeed, this local Treuhand branch was sometimes labelled "Ganoven GmbH Halle" (English: Crooks Inc., Halle). Do we see more pronounced electoral backlash in the Halle region as compared to the rest of East Germany?

To address this question, we interact our treatment variables (privatization or liquidation) with a measure of the share of firms that were administered by the Treuhand's Halle branch. Table 1 shows the corresponding regression coefficients for the 1994 general election. Neither at the municipality nor at the district level do we observe that the treatment effects were particularly pronounced in the Halle region. If anything, the coefficients point in the opposite direction, but none of the interaction terms are statistically significant. We have thus little reason to believe that the positive effect of privatizations on pro-socialist voting is restricted to those areas where the Treuhand was perceived to be particularly corrupt and non-democratic.

5.2 Privatizations unfairly benefited the West

A second broad mechanism through which privatizations may have sparked socialist voting is by undermining affected residents' belief that capitalism is a meritocratic system. To trace this channel, we marshal three pieces of evidence.

First, we believe it is instructive to compare privatizations and restitutions. Recall that restituted firms were given to individuals who had formerly owned the company

Table 1: Effect of privatization on socialist voting conditioned by Halle branch

	<i>DV</i> : Socialist Vote Share	
	Municipalities	Districts
Privatizations x 1994 General Election	1.594*** (0.338)	7.218*** (1.524)
Liquidations x 1994 General Election	1.369*** (0.343)	7.169** (2.224)
Privatizations x 1994 General Election x Halle	-1.049 (0.745)	-5.148 (7.043)
Liquidations x 1994 General Election x Halle	0.426 (0.854)	-3.928 (12.102)
Observations	7,190	560
R ²	0.937	0.970
Adjusted R ²	0.921	0.958

Note: Coefficients from TWFE regression following equation 1. Controls are the size of the electorate at the earliest election and state dummies interacted with time. Regressions are weighted with the share of the electorate in the earliest election. Only the 1994 coefficients are reported. Significance levels are: *p<0.05; **p<0.01; ***p<0.001. Full regression results in Table A2.

and thus had historic ties to the region. These individuals were former Jewish or aristocratic owners who had been expropriated during the Third Reich, or former company owners expropriated during the rule of the GDR. These individuals therefore had a connection to the land and East Germany more broadly. As such, selling companies to a restituted owner was more plausibly based on “merit” compared to a West German investor without any connection to the land. In line with the proposed channel, as we noted above, we find that restitutions, if anything, have a *negative* effect while privatizations have a positive effect on pro-socialist voting (see Figure A3). The finding, to our mind, is particularly interesting because restitutions, too, constitute a kind of privatization, but one that is based on “merit” (tie to the land and firm).

Second, to further trace whether privatizations were deemed to unfairly benefit Western elites, we can scrutinize so-called management buyouts (MBOs). These types of privatizations meant that firms were bought by local staff and former employees who arguably had a real stake in the company. East Germans lacked access to credit

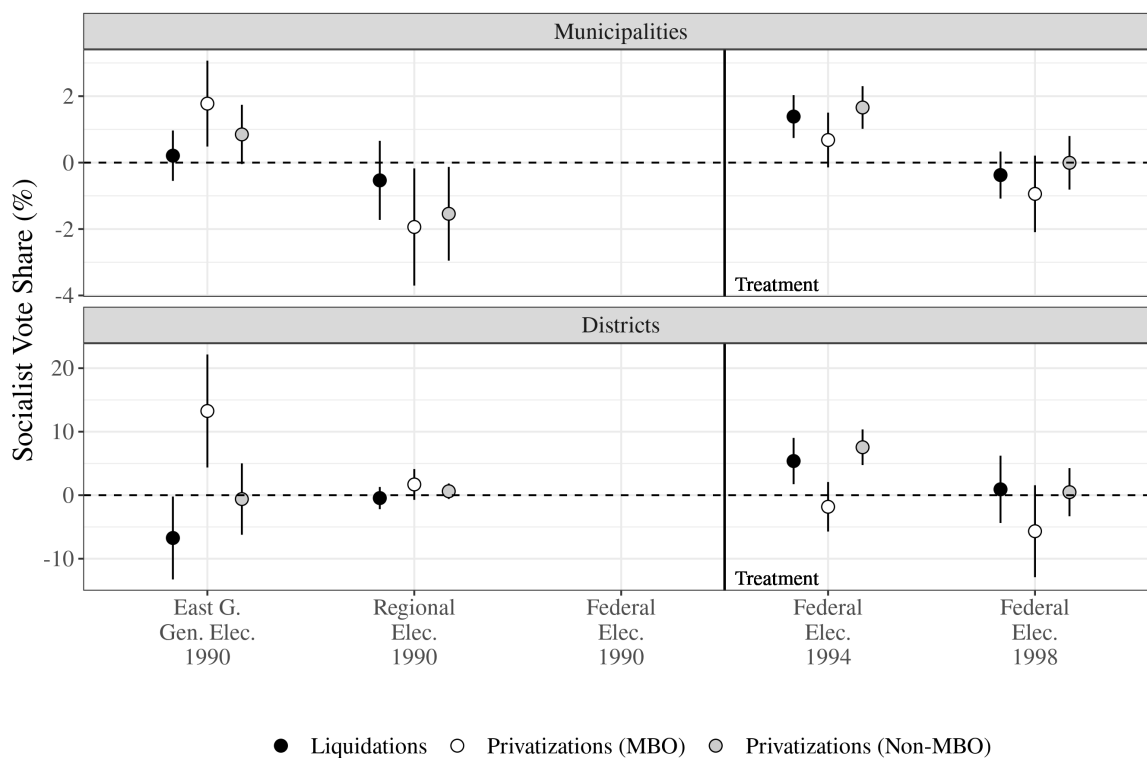
and Western management expertise demanded by the privatization agency, so that they often were not able to participate in the sales processes of companies. MBOs were—besides restitutions—virtually the only way how East-Germans could come into possession of a company.

One would expect MBO privatizations to have *no* effect on pro-socialist voting, given that such privatizations do not operate through the perceived inequity channel. Indeed, in many instances the Treuhand opposed plans of employees to buy firms themselves. For instance, employees and workers of the vehicle plant in Suhl (Thuringia, VEB Simson) attempted to acquire the company in 1990. The Treuhand, however, did not believe the business could be successfully restructured. As a consequence, the workers organized strikes and occupied the plant to create public pressure in favor of their plan (TAZ, 1993). The company was liquidated in the following years (Schulz, 2013). Interestingly, a survey conducted among 601 successful MBOs in 1995/96 reveals that the East-German buyers' motivation did, indeed, differ remarkably from the logic of capitalist profit maximization. For most East-German MBOs, the key goal was to secure the existence of the companies and to maintain jobs. Profit expectations and support by the Treuhand and banks, by contrast, were less relevant (Skopp, 1997).

Do we see *no* effect of MBOs on pro-socialist voting? To assess this question, we subtract the share of firms sold through MBOs from our privatization indicator and add it to our main regression equation. Figure 4 shows coefficients from the corresponding two-way fixed effects regression. Consistent with the idea that the pro-socialist revival was triggered by the perceived “non-deservingness” of West-German buyers, the effects for MBOs are close to zero and statistically insignificant. To our mind, these results corroborate the conjecture that East Germans felt privatizations were unfair, belying capitalist ideals of merit.

Third, an additional piece of evidence for the proposed inequity-channel can be gleaned from public opinion surveys. According to a representative survey conducted in 1994, 86% of East Germans agreed with the statement that the East is predominantly a

Figure 4: Effect of Privatizations on Socialist Voting including Management Buyouts (MBOs)



Notes: Figure 3 plots point estimates and 95 percent confidence intervals from two-way fixed effects regressions of the socialist vote share on the share of MBOs / privatized without MBOs / liquidated firms omitting the share of restituted firms in a given municipality / district, following equation 1. Municipalities without firms are omitted. Specifications control for differential trends in states and from variation in the size of initial electorate. The black line indicates the beginning of the privatization program toward the end of 1990. Full regression results in Table A3.

“sales market” (Absatzmarkt) for the West (Berger et al., 1994). And 65% believed that German reunification brought more advantages for the West than the East, while 63% agreed with the statement that West Germans had conquered the GDR in a ‘colonial style’ (Berger et al., 1994). These numbers thus provide further illustration that East Germans perceived the West as the undeserving profiteer of German unification. In 1994, the Allbus institute asked a representative sample of Germans to what extent they agreed with the statement that ‘the fate of East Germans depends on whether they try hard.’ Answer choices ranged from 1 (totally disagree) to 4 (totally agree). The results are shown in Table A4. Consistent with the proposed channel that the post-1990 privatizations belied the narrative that capitalism is meritocratic, East Germans gave an average of 2.3 points. West Germans, by contrast, were significantly more likely to agree with the statement (3.1 points).

5.3 Ruling out alternative explanations

Having pointed to one plausible channel, we want to briefly revisit two alternative (economic) channels for the positive effect of privatizations on socialist voting.

5.3.1 Job loss

First, privatizations led to significant job loss and mass layoffs. The resulting economic hardship may then have led people to vote pro-socialist (a related argument is made by Denisova et al., 2012). To explore this alternative explanation, we inspect whether the treatment effects are stronger in municipalities that experienced particularly stark job loss. Using the number of employees from the first and last waves of the firm surveys, we are able to measure the change in total employment in privatized, restituted and liquidated firms, respectively. This enables us to compute the share of employment lost over time from the early until the final stage of the privatization program. We then distinguish between areas that suffered drastic employment losses and those that did not. In particular, we construct a dummy variable that divides our observations

at the mean employment loss. At the municipality level, the average employment loss in formerly state-owned firms was 62.5% between 1990 and 1994.¹⁰ At the district level, the corresponding value was 71%. We interact this dummy variable with our treatment indicators to investigate whether firm liquidations and privatizations had different effects depending on the extent of mass layoffs. Table A5 shows regression results if we condition the firm privatizations/liquidations on an area's employment losses. By and large, we do not find major differences between areas that were hit more or less hard by mass layoffs. For both levels of the analysis, the socialist vote share develops positively in response to firm privatizations as well as liquidations. Figure A4 shows event study results from the impact of individuals' first unemployment experience after the end of the GDR on the likelihood to vote for the PDS. Whereas we find no effect on the intention of Socialist voting, we observe a large increase in the uptake of unemployment benefits. The results indicate that there may be no (direct) impact of unemployment on the intention to vote for the PDS.

5.3.2 Migration

Second, privatizations may have led individuals opposed to socialism to leave their municipalities. In particular, it is well known that large numbers of East Germans (particularly women and well-educated individuals) moved to West Germany after the 1990 transformation. These individuals may have been more opposed to socialism and, at the same time, more likely to leave once privatizations took place. If this were the case, our main models would potentially capture the result of compositional changes within the electorate, not changes in preferences. To test for this channel, we again use a three-way interaction: We calculate the change in the size of the electorate in 1994 as a share of the 1990 electorate. As with the employment loss measures, we then divide our sample at the average of this variable and run separate analyses for

¹⁰For the regional economy as a whole, this employment loss in Treuhand firms is attenuated by relative job stability in the public sector as well as market entrance of new firms.

both subsets (median values are -2.15% at the municipality level and -2.62% at the district level). We then interact this binary variable with our treatment indicators to investigate whether the resulting treatment effects are moderated by a municipality's population changes. Reassuringly, Table A6 (Appendix) shows that we find no significant differences between municipalities (or districts) that were affected by different levels of population changes between 1990 and 1994. Hence, these results do not lend support to the alternative explanation that the estimated effects are predominantly driven by citizens moving away from the former territory of the GDR.

6 Conclusion

This paper has provided evidence that the transformation of East Germany's command economy into a capitalist one created a marked socialist backlash. In particular, municipalities that experienced firm privatizations became more likely to vote pro-socialist. We argued that this effect is likely due to perceptions about inequity: Residents perceived privatizations to unfairly benefit (Western) elites, which undermined the promise that capitalism is meritocratic. To buttress this point, we showed that pro-socialist voting experienced a less marked resurgence whenever firms were restituted, i.e., given to owners who had ties to East Germany. We further substantiated this finding by showing that management buyouts – the only possibility for East Germans to acquire firms – did *not* spark pro-socialist voting. Our results offer three points for reflection.

First, our study complements the broader debate on historical legacies, in particular the imprint of communism on political attitudes. Our study highlights the importance of studying the process of transformation itself in order to explain how past institutions predict the development of political attitudes (Mau, 2019). In doing so, we also point to marked variation in socialist attitudes *within* East Germany. In other words, it is not the case that all of East Germany showed high levels of pro-socialist sentiment

or backlash. Rather, there was substantial variation in socialist voting, fuelled by the extent of economic privatizations and liquidations.

Second, our study underlines the role of preferences for equality in explaining political behavior (Alesina et al., 2004). We find that the privatization of the economy led to a socialist backlash. And, importantly, we argue that this backlash can partly be explained by perceived inequity: East Germans felt that privatizations were not fair—not everyone had the same chance of becoming an owner of capital. Indeed, as early as 1994, East Germans were significantly less likely to agree with the statement that “profits are fairly shared in society” (see Table A4). This perceived inequity, in turn, led some residents back to the former Socialist Unity Party.

Third and related, we found that economic factors—noticeably job loss—are unlikely explanations for the effect of privatizations on pro-socialist voting. This finding matters for at least two reasons. First, it showcases the relevance of “cultural” explanations for political attitudes (Norris et al., 2004). That is, we find no evidence that it was the direct, individual experience of economic hardship, such as job loss, that drove voters to the socialist party. Instead, perceived inequity that goes beyond the personal pocketbook matters most. The fact that privatizations *and* liquidations led to similar effects further supports this interpretation. The socialist backlash, at least in the context of East Germany, was more the result of perceived unfairness than hard economic facts.

In closing, we want to point out two ways to expand our research. For one, our empirical evidence is limited in that we examined one case: the former German Democratic Republic. It would therefore prove fruitful to also assess the imprint of economic privatizations on other post-communist parties, including the Czech Communist Party of Bohemia and Moravia or the Communist Party of the Russian Federation. Second, such an analysis would also allow one to distill important scope conditions. In our setting, Western elites played a pivotal role, including in the decision-making of the Treuhand. It is therefore worth asking if one would uncover similar socialist backlash

due to privatizations in, say, the former USSR or in Poland, where Western elites played a less pronounced role. Related, East Germany was unique in that it had a Western counterpart, the Federal Republic. Examining whether this institutional setup can help explain socialist voting would be highly interesting and could be done by comparing across cases in Eastern Europe.

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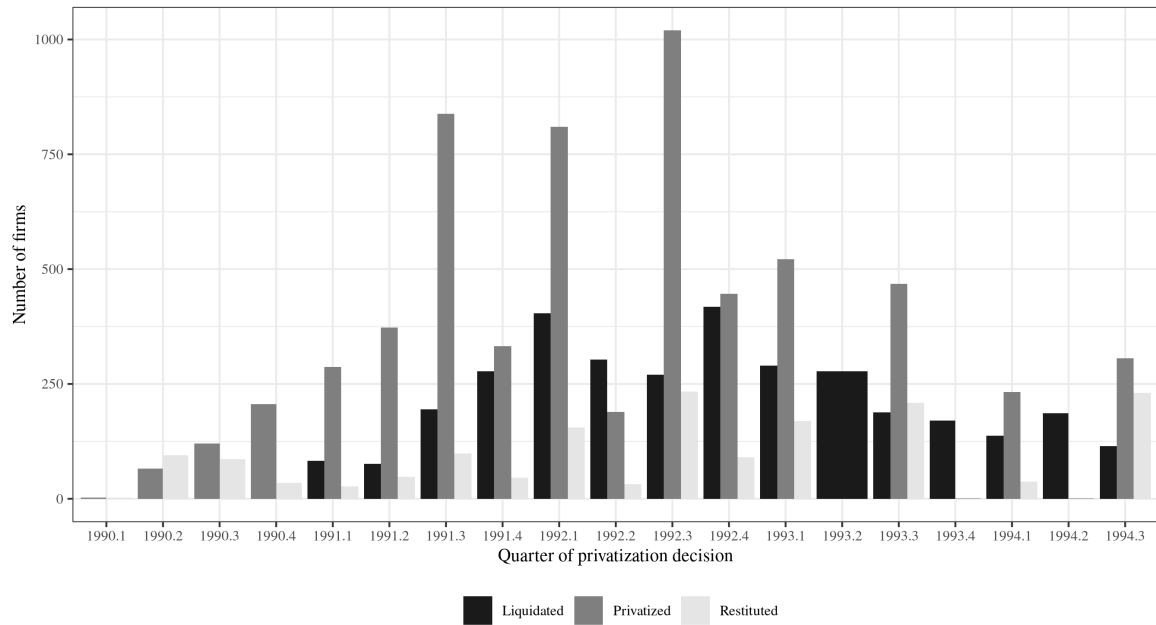
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Appendix

Figure A1: Decisions taken by privatization agency over time



Note: The figure plots the number of firms which were either privatized, restituted or liquidated by the privatization agency over time.

Table A1: The Effect of Treuhand activities on Socialist Voting

	<i>DV: Socialist Vote Share</i>	
	Municipalities	Districts
	(1)	(2)
Treuhand activities [Ref.: Restitutions]		
Privatizations x		
East German General Election 1990	0.908* (0.440)	1.943 (2.798)
Regional Elections 1990	-1.646* (0.699)	0.788 (0.595)
German Federal Election 1994	1.440*** (0.319)	6.136*** (1.418)
German Federal Election 1998	-0.231 (0.393)	-0.444 (1.855)
Liquidations x		
East German General Election 1990	0.127 (0.387)	-6.408 (3.562)
Regional Elections 1990	-0.589 (0.609)	-0.457 (0.893)
German Federal Election 1994	1.328*** (0.327)	5.402** (1.993)
German Federal Election 1998	-0.434 (0.362)	0.943 (2.798)
<i>Controls</i>		
Size of 1990 Electorate x		
East German General Election 1990	0.015 (0.008)	-0.002 (0.008)
Regional Elections 1990	-0.019 (0.012)	-0.002 (0.002)
German Federal Election 1994	0.025*** (0.005)	-0.013*** (0.002)
German Federal Election 1998	-0.008 (0.007)	0.009 (0.006)
East German States [Ref.: Brandenburg]		
Mecklenburg-Western Pomerania x		
East German General Election 1990	1.169 (0.857)	1.651 (0.984)
Regional Elections 1990	-0.052 (0.431)	-0.938*** (0.177)
German Federal Election 1994	0.929** (0.308)	0.705 (0.414)
German Federal Election 1998	-0.026 (0.441)	0.776 (0.588)
Saxony x		
East German General Election 1990	-3.213*** (0.445)	-2.229*** (0.605)
Regional Elections 1990	-4.041*** (0.750)	-0.969*** (0.163)
German Federal Election 1994	0.028 (0.312)	0.021 (0.369)
German Federal Election 1998	1.964*** (0.458)	2.028*** (0.541)
Saxony-Anhalt x		
East German General Election 1990	-2.528*** (0.426)	-2.147*** (0.558)
Regional Elections 1990	-0.625 (0.857)	0.303 (0.204)
German Federal Election 1994	0.973** (0.310)	0.543 (0.400)
German Federal Election 1998	2.246*** (0.354)	2.554*** (0.476)
Thuringia x		
East German General Election 1990	-4.282*** (0.314)	-3.833*** (0.498)
Regional Elections 1990	-3.628*** (0.617)	-0.910*** (0.159)
German Federal Election 1994	1.381*** (0.327)	0.800 (0.437)
German Federal Election 1998	4.209*** (0.382)	4.168*** (0.540)
Unit Fixed Effect	✓	✓
Time Fixed Effect	✓	✓
Two-Way Clustered Std. Err.	✓	✓
Observations	7,190	560
Units	1,438	112
Elections	5	5
R ²	0.934	0.969
Adjusted R ²	0.917	0.958

Note:

*p<0.05; **p<0.01; ***p<0.001
Reference category for elections: German Federal Election 1990.
Population weights (size of 1990 electorate) used.
Coefficients of reference categories omitted due to fixed effects.

Table A2: The Effect of Treuhand activities on Socialist Voting conditioned by Halle branch

	<i>DV: Socialist Vote Share</i>	
	Municipalities (1)	Districts (2)
Elections [Ref.: German Federal Election 1990]		
East German General Election 1990	6.507*** (0.484)	8.164* (3.310)
Regional Elections 1990	3.328*** (0.611)	1.770** (0.672)
German Federal Election 1994	5.920*** (0.348)	2.808 (1.504)
German Federal Election 1998	9.320*** (0.411)	7.416** (2.321)
Treuhand activities [Ref.: Restitutions]		
Halle Branch x		
East German General Election 1990	-0.187 (0.687)	-12.681 (7.611)
Regional Elections 1990	-0.312 (1.172)	-3.217 (2.846)
German Federal Election 1994	0.212 (0.595)	5.620 (6.313)
German Federal Election 1998	0.296 (0.586)	2.820 (5.572)
Privatizations x		
East German General Election 1990	0.935 (0.493)	1.641 (3.315)
Regional Elections 1990	-1.711* (0.684)	0.832 (0.682)
German Federal Election 1994	1.595*** (0.337)	7.198*** (1.518)
German Federal Election 1998	-0.072 (0.435)	0.329 (2.071)
Privatizations x Halle Branch		
East German General Election 1990	1.953 (1.412)	12.380 (10.188)
Regional Elections 1990	5.648** (2.056)	5.172 (3.182)
German Federal Election 1994	-1.049 (0.745)	-5.103 (7.052)
German Federal Election 1998	0.874 (0.991)	-3.191 (6.748)
Liquidations		
East German General Election 1990	0.221 (0.424)	-7.130 (4.143)
Regional Elections 1990	-0.293 (0.543)	0.403 (0.959)
German Federal Election 1994	1.382*** (0.344)	7.022** (2.208)
German Federal Election 1998	-0.281 (0.398)	1.788 (3.160)
Liquidations x Halle Branch		
East German General Election 1990	1.041 (0.870)	25.459* (10.976)
Regional Elections 1990	1.035 (1.180)	5.805 (5.096)
German Federal Election 1994	0.412 (0.854)	-3.628 (12.104)
German Federal Election 1998	0.926 (0.820)	0.646 (8.942)
<i>Controls</i>		
Size of 1990 Electorate x		
East German General Election 1990	0.014 (0.008)	-0.002 (0.009)
Regional Elections 1990	-0.023* (0.010)	-0.002 (0.002)
German Federal Election 1994	0.026*** (0.005)	-0.013*** (0.003)
German Federal Election 1998	-0.009 (0.007)	0.009 (0.006)
East German States [Ref.: Brandenburg]		
Mecklenburg-Western Pomerania x		
East German General Election 1990	1.265 (0.884)	1.643 (0.991)
Regional Elections 1990	0.040 (0.454)	-0.962*** (0.179)
German Federal Election 1994	1.117*** (0.334)	0.715 (0.416)
German Federal Election 1998	0.087 (0.418)	0.791 (0.592)
Saxony x		
East German General Election 1990	-3.223*** (0.448)	-2.258*** (0.664)
Regional Elections 1990	-4.091*** (0.759)	-1.016*** (0.172)
German Federal Election 1994	0.057 (0.313)	0.093 (0.385)
German Federal Election 1998	1.970*** (0.461)	2.100*** (0.565)
Saxony-Anhalt x		
East German General Election 1990	-2.962*** (0.368)	-2.348*** (0.560)
Regional Elections 1990	-1.803 (0.965)	-0.161 (0.198)
German Federal Election 1994	1.089* (0.427)	-0.079 (0.432)
German Federal Election 1998	1.873*** (0.346)	2.181*** (0.494)
Thuringia x		
East German General Election 1990	-4.292*** (0.315)	-3.829*** (0.514)
Regional Elections 1990	-3.662*** (0.611)	-0.964*** (0.161)
German Federal Election 1994	1.393*** (0.328)	0.794 (0.454)
German Federal Election 1998	4.204*** (0.382)	4.182*** (0.555)
Unit Fixed Effect	√	√

Time Fixed Effect	✓	✓
Two-Way Clustered Std. Err.	✓	✓
Observations	7,190	560
Units	1,438	112
Elections	5	5
R ²	0.937	0.970
Adjusted R ²	0.921	0.958

Note:

*p<0.05; **p<0.01; ***p<0.001

Population weights (size of 1990 electorate) used.

Coefficients of reference categories omitted due to fixed effects.

Table A3: The Effect of Treuhand activities on Socialist Voting including Management Buyouts (MBOs)

	<i>DV: Socialist Vote Share</i>	
	Municipalities (1)	Districts (2)
<i>Elections [Ref.: German Federal Election 1990]</i>		
East German General Election 1990	6.423*** (0.451)	7.682** (2.826)
Regional Elections 1990	3.204*** (0.609)	1.949** (0.602)
German Federal Election 1994	6.001*** (0.323)	4.063** (1.311)
German Federal Election 1998	9.371*** (0.381)	8.243*** (2.133)
<i>Treuhand activities [Ref.: Restitutions]</i>		
<i>Privatizations x</i>		
East German General Election 1990	0.849 (0.455)	-0.607 (2.867)
Regional Elections 1990	-1.541* (0.720)	0.624 (0.622)
German Federal Election 1994	1.659*** (0.328)	7.551*** (1.432)
German Federal Election 1998	-0.006 (0.412)	0.478 (1.934)
<i>MBOs x</i>		
East German General Election 1990	1.776** (0.660)	13.259** (4.539)
Regional Elections 1990	-1.938* (0.900)	1.693 (1.237)
German Federal Election 1994	0.680 (0.420)	-1.823 (1.989)
German Federal Election 1998	-0.942 (0.588)	-5.670 (3.692)
<i>Liquidations x</i>		
East German General Election 1990	0.209 (0.387)	-6.737* (3.330)
Regional Elections 1990	-0.535 (0.607)	-0.453 (0.892)
German Federal Election 1994	1.386*** (0.329)	5.379** (1.860)
German Federal Election 1998	-0.375 (0.361)	0.924 (2.704)
<i>Controls</i>		
<i>Size of 1990 Electorate x</i>		
East German General Election 1990	0.015 (0.008)	-0.001 (0.008)
Regional Elections 1990	-0.018 (0.011)	-0.002 (0.002)
German Federal Election 1994	0.026*** (0.005)	-0.012*** (0.002)
German Federal Election 1998	-0.007 (0.007)	0.010 (0.006)
<i>East German States [Ref.: Brandenburg]</i>		
<i>Mecklenburg-Western Pomerania x</i>		
East German General Election 1990	1.214 (0.878)	1.094 (0.975)
Regional Elections 1990	0.047 (0.423)	-0.974*** (0.196)
German Federal Election 1994	1.156*** (0.324)	1.035** (0.348)
German Federal Election 1998	0.122 (0.418)	0.998 (0.581)
<i>Saxony x</i>		
East German General Election 1990	-3.202*** (0.444)	-2.209*** (0.601)
Regional Elections 1990	-4.034*** (0.747)	-0.957*** (0.165)
German Federal Election 1994	0.034 (0.307)	-0.074 (0.323)
German Federal Election 1998	1.968*** (0.456)	1.975*** (0.532)
<i>Saxony-Anhalt x</i>		
East German General Election 1990	-2.519*** (0.422)	-2.162*** (0.551)
Regional Elections 1990	-0.614 (0.852)	0.297 (0.208)
German Federal Election 1994	0.989** (0.312)	0.616 (0.356)
German Federal Election 1998	2.262*** (0.354)	2.611*** (0.470)
<i>Thuringia x</i>		
East German General Election 1990	-4.294*** (0.312)	-3.888*** (0.458)
Regional Elections 1990	-3.614*** (0.619)	-0.919*** (0.162)
German Federal Election 1994	1.398*** (0.325)	0.857* (0.401)
German Federal Election 1998	4.227*** (0.383)	4.216*** (0.542)
Unit Fixed Effect	✓	✓
Time Fixed Effect	✓	✓
Two-Way Clustered Std. Err.	✓	✓
Observations	7,190	560
Units	1,438	112
Elections	5	5
R ²	0.937	0.972
Adjusted R ²	0.920	0.962

Note:

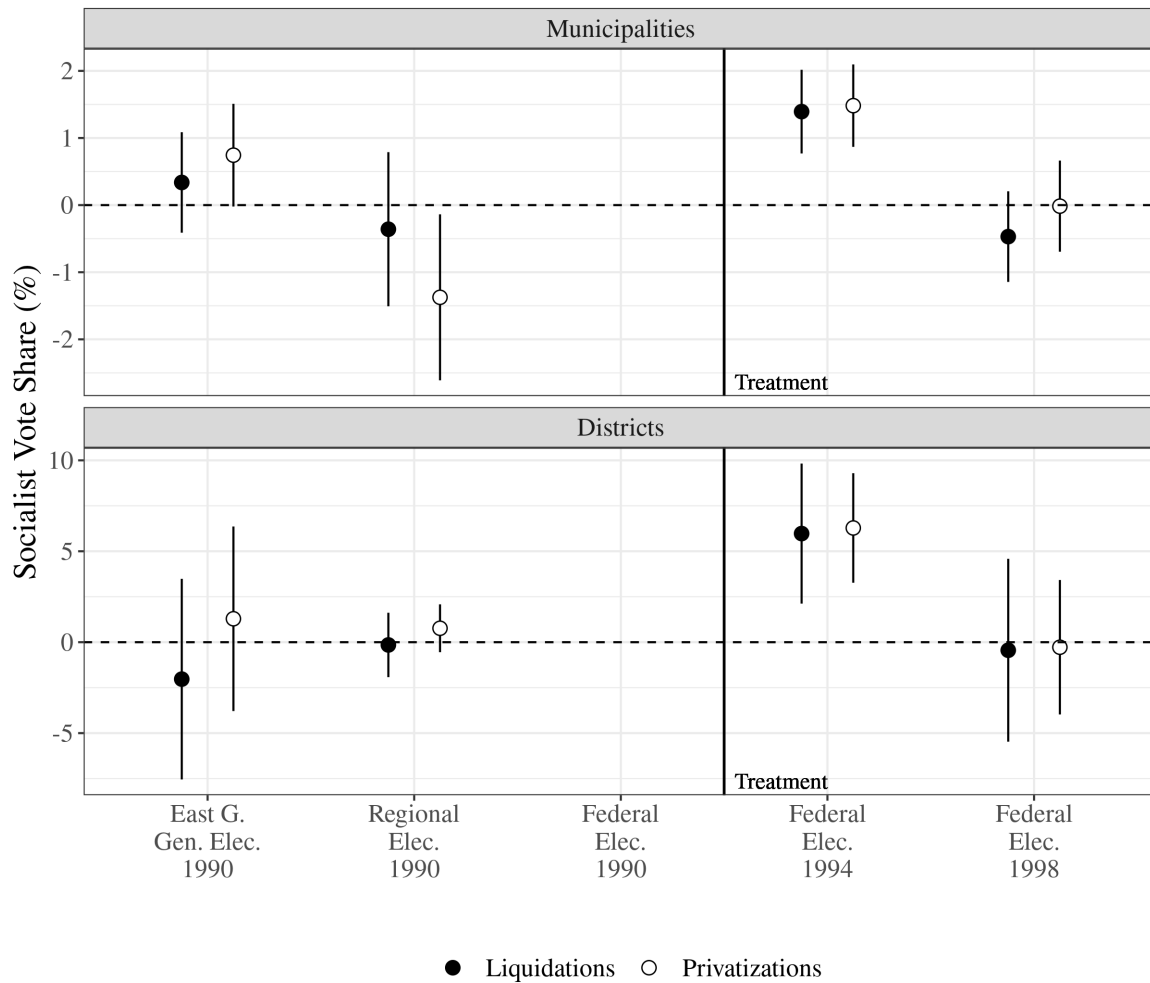
*p<0.05; **p<0.01; ***p<0.001
Population weights (size of 1990 electorate) used.
Coefficients of reference categories omitted due to fixed effects.

Table A4: Support for selected political statements across East and West in 1994

	Average agreement (4-point scale)	
	<i>West</i>	<i>East</i>
‘Reunification was beneficial to West’	2.1	3.0
‘Reunification was beneficial to East’	3.1	2.4
‘East Germany’s fate depends on whether they try hard’	3.1	2.3
‘East Germans can’t handle competitiveness of markets’	3.0	2.6
‘Political organization is useless’	2.6	2.7
‘State must interfere in economy to safeguard prices’	2.9	3.4
‘Profits are fairly shared in society’	2.1	1.6
‘Profits are necessary for a functioning economy’	3.0	2.7
‘Class matters’	2.8	3.4
‘Skills matter, not upbringing’	3.0	2.6

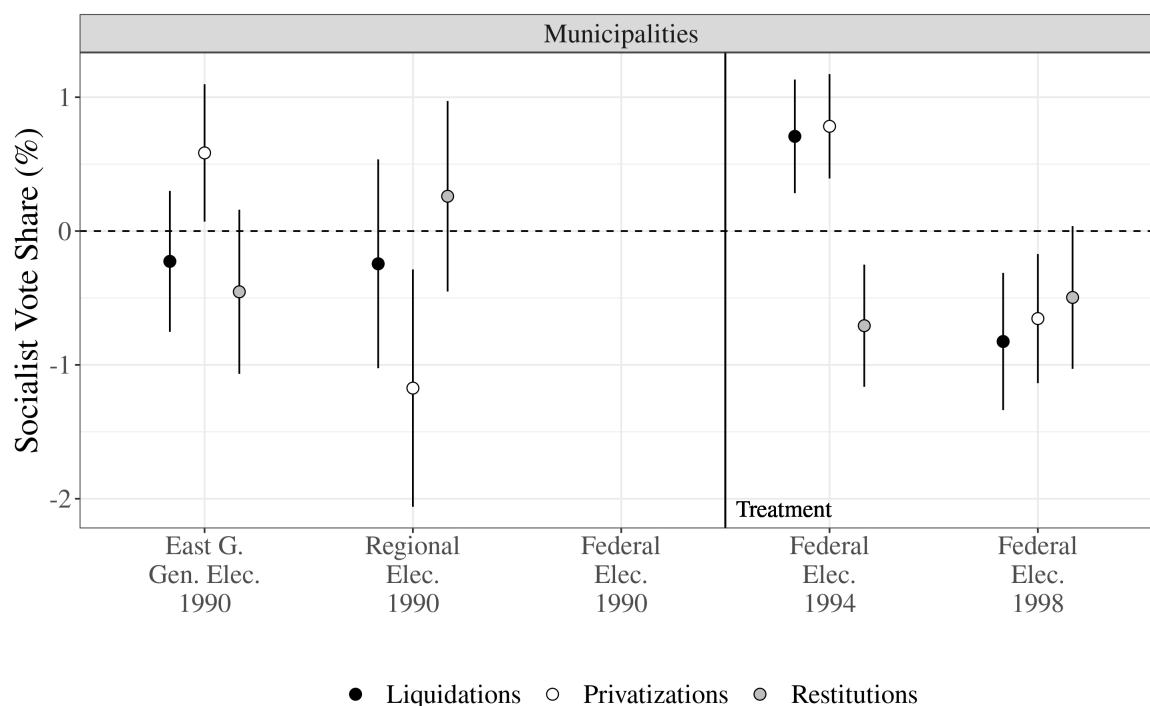
Notes: The tables plots average agreement on a four point scale (1 “totally disagree”; 4 = “totally agree”) across the indicated items. The data come from the Allbus 1994 survey. The overall N is 3450, of which 1108 individuals reside in East Germany.

Figure A2: Main results with additional covariates



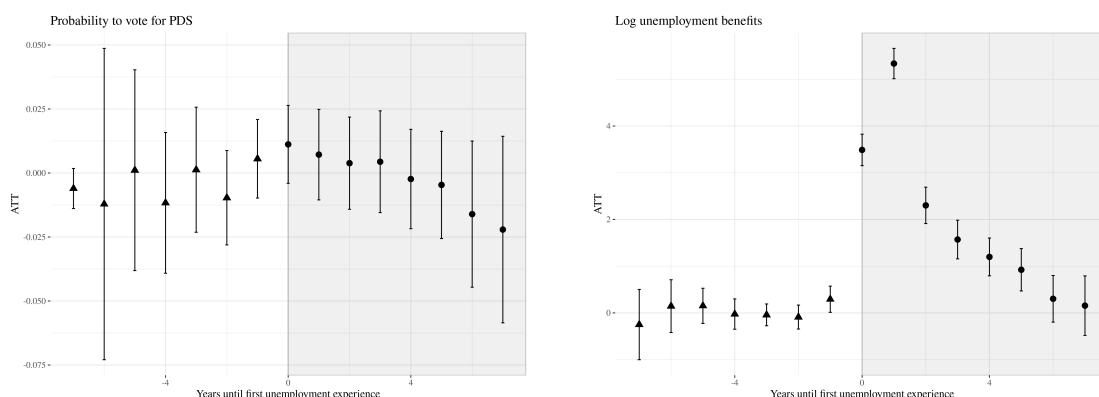
Notes: Figure A2 plots point estimates and 95 percent confidence intervals from two-way fixed effects regressions of the socialist vote share on the share of privatized / liquidated firms omitting the share of restituted firms in a given municipality / district, following equation 1. Municipalities without firms are omitted. Specifications include controls interacted with time, namely state and initial size of electorate, pre-reunification measures of railway infrastructure, labor productivity and share of agriculture, the KPD vote share in 1933 and the distance to the inner-German border. The black line indicates the beginning of the privatization program toward the end of 1990.

Figure A3: Effect of privatizations on socialist voting (including municipalities without Treuhand activity)



Notes: Figure A3 plots point estimates and 95 percent confidence intervals from two-way fixed effects regressions of the socialist vote share on the share of privatized / liquidated / restituted firms in a given municipality. Municipalities without firms are included with shares equal to zero. Specifications control for differential trends in states and from variation in the size of initial electorate. The black line indicates the beginning of the privatization program toward the end of 1990.

Figure A4: Event study of impact of first unemployment experience on socialist voting and unemployment benefits



Notes: The figure plots point estimates and 95 percent confidence intervals of two-way fixed effects regressions of the impact of the first unemployment experience after the end of Communist job guarantees on the likelihood to vote for the Socialist party and log amount of unemployment benefits.

Table A5: The effect of Treuhand activities on socialist voting conditioned on employment loss

	<i>DV</i> : Socialist Vote Share	
	Municipalities	Districts
Privatizations x 1994 General Election	1.263*** (0.350)	7.233** (2.585)
Liquidations x 1994 General Election	2.634*** (0.687)	7.685* (3.690)
Privatizations x 1994 General Election x 1994 Employment Loss	1.204 (0.663)	-1.952 (2.972)
Liquidations x 1994 General Election x 1994 Employment Loss	-0.725 (0.895)	-0.923 (4.443)
Observations	6,589	560
R ²	0.939	0.970
Adjusted R ²	0.923	0.958

Note: Coefficients from TWFE regression following equation 1. Controls are the size of the electorate at the earliest election and state dummies interacted with time. Regressions are weighted with the share of the electorate in the earliest election. Only the 1994 coefficients are reported. Significance levels are: *p<0.05; **p<0.01; ***p<0.001

Table A6: The effect of Treuhand activities on socialist voting conditioned on population change in 1994

	<i>DV</i> : Socialist Vote Share	
	Municipalities	Districts
Privatizations x 1994 General Election	1.242*** (0.362)	7.558*** (1.883)
Liquidations x 1994 General Election	1.297*** (0.388)	7.152* (2.779)
Privatizations x 1994 General Election x 1994 % Population Change	0.555 (0.545)	-1.533 (2.470)
Liquidations x 1994 General Election x 1994 x 1994 % Population Change	0.184 (0.605)	-1.769 (3.991)
Observations	7,190	560
R ²	0.937	0.970
Adjusted R ²	0.921	0.958

Note: Coefficients from TWFE regression following equation 1. Controls are the size of the electorate at the earliest election and state dummies interacted with time. Regressions are weighted with the share of the electorate in the earliest election. Only the 1994 coefficients are reported. Significance levels are: *p<0.05; **p<0.01; ***p<0.001