Mimicking the opposition: Bismarck's welfare state and the rise of the socialists*

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Abstract

This paper examines the consequences of a government mimicking the policy of its competitor by studying the introduction of the welfare state in 19th century Germany. The reform conducted by the conservative government targeted blue-collar workers and aimed to reduce the success of the socialist party. The result based on a difference-in-differences design shows that the socialist party benefited in elections due to the reform. The analysis of the mechanism points to the socialist's issue ownership by strengthening its reform orientation, which voters followed. The results are not driven by other political and economic channels related to the reform.

JEL classification: D74, H53, I38, N44, P16

Keywords: welfare state, socialism, government, opposition, issue ownership, voting behavior, Germany

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1 Introduction

Governments aim to stay in power. To achieve this goal, governments have different tools at hand like reforms and repression. One option is to copy the political agenda of competitors and implement their advocated policies. This approach has gained recent attraction in the wake of the success of right-wing populist parties. In this paper, I investigate whether a government can benefit from this strategy.

In examining this question, two competing hypotheses emerge: On the one hand, governments tend to benefit from reforms in general suggesting an electoral reward for the government pursuing this strategy. In the empirical literature, land reforms (Caprettini et al., 2021), cash transfers (Manacorda et al., 2011), public goods (Huet-Vaughn, 2019), or education reforms (Acemoglu et al., 2021) are beneficial for governments due to mechanisms like gift exchange, rational learning, salience of public spending, or voter's tendency to reward fulfilled promises. On the other hand, through the lens of political competition models (Alesina, 1988; Petrocik, 1996), such policy faces the risk that the opposition can benefit from *issue ownership* because voters attribute a topic to the competitor. Following this reasoning, support for the government would not increase.

In this paper, I test these hypotheses by analyzing the political consequences of the first introduction of the welfare state. In Germany, the conservative chancellor Otto von Bismarck implemented the welfare state, a core demand of his competitor, the socialist party. His goal was to reduce the support for the socialist party. Relying on a difference-in-differences setup, I find that the socialist party substantially benefited in elections from Bismarck's reform whereas the parties that formed Bismarck's coalition tended to lose vote shares. As mechanism, I provide evidence that the socialist party became more moderate as response to Bismarck's reform in times of heated debates within the socialist party between reform and revolution (Berman, 2006). Moreover, the voters followed the party's turn to a stronger reform-orientation. Crucially, I can rule out alternative mechanisms like activities of the radical wing of the socialist party that favored a revolutionary program as well as several economic channels related to Bismarck's reform.

In a first step, I analyze the effect of Bismarck's reform on electoral support for the socialist party. The main empirical challenge is to distinguish between the specific effect of the social insurance and the general role of blue-collar workers for the increase in support for the socialist party. This is hard because only blue-collar workers were eligible for the social insurance and at the same time formed the core group of voters for the socialist party. To tackle this obstacle, I exploit the fact that local and industry-specific health insurance schemes existed already before the introduction of Bismarck's public scheme. To capture this variation, I rely on a detailed and previously unused firm census of 1876. Around 35% of all blue-collar workers already had health insurance before Bismarck's reform. These schemes are seen as a role model for Bismarck's policies and became redundant with the introduction of the public insurance scheme, which extended health insurance to 100% of all blue-collar workers. Hence, my treatment variable is the share of newly insured workers. I employ this variable in an event-study and difference-in-differences framework, in which I compare changes in

votes in constituencies where Bismarck's health insurance lead to large additional insurance coverage with regions with less of a coverage increase over seven elections between 1874 and 1890—the end of Bismarck's reign as chancellor. Crucially, I allow for flexible effects for the share of blue-collar workers. Common pre-treatment election trends corroborate the validity of the identification strategy.

The first set of empirical results show that Bismarck's social reform causally let to increasing votes for the socialist party. This finding is in contrast to Bismarck's objective to reduce the vote share for the party and the conventional wisdom, which interprets Bismarck's reform as the blue print for social cohesion (Wehler, 2006; Eichengreen, 2018). The magnitude of the positive effect is quite large: An increase in one standard deviation explains around 80% of the average increase in votes for the socialist party when comparing the elections directly before and after the introduction of the social insurance. The growing success came at the expense of the vote share of the conservatives and national-liberals, the two parties that formed Bismarck's coalition. While Bismarck remained in power until 1890, the growing success of the socialist party, which became the strongest party in terms of votes in 1890, was one of the main reasons for his end as chancellor.

In the second part of this paper, I examine the mechanisms behind the impact of the reform on the socialist party's electoral success. I show that it is not because of reform's economic consequences related to voting decisions. Here, I focus on migration, employment growth, and changes in firm size. In particular, I test whether Bismarck's reform led to more, potentially selected migration within Germany to constituencies with a stronger treatment intensity. This was not the case. Next, I show that constituencies more affected by the reform did not experience stronger employment growth than constituencies less affected by the reform. Related, also sectors with a higher share of newly insured workers did not grow more than sectors with a lower share of newly insured workers. Similarly, also firm size did not increase differently by share of newly insured workers in a sector.

Rather, I argue in favor of issue ownership as central mechanism. Here, it is indicative that even Bismarck and the head of police confirmed the issue ownership of the socialist party. What is more, the party shifted towards a stronger reform orientation to retain "issue ownership" after Bismarck attempt to capture their core topic. This shift was accompanied by more moderate political actions of their voters. I provide three pieces of evidence consistent with this interpretation.

First, regarding the supply side, i.e., the political position of the socialist party, it was after Bismarck's reform that the reform orientation became stronger and the party turned to "a political party in the modern parliamentary sense, involving the possibilities of swapping votes in elections, parliamentary maneuverings and compromises on elections" (Lidtke, 1966, p.185). In line with the increase in reform orientation, parts of the party actively engaged with the implementation of the welfare state by providing a health insurance organized by the workers. Moreover, it were the elected MPs who most strongly valued pragmatism over principles in a core debate within the party.

Second, the activities of the radical wing do not explain the growing success of the party. Here, I use archival material on the subscription lists of an illegal newspaper that was the core outlet of the radical wing. The Prussian minister of the interior Robert Viktor Puttkamer described this newspaper as "one of the most dangerous attacks on the security and inner peace of the German Reich"

(cited after Engelberg, 1959, p.51, own translation). By allowing for an interaction effect between the treatment variable and a dummy variable for constituencies with readers of the newspaper as indicator of a stronghold of the radical wing, I show that the newspaper did not matter for the growing electoral success of the party.

Third, regarding the demand side, i.e., the political position of voters, I leverage a large strike data-set for the early 20th century, which differentiates between rather peaceful union strikes and more radical political strikes. I show that constituencies more affected by the health insurance experienced a higher share of union strikes vis-à-vis a lower share of political strikes conditional on the number of strikes suggesting more moderate revealed political preferences.

To account for remaining concerns about my empirical result, I do several exercises. One worry are regional unobservable characteristics that might drive the share of ex-ante existing health insurance. To mitigate these concerns, I construct a shift-share instrument based on the industry-specific variation in the share of ex-ante insured workers. The company census and other sources allow me to calculate the share of ex-ante insured workers for ten industries. I combine these shares and the local sector shares to build my shift-share instrument. This exercise confirms my main finding.

One other identification concern is that local industry shares could predict votes for the socialist parties through channels other than the health insurance. I follow an approach of Goldsmith-Pinkham et al. (2020) and construct pre-trend figures by industry to preclude other channels. I do not find evidence for systematic and significant pre-trends for the different industries in the change of votes for the socialist party. What is more, my findings suggest that indeed industries with a low share of ex-ante insured workers drive my results. To provide one example, I even find a notable difference in the change of votes for the socialist party between the otherwise similar industries of textiles (high share of ex-ante insured workers) and clothing (low share of ex-ante insured workers) after the introduction of social insurance. Taken together, this supports my claim that, indeed, the introduction of health insurance is the main channel for the rising support for the socialist party.

Last, I conduct several other robustness checks dealing with potential violations of the parallel trend assumption (following Rambachan and Roth, 2023), the spatial feature of the underlying data-set (following Colella et al., 2019), confounding events like the anti-socialist law[1], sample restrictions, and other social cleavages. Throughout these additional results, my core finding, i.e., the increase in votes of the socialist party, remains qualitative the same and highly significant.

My paper speaks to several strands of literature in political economy and economic history. First, I add to the literature in economics and political science on the electoral effects of reforms and political competition. Many studies find that governments benefit in elections from policies like cash transfer (Manacorda et al., 2011; Galiani et al., 2019), disaster relief (Bechtel and Hainmueller, 2011), public spending (Huet-Vaughn, 2019; Voigtländer and Voth, 2021; Albanese et al., 2023; González and Prem, 2023), welfare benefits (Kogan, 2021), or land reform (Caprettini et al., 2021). Closely related to my paper, Acemoglu et al. (2021) study an education reform in the 1930s conducted by

[1] In a related study, Thomson (2022) analyzes one aspect of the anti-socialist law, the possibility to expel socialist leaders from cities. In contrast to this study, I capture the anti-socialist law in its core aspect, the ban of organizations.

the social democratic party in Norway, which voters rewarded in elections. My paper adds the opposite case: A welfare reform conducted by the government to weaken the social democratic party. In contrast to the existing literature, my results suggest that the government did not benefit. I showcase issue ownership as new hypothesis and mechanism by building on the literature on political competition (Alesina, 1988; Petrocik, 1996). So far, empirical studies in this literature have analyzed the strategies of political parties providing evidence in favor of the median voter theorem (see, e.g., Di Tella et al., 2023; Le Pennec, 2023). Evaluating the success of accommodating strategies, research in political science has found mixed evidence (Meguid, 2005; Krause et al., 2023). Moreover, a recent paper by Bauernschuster et al. (2023) shows that parties associated with health insurance benefited after the Spanish flu in Weimar Germany. To this literature, I contribute by studying the electoral consequences of a government that implemented a reform associated with its competitor.

Second, I contribute to the rich literature on populism.[2] In their review article on this literature, Guriev and Papaioannou (2022, p.820) present several avenues for further research: "[...] most research on the causes of populism focuses on factors that promote it; much less work exists on what prevents or slows its rise. What is the role of redistribution policies? Does providing social protection, health care, and education, protect societies from populism?" My study exactly adds an analysis of a government attempting to slow its opposition with a targeted policy. The results indicate that this strategy can even lead to rising popularity of the opposition because the opposition might own certain topics.

Third, my paper is related to the literature on nation-building. Bismarck's welfare reform was an attempt to strengthen the link between the workers and the nation state as stressed, for instance, by the historian Kocka (2016). The existing empirical literature on nation-building often finds evidence for successful nation-building through propaganda (Blouin and Mukand, 2019; Kersting and Wolf, 2021), foreign intervention (Dell and Querubin, 2018), inter-group contact (Bazzi et al., 2019), leadership (Assouad, 2021), sport (Depetris-Chauvin et al., 2020), and education (Cinnirella and Schueler, 2018; Blanc and Kubo, 2023).[3] Nation-building can also backfire as shown by Fouka (2020) for an assimilation policy. Closely related to my paper, Caprettini and Voth (2023) provide evidence for the positive impact of social spending (as part of the New Deal) on patriotism. To this strand of literature, I add a case study where the government attempts of nation-building with a welfare reform targeted at the opposition. The results indicate that nation-building can also strengthen the opposition despite material benefits.

Finally, my study is related to the large historical literature on worker' parties in general and on Bismarck's social insurance in particular. Berman (2006) provides an excellent account of the increasing role of the reform camp within the socialist party, while Bartels et al. (2023) analyze core parts of this debate quantitatively. Existing studies on Bismarck's social insurance analyze the effect on mortality (Guinnane and Streb, 2015; Bauernschuster et al., 2020), savings (Lehmann-Hasemeyer and Streb, 2018), fertility (Scheubel, 2013; Fenge and Scheubel, 2017; Guinnane and Streb, 2021), and

[2]See the recent review articles by Rodrik (2021), Colantone et al. (2022), and Guriev and Papaioannou (2022).
[3]See Rohner and Zhuravskaya (2023) for a recent overview of this literature.

out-migration (Khoudour-Casteras, 2008). There is a consensus in this literature that the introduction of the social insurance led to social improvements.[4] In the qualitative historical literature, the reform is described as success, e.g., Wehler (2006) and Eichengreen (2018) stress the positive impact on the social integration (see Ritter 1983 for a more skeptic view). However, we lack a thorough quantitative analysis of the political effects of Bismarck's reform, which is my core contribution to this literature.

The rest of the paper is organized as follows. Section 2 describes the historical background and the data collection. Section 3 analyzes the political effect of the reform. Section 4 studies the mechanism. Section 5 concludes.

2 Historical background and data

2.1 Historical background: Bismarck, the welfare state and the socialists

In the 1870s, after the German unification in 1871, the socialist movement gained in popularity among the German society. In 1875, the *Sozialistische Arbeiterpartei Deutschlands* (SAP; Socialist Workers' Party of Germany) was founded as a coalition of the previous workers' parties in Germany, the *Sozialdemokratische Arbeiterpartei* (SDAP; Social Democratic Workers' Party) and the *Allgemeine Deutsche Arbeiterverein* (ADAV; General German Workers' Association). In the next general election in 1877, the party received 9.1% of the votes after only 3.2% six years earlier. Their core demands in the *Gothaer Programm* were on the one hand reforms, e.g., the introduction of a 10-hour-working day, the prohibition of Sunday-work, more rights for trade unions, and more education, especially for younger workers. On the other hand, the program also contained a radical revolutionary outlook by advocating for the defeat of capitalism and the abolishment of private property (Bartel et al., 1980, p.30ff).

Support for the Paris Commune and unseen levels of strike activity (at least 530 strikes between 1871 and 1873) increased the bourgeoisie's fear of a socialist revolution. Chancellor Bismarck, for instance, fueled the bourgeoisie's fears by spreading rumors that supporters of the SAP formed a kind of army in the middle of Germany that even limited the economic recovery after the *Gründerkrise* (Bismarck, 2004, original from 1878). August Bebel, the leader of the socialist party, triggered the fears by famously claiming in parliament "that before a few decades pass, the battle cry of the Parisian proletariat 'War to the palaces, peace to the huts, death to misery and idleness!' will become the battle cry of the entire European proletariat" (Bebel, 1911, p.184, own translation, original from 1871).

After two failed assassinations of the emperor, for which the socialist party—without clear evidence for it—was held responsible, Bismarck's government reacted to the growing socialist movement by introducing the so-called *Sozialistengesetze* (anti-socialist laws) in 1878. The anti-socialist laws prohibited most activities of the SAP and trade unions. Bismarck aimed to conduct a "war of extermination" with laws against the "red enemies of the empire" (Bismarck, 2004, original from 1878). Overall, the anti-socialist laws led to a ban on more than 200 associations and 400 publications within a year. The implementation did not differentiate between social entertainment clubs or trade

[4] See Jopp and Streb (2023) for a recent overview on the social and economic effects of the social insurance.

unions with a strong focus on local economic assistance on the one hand, and socialist agitators on the other hand (Lidtke, 1966, p.80). Centralized party activities were forbidden. However, supporters of the banned party were still allowed to run for parliament as private persons. Still, there is a broad consensus in the historical literature that the introduction of the anti-socialist laws was not successful for Bismarck.[5]

To complement the repressive policy that already contemporaries considered a failure, Bismarck's government introduced a new social policy to reduce the support for socialist candidates in 1883. Bismarck formulated his goals bluntly: "Give the worker the right to work as long as he is healthy, give him care when he is sick, give him care when he is old. When you do that [...], then I believe that the gentlemen of the Wydener program [the SAP] will blow their whistle in vain." (Bismarck, 1885a, own translation). In addition, he aimed to "create a conservative mindset among the great mass of the dispossessed" (Bismarck, 1881, own transllation).

The social insurance built upon three pillars: Health insurance, accident insurance, and pension insurance. The *Gesetz betreffend die Krankenversicherung der Arbeiter* enacted June 15, 1883, and implemented December 1, 1884, provided public health insurance coverage for blue-collar workers in non-agricultural sectors. It covered sick pay (up to 13 weeks, at least 50% of the local wage), doctor appointments and expenditures for medicine with employers paying one-third of the contributions and employees two-thirds. The health insurance stood at the core of the social insurance reform. One year later, the government provided accident insurance targeted at the same workers group. The pension insurance was implemented in 1889, shortly before Bismarck's reign as chancellor ended, and had strict eligibility criteria, especially regarding the age requirement. Overall, these policies targeted the workers and not the working poor, and, thus, the core voters of the socialist party (Ritter and Tenfelde, 1992, p.702). In this paper, I focus on the health insurance as the first key part of the reform that also was by far the biggest one in terms of financial volume (Jopp and Streb, 2023).

The introduction of the health insurance was supported by a broad coalition existing of the conservatives and the national-liberals – the two parties that formed Bismarck's coalition – as well as the catholic *Zentrum* (Hänlein et al., 2009, p.XVIII). Parts of the left-liberals and the socialists voted against the law. To find out who politically benefited from the reform, I compare changes in electoral support focussing on Bismarck's coalition and the socialist party.

What were the aspects of the health insurance that made it attractive? The health insurance led to a common public insurance scheme with minimum standards for all blue-collar workers. The level of sick pay, however, was barely sufficient to subsist while being sick at home. Still, as previous research on Bismarck's reform has shown (Bauernschuster et al., 2020), life expectancy of blue-collar workers increased after the implementation of the health insurance, especially due to better medical care. Moreover, the social insurance led to higher "indirect wages" consisting of the benefits of the social insurance (Khoudour-Casteras, 2008). However, it is unclear whether the social insurance had redistributive effects because the employers and employees co-financed the insurance. Without any

[5] Wehler (2006, p.906) argues that the anti-socialist laws led to increasing solidarity among the SAP voters and not to deterrence effects. Nipperdey (1992, p.400) concludes that the anti-socialist laws were too excessive because they solely relied on violence and coercion and made supporters of the SAP enemies of the state.

doubt, the health insurance brought blue-collar workers substantial social improvements.

Before Bismarck's reform, insurance coverage existed but was dependent on local and industry-specific decisions. In some cases, the insurances were founded in the 16th century (Jopp and Streb, 2023). For instance, *Knappschaften* (miners' guilds) offered health insurance for miners, and *Fabrikkassen* covered health insurance for the employees of firms. Employers often contributed to the financing of these insurance programs. These existing health insurance schemes are a crucial part of my empirical strategy.

It was challenging for the socialist party to take a clear position on the new social security policies. On the one hand, the party could choose a more moderate stance at the risk of becoming part of the institutions they—at least partially—opposed. On the other hand, the party could stick to fierce opposition helping the government to claim the credits of the reform, which contemporaries and potential voters interpreted as 'socialist'. Exactly this dilemma let to fierce debates within the socialist party. While the radical wing opted for illegal activities and a revolutionary program, the moderate wing aimed to show voters the benefits of reform activity and to stop the isolation of the party, which the radicals criticized as opportunistic. Bebel and Engels as the major advocates of the radicals even thought that a failure of more moderate candidates like Ignaz Auer, Louis Viereck, Paul Singer, and August Heine during the election in 1884 would have been a success for the party (Lidtke, 1966, p.190). This conflict within the party will be key for the analysis of the mechanism in section 4.

Hypotheses When it comes to the political evaluation of Bismarck's welfare reform, the historical literature tends to see Bismarck's welfare reform as blueprint for successful social integration. Most notably, Wehler (2006, p.915) claims that Bismarck's introduction of social insurance successfully integrated the working class in the new German nation-state. Eichengreen (2018, p.47-58) interprets Bismarck's reform as prime example of how to respond to "economic insecurity". Others argue that the opposite was the case because of the small distributional effect (Ritter, 1983, p.50ff). Still, my hypothesis based on the historical narrative is as follows: The introduction of the welfare state leads to a decline in votes for the socialist party.

Through the lens of the political economy of political competition (Alesina, 1988; Petrocik, 1996), I form the opposite hypothesis: The introduction of the welfare state leads not a decline in votes for the socialist party. The literature on political competition aims to explain why political parties choose on particular issues in their campaigns. The key prediction is that parties focus on issues that they "own". With this strategy, parties appear credible, as the issues have to be consistent with the party's image (Alesina, 1988). Here, I extend this reasoning to a case where the government implements a reform, which is associated with another party. In other words, my hypothesis tests whether "issue ownership" even plays a role if the potential "owner" of the policy has not actually implemented it. Whether to expect constant or increasing vote shares for the socialist party arguably depends on the reaction of the socialist party and will be part of the discussion of the mechanism. To shed new light on both hypotheses, I propose the first quantitative evaluation of the political consequences of Bismarck's reform.

2.2 Data

My empirical analysis builds on several new datasets, which I describe in this section. As some of my sources, most crucially those on the ex-ante existing health insurances, are only available for Prussia, I restrict my analysis to this part of Germany. Prussia was by far the biggest state in Imperial Germany and covered roughly two thirds of the population. The restriction to Prussia gives me the advantage to analyze a homogeneous institutional setting.

Health insurance To capture the political impact of Bismarck's welfare state, I focus on the public health insurance scheme.[6] I collect new data from multiple sources to calculate health insurance coverage before Bismarck's reform, which I use as my treatment variable in section 3.1. Three groups must be taken into account: firstly, employees in (larger) factories, secondly, employees in handcrafts, and thirdly, employees in the mining industry who play a special role. In the following, I describe how I calculate the share of already insured employees for each of these three groups.

To take employees in larger companies into account, my main source is an official firm census conducted by the Minister für Handel, Gewerbe und öffentliche Arbeiten (1876a). From this census, I obtain information on every firm with more than 30 workers that offered health insurance to its workers before Bismarck's reform in Prussia.[7] The census aimed to provide a detailed report on the social and economic situation of the workers and was conducted because of the growing concerns over the rising popularity of the socialist movement. The data include information on the number of workers employed and their sector. Information on the location of the firm helps me to link the data with electoral constituencies. In total, 2,067 firms offered health insurance for 361,574 employees in 1876.

While this firm census provides a complete picture for larger factories, also workers in smaller factories were covered by health insurances (around 142.000 workers) before the reform. Here, I rely on official data on the district-level provided by the Minister für Handel, Gewerbe und öffentliche Arbeiten (1876b). I distribute workers from the district level to constituencies and sectors using the share of insured workers for each industry from the firm census and the share of workers for each industry in a constituency within one district.

To cover health insurance in handcrafts, I again rely on official data on the district-level provided by the Minister für Handel, Gewerbe und öffentliche Arbeiten (1876b). These insurances cover 157,000 workers. I distribute these already insured workers according to the proportion of workers in handcrafts in a constituency relative to all workers in handcrafts in a district. Hence, I have to assume that the share of workers in handcrafts with ex-ante existing health insurance is the same within one district. Given that only about 15% of all ex-ante insured workers were employed in handcrafts and that I still use the variation between 36 districts, this assumption seems rather marginal.

Finally, I take into account that miner guilds (*Knappschaften*) provided mandatory health insur-

[6] In 1884, the accident insurance was introduced. Hence, the health insurance overlaps with this reform. However, I capture the accident insurance by controlling for the share of blue-collar workers.

[7] Appendix Figure A1 shows how the original source looks like.

ance for all workers in mining (Jopp, 2011). In 1878, 85 miner guilds provided health care for 261,118 workers in more than 3,000 mines, smelting works, and salt works. It is noteworthy that the miner guilds were heavily concentrated in the coal regions in the Ruhr area, Silesia, and Saxony. Following Guinnane and Streb (2021), I assume that all blue-collar workers in mining already had health insurance. The data on blue collar-workers in mining as of 1882 is provided by Galloway (2007).

Based on these sources, I estimate that around 35% of all blue-collar workers were already insured. Note that this share varied significantly between different sectors (see Appendix Table A1). While about 60% of all blue-collar workers in textiles already benefited from ex-ante existing health insurance, only 18% of all blue-collar workers employed in the construction and timber industry were covered by health insurance. I use these differences across industries for the validation of my empirical strategy (section 3.4).

Firms had several reasons to support health insurance (Frevert, 1984, p.185-219). Importantly, there were economic arguments, e.g., potential productivity increases due the provision of health insurance. In addition, firms hoped to strengthen the loyalty and discipline of the workers in times of high levels of turnover. These *Fabrikkassen* and similar forms of health insurance had a long tradition in Germany, which went back to the beginnings of the industrialization. Thus, the amount of ex-ante existing health insurance does not reflect an immediate reaction of employers to the growing popularity of the socialist party in the 1870s. This is also shown by the fact that the development of such health insurance before 1876 was quite flat (Bauernschuster et al., 2020, p.2571). Thus, the share of ex-ante insured workers is arguably exogenous to the increase in votes for the socialist party during the 1870s.

Anti-socialist laws My source is information published in the official *Reichsanzeiger* and collected by Teich (1879). This list includes the type and location of the organization. All of these associations were prohibited on the basis of the anti-socialist law, i.e., they had links with the socialist party or the trade union. There was a wide range of forbidden associations: explicitly political associations (27%), so-called workers' associations and electoral associations, but also social associations (33%), including singing associations, as well as other groups of associations (see Appendix Table A2). Based on this information, I construct a dummy variable for all constituencies with at least one forbidden organization. Overall, 30 of 229 electoral constituencies in Prussia were affected (see Appendix Figure B2).

Legal support for the socialist party: Votes in elections The main dependent variable of all baseline regressions is vote shares for the socialist party in general elections made available by Caramani (2004). Given the prohibition of other legal activities, e.g., party membership, voting behavior is among the best available measurements for legal support for the SAP. Despite the partially monarchic character of the German *Kaiserreich*, the electoral system is regarded as the most democratic in Europe of that time (Sperber, 1997). What is more, the general elections were important for the government and the socialist party. The government needed a majority to enact laws. Bismarck, for instance, even

dissolved the parliament to get a majority for the anti-socialist laws. For the socialist party, electoral successes remained their main public stage. Because of the majority voting system, I focus on the vote shares.

The vote shares for the socialist party increased until 1877. Afterwards, the vote shares declined following the introduction of the anti-socialist laws but recovered in 1884 and 1887 and experienced a sharp increase in 1890, the last election before the anti-socialist laws were abolished. The SAP even got the most votes in this election (see Appendix Figure B1).

3 The political effect of Bismarck's reform

In this section, I present evidence on the political effects of the social insurance. I proceed in five steps: I introduce my treatment variable to capture the social insurance (section 3.1). Then, I present my main findings based on an event-study approach (section 3.2). To validate my results, I discuss the results of a shift-share instrument (section 3.3), a between-sector comparison (section 3.4), several robustness checks (section 3.5), and provide a brief interpretation of the results (section 3.6).

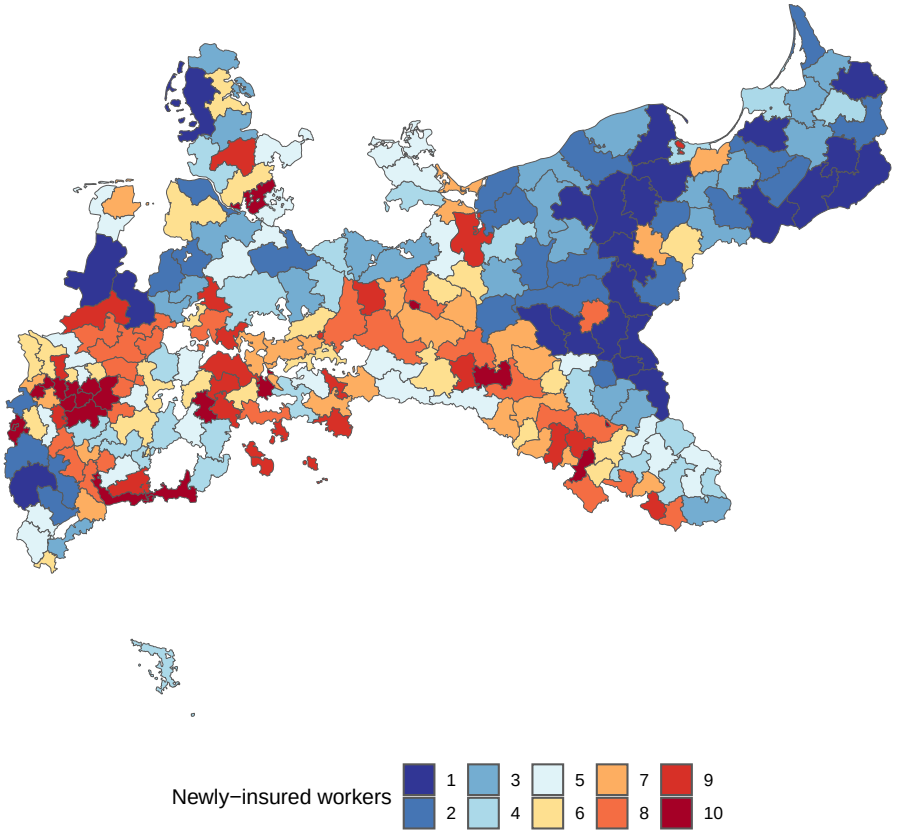
3.1 Treatment

Based on the ex-ante existing health insurance schemes, I calculate the share of newly insured workers at the level of electoral constituencies. I combine data on ex-ante existing coverage of health insurance with information on blue-collar workers as of 1882 from Galloway (2007). The number of blue-collar workers captures the share of the workforce that was eligible for public health insurance. I subtract the number of workers with ex-ante existing health insurance from blue-collar workers in each constituency and weigh this number by population of each constituency.[8] The share of newly insured workers was, on average, around 5% of the local population (see Appendix Table B1). Figure 1 shows the share of newly insured workers for each constituency. Broadly speaking, the share is higher in constituencies of industrialized regions in the Ruhr area in the West, parts of Saxony in the Center, around Berlin, and Silesia in the South-east.

Relying on this treatment variable implies to make two assumptions: The German parliament introduced the public health insurance in 1884 and the data for ex-ante existing health insurance is from 1876. Thus, I have to assume that the share of already insured workers remains stable between 1876 and 1883. Given the flat development of membership in ex-ante existing health share in the years before 1876 (Minister für Handel, Gewerbe und öffentliche Arbeiten, 1876b and Bauernschuster et al., 2020, p.2571), this assumption seems plausible. Still, a related assumption concerns the role of domestic migration. More specifically, constituencies with a higher share of ex-ante insured workers could attract more workers in the years between 1876 and 1883. This would bias my findings. To alleviate this concern, I test whether the share of newly insured workers is correlated with net-migration during this period. To capture net-migration, I decompose total population growth into its components, first, migration and, second, "natural" population growth. I calculate the difference

[8] The population data available in Galloway (2007) is as of 1880, the closest population census.

Figure 1: Newly insured workers



Notes: Map of share of newly insured workers (in the population) in Prussia (in deciles).
Sources: Own calculation based on Minister für Handel, Gewerbe und öffentliche Arbeiten (1876a), Minister für Handel, Gewerbe und öffentliche Arbeiten (1876b), and Galloway (2007).

between the reported "natural" population growth based on births and deaths for each year and the actual population growth between two censuses conducted every five years provided by Galloway (2007). The results in Appendix Table B2 show that the share of newly insured workers does not predict net-migration in the years prior to Bismarck's reform.

Two aspects of the reform are crucial for the empirical analysis. First, voters could not anticipate the introduction of the health insurance in the election in 1881 because the famous *Kaiserliche Botschaft* announced the reform after the election. This speech of the *Kaiser* read by Bismarck in the German parliament was a turning point insofar that it openly addressed the potential pitfalls of rising social cleavages. Second, a key criterion for using geographic variation in existing insurance coverage for the workers to identify the political impact of Bismarck's reform is that this insurance was redundant of what the public health insurance subsequently covered. In line with this, Hänlein et al. (2009) argue that Bismarck used these existing insurance forms (for instance, so-called *Fabrikkassen*) as a blueprint for the implementation.

3.2 Event-study approach

Empirical approach I compare changes in voting shares for the SAP in constituencies where Bismarck's health insurance led to large additional insurance coverage to constituencies where there was less additional insurance coverage conditional on the share of blue-collar workers. I estimate the following event-study approach

$$\text{SAP}_{it} = \alpha_i + \theta_t + \sum_{t=1874}^{t=1890} \gamma_t(\text{Treatment}_i \cdot \text{Year}_t) + \sum_{t=1874}^{t=1890} \delta_t(\text{BlueCollar}_i \cdot \text{Year}_t) + X_{it}\beta + \epsilon_{it}, \quad (1)$$

where the dependent variable SAP_{it} is the vote share for the SAP in electoral constituency i and year t. α_i captures electoral constituency fixed effects, θ_t election year fixed effects, and X_{it} various time-varying control variables like population provided by Galloway (2007). The key variables of interest are the interactions of year dummies with the impact of Bismarck's health insurance. The coefficients of this interaction (γ_t) show the difference in vote shares in constituencies where Bismarck's insurance led to a one percentage point larger increase in newly-insured workers relative to the last election before the reform in 1881.

In my preferred specification, I allow for a flexible effect of the share of blue-collar workers as of 1882 to make sure to capture the *specific* effect of the introduction of the health insurance and not the *general* correlation between blue-collar workers and votes for the socialist party. The empirical approach is, therefore, to control for the share of blue-collar workers and to look at whether there is a break in any pre-existing differences in the trend of election outcomes *after* the introduction of Bismarck's public health insurance in 1884. The identifying assumption is that without Bismarck's reform any pre-treatment differences would have continued on the same trends.

As further controls, I include flexible effects for the share of Protestants to capture the religious cleavage in Imperial Germany. For instance, the end of the *Kulturkampf* might have led to changing patterns how religious composition affected electoral outcomes, e.g., in the Catholic *and* industrialized Ruhr area. In addition, I include interactions between a dummy variable whether there was at least one forbidden socialist organization and election dummies to account for the anti-socialist law. Moreover, I include population (in logs) as control variable. With this set of controls, I am confident to isolate the effect of Bismarck's health insurance reform. Standard errors are clustered at the district-level.

In the regressions, I include all seven general elections for the *Reichstag* between 1874 and 1890. I exclude the election in 1871, which was special along two important dimensions. Most importantly, the socialist party still consisted of two parties. In contrast to the later elections, one of these socialist parties—the General German Workers' Association—even endorsed Bismarck and the German unification. Second, the election in 1871 was dominated by the end of the French/German war in 1870/71 (Sperber, 1997, p.161). The election took place on March 3, while the foundation of the German Empire was less than two months earlier on January 18. The election in 1890 serves as "natural" end, as Bismarck had to resign as chancellor after this election.

Results The event-study results in Figure 2 show that the socialist party gained in constituencies with a higher share of newly treated workers after the introduction of health insurance.[9]

Figure 2 shows only weak evidence for a significant pre-trend as the coefficients for the elections before 1884 remain insignificant. The point estimates do not reveal any clear trend, i.e., the pre-trend is not due to large standard errors. Overall, the pre-trends looks highly stable: The coefficients are basically zero—the average coefficient for the pre-period is -0.061 (p-value: 0.793). This absence of a pre-trend is reassuring for my identifying assumption.

To demonstrate the economic significance of the effect, I calculate the share of the change between the election in 1881 and 1884 that can be explained by the effect of newly insured workers. On average, the socialist party gained 2.05 percentage points between 1881 and 1884. Multiplying the standard deviation of newly insured workers (2.15, see Appendix Table B1) and the effect size (0.76 for 1884, see column 2, Appendix Table B3) yields that the socialist party increases their vote share by 1.63 percentage points in a hypothetical electoral constituency with the same share of a blue-collar workers and a higher share of newly insured workers of one standard deviation compared to the election in 1881. Hence, one standard deviation in my treatment variable explains 80% of the increase in votes for the socialist party immediately after the reform.

Other parties Where did the vote gains for the socialist party come from? Although a precise analysis of voter migration is not possible here, the approach allows to analyze the effect of Bismarck's reform on the vote shares for other parties and on voter turnout. The results in Table 1 indicate that in particular Bismarck's coalition lost after the reform (although the coefficients are not statistically significant). In other words, part of the increase for the socialist party came at the expense of Bismarck's coalition. Moreover, the Catholic *Zentrum* also seem to have lost votes in regions that were more affected by the introduction of the health insurance. Turnout did not increase significantly in constituencies with a higher share of newly insured workers.

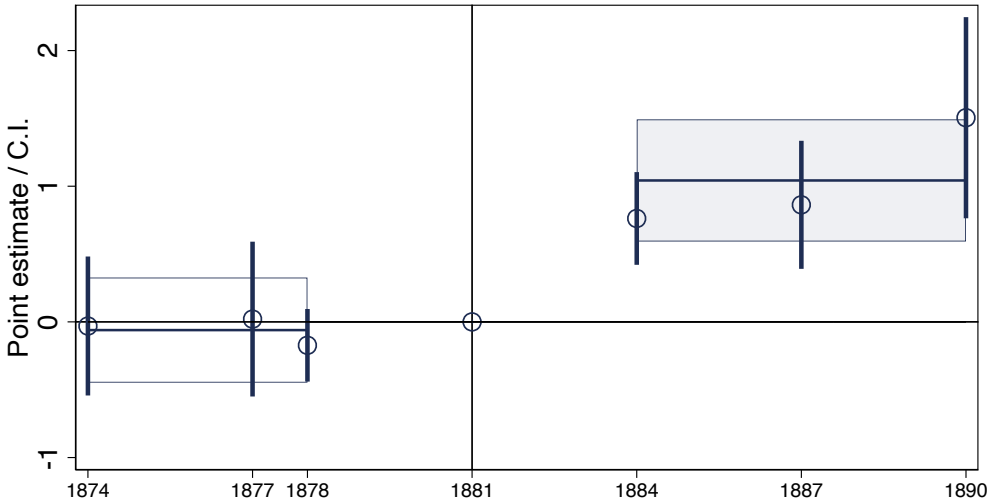
The results so far suggest that with the introduction of social insurance the socialist party—contrary to Bismarck's intention—won more votes in those areas where more people were affected by social insurance. To further validate the causal interpretation of my findings, I present a shift-share approach (section 3.3), an analysis by industry (section 3.4), and several robustness tests (section 3.5).

3.3 Shift-share approach

Regional (unobservable) characteristics may play a role. For example, I cannot rule out the possibility that more health insurance was introduced during the 1870s in regions with more socialist activity (although the historical literature points to older traditions that determine health insurance). To address this concern, I implement a shift-share instrument based on national totals in ex-ante existing health insurance by sector and local sector shares.

[9] In Appendix Figure B3 and Table B4, I document the results for a dummy variable approach. The dummy equals 1 for all constituencies with a share of newly insured workers above the median. The results confirm the finding in Figure 2. The results for the anti-socialist law are documented in Appendix Figure B4 and Table B5. In line with the historical literature, I find no indication of a decline in votes for the socialist party due to the anti-socialist law.

Figure 2: Effect of the social insurance on votes for the socialist party



Notes: The figure presents the effect of newly insured workers on the vote share of the socialist party. Regressions are estimated using OLS, and include constituency and year fixed effects. Yearly regression coefficients of interest are interactions between the share of newly insured workers and year fixed effects and are estimated relative to the omitted interaction with 1881, the last election before the reform. In the aggregate specification, coefficients of interest are interactions between the share of newly insured workers and a 1874-1878 dummy ($\beta = -0.061; p = 0.793$) and between the share of newly insured workers and a 1884-1890 dummy ($\beta = 1.042; p = 0.000$). Coefficient estimates on the election interactions are plotted as dots with their 95% confidence intervals indicated with vertical lines. Coefficient estimates on the aggregate interactions are shown with horizontal lines, and their 95% confidence intervals are indicated as boxes. Controls include: Share blue-collar workers $\times$ election dummies, share Protestants $\times$ election dummies, dummy forbidden socialist organization $\times$ election dummies, and population (in log). The results shown in this Figure correspond to column (2) in Appendix Table B3. Standard errors are clustered at the district level.
Sources: Appendix A.

To construct a shift-share instrument, I decompose the treatment variable into its parts:

$$\text{Treatment}_i = \text{BlueCollar}_i - \text{ExAnteInsured}_i = \sum_j \text{BlueCollar}_{ij} - \text{ExAnteInsured}_{ij} \tag{2}$$

The number of newly insured workers in constituency i consists of the sum (over all sectors j) of the difference between blue-collar workers and ex-ante insured workers.

This sum, in turn, can be instrumented with a shift-share instrument of the following form

$$\sum_j \alpha_{ij} (\text{BlueCollar}_{\text{Prussia},j} - \text{ExAnteInsured}_{\text{Prussia},j}) \tag{3}$$

where α_{ij} denotes the share of blue-collar workers in sector j and constituency i relative to total blue-collar employment in sector j.

Recent contributions on shift-share analysis (for instance, Goldsmith-Pinkham et al., 2020) suggest differentiating between research designs relying on shocks and research designs relying on shares.

Table 1: Effect on other parties and turnout

	SAP (1)	Bismarck (2)	Left-liberals (3)	Catholic (4)	Turnout (5)
% Newly insured × post1884	1.151***	-1.000	0.144	-0.079	-0.159
	(0.215)	(0.609)	(0.582)	(0.294)	(0.288)
Mean dep. var.	5.64	47.53	13.74	22.88	63.98
Controls	✓	✓	✓	✓	✓
Constituency FE	✓	✓	✓	✓	✓
Time FE	✓	✓	✓	✓	✓
Observations	1603	1603	1603	1603	1603
Constituencies	229	229	229	229	229
Elections	7	7	7	7	7
R-squared within	0.43	0.28	0.23	0.05	0.54
R-squared overall	0.35	0.00	0.02	0.05	0.19

Notes: The dependent variable measures the share of votes for the socialist party (column 1), Bismarck's coalition of the national-liberal party and the conservatives (column 2), the left-liberals (column 3), the catholic party (column 4), and turnout (column 5). Treatment variable: share of newly insured population × post1884. Controls: Share protestants × post1884, share blue collar workers × post1884, and population (log). Standard errors, clustered at the district level, in parentheses. *** p<0.01, ** p<0.05, * p<0.1.
Sources: Appendix section A.

In my setting, the shares in employment for different industries lead to different exposure to the common shock of public health insurance. The idea is to ask whether differential exposure to public health insurance leads to differential changes in the outcome. Note that this empirical strategy does not assume the shares themselves to be uncorrelated with the political outcomes (Goldsmith-Pinkham et al., 2020, p.2588).

I implement this shift-share instrument in the event-study regression used in equation 1. The results in Table 2 overall confirm the results from Figure 2. The share of newly insured workers shows a strongly positive effect on votes for the socialist party after the introduction of the public health insurance in the second stage (column 1). The coefficients are larger compared to the OLS results in column 2, but not statistically significant from eachother. Note that I include flexible effects for the share of blue-collar workers throughout. Moreover, there is only weak evidence for significant pre-trends. All coefficients are insignificant. Concluding, the results of the shift-approach further validate my empirical strategy.

3.4 Between-sector comparison

One central remaining concern is that the sector shares that form the basis of my treatment variable predict votes for the socialist parties through channels other than the health insurance. To address these worries, I follow the analysis by industry as proposed by Goldsmith-Pinkham et al. (2020). The main idea is to check whether industries with a low share of ex-ante insured workers indeed drive my overall positive effect.

Therefore, I analyze the pre-trends for all sectors separately. More specifically, I keep regional blue-collar shares for 10 industries constant at the 1882 values and use these shares in the event-

Table 2: Effect of social insurance, shift-share IV

Votes SAP (in %)	Second stage (1)	OLS (2)	Reduced form (3)
% Newly insured × 1874	-0.311	-0.030	
	(0.408)	(0.280)	
% Newly insured × 1877	0.212	0.021	
	(0.375)	(0.312)	
% Newly insured × 1878	0.121	-0.173	
	(0.140)	(0.146)	
% Newly insured × 1884	1.191***	0.762***	
	(0.204)	(0.187)	
% Newly insured × 1887	1.343***	0.863***	
	(0.270)	(0.258)	
% Newly insured × 1890	2.357***	1.505***	
	(0.500)	(0.406)	
% Newly insured instrument × 1874			-0.288
			(0.389)
% Newly insured instrument × 1877			0.197
			(0.355)
% Newly insured instrument × 1878			0.113
			(0.131)
% Newly insured instrument × 1884			1.105***
			(0.169)
% Newly insured instrument × 1887			1.245***
			(0.237)
% Newly insured instrument × 1890			2.185***
			(0.431)
Mean dep. var.	5.64	5.64	5.64
Controls	✓	✓	✓
Constituency FE	✓	✓	✓
Time FE	✓	✓	✓
Observations	1603	1603	1603
Constituencies	229	229	229
Elections	7	7	7
R-squared within		0.53	0.54
R-squared overall		0.44	0.46

Notes: Unit of analysis: Constituency. The omitted election is 1881. The dependent variable measures the share of votes for the social democratic party. Treatment variables: share of newly insured population in 1884, interacted with election dummies. Controls include: Share blue-collar workers × election dummies, share Protestants × election dummies, dummy forbidden socialist organization × election dummies, and population (in log). Standard errors, clustered at the district level, in parentheses. *** p<0.01, ** p<0.05, * p<0.1.
Sources: Appendix section A.

study approach from section 3.2. Figure 3 report the effect of these blue-collar shares on *changes* in votes for the socialist party. In the regressions, I again use the same set of controls as above. To allow comparability, I standardize the coefficients. In most cases, the pre-trends look satisfying.

For the effects after the introduction of public social insurance, evidence in favor of my identification strategy would show positive and significant effects for sectors with a lower share of ex-ante insured workers. The results in Figure 3 overall support this reasoning. I document the share of ex-ante insured workers in parentheses next to the sector. Clothes and construction/timber—two sectors with a low share of ex-ante insured workers—show the strongest standardized effects. The

positive effects for blue-collar workers in print/art and food are smaller in magnitude, but still supportive of my overall case. Note that the effects of textiles with a high share of ex-ante insured workers (around 60%) remain almost constant. This finding is particularly interesting in comparison to clothes as both have a similar structure of employees, but differ in their share of ex-ante insured workers. These patterns illustrate that sectors with an ex-ante low share of insured workers drive my result. Overall, the pre- and post-trends provide sound support that the introduction of health insurance is the primary channel through which the socialist party gained votes.

3.5 Robustness checks

Serial autocorrelation To account for possible serial autocorrelation and the possibility of downward biased standard errors, I provide additional results where I collapse the data into pre- and post-period following Bertrand et al. (2004) in Appendix Table B6. The results are qualitatively and quantitatively almost identical.

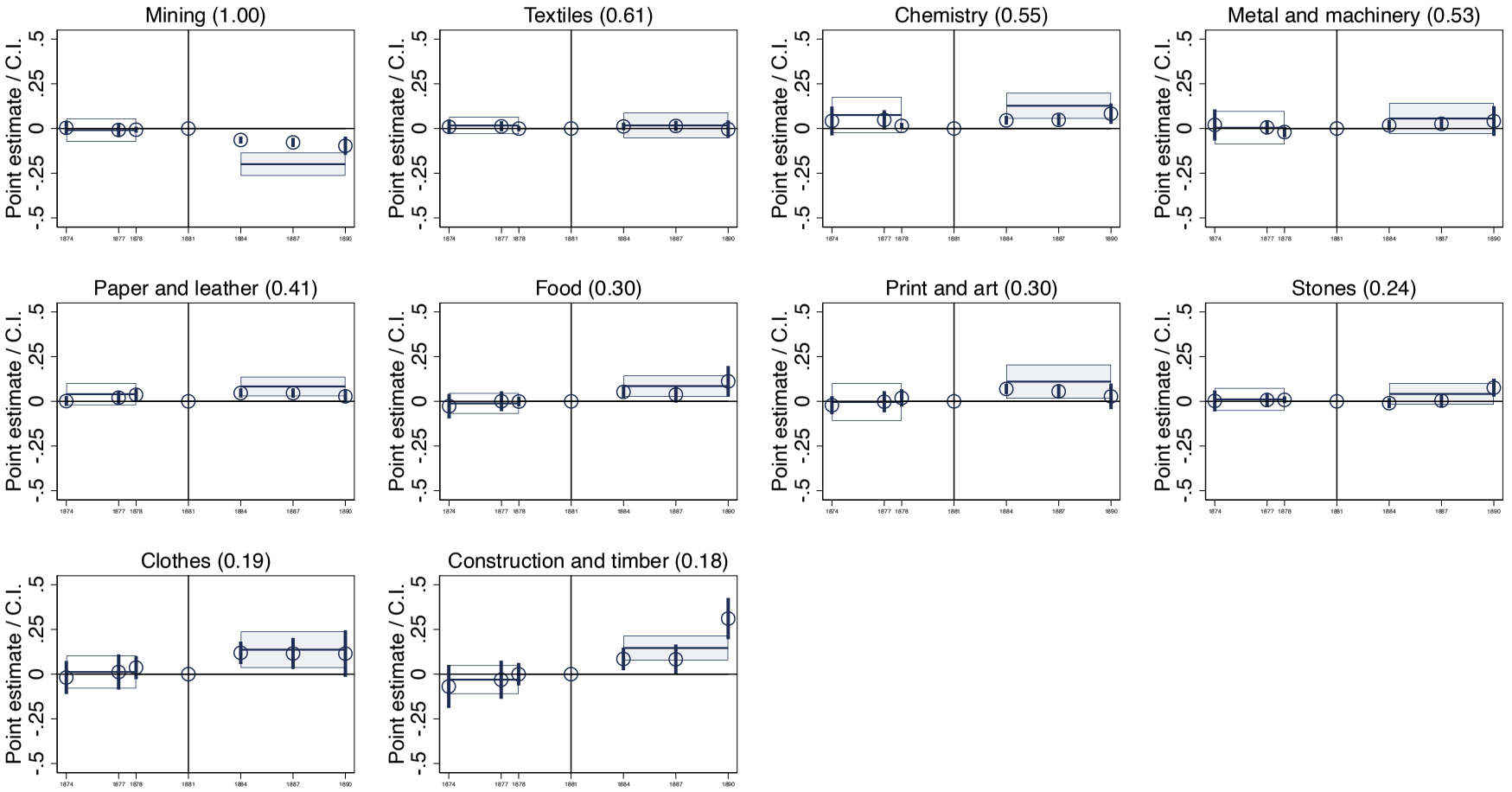
Spatial standard errors While I cluster standard errors at the district-level throughout, I allow for a more flexible approach by relying on *acreg* command put forward by Colella et al. (2019). With this approach, I implement different cutoffs (100km and 200km) for the calculation of the standard errors. The results in Appendix Table B7 confirm my previous finding with only slight changes in the standard errors.

Sample restrictions In addition, I allow for several sample restrictions. I drop the main industrial provinces as well as the the top and bottom quarter in terms of newly insured workers. The effect of the social insurance on votes for the socialist party remains highly significant throughout the different restrictions I apply in Appendix Table B8. This result indicates that my effect is indeed not driven by specific regions or constituencies with a rather low or high share of newly insured workers.

Province×year fixed effects To account for potential regional trends in electoral changes, I include province×year fixed effects in Appendix Table B9. The results confirm my previous findings.

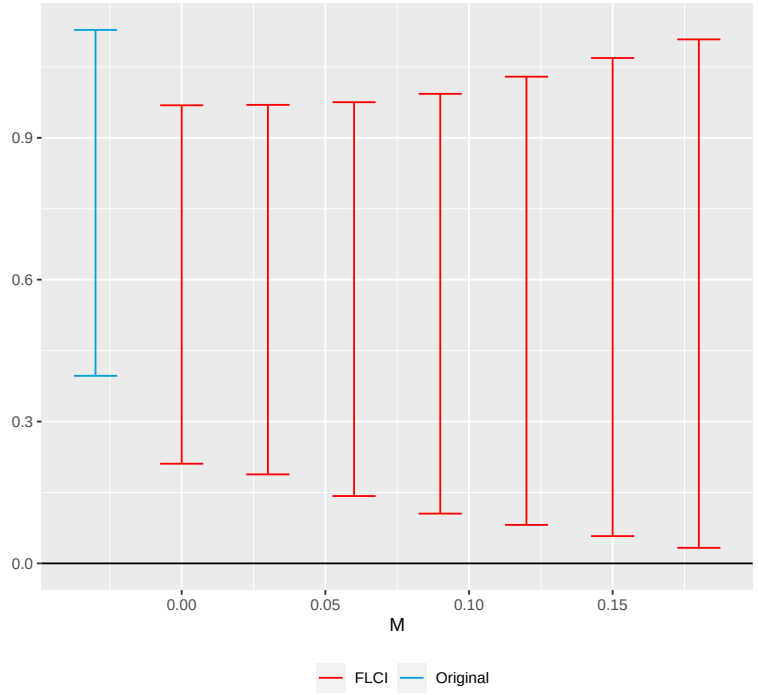
Accounting for other social conflicts Next to economic and religious cleavages, which I already control for, rural/urban and ethnic cleavages also mattered in Imperial Germany. Hence, I control for flexible effects for ethnicity (most notable Germans vs Poles) by including the share of German speakers. The increasing tensions along ethnic lines in Germany could potentially overlap with my treatment variable, especially in Silesia in the eastern part of Prussia. In addition, I allow for flexible effects for the share of urban population to account for potential changes in the rural/urban cleavage. The results in Appendix Table B9 also confirm my previous findings with highly stable effect sizes.

Figure 3: Pre-trend and post-trend by sector



Notes: The results present the flexible effect for the share of blue-collar workers (relative to the population) for different industry sectors on the vote share of the socialist party. Regressions are estimated using OLS, and include constituency and year fixed effects. Yearly regression coefficients of interest are interactions between the share of blue collar workers in a sector (listed above each figure) and year fixed effects and are estimated relative to the omitted interaction with 1881, the last election before the reform. In the aggregate specification, coefficients of interest are interactions between the share of blue collar workers in a sector and a 1874-1878 dummy and between the share of blue collar workers in a sector and a 1884-1890 dummy. Coefficient estimates on the election interactions are plotted as dots with their 95% confidence intervals indicated with vertical lines. Coefficient estimates on the aggregate interactions are shown with horizontal lines, and their 95% confidence intervals are indicated as boxes. Controls include: Share blue-collar workers $\times$ election dummies, share Protestants $\times$ election dummies, dummy forbidden socialist organization $\times$ election dummies, and population (in log). In parentheses next to the sector, I report the share of already insured workers. Standard errors are clustered at the district level.
Sources: Appendix section A.

Figure 4: Sensitivity analysis for the pre-trends



Notes: The graph is produced with the R-package *HonestDiD* provided by Rambachan and Roth (2023). In blue, I report the result for the interaction of "% Newly insured × 1884" reported in Appendix Table B3, column 2. In red, I report for fixed length confidence intervals for values of M between 0 and 0.18.
Sources: Appendix section A.

Pre-trends To alleviate further concerns regarding the parallel trends assumption, I follow a recent approach by Rambachan and Roth (2023), which tests how sensitive post-treatment violations of parallel trends can be from pre-treatment violations in trends. One specific concern would be that the socialist party targeted constituencies with a lower share of ex-ante insured workers, and that this phenomenon was amplified throughout the elections. Given that the concern is about trends (and not about specific shocks to constituencies with a lower share of ex-ante insured workers in the pre-treatment and post-treatment period), smoothness restrictions seem the correct choice in this context; see the discussion in Rambachan and Roth (2023, section 6). Concretely, this procedure imposes boundaries to which differential trends may change.[10] The plausibility of different values for M depends on the context. Relevant for this paper are arguably persuasion rates on political outcomes found in other studies (DellaVigna and Gentzkow, 2010). For instance, Enikolopov et al. (2011) find a persuasion rate for independent Russian media of about 7.7% for the 1999 election. It would require a deviation from linear parallel trends from election to election more than twice this size in order to get insignificant effects for the post-period in Figure 4. Given the limited room for political activity of the socialist party, this seems to be an unrealistic assumption against my findings.

[10] Rambachan and Roth (2023) denote these boundaries with M, i.e., $M = 0$ allows for linear violations of parallel trends. Larger values of M correspond to larger deviations.

3.6 Interpretation

This section so far has established the positive impact of the welfare reform on the growing success of the socialist party. This finding supports the issue ownership hypothesis. This interpretation is also supported by Bismarck who acknowledged in parliament that "if there were no social democracy, and if a lot of people were not afraid of it, the modest progress we have made so far in social reform would not exist" (Bismarck, 1885b). The socialist party often mentioned this quote from Bismarck in their election campaigns (Lidtke, 1966, p.177). The head of police came to a similar conclusion: one reason for the party's increasing influence on the workers was that the party could credibly claim credit for the social reform. He resigned by stressing this to be a key reason why any additional effort of the government might be fruitless (von Richthofen, 1983, p.290, original from 1886). But how was the socialist party able to maintain the issue ownership and even win more votes?

4 Mechanism

To understand the underlying mechanisms, I proceed in three steps. First, I look at the debate between the reform-oriented and radical wing within the socialist party to investigate the role of political supply. Second, turning to the political demand, I analyze the revealed preferences of the workers after the reform. Third, I discuss potential alternative mechanisms related to the economic consequences of the reform.

4.1 Role of political supply: Reform vs. revolution in the socialist party

Throughout the late 19th century, there were heated debates within the socialist party about the correct strategy (Berman, 2006). Parts of the party opted for a reformist approach to improve the conditions of work force. Other chose a more radical approach and aimed for a political and economic revolution, often based on rather orthodox Marxist thinking. How did this debate develop after Bismarck's welfare reform?

It was after Bismarck's reform that the party turned to "a political party in the modern parliamentary sense, involving the possibilities of swapping votes in elections, parliamentary maneuverings and compromises on elections" (Lidtke, 1966, p.185). Within the party, it was especially the elected members of parliament that strongly advocated the reform-orientation. Directly after the reform, the majority of the MPs (19 of 24) even aimed to support the government's bill to subsidize steamship lines abroad (Lidtke, 1966, p.185). On the one hand the subsidy was part of the colonial strategy of the government, which the party refused, one the other hand the subsidy was beneficial for workers at shipyards that experienced high levels of unemployment. The debate shifted into a conflict over how to weigh advantages of reforms against political principles, which even threatened to split the party. The compromise eventually became to condition the support to some amendments, which the other parties in parliament refused. Still, the conflict over the steamship subsidy revealed the dividing line within the party. It was the fraction of the party that depended on electoral votes which opted most

strongly for reforms suggesting that the increasing success, also due to Bismarck's reform, strengthened the reform wing. Indicative of change within influential figures is Wilhelm Liebknecht, one of the leading politicians of the SAP and once a furious opponent of parliamentarism, who started to advocate reform-oriented activities during this period as well (Lidtke, 1966, p.239).

What is more, the reform-wing used the reform itself to show its ability to organize the health insurance in particular and reforms in general. Specifically, the party used one form of health insurances, so-called mutual health funds. Mutual health funds were part of the institutional structure of the health insurance. The insurance was organized in different forms at a local level, most notably local funds (*Allgemeine Ortskrankenkasse*), factory health insurance (*Fabrikkassen*), parish funds (*Gemeindekrankenversicherungen*), and mutual health funds (*Hilfskassen*). All these organizations had to provide the same service.

The mutual health funds represented the local social solidarity—organized by the party and the workers themselves—that the socialist party envisioned as an alternative to the other forms of health insurance (Collin, 2011, p.201). Still, this form of insurance had a price for the workers. Employers did not contribute to this insurance form, i.e., employees paid more to become members of the mutual health fund. This cost makes it astonishing that this form of insurance became popular. Roughly 800.000 workers joined this type of health insurance in 1885 alone, accounting for almost 20 percent of all insured workers.[11] This share remained stable throughout the following years. The socialist party organized more than 1000 events in Germany to convince workers to join the mutual health funds (Hänlein et al., 2009, p.XXXIV).[12] Providing this alternative arguably helped their case in convincing voters and showcasing their competence regarding social reforms.

But what about the role of the radical wing that advocated a political revolution and fundamentally opposed the political system including a welfare reform? My proxy for the activity of this wing is the newspaper *Der Sozialdemokrat*. The Prussian minister of the interior Robert Viktor Puttkamer described this newspaper as "one of the most dangerous attacks on the security and inner peace of the German Reich" (cited after Engelberg, 1959, p.51, own translation). Within the socialist party, the moderate wing often complained that only radical voices were allowed and that other opinions were tabooed in the newspaper (Grillenberger, 2019). The distribution of the newspaper heavily relied on local structures suggesting that the distribution of the newspaper itself indicates the local strength of the radical camp.[13]

Luckily, despite its illegal status, the subscribers' lists are available in the archive of Julius Mot-

[11] It is not possible to conduct quantitative analysis with the mutual health funds because only district-level data (36 in total in Prussia) exists.

[12] The administration around Bismarck was well aware of these events. Minister of the interior von Puttkamer (2009, original from 1883) who was in charge of the central supervision of the anti-socialist laws, wrote to the local governments that they should prohibit events promoting the mutual health funds demanded to receive notifications about such events. However, the government refused to change the law although Bismarck suggested to do so. Instead, they opted for stricter controls of the mutual health funds. This decision was potentially influenced by Theodor Lohmann, the leading advisor of Bismarck for the social insurance reform (Hänlein et al., 2009, p.XXXVIII). Lohmann was in favor of keeping the more liberal aspects of the reform. In addition, he doubted that a ban on the mutual health funds would get a majority in parliament (Tennstedt, 1983, p.334).

[13] In their internal report, the police emphasized the "accuracy and diligence" of this organization and described the details, according to which each unit is further subdivided and the smallest unit were two houses—at least in Berlin (von Madai, 1983, p.243, original from 1884).

teler, who was in charge of the distribution of the newspaper. Based on Motteler (2019), I calculate the number of subscribers for each constituency between 1887 and 1890. Unfortunately, this information is not available for other years. I plot the spatial distribution in the number of subscribers in Appendix Figure B5. While there were a lot of constituencies without subscribers, constituencies around Berlin, in the Ruhr area, parts of Saxony and northern Prussia had quite numerous readership.[14]

To assess whether the distribution of the newspaper mattered for the electoral success, I use the following regression model including an interaction term between the share of newly insured workers and the newspaper dummy variable, i.e., testing whether there was a different effect of the social insurance on votes in constituencies with a radical newspaper:

$$\begin{aligned} \text{SAP}_{it} = \alpha_i + \theta_t + \gamma \cdot \text{SocialInsurance}_i \cdot \text{Post1884}_t + \delta \cdot \text{Newspaper}_i \cdot \text{Post1884}_t \\ + \rho \cdot \text{SocialInsurance}_i \cdot \text{Newspaper}_i \cdot \text{Post1884}_t \\ + \theta_{1884} \cdot \text{Post1884} + X_{it}\beta + \epsilon_{it} \end{aligned} \tag{4}$$

The results in Table 3 show no sign of a positive interaction effect, i.e., no evidence that the socialist party particularly gained in constituencies with a higher share of newly insured workers and readers of their newspaper. In addition, the coefficient for the health insurance remains almost identical (comparing column 1 and 2). This finding provides evidence that the strength of the radicals does not explain the growing popularity of the socialist party.

Table 3: Interaction effect between health insurance and *Der Sozialdemokrat*

Dep. var.: Votes SAP (in %)	(1)	(2)
% Newly insured × post1884	1.316***	1.323***
	(0.235)	(0.350)
Socialist newspaper (dummy) × % Newly insured × post1884		-0.389
		(0.420)
Mean dep. var.	5.26	5.26
Controls	✓	✓
Time FE	✓	✓
Constituency FE	✓	✓
Observations	1832	1832
Constituencies	229	229
Elections	8	8
R-squared within	0.40	0.41
R-squared overall	0.31	0.32

Notes: Unit of analysis: constituency. The dependent variable measures the share of votes for the social democratic party. Controls: population (log), share blue collar workers× post1884. Standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1.
Sources: Appendix section A.

Irrespective of the party's strategy after reform, one concern could be that the reform over-proportionally affected sectors that were more receptive to ideas of the party before the reform. To

[14]When considering the number of issues sent to a particular city, one should keep in mind that not just the individual subscribers read the issues. Motteler himself estimated, on average, around ten readers of every newspaper issued, as the subscribers handed theirs to others (Stammberger, 1979, p.37).

look at the potential correlation between share of newly insured workers and organizational strength by sector, I collect additional data on union newspapers by sectors prior to the reform in 1877 based on Knaack and Schröder (1981). Unfortunately, these data are only available at the national level. The descriptive evidence in column 2 of Table 4 indicates rather an inverse u-shaped relationship, i.e., particular strong union newspaper readership in sectors with middle levels of ex-ante insured workers, and thus no positive correlation between the union newspaper circulation and the share of ex-ante insured workers.

Table 4: Political and economic characteristics of sectors

Sector	Ex-ante health insurance (in %) (1)	Union newspaper (in %), 1877 (2)	Δ Employment (in %), 1882-1895 (3)	Δ Firm size (in %), 1875-1895 (4)
Mining	100.00	0.22	32.16	285.47
Textiles	60.91	0.00	7.73	217.92
Chemistry	55.40	0.00	80.76	190.80
Metal and machinery	53.15	1.70	56.48	171.89
Paper and leather	41.35	0.82	35.51	143.67
Print and art	30.06	10.86	54.08	125.98
Food	29.70	2.94	32.46	134.58
Stones	24.41	0.00	51.88	242.38
Clothes	18.54	1.81	14.79	124.04
Construction and timber	18.09	1.98	39.34	215.59

Notes: Unit of analysis: sector. The tables documents – next to the share of ex-ante workers – different other aspects of these sector.
Sources: Appendix section A.

Taken together, the presented qualitative and quantitative insights suggest that the socialist party rather turned to a more moderate approach to maintain issue ownership. In line with this argument, activities related to the radical wing did not explain the rising success of the party. But did the voters follow this change?

4.2 The role of political demand: Reform or revolution?

One way to assess this question is to look at labor conflict in the early 20th century. During this period, two forms of strikes played a huge role in Germany: On the one hand, local radical strikes with political goals, e.g., a revolution like the one in Russia in 1905, famously supported by Rosa Luxemburg, on the other hand, strikes organized and supported by unions with more narrow economic goals and interested in cooperation with the employers. Whether the socialist party should support also more radical strikes was part of the *Massenstreikdebatte*, which led to huge controversies within the party. Eventually, the approach by the unions prevailed after an agreement in Mannheim in 1906. Later, the unions established with the employers associations the influential German model of industrial relations (Jäger et al., 2022). But what about the correlation between Bismarck's reform and the two forms of strikes before 1906?

To investigate this question, I analyze how the social insurance was linked to reform-oriented and radical activities after Bismarck's reign as chancellor. Here, I use detailed administrative strike

statistics between 1899 and 1905, which include the place, sector, and date for more than 10,000 strikes. Crucially, the strike statistics also document whether a strike was supported by labor unions. I use this information as indicator for a more reform-oriented strike. For the empirical analysis, I calculate the share of union strikes for each constituency. The key independent variable is, as before, the share of newly insured workers. I control for the share of blue-collar workers throughout. To have a comparable sample, I only take constituencies into account with at least two strikes leading to a smaller sample size. The results in Table 5 document a positive significant association in all specifications. The association is robust to the inclusion of the number of strikes (in logs) (column 2) and province fixed effects (column 3).

Crucially, I test whether reform orientation before Bismarck's reform mattered for the strike outcome. If that were not the case, it would suggest that indeed a stronger reform orientation of workers and voters after the reform. Here, I rely on party membership as of 1875. I digitize data listed by Zwahr (1987) on membership in the socialist party in 1875 when the two predecessors of the socialist party–the reform-oriented ADAV and the radical SAPD–united. Based on this membership data, I construct a dummy variable for each constituency with at least one member of the moderate ADAV. I allow for an interaction between the share of newly insured workers with the dummy variable for reform orientation before Bismarck's reform. The results in Table 5 show that this interaction is far from statistically significant. This evidence suggests that indeed also the workers, i.e., the voters of the party, did become more moderate in regions more affected by the reform.

Table 5: Welfare reform and strikes (1899-1905)

Dep. var.: Share reform oriented strikes (in %)	(1)	(2)	(3)	(4)
% Newly insured	2.027**	2.121**	2.044*	1.993*
	(0.801)	(0.815)	(1.087)	(1.114)
% Blue collar	-0.309	-0.209	-0.480	-0.501
	(0.293)	(0.392)	(0.523)	(0.531)
% Newly insured × Reform orientation 1870s				0.277
				(1.840)
Reform orientation 1870s				-0.532
				(12.537)
Mean dep. var.	67.05	67.05	67.05	67.05
Strike control		✓	✓	✓
Province FE			✓	✓
Observations	175	175	175	175
R-squared	0.03	0.03	0.13	0.13

Notes: Standard errors, clustered at the province level, in parentheses. *** p<0.01, ** p<0.05, * p<0.1. Sample: Constituencies with at least two strikes.
Sources: Appendix section A.

4.3 Economic channels

Next to political supply and demand, Bismarck's reform could have changed economic dynamics, which, in turn, could have affected voting decisions. Here, I focus on migration, employment, and firm size as alternative channels.

Migration Internal migration could confound the interpretation of my results. Rural workers could migrate to the cities, also because of the welfare reform, and extend the electoral basis of the socialist party. Thus, I test whether constituencies with a greater share of ex-ante uninsured workers did experience differential migration rates after the reform. For this purpose, I rely on the population census made available by Galloway (2007) which allows me to calculate net-migration for each constituency 10 years before and after the reform.[15] The results in columns 1 and 2 of Table 6 do not provide evidence for differential migration rates before and after due to the reform.

Related, Khoudour-Casteras (2008) presents some evidence that the introduction of social insurance led to a decline in outmigration due to an increase in the relative real wage in comparison to the United States. The fall of the emigration of workers could, thereby, strengthen the potential electorate of the socialist party. To account for this explanation, I collected new detailed data on outmigration from the port of Hamburg to the United States. In contrast to the data by Khoudour-Casteras (2008), the data published by the Statistisches Bureau der Deputation für direkte Steuern (1872-1895) includes information on the sectors in which the migrants worked. The hypothesis following Khoudour-Casteras (2008) predicts that the introduction of social insurance is associated with a decline in out-migrating workers. While I find a decrease in the share of migrants employed in the industry sector in Appendix Figure B6, this decline starts already in 1880 and stagnates after the introduction of social insurance. Also, the absolute number of out-migrating industry workers remains stable.

Table 6: Impact of newly insured workers on migration and employment

	Net-migration		Employment growth	
	(1)	(2)	(3)	(4)
% Newly insured × post1884	-0.329	0.231		
	(0.339)	(0.391)		
Blue-collar workers × post1884	0.354*	-0.839**		
	(0.176)	(0.397)		
% Newly insured			-1.109	0.002
			(1.034)	(0.966)
% Blue collar			2.548***	0.917*
			(0.402)	(0.501)
Mean dep. var.	-4.95	-4.95	25.05	25.05
Controls		✓		✓
Constituency FE	✓	✓		
Time FE	✓	✓		
Observations	458	458	229	229
R-squared within	0.02	0.47		
R-squared overall	0.11	0.22		
R-squared	0.02	0.47	0.16	0.26

Notes: Unit of analysis: constituency. The dependent variable measures the share of votes for the social democratic party. Controls: population (log), share blue collar workers× post1884. Standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1.
Sources: Appendix section A.

[15]Due to the availability of census years, I refer to 1871 to 1880 as pre-treatment period and to 1885 to 1895 as post-treatment period.

Employment and firm size growth The welfare reform may have affected growth and firm dynamics in ways that advantaged the socialists. One concern could be that industries with a lower share of ex-ante insured workers grow faster than industries with a high share of ex-ante insured workers. To rule out this concern, I calculate the growth in employment by industry between the two censuses of 1882 and 1895 in column 3 of Table 4. Overall, the pattern is in favor of my argument. Industries with a low share of ex-ante insured workers (stones, food, clothing, construction and timber, print and art) grow on average on an almost identical rate (38.18%) as industries (mining, metal and machinery, chemistry, textiles, paper and leather) with a high share of ex-ante insured workers (39.15%). What is more, columns 3 and 4 of Table 6 show that constituencies with a higher share of newly-insured workers did not experience more industry employment growth between 1882 and 1895 (relying on data from the occupation census).

Related, the reform may have increased small firms' costs and led to the further expansion of large firms already offering health insurance. If socialists had an advantage in organizing labor in large firms, their success may just reflect large firms' expansion. The descriptive evidence collected in column 4 of Table 4 suggests that this was not the case. If anything, sectors with a higher share of ex-ante insured workers experienced stronger increases in firm size.

In summary, the presented evidence on economic channels corroborates my interpretation according to which the socialist party gained votes due its increasing reform-orientation and issue-ownership.

5 Conclusion

It was in Germany that the welfare state was invented. Investigating the political consequences of this reform, I show—in contrast to the common wisdom and in line with the political economy of party competition—that the socialist party substantially benefited due to the reform in elections. As mechanism, I highlight that the socialist party owned the issue "welfare reform". Thus, voters rewarded the socialist party and not Bismarck's coalition for the reform. This success of the socialist party also mattered for Bismarck's career. Not only did the conservative party and national-liberal party lost in elections due to the reform. What is more, he had to resign as chancellor in 1890 when the socialist party became the strongest party in terms of absolute votes.

My empirical analysis is based on an event-study approach exploiting different levels of treatment intensity for the social insurance due to ex-ante existing health insurance schemes. To address concerns regarding my key identification assumptions, I provide evidence that the results also hold with a shift-share approach and that industry sectors with a low share of ex-ante insured workers show the strongest positive correlation with vote shares for the socialist party after the introduction of the social insurance.

To validate my interpretation of the mechanism, I investigate alternative political and economic mechanisms. Based on these additional results, I reject mechanisms related to radical strategies of the socialist party and to economic dynamics like differential migration, employment growth, and firm

size growth. Instead, I argue that parts of the socialist party turned to a stronger reform orientation. What is more, I also document a shift towards reform orientation of the voters and workers: Regions more affected by Bismarck's health insurance experienced more unionized and less radical strikes in the early 20th century.

What are the implications for our interpretation of Bismarck's reform? One the one hand, the socialist party became more successful due to Bismarck's reform. On the other hand, the reform arguably strengthened the reform-oriented wing of the party. In the late 1890s, the revisionism debate and the associated question of the role of reforms versus revolution started (Berman, 2006; Bartels et al., 2023). It was precisely this question (in addition to the evaluation of the First World War) that later divided the party with the emergence of the social democrats and the communists as two separate parties.

Can the historical case study of 19th century Germany inform modern-day debates? The debate about political responses to the growing support for populist parties is still ongoing with no clear consensus and a lack of empirical knowledge (Guriev and Papaioannou, 2022). Based on the historical case of Bismarck's Germany, it seems imperative to consider *ownership issue* when thinking about following the demands of radical parties. Mimicking policies of competitors has both, the risk to strengthen their popularity and the potential to increase their reform-orientation.

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Online Appendix

Content

A Data and sources

Newly insured workers (in %), 1876

Sources: Minister für Handel, Gewerbe und öffentliche Arbeiten (1876a), Minister für Handel, Gewerbe und öffentliche Arbeiten (1876b) and Galloway (2007).

Explanation: The measure is calculated for each constituency i in the following way

$$\frac{\text{Blue-collar workers}_i - \text{Workers with ex-ante existing health insurance}_i}{\text{Population}_i}.$$

Details on craft professions:

- Distribute on constituency-sector level based on local share (within district) in craft workers by sector

Details on factory professions not covered in the firm census:

- Distribute on constituency-sector level based on local share (within district) of workers (not covered in the firm census)

Figure A1: Firm census example

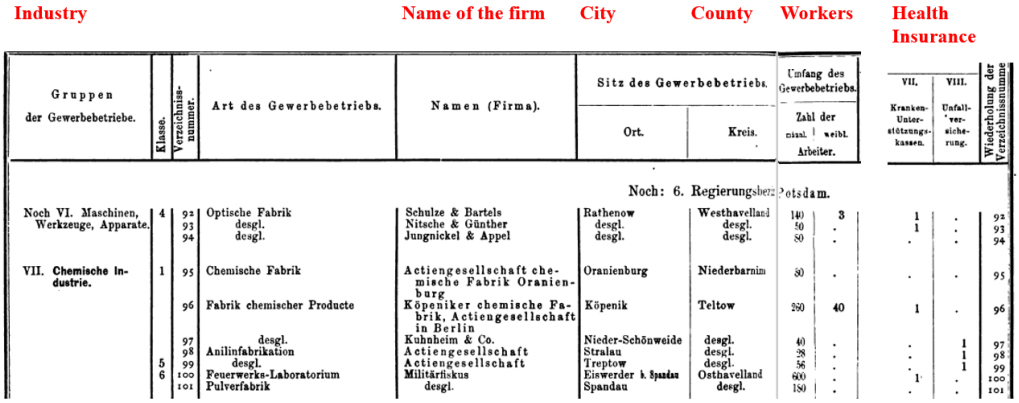


Table A1: Ex-ante existing health insurance by industry

Ex-ante existing health insurance by sector	in %
Mining	100.00
Stones	24.41
Metal and machinery	53.15
Chemistry	55.40
Textiles	60.91
Paper and leather	41.35
Food	29.70
Clothes	18.54
Construction and timber	18.09
Print and art	30.06
Other	15.89

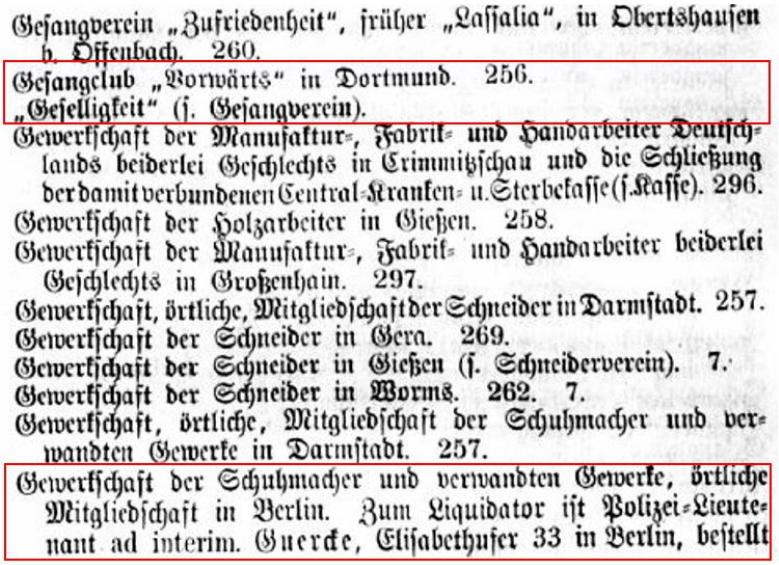
Notes: The table reports the share of ex-ante health insured workers by industry.

Forbidden socialist organizations, 1878

Source: Teich (1879).

Explanation: Dummy equals to one if there is at least one forbidden organization in constituency i, zero otherwise.

Figure A2: List of forbidden socialist organizations example



Gesangverein „Zufriedenheit", früher „Lassalia", in Obertshausen b. Offenbach. 260.
Gesangclub „Vorwärts" in Dortmund. 256.
„Geselligkeit" (s. Gesangverein).
Gewerkschaft der Manufaktur-, Fabrik- und Handarbeiter Deutschlands beiderlei Geschlechts in Crimmitzschau und die Schließung der damit verbundenen Central-Kranken- u. Sterbekasse (s. Kasse). 296.
Gewerkschaft der Holzarbeiter in Gießen. 258.
Gewerkschaft der Manufaktur-, Fabrik- und Handarbeiter beiderlei Geschlechts in Großenhain. 297.
Gewerkschaft, örtliche, Mitgliedschaft der Schneider in Darmstadt. 257.
Gewerkschaft der Schneider in Gera. 269.
Gewerkschaft der Schneider in Gießen (s. Schneiderverein). 7.
Gewerkschaft der Schneider in Worms. 262. 7.
Gewerkschaft, örtliche, Mitgliedschaft der Schuhmacher und verwandten Gewerke in Darmstadt. 257.
Gewerkschaft der Schuhmacher und verwandten Gewerke, örtliche Mitgliedschaft in Berlin. Zum Liquidator ist Polizei-Lieutenant ad interim. Guercke, Elisabethufer 33 in Berlin, bestellt

Notes: The first example highlighted with red refers to a singing club in Dortmund. The second example refers to shoemaker union in Berlin.

Table A2: Types of forbidden socialist organizations

Forbidden socialist organizations by type	in %
Political	27.05
Local Support	11.48
Social clubs	33.20
Occupation	11.89
Education	6.97
Other	9.02

Notes: The table reports the share for different types of forbidden organizations among all forbidden socialist organizations due to the anti-socialist laws.
Source: Own calculation based on Teich (1879).

Votes for the socialist party (in %), 1871-1890

Source: Caramani (2004).

Explanation: Number of votes for the socialist party relative to votes.

Circulation of illegal newspaper *Der Sozialdemokrat*, 1887-1890

Source: Motteler (2019).

Explanation: Dummy equals to one if there is at least one reader of the newspaper, zero otherwise.

Union newspaper readership, 1877

Source: Knaack and Schröder (1981).

Explanation: Number of readers of union newspaper by sector.

Party members, 1875

Source: Zwahr (1987).

Explanation: Dummy equals to one if there are members of the ADAV (the reform party) at the congress in Gotha in 1875, zero otherwise.

Strikes, 1899-1905

Source: Bartels et al. (2023).

Explanation: Number of strikes supported by unions divided by total number strikes by constituency between 1899 and 1905.

Blue-collar workers (in %), 1882

Source: Galloway (2007).

Explanation: Number of blue-collar workers relative to population.

Sectoral employment growth, 1882-1895

Sources: Kaiserliches Statistisches Amt (1884) for 1882 and Kaiserliches Statistisches Amt (1897) for 1895.

Explanation: Employment in sector i in 1895 divided by employment in sector i in 1882.

Sectoral firm size growth, 1875-1895

Source: Königlich Statistisches Bureau (1878) for 1875 and Kaiserliches Statistisches Amt (1898) for 1895.

Explanation: Average firm size in sector i in 1895 divided by average firm size in sector i in 1882.

Population, 1871-1890

Source: Galloway (2007).

Explanation: Population for each constituency every five years.

Net-migration, 1871-1890

Source: Galloway (2007).

Explanation: Total population growth is decomposed into its components (1) migration and (2) "natural" population growth. Net-migration is defined as the difference between the reported "natural" population growth based on births and deaths for each year and the actual population growth between two censuses.

Outmigration, 1871-1890

Source: Statistisches Bureau der Deputation für direkte Steuern (1872-1895).

Explanation: Number of industrial workers who emigrate from the port of Hamburg relative to all emigrating people.

Protestantism, 1890

Source: Galloway (2007).

Explanation: Number of Protestants relative to population.

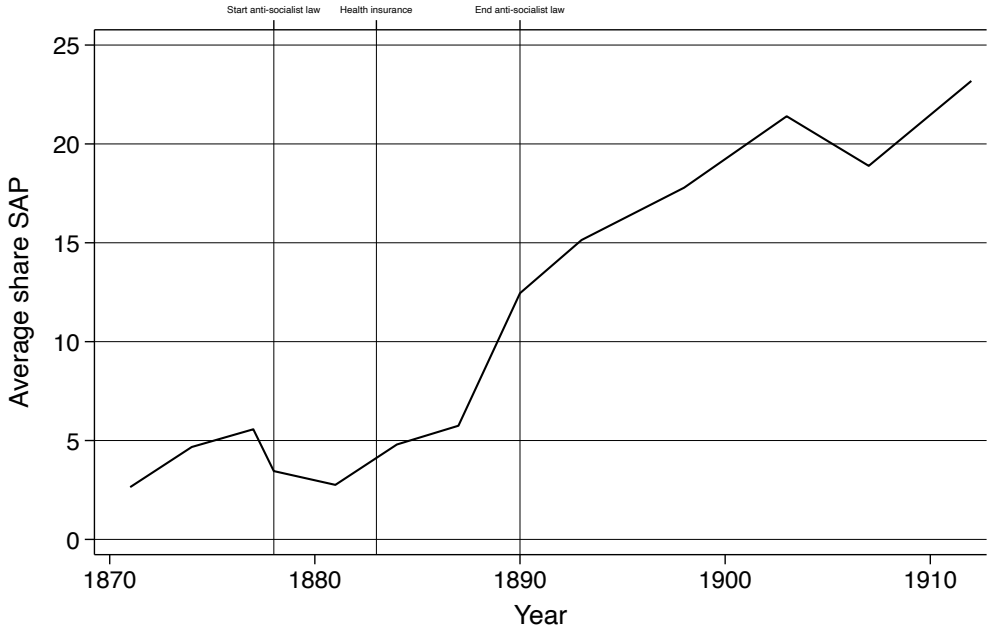
German-speaking, 1890

Source: Galloway (2007).

Explanation: Number of German-speaking people relative to population.

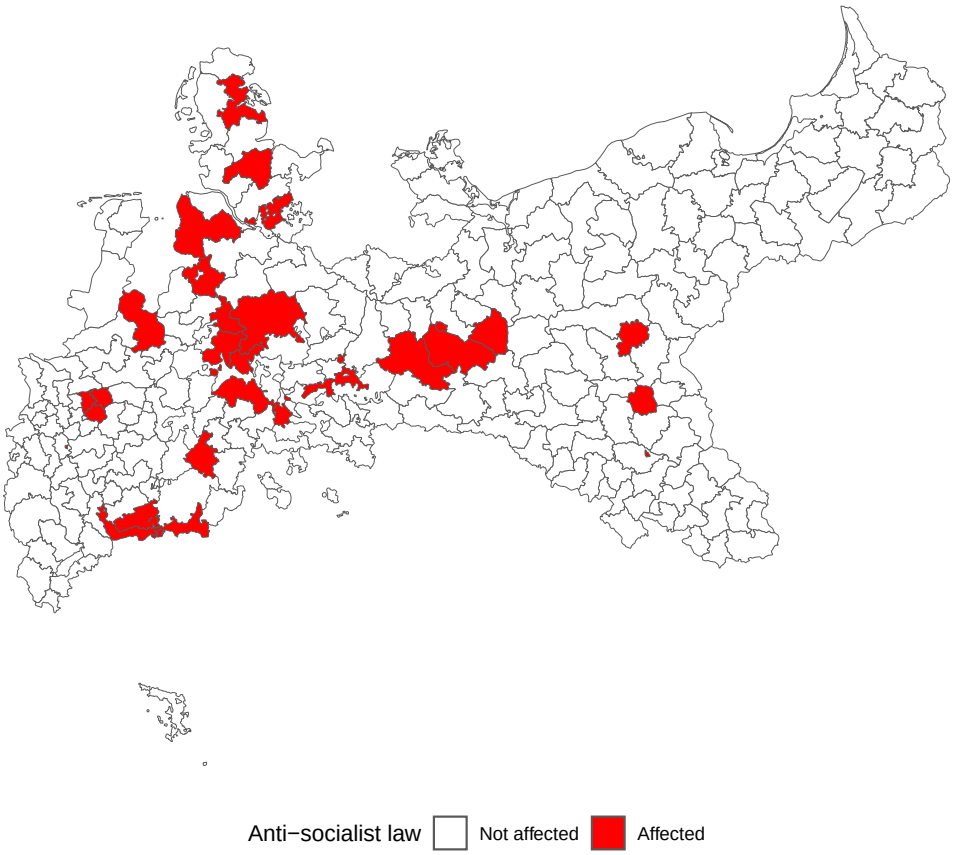
B Tables and figures

Figure B1: Vote shares for the socialist party, 1871–1890



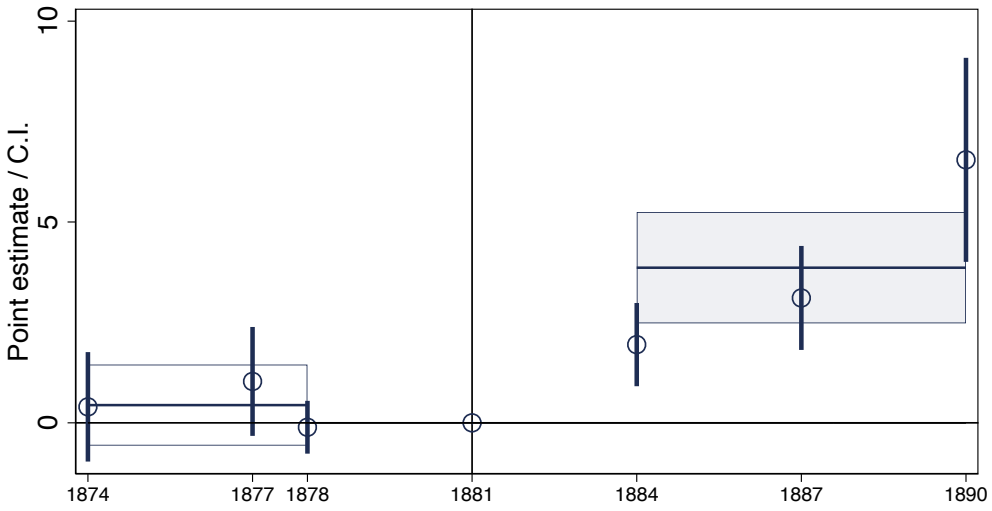
Notes: The graph shows the average vote share for the socialist party in Prussian constituencies in *Reichstag* elections between 1871 and 1890.
Sources: Own calculation based on Caramani (2004).

Figure B2: Forbidden socialist organizations



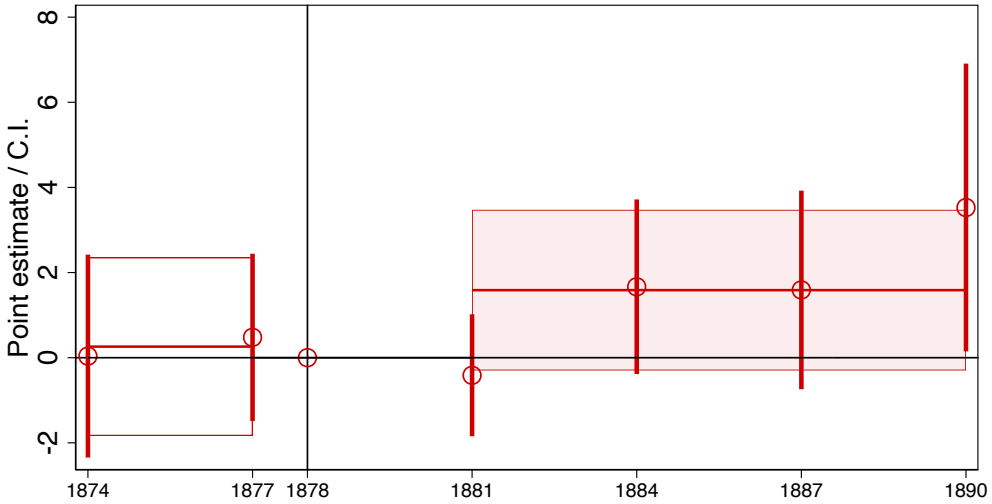
Notes: Map of forbidden socialist organizations at the beginning of the anti-socialist laws (dummy variable).
Source: Own calculation based on Teich (1879).

Figure B3: Vote shares for the socialist party, dummy treatment



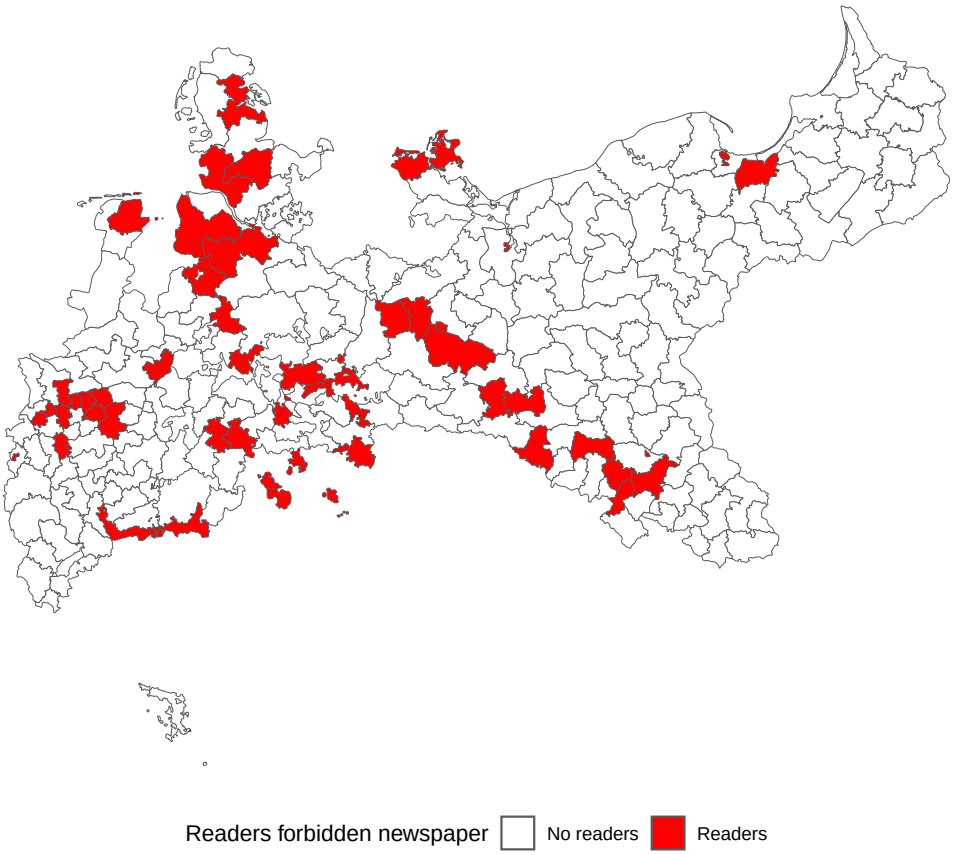
Notes: The figure presents the effect of newly insured workers (dummy variable based on above and below median values) on the vote share of the socialist party. Regressions are estimated using OLS, and include constituency and year fixed effects. Yearly regression coefficients of interest are interactions between the share of newly insured workers and year fixed effects and are estimated relative to the omitted interaction with 1881, the last election before the reform. In the aggregate specification, coefficients of interest are interactions between the share of newly insured workers and a 1874-1878 dummy ($\beta = 0.442; p = 0.464$) and between the share of newly insured workers and a 1884-1890 dummy ($\beta = 3.863; p = 0.000$). Coefficient estimates on the election interactions are plotted as dots with their 95% confidence intervals indicated with vertical lines. Coefficient estimates on the aggregate interactions are shown with horizontal lines, and their 95% confidence intervals are indicated as boxes. Controls include: Share blue-collar workers $\times$ election dummies, share Protestants $\times$ election dummies, dummy forbidden socialist organization $\times$ election dummies, and population (in log). The results shown in this Figure correspond to column (2) in Appendix Table B3. Standard errors are clustered at the district level.
Sources: Appendix Section A.

Figure B4: Anti-socialist law and votes for the socialist party



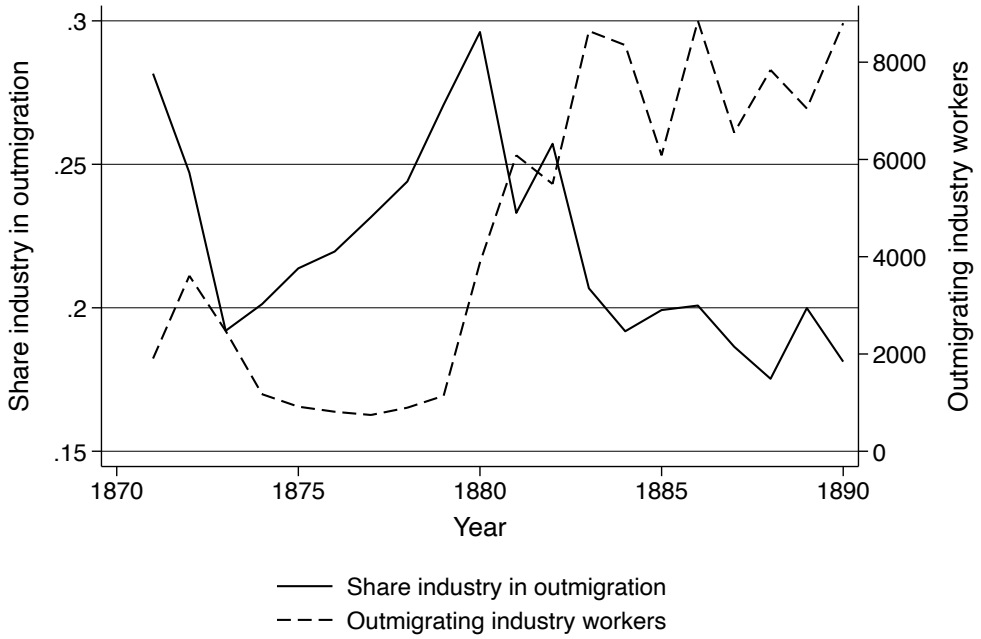
Notes: The figure presents the differential probability on the vote share of the socialist party in constituencies with eventually at least one forbidden socialist organization, relative to constituencies with eventually no forbidden socialist organization. Regressions are estimated using OLS, and include constituency and year fixed effects. Yearly regression coefficients of interest are interactions between the forbidden socialist organizations (dummy) and year fixed effects and are estimated relative to the omitted interaction with 1878, the last election before the reform. In the aggregate specification, coefficients of interest are interactions between the share of newly insured workers and a 1874-1877 dummy ($\beta = -.260; p = 0.834$) and between the share of newly insured workers and a 1881-1890 dummy ($\beta = 1.587; p = 0.164$). Coefficient estimates on the election interactions are plotted as dots with their 95% confidence intervals indicated with vertical lines. Coefficient estimates on the aggregate interactions are shown with horizontal lines, and their 95% confidence intervals are indicated as boxes. Controls include: Share blue-collar workers $\times$ election dummies, share Protestants $\times$ election dummies, share newly insured workers $\times$ election dummies, and population (in log). The results shown in this Figure correspond to column (2) in Appendix Table B5. Standard errors are clustered at the district level.
Sources: Appendix Section A.

Figure B5: Distribution of the newspaper *Der Sozialdemokrat*



Notes: Map of the distribution of the illegal newspaper *Der Sozialdemokrat* between 1887 and 1890. Red constituencies had readers of the newspaper.
Sources: Own calculation based on Motteler (2019).

Figure B6: Industry workers and migration



Notes: The figure shows the relative share of industry workers among all migrants (x-Axis) and the absolute number of industry workers (y-Axis) emigrating from the harbor of Hamburg.
Sources: Own calculation based on Statistisches Bureau der Deputation für direkte Steuern (1872-1895).

Table B1: Descriptive statistics

	mean	sd	min	max
Votes for the socialist party in %				
Election 1871	2.64	7.54	0	47.06
Election 1874	4.67	9.96	0	58.64
Election 1877	5.57	10.32	0	51.03
Election 1878	3.46	7.84	0	46.29
Election 1881	2.76	6.87	0	39.08
Election 1884	4.80	9.80	0	51.66
Election 1887	5.75	10.20	0	53.44
Election 1890	12.45	14.65	0	66.11
Indicators for health insurance				
% Newly insured	4.99	2.15	1.30	14.59
% Newly insured instrument	4.77	2.16	1.21	11.34
% Blue collar	9.71	5.43	2.29	27.45
Indicator for anti-socialist laws				
Dummy forbidden socialist organization	0.13	0.34	0	1
Radical newspaper				
Dummy circulation of illegal newspaper *Der Sozialdemokrat*	0.23	0.42	0	1

Sources: Appendix Section A.

Table B2: Newly insured workers and domestic migration (1876-1883)

	(1)	(2)
% Newly insured	0.211	0.223
	(0.303)	(0.373)
% Blue collar	0.734***	0.681***
	(0.140)	(0.217)
Mean dep. var.	-4.42	-4.42
Controls		✓
Observations	229	229
Constituencies	0.16	0.16

Notes: Unit of analysis: Constituency. The dependent variable measures net-migration in %. Further controls include: Population (in log), share Protestants, and dummy forbidden socialist organization. Standard errors, clustered at the district level, in parentheses. *** p<0.01, ** p<0.05, * p<0.1.
Sources: Appendix Section A.

Table B3: Effect of social insurance

Dep. var.: Votes SAP (in %)	(1)	(2)
% Newly insured × 1874	-0.024	-0.030
	(0.314)	(0.280)
% Newly insured × 1877	0.027	0.021
	(0.346)	(0.312)
% Newly insured × 1878	-0.163	-0.173
	(0.155)	(0.146)
% Newly insured × 1884	0.779***	0.762***
	(0.195)	(0.187)
% Newly insured × 1887	0.858***	0.863***
	(0.267)	(0.258)
% Newly insured × 1890	1.503***	1.505***
	(0.454)	(0.406)
% Blue collar × 1874	0.071	0.114
	(0.114)	(0.127)
% Blue collar × 1877	0.292**	0.304**
	(0.119)	(0.120)
% Blue collar × 1878	0.158*	0.173**
	(0.079)	(0.071)
% Blue collar × 1884	0.108	0.046
	(0.073)	(0.077)
% Blue collar × 1887	0.173*	0.074
	(0.094)	(0.090)
% Blue collar × 1890	0.598***	0.434**
	(0.214)	(0.179)
Mean dep. var.	5.64	5.64
Further controls		✓
Constituency FE	✓	✓
Time FE	✓	✓
Observations	1603	1603
Constituencies	229	229
Elections	7	7
R-squared within	0.46	0.53
R-squared overall	0.29	0.44

Notes: Unit of analysis: Constituency. The omitted election is 1881. The dependent variable measures the share of votes for the social democratic party. Treatment variables: Share of newly insured workers in 1884, interacted with election dummies. Further controls include: Share Protestants × election dummies, dummy forbidden socialist organization × election dummies, and population (in log). Standard errors, clustered at the district level, in parentheses. *** p<0.01, ** p<0.05, * p<0.1.
Sources: Appendix Section A.

Table B4: Effect of social insurance (dummy variable)

Dep. var.: Votes SAP (in %)	(1)	(2)
Dummy newly insured (above median) × 1874	0.514	0.399
	(0.735)	(0.745)
Dummy newly insured (above median) × 1877	1.143	1.031
	(0.765)	(0.742)
Dummy newly insured (above median) × 1878	-0.030	-0.110
	(0.362)	(0.360)
Dummy newly insured (above median) × 1884	1.925***	1.947***
	(0.583)	(0.567)
Dummy newly insured (above median) × 1887	3.028***	3.109***
	(0.723)	(0.708)
Dummy newly insured (above median) × 1890	6.541***	6.547***
	(1.718)	(1.390)
Mean dep. var.	5.64	5.64
Blue-collar control	✓	✓
Further controls		✓
Constituency FE	✓	✓
Time FE	✓	✓
Observations	1603	1603
Constituencies	229	229
Elections	7.00	7.00
R-squared within	0.46	0.54
R-squared overall	0.28	0.43

Notes: Unit of analysis: Constituency. The omitted election is 1881. The dependent variable measures the share of votes for the social democratic party. Treatment variables: Dummy variable for constituencies with a share of newly insured workers in 1884 above the median, interacted with election dummies. Further controls include: Share Protestants × election dummies, dummy forbidden socialist organization × election dummies, and population (in log). Standard errors, clustered at the district level, in parentheses. *** p<0.01, ** p<0.05, * p<0.1.
Sources: Appendix Section A.

Table B5: Effect of the anti-socialist laws

Dep. var.: Votes SAP (in %)	(1)	(2)
Forbidden organization × 1874	0.671	0.037
	(1.297)	(1.304)
Forbidden organization × 1877	1.256	0.478
	(1.029)	(1.075)
Forbidden organization × 1881	-0.615	-0.414
	(0.789)	(0.784)
Forbidden organization × 1884	2.211*	1.666
	(1.246)	(1.122)
Forbidden organization × 1887	2.623*	1.592
	(1.338)	(1.276)
Forbidden organization × 1890	6.081***	3.528*
	(2.107)	(1.850)
Mean dep. var.	5.64	5.64
Blue-collar control	✓	✓
Further controls		✓
Constituency FE	✓	✓
Time FE	✓	✓
Observations	1603	1603
Constituencies	229	229
Elections	7	7
R-squared within	0.45	0.53
R-squared overall	0.29	0.44

Notes: Unit of analysis: Constituency. The omitted election is 1878. The dependent variable measures the share of votes for the social democratic party. Treatment variables: Forbidden socialist organization in 1878 (dummy), interacted with election dummies. Further controls include: Share Protestants × election dummies, share newly insured workers × election dummies, and population (in log). Standard errors, clustered at the district level, in parentheses. *** p<0.01, ** p<0.05, * p<0.1.
Sources: Appendix Section A.

Table B6: Comparison pre-and postperiod

Dep. var.: Votes SAP (in %)	(1)	(2)
% Newly insured × post1884	1.087***	1.091***
	(0.235)	(0.217)
Mean dep. var.	5.89	5.89
Blue-collar control	✓	✓
Controls		✓
Constituency FE	✓	✓
Time FE	✓	✓
Observations	458	458
Constituencies	229	229
Periods	2	2
R-squared within	0.58	0.65
R-squared overall	0.27	0.41

Notes: The dependent variable measures the share of votes for the social democratic party. Treatment variables: share of newly insured population in 1884; dummy variable for at least one forbidden organization in the wake of the anti-socialist law. Controls: Share protestants × post1884, share blue collar workers × post1884, and population (log). Standard errors, clustered at the district level, in parentheses. *** p<0.01, ** p<0.05, * p<0.1. *Sources*: Appendix Section A.

Table B7: Different spatial s.e.

Dep. var.: Votes SAP (in %)	Baseline (1)	100km (2)	200km (3)
% Newly insured × 1874	-0.030	-0.030	-0.030
	(0.280)	(0.258)	(0.210)
% Newly insured × 1877	0.021	0.021	0.021
	(0.312)	(0.287)	(0.289)
% Newly insured × 1878	-0.173	-0.173	-0.173
	(0.146)	(0.284)	(0.247)
% Newly insured × 1884	0.762***	0.762***	0.762***
	(0.187)	(0.234)	(0.222)
% Newly insured × 1887	0.863***	0.863***	0.863***
	(0.258)	(0.249)	(0.183)
% Newly insured × 1890	1.505***	1.505***	1.505***
	(0.406)	(0.355)	(0.341)
Mean dep. var.	5.64	5.64	5.64
Further controls	✓	✓	✓
Constituency FE	✓	✓	✓
Time FE	✓	✓	✓
Observations	1603	1603	1603
Constituencies	229		
Elections	7		
R-squared within	0.53		
R-squared overall	0.44		

Notes: The dependent variable measures the share of votes for the social democratic party. Treatment variables: share of newly insured population in 1884. Controls: Population (log) and share blue collar workers × Post1884. Standard errors, clustered at the district level, in parentheses. *** p<0.01, ** p<0.05, * p<0.1.
Sources: Appendix Section A.

Table B8: Sample restrictions

Dep. var.: Votes SAP	Baseline (1)	w/o Rhine Province (2)	w/o Westfalia (3)	w/o Brandenburg (4)	bottom 75% (5)	top 75% (6)
% Newly insured × 1874	-0.030	0.338	-0.121	-0.027	0.389	-0.025
	(0.280)	(0.299)	(0.312)	(0.275)	(0.324)	(0.307)
% Newly insured × 1877	0.021	0.457	0.014	0.014	0.481	-0.004
	(0.312)	(0.291)	(0.383)	(0.314)	(0.387)	(0.344)
% Newly insured × 1878	-0.173	-0.169	-0.205	-0.096	0.191	-0.224
	(0.146)	(0.192)	(0.194)	(0.142)	(0.188)	(0.146)
% Newly insured × 1884	0.762***	0.900***	0.657***	0.757***	0.559***	0.934***
	(0.187)	(0.180)	(0.206)	(0.183)	(0.193)	(0.223)
% Newly insured × 1887	0.863***	1.041***	0.751**	0.851***	0.950***	1.019***
	(0.258)	(0.223)	(0.292)	(0.253)	(0.327)	(0.301)
% Newly insured × 1890	1.505***	1.936***	1.507***	1.465***	1.952***	1.519***
	(0.406)	(0.393)	(0.510)	(0.418)	(0.712)	(0.448)
Mean dep. var.	5.64	5.67	5.81	5.29	2.78	7.24
Controls	✓	✓	✓	✓	✓	✓
Constituency FE	✓	✓	✓	✓	✓	✓
Time FE	✓	✓	✓	✓	✓	✓
Observations	1603	1351	1484	1456	1204	1204
Constituencies	229	193	212	208	172	172
Elections	7	7	7	7	7	7
R-squared within	0.53	0.53	0.53	0.51	0.45	0.56
R-squared overall	0.44	0.47	0.46	0.42	0.32	0.44

Notes: The dependent variable measures the share of votes for the social democratic party. Treatment variables: share of newly insured population in 1884. Controls: Population (log) and share blue collar workers × Post1884. Standard errors, clustered at the district level, in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

Sources: Appendix Section A.

Table B9: Province×Year FE and other social conflicts

Dep. var.: Votes SAP (in %)	(1)	(2)	(3)	(4)
% Newly insured × 1874	-0.030	-0.055	-0.065	-0.112
	(0.280)	(0.302)	(0.317)	(0.383)
% Newly insured × 1877	0.021	-0.016	0.086	0.006
	(0.312)	(0.329)	(0.344)	(0.350)
% Newly insured × 1878	-0.173	-0.172	-0.134	-0.124
	(0.146)	(0.135)	(0.165)	(0.183)
% Newly insured × 1884	0.762***	0.787***	0.603**	0.544**
	(0.187)	(0.220)	(0.239)	(0.266)
% Newly insured × 1887	0.863***	0.961***	0.650**	0.680*
	(0.258)	(0.315)	(0.303)	(0.356)
% Newly insured × 1890	1.505***	1.642***	1.511***	1.697***
	(0.406)	(0.508)	(0.509)	(0.588)
Mean dep. var.	5.64	5.64	5.64	5.64
Controls	✓	✓	✓	✓
Urban/rural cleavage			✓	✓
Ethnic cleavage			✓	✓
Time FE	✓		✓	
Province × YearFE		✓		✓
Constituency FE	✓	✓	✓	✓
Observations	1603	1603	1603	1603
Constituencies	229	229	229	229
Elections	7	7	7	7
R-squared within	0.53	0.60	0.53	0.61
R-squared overall	0.44	0.29	0.19	0.20

Notes: The omitted election is 1881. The dependent variable measures the share of votes for the social democratic party. Treatment variables: share of newly insured population in 1884, interacted with election dummies. Column (1): result from Appendix Table B3 (included for comparison). Column (2): allows for flexible time trends for each province. Column (3): includes flexible effects for Protestantism (in %) and German speakers (in %) and urban share (in %). Column (4): includes flexible time trends and controls for social conflicst. Further controls: share of blue-collar workers interacted with time dummies, population (log). Standard errors, clustered at the district level, in parentheses. *** p<0.01, ** p<0.05, * p<0.1.
Sources: Appendix Section A.