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

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Abstract

The fall of the Berlin Wall marks one of the largest transformations of the 20th century. At its core, the year 1990 brought two new systems to Eastern Europe: capitalism and democracy. Yet, to this day, Eastern Europeans show distinctly negative attitudes toward the Western world order, and democratic and market institutions across the region are far from perfect. What explains this unsuccessful transformation? This paper points to the rushed privatization of East European economies as one plausible driver of citizens' discontent with capitalism and democracy. Using micro-level data from East Germany, we show that firm privatizations led to a marked resurgence of the successor of the former Socialist Unity Party as early as 1994. We argue that this effect is likely due to perceived injustice: Socialist voting thrived whenever firms were sold to Western elites, which local residents took as a sign that capitalism is not meritocratic.

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1 Introduction

On November 9, 1989, the Berlin Wall fell, leading to one of history’s largest transformations. As tens of thousands of East Berliners flowed into West Berlin, Eastern Europe witnessed the collapse of socialism. One year later, most countries of the Eastern Bloc had implemented democratic elections and begun the process of transforming command economies into capitalist ones. The advent of democracy and capitalism was widely welcomed and has since led to a profound improvement in standards of living (World Bank, 2021).

Yet, thirty years later, Eastern Europeans continue to hold distinctly negative attitudes toward both representative democracy and capitalism (Karp and Milazzo, 2015). Countries like Poland, Hungary, and Russia have departed from core democratic principles (Frye et al., 2019; Haggard and Kaufman, 2021), and Eastern European market economies are plagued by corruption and misguided state interference (Fazekas and King, 2019; Griewald, 2018). How did the merging of the so-called second and first world go wrong? Why did the introduction of capitalism and democracy backfire, leading to widespread discontent with the new world order?

This paper hypothesizes that Eastern Europe’s discontent with capitalism and representative democracy is partly the result of large-scale privatizations in the early 1990s. First, privatizations were conducted in a nontransparent, top-down and, at times, corrupt manner. They thus arguably sowed mistrust toward the new political system. Second, sales of formerly state-run firms mostly benefited (Western) elites. Privatizations thus plausibly undermined support for capitalism and its supposed benefits of rewarding merit, not status (Benabou and Tirole, 2006). The result of both channels, we contend, was growing frustration with the new world order.

To empirically trace these theoretical arguments, we draw on untapped firm-level data on privatizations from the early 1990s in East Germany. After mass protests and the falling 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 fully owned by the Federal Republic of Germany. The *Treuhand* was charged with selling the firms to willing investors or shutting the companies down. During this process, a fraction of the firms in the portfolio of the agency were given back to former owners through court decisions, so-called restitutions. Important for our case: The former ruling East-German Socialist Unity Party was never completely abolished, but mostly renamed and reorganized itself as the *Party of Democratic Socialism* (PDS). The party did begin to espouse democracy, but it also continued to embrace socialism. As such, the party was widely interpreted as a ‘wolf in sheep’s clothing,’ particularly in the early days.¹ Whether pro-democratic or not, the survival of East Germany’s Socialist Unity Party offers us the unique opportunity to cleanly measure pro-socialist preferences and discontent with the new world order—before and after privatizations were implemented.

Using a difference-in-differences design, we show that privatizations led to a marked resurgence of the former Socialist Unity Party between 1990 and 1994. Municipalities which experienced only privatizations opposed to municipalities which experienced only restitutions became 1.5 percentage points more likely to vote pro-socialist. Privatizations, in other words, backfired as early as 1994, setting East Germany on a fraught electoral trajectory.² We buttress the integrity of this estimate by i) testing for non-parallel trends in pre-treatment periods, ii) demonstrating that the results hold both at the municipality- and 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 former Socialist Unity Party—the party which had opposed democracy and capitalism for decades? We compare the effect of privatizations to restitutions. In the case of restitutions, firms were given to former owners with historic ties to the region. By contrast, regular pri-

¹For detailed treatments of the party’s post-1990 history, see Behrend (2006); Bergsdorf (2008); Bortfeldt (1992); Gerner (1994); Jesse and Lang (2008); Knabe (2009); Neugebauer (2013).

²Kellermann (2021) finds that *Treuhand* activities predict “radical voting” in 2017.

vatizations were mostly given to Western corporations and their owners without any ties to East Germany. Consistent with the meritocracy channel, we find that only privatizations, not restitutions, sparked pro-socialist voting. We provide further evidence by investigating the effect of management buy outs. These buy outs were literally the only way in which East Germans could acquire formerly state-owned firms themselves. In support of the meritocracy channel, we find that “regular” privatizations (which usually benefited West German elites) but not management buy outs positively affected pro-socialist voting. 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.

Moreover, we revisit the hypothesis that privatizations were implemented in a non-transparent, corrupt manner and thus undermined support for the new democratic mode of governance. To test this channel, we test for heterogenous effects in local branches of the agency with high-profile corruption cases. We do not find evidence that privatizations sparked socialist voting more significantly where corruption was rampant.

We also rule out two plausible alternative channels. First, 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, find any evidence that the positive effect of privatizations on pro-socialist voting was more widespread in municipalities, which experienced greater job loss in the course of the privatization program. Second, we show that the effect is not driven by emigration. In particular, we do not find that privatization efforts drove anti-socialist voters out of municipalities, thus explaining a revival of the former socialist unity party. The two null findings thus corroborate the argument that privatization revived pro-socialist voting via a broader channel, namely, by sowing mistrust toward capitalism.

Our study contributes to two major literatures across the social sciences. First, we add to a broad debate on the interplay of capitalism and democracy. It is often

argued that capitalism strengthens democracy and vice versa (Acemoglu et al., 2019; 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, there seems to be a positive imprint of privatizations on pro-socialist voting. The driver behind this negative effect is the perceived injustice 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 took over most firms.

Second, we add to a literature on large structural transformations, particularly the fall of the Berlin Wall. 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 (Alesina and Fuchs-Schündeln, 2007; Burchardi and Hassan, 2013; De Vries and O’Brien, 2021; Neundorf, 2010; Neundorf and Pop-Eleches, 2020). Analyses on the immediate repercussions of the transformation and, in particular, privatization are relatively scarce, however. While the economic repercussions of privatization have received some scrutiny (Barberis et al., 1996; Collier and Siebert, 1991; Mergele et al., 2020), we are the first to show that privatization efforts led to an immediate resurgence of the former Socialist Unity Party as early as 1994. As such, we fill an important gap that explains the (semi-)successful transformation of Eastern Europe into democratic and capitalist societies.

2 Theoretical Background

How can the privatization of a socialist 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 hones in on 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.³ 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 The Privatization of East Germany

The German Democratic Republic (henceforth, GDR) was established in 1949. Interestingly, East Germany's constitution originally instituted democratic governance and also protected private property (Article 20). But, 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 rigged elections.

In 1990, the GDR was incorporated into West Germany, following the peaceful revolution of 1989 (Gray et al., 1996). Formerly state-owned East German companies therefore simply switched state owners. In particular, East Germany's 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 the GDR. In light of Germany's capitalist constitution, the German government signed a law, which tasked the Treuhand with privatizing all

³There are undoubtedly alternative potential channels that link privatizations to socialist voting, namely, migration and job loss. We revisit these channels in Section 5.3 and provide evidence that they are not active in our setting.

East German companies. Paragraph 1 of the Treuhand-law stated: “Nationally owned property is to be privatized.”⁴

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 (henceforth, *privatization*), which was the desired outcome for the Treuhand. Of the total number of firms, roughly 57 percent were successfully privatized (see Section 3.1). Second and related, firms could be restituted to former owners, which had been expropriated during the Third Reich or one of the GDR’s expropriation campaigns (henceforth, *restitution*). This special case of privatization happened in roughly 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 open (henceforth, *liquidation*). 28 percent of firms ended up in liquidation.⁵

2.2 The Politicization of the Privatization Campaign

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 in the late 1980s (Lohmann, 1994), changed their focus in 1990 and started protesting against the Treuhand. In Leipzig 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 which opposed the privatizations pursued by the Treuhand.

⁴All German translations are by the authors.

⁵Note that East German firms could also remain in government ownership (henceforth, *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 low number of cases, we cannot expect to identify a local effect on pro-socialist voting.

The protests ultimately 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 Privatizations unfairly benefited the West

The first major critique leveled against the Treuhand was that it unfairly benefited West German companies and individuals. This critique came in two variants. First, the Treuhand was criticized for not only shutting down non-profitable firms, but for *also* liquidating profitable firms so as 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 few internationally successful firms of the GDR. In 1991, the Treuhand decided to merge the company with a West German competitor, K+S, which was headquartered just 30km to the 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. Not surprisingly, Goschler and Böick (2017) find that in a sample of 238 East Germans, 52 mention the term “liquidation” when asked what terms they associate with the Treuhand.

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 Deutsch

Mark. In other cases—as in the example of Karl Zeiss Jena—the German government sold the company and put an additional subsidy of 2.4 billion Deutsch Marks on top. Another case in point 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 using a management buyout. Yet, despite knowing the company inside out and obtaining credit approval from a local bank, the Treuhand sold the company 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 companies—which generated significant public attention—were almost exclusively sold to West German investors. Again, the aforementioned 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 companies 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, Germany’s then-chancellor, Helmut Kohl, gave a famous speech on October 4, 1990, where he said: “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 such that West German companies had less competition.

2.2.2 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, too, had two distinct dimensions. First, there was a widespread feeling 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) finds that 24 out of 238 East Germans predominantly associate the Treuhand with the term "fraud," underlining the impression that privatizations did not benefit East German residents. 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 momentarily). It later became clear that bribes in the order of 47 million Euros were paid. The corruption was largely ascribed to the nontransparent decision-making of the Treuhand. 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 value to pre-selected buyers and received more than 4.5 million Deutsch Mark in kickbacks. In other cases, Treuhand employees were paid excessively high salaries. For example, the lawyer Karl Tynek received up to 25 million Deutsch Mark for the liquidation of 29 companies, according to contemporary media reports.

The Treuhand was thus criticized for pursuing privatizations in a top-down manner, which belied democratic ideals that the median voter is in charge. The aforementioned example of the VEB Kombinat Minol oil refinery is a succinct example for this critique. The oil refinery was a prime case of a relatively profitable East German firm. Rather than sell 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. As a result, despite other potential interested investors and popular demands to keep the company German-owned, the company 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 Germany with the new democratic ‘experiment.’ East Germany, to recall, was not democratic, despite contrary claims in its constitution. Elections were not free and there was, practically, only one party to vote for, the Socialist Unity Party. German reunification, thus, brought democracy to East Germany. Indeed, democratic governance was an explicit reason for reunification. As then-chancellor Helmut Kohl, in a speech to East Germans in 1991, stated “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.” The Treuhänder, so the popular narrative went, discredited these ideals by i) letting officials overrule popular will when deciding how to privatize, and ii) by conducting (some) privatizations in an intransparent, corrupt manner.

Figure 1: The Privatization of East Germany

Figure 1a: Privatized firms

Figure 1b: Liquidated firms

Notes: The Figures map the percentage of local firms, which were privatized (1) or liquidated (2), separated into five bins. The unit is the East German municipality, harmonized at the 2002 geometries.

3 Design

To explore whether the privatization of East Germany’s economy sparked disenchantment with the new Western world order, thus reviving pro-socialist voting, we draw on unique micro-level data. We make use of the fact that privatization, liquidation, and restitution decisions took place to varying degrees in municipalities, which affords a difference-in-difference design (see Figure 1). 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), which affords us with a reliable measure for pro-Socialist voting. As stated, the party *did* begin to espouse democracy by 1990, though scholars disagree on how sincere this transformation was, particularly in the early days (see Footnote 1). But, most importantly, the party continued to embrace socialism. Whether pro-democratic or not, the survival of East Germany’s Socialist Unity Party therefore offers us the unique opportunity to cleanly measure pro-socialist preferences and discontent with the new world order—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 variable is the share of companies in East German municipalities, which were privatized, liquidated or restituted by the privatization agency. The starting point of our data collection is an administrative list of the entire universe of Treuhand firms by the BvS, the legal successor of the Treuhandanstalt, obtained through a Freedom of Information Request (Bundesanstalt für vereinigungsbedingte Sonderaufgaben, 2016). We match this list with another registry and biannual surveys conducted since April 1991, both by the SOESTRA institute. Using these data sources, Mergele et al. (2020) demonstrate that the surveys are representative for the whole universe of firms in terms of privatization status and federal state.

The data set includes the municipality identifier for 92 percent of all Treuhand-owned firms. Using municipality identifiers is complicated by the fact that municipalities were merged, redrawn and recoded dramatically in the 1990es. We make use of the cross-walk of German municipalities by the BBSR across time and transform all our data sources with population weights to end of year 2002 territorial status (Bundesinstitut für Bau-, Stadt- und Raumforschung, 2020).

Using municipality codes, we calculate the share of companies in a given municipality, which were i) privatized, ii) liquidated, or iii) restituted. 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 33% of the 4,746⁶ East German municipalities.

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

We construct two samples based on our treatment variables: First, we use only municipalities where the privatization agency had at least one company in its portfolio. Second, we use all municipalities assuming that there was no Treuhand activity and therefore 0 privatizations, liquidations or restitutions. Both samples assume that firms not in our survey are missing at random to rule out selection bias in the former and imputation bias in the later. As mentioned above, Mergele et al. (2020) provide some

⁶This figure reflects the number of municipalities in 2002 after numerous territorial changes and reforms since 1990.

supportive evidence of this assumption.

3.1.2 Outcome: Socialist voting

In the theoretical section, we hypothesized that the privatization of East German firms would lead residents to become disenchanted with capitalism and democracy, making them susceptible to the old socialist system. 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). As such, one can plausibly interpret a vote for the PDS as a vote for socialist ideals or, put differently, a vote against the new Western system.⁷ This holds particularly true in the early 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. In particular, we relied on official election statistics of the German federal elections in 1990, 1994, and 1998.⁸ We do not include later elections

⁷We 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 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. A notable example is the PDS’s later leader, Gregor Gysi, who came from a nomenklatura GDR family. For details, see the cited literature in Footnote 1.

⁸One particular challenge in collecting the voting data are administrative changes. East German municipalities were subject to numerous territorial reforms, which mostly consisted of merging or dissolving smaller municipalities. In total, out of the 16,727 East German municipalities that existed in 1990, 3,674 were subject to territorial changes of which 90% (3,314) were dissolutions and subsequent

because the PDS joined forces with a West-German party by the 2005 federal election. 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—in order to test for pre-treatment differential trends in socialist voting between municipalities which later experienced more or less activity by the privatization agency (difference-in-differences comparison).

3.1.3 Control variables

We use a battery of control variables throughout various specifications, which arguably predict socialist voting and, perhaps, privatizations decisions. First, we digitized a novel firm and production plant census in 1987, compiled at the district-level by the joint statistical offices of the East German Federal states after unification (Amt, 1987). We use a pre-unification measure of labor productivity and railway infrastructure to capture the degree of economic development of production and infrastructure from the census. Second, we use the share of employment in agriculture in 1989 from Rudolph (1990) and the KPD vote share in 1933 from King et al. (2008).

3.2 Estimation

To examine the effect of privatizations on pro-socialist voting, we make use of a difference-in-differences design (DiD) using two-way fixed effects (TWFE). In particular, we estimate the following equation:

mergers with other municipalities and 10% (340) have been splits of existing municipalities. To ensure the comparability of the election results over time, we therefore took the 2002 territorial organization as our point of reference. Using the cross-walk by the BBSR we summarize votes at the year 2002 using population weights (Bundesinstitut für Bau-, Stadt- und Raumforschung, 2020)

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

$$\begin{aligned}
\text{Socialist}_{i,t} = & \sum_{t=-3, t \neq -1}^1 \beta_t \text{Privatized}_i \times \nu_t + \sum_{t=-3, t \neq -1}^1 \gamma_t \text{Liquidated}_i \times \nu_t \\
& + \lambda_1 X_i \times \nu_t + \lambda_2 X_{i,t} + \nu_t + \delta_i + \epsilon_{i,t},
\end{aligned} \tag{1}$$

where i indexes municipalities and t denotes elections. The outcome *Socialist* is the vote share of the former Socialist Unity Party, the Party of Democratic Socialism (PDS). (As a robustness check, we also aggregate the data at the district-level.) Privatized and Liquidated are the continuous treatment variables, which depict the shares of firms in a given municipality that were **p**rivatized or **l**iquidated. 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 **r**estitutions 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 serves as municipality and time fixed effects, respectively. By using two-way fixed effects, we control for any time- or municipality-invariant confounders. X_i indicates a vector of pre-treatment control variables and X_{it} are time varying controls. In our main specification, we introduce state dummies. In this way, we control for the possibility that – due to the federal structure of the German political system – municipalities in different East-German states are featured 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. In this way, we account for the possibility that smaller and larger municipalities are featured by differing 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 Parallel Trends

Difference-in-differences designs are able to recover average treatment effects on the treated under the assumption of parallel trends. That is, municipalities / districts that later saw many firms being privatized by the Treuhand should have similar trends in socialist voting prior to the Treuhand becoming active as compared to areas, which did not experience many privatizations. To corroborate this assumption, we analyze 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 trend given that they were neither free nor fair.)

Figure 2: Effect of Privatizations on Socialist Voting

Notes: The figure plots point estimates and 95 percent confidence intervals of OLS regressions of the socialist vote share on the share of privatized / liquidated firms in a given municipality / district, following equation 1. The black line indicates the beginning of firm privatizations / liquidations after 1990.

4 Results

Figure 2 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 (PDS) in the 1994 general election. On the other hand, restitutions to former owners through court cases as the omitted base category, led to lower vote shares. The upper panel shows the regression estimates if we make use of municipality level data. Here, we do see a positive and significant effect of privatizations and liquidations on the socialist vote share. 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, privatizations and liquidations caused an average increase of 1.5 percentage points as opposed to municipalities with only restitutions. At the district level, the effect is even more pronounced with an estimated size of 5 percentage points. There is thus credible evidence that privatization and liquidation as opposed to restitution led to a socialist backlash.

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 A2 shows the coefficients of this regression. Despite the fact that restituted firms, too, were privatized, we see no meaningful rise in socialist voting. If anything, the effect is negative, suggesting positive affect toward restituted owners. This piece of evidence is interesting since restituted firms also suffered from economic repercussions. Still, socialist voting did not go up.

What can explain the complete opposite effects of privatizations and restitutions?

Our preferred explanation why privatizations may have sparked socialist voting is by undermining residents’ belief that capitalism is a meritocratic system. Recall that restituted firms were given to individuals, who had formerly owned the company and thus had historic ties to the region. Some of these individuals were former Jewish or aristocratic owners, which had been expropriated during the Third Reich. While many expropriated individuals came from the West, they did have a connection to the land and East Germany more broadly. As such, they arguably had more “merit” in obtaining a company compared to West German investors without any connection to the land.

4.1 Robustness

As noted above, using fixed effects at the unit and the time level already controls for all time- or unit-invariant differences in our main sample. To further ensure that the results shown in Figure 2 are not driven by some third, confounding factors, we re-run our models with additional covariates. Concretely, we add five control variables that capture economic and structural differences between the units under study. First, we add a municipality’s spatial distance to the inner-German border and to the closest city with at least 20,000 inhabitants to the regression equation. Second, we control for the productivity of a municipality’s work force before re-unification. For that purpose, we use the value of produced goods divided by the number of employees in manufacturing in 1987. Next, East-German municipalities are featured by different infrastructure-related factors. To control for these differences, we use the total number of direct railway connections of production plants per municipality. In addition, we control for the share of the agricultural sector 1989 of total value added from Lichter et al. (2021).

We also include two political variables in our regression equation. For one, it might be possible that different municipalities are featured by different traditions of socialist voting. For that reason, we also control for the vote share obtained by the Communist Party of Germany (KPD) in 1933 (Lichter et al., 2021). Lastly, we add voter turnout

to control for the possibility that our results are only due to higher abstention rates in areas that were strongly affected by the Treuhand’s activities.

Figure A3 in the Appendix shows the regression results when including the comprehensive set of controls. Reassuringly, we do not observe substantial differences to the results shown in Figure 2. The only difference is that neither the privatization nor the liquidation share has a significant impact on the PDS’s vote share in the pre-treatment period. This lends further support to the non-existence of relevant pre-trends affecting the vote share of the PDS in 1994.

5 Mechanism

We have estimated a positive effect of the Treuhand’s privatization efforts on socialist voting. What mechanisms give rise to this effect? 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 argued that privatizations were perceived to unfairly benefit West German investors, thus undermining support for capitalism, which was advertised 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 has been most visible for East-German citizens. Perhaps 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 assess 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, we observe that the treatment effects were particularly pronounced in the Halle region. If anything, the coefficients show in the opposite direction, but none of the interaction terms reaches common levels of statistical significance. We have thus little reason to believe that our identified treatment effects are more pronounced in areas where the Treuhand was particularly corrupt.

Table 1: The effect of Treuhand activities on Socialist Voting Conditioned by Halle Branch

	<i>DV</i> : Socialist Voting	
	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	7,306	559
R ²	0.937	0.970
Adjusted R ²	0.921	0.958

Note:

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

OLS regression results following equation 1.
Two-way fixed effects models controlling for state
trends and size of the 1990 electorate.

5.2 Privatizations unfairly benefited the West

We examine whether pro-socialist voting was differentially affected by how the enterprise was privatized. To this end, we split the share of privatizations into those firms which were "bought out" by the respective management and those which were sold. In the former cases, companies' existing managers acquired a large part, or all, of the respective companies. Such a management buy out (MBO) was virtually the only way East-German themselves could come into possession of a company. We subtract the share of firms sold due to MBOs from our privatization indicator and add it to the regression equation. Table 2 shows the corresponding regression results for the 1994 general election. Consistent with the idea that electoral support for the PDS was triggered by the perceived "undeservedness" with which West German buyers acquired East German firms, the effects for management buy outs are close to zero and not statistically insignificant. To our mind, these results corroborates the channel that East Germans felt privatizations were unfair, belying capitalist ideals of merit.

Table 2: The Differential Effect of Management-Buy-Outs on Socialist Voting

	<i>DV: Socialist Voting</i>	
	Municipalities	Districts
Privatizations (w/o MBOs) x 1994 General Election	1.660*** (0.329)	7.509*** (1.431)
MBOs x 1994 General Election	0.670 (0.419)	-1.596 (1.952)
Liquidations x 1994 General Election	1.374*** (0.329)	5.405** (1.865)
Observations	7,306	559
R ²	0.937	0.972
Adjusted R ²	0.920	0.962

Note:

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

OLS regression results following equation 1.

Two-way fixed effects models controlling for state trends and size of the 1990 electorate.

A further piece of evidence can be gleaned from a public opinion survey conducted right after the height of privatization decisions. In 1994, the Allbus institute asked

a representative sample of Germans to what extent they agreed with the statement ‘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 A1 in the Appendix. 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). The evidence finds further support in the survey reported in Goschler and Böick (2017) who consistently find that East Germans associated the Treuhand with terms such as “injustice” and “rip-off.”

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.

Job loss First, privatizations led to significant job loss and mass layoffs. The resulting economic hardship may then have led people to move to the Party of Democratic Socialism. 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. Using this information, we can then 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 areas where this was not the case. In particular, we construct a dummy variable using the mean employment loss within the areas under study. At the municipality level, the average employment loss 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

level of mass layoffs. Table A2 (Appendix) shows regression results if we condition the firm privatizations/liquidations by an area's employment losses. By and large, we do not observe major differences between areas that were hit more or less hard by mass layoffs. For both levels of analysis, the socialist vote share develops positively in response to both firm privatization and liquidations.

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 be 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 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 A3 (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 claim 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 or liquidations became more likely to vote for the transformed Socialist Unity Party. 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 former ties to East Germany. We further substantiated this finding by showing that management buy outs –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 so doing, 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 succinct variation in socialist voting, which is a function of economic privatizations and liquidations.

Second, our study underlines the role of preferences for equality in explaining political behavior (Alesina et al., 2004). East Germany undoubtedly benefited from turning its command economy into a capitalist one. Standards of living rose dramatically and East Germans were free to vote as they please. Even so, 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 inequality: 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 A1). 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, it was not job loss that drove voters to the socialist party, but perceived inequity. The fact that privatizations *and* liquidations led to similar effects is further evidence for this finding. 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 should point out at least two ways to expand on 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 the Czech Communist Party of Bohemia and Moravia or the Communist Party of the Russian Federation. Second and related, 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. Scrutinizing 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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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 for each quarter of the agency's operations.

Figure A2: Effect of Privatizations on Socialist Voting (including municipalities without Treuhand activity)

Notes: The figure plots point estimates and 95 percent confidence intervals of OLS regressions of the socialist vote share on the share of privatized / liquidated firms in a given municipality / district, following equation 1. The black line indicates the beginning of firm privatizations / liquidations after 1990.

Figure A3: Main results with additional covariates

Notes: The figure plots point estimates and 95 percent confidence intervals of OLS regressions of the socialist vote share on the share of privatized / liquidated firms in a given municipality / district, following equation 1. The black line indicates the beginning of firm privatizations / liquidations after 1990.

Table A1: 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.

Table A2: The effect of Treuhand activities on Socialist Voting Conditioned by Population Change in 1994

	<i>DV: Socialist Voting</i>	
	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	559
R ²	0.939	0.970
Adjusted R ²	0.923	0.958

Note:

*p<0.05; **p<0.01; ***p<0.001
OLS regression results following equation 1.
Two-way fixed effects models controlling for state
trends and size of the 1990 electorate.

Table A3: The effect of Treuhand activities on Socialist Voting Conditioned by Population Change in 1994

	<i>DV: Socialist Voting</i>	
	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	7,306	559
R ²	0.937	0.970
Adjusted R ²	0.921	0.958

Note:

*p<0.05; **p<0.01; ***p<0.001
OLS regression results following equation 1.
Two-way fixed effects models controlling for state
trends and size of the 1990 electorate.