Privatizations Spark Socialist Backlash:

Evidence from East Germany's Transformation

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Abstract

The fall of the Berlin Wall in 1989 brought the end of real socialist systems across Eastern Europe, yet pro-socialist sentiment regained momentum surprisingly throughout the following years. Why did voters return to political parties that were associated with unfree elections and the hardships of economic downturns? To answer this question, this paper points to the rushed privatization of East European economies as one plausible but so far less studied driver of the revival of socialist voting. Using micro-level data from East Germany, we show that firm privatizations led to a marked electoral resurgence of the former Socialist Unity Party that transformed into the Party of Democratic Socialism. 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.

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Introduction

One of the more surprising byproducts of the end of the Cold War in 1989 is the survival of socialist preferences across Eastern Europe. Following market-economic reforms, socialist preferences did not wither away in these countries. To the contrary, most countries witnessed a surprising comeback of Communist successor parties by the mid-1990s (Grzymala-Busse, 2002; Nalepa, 2010; Pop-Eleches and Tucker, 2017; Tavits, 2013; Ziblatt, 1998). What explains this revival of socialist parties and preferences?

This paper points to the privatization of formerly state-run firms as a likely driver for Eastern Europe's pro-socialist revival. We argue that there are two theoretically plausible channels through which privatizations may have revived socialist voting. First, privatizations were conducted in a non-transparent, at times corrupt manner. They thus arguably sowed mistrust toward the new political elites, making socialist opposition to the economic transformation the fallback option. Second, sales of formerly state-run firms often benefited a small economic 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 fine-grained, untapped firm-level data unmatched for Eastern Europe. With this data, we examine the effect of more than 6,800 privatizations on socialist voting from the early 1990s in over 1,400 East German municipalities. 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 (Grzymala-Busse, 2002, 272-74).¹ East Germany thus offers us the 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. In municipalities affected by privatizations, the likelihood of voting for the Party of Democratic Socialism increased by 1.5 percentage points, while at the district level, the increase exceeded six percentage points. For both municipalities and districts, these changes correspond to an effect size of 0.6 standard deviations. In other words, privatizations backfired as early as 1994. We buttress the robustness of this finding by testing for non-parallel trends in pretreatment periods

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 prosocialist 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.

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 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. As of 1994, 95 percent of the PDS members had been members of the SED (Ziblatt, 1998).

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 socialist 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. The two 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 four 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 (Pop-Eleches and Tucker, 2017). 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), the strategic use of transitional justice legislation (Nalepa, 2010) as well as the long-term consequences of socialization and historical legacies (Pop-Eleches and Tucker, 2017, 2020). 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 economic consequences of privatization programs in Central and Eastern Europe (e.g., Collier and Siebert, 1991; Estrin et al., 2009; Mergele et al., 2020; Shleifer and Treisman, 2005; Treisman, 2016).² In fact, the design of privatization programs was one of the most intensely discussed research topics in post-communist countries (Brown et al., 2009, 266). In this regard, recent research has started to show an increasing interest in the East German transformation (e.g., Biermann and Welsch, 2021; Schaewitz et al., 2022). 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). Although electoral backslashes were frequently observed in Eastern Europe (Hellman, 1998), analyses of the immediate repercussions of the transformation and, in particular, privatization are relatively scarce, particularly at fine-grained levels. Adding to recent work on the consequences of the economic transition in East Germany (e.g. Biermann and Welsch, 2021; Kellermann, 2023), we are the first to provide credible evidence that privatization efforts led to an immediate resurgence of pro-socialist voting. Using untapped municipality level data of the last (and first free) election of the GDR in 1990, we are also able to alleviate concerns related to differential pre-trends in socialist voting that remained unaddressed in previous work.

Third, our dataset enables us to differentiate the impact of privatization based on the origins of investors and buyers. This enables us to explore whether privatization per se resulted in socialist backlash or if particular arrangements sparked discontent with the economic transition in East Germany. In this regard, our findings also contribute to contemporary debates concerned with citizens' nostalgia for representative of com-

²See, for example, Hellman et al. (2003); Markus (2012, 2015); Megginson and Netter (2001); Sonin (2003, 2013) for research concerned with the interaction of economic performance, property right protection, and state bureaucracy in the former Soviet Union and Eastern Europe.

munist and other non-democratic political systems (e.g., Dinas and Northmore-Ball, 2020; Ekman and Linde, 2005; Pop-Eleches and Tucker, 2017). Our findings underline the importance of short-term performance of the new system as a critical component of the revival of socialist voting behavior.

Fourth 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).

Theoretical Background

Previous research has broadly debated the catalysts behind the resurgence of socialist preferences across post-communist nations during the 1990s. On one hand, empirical evidence supports the idea that the revival stems to a substantial extent from long-term factors associated with citizens' (political) socialization. These factors, the argument goes, can to a substantial extent explain citizens' widespread return toward political actors of the past across Eastern Europe and beyond (e.g., Dinas and Northmore-Ball, 2020; Gherghina and Klymenko, 2012). On the other hand, studies have endorsed the notion that dissatisfaction with the new system's efficacy constituted a major driving

force (e.g., Ekman and Linde, 2005; Mishler and Rose, 1997, 2007; White, 2010). In this perspective, the resurgence of post-communist political parties can not be attributed to genuine nondemocratic values among voters, but resulted from increasing perceptions of injustice attributed to the new system's political and economic performance.

In what follows, we focus on the second perspective, examining whether and how privatization of a formerly state-run economy revived socialist preferences and voting behavior. 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 also revisit an alternative economic channel, i.e. job loss, and provide evidence that it is 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.

Context: Privatizing East Germany

The German Democratic Republic (henceforth, GDR) was established in 1949. Starting in 1952, the GDR began to nationalize virtually all companies, including the agricultural sector. State-owned firms were given precise quotas on what and how much to produce and 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*. In 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. After reunification, the German government signed a law mandating the Treuhand with privatizing all East German companies. Paragraph 1 of the Treuhand-law stated: "Nationally owned property is to be privatized." In contrast to the privatization strategies adopted by other post-communist societies, which predominantly involved distributing vouchers to all citizens for subsequent exchange for shares (Sonin, 2013), the Treuhand's approach prioritized open sales. Specifically, it facilitated the swift acquisition of formerly state-owned firms by West-German and international companies.

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 privatized. 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

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

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.

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 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 capitalist order and ultimately led them back to the former Socialist Unity Party.

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 the 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.⁵

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.

⁵The firm was eventually sold as a management buy-out because the West German investors did not make any payment. Hence, the Treuhand was left with no alternative than selling it to Kienast and Dobbratz.

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.

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. 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 ideals about democratic responsiveness. 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 capitalist and 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 East Germans' demands 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.

Design

To explore whether the privatization of East Germany's economy revived pro-socialist voting, we draw on unique local-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 one of the cases where the formerly ruling Socialist Unity Party was never entirely abolished, but merely renamed and reorganized in 1990 (Grzymala-Busse, 2002). 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 (Phillips, 1994; Ziblatt, 1998). 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.

Data

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"⁶, 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 SÖSTRA institute on behalf of the Treuhandandstalt 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 privatization status and regional distribution.

The data set includes the municipality identifier for 92 percent of all Treuhandowned 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

⁶Original name: Bundesanstalt für vereinigungsbedingte Sonderaufgaben.

and Spatial Development"⁷ to harmonize the territorial boundaries of municipalities to the end of 2002 (Bundesinstitut für Bau-, Stadt- und Raumforschung, 2020).

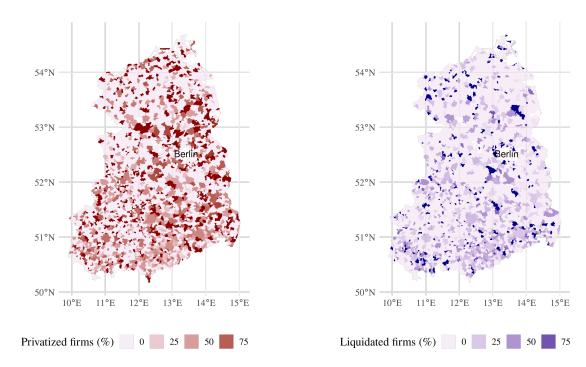


Figure 1: The privatization of East Germany

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.

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 4493⁸ East German

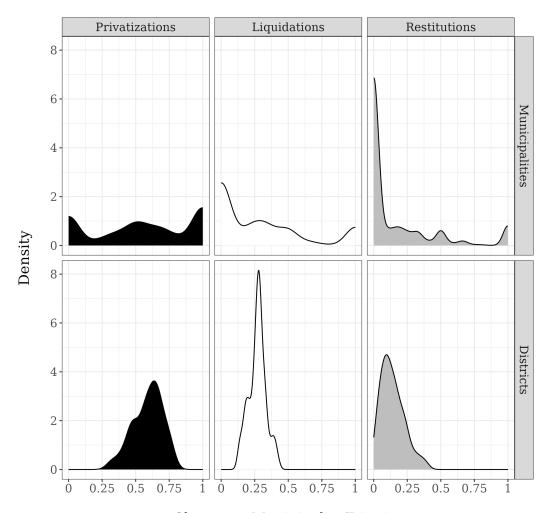
⁷Original name: Bundesinstituts für Bau-, Stadt- und Raumforschung (BBSR).

⁸This figure reflects the number of municipalities in 2002 after numerous territorial changes and reforms since 1990.

municipalities. Tables A1 and A2 in the Appendix present summary statistics of all variables.

Figure 2 illustrates the distribution of the three treatment indicators across East-German municipalities and districts. Restitutions have been less frequent (municipality mean: 16.7%, district mean: 14.0%), while privatization shares are most widespread at both geographic levels (municipality mean: 55.1%, district mean: 59.0%). Importantly, the charts demonstrate significant variation in the treatments, which is essential for the subsequent analyses.

Figure 2: Distribution of treatment indicators across municipalities and districts



Share per Municipality/District

Notes: The Figure shows the distribution of the shares of privatized, liquidated, and restituted firms per municipality/district. Shares based on all Treuhand-handled firms. Municipality shares refer to all units with at least one firm managed by the Treuhand.

Our combined data sources allow us to identify the month in which the privatization decision was made by the agency. Crucially, Figure A.1 (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.

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.⁹

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

⁹We also exclude Berlin from the following analyses as East and West Berlin cannot be sufficiently separated in terms of elections outcomes and PDS support.

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)¹⁰ 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 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).

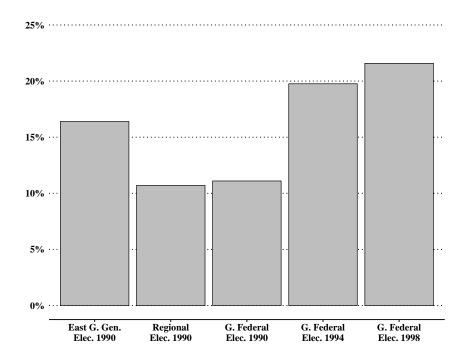
Figure 3 shows the overall development of socialist voting in East Germany. Immediately after the German unification in October 1990, the party had substantial difficulties in attracting voters. While its electoral support in West Germany was close to nonexistent, it gained about 10% of the East German 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.

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

¹⁰Provided in Stegmann (2019).

Figure 3: Socialist voting in East Germany, 1990-1998



Notes: Figure 3 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.

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).

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:

Socialist_{i,t} =
$$\sum_{t=-3,t\neq-1}^{1} \beta_t \text{Privatized}_i \times \nu_t + \sum_{t=-3,t\neq-1}^{1} \gamma_t \text{Liquidated}_i \times \nu_t + \lambda_1 X_i \times \nu_t + \nu_t + \delta_i + \epsilon_{i,t},$$
(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. For instance, if there were uniform shocks to Socialist voting in municipalities from the currency union on the 1st of July 1990, they would be captured with time fixedeffects. Time-constant confounders, such as the pre-1990 degree of industrialization, are captured by the municipality fixed-effects. 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 weight the regression according to the size of the electorates.

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 (Callaway et al., 2024). Since there is currently no 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.

¹¹As we estimate effects with respect to the first federal election in December 1990, we note that the inclusion of the preceding 1990 state-level election in October does not change the point estimates of the treatment effects.

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).

Results

Figure 4 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 4, 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 unit increase in the share of privatizations (that coincides with a decrease in the restitution share) causes an increase in the socialist vote share

of 1.53 percentage points in 1994. At the district level, the effect size is comparable for privatizations where an increase by one unit in privatizations leads to an increase of the PDS vote share of 6.14 percentage points in 1994. For liquidations, effect sizes are comparable at the municipality (1.41 pp) and the district level (5.40 pp). Hence, there is credible evidence that privatization and liquidation led to a socialist revival.

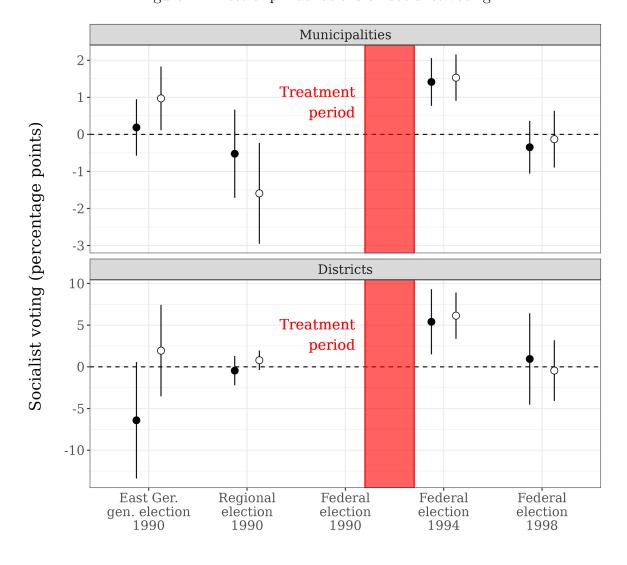


Figure 4: Effect of privatizations on socialist voting

• Liquidations O Privatizations

Notes: Figure 4 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 A3.

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 A.3 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 our section on mechanisms.

Perhaps surprisingly, the privatizations effect does not seem to matter for the 1998 election although the PDS managed to further increase its electoral support among East Germans (see Figure 3). To our mind, there are three possible explanations for this pattern.¹²

First, the privatization agency was shut down in a televised event on December 31, 1994, in response to public discontent. Although most of the privatization decisions had been taken by that time, 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. It is thus possible that the communication strategy helped to shift voters' attention away from privatizations.

¹²Note that our finding does not speak to the so-called *J-curve* (see, e.g., Hellman, 1998; Przeworski, 1991) since the PDS even managed to further increase its overall electoral support between 1994 and 1998 in Eastern Germany.

Second, the PDS branded itself as the 'true defender' of eastern interests. The party criticized the East's unfair "annexation" by West Germany and claimed that the Treuhand's privatization program had, first and foremost, negative consequences (Phillips, 1994). This programmatic orientation became particularly dominant after 1994 (Grzymala-Busse, 2002; Ziblatt, 1998). It is, therefore, possible that the party—based on this programmatic (re)orientation—was successful in gathering support beyond the municipalities immediately hit by the Treuhand's privatization efforts.

Third, German reunification and East Germany's economic transformation triggered significant economic and social distortions—including mass unemployment—in East Germany. It is possible that the subsequent migration within (East) German municipalities redistributed PDS supporters beyond the municipalities directly affected by the privatization program.

Although the data does not allow for a clear explanation for the disappearance of the treatment effect in 1998, Table 1 offers evidence supporting the presence of spillover effects from privatization in neighboring untreated municipalities. To assess these spillovers, we created an additional treatment variable by drawing circles with a 5 km radius around each untreated municipality and calculated the average treatment intensity of neighboring municipalities within those circles. In the final sample, we only retained municipalities that were either directly treated or experienced spillovers of varying intensities. By incorporating this spillover measure into our baseline regression, we find a significant positive effect of privatization spillovers on Socialist voting in 1998. This suggests that the 1998 election results are to a considerable extent driven by these spillover effects from the Treuhand's privatization efforts, extending the influence of privatization beyond directly treated municipalities.

Robustness

As noted above, using two-way fixed effects already controls for any time- or unitinvariant differences in our main sample. To further ensure that the results shown

Table 1: The Effect of Treuhand activities on Socialist Voting – Spillover Effects

	DV: Socialist Voting
All-German Federal Election 1994 x Privatizations	0.735***
	(0.188)
All-German Federal Election 1998 x Privatizations	-0.366
	(0.250)
All-German Federal Election 1994 x Liquidations	0.679**
	(0.220)
All-German Federal Election 1998 x Liquidations	-0.584*
	(0.292)
All-German Federal Election 1994 x Privatizations Spillovers	-0.149
	(0.187)
All-German Federal Election 1998 x Privatizations Spillovers	0.657**
•	(0.241)
All-German Federal Election 1994 x Liquidations Spillovers	-0.706**
	(0.218)
All-German Federal Election 1998 x Liquidations Spillovers	-0.274
	(0.310)
Observations	15,256
Adjusted R^2	0.919

Notes: Two-way fixed effects models following equation 1 controlling for state trends and size of the 1990 electorate. The sample contains all municipalities with missing information on Treuhand activity. Standard errors are clustered at the respective administrative level with significance levels 0.01 (***), 0.05 (**) and 0.1 (*).

in Figure 4 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 the spatial distance from a unit's centroid to the inner-German border. Second, it might be that the PDS's organizational strength and campaign efforts varied across East German municipalities. To capture these differences, 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 A.2 shows the regression results when including the comprehensive set of controls. Reassuringly, the results are not substantially different from the results shown in Figure 4. 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.

To assess the sensitivity of our effect estimates while allowing for potential violations of parallel trends, we implement checks suggested by Rambachan and Roth (2023). Both upper panes in Figure A.4 demonstrate the sensitivity of results if shocks to different intensities of treatment were constant over time. This means we are testing whether our estimated effects hold even if external factors impacted different treatment levels uniformly over the study period. In the municipality sample, the estimated privatization effect in 1994 barely accommodates deviations from parallel trends in the post-treatment period, allowing only for a 0.5 margin of the maximum pre-treatment violation. This suggests that the municipality results are quite sensitive, and even smaller violations of the parallel trends assumption could alter the interpretation of the findings. In contrast, the district sample permits deviations in post-treatment trends that exceed the largest pre-treatment violations, indicating more robustness to such violations. This greater stability at the district level may stem from the aggregation of data, which reduces local noise and makes the estimates less sensitive to idiosyncratic shocks. Another concern involves the possibility of differential trends between areas with low and high treatment intensity. The lower panels in Figure A.4 show that we account for significant non-linear deviations from the pre-treatment trends, even when those trends are extrapolated linearly. This further enhances the robustness of the findings.

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. In the following, we revisit both channels in turn.¹³

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

¹³Note that we also examined the impact of the Treuhand's privatization and liquidation activities on far-right voting. To assess this, we combined the vote shares of the National Democratic Party (NPD), the German People's Union (DVU), and the Republicans (REP) in each municipality and district. Since no far-right party contested the 1990 East German general election, these estimations are restricted to the four elections that took place in the re-unified Germany. The results depicted in Figure A.5 demonstrate that there is no observable positive treatment effect on the far-right vote. If anything, the model estimates point to a negative effect for both privatization and liquidation in the 1998 general election.

more pronounced electoral backlash in the Halle region as compared to the rest of East Germany?

Table 2: The effect of Treuhand activities on Socialist Voting Conditioned by Halle Branch

	DV: Socialist Voting	
	Municipalities	Districts
Privatizations x 1994 General Election	1.595***	7.198***
	(0.337)	(1.518)
Liquidations x 1994 General Election	1.382***	7.022**
	(0.344)	(2.208)
Privatizations x 1994 General Election x Halle	-1.049	-5.103
	(0.745)	(7.052)
Liquidations x 1994 General Election x Halle	0.412	-3.628
	(0.854)	(12.104)
Observations	7,306	559
Adjusted R ²	0.921	0.958

Notes: Two-way fixed effects models following equation 1 controlling for state trends and size of the 1990 electorate. The municipality sample does not contain municipalities with missing information on Treuhand activity. Standard errors are clustered at the respective administrative level with significance levels 0.01 (***), 0.05 (**) and 0.1 (*).

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 2 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.

¹⁴In total, 151 of 1,438 municipalities and 26 of the 112 districts were at least in part administered by the Treuhand's Halle branch.

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 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 A.3). 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).

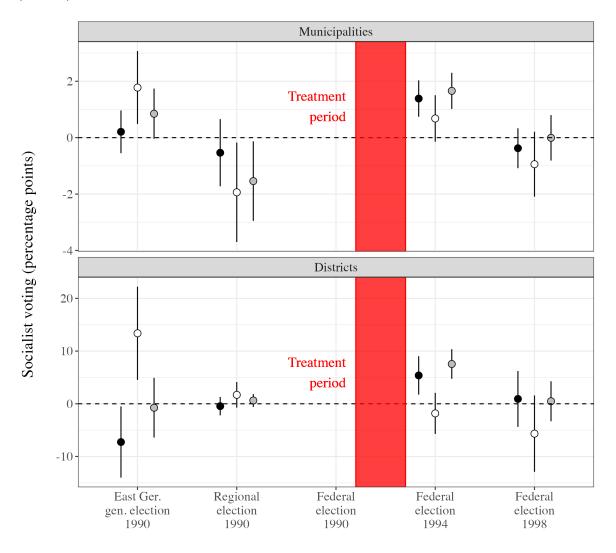
Second, to further trace whether privatizations were deemed to unfairly benefit Western elites, we can scrutinize so-called management buyouts (MBOs). These types of privatizations meant that firms were bought by local staff and former employees who arguably had a real stake in the company. East Germans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

selves. 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 that 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 5 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.¹⁵

Figure 5: Effect of Privatizations on Socialist Voting including Management Buyouts (MBOs)



● Liquidations ○ Privatizations (MBO) ◎ Privatizations (Non-MBO)

Notes: Figure 4 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 A4.

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 A6. 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).

Ruling out job losses as an alternative explanation

Having pointed to one plausible channel, we want to briefly revisit an alternative economic channel for the positive effect of privatizations on socialist voting. In general, 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. 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.

¹⁶For 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.

Table A5 in the Appendix 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 A.6 in the appendix 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. We make use of an individual panel dataset of working-age adults who lived in East Germany before 1989 and still live in the East in the period from 1990 to 2000 (SOEP, 2022). 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.

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 (Denisova et al., 2012; Ekman and Linde, 2005; Grzymala-Busse, 2002). 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. In this sense, the PDS gave (some) East Germans the possibility to express their discontent with the economic and political developments in the newly unified Germany.

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 A6). This perceived inequity, in turn, led some residents back to the former Socialist Unity Party.

Third and related, our findings suggest that economic indicators, notably job loss, in isolation, fail to explain the effect of privatization on pro-socialist voting (see Figures A5 and A.6). Rather, our analysis underscores the crucial influence of the execution of privatization initiatives. Specifically, it is how privatization succeeded that prompted individuals to turn towards the sole critic of the privatization efforts, namely, the former Socialist Unity Party. 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 three ways to expand our research. For one, our empirical evidence is limited in that we examined one case: the former German Democratic Republic. While East Germany's path has been, to some extent, unique, similar dynamics of perceived injustice regarding the processes of economic transition can very well be expected in other post-communist countries (Ekman and Linde, 2005). It would therefore prove fruitful to also assess the imprint of economic privatizations on other post-communist parties using fine-grained data, 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. Lastly, while our study delves into the privatization within post-communist societies—"the largest natural experiment in economics ever" (Sonin, 2013, 1)—its implications extend beyond this context. Our findings enrich ongoing research into contemporary economic transformations. A significant part of the current literature examines privatization endeavors in developing countries (e.g., Estrin and Pelletier, 2018; Kose et al., 2022; Murillo, 2002). Understanding the nuanced dynamics of how citizens' political preferences respond to these programs in today's emerging economies thus constitutes a crucial undertaking.

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Supporting Information

Table A1: Summary Statistics at the Municipality Level

	mean	sd	min	max	n
Voting Outcome					
Socialist Vote Share (%)	12.804	6.482	0.000	53.846	7306
Privatization Treatments					
Privatization Share	0.551	0.382	0.000	1.000	7306
Liquidation Share	0.282	0.339	0.000	1.000	7306
Restitution Share	0.167	0.289	0.000	1.000	7306
MBO Share	0.094	0.211	0.000	1.000	7306
Share Initial Empl. Lost	0.625	0.465	-8.824	1.000	6589
Controls					
Electorate 1990 (1k $\#$)	5.369	10.053	0.097	107.862	7306
Dist. to Inner-German border (km)	91.118	58.946	0.096	238.624	7306
Railway Connections 1987 (#)	42397.553	205192.496	0.000	1526639.000	7306
Communist Vote Share 1933 (%)	13.315	5.610	2.342	31.319	7306
Agricultural Share V.A. 1989 (%)	17.991	11.254	0.000	51.300	7306
Brandenburg	0.189	0.392	0.000	1.000	7306
Mecklenburg-Western Pom.	0.147	0.354	0.000	1.000	7306
Saxony	0.261	0.439	0.000	1.000	7306
Saxony-Anhalt	0.212	0.409	0.000	1.000	7306
Thuringia	0.191	0.393	0.000	1.000	7306

Notes: The table reports summary statistics of our main panel at the election and municipality level. All control variables are time-invariant. Railway connections, the Communist Party's Vote Share, and Agricultural of Value Added only vary at the district level.

Table A2: Summary Statistics at the District Level

	mean	sd	min	max	n
Voting Outcome					
Socialist Vote Share (%)	14.939	5.880	3.934	38.544	559
Privatization Treatments					
Privatization Share	0.589	0.110	0.301	0.783	560
Liquidation Share	0.270	0.063	0.130	0.426	560
Restitution Share	0.141	0.086	0.000	0.389	560
MBO Share	0.118	0.050	0.035	0.281	560
Share Initial Empl. Lost	0.710	0.093	0.348	0.884	560
Controls					
Electorate 1990 (1k #)	85.547	31.512	1.394	183.114	560
Dist. to Inner-German border (km)	90.672	58.551	3.991	225.442	560
Railway Connections 1987 (#)	54365.720	241944.676	1.000	1526639.000	560
Communist Vote Share 1933 (%)	13.188	5.698	2.342	31.319	560
Agricultural Share V.A. 1989 (%)	16.139	11.225	0.000	49.500	560
Brandenburg	0.161	0.368	0.000	1.000	560
Mecklenburg-Western Pom.	0.159	0.366	0.000	1.000	560
Saxony	0.261	0.439	0.000	1.000	560
Saxony-Anhalt	0.214	0.411	0.000	1.000	560
Thuringia	0.205	0.404	0.000	1.000	560

Notes: The table reports summary statistics of our main panel aggregated at the election and district level. All control variables are time-invariant.

Table A3: The Effect of Treuhand activities on Socialist Voting

	DV: Socialist Voting	
	Municipalities	Districts
All-German Federal Election 1994 x Privatizations	1.531***	6.136***
	(0.319)	(1.418)
All-German Federal Election 1998 x Privatizations	-0.129	-0.444
	(0.391)	(1.855)
All-German Federal Election 1994 x Liquidations	1.415***	5.402***
	(0.329)	(1.993)
All-German Federal Election 1998 x Liquidations	-0.348	0.943
	(0.363)	(2.798)
Observations	7,306	559
Adjusted R ²	0.920	0.958

Notes: Two-way fixed effects models following equation 1 controlling for state trends and size of the 1990 electorate. The municipality sample does not contain municipalities with missing information on Treuhand activity. Standard errors are clustered at the respective administrative level with significance levels 0.01 (***), 0.05 (**) and 0.1 (*).

Table A4: The Differential Effect of Management-Buy-Outs on Socialist Voting

	DV: Socialist Voting		
	Municipalities	Districts	
Privatizations (w/o MBOs) x 1994 General Election	1.659***	7.551***	
	(0.328)	(1.432)	
MBOs x 1994 General Election	0.680	-1.823	
	(0.420)	(1.989)	
Liquidations x 1994 General Election	1.386***	5.379**	
	(0.329)	(1.860)	
Observations	7,306	559	
Adjusted R ²	0.920	0.962	

Notes: Two-way fixed effects models following equation 1 controlling for state trends and size of the 1990 electorate. The municipality sample does not contain municipalities with missing information on Treuhand activity. Standard errors are clustered at the respective administrative level with significance levels $0.01 \ (***)$, $0.05 \ (**)$ and $0.1 \ (*)$.

Table A5: The effect of Treuhand activities on Socialist Voting Conditioned by Employment Loss in 1994

	DV: Socialist Voting		
	Municipalities	Districts	
Privatizations x 1994 General Election	1.281***	7.322**	
	(0.351)	(2.591)	
Liquidations x 1994 General Election	2.612***	7.623*	
	(0.684)	(3.697)	
Privatizations x 1994 General Election x 1994 Employment Loss	1.166	-2.079	
	(0.663)	(2.973)	
Liquidations x 1994 General Election x 1994 Employment Loss	-0.712	-0.974	
	(0.892)	(4.427)	
Observations	6,589	559	
Adjusted R^2	0.923	0.958	

Notes: Two-way fixed effects models following equation 1 controlling for state trends and size of the 1990 electorate. The municipality sample does not contain municipalities with missing information on Treuhand activity. Standard errors are clustered at the respective administrative level with significance levels $0.01 \, (***)$, $0.05 \, (**)$ and $0.1 \, (*)$.

Table A6: Support for selected political statements across East and West in 1994

	Average agreement (4-point scale)	
	West	East
'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.

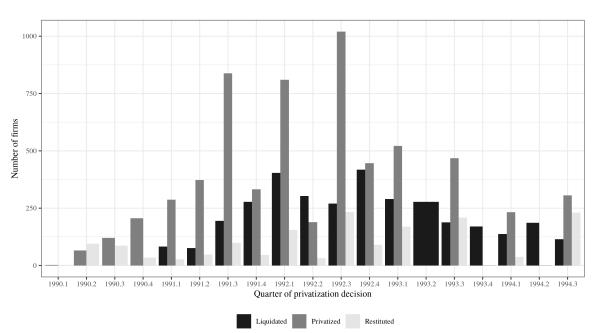


Figure A.1: Decisions taken by privatization agency over time

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

Municipalities 2 1 Socialist voting (percentage points) 0 -1 -2 Districts 10 5 0 -5 East G. Regional Federal Federal Federal

Figure A.2: Main results with additional covariates

• Liquidations O Privatizations

Elec.

1990

Elec.

1994

Elec.

1998

Notes: Figure A.2 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.

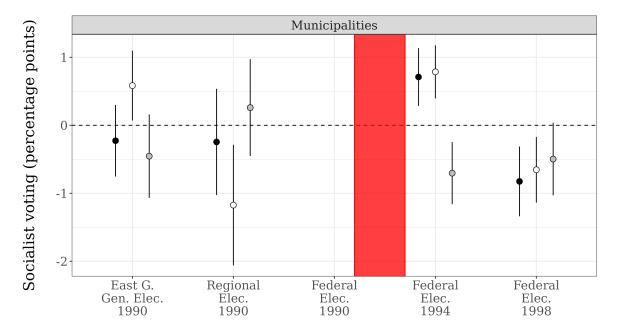
Gen. Elec.

1990

Elec.

1990

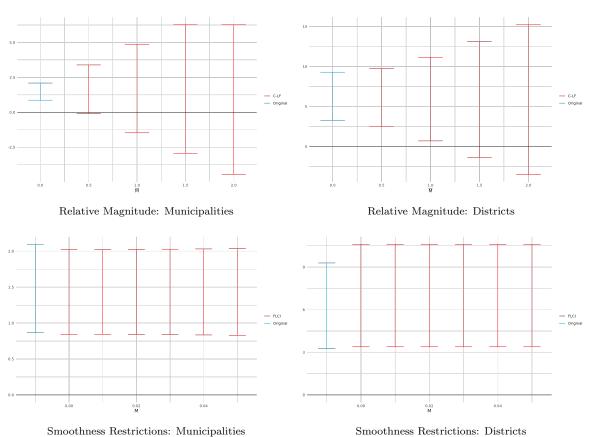
Figure A.3: Effect of privatizations on socialist voting (including municipalities without Treuhand activity)



ullet Liquidations \circ Privatizations \circ Restitutions

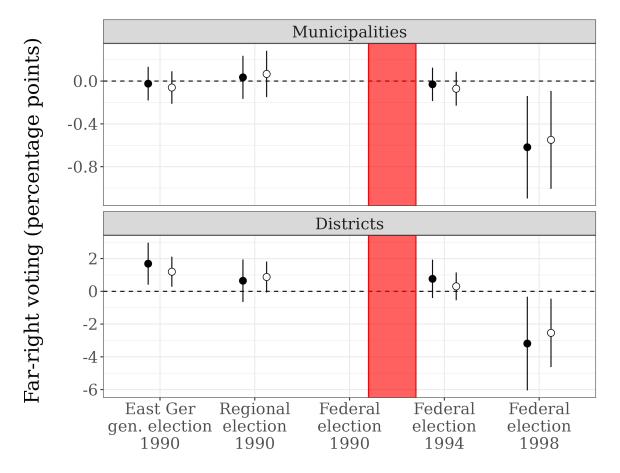
Notes: Figure A.3 plots point estimates and 95 percent confidence intervals from two-way fixed effects regressions of the socialist vote share on the share of privatized / liquidated / restituted firms in a given municipality. Municipalities without firms are included with shares equal to zero. Specifications control for differential trends in states and from variation in the size of initial electorate.

Figure A.4: Rambachan and Roth (2023) Sensitivity Checks



Note: The plot visualizes coefficients and 95% confidence intervals from the event study sensitivity checks proposed by Rambachan and Roth (2023). Both upper plots allow for deviations from parallel trends post-treatment by \bar{M} times the maximum violation of trends prior to treatment. Both lower plots allow for M changes in the slope of the pre-trend.

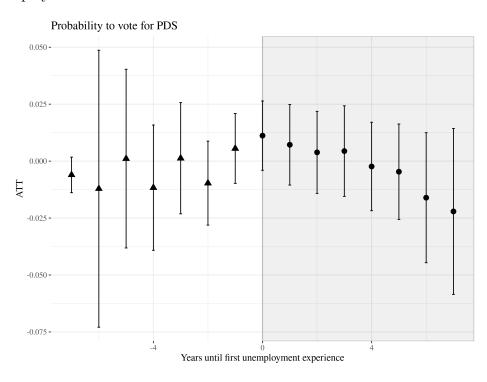
Figure A.5: Effect of privatizations on far-right voting (including municipalities without Treuhand activity)

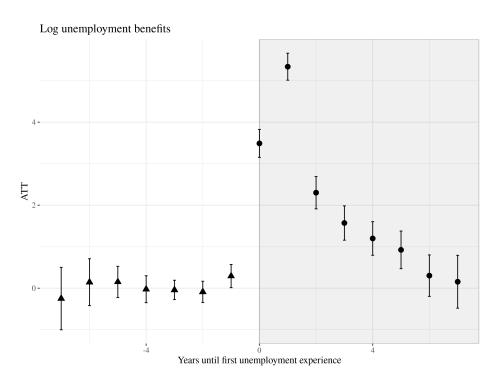


• Liquidations o Privatizations

Notes: Figure A.5 plots point estimates and 95 percent confidence intervals from two-way fixed effects regressions of the far-right vote share on the share of privatized / liquidated / restituted firms in a given municipality. Specifications control for differential trends in states and from variation in the size of initial electorate.

Figure A.6: 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 event studies using 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. We use panel data of working age individuals who lived before the fall of the wall and still live in East Germany over the period from 1990 to 2000 (SOEP, 2022).