# The German Trade Shock and The Rise of the Neo-Welfare State in Early 20th Century Britain [1]

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**Abstract**

We study the international origins of the neo-welfare state in Britain during the era of globalization before World War I. We introduce a new mechanism linking trade to the expansion of the state. In addition to increasing assessments of the volatility of employment in a market economy, trade shocks changed beliefs about the deservingness of the poor. Employing a shift-share measure of local exposure to German imports, we show that rising imports caused worse labor market outcomes from 1880 to 1910. Import competition led to a decrease in support for the Conservative Party in national elections after 1900, when the Liberal Party supported welfare state reforms. We further show that rising imports increased the usage in local newspapers of scientific terms like "unemployment" relative to pejorative terms like "vagrancy" to describe the poor. Political responses to globalization helped shape voter support for the modern British welfare state at its inception.

# 1  Introduction

The emergence of Germany as a major economic and military power transformed world politics. German unification in 1871, and the country's subsequent industrialization did not just alter the balance of power in Europe, but also reordered global patterns of comparative advantage. This article studies the effects of rising German imports on British politics. We use this case to examine how voters, parties, and governments respond to changes in the global economic order. Over the three decades before the First World War, Britain's once-dominant manufacturing industries lost out to rapidly-growing German competitors. Understanding the consequences of these developments for Britain's domestic politics is crucial given the concern that the rise of China since the 1980s has led to polarization and extremism in the US and Europe (Autor et al., 2017; Colantone and Stanig, 2018c).

We argue that Germany's economic development and integration into the world economy increased support for the neo-welfare state, a bundle of modern spending and regulatory programs that replaced traditional forms of poverty relief and protected citizens from an array of negative market outcomes. In 1906 British voters elected a Liberal government which introduced sweeping reforms, including the introduction of public pensions and health insurance, which would form the basis of the postwar welfare state. We find that localized German import penetration increased support for the Liberal and Labour parties when they advocated welfare reforms. Import penetration also led Liberal candidates to draw more attention to these reforms when campaigning. We argue that German imports increased support for the early welfare state through two channels. First, labor market disruption from German imports led voters to demand government programs that would compensate them for the economic harms and risk wrought by globalization. Second, import competition, which pushed previously productive workers out of employment, changed perceptions of the moral status of the poor.

In arguing that exposure to the world economy contributed to the establishment of the early welfare state in the Britain, this study relates to seminal contributions by Cameron

(1978) and Rodrik (1998). Cameron emphasized how specialization in trade led to industrial concentration which in turn strengthened the role of unions in policymaking. Rodrik argued that trade increased economic volatility, and that state spending could help limit the negative consequences of these disruptions. This compensation theory became central to understanding variation in the size of government and the growth of the postwar welfare state (see also Huber and Stephens 2001; Adserà and Boix 2002; Mares 2005), and foundational to Ruggie (1982)'s argument that open markets were politically possible because states limited their distributional consequences in part through the welfare state and other forms of government spending (Hays, Ehrlich and Peinhardt, 2005; Hays, 2009; Kurtz and Brooks, 2008; Mansfield and Rudra, Forthcoming). Scholars have pointed out that openness might also create a race to the bottom that constrains the ability of states to meet the new demands of their citizens even while openness increases the demand for government (Rodrik, 1997; Rudra, 2002; Huber and Stephens, 2001).

This study extends compensation theory to the origins of the welfare state. Leading explanations of welfare state formation emphasize franchise extension (Lindert, 2004), unions and class politics (Huber and Stephens, 2001; Korpi, 2006), and the role of employers (Swensen, 2002; Hall and Soskice, 2001). Scholars emphasize the importance of industrialization, both in creating the socialists, industrialists, and unionists who pushed for the welfare state, and in generating new social risks and thus demands for state support (Moses, 2018). We do not argue that these factors were not important; the emergence of the welfare state was not monocausal. However, our evidence of trade leading to support for the early welfare state cannot be attributed to these mechanisms, but is complementary to the existing literature. Exposure to the global economy, through the mechanisms we outline, led both ordinary voters and elites to support welfare programs. Its effects on the rise of the early welfare state are thus consistent with explanations of welfare state formation that emphasize the importance of different groups of actors. The compensation mechanism is also relevant to understanding support for the particular type of centralized welfare state created by the

Liberals in place of Britain's existing decentralized system of poverty relief (López-Santana, 2015).[1] A centralized system could pool risk across regions, making it more desirable in the presence of regionally-concentrated import shocks.

We estimate the effects of the German trade shock on economic and political outcomes in England and Wales from 1880 to 1910 using parliamentary constituencies as the unit of analysis. We measure the change in import penetration at the local level using the empirical strategy developed by Autor, Dorn and Hanson (2013). We construct a shift-share change in import penetration per worker measure of local exposure to German imports based on 94 industries. We do so using national-level trade data by product and local measures of occupations allocated to each constituency. We examine the effects of this variable on labor-market disruption using census micro-data at the constituency level, and on the vote shares of different parties. To further understand the political response to the German trade shock, we use data from the British Newspaper Archive on the text of 480 newspapers, which we geocode and link to parliamentary constituencies. We use this source to measure local concerns about trade and immigration as well as local beliefs about the deservingness of the poor. Finally, we also measure local demand for policy—especially social reform—from references in candidate campaign manifestos collected by Laura Bronner and Daniel Ziblatt.

Our estimation strategy examines the effects of within-constituency changes in imports per worker on our measures of labor market outcomes, voting for particular parties, and the prevalence of different issues in newspapers and campaign manifestos. We estimate first-difference and fixed effects regressions and control for non-linear trends related to pre-shock manufacturing activity. Estimates from these regressions can be interpreted causally within the difference-in-differences framework. The key identifying assumption is that apart from the effects of changes in imports, constituencies with greater employment in affected industries would have followed similar trajectories to constituencies with less employment in those industries.

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[1]Ansell and Lindvall (2021) note that during this period states expanded and centralized many public services such as policing, education, and public health.

We present evidence that rising imports caused worse labor market outcomes as measured by vagrancy and the share of workers in unskilled jobs in the period 1880-1910. We also find that rising imports led to a decrease in support for the Conservative Party in national elections after 1900, by which time the Liberal Party had signaled its support for the neo-welfare state. The key findings are that the German trade shock had a negative effect on local labor markets in Britain and that the political response was a shift away from the Conservative Party toward left-of-center parties, mostly toward the Liberals. This result is inconsistent with voters demanding protectionism in response to the trade shock. After 1900 the Liberals still unambiguously favored free trade while the Conservative Party was divided with some party leaders advocating protective tariffs.

Given that the timing of when the trade shock favored the Liberals coincided with the Liberals' embrace of social reform, this result is broadly consistent with compensation theory. We further present evidence that trade shocks are correlated with increased references to social reform in Liberal candidates' campaign manifestos, which bolsters the interpretation that greater support for Liberal candidates reflected demand for the emerging neo-welfare state.

We suggest that there were two mechanisms at work in trade's effect on the demand for more government. First, as argued by Rodrik (1998), the German trade shock increased assessments of how volatile employment is in a market economy and as a result increased the demand for government policies that would smooth these cycles. We show that rising imports increased local newspaper references to trade and imports as well as Liberal candidate references to social reform. Second, we find evidence suggesting that the trade shock changed elite beliefs about the deservingness of the poor, transforming "vagrants" into the "unemployed." A range of social scientific work on support for the welfare state emphasizes that the more individuals believe that bad economic outcomes are due to a lack of effort or some other defect on the part of the worker, the less favorably they view the welfare state (see among others Piketty 1995; Fong 2001; Alesina and Angeletos 2005). For much of

the history of capitalism up to the 20th century, moral failing was a dominant account of poverty. We show that trade shocks are positively associated with the use of neutral terms like "unemployment" relative to morally-charged terms like "pauperism" and "vagrancy." Our findings link to a growing historical literature on changing attitudes and welfare state development. Moses (2018) discusses how the realization that workplace accidents were an unavoidable feature of industrial capitalism, and not simply the result of negligence, contributed to support for workplace compensation and the early emergence of the welfare state. This study provides quantitative evidence that trade contributed to the rise of the welfare state in part through a similar process.

This article makes three main contributions. First, it provides evidence that globalization contributed to demands for welfare state development at the origin of the welfare state. This finding is in contrast with other theories of the origin of the welfare state, which emphasize a different set of factors. Our research design allows us to rule out the possibility that franchise extension, or lobbying for the welfare state by unions or employers—except as influenced by German trade—explains our results. In relation to these theories, studying the effects of import competition provides a new set of reasons why groups of actors came to support the early welfare state. This finding is also in contrast to previous work which links globalization to the postwar expansion of the welfare state. The article builds on Mares (2005)'s cross-country study of unemployment insurance during the interwar period and provides an out-of-sample test of compensation theory with a research design that supports a causal interpretation. This contribution is complementary to Barnes (2020)'s recent work arguing that the shared interests in free trade of elites and labor led to more progressive tax policies prior to World War I in Europe generally and in the United Kingdom specifically.[2] Barnes' argument is not about compensation, in that she emphasizes shared interests in free trade driving some elites to compromise on progressive taxation that workers were already demanding. Nonetheless, both her study and ours argue that the international origins of the

[2]Our results are also relevant to the large political economy literature dating back to Rogowski (1987) which links changes in the global economy to domestic political competition (see for instance Fresh 2019).

neo-welfare state have been neglected in prior research.

Second, the article introduces a new mechanism for the compensation effect of globalization: negative trade-induced labor market outcomes are less likely to be attributed to the failings of the unemployed and government spending on the deserving poor is viewed more favorably by voters. This finding connects compensation theory to a large empirical literature on public support for redistributive policies.

Third, this article applies methods used to study the China trade shock to Germany's integration into the world economy. China's industrialization has accelerated the decline of manufacturing employment in many industrial economies. While the political response to these developments has varied across countries, the majority of studies find the China shock increased both skepticism about the role of the government in the economy and support for protectionist trade and restrictionist immigration policies, and precipitated a turn towards authoritarian and nationalist values (Margalit, 2019; Che et al., 2016; Colantone and Stanig, 2018*a,b,c*; Hays, Lim and Spoon, 2019; De Vries, Hobolt and Walter, 2020; Milner, 2021; Broz, Frieden and Weymouth, 2020; Ballard-Rosa et al., Forthcoming; Baccini and Weymouth, 2021; Gidron and Hall, 2017, 2020). This study expands research on the political consequences of import competition beyond the China example. Late 19th and early 20th century Britain is perhaps the first case of serious import competition in an industrialized democracy that had previously been the global industrial leader. This case is thus important for contextualizing the effects of the China shock, especially in the United States. This study finds that trade led to demand for the early welfare state. These findings warrant further research on why globalization leads to different political reactions in different contexts. Our conclusion highlights several features of early 20th century Britain that distinguish it from many of the countries most affected by China's integration into the world economy and may account for the turn towards compensation and more government rather than protectionism and right-wing populism.

The rest of the article proceeds as follows: we first describe the economic and political

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environment in late 19th and early 20th century Britain that witnessed dramatic increases in German imports, significant economic change, and the emergence of new cleavages in domestic politics over the regulation of capitalism and the formation of a neo-welfare state. We then describe the new constituency-level historical data that we have constructed to study the effect of rising German imports on labor market outcomes, election results, and local economic and political concerns expressed in newspapers and campaign manifestos. Next, we outline our empirical strategy and present our main results on the effect of the German trade shock on labor market outcomes and election results. We then present our analysis exploring the mechanisms underlying the relationship between rising imports and vote choice. We conclude by discussing the implications of the findings for the literatures on globalization, the size of government, and redistributive politics.

## 2  German Trade and British Political Economy in the Late 19th and Early 20th Century

Before analyzing the within-constituency effects of German imports on economic change and demand for the neo-welfare state, it is natural to ask whether at the national level rising imports from Germany were accompanied by the expansion of social spending.

Figure 1 reports UK imports from Germany from 1880 to 1910. Our data come from the *Annual Statement of the Trade of the United Kingdom.* At this time, Germany shipped its products directly from German ports but also through Belgium and the Netherlands. Our data source assigns the country that the good is shipped from as the origin of the import whether or not the good was produced there. Consequently, we count imports from Belgium and the Netherlands as German imports as well as shipments directly from Germany. The figure indicates an almost doubling of German imports from 1880 to 1910. During this period Germany was the UK's second largest source of imports, after the US, from which it mainly imported raw materials like cotton (Figure A-2). Between 1880 and 1910, the UK's trade to

GDP ratio averaged 54% (Thomas and Dimsdale, 2017).
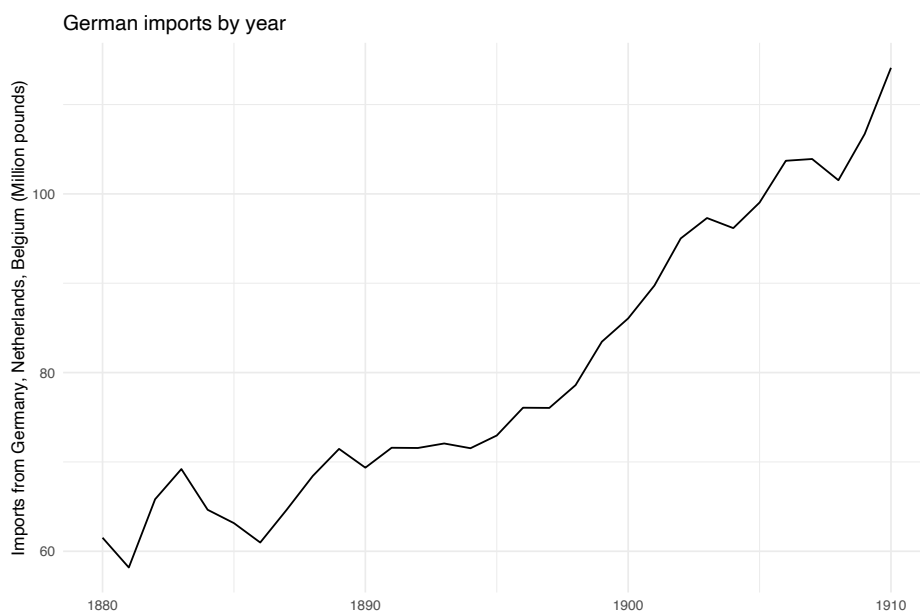


Figure 1: UK imports from Germany, 1880–1910

During most of this period, there were only modest changes in German and UK trade policies. Germany generally had high tariffs while the UK maintained free trade. The increase in German imports reflected the country's rapid industrialization, especially after 1890, comparative advantage, and declining transportation costs. Figure 2 breaks down the increases in imports by product categories.

Figures 1 and 2 suggest that the magnitude of the increase in German exports to the UK was economically significant. Below we provide a new analysis assessing the economic effects of the shock. But for context, it is important to note that British observers at the time thought German imports were important. They were one of a number of indicators that suggested relative economic decline in the Victorian era and explaining this decline was an obsession of the businessmen and economists of the period (McCloskey and Sandberg, 1971). An 1896 book drawing attention to the prevalence of imports "Made in Germany," which warned "The industrial supremacy of Great Britain ... is fast turning into a myth," ran through six editions (Williams, 1896, 1). In a 1903 speech, Joseph Chamberlain, a leading
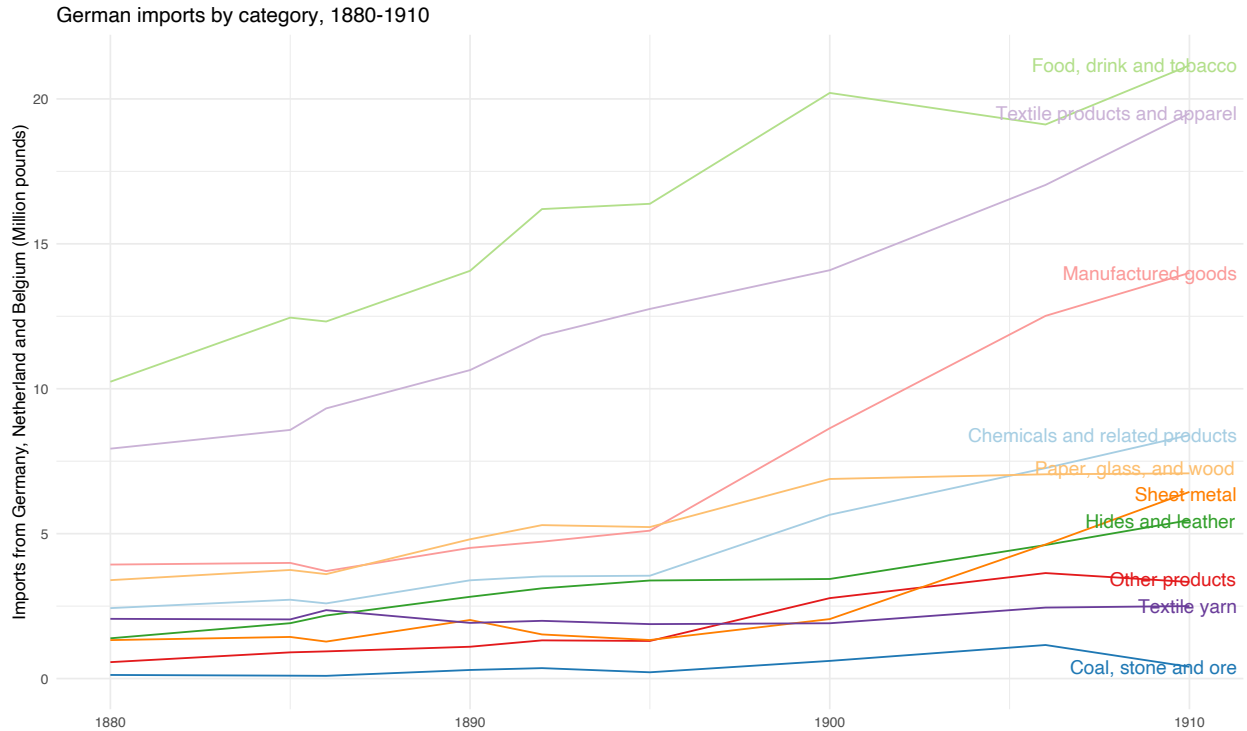
Figure 2: UK imports from Germany in decade and election years, by category

advocate of protectionism, warned that in the face of foreign competition "Sugar has gone; silk has gone; iron is threatened; wool is threatened; cotton will go ... Do you think, if you belong at the present time to a prosperous industry, that your prosperity will be allowed to continue?" (Chamberlain, 1914, 177).

Were these rising imports accompanied by greater social spending? Figure 3 reports data from Boyer (2019) combining spending on poor relief and pensions in the United Kingdom. It records a steady increase in social spending starting in the 1890s through the mid-1900s followed by a dramatic increase for the remainder of that decade and leading up to World War I. This increase reflected the Liberal Party running and winning in 1906 on a platform committed to social reform and free trade, overturning a Conservative majority elected in 1900 on a platform of imperialism. The Liberal Party then won two elections in 1910 on an explicit platform of redistribution. The data capture only a fraction of the legislation enacted in this period that could be viewed as, in part, serving a compensatory purpose.

The Liberals passed the Workmen's Compensation Act of 1906, the Old-Age Pensions Act of 1908, the Labour Exchanges Act of 1909, and the National Insurance Act of 1911 as well as other legislation that would address directly and indirectly some of the costs associated with increased import competition. It is, of course, impossible to tell from these aggregated data whether greater social spending was at least partially a response to increased trade. The remainder of the article seeks to determine the nature of this relationship.

Social welfare spending



Figure 3: Social welfare spending, 1880–1914, from Boyer (2019)

# 3 Data

## 3.1 Trade and Labor Market Outcome Data

We estimate the effects of the German trade shock on economic and political outcomes in England and Wales, using parliamentary constituencies as the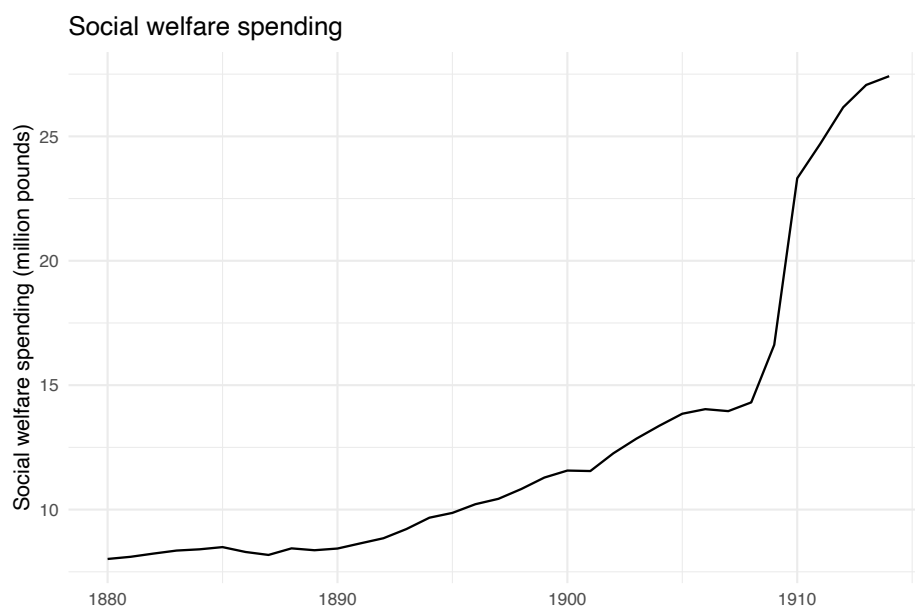 unit of analysis. We measure the change in import penetration at the local level using the empirical strategy developed

by Autor, Dorn and Hanson (2013), that is, we compute

$$\Delta \text{IPW}_{it} = \sum_{j}^{n} \frac{L_{ij}}{L_i} \frac{\Delta M_{jt}}{L_j}$$

where $L_{ij}/L_i$ is the share of employment in industry $j$ in constituency $i$ in the base year, 1881. $\Delta M_{jt}/L_j$ is the change in imports for industry $j$ in year $t$, relative to total employment in that industry in 1881. We index the change in imports relative to different years in different specifications: in long first-difference specifications, $\Delta M_{jt}$ is the change in imports relative to the previous period, in other models which use constituency fixed effects we index relative to the first year used in the analysis. We winsorize the industry-level change in imports per worker at plus or minus 500 pounds per worker, equivalent to the 97th percentile.

We use the full-count 1881 census of England and Wales (Schürer and Higgs, 2014) to compute the sizes and distributions of different industries, and combine this with product-level data on imports from the *Annual Statement of the Trade of the United Kingdom*. Occupational categories in the 19th-century census contain a high degree of specificity about industries, distinguishing, for instance, "Ironfounders" from "Iron clasp, buckle, and hinge makers" and "Brass founders." We group occupational categories and product-level import data into 94 industries, with the aim of identifying the finest level of variation present in both the trade statistics over the total period and the occupational categories.

British parliamentary constituencies do not coincide with administrative units, which has prevented scholars from computing economic variables at the constituency level. We resolve this problem by allocating parishes—the finest level of aggregation in the census—to constituencies. For the 1881 census we use crosswalk files constructed by Jusko (2017), who manually assigned parishes to constituencies, based on contemporary reports by the boundary commission and maps. For other years we first link the census data to a consistent GIS based on parishes in the 1851 census (Satchell et al., 2016), using crosswalk files constructed by Day (2016). We then assign parishes to constituencies using shapefiles from the Great

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Britain Historical GIS Project (2004). Where parishes fall into multiple constituencies, we weight the fraction assigned to each constituency by the fraction of the parish falling into that constituency multiplied by the relative population density of the constituency.

We compute two measures of the economic effects of the trade shock—the percentage of vagrants and the percentage employed in unskilled occupations—at the constituency level, using full-count data from the 1881, 1891, 1901 and 1911 censuses. We classify vagrants as those whose occupation was listed as "No specified occupation – vagrants, unemployed." This measure plausibly captures labor-market disruption, in the form of increased unemployment, and the unemployed migrating in search of work. Using the limited time-series data collected by Poor Law administrators, Boyer (2019, 111–112) finds that rates of vagrancy and unemployment closely tracked one another.

We classify unskilled occupations using the *Seventy-fourth Annual Report of the Registrar General*, 1913, which allocated census occupations to eight social classes. The percentage of people in occupations in class 5 ("occupations including mainly unskilled men," p. xli) has been used in the historical geography literature to measure poverty at the local level (Gregory, Dorling and Southall, 2001). These occupations are primarily various forms of unskilled laborers, such as "shipyard labourers," "navvies," "bill posters," and workers in "scavenging and disposal of refuse." The fraction employed in unskilled jobs would plausibly increase in response to import competition if there was a reduction in higher-skilled employment, leading unemployed skilled workers to take on casual labor.

In many of our regression specifications we control for 1881 manufacturing employment interacted with year dummies in order to separate the effects of the German trade shock from time-variant effects related to manufacturing. We compute this measure using the fraction of people employed in secondary occupations—those in which raw materials were converted into finished products—according to the classification system developed by Wrigley (2010) and Bennett et al. (2017). Figure 4 shows the geographic distribution of import competition in 1910, with and without this control.
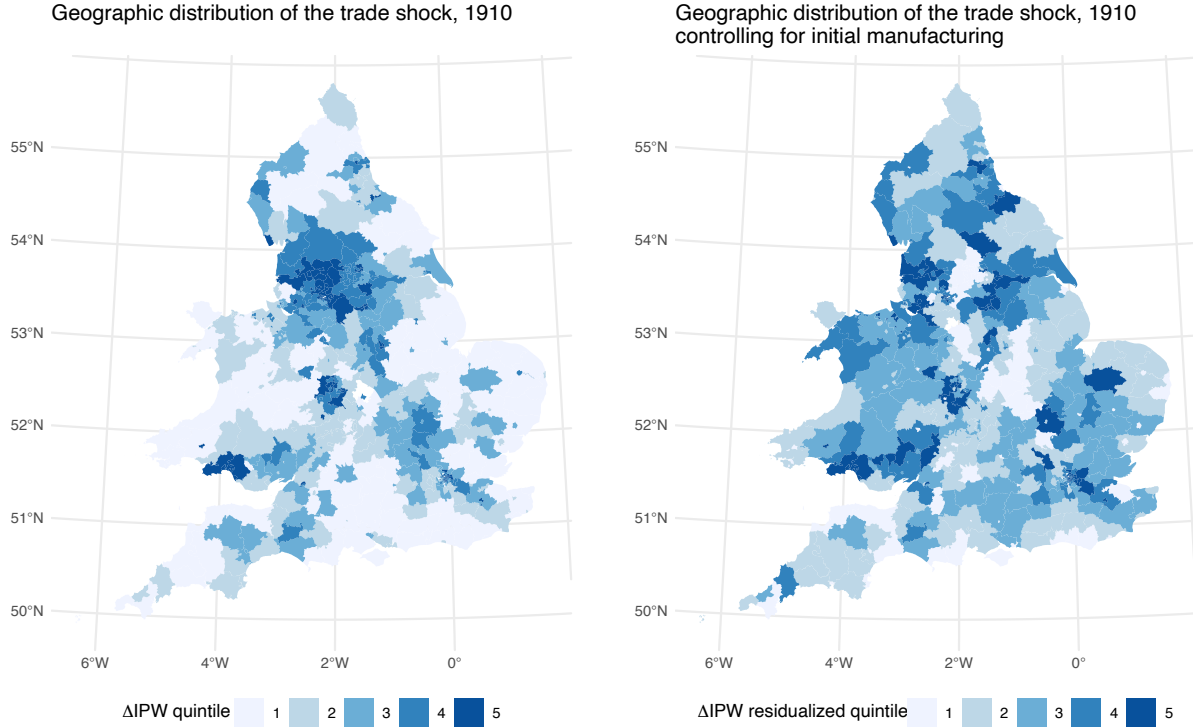
Figure 4: Geographic distribution of change in German imports per worker, 1885–1910

## 3.2 Election Data

Our primary measure of the political effects of import competition is the share of the vote won by Conservative and Unionist parliamentary candidates. This variable captures the main left-right division in British politics over this period. The Labour Party only contested elections after 1900, and did so in an electoral pact with the Liberal Party. We use data from Eggers and Spirling (2014), and compute the share of the vote won by different parties in the eight general elections from 1885 to 1910. Constituency boundaries and the electoral franchise were consistent over this period. The franchise was also relatively broad: around two-thirds of adult men could vote. Exclusion was somewhat arbitrary, based primarily on residency criteria, leading one historian to conclude that "the overall occupational structure [of the franchise] does not differ vastly from what one would have expected from a fully inclusive franchise" (Brodie, 2004, 52). Table 1 reports descriptive statistics for the economic and political variables.

Table 1: Summary statistics

| Variable | N | Mean | SD | Min | Max |
|---|---|---|---|---|---|
| *Constituency* | | | | | |
| Manufacturing share 1881 | 463 | 0.202 | 0.094 | 0.069 | 0.474 |
| Immigrant share 1881 | 463 | 0.009 | 0.011 | 0.001 | 0.132 |
| *Constituency x Industry* | | | | | |
| Industry share | 43,985 | 0.011 | 0.087 | 0.000 | 0.966 |
| *Constituency x census year* | | | | | |
| Manufacturing share | 1,852 | 0.162 | 0.079 | 0.056 | 0.430 |
| Vagrant share | 1,852 | 0.006 | 0.005 | 0.000 | 0.024 |
| Unskilled jobs share | 1,852 | 0.058 | 0.020 | 0.012 | 0.194 |
| Average economic status | 1,852 | 48.044 | 1.645 | 43.752 | 53.317 |
| *First difference constituency x census year* | | | | | |
| $\Delta \text{IPW}_t$ | 1,389 | 0.724 | 0.787 | -1.226 | 8.498 |
| $\Delta$ln vagrant share | 1,389 | 0.019 | 2.239 | -6.257 | 4.625 |
| $\Delta$ln unskilled jobs share | 1,389 | 0.014 | 0.130 | -0.963 | 0.600 |
| $\Delta$Average economic status | 1,389 | 0.610 | 0.514 | -1.463 | 2.890 |
| *Constituency x election year* | | | | | |
| $\Delta \text{IPW}_{1885}$ | 3,133 | 0.945 | 1.262 | -1.600 | 11.154 |
| Conservative vote share | 3,133 | 0.497 | 0.112 | 0.000 | 1.000 |
| Liberal vote share | 3,133 | 0.474 | 0.139 | 0.000 | 1.000 |
| Labour vote share | 3,133 | 0.047 | 0.148 | 0.000 | 0.817 |

## 3.3  Newspaper Measures of Local Concerns

We use data from the British Newspaper Archive to estimate the prevalence of different local concerns. The British Newspaper Archive is a project aiming to digitize the British Library's extensive historical newspaper collections. Over the 1885–1910 period, it contains text for 480 newspapers, which we geocode and link to parliamentary constituencies.[3] We compute the number of references to specific terms made in a given year by a given newspaper, divide by the number of issues of the newspaper in the British Newspaper Archive in that year, and then subtract the mean and divide by the standard deviation of that variable to aid interpretation. We use newspaper fixed effects in all specifications to control for time-invariant linguistic or topical features of specific newspapers.

Our intuition in using these measures is that if an issue became more prevalent in a given constituency in a given year, one would expect newspapers to devote greater attention to it. While newspapers might reflect the opinions of their owners and editors, rather than their readers, theoretical and empirical studies of media bias suggest that newspapers tend to cater to their readers' views and concerns (Gentzkow and Shapiro, 2010). Incentives for newspapers to provide more representative opinion are stronger when demand for media and potential advertising revenues are high, and so the returns to providing popular news that will appeal to readers is large (Petrova, 2011). These theoretical predictions should apply in the period we study: by the 1880s the removal of newspaper taxes and developments in printing technology had made possible a business model for newspapers based on large circulations and advertising revenues (Lee, 1976).[4]

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[3]In cases where city newspapers would have catered to multiple constituencies—for instance, the *Manchester Guardian* would reflect opinion in Manchester, and not just one particular Manchester parliamentary constituency—we aggregate the shock variable at the city level.

[4]Nevertheless, our newspaper results are informative of our mechanism even if one thinks that they reflect elite newspaper opinion and nothing more. The mechanism whereby German import competition changed perceptions of the unemployed and thus increased support for the welfare state should have affected elite newspaper proprietors in the same way as ordinary voters.

## 3.4 Other Data

We additionally use an unpublished dataset of parliamentary candidates' manifestos compiled by Laura Bronner and Daniel Ziblatt. From the late 19th century onwards, candidates could distribute one leaflet for free via Royal Mail, to inform voters of their views. Bronner and Ziblatt collect and digitize manifestos for all parliamentary candidates in general elections from 1892 to 1910. We use this data in a similar way to the newspaper data. We divide the number of references to a given term by the number of words in the manifesto, and then standardize that measure.[5]

# 4 Empirical Framework

## 4.1 Model Specification

Our estimation strategy examines the effects of within-constituency changes in imports per worker on a set of outcome variables: labor market distress, voting for particular parties, and the prevalence of different issues in newspapers and campaign manifestos. We use two main model specifications. For the economic outcome variables, using decadal data from the census, we estimate regressions of the form

$$\Delta Y_{it} = \beta_1 \Delta \text{IPW}_{it} + \mathbf{X}'_{it}\beta_2 + \gamma_t + \varepsilon_{it}$$

where $\Delta Y_{it}$ is the change in a given outcome variable in constituency $i$ relative to the previous census, $\Delta \text{IPW}_{it}$ is the change in the trade shock measure relative to the previous census, $\gamma_t$ is a year fixed effect, and $\mathbf{X}'_{it}$ is a vector of controls. We estimate these models in stacked first differences, consistent with other economic studies of the effects of trade shocks (Autor, Dorn and Hanson, 2013).

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[5]These candidate communications should be interpreted in the context that voting was, nonetheless, by this time party-centered (Cox, 1987; Dewan, Meriläinen and Tukiainen, 2020).

We estimate the majority of regressions with political dependent variables in levels. This practice is consistent with empirical studies of the effects of trade shocks on voting (Colantone and Stanig, 2018$b$,$c$; Feigenbaum and Hall, 2015). We are interested in the effects of long-term changes in import penetration, not the effects of year-to-year variation. This focus makes 10-year census-to-census first-differences appropriate, but election-to-election first-differences inappropriate, given the short gap between some elections in our sample.[6] We estimate regressions of the form

$$Y_{it} = \beta_1 \Delta \text{IPW}_{it} + \mathbf{X}'_{it}\beta_2 + \gamma_t + \delta_i + \varepsilon_{it}$$

Where $Y_{it}$ is some political outcome variable, $\Delta \text{IPW}_{it}$ is the change in imports per worker for constituency $i$ in year $t$ relative to the start year, $\mathbf{X}'_{it}$ is a vector of controls, $\gamma_t$ is a year fixed effect, and $\delta_i$ a constituency fixed effect. Note that the differenced dependent variables and constituency fixed effects account for time-invariant confounders.

## 4.2 Identification

Estimates from these regressions can be interpreted causally within the difference in differences framework. While our measure of imports per worker is computed according to a shift-share formula, our identification strategy does not rely on the use of exogenous variation in the form of exports from Germany to a third party. Goldsmith-Pinkham, Sorkin and Swift (2020) argue that shift-share designs rely on the assumption that the initial shares used to construct the shift-share variable are exogenous to the outcome variable. This assumption is more plausibly satisfied in research designs like ours which control for unit fixed effects, and for which the equivalent identifying assumption is that these shares are exogenous to changes in the outcome variables. Thus for our estimates to be interpreted causally, one

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[6]While there are theoretical reasons for favoring the specification in levels, the particular specification choice is not important for our results. As a robustness check we estimate the main voting regressions using long election-to-election differences: 1885–1892, 1892–1900, and 1900–1910, and obtain similar results.

must believe that, apart from the effects of changes in imports, constituencies with greater employment in affected industries would have followed similar trajectories to constituencies with less employment in those industries.

We address this assumption in three ways. First, we include controls for initial manufacturing interacted with year dummies across all our specifications. We thus allow more industrial constituencies to follow different non-linear trajectories to less industrial constituencies, and implicitly compare constituencies affected by German imports in a given year to less-affected industrial constituencies. Second, we follow the procedure outlined by Goldsmith-Pinkham, Sorkin and Swift (2020) to identify the industry-year combinations for which our estimated coefficients are most sensitive to mis-specification, and show that our results are robust to controlling for these initial industry shares interacted with year dummies, and to controlling for the first 3 principal components of the 1881 industry shares interacted with year dummies. These robustness checks suggest it is unlikely that differential trends relating to specific industries or clusters of industries are driving our results. Third, we employ traditional difference-in-differences robustness tests: controlling for constituency time trends and checking that leads of the trade shock variable do not affect outcomes.

The shift-share design is important to our empirical strategy as an accounting method, and as a way to avoid bias from post-treatment economic changes. It is important to emphasize that our primary use of the Autor, Dorn and Hanson (2013) trade shock formula is simply to measure the incidence of import competition at the local level. Using the 1881 industry shares, as opposed to subsequent shares, has the additional benefit of separating our measure of exposure to German imports from changes in local economies that may themselves be affected by German imports.

## 4.3 Standard Errors

We cluster standard errors at the county level, rather than at the more granular constituency level. This is a conservative choice to account for potential spatial autocorrelation in the

error term due to local spillover effects. In Appendix E, we re-estimate all regressions in the paper using the aggregation method recommended by Borusyak, Hull and Jaravel (2018). Adão, Kolesár and Morales (2019) note that in shift-share designs, conventional standard errors fail to account for correlation in the error structure between units with similar shares. Aggregating the relevant variables to the industry level gives "exposure robust" standard errors that account for errors correlated across units with similar shares, in the same way that one can avoid problems with within-cluster correlations by aggregating to the level of the cluster.

# 5    Economic Consequences of the German Trade Shock

We first examine the effects of German import competition on labor market disruption. Table 2 reports the results of stacked first-difference regressions in which the dependent variables are the log share of vagrants in a constituency, and the log share of people employed in unskilled jobs. Import competition was associated with negative outcomes in local labor markets: the fraction of vagrants increased, as did the share of people employed in unskilled jobs. This evidence is consistent with a theoretical account in which German imports cause reductions in employment in import-affected industries, pushing workers either out of the labor force entirely—into the vagrants category—or into unskilled jobs. It also fits with arguments made by advocates for protectionism at the time. The *Western Gazette* complained that "the free importation of foreign manufactures ... degrades skilled and highly-paid workers to the ranks of casual labour."[7] Models (1) and (2) suggest a 1 pound increase in imports per worker was associated with a 15% relative increase in vagrancy, (5) and (6) suggest such an increase was associated with a roughly 1.5% relative increase in the share of employment in unskilled jobs.[8] These results are robust to the inclusion of controls for 1881 manufacturing

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[7] "Points for Fiscal Reform. 'Free Trade' Creates Casual Labour," *Western Gazette,* August 13, 1909.

[8] As an additional robustness test of the economic effect of the trade shock, we report results in Table A-2 showing a negative effect on the average economic status of constituency occupations as measured by the HISCAM Project (Lambert et al., 2013).

interacted with year dummies, and to the addition of constituency-specific time trends, which make it more plausible that the parallel trends assumption holds. Additionally, in Appendix B we show that these results are robust to controlling for initial shares in key industries interacted with year dummies, and to controlling for the first three principal components of the matrix of 1881 industry shares, which account for 84% of the variance in those shares, interacted with year dummies.

# 6  Political Responses to the German Trade Shock

We now examine the effects of German import competition on political outcomes. We find that import competition reduced vote share for the Conservative Party, and increased it for the Liberal and Labour parties, but only after 1900. Table 3 documents the main electoral effects, regressing the Conservative and Unionist share of the vote on $\Delta$IPW over different periods. While there was essentially no association between import competition and vote share for the Conservative Party over the entire 1885–1910 period (1 and 2), the association between these variables varied over the period. For 1885–1900, we find a positive correlation between imports per worker and Conservative vote share. While the positive coefficient in model (3) could be taken as evidence that German imports increased vote share for the more protectionist party, we are wary of drawing strong conclusions from this result. Adding controls for initial manufacturing shares interacted with year dummies results in a smaller and statistically insignificant coefficient in model (4), suggesting that the effect in model (3) may be picking up changes in voting patterns in industrial areas unrelated to the trade shock. We find stronger evidence for a negative effect of the trade shock on Conservative vote share in the 1900–1910 period. In model (5), we find that a 1 pound increase in imports per worker was associated with a roughly 2 percentage point decrease in Conservative vote share over this period. In 15% of constituency races from 1900–1910, the difference between the Conservative and Liberal or Labour vote share was smaller than this difference.

Table 2: Effects of import competition on local economies

| | $\Delta$ ln % vagrants | | | | $\Delta$ ln % unskilled jobs | | | |
|---|---|---|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
| $\Delta\text{IPW}_t$ | 0.150*** | 0.143*** | 0.077*** | 0.373*** | 0.014*** | 0.018*** | 0.016** | 0.017*** |
| | (0.032) | (0.038) | (0.028) | (0.086) | (0.005) | (0.006) | (0.007) | (0.004) |
| Controls | | x | x | x | | x | x | x |
| Initial Mf x year | | | x | | | | x | |
| Constituency trends | | | | x | | | | x |
| Observations | 1,389 | 1,389 | 1,389 | 1,389 | 1,389 | 1,389 | 1,389 | 1,389 |
| $R^2$ | 0.860 | 0.883 | 0.893 | 0.900 | 0.022 | 0.118 | 0.121 | 0.585 |
| Adjusted $R^2$ | 0.860 | 0.882 | 0.893 | 0.849 | 0.020 | 0.113 | 0.115 | 0.374 |

*Note:* *p<0.1; **p<0.05; ***p<0.01
Stacked first difference estimates, at the constituency level, for 1880–1890, 1890–1900, 1900-1910. All models include year fixed effects. (2)–(4) and (6)–(8) add controls for lagged manufacturing employment, lagged fraction in unskilled jobs, lagged fraction of vagrants, and lagged average economic status; (3) and (7) include 1880 manufacturing employment interacted with year dummy variables, (4) and (8) include constituency fixed effects, which adjust for constituency-specific time trends. Standard errors clustered by county in parentheses.

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We perform an extensive set of robustness checks. We find this effect is robust to the addition of manufacturing by year controls, and to the addition of time-varying controls for specific industries, and for the 1881 industry shares PCA (Table A-9). One might be concerned that the $\Delta$IPW variable is correlated with demand or technology shocks common to both Britain and Germany. However, when we control for the change in exports per worker to Germany, our results are unaffected, suggesting that rising competition from Germany, rather than shocks to both German and British supply and demand, which would affect both exports and imports, account for our results (Table A-13). Similarly, when we decompose the estimate by industry following Goldsmith-Pinkham, Sorkin and Swift (2020) in Table A-8, we find that our results are not driven by new industries like chemicals and electricals, which saw rapid technological progress during this period. In these industries German firms did have an advantage, but the initial base of employment was small, and so the labor-market and political effects were muted. Another concern is that the German trade shock was correlated with a different import shock: US grain imports (O'Rourke, 1997; Heblich, Redding and Zylberberg, 2021). We compute a measure of US wheat imports per worker, and reassuringly find that controlling for this variable does not affect our estimates (Table A-13). Our results are also robust to dropping individual elections from the 1900–1910 period (A-10), suggesting no single election accounts for our results. Estimating the models in long first differences gives very similar point estimates and levels of significance (A-7). Using the estimator proposed by de Chaisemartin and D'Haultfœuille (2020), which is robust to the negative weights issue in two-way fixed effects estimation, gives results which are larger in magnitude and statistically significant (Table A-15). Table A-6 switches the dependent variable from Conservative vote share to combined Liberal and Labour vote share, and confirms the pattern of results.

Our empirical strategy also reduces the possibility that other explanations for the rise of the early welfare state explain our results. Franchise extension shifting the median voter left, as argued by Lindert (2004), is unlikely to explain why the constituencies affected

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by German imports shifted towards the Liberals. The franchise was restricted by property ownership and residency, and so economic changes which pushed people out of work and into vagrancy would have served to restrict access to the vote. There was gradual franchise extension during this period due to inflation and economic growth pushing people over the property threshold, but this was a slow-moving and common phenomenon and should be accounted for by constituency and year fixed effects and manufacturing-by-year controls. It is unlikely that trade unions are driving our results. In Table A-11, we address this possibility using data on unionization by county. Controlling for unionization interacted with period dummy variables attenuates our coefficients somewhat, but does not change their substantive or statistical interpretation. Explanations centered on class politics do a poor job of explaining our results given that the Liberals—not an explicitly working-class party—were the prime beneficiaries and implemented the welfare reforms in government. It is similarly difficult to believe that our results are explained by employers mobilizing in support of the welfare state, for reasons unrelated to trade. One would have to believe that constituencies affected more by the trade shock were also following differential trends in employer mobilization that were distinct from initial levels of industrialization. Lastly, other theories of welfare state formation based on industrialization are unlikely to drive our results. Import competition harmed British manufacturing industries, and so changes in our independent variable should be negatively correlated with increases in industrialization within Britain. We also control for non-linear time trends related to initial industrialization, which should account for most of the variation in industrialization unrelated to the trade shock during the period.

Our results suggest that the trade shock increased the share of the vote for left-of-center parties in the 1900–1910 period, but was associated with a mild shift away from those parties in the preceding period. These differential trends may suggest that our estimates for the 1900–1910 period constitute a lower bound: if certain constituencies were trending towards the Conservatives from 1885 to 1900, and then reversed direction, the effect of

Table 3: Effects of import competition on voting

| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
|---|---|---|---|---|---|---|---|---|
| $\Delta$IPW$_{1885}$ | −0.003 | −0.003 | 0.014** | 0.008 | | | | |
| | (0.004) | (0.002) | (0.006) | (0.006) | | | | |
| $\Delta$IPW$_{1900}$ | | | | | −0.021*** | −0.016*** | −0.018*** | −0.018*** |
| | | | | | (0.006) | (0.005) | (0.004) | (0.005) |
| Years | All | All | 1885–1900 | 1885–1900 | 1900–1910 | 1900-1910 | 1900–1910 | 1900–1910 |
| Initial MF x election | | x | | x | | x | | x |
| Matched panel | | | | | | | x | x |
| Observations | 3,133 | 3,133 | 1,860 | 1,860 | 1,578 | 1,578 | 684 | 684 |
| R$^2$ | 0.709 | 0.712 | 0.720 | 0.723 | 0.834 | 0.837 | 0.792 | 0.796 |
| Adjusted R$^2$ | 0.657 | 0.661 | 0.626 | 0.629 | 0.765 | 0.768 | 0.720 | 0.723 |

*Note:*  *p<0.1; **p<0.05; ***p<0.01

Constituency-level fixed effects regression, dependent variable is share of the vote for the Conservative Party. All models include constituency and election fixed effects, (2) and (4), (6), and (8) add manufacturing employment in 1880 interacted with election dummies. (7) and (8) use a panel matched on Conservative vote share in 1885, 1892, and 1900. Standard errors clustered by county in parentheses.

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the trade shock relative to a continued trend towards the Conservatives would be larger than the effect we estimate. However, a plausible concern is that our estimates for 1900–1910 reflect some form of mean-reversion after an outsized shift to the Conservatives. As an additional robustness check we use matching to create a panel of constituencies following a similar trend in Conservative voting from 1885 to 1900. We divide constituencies into two groups according to the incidence of the 1900–1910 trade shock, and then match on 1885, 1892, and 1900 Conservative vote share. We discard pairs which differ by more than 0.1 standard deviations in 1900 Conservative vote share, and apply a looser cutoff to the 1885 and 1892 vote shares. The idea is not to use matching to provide causal inferences within a selection-on-observables framework, but rather to create a panel which more plausibly satisfies the parallel trends assumption. Replicating the 1900–1910 difference in differences regressions of Conservative vote share on import competition in Table 3, models (7) and (8), we find a slightly smaller, but comparable and statistically significant effect, of –1.8 percentage points. Figure 5 illustrates this strategy, comparing the average Conservative vote shares over time between constituencies more and less affected by the 1900–1910 trade shock: while the matched constituencies follow the same trajectory prior to 1900, they subsequently diverge, and Conservative support falls more sharply in constituencies affected worse by the trade shock.

While this matching process, analogous to a synthetic control design, is our preferred specification for adjusting for possibly non-parallel trends, we report additional difference-in-differences robustness checks in Table A-14. We directly control for constituency trends in Conservative voting, and perform placebo tests in which we regress pre-1895 voting outcomes on subsequent import penetration.
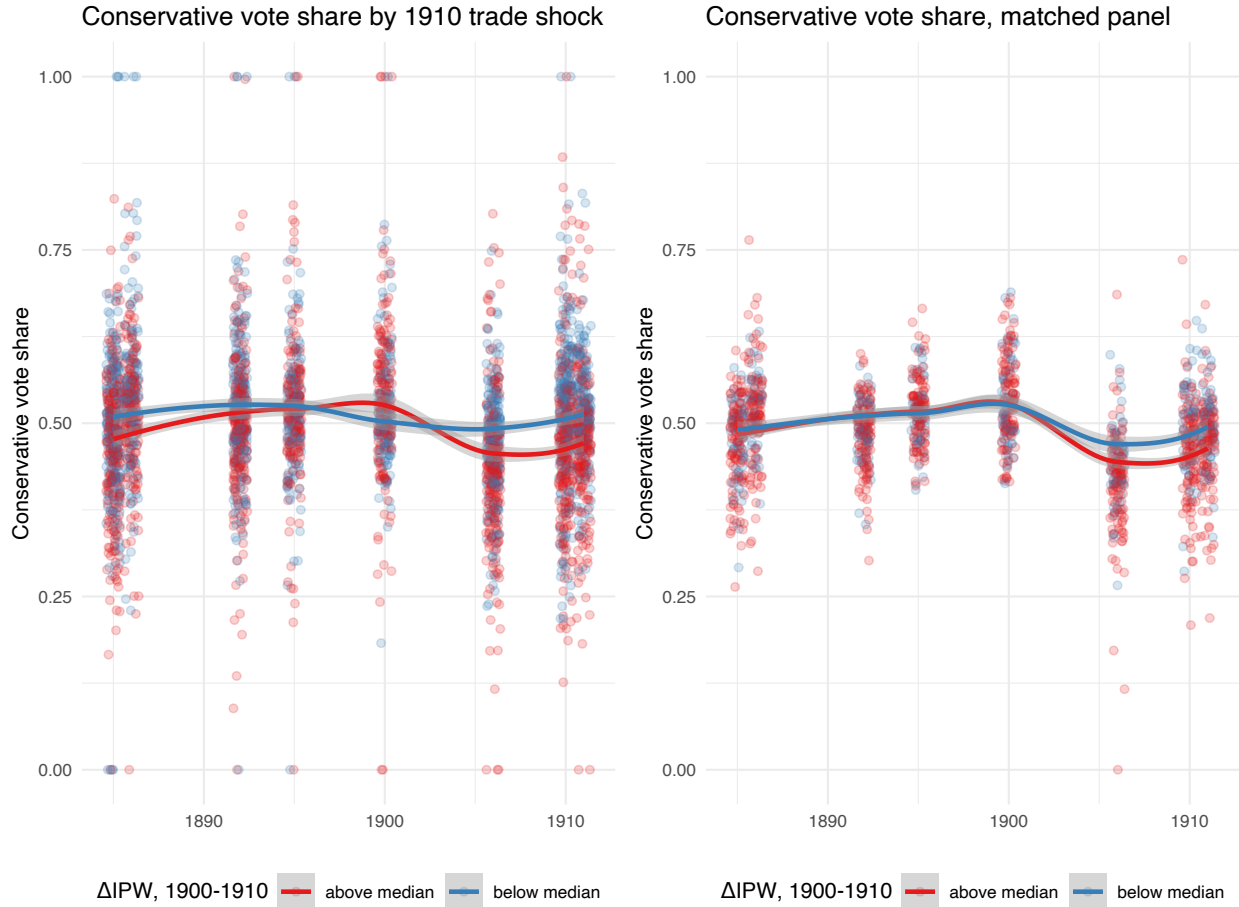
Figure 5: Conservative vote share by 1910 ΔIPW, with matched panel

# 7 Interpretation

The German trade shock increased support for left-of-center parties through two mechanisms. First, the negative economic effects of import penetration directly led to demand for the early welfare state. Unemployed voters demanded compensation, and voters concerned about an increased risk of unemployment supported programs that would hedge against these risks. We find that the trade shock led Liberal candidates to place more emphasis on issues related to social reform. Second, the trade shock changed attitudes towards the unemployed, and this development affected support for welfare policies. The concept of unemployment as the result of macroeconomic fluctuations, as opposed to personal moral deficiencies, emerged in this period. Politicians and voters may have believed that people unemployed due to foreign

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import competition were worthy of compensation in a way that "vagrants" and "paupers" were not. We find that the trade shock was associated with a change in newspaper language towards terms associated with this new concept of unemployment.

## 7.1 Voter Concern about German Trade

Before directly studying these mechanisms, we examine whether the trade shock increased attention to trade in newspapers. A theory in which the direct economic effects alone accounted for the political changes—unemployed voters supported the welfare state—would not require voters to necessarily pay more attention to trade. However, increased attention to trade is an important part of mechanisms in which trade affected beliefs about the risk of economic upheaval—perhaps by tapping into fears about national decline and global competition—and the moral desert of the unemployed, perhaps because foreign industrialization is unrelated to the effort of domestic workers. We regress a standardized measure of the per-issue references to different trade-related terms on $\Delta$IPW, with newspaper and year fixed effects, and time-varying manufacturing controls. Table 4 shows the results of these regressions. Over the whole period, import competition was associated with increased references in newspapers to trade and imports. The coefficient magnitudes suggest a 1 pound increase in imports per worker was associated with a 0.1 standard deviation increase in coverage. The effect is driven by the 1900–1910 period (models (3), (4), (7), (8)), when we find trade had a political effect.

## 7.2 Support for the Neo-Welfare State

At the constituency level, the contents of parliamentary candidates' appeals provide evidence that import competition led to increased demand for the neo-welfare state. We expect that candidates could observe some signal of local demand for particular policies, and would emphasize policies that were more popular with voters in their constituencies. If candidates emphasized a policy more in a given area, it was presumably in part because that policy was more popular there. We regress a normalized measure of references to specific policy-related

Table 4: Effects of import competition on newspaper references to trade

| | "import" | | | | "trade" | | | |
|---|---|---|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
| $\Delta$IPW$_{1885}$ | 0.089*** | 0.100*** | | | 0.146*** | 0.111*** | | |
| | (0.031) | (0.034) | | | (0.034) | (0.033) | | |
| $\Delta$IPW$_{1900}$ | | | 0.198*** | 0.192*** | | | 0.253*** | 0.206*** |
| | | | (0.048) | (0.056) | | | (0.048) | (0.062) |
| Years | All | All | 1900–1910 | 1900–1910 | All | All | 1900–1910 | 1900–1910 |
| Initial Mf x year | | x | | x | | x | | x |
| Observations | 2,365 | 2,365 | 962 | 962 | 2,365 | 2,365 | 962 | 962 |
| R$^2$ | 0.778 | 0.779 | 0.859 | 0.860 | 0.786 | 0.789 | 0.875 | 0.878 |
| Adjusted R$^2$ | 0.721 | 0.722 | 0.752 | 0.753 | 0.731 | 0.733 | 0.781 | 0.785 |
| *Note:* | *p<0.1; **p<0.05; ***p<0.01 | | | | | | | |

Newspaper-level regressions. Dependent variable is number of uses of specified term per newspaper issue, standardized. All models include newspaper and year fixed effects. For newspapers in cities, $\Delta$IPW is calculated at the city-, not constituency-level. Standard errors clustered by county in parentheses.

terms in Liberal manifestos on $\Delta$IPW. We focus on three terms, "social reform," which was used to refer broadly to social policy, "poor law," the punitive system of welfare which Liberal governments in the 1900s promised to reform, and "labour exchange," a proposed policy to deal with unemployment due to economic fluctuations. These policies sought to address hardships endured by adult unemployed workers, those affected by import competition. Table 5 shows a consistent positive association between import competition and Liberal candidates mentioning these phrases.

Qualitative newspaper evidence suggests in addition that voters understood that voting Liberal meant voting for the welfare state. Conservative campaigners in January 1910 argued that unemployment "was 'the' issue" in the election.[9] Responding to this Conservative challenge, the Liberal chancellor Lloyd George argued that the Liberals' proposed budget "makes a larger provision for mitigating the evils of unemployment than any measure ever introduced," drawing emphasis in particular to labor exchanges and unemployment insurance.[10]

There is also evidence from historians and primary sources that import competition led Liberal politicians to prioritize welfare state reforms. Green (1995, 230) notes that economic dislocation lent credence to Conservative promises of tariff reform, which promised to "deal with the causes as well as the symptoms of social distress." Searle (1992) argues that the Liberal party adopted an expanded policy of social reform in response to this electoral threat. In 1910, the Labour MP Philip Snowden argued that supporters of Free Trade had to promote "social reforms which will so improve the conditions of the working classes that they will not be victims of the sophistries and plausibilities of Tariff 'Reform.'"[11]

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[9] "Lieutenant Bellairs and Unemployment. Tariff 'Reform' Solution," *Manchester Guardian*, January 4, 1910.

[10] "Mr Lloyd George: Speech to London Liberals. Unemployment. The evil intensified by protection: Government remedies," *Manchester Guardian*, January 1, 1910.

[11] "Mr Philip Snowden: The way to meet tariff 'reform,'" *Manchester Guardian*, January 10, 1910.

Table 5: Effect of local trade shocks on references to social reform in Liberal campaign manifestos

| | "social reform" | | "poor law" | | "labour exchange" | | All | |
|---|---|---|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
| $\Delta\text{IPW}_{1885}$ | 0.094** | 0.062* | 0.071** | 0.067** | 0.079*** | 0.088*** | 0.124*** | 0.101*** |
| | (0.037) | (0.034) | (0.032) | (0.026) | (0.026) | (0.027) | (0.035) | (0.031) |
| Initial Mf x year | | x | | x | | x | | x |
| Observations | 2,121 | 2,121 | 2,121 | 2,121 | 2,121 | 2,121 | 2,121 | 2,121 |
| $R^2$ | 0.314 | 0.320 | 0.268 | 0.271 | 0.457 | 0.458 | 0.362 | 0.365 |
| Adjusted $R^2$ | 0.126 | 0.131 | 0.067 | 0.069 | 0.309 | 0.307 | 0.187 | 0.188 |

*Note:* $^*p<0.1$; $^{**}p<0.05$; $^{***}p<0.01$

Manifesto-level regressions. Dependent variable is number of uses of specified term relative to total length of manifesto, by Liberal candidates, standardized. All models include constituency and election fixed effects. Standard errrors clustered by county in parentheses.

## 7.3  Changing Attitudes towards the Unemployed

The results presented thus far—that German import competition induced a shift towards the Lib-Lab pact proposing the early welfare state—could be explained by a direct compensation effect (Rodrik, 1998). We also find evidence consistent with a different mechanism, in which trade-induced economic turmoil, because it was unrelated to the behavior of those affected, changed beliefs about the moral desert of the unemployed. A new concept of unemployment emerged in this period, and we find evidence that its emergence was linked to the incidence of the trade shock. We also see this concept of unfair misfortune linked to economic fluctuations in Liberal campaign rhetoric.

There is qualitative evidence that a shift in attitudes towards unemployment occurred in early 20th century Britain. Beveridge (1910), later the architect of the welfare state, argued that unemployment, "the problem of the adjustment of the supply of labour and the demand for labour" (p. 4), was the product of technical change, "fluctuations of industrial activity" (p. 13), and the need for excess labor for industries to hire in boom periods. While acknowledging that the least productive workers may be more likely to be unemployed, Beveridge noted that "The best and most regular of workmen may in a changing world find himself exceptionally unemployed" (p. 142). The prevalence of unemployment was thus distinct from the moral character of the unemployed. The concept of "unemployment" as distinct from vagrancy entered common usage at this time. This sharp break can be seen in Figure 6, which plots references to "unemployment," "vagrancy," and "pauperism" in the *Times* newspaper over the period.

This attitudinal shift was linked to the incidence of the trade shock. Table 6 examines the link between import competition and the use of terms related to this new concept of unemployment in newspapers. It shows the results of newspaper-level regressions in which the dependent variable is the number of references to "unemployment," "employment" and the "unemployed," minus the number of references to "pauper(s)," "pauperism," "vagrant(s)," and "vagrancy," standardized. Positive coefficients across specifications suggest that coverage

References to unemployment in the Times newspaper, 1880-1910
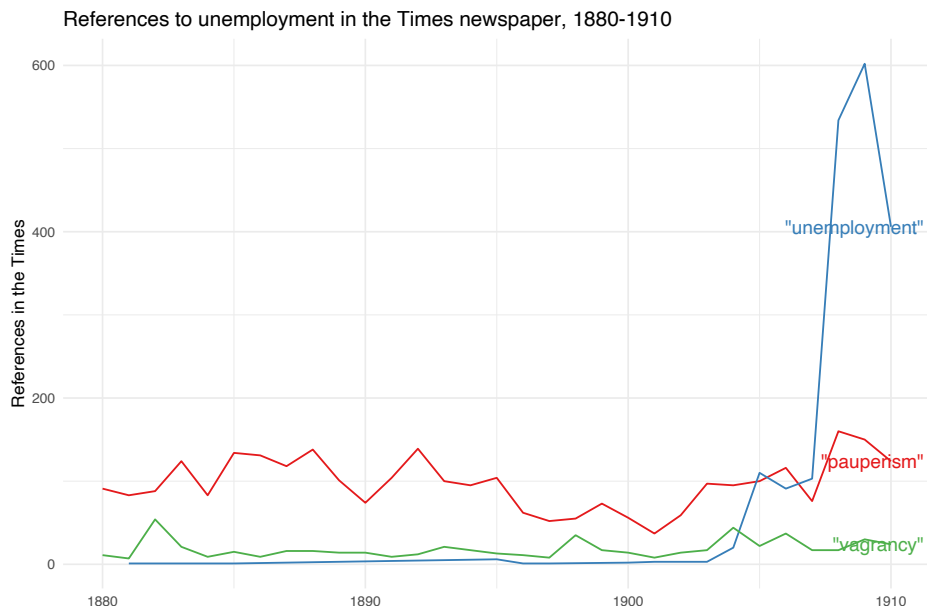
Figure 6: References to unemployment, vagrancy, and pauperism in the *Times*

of the economic effects of the trade shock focused on the morally-neutral phenomenon of unemployment, not morally-charged notions of vagrancy and pauperism. In Appendix D we employ a more principled approach, and use natural language processing methods to identify terms more associated with the new concept of unemployment relative to older notions of pauperism. We find a similar effect of import competition on newspaper usage of terms connected to this new concept of unemployment in Table A-17.[12]

The new concept of unemployment featured in Liberal arguments for the early welfare state. Campaigning in 1910, Lloyd George claimed "Unemployment entails great suffering on the part of people who do not deserve it ... They are not responsible for the fluctuations in trade. They are purely its victims, and I think that it is a duty of any country within the limits of its resources to see that that suffering is mitigated."[13] The idea that economic

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[12]One might be concerned that these regressions are picking up a change in attitudes linked to growing awareness of the social risks faced by workmen, due to rising industrialization rather than the trade shock (Moses, 2018). We think that is unlikely because import competition should have at the local level decreased industrialization, and because the even-numbered models control for non-linear trends related to initial industrialization, which should account for most variation in within-city industrialization over the period.

[13]"Mr Lloyd George: Speech to London Liberals. Unemployment. The evil intensified by protection: Government remedies," *Manchester Guardian*, January 1, 1910.

Table 6: Effects of import competition on newspaper references to unemployment, vagrancy, and pauperism

|  | (1) | (2) | (3) | (4) |
|---|---|---|---|---|
| $\Delta\text{IPW}_{1885}$ | 0.095** | 0.073* | | |
|  | (0.036) | (0.039) | | |
| $\Delta\text{IPW}_{1900}$ | | | 0.204*** | 0.170** |
|  | | | (0.063) | (0.077) |
| Years | All | All | 1900–1910 | 1900–1910 |
| Initial Mf x year | | x | | x |
| Observations | 2,365 | 2,365 | 962 | 962 |
| $R^2$ | 0.706 | 0.709 | 0.791 | 0.794 |
| Adjusted $R^2$ | 0.630 | 0.633 | 0.632 | 0.636 |

*Note:*    *p<0.1; **p<0.05; ***p<0.01

Newspaper-level regressions. Dependent variable is the number of references to "unemployed," "unemployment," and "employment," minus the number of references to "vagrants," "vagrancy," "pauper," and "pauperism," standardized. All models include newspaper and year fixed effects. For newspapers in cities, $\Delta\text{IPW}$ is calculated at the city-, not constituency-level. Standard errors clustered by county in parentheses.

volatility meant that people out of work were not responsible for their misfortune was thus part of the argument used to convince voters to support the neo-welfare state.

## 7.4 Alternative Theories of the Effects of Import Competition

Existing research highlights an alternative set of political effects of trade exposure. Scholarship on the China trade shock finds that voters negatively impacted by increased trade want less trade and turn to protectionist candidates and parties (Che et al., 2016), punish incumbent politicians (Jensen, Quinn and Weymouth, 2017), and experience a shift in values towards authoritarianism and xenophobia (see for instance Ballard-Rosa et al. (Forthcoming)). A shift towards protectionism cannot explain our results, as the Liberals remained committed to free trade while the Conservatives were perceived to be more supportive of tariffs, partially embraced protectionism in 1906, and doubled down on that policy in the 1910 elections. We similarly find no evidence that German imports prompted voters to punish incumbent politicians, whether we define incumbency at the individual, party-constituency, or national level (Table A-16).

We do find evidence of increased attention to immigration in both newspapers and the election addresses of Conservative candidates. Anti-immigrant politics could be the manifestation of in-group favoritism and xenophobia caused by import competition, as suggested by scholarship on the China trade shock, or it could reflect voters' changed economic priorities. Protectionism and immigration restriction can be substitutes: restricting the supply of foreign workers who would compete in the labor market offers politicians a different way of limiting the harm to workers affected by rising imports (Peters, 2017).

In the 1900s the British government began to regulate immigration. The Conservative government in 1905 introduced the Aliens Act, which defined categories of undesirable immigrants and gave the state power to exclude them. The act mainly excluded Jewish immigrants from Eastern Europe. In Table A-20 we report a positive effect of import competition on Conservative candidates referring to immigrants, aliens, and Jews. Import competition

may have created demand for xenophobic policies, which Conservative candidates sought to capitalize on. We also find a positive effect on coverage of immigration in newspapers (Table A-21).

The net effect of anti-immigrant politics on electoral outcomes in this period is of secondary importance relative to the rise of the welfare state. The Aliens Act was a policy which Conservative MPs campaigned for and a Conservative government implemented, and so an increase in anti-immigrant politics cannot explain the shift towards the Liberals. We leave a study of when trade-induced xenophobia is electorally dominant, which would require more than one case study, for future research. A possible explanation for why the electoral effects of xenophobia in early 20th century Britain were relatively muted is that the scale of immigration, while historically unprecedented, was relatively small, and immigrants were concentrated in a handful of parliamentary constituencies in east London (Pelling, 1967).

# 8   Conclusion

We examine the economic and political effects of rising German imports in late 19th and early 20th century Britain. We find that the German trade shock increased the prevalence of vagrancy and employment in low-skilled occupations during the full study period of 1880 to 1910 and decreased electoral support for the Conservative Party after 1900. We note that the timing of when exposure to increasing imports had a differential effect on voting patterns coincides with when the Liberal Party started to advocate social reforms and investment in Britain's neo-welfare state. We provide evidence that trade shocks were correlated with Liberal candidate manifesto mentions of social reform, bolstering our interpretation that the left-of-center shift in trade-impacted constituencies reflects increased demand for social welfare spending. Our results suggest this compensation mechanism was driven by two considerations: the German trade shock increased assessments of how volatile employment is in a market economy and therefore how much social insurance is optimal, and it changed beliefs

about the deservingness of the poor, transforming vagrants into the unemployed, which in turn increased support for welfare state development.

These results suggest an important and under-appreciated role for globalization in the creation of the welfare state. They also resonate with a large literature on compensation theory including Cameron (1978) and Rodrik (1998). It is notable that some of the more recent research on the political consequences of China's integration with the world economy also shows political responses that are left-of-center (Che et al., 2016). But a great deal of this research records a response to trade that is more protectionist, skeptical of government's role in the economy, xenophobic, and supportive of nationalist and populist parties and candidates (Margalit, 2019; Colantone and Stanig, 2018b,c; Hays, Lim and Spoon, 2019; Milner, 2021).

What makes Britain in this period different? What more generally accounts for variation across individuals, regions, countries, and time periods in the political effects of openness? There are at least four important characteristics of British politics in the first decade of the 20th century that contrast to the political economy setting of 21st century advanced industrial democracies and may have contributed to the turn to the welfare state and social reform.

First, progressive reforms in the 20th century promised to have a relatively significant marginal impact because they were added to a minimal state and promised to ameliorate some of the worst aspects of laissez-faire capitalism. Second, the 21st century context was one in which the state was perceived to have failed to set policies that ensured that the gains from globalization were widely shared, while at the turn of the 20th century the idea that the state was responsible for such outcomes was just beginning to take hold. It may be more compelling to consider a new role for the state than to invest further in a state that had failed. Third, differences in income levels in the two periods may have influenced the weight of labor market costs and consumer benefits associated with increased trade. Free trade in early 20th century Britain was first and foremost associated with cheaper food prices, which

was central to Liberal Party arguments against protectionism and in favor of social reform to deal with labor market dislocation. While consumer considerations are certainly relevant in the modern context and have been shown to be important in attitudes about trade in the developing world (Baker, 2003), it is not clear that they have the same political resonance in contemporary debates in developed democracies. Finally, it is possible that variation in ethnic and racial heterogeneity or the extent of immigration influences the likelihood that individuals blame outgroups for changes in their economic trajectories or embrace nationalist and populist solutions. For example, the foreign born population as a percent of the total in England and Wales is nearly an order of magnitude higher now than at the end of the 19th century. Future research is needed to construct a full account of differing political responses to openness. Our study provides a roadmap for such research.

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# Online Appendix for "The German Trade Shock and The Rise of the Neo-Welfare State in Early 20th Century Britain"

# A  Additional Information on Trade Shock Measures

Table A-1: Industry categories

| Industry | 1881 Employment | ΔIPW (1885-1910) |
|---|---|---|
| Apparel And Haberdashery | 587,889 | 2.376 |
| Coal Coke And Patent Fuel | 381,825 | -0.009 |
| Cotton Manufactures | 290,772 | 17.322 |
| Shoes | 209,525 | 0.159 |
| Cotton Yarn | 186,136 | -0.754 |
| Machinery | 172,153 | 9.483 |
| Wool Manufactures | 139,740 | 5.556 |
| Iron Manufactures | 129,884 | 12.342 |
| Printed Matter | 95,949 | 0.322 |
| Hats | 85,334 | 0.411 |
| Wood Products | 83,723 | 0.800 |
| Sheet Iron And Steel | 67,794 | 51.355 |
| Carriages | 55,182 | 0.254 |
| Silk Manufactures | 53,361 | -9.635 |
| Wool Yarn | 47,485 | 5.997 |
| Stone | 42,543 | 5.075 |
| Lace | 42,406 | 18.281 |
| China And Earthenware | 42,320 | 6.408 |
| Leather Manufactures | 42,015 | 10.029 |
| Paper | 34,895 | 57.654 |
| Beer | 33,438 | 2.814 |
| Hardware And Cutlery | 29,569 | 35.075 |
| Brass Manufactures | 28,273 | 4.284 |
| Fish | 26,667 | -1.204 |
| Iron Ore | 26,072 | 0.483 |
| Leather | 25,327 | 37.490 |
| Dairy | 24,430 | -77.293 |
| Clocks And Watches | 23,345 | 3.241 |
| Glass | 21,963 | 55.714 |
| Art | 21,291 | 15.661 |
| Plaiting Of Straw | 16,320 | 19.085 |
| Chemicals | 15,360 | 77.730 |
| Bristles And Brushes | 15,170 | 27.145 |

| | | |
|---|---|---|
| Gloves | 14,926 | 22.578 |
| Implements And Tools | 12,859 | 6.689 |
| Linen | 12,850 | 108.301 |
| Tin Ore | 12,807 | 1.109 |
| Silk Yarn | 11,715 | 26.929 |
| Lead Ore | 11,607 | 0.000 |
| Arms And Ammunition | 11,355 | -3.686 |
| Slate | 10,824 | 0.000 |
| Cordage | 10,716 | 17.905 |
| Tobacco Manufactures | 10,528 | 4.988 |
| Jewellery | 9,257 | 34.175 |
| Musical Instruments | 7,787 | 29.650 |
| Umbrellas And Sticks | 7,363 | 4.252 |
| Dyes And Paints | 7,077 | 268.612 |
| Skins And Furs | 7,071 | 256.483 |
| Electricals | 7,010 | 198.564 |
| Buttons | 5,976 | 12.485 |
| Meat | 5,087 | 98.880 |
| Soft Drinks | 4,809 | 30.954 |
| Artificial Flowers | 4,800 | 68.442 |
| Oil Seed And Oil Cake | 4,790 | 61.247 |
| Scientific Instruments | 4,767 | 89.464 |
| Alkali | 4,634 | 16.585 |
| Sand Flint Clay Gravel Chalk | 4,552 | 13.875 |
| Chocolate | 4,501 | 133.220 |
| Copper Ore | 4,341 | 1.213 |
| Matches | 4,266 | 31.966 |
| Sheet Copper | 4,143 | 12.086 |
| Toys | 4,136 | 139.194 |
| Copper Manufactures | 3,721 | 81.646 |
| Cement | 3,670 | 19.297 |
| Refined Sugar | 3,443 | 500.000 |
| Candles And Grease | 3,395 | 74.711 |
| Fancy Goods | 3,384 | 137.369 |
| Lamps | 3,221 | 5.059 |
| Tobacco Pipes | 3,175 | 14.261 |
| Embroidery | 2,668 | 500.000 |
| Sheet Lead | 2,468 | -56.958 |
| Soap | 2,445 | 1.062 |
| Jute Manufactures | 2,205 | 54.536 |
| Mats | 1,989 | 11.924 |

| | | |
|---|---:|---:|
| Sheet Zinc | 1,950 | 500.000 |
| Manure | 1,924 | 120.665 |
| Rubber | 1,923 | 495.493 |
| Feathers | 1,807 | 80.503 |
| Tin | 1,602 | -9.023 |
| Motor Cars | 1,358 | 500.000 |
| Sheet Gold Silver | 1,333 | -27.131 |
| Waterproof Goods | 962 | 188.389 |
| Bicycles | 949 | 140.551 |
| Mustard Vinegar Spice Pickle | 924 | 18.902 |
| Hay | 902 | 43.167 |
| Spirits | 850 | -32.727 |
| Sheet Other Metals | 774 | -74.398 |
| Silver Ore | 682 | -3.554 |
| Floor Cloth And Oil Cloth | 653 | 75.790 |
| Jams And Sweets | 515 | 500.000 |
| Glue | 399 | 500.000 |
| Zinc Manufactures | 203 | 500.000 |
| Gold Ore | 116 | 0.000 |
| Gum | 107 | 500.000 |
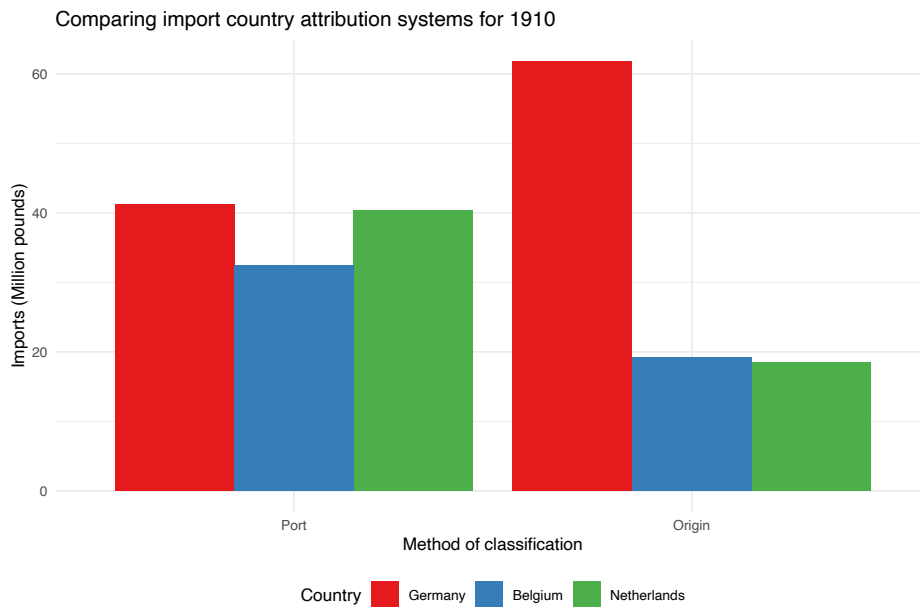


Figure A-1: Comparing value of imports by country according to pre- and post-1908 classification systems

# B    Additional Regressions and Robustness Checks for Economic Regressions

As an additional measure, we compute the average economic status of people in the constituency, using occupational titles, and scores from the HISCAM project (Lambert et al., 2013). The HISCAM project uses historical data on the jobs of parents and their children to infer the relative social status of different occupations. The key assumption in constructing these status scores is that children tend to hold similar status jobs to those of their parents, and so if a pair of occupations occur frequently in parent-child pairs, those occupations are likely similar status. We use a version of the scores estimated from 19th century UK parish registers and genealogical data. Regressions using this variable are shown in Table A-2.

We also show Rotemberg weights for the industry-year combinations for which our regressions of economic outcome variables on import competition are most sensitive to misspecification, following Goldsmith-Pinkham, Sorkin and Swift (2020), in Table A-3. We then re-estimate these models in Table A-4, adding controls for these industry shares interacted with year fixed effects.
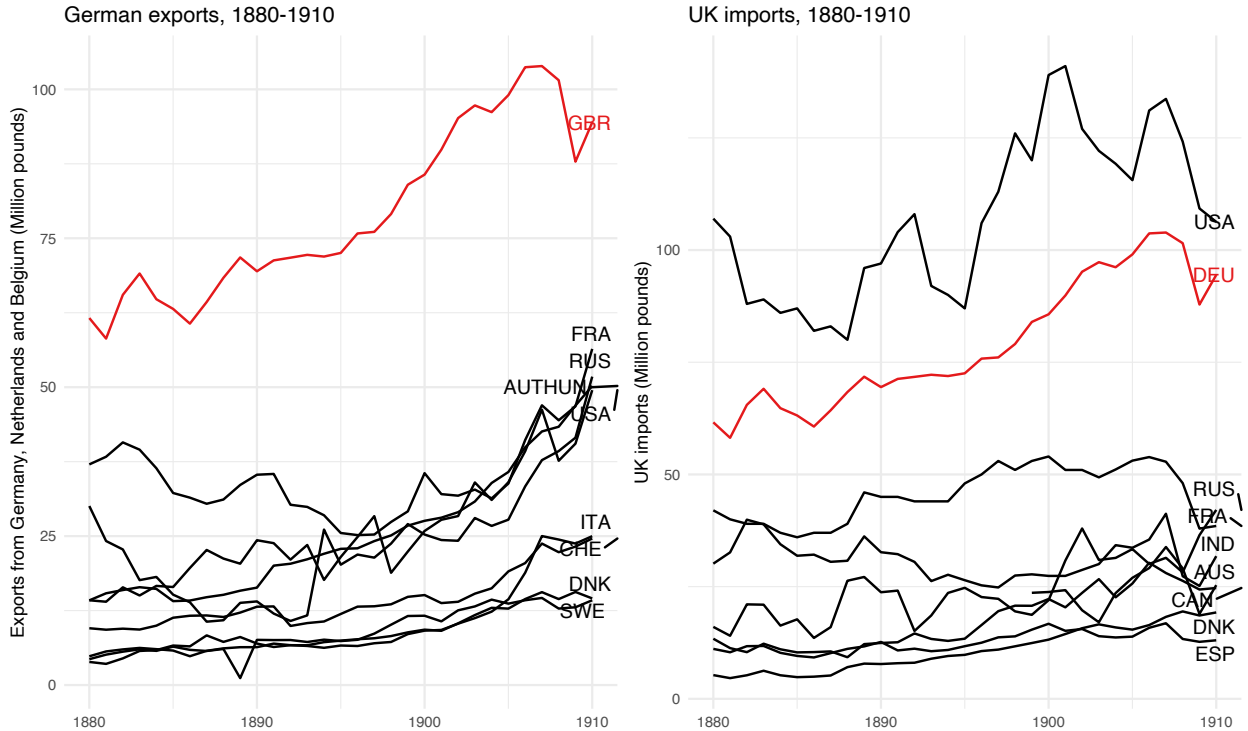


Figure A-2: German exports and UK imports 1880–1910, data from TRADHIST (note the change in UK import attribution in 1908)

Table A-2: Effects of import competition on average economic status

|  | (1) | (2) | (3) | (4) |
|---|---|---|---|---|
| $\Delta\text{IPW}_t$ | $-0.067$** | $-0.073$*** | $-0.047$** | $-0.101$*** |
|  | (0.026) | (0.026) | (0.020) | (0.037) |
| Controls |  | x | x | x |
| Initial Mf x year |  |  | x |  |
| Constituency trends |  |  |  | x |
| Observations | 1,389 | 1,389 | 1,389 | 1,389 |
| $R^2$ | 0.240 | 0.243 | 0.306 | 0.675 |
| Adjusted $R^2$ | 0.239 | 0.240 | 0.302 | 0.510 |

| *Note:* | *p<0.1; **p<0.05; ***p<0.01 |
|---|---|
|  | Stacked first difference estimates, at the constituency level, for 1880–1890, 1890–1900, 1900-1910. Dependent variable is change in average economic status. All models include year fixed effects. (2)–(4) add controls for lagged manufacturing employment and lagged average economic status; (3) includes 1880 manufacturing employment interacted with year dummy variables, (4) includes constituency fixed effects, which adjust for constituency-specific time trends. Standard errors clustered by county in parentheses. |

Table A-3: Rotemberg weights for economic regressions

| No controls | | | Controls and Mf x year | | |
|---|---|---|---|---|---|
| Industry | Year | Weight | Industry | Year | Weight |
| sheet iron and steel | 1910 | 0.106 | sheet zinc | 1910 | 0.133 |
| sheet zinc | 1910 | 0.093 | sheet iron and steel | 1910 | 0.127 |
| refined sugar | 1900 | 0.065 | refined sugar | 1900 | 0.073 |
| cotton manufactures | 1910 | 0.064 | sheet zinc | 1890 | 0.068 |
| refined sugar | 1890 | 0.055 | refined sugar | 1890 | 0.059 |
| hardware and cutlery | 1910 | 0.047 | gloves | 1890 | 0.058 |
| sheet zinc | 1890 | 0.047 | hardware and cutlery | 1910 | 0.055 |
| refined sugar | 1910 | 0.042 | wool manufactures | 1910 | 0.049 |
| skins and furs | 1910 | 0.037 | refined sugar | 1910 | 0.043 |
| gloves | 1890 | 0.036 | skins and furs | 1910 | 0.035 |
| cotton manufactures | 1900 | 0.029 | sheet copper | 1890 | 0.030 |
| glass | 1900 | 0.026 | glass | 1900 | 0.028 |
| lace | 1910 | 0.023 | lace | 1910 | 0.025 |
| sheet copper | 1890 | 0.021 | cotton manufactures | 1910 | 0.017 |
| wool manufactures | 1910 | 0.012 | silk manufactures | 1900 | 0.012 |
| electricals | 1910 | 0.012 | electricals | 1910 | 0.012 |
| linen | 1910 | 0.012 | linen | 1890 | 0.011 |
| dyes and paints | 1910 | 0.011 | linen | 1910 | 0.010 |
| chemicals | 1910 | 0.010 | jewellery | 1910 | 0.010 |
| jewellery | 1910 | 0.010 | silk manufactures | 1890 | 0.009 |

Table A-4: Robustness checks for economic variables

| | Δ ln % vagrants | | | | Δ ln % unskilled jobs | | | |
|---|---|---|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
| $\Delta\text{IPW}_t$ | 0.175*** | 0.170*** | 0.173*** | 0.134*** | 0.017*** | 0.020*** | 0.021*** | 0.024*** |
| | (0.039) | (0.047) | (0.048) | (0.029) | (0.005) | (0.006) | (0.004) | (0.006) |
| Initial steel x year | x | | | | x | | | |
| Initial zinc x year | | x | | | | x | | |
| Initial sugar x year | | | x | | | | x | |
| Initial shares PCA x year | | | | x | | | | x |
| Observations | 1,389 | 1,389 | 1,389 | 1,389 | 1,389 | 1,389 | 1,389 | 1,389 |
| $R^2$ | 0.883 | 0.880 | 0.883 | 0.890 | 0.089 | 0.071 | 0.070 | 0.160 |
| Adjusted $R^2$ | 0.883 | 0.880 | 0.883 | 0.889 | 0.083 | 0.065 | 0.064 | 0.151 |

*Note:*

*p<0.1; **p<0.05; ***p<0.01

Stacked first difference estimates, at the constituency level, for 1880–1890, 1890–1900, 1900-1910. All models include year fixed effects, and controls for lagged share unskilled, lagged manufacturing employment and lagged fraction of vagrants; (1) and (5) include the share of employment in 1881 in sheet iron and steel interacted with year fixed effects, (2) and (6) do the same for employment in sheet zinc, (3) and (7) the same for sugar. (4) and (8) add the first three principal components for the 1881 industry shares interacted with year fixed effects. Standard errors clustered by county in parentheses.

# C  Additional Regressions and Robustness Checks for Voting Regressions

This section shows additional information and robustness checks relevant to our estimates of the effects of import competition on voting. Table A-5 shows the results with the voteshare of different parties as the dependent variable, and Table A-6 shows equivalent regressions using the combined voteshare for the Liberals and Labour as the dependent variable. Table A-8 shows the largest industry-year Rotemberg weights in these models, and Table A-9 shows results controlling for the most important industry shares interacted with year fixed effects. Table A-10 re-estimates our main voting regressions of Conservative vote share on import competition for the 1900–1910 period, dropping specific elections. Table A-11 examines the moderating effect of a cross-sectional measure of union membership on these voting results, and shows that the main results are robust to controlling for this variable interacted with year fixed effects. Table A-12 further breaks down our results by period, to verify that our conclusion of an anti-Conservative result post-1900 and a null result pre-1900 is not sensitive to the precise choice of starting year. Table A-13 controls for the change in exports to Germany, which may pick up common demand and technological shocks, and exposure to wheat imports from the US. Table A-14 provides additional checks for pre-trends, controlling for constituency trends in Conservative voting and verifying that the change in German imports after 1895 did not affect pred-1895 outcomes. Table A-15 replicates the main post-1900 results using the estimator proposed by de Chaisemartin and D'Haultfœuille (2020), which is robust to negative weights issues in two-way fixed effects estimation. Table A-16 examines the effects of the change in German imports on three types of incumbency, at the MP, constituency-level party, and national-level party level.

Table A-5: Effects of import competition on voting for different parties

|  | Conservative | | | Labour | | Liberal vote share | | |
|---|---|---|---|---|---|---|---|---|
|  | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
| $\Delta\text{IPW}_{1885}$ | $-0.003$ | $0.014^{**}$ |  | $0.014^{*}$ | $-0.016^{***}$ | $-0.026^{***}$ |  |  |
|  | (0.004) | (0.006) |  | (0.008) | (0.005) | (0.009) |  |  |
| $\Delta\text{IPW}_{1900}$ |  |  | $-0.021^{***}$ |  |  |  | 0.008 | $0.019^{***}$ |
|  |  |  | (0.006) |  |  |  | (0.007) | (0.005) |
| Years | All | 1885–1900 | 1900-1910 | All | All | 1885-1900 | 1900–1910 | 1900-1910 |
| Excluding Labour |  |  |  |  |  |  |  | x |
| Observations | 3,133 | 1,860 | 1,578 | 3,133 | 3,133 | 1,860 | 1,578 | 1,336 |
| $R^2$ | 0.709 | 0.720 | 0.834 | 0.502 | 0.533 | 0.693 | 0.739 | 0.811 |
| Adjusted $R^2$ | 0.657 | 0.626 | 0.765 | 0.414 | 0.451 | 0.590 | 0.631 | 0.721 |

*Note:*
$^{*}$p<0.1; $^{**}$p<0.05; $^{***}$p<0.01
Constituency-level fixed effects regression, dependent variable is share of the vote for specified party. All models include constituency and election fixed effects. Model 8 excludes elections contested by Labour. Standard errors clustered by county in parentheses.

Table A-6: Effects of import competition on voting for combined Liberals and Labour

|  | (1) | (2) | (3) | (4) |
|---|---|---|---|---|
| $\Delta\text{IPW}_{1885}$ | $-0.020^{***}$ | $-0.013$ |  |  |
|  | $(0.007)$ | $(0.008)$ |  |  |
| $\Delta\text{IPW}_{1900}$ |  |  | $0.019^{***}$ | $0.015^{***}$ |
|  |  |  | $(0.005)$ | $(0.005)$ |
| Years | 1885–1900 | 1885–1900 | 1900–1910 | 1900-1910 |
| Initial MF x election |  | x |  | x |
| Observations | 1,860 | 1,860 | 1,578 | 1,578 |
| $R^2$ | 0.709 | 0.713 | 0.822 | 0.823 |
| Adjusted $R^2$ | 0.611 | 0.616 | 0.748 | 0.748 |
| *Note:* | \*p<0.1; \*\*p<0.05; \*\*\*p<0.01 | | | |

*Note:* $^*$p<0.1; $^{**}$p<0.05; $^{***}$p<0.01

Constituency-level fixed effects regression, dependent variable is combined share of the vote for the Liberal and Labour parties. All models include constituency and election fixed effects, (2) and (4) add the manufacturing employment in 1880 interacted with election dummies. Standard errors clustered by county in parentheses.

Table A-7: First-difference effects of import competition on voting

| | (1) | (2) | (3) | (4) | (5) | (6) |
|---|---|---|---|---|---|---|
| $\Delta$IPW$_t$ | 0.018** | 0.016** | −0.027*** | −0.020*** | 0.017 | 0.017 |
| | (0.007) | (0.008) | (0.009) | (0.007) | (0.010) | (0.011) |
| $\Delta$IPW$_{t+1}$ | | | | | 0.001 | −0.002 |
| | | | | | (0.007) | (0.009) |
| Years | 1885–1900 | 1885–1900 | 1900–1910 | 1900-1910 | 1885–1900 | 1885–1900 |
| Initial Mf x election | | x | | x | | x |
| Observations | 712 | 712 | 578 | 578 | 712 | 712 |
| R$^2$ | 0.015 | 0.017 | 0.072 | 0.086 | 0.015 | 0.017 |
| Adjusted R$^2$ | 0.013 | 0.011 | 0.069 | 0.079 | 0.011 | 0.010 |

*Note:*  $^*$p<0.1; $^{**}$p<0.05; $^{***}$p<0.01

Constituency-level stacked first-difference regressions, for waves 1885–1892, 1892–1900, 1900–1910 (note there were two elections in 1910). Dependent variable is change in share of the vote for the Conservative Party. All models include constituency and election fixed effects, (2), (4) and (6) add controls for manufacturing employment in 1880 interacted with election dummies. Standard errors clustered by county in parentheses.

Table A-8: Rotemberg weights for post-1900 voting regressions

| No controls | | | Initial Mf x election | | |
|---|---|---|---|---|---|
| Industry | Year | Weight | Industry | Year | Weight |
| cotton manufactures | 1910 | 0.095 | lace | 1906 | 0.120 |
| cotton manufactures | 1911 | 0.089 | sheet iron and steel | 1910 | 0.091 |
| lace | 1906 | 0.085 | refined sugar | 1910 | 0.091 |
| sheet iron and steel | 1910 | 0.085 | refined sugar | 1911 | 0.089 |
| refined sugar | 1910 | 0.071 | sheet iron and steel | 1911 | 0.069 |
| refined sugar | 1911 | 0.069 | wool manufactures | 1910 | 0.055 |
| sheet iron and steel | 1911 | 0.063 | cotton manufactures | 1910 | 0.045 |
| skins and furs | 1910 | 0.042 | skins and furs | 1910 | 0.043 |
| skins and furs | 1911 | 0.040 | skins and furs | 1911 | 0.041 |
| hardware and cutlery | 1910 | 0.028 | wool manufactures | 1911 | 0.040 |
| hardware and cutlery | 1911 | 0.027 | cotton manufactures | 1911 | 0.037 |
| refined sugar | 1906 | 0.016 | hardware and cutlery | 1910 | 0.027 |
| linen | 1910 | 0.016 | hardware and cutlery | 1911 | 0.025 |
| sheet zinc | 1910 | 0.015 | refined sugar | 1906 | 0.021 |
| sheet zinc | 1911 | 0.015 | silver ore | 1906 | 0.019 |
| wool manufactures | 1910 | 0.014 | sheet zinc | 1911 | 0.018 |
| dyes and paints | 1910 | 0.014 | sheet zinc | 1910 | 0.016 |
| linen | 1911 | 0.013 | sheet zinc | 1906 | 0.014 |
| dyes and paints | 1911 | 0.012 | linen | 1910 | 0.014 |
| silver ore | 1906 | 0.012 | electricals | 1910 | 0.012 |

Table A-9: Robustness checks for post-1900 voting regressions

|  | (1) | (2) | (3) | (4) | (5) |
|---|---|---|---|---|---|
| $\Delta\text{IPW}_{1900}$ | $-0.018$*** | $-0.017$*** | $-0.011$** | $-0.019$*** | $-0.015$** |
|  | (0.006) | (0.006) | (0.005) | (0.006) | (0.006) |
| Initial steel x year | x |  |  |  |  |
| Initial cotton x year |  | x |  |  |  |
| Initial sugar x year |  |  | x |  |  |
| Initial lace x year |  |  |  | x |  |
| Initial shares PCA x year |  |  |  |  | x |
| Observations | 1,578 | 1,578 | 1,578 | 1,578 | 1,578 |
| $R^2$ | 0.839 | 0.840 | 0.838 | 0.838 | 0.842 |
| Adjusted $R^2$ | 0.771 | 0.772 | 0.769 | 0.770 | 0.773 |

| *Note:* | *p<0.1; **p<0.05; ***p<0.01 |
|---|---|
|  | Constituency-level fixed effects regressions, for 1900–1910. Dependent variable is share of the vote for Conservative candidates. All models include constituency and year fixed effects, and initial manufacturing by year controls. (1) includes the share of employment in 1881 in sheet iron and steel interacted with year fixed effects, (2) does the same for employment in sheet zinc, (3) does the same for sugar, (4) does the same for lace. (5) adds the first three principal components for the 1881 industry shares interacted with year fixed effects. Standard errors clustered by county in parentheses. |

Table A-10: Effects of import competition on voting, dropping certain years

| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
|---|---|---|---|---|---|---|---|---|
| $\Delta$IPW$_{1900}$ | −0.017*** | −0.017*** | −0.026*** | −0.020** | −0.020*** | −0.016*** | −0.020*** | −0.012* |
| | (0.005) | (0.003) | (0.009) | (0.007) | (0.005) | (0.005) | (0.008) | (0.006) |
| Excluding | 1900 | 1900 | 1906 | 1906 | 1910J | 1910J | 1910D | 1910D |
| Initial MF x election | | x | | x | | x | | x |
| Observations | 1,273 | 1,273 | 1,145 | 1,145 | 1,122 | 1,122 | 1,194 | 1,194 |
| R$^2$ | 0.903 | 0.904 | 0.857 | 0.859 | 0.831 | 0.834 | 0.833 | 0.837 |
| Adjusted R$^2$ | 0.848 | 0.849 | 0.761 | 0.763 | 0.715 | 0.718 | 0.728 | 0.733 |

*Note:*    *p<0.1; **p<0.05; ***p<0.01

Constituency-level fixed effects regression, dependent variable is share of the vote for the Conservative Party, for the period 1900–1910. All models include constituency and election fixed effects, even numbers add manufacturing employment in 1880 interacted with election dummies. Each model drops one election from the period. Standard errors clustered by county in parentheses.

Table A-11: Moderating effect of unions on effect of import competition on voting

| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) |
|---|---|---|---|---|---|---|---|---|---|---|
| $\Delta IPW_{1885}$ | 0.009 | 0.008 | | | −0.001 | −0.009 | | | | |
| | (0.008) | (0.009) | | | (0.002) | (0.006) | | | | |
| $\Delta IPW_{1885} \times \%$ Union | 0.189 | −0.195 | | | | | | | | |
| | (0.131) | (0.125) | | | | | | | | |
| $\Delta IPW_{1900}$ | | | 0.003 | 0.005 | | | −0.011 | −0.025*** | −0.015*** | −0.013** |
| | | | (0.014) | (0.014) | | | (0.008) | (0.006) | (0.005) | (0.005) |
| $\Delta IPW_{1900} \times \%$ Union | | | −0.429** | −0.385* | | | | | | |
| | | | (0.205) | (0.203) | | | | | | |
| | | | | | | | | | | |
| Years | All | All | 1900–1910 | 1900–1910 | All | All | 1900–1910 | 1900–1910 | 1900–1910 | 1900–1910 |
| Union sub-sample | All | All | All | All | 2H | 1H | 2H | 1H | All | All |
| Union x election | | | | | x | x | x | x | x | x |
| Initial MF x election | | x | | x | x | x | x | x | x | x |
| Observations | 3,134 | 3,134 | 1,578 | 1,578 | 1,564 | 1,570 | 785 | 793 | 1,578 | 1,578 |
| $R^2$ | 0.704 | 0.708 | 0.837 | 0.839 | 0.702 | 0.679 | 0.827 | 0.822 | 0.841 | 0.842 |
| Adjusted $R^2$ | 0.652 | 0.656 | 0.768 | 0.771 | 0.647 | 0.618 | 0.755 | 0.744 | 0.774 | 0.775 |

*Note:* $^{*}$p<0.1; $^{**}$p<0.05; $^{***}$p<0.01

Constituency-level fixed effects regression, dependent variable is share of the vote for the Conservative Party. Data on union membership relative to population in 1892 at the county level is taken from Sidney and Beatrice Webb, *The History of Trade Unionism* (London: Longmans, Green and Co., 1896). Models (5) and (7) are estimated for constituencies with above-median unionization, (6) and (8) for constituencies with below-median unionization. Models (9) and (10) replicate regressions from table 3, adding controls for unionization interacted with year dummy variables. All models include constituency and election fixed effects, Standard errors clustered by county in parentheses.

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Table A-12: Effects of import competition on voting, by period

| | 1885–1895 | | 1895–1906 | | 1906–1910 | | 1895–1910 | |
|---|---|---|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
| $\Delta$IPW$_{1885}$ | 0.006 | −0.0002 | | | | | | |
| | (0.007) | (0.008) | | | | | | |
| $\Delta$IPW$_{1900}$ | | | −0.005 | 0.001 | −0.017*** | −0.017*** | −0.013*** | −0.010*** |
| | | | (0.004) | (0.004) | (0.005) | (0.003) | (0.004) | (0.002) |
| Initial MF x election | | x | | x | | x | | x |
| Observations | 1,555 | 1,555 | 1,086 | 1,086 | 1,273 | 1,273 | 1,926 | 1,926 |
| R$^2$ | 0.750 | 0.753 | 0.785 | 0.789 | 0.903 | 0.904 | 0.788 | 0.791 |
| Adjusted R$^2$ | 0.643 | 0.646 | 0.624 | 0.630 | 0.848 | 0.849 | 0.721 | 0.724 |

*Note:* *p<0.1; **p<0.05; ***p<0.01

Constituency-level fixed effects regression, dependent variable is share of the vote for the Conservative Party, subset by different groups of years. All models include constituency and election fixed effects, even numbers add manufacturing employment in 1880 interacted with election dummies. Standard errors clustered by county in parentheses.

Table A-13: Effects of import competition on voting, controlling for exports and wheat imports

|  | (1) | (2) | (3) | (4) |
|---|---|---|---|---|
| $\Delta\text{IPW}_{1900}$ | −0.021*** | −0.016*** | −0.016*** | −0.014** |
|  | (0.005) | (0.006) | (0.006) | (0.005) |
| $\Delta\text{Exports per worker}_{1900}$ | −0.010** | −0.0002 |  |  |
|  | (0.004) | (0.007) |  |  |
| $\Delta\text{US wheat imports per worker}_{1900}$ |  |  | −0.033*** | −0.026** |
|  |  |  | (0.009) | (0.010) |
| Initial MF x election |  | x |  | x |
| Observations | 1,578 | 1,578 | 1,578 | 1,578 |
| $R^2$ | 0.835 | 0.837 | 0.837 | 0.838 |
| Adjusted $R^2$ | 0.767 | 0.768 | 0.769 | 0.770 |

*Note:* *p<0.1; **p<0.05; ***p<0.01

Constituency-level fixed effects regression, dependent variable is share of the vote for the Conservative Party, for the period 1900–1910. All models include constituency and election fixed effects, even numbers add manufacturing employment in 1880 interacted with election dummies. Models 1 and 2 in addition control for exports to Germany per worker, computed the same way as $\Delta\text{IPW}$, models 3 and 4 control for US wheat imports per worker, with wheat employment calculated using agricultural laborers weighted by the share of county land devoted to wheat cultivation. Standard errors clustered by county in parentheses.

Table A-14: Checks for pre-trends

| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
|---|---|---|---|---|---|---|---|---|
| $\Delta IPW_{1900}$ | −0.017*** | −0.011** | −0.022*** | −0.017*** | | | | |
| | (0.005) | (0.005) | (0.005) | (0.005) | | | | |
| Constituency Conservative trend (1885–1910) | 0.872*** | 0.861*** | | | | | | |
| | (0.177) | (0.175) | | | | | | |
| Constituency Conservative trend (1885–1900) | | | −0.228* | −0.223* | | | | |
| | | | (0.121) | (0.119) | | | | |
| $\Delta IPW_{t+2}$ | | | | | 0.005 | 0.001 | | |
| | | | | | (0.007) | (0.006) | | |
| $\Delta IPW_{t+3}$ | | | | | | | 0.005 | 0.003 |
| | | | | | | | (0.006) | (0.006) |
| Years | 1900–1910 | 1900–1910 | 1900–1910 | 1900–1910 | 1885–1895 | 1885–1895 | 1885–1895 | 1885–1895 |
| Initial MF x election | | x | | x | | x | | x |
| Observations | 1,578 | 1,578 | 1,549 | 1,549 | 1,555 | 1,555 | 1,555 | 1,555 |
| R$^2$ | 0.843 | 0.845 | 0.839 | 0.842 | 0.750 | 0.753 | 0.750 | 0.753 |
| Adjusted R$^2$ | 0.777 | 0.780 | 0.773 | 0.775 | 0.643 | 0.646 | 0.643 | 0.646 |

*Note:*

*p<0.1; **p<0.05; ***p<0.01

Constituency-level fixed effects regression, dependent variable is share of the vote for the Conservative Party. Models (1)–(4) re-estimate the main voting result, for the 1900–1910 period, adding controls for Conservative vote share as predicted by constituency-specific time trends, based on the 1885–1910 period for models (1) and (2), and based on the 1885–1900 period for (3) and (4). Models (5)–(8) test for differential trends in Conservative voting prior to the acceleration of German imports after 1895, regressing Conservative vote share 1885–1895 on import penetration 1892–1906 and 1895–1910. All models include constituency and election fixed effects, even numbers add manufacturing employment in 1880 interacted with election dummies. Standard errors clustered by county in parentheses.

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|  | TWFE estimator | | CH estimator | |
|---|---|---|---|---|
|  | (1) | (2) | (3) | (4) |
| $\Delta\text{IPW}_{1900}$ (rounded) | $-0.019^*$ | $-0.013^*$ | $-0.034^*$ | $-0.022^*$ |
|  | (0.006) | (0.005) | $[-0.051; -0.011]$ | $[-0.059; -0.002]$ |
| Initial Mf x year |  | x |  | x |
| N | 1196 | 1196 | 730 | 730 |
| N switchers |  |  | 410 | 410 |

This table shows the results of regressions of Conservative vote share, 1900–1910 on the change in imports per worker. Models (1) and (2) use the conventional two-way fixed effects estimator used throughout the paper. Models (3) and (4) use the estimator proposed by Chaisemartin and D'Haultfoeuille, which corrects for negative weights. This estimator directly compares units which changed treatment status from one period to the next against units which did not. In order to use this estimator, we round our $\Delta$IPW measure to the nearest 0.5, and average the dependent variable over the two 1910 elections (for which the treatment is unchanged). All models control for constituency and year fixed effects, and (2) and (4) control for initial manufacturing interacted with year fixed effects. For models (1) and (2), standard errors clustered by county are shown in parentheses, for (3) and (4) we cluster bootstrap at the county level and report 95% confidence intervals. $^*p < 0.05$ (or Null hypothesis value outside the confidence interval).

Table A-15: Robustness of post-1900 voting results to Chaisemartin-D'Haultfoeuille estimator

# D   Additional Regressions Using News and Manifesto Data

This section provides additional results using the newspaper and manifesto data. Table A-17 examines the link between import competition and the new notion of unemployment in more detail. For models (1) and (2) the dependent variable is a standardized measure of the use of a number of terms which were overused in Beveridge's analysis of unemployment, relative to other writings supportive of the existing poor law system.[14] Following Gentzkow and Shapiro (2010), we compute a $\chi^2$ measure for each word, which gives the test statistic for the null hypothesis that the probability of the word being used is the same in both corpuses. We then select the twenty words with the highest $\chi^2$ statistics for which their relative frequency in the Beveridge text minus their relative frequency in the other texts divided by their frequency across both texts is greater than three. The idea is to select terms which distinguish the new concept of unemployment as the product of economic frictions from the old concept of unemployment as the product of character defects. The terms selected by this method refer to industrial dislocation—"fluctuation," "depression" and "cyclical"— and unemployment, as well as to the economy more broadly, and the industries Beveridge was concerned about, such as the docks. The trade shock was associated with a statistically significant within-newspaper shift towards the use of these terms, which is robust to the inclusion of manufacturing by year controls. The positive coefficient in models (1) and (2) is

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[14]The texts in question are Helen Bosanquet's summary of the Poor Law Report of 1909 (1911), an anonymous criticism of the Poor Law Minority Report (1910), F.C. Montague's *The Old Poor Law and the New Socialism* (1886), the Poor Law Commissioners' Report (1834), *Self Help* by Samuel Smiles (1863), and William Dawson's *The Vagrancy Problem* (1910)

Table A-16: Effects of import competition on incumbency

|  | MP | | Local Party | | National Party | |
|---|---|---|---|---|---|---|
|  | (1) | (2) | (3) | (4) | (5) | (6) |
| $\Delta\text{IPW}_{1885}$ | 0.002 |  | 0.010* |  |  |  |
|  | (0.007) |  | (0.005) |  |  |  |
| $\Delta\text{IPW}_{1900}$ |  | 0.009 |  | 0.001 |  |  |
|  |  | (0.025) |  | (0.007) |  |  |
| $\Delta\text{IPW}_t$ |  |  |  |  | 0.004 | $-0.0004$ |
|  |  |  |  |  | (0.003) | (0.004) |
| Years | All | 1900-1910 | All | 1900-1910 | All | 1900-1910 |
| Observations | 3,133 | 1,578 | 3,133 | 1,578 | 2,025 | 1,098 |
| $R^2$ | 0.336 | 0.434 | 0.500 | 0.486 | 0.230 | 0.183 |
| Adjusted $R^2$ | 0.219 | 0.198 | 0.412 | 0.272 | 0.228 | 0.181 |

*Note:* *p<0.1; **p<0.05; ***p<0.01
Constituency-level regressions, (1)–(4) are estimated in levels and include constituency and year fixed effects, (5) and (6) in stacked first-differences, and include year fixed effects. For (1) and (2) the dependent variable is the share of the vote won by incumbent MPs, for (3) and (4), the share of the vote won by incumbent parties at the local level, for (5) and (6), the change in voteshare by the nationally-incumbent party. Standard errrors clustered by county in parentheses.

driven by attention to industrial dislocation and unemployment. This evidence supports the interpretation that updated perceptions of the risk of unemployment led to increased support for the welfare state, in suggesting the trade shock led to increased focus on economic risk. Yet it is also consistent with changing attitudes towards the unemployed: elite newspaper writers responded to an uptick in the prevalence of vagrants and casual laborers by reporting on the disruptive effects of impersonal market forces.

Tables A-18 and A-19 document the relationship between German import competition, and attention to Germany and to the arms race with Germany, in newspapers and campaign addresses. They show a positive effect of import competition on news coverage of Germany, but not of the navy or militarist organizations.

Tables A-20 and A-21 study the effects of German import penetration on xenophobia. Scholarship on the China trade shock documents an anti-immigrant and authoritarian shift (see for instance Ballard-Rosa et al. (Forthcoming)). It is natural to ask whether import penetration had a similar effect in early 20th century Britain, especially since the Conservative government introduced Britain's first serious controls on immigration in 1905. The Aliens Act was introduced with an aim of limiting Jewish immigration from Eastern Europe. We study whether newspapers and Conservative MPs devoted more attention to this issue in places affected by the trade shock.

In all these regressions we control for the 1880 share of immigrants—which we compute using the full-count census data—interacted with year fixed effects. We do so because a regression of xenophobia on the trade shock could however be biased, if, for instance, areas affected by the shock happened to have more immigrants, and the prevalence of immigration-related issues at a national level changed over time. Flexibly controlling for initial immigration allows us to adjust for the changing prevalence of immigration as a political issue over time. It is also preferable to directly controlling for the share of immigrants, which may be affected by changes in xenophobia and so is a bad control. We exclude Irish immigrants as Ireland was legally part of the domestic British Isles and so Irish immigrants were not considered Aliens and were not subject to anti-immigration legislation.

We find that Conservative candidates did mention terms relevant to immigration in places affected by the trade shock, suggesting that they attempted to capitalize on increased xenophobia by drawing attention to the Conservatives' anti-immigration policies. We also find some evidence that newspapers in these areas devoted more coverage to immigration. However, these results cannot drive our main result that the trade shock decreased support for the Conservatives: an anti-immigrant backlash should have bolstered the Conservative vote.

Table A-17: Effects of import competition on newspaper references terms overused in Beveridge's analysis of unemployment

| | Beveridge terms | | "fluctuation" | | "depression" | | "(un)employment" | | "exchange" | |
|---|---|---|---|---|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) |
| $\Delta$IPW$_{1885}$ | 0.115*** | 0.116*** | 0.124*** | 0.116** | 0.137** | 0.159** | 0.061* | 0.062 | 0.124*** | 0.167*** |
| | (0.031) | (0.029) | (0.034) | (0.044) | (0.054) | (0.074) | (0.034) | (0.038) | (0.037) | (0.041) |
| Initial Mf x year | | x | | x | | x | | x | | x |
| Observations | 2,365 | 2,365 | 2,365 | 2,365 | 2,365 | 2,365 | 2,365 | 2,365 | 2,365 | 2,365 |
| R$^2$ | 0.787 | 0.788 | 0.744 | 0.745 | 0.764 | 0.766 | 0.731 | 0.733 | 0.798 | 0.800 |
| Adjusted R$^2$ | 0.732 | 0.733 | 0.678 | 0.678 | 0.704 | 0.704 | 0.661 | 0.663 | 0.745 | 0.747 |

*Note:*  *p<0.1; **p<0.05; ***p<0.01

Newspaper-level regressions. Dependent variable is number of uses of specified term per newspaper issue, standardized. All models include newspaper and year fixed effects. For newspapers in cities, $\Delta$IPW is calculated at the city-, not constituency-level. "Beveridge terms" refers to terms overused in Beveridge's *Unemployment: A Problem of Industry*, relative to other contemporary writings supportive of the existing Poor Law system. Terms were selected using the $\chi^2$ test statistic proposed by Gentzkow and Shapiro (2010). The terms in question are "unemployed," "unemployment," "industrial," "exchange," "table," "fluctuation," "demand," "depression," "trades," "reserve," "percentage," "organisation," "situation," "cyclical," "skilled," "dock," "note," "seasonal," "unskilled," and "production." Standard errors clustered by county in parentheses.

Table A-18: Effects of import competition on newspaper references to Germany and the naval race

| | "germany" | | German terms | | Navy terms | | Militarist groups | |
|---|---|---|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
| $\Delta$IPW$_{1885}$ | 0.083** | 0.055 | 0.091** | 0.062* | −0.004 | 0.009 | −0.116* | −0.033 |
| | (0.038) | (0.033) | (0.036) | (0.035) | (0.036) | (0.040) | (0.062) | (0.048) |
| Initial Mf x year | | x | | x | | x | | x |
| Observations | 2,365 | 2,365 | 2,365 | 2,365 | 2,365 | 2,365 | 2,365 | 2,365 |
| R$^2$ | 0.740 | 0.743 | 0.758 | 0.760 | 0.861 | 0.861 | 0.514 | 0.521 |
| Adjusted R$^2$ | 0.673 | 0.676 | 0.695 | 0.697 | 0.825 | 0.825 | 0.389 | 0.395 |

*Note:*  $^*$p<0.1; $^{**}$p<0.05; $^{***}$p<0.01

Newspaper-level regressions. Dependent variable is number of uses of specified term per newspaper issue, standardized. All models include newspaper and year fixed effects. For newspapers in cities, $\Delta$IPW is calculated at the city-, not constituency-level. "German terms" are "germany," "kaiser," "teuton," "prussia," and "fatherland," "Navy terms" are "navy," "naval," "dreadnought," "battleship," and "fleet," "Militarist groups" are "national service league" and "navy league." Standard errors clustered by county in parentheses.

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Table A-19: Effects of import competition on manifesto references to Germany and the naval race

| | "germany" | | German terms | | Navy terms | | Militarist groups | |
|---|---|---|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
| $\Delta$IPW$_{1885}$ | 0.038 | 0.058 | 0.034 | 0.054 | −0.035 | 0.004 | −0.041* | −0.035 |
| | (0.029) | (0.042) | (0.030) | (0.041) | (0.027) | (0.022) | (0.021) | (0.024) |
| Initial Mf x year | | x | | x | | x | | x |
| Observations | 5,147 | 5,147 | 5,147 | 5,147 | 5,147 | 5,147 | 5,147 | 5,147 |
| R$^2$ | 0.146 | 0.149 | 0.145 | 0.148 | 0.356 | 0.358 | 0.104 | 0.106 |
| Adjusted R$^2$ | 0.060 | 0.062 | 0.060 | 0.062 | 0.292 | 0.293 | 0.015 | 0.015 |

*Note:* *p<0.1; **p<0.05; ***p<0.01

Manifesto-level regressions. Dependent variable is number of uses of specified term relative to total length of manifesto, standardized. All models include constituency, party, and year fixed effects. "German terms" are "germany," "kaiser," "teuton," "prussia," and "fatherland." "Navy terms" are "navy," "naval," "dreadnought," "battleship," and "fleet." "Militarist groups" are "national service league" and "navy league." Standard errors clustered by county in parentheses.

Table A-20: Effect of local trade shocks on references to immigration in Conservative campaign manifestos

| | "immigrant" | | "alien" | | "jew" | | "foreigner" | | All | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) |
| $\Delta\text{IPW}_{1885}$ | 0.059* | 0.087*** | 0.084* | 0.215*** | 0.069* | 0.095* | −0.006 | 0.025 | 0.061 | 0.165** |
| | (0.033) | (0.031) | (0.050) | (0.060) | (0.038) | (0.056) | (0.065) | (0.075) | (0.071) | (0.080) |
| Initial immigrants x year | x | | x | | x | | x | | x | |
| Initial Mf x year | | x | | x | | x | | x | | x |
| Observations | 2,679 | 2,679 | 2,679 | 2,679 | 2,679 | 2,679 | 2,679 | 2,679 | 2,679 | 2,679 |
| $R^2$ | 0.183 | 0.183 | 0.296 | 0.306 | 0.217 | 0.218 | 0.325 | 0.326 | 0.343 | 0.348 |
| Adjusted $R^2$ | 0.008 | 0.007 | 0.145 | 0.157 | 0.050 | 0.049 | 0.181 | 0.180 | 0.203 | 0.207 |

*Note:*  *p<0.1; **p<0.05; ***p<0.01
Manifesto-level regressions. Dependent variable is number of uses of specified term relative to total length of manifesto, by Conservative candidates, standardized. All models include constituency and election fixed effects. Standard errors clustered by county in parentheses.

Table A-21: Effect of local trade shocks on newspaper coverage of immigration

| | "immigrant" | | "alien" | | "jew" | | "foreigner" | | All | |
|---|---|---|---|---|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) |
| $\Delta$IPW$_{1885}$ | 0.054* | 0.045 | 0.037 | 0.029 | 0.068* | 0.028 | 0.118*** | 0.116*** | 0.123*** | 0.111*** |
| | (0.031) | (0.039) | (0.027) | (0.033) | (0.036) | (0.037) | (0.025) | (0.029) | (0.024) | (0.029) |
| Initial immigrants x year | x | | x | | x | | x | | x | x |
| Initial Mf x year | | x | | x | | x | | x | x | x |
| Observations | 2,365 | 2,365 | 2,365 | 2,365 | 2,365 | 2,365 | 2,365 | 2,365 | 2,365 | 2,365 |
| R$^2$ | 0.652 | 0.655 | 0.705 | 0.705 | 0.804 | 0.805 | 0.779 | 0.781 | 0.798 | 0.799 |
| Adjusted R$^2$ | 0.561 | 0.563 | 0.627 | 0.627 | 0.752 | 0.753 | 0.721 | 0.722 | 0.745 | 0.746 |

*Note:*  $^{*}$p<0.1; $^{**}$p<0.05; $^{***}$p<0.01

Newspaper-level regressions. Dependent variable is number of uses of specified term per newspaper issue, standardized. All models include newspaper and year fixed effects. For newspapers in cities, $\Delta$IPW is calculated at the city-, not constituency-level. (9) and (10) use mentions of all four terms. Standard errors clustered by county in parentheses.

# E Regressions Using Exposure-Robust Standard Errors

We re-estimate all models in the paper using the aggregation and standard error calculation method recommended by Borusyak, Hull and Jaravel (2018). This method entails aggregating constituency-level data at the industry-year level, and gives identical point estimates to constituency-level regressions, but standard errors which account for correlated errors between constituencies with similar industry shares.

Table A-22: Effects of import competition on local economies, exposure-robust standard erors

| | $\Delta \ln \%$ vagrants | | | | $\Delta \ln \%$ unskilled jobs | | | |
|---|---|---|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
| $\Delta$IPW$_t$ | 0.150*** | 0.143** | 0.077* | 0.373*** | 0.014** | 0.018*** | 0.016** | 0.017** |
| | (0.035) | (0.057) | (0.045) | (0.096) | (0.007) | (0.006) | (0.006) | (0.007) |
| Controls | | x | x | x | | x | x | x |
| Initial Mf x year | | | x | | | | x | |
| Constituency trends | | | | x | | | | x |
| First stage F-stat | 19.2 | 16.1 | 16.7 | 5.8 | 19.2 | 16.1 | 16.7 | 5.8 |
| Observations | 285 | 285 | 285 | 285 | 285 | 285 | 285 | 285 |

*Note:*

*p<0.1; **p<0.05; ***p<0.01

This table replicates the results of Table 2 using the aggregation and standard error calculation methods recommended by Borusyak, Jaravel, and Hull (2018). Stacked first difference estimates, at the constituency level, aggregated to the industry level, for 1880–1890, 1890–1900, 1900–1910. All models include year fixed effects. (2)–(4) and (6)–(8) add controls for lagged manufacturing employment, lagged fraction in unskilled jobs, lagged fraction of vagrants, and lagged average economic status; (3) and (7) include 1880 manufacturing employment interacted with year dummy variables, (4) and (8) include constituency fixed effects, which adjust for constituency-specific time trends. Standard errors clustered by industry in parentheses.

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Table A-23: Effects of import competition on voting, exposure-robust standard errors

| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
|---|---|---|---|---|---|---|---|---|
| ΔIPW | −0.003 | −0.003 | 0.014** | 0.008 | −0.021*** | −0.016** | −0.018*** | −0.018** |
| | (0.004) | (0.006) | (0.006) | (0.008) | (0.006) | (0.006) | (0.005) | (0.007) |
| Years | All | All | 1885–1900 | 1885–1900 | 1900–1910 | 1900-1910 | 1900–1910 | 1900–1910 |
| Initial MF x election | | x | | x | | x | | x |
| Matched panel | | | | | | | x | x |
| First stage F-stat | 11.5 | 14.3 | 5.4 | 7.2 | 12.2 | 13 | 16.5 | 15 |
| Observations | 760 | 760 | 475 | 475 | 380 | 380 | 380 | 380 |

*Note:*

Table A-24: Effects of import competition on newspaper references to trade, exposure-robust standard errors

| | "import" | | | | "trade" | | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
| ΔIPW | 0.089*** | 0.100*** | 0.198*** | 0.192** | 0.146*** | 0.111*** | 0.253*** | 0.206*** |
| | (0.023) | (0.032) | (0.058) | (0.080) | (0.028) | (0.031) | (0.052) | (0.067) |
| Years | All | All | 1900–1910 | 1900–1910 | All | All | 1900–1910 | 1900–1910 |
| Initial Mf x year | | x | | x | | x | | x |
| First stage F-stat | 7.4 | 7.2 | 8.2 | 7.4 | 7.4 | 7.2 | 8.2 | 7.4 |
| Observations | 665 | 665 | 285 | 285 | 665 | 665 | 285 | 285 |

*Note:*     *p<0.1; **p<0.05; ***p<0.01

This table replicates the results of Table 4 using the aggregation and standard error calculation methods recommended by Borusyak, Hull, and Jaravel (2018). Newspaper-level variables aggregated up to the industry level. Dependent variable is number of uses of specified term per newspaper issue, standardized. All models include newspaper and year fixed effects. For newspapers in cities, ΔIPW is calculated at the city-, not constituency-level. Standard errors clustered by industry in parentheses.

Table A-25: Effect of local trade shocks on references to social reform in Liberal campaign manifestos, exposure-robust standard errors

|  | "social reform" | | "poor law" | | "labour exchange" | | All | |
|---|---|---|---|---|---|---|---|---|
|  | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
| $\Delta$IPW$_{1885}$ | 0.094** | 0.062 | 0.071*** | 0.067* | 0.079** | 0.088* | 0.124*** | 0.101** |
|  | (0.037) | (0.042) | (0.026) | (0.036) | (0.035) | (0.045) | (0.031) | (0.039) |
| Initial Mf x year |  | x |  | x |  | x |  | x |
| First stage F-stat | 10.3 | 9.7 | 10.3 | 9.7 | 10.3 | 9.7 | 10.3 | 9.7 |
| Observations | 570 | 570 | 570 | 570 | 570 | 570 | 570 | 570 |

*Note:*  *p<0.1; **p<0.05; ***p<0.01

This table replicates the results of Table 5 using the aggregation and standard error calculation methods recommended by Borusyak, Jaravel, and Hull (2018). Manifesto-level data aggregated to the industry level. Dependent variable is number of uses of specified term relative to total length of manifesto, by Liberal candidates, standardized. All models include constituency and election fixed effects. Standard errors clustered by industry in parentheses.

Table A-26: Effects of import competition on newspaper references to unemployment, vagrancy, and pauperism, exposure-robust standard errors

|  | (1) | (2) | (3) | (4) |
|---|---|---|---|---|
| $\Delta$IPW | 0.095*** | 0.073* | 0.204*** | 0.170 |
|  | (0.027) | (0.038) | (0.074) | (0.105) |
| Years | All | All | 1900–1910 | 1900–1910 |
| Initial Mf x year |  | x |  | x |
| First stage F-state | 7.4 | 7.2 | 8.2 | 7.4 |
| Observations | 665 | 665 | 285 | 285 |

*Note:*      *p<0.1; **p<0.05; ***p<0.01

This table replicates the results of Table 6 using the aggregation and standard error calculation methods recommended by Borusyak, Jaravel, and Hull (2018). Newspaper-level variables aggregated to the industry level. Dependent variable is the number of references to "unemployed," "unemployment," and "employment," minus the number of references to "vagrants," "vagrancy," "pauper," and "pauperism," standardized. All models include newspaper and year fixed effects. For newspapers in cities, $\Delta$IPW is calculated at the city-, not constituency-level. Standard errors clustered by industry in parentheses.

Table A-27: Effects of import competition on average economic status, exposure-robust standard errors

|  | (1) | (2) | (3) | (4) |
|---|---|---|---|---|
| $\Delta\text{IPW}_t$ | $-0.067^{**}$ | $-0.073^{**}$ | $-0.047^{*}$ | $-0.101^{**}$ |
|  | (0.026) | (0.032) | (0.025) | (0.047) |
| Controls |  | x | x | x |
| Initial Mf x year |  |  | x |  |
| Constituency trends |  |  |  | x |
| First stage F-stat | 19.2 | 21.1 | 21.8 | 5.8 |
| Observations | 285 | 285 | 285 | 285 |

*Note:* $^{*}$p<0.1; $^{**}$p<0.05; $^{***}$p<0.01

This table replicates the results of Table A-2 using the aggregation and standard error calculation methods recommended by Borusyak, Jaravel, and Hull (2018). Stacked first difference estimates, at the constituency level, aggregated to the industry level, for 1880–1890, 1890–1900, 1900-1910. Dependent variable is change in average economic status. All models include year fixed effects. (2)–(4) add controls for lagged manufacturing employment and lagged average economic status; (3) includes 1880 manufacturing employment interacted with year dummy variables, (4) includes constituency fixed effects, which adjust for constituency-specific time trends. Standard errors clustered by industry in parentheses.

Table A-28: Robustness checks for economic variables, exposure-robust standard errors

| | Δ ln % vagrants | | | | Δ ln % unskilled jobs | | | |
|---|---|---|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
| ΔIPW$_t$ | 0.175*** | 0.170** | 0.173*** | 0.134*** | 0.017*** | 0.020*** | 0.021*** | 0.024*** |
| | (0.062) | (0.077) | (0.065) | (0.051) | (0.007) | (0.007) | (0.007) | (0.005) |
| Initial steel x year | x | | | | x | | | |
| Initial zinc x year | | x | | | | x | | |
| Initial sugar x year | | | x | | | | x | |
| Initial shares PCA x year | | | | x | | | | x |
| First stage F-stat | 23.2 | 15.7 | 6.4 | 17.2 | 23.2 | 15.7 | 6.4 | 17.2 |
| Observations | 285 | 285 | 285 | 285 | 285 | 285 | 285 | 285 |

*Note:*

*p<0.1; **p<0.05; ***p<0.01

This Table replicates the results in Table A-4 using the aggregation and standard error calculation method recommended by Borusyak, Hull, and Jaravel (2018). Stacked first difference estimates, at the constituency level, aggregated to the industry level, for 1880–1890, 1890–1900, 1900-1910. All models include year fixed effects, and controls for lagged share unskilled, lagged manufacturing employment and lagged fraction of vagrants; (1) and (5) include the share of employment in 1881 in sheet iron and steel interacted with year fixed effects, (2) and (6) do the same for employment in sheet zinc, (3) and (7) the same for sugar. (4) and (8) add the first three principal components for the 1881 industry shares interacted with year fixed effects. Standard errors clustered by industry in parentheses.

Table A-29: Effects of import competition on voting for different parties, exposure-robust standard errors

| | Conservative | | | Labour | | Liberal vote share | | |
|---|---|---|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
| ΔIPW | −0.003 | 0.014** | −0.021*** | 0.014* | −0.016*** | −0.026*** | 0.008 | 0.019*** |
| | (0.004) | (0.006) | (0.006) | (0.007) | (0.006) | (0.005) | (0.014) | (0.004) |
| Years | All | 1885–1900 | 1900-1910 | All | All | 1885-1900 | 1900–1910 | 1900-1910 |
| Excluding Labour | | | | | | | | x |
| First stage F-stat | 11.5 | 5.4 | 12.2 | 11.5 | 11.5 | 5.4 | 12.2 | 13 |
| Observations | 760 | 475 | 380 | 760 | 760 | 475 | 380 | 380 |

*Note:* *p<0.1; **p<0.05; ***p<0.01

This table replicates the results of Table A-5 using the aggregation and standard error calculation methods recommended by Borusyak, Jaravel, and Hull (2018). Constituency-level variables aggregated to the shock level, exposure-robust standard errors clustered by industry in parentheses, all models include constituency and election fixed effects. Model 8 excludes elections contested by Labour.

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Table A-30: Effects of import competition on voting for combined Liberals and Labour, exposure-robust standard errors

|  | (1) | (2) | (3) | (4) |
|---|---|---|---|---|
| $\Delta$IPW | $-0.020^{***}$ | $-0.013^{**}$ | $0.019^{***}$ | $0.015^{***}$ |
|  | (0.004) | (0.005) | (0.005) | (0.005) |
| Years | 1885–1900 | 1885–1900 | 1900–1910 | 1900-1910 |
| Initial MF x election |  | x |  | x |
| First stage F-stat | 5.4 | 7.2 | 12.2 | 13 |
| Observations | 475 | 475 | 380 | 380 |

*Note:* $^{*}$p<0.1; $^{**}$p<0.05; $^{***}$p<0.01

This table replicates the results of Table A-6 using the aggregation and standard error calculation methods recommended by Borusyak, Jaravel, and Hull (2018). Constituency-level variables aggregated up to the industry level, dependent variable is combined share of the vote for the Liberal and Labour parties. All models include constituency and election fixed effects, (2) and (4) add the manufacturing employment in 1880 interacted with election dummies. Standard errors clustered by industry in parentheses.

Table A-31: First-difference effects of import competition on voting, exposure-robust standard errors

| | (1) | (2) | (3) | (4) | (5) | (6) |
|---|---|---|---|---|---|---|
| Shock | 0.018* | 0.016 | −0.027*** | −0.020** | 0.001 | −0.002 |
| | (0.009) | (0.010) | (0.009) | (0.009) | (0.007) | (0.008) |
| Shock variable | $\Delta IPW_t$ | $\Delta IPW_t$ | $\Delta IPW_t$ | $\Delta IPW_t$ | $\Delta IPW_{t+1}$ | $\Delta IPW_{t+1}$ |
| Years | 1885–1900 | 1885–1900 | 1900–1910 | 1900-1910 | 1885–1900 | 1885–1900 |
| Initial Mf x election | | x | | x | | x |
| First stage F stat | 9.9 | 13 | 15.8 | 14.4 | 12.8 | 16.9 |
| Observations | 190 | 190 | 190 | 190 | 190 | 190 |

*Note:*  *p<0.1; **p<0.05; ***p<0.01

This table replicates the results of Table A-7 using the aggregation and standard error calculation methods recommended by Borusyak, Jaravel, and Hull (2018). Stacked first-difference regressions, for waves 1885–1892, 1892–1900, 1900-1910 (note there were two elections in 1910), with constituency-level variables aggregated up to the industry level. Dependent variable is change in share of the vote for the Conservative Party. All models include constituency and election fixed effects, (2), (4) and (6) add controls for manufacturing employment in 1880 interacted with election dummies. Standard errors clustered by industry in parentheses, (5) and (6) control for $\Delta$ IPW for the correct period.

Table A-32: Robustness checks for post-1900 voting regressions, exposure-robust standard errors

|  | (1) | (2) | (3) | (4) | (5) |
|---|---|---|---|---|---|
| $\Delta\text{IPW}_{1900}$ | $-0.018$** | $-0.017$*** | $-0.011$* | $-0.019$*** | $-0.015$** |
|  | (0.007) | (0.005) | (0.007) | (0.005) | (0.007) |
| Initial steel x year | x |  |  |  |  |
| Initial cotton x year |  | x |  |  |  |
| Initial sugar x year |  |  | x |  |  |
| Initial lace x year |  |  |  | x |  |
| Initial shares PCA x year |  |  |  |  | x |
| First stage F-stat | 11.7 | 12.4 | 8.1 | 13.1 | 12.4 |
| Observations | 380 | 380 | 380 | 380 | 380 |

*Note:* *p<0.1; **p<0.05; ***p<0.01

This table replicates the results of Table A-9 using the aggregation and standard error calculation methods recommended by Borusyak, Hull, and Jaravel (2018). Constituency-level fixed effects regressions, aggregated to the industry level for exposure-robust standard errors, for 1900–1910. Dependent variable is share of the vote for Conservative candidates. All models include constituency and year fixed effects, and initial manufacturing by year controls. (1) includes the share of employment in 1881 in sheet iron and steel interacted with year fixed effects, (2) does the same for employment in sheet zinc, (3) does the same for sugar, (4) does the same for lace. (5) adds the first three principal components for the 1881 industry shares interacted with year fixed effects. Standard errors clustered by industry in parentheses.

Table A-33: Effects of import competition on voting, dropping certain years, exposure-robust standard errors

| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
|---|---|---|---|---|---|---|---|---|
| $\Delta$IPW$_{1900}$ | $-0.017^{**}$ | $-0.017^{**}$ | $-0.026^{***}$ | $-0.020^{**}$ | $-0.020^{***}$ | $-0.016^{**}$ | $-0.020^{**}$ | $-0.012$ |
| | (0.007) | (0.008) | (0.009) | (0.010) | (0.005) | (0.007) | (0.008) | (0.007) |
| Excluding | 1900 | 1900 | 1906 | 1906 | 1910J | 1910J | 1910D | 1910D |
| Initial MF x election | | x | | x | | x | | x |
| First stage F-stat | 5.9 | 5.7 | 14 | 13.4 | 12.1 | 12.3 | 11 | 11.1 |
| Observations | 285 | 285 | 285 | 285 | 285 | 285 | 285 | 285 |

*Note:*    $^{*}$p<0.1; $^{**}$p<0.05; $^{***}$p<0.01

This table replicates the results of Table A-10 using the aggregation and standard error calculation methods recommended by Borusyak, Hull, and Jaravel (2018). Constituency-level variables aggregated up to the industry level, dependent variable is share of the vote for the Conservative Party, for the period 1900–1910. All models include constituency and election fixed effects, even numbers add manufacturing employment in 1880 interacted with election dummies. Each model drops one election from the period. Standard errors clustered by industry in parentheses.

Table A-34: Moderating effect of unions on effect of import competition on voting, exposure-robust standard errors

|  | (1) | (2) | (3) | (4) | (5) | (6) |
|---|---|---|---|---|---|---|
| ΔIPW | −0.001 | −0.009 | −0.011 | −0.025*** | −0.015*** | −0.013* |
|  | (0.008) | (0.006) | (0.009) | (0.008) | (0.006) | (0.007) |
| Years | All | All | 1900–1910 | 1900–1910 | 1900–1910 | 1900–1910 |
| Union sub-sample | 2H | 1H | 2H | 1H | All | All |
| Union x election |  |  |  |  | x | x |
| Initial MF x election | x | x | x | x |  | x |
| First stage F-stat | 9.5 | 21.4 | 8.2 | 7.6 | 13.8 | 13.5 |
| Observations | 760 | 760 | 380 | 380 | 380 | 380 |

*Note:*  *p<0.1; **p<0.05; ***p<0.01

This table replicates the results of models (5)–(10) of Table A-11 using the aggregation and standard error calculation methods recommended by Borusyak, Jaravel, and Hull (2018) (their method does not allow us to estimate standard errors for variables interacted with the shock). Constituency-level variables aggregated up to the industry level, dependent variable is share of the vote for the Conservative Party. Data on union membership relative to population in 1892 at the county level is taken from Sidney and Beatrice Webb, *The History of Trade Unionism* (London: Longmans, Green and Co., 1896). Models (1) and (3) are estimated for constituencies with above-median unionization, (2) and (4) for constituencies with below-median unionization. Models (5) and (6) replicate regressions from table 3, adding controls for unionization interacted with year dummy variables. All models include constituency and election fixed effects, Standard errors clustered by industry in parentheses.

Table A-35: Effects of import competition on voting, by period, with exposure-robust standard errors

| | 1885–1895 | | 1895–1906 | | 1906–1910 | | 1895–1910 | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
| ΔIPW | 0.006 | −0.0002 | −0.005 | 0.001 | −0.017** | −0.017** | −0.013*** | −0.010** |
| | (0.009) | (0.011) | (0.004) | (0.004) | (0.007) | (0.008) | (0.004) | (0.004) |
| Initial MF x election | | x | | x | | x | | x |
| First stage F-stat | 3.6 | 4.6 | 17.8 | 16 | 5.9 | 5.7 | 26.5 | 28.7 |
| Observations | 380 | 380 | 285 | 285 | 285 | 285 | 475 | 475 |

*Note:*

*p<0.1; **p<0.05; ***p<0.01

This table replicates the results of Table A-12 using the aggregation and standard error calculation methods recommended by Borusyak, Hull, and Jaravel (2018) Constituency-level variables aggregated up to the industry level, dependent variable is share of the vote for the Conservative Party, subset by different groups of years. All models include constituency and election fixed effects, even numbers add manufacturing employment in 1880 interacted with election dummies. Standard errors clustered by industry in parentheses.

Table A-36: Effects of import competition on voting, controlling for exports and wheat imports, with exposure-robust standard errors

|  | (1) | (2) | (3) | (4) |
|---|---|---|---|---|
| $\Delta\text{IPW}_{1900}$ | $-0.021^{***}$ | $-0.016^{**}$ | $-0.016^{***}$ | $-0.014^{**}$ |
|  | (0.004) | (0.008) | (0.006) | (0.007) |
| Initial MF x election |  | x |  | x |
| First stage F-stat | 12.2 | 12.7 | 11.8 | 12.8 |
| Observations | 380 | 380 | 380 | 380 |

*Note:* *p<0.1; **p<0.05; ***p<0.01

This table replicates the results of Table A-13 using the aggregation and standard error calculation methods recommended by Borusyak, Hull, and Jaravel (2018) Constituency-level variables aggregated up to the industry level, dependent variable is share of the vote for the Conservative Party, for the period 1900–1910. All models include constituency and election fixed effects, even numbers add manufacturing employment in 1880 interacted with election dummies. Models 1 and 2 in addition control for exports to Germany per worker, computed the same way as $\Delta\text{IPW}$, models 3 and 4 control for US wheat imports per worker, with wheat employment calculated using agricultural laborers weighted by the share of county land devoted to wheat cultivation. Standard errors clustered by industry in parentheses.

Table A-37: Checks for pre-trends, with exposure-robust standard errors

| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
|---|---|---|---|---|---|---|---|---|
| ΔIPW | −0.017*** | −0.011** | −0.022*** | −0.017*** | 0.005 | 0.001 | 0.005 | 0.003 |
| | (0.004) | (0.005) | (0.006) | (0.006) | (0.005) | (0.006) | (0.005) | (0.006) |
| Years | 1900–1910 | 1900–1910 | 1900–1910 | 1900–1910 | 1885–1895 | 1885–1895 | 1885–1895 | 1885–1895 |
| Shock | $\Delta IPW_{1900}$ | $\Delta IPW_{1900}$ | $\Delta IPW_{1900}$ | $\Delta IPW_{1900}$ | $\Delta IPW_{t+2}$ | $\Delta IPW_{t+2}$ | $\Delta IPW_{t+3}$ | $\Delta IPW_{t+3}$ |
| Constituency time trend | 1885–1910 | 1885–1910 | 1885–1900 | 1885–1900 | | | | |
| Initial MF x election | | x | | x | | x | | x |
| First stage F-state | 12.4 | 12.9 | 12.4 | 13.2 | 16.8 | 16.1 | 18.8 | 18.5 |
| Observations | 380 | 380 | 380 | 380 | 380 | 380 | 380 | 380 |

*Note:*

*p<0.1; **p<0.05; ***p<0.01

This table replicates the results of Table A-14 using the aggregation and standard error calculation methods recommended by Borusyak, Hull, and Jaravel (2018) Constituency-level variables aggregated up to the industry level, dependent variable is share of the vote for the Conservative Party. Models (1)–(4) re-estimate the main voting result, for the 1900–1910 period, adding controls for Conservative vote share as predicted by constituency-specific time trends, based on the 1885–1910 period for models (1) and (2), and based on the 1885–1900 period for (3) and (4). Models (5)–(8) test for differential trends in Conservative voting prior to the acceleration of German imports after 1895, regressing Conservative vote share 1885–1895 on import penetration 1892–1906 and 1895–1910. All models include constituency and election fixed effects, even numbers add manufacturing employment in 1880 interacted with election dummies. Standard errors clustered by industry in parentheses.

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Table A-38: Effects of import competition on incumbency, exposure-robust standard errors

|  | MP | | Local Party | | National Party | |
|---|---|---|---|---|---|---|
|  | (1) | (2) | (3) | (4) | (5) | (6) |
| ΔIPW | 0.002 | 0.009 | 0.010** | 0.001 | 0.004 | −0.0004 |
|  | (0.007) | (0.025) | (0.004) | (0.008) | (0.004) | (0.004) |
| Years | All | 1900-1910 | All | 1900-1910 | All | 1900-1910 |
| First stage F-stat | 11.5 | 12.2 | 11.5 | 12.2 | 17.2 | 11.5 |
| Observations | 760 | 380 | 760 | 380 | 570 | 285 |

*Note:*      *p<0.1; **p<0.05; ***p<0.01

This table replicates the results of Table A-16 using the aggregation and standard error calculation methods recommended by Borusyak, Jaravel, and Hull (2018). Constituency-level variables aggregated to the industry level, (1)–(4) are estimated in levels and include constituency and year fixed effects, (5) and (6) in stacked first-differences, and include year fixed effects. For (1) and (2) the dependent variable is the share of the vote won by incumbent MPs, for (3) and (4), the share of the vote won by incumbent parties at the local level, for (5) and (6), the change in voteshare by the nationally-incumbent party. Standard errrors clustered by industry in parentheses.

Table A-39: Effects of import competition on newspaper references terms overused in Beveridge's analysis of unemployment, exposure-robust standard errors

| | Beveridge terms | | "fluctuation" | | "depression" | | "(un)employment" | | "exchange" | |
|---|---|---|---|---|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) |
| $\Delta\text{IPW}_{1885}$ | 0.115*** | 0.116*** | 0.124*** | 0.116*** | 0.137*** | 0.159*** | 0.061*** | 0.062* | 0.124*** | 0.167*** |
| | (0.020) | (0.026) | (0.025) | (0.036) | (0.032) | (0.050) | (0.023) | (0.035) | (0.035) | (0.046) |
| Initial Mf x year | | x | | x | | x | | x | | x |
| First stage F-stat | 7.4 | 7.2 | 7.4 | 7.2 | 7.4 | 7.2 | 7.4 | 7.2 | 7.4 | 7.2 |
| Observations | 665 | 665 | 665 | 665 | 665 | 665 | 665 | 665 | 665 | 665 |

*Note:* *p<0.1; **p<0.05; ***p<0.01

This table replicates the results of Table A-17 using the aggregation and standard error calculation methods recommended by Borusyak, Jaravel, and Hull (2018). Newspaper-level variables aggregated up to the industry level. Dependent variable is number of uses of specified term per newspaper issue, standardized. All models include newspaper and year fixed effects. For newspapers in cities, $\Delta\text{IPW}$ is calculated at the city-, not constituency-level. "Beveridge terms" refers to terms overused in Beveridge's *Unemployment: A Problem of Industry*, relative to other contemporary writings supportive of the existing Poor Law system. Terms were selected using the $\chi^2$ test statistic proposed by Gentzkow and Shapiro (2010). The terms in question are "unemployed," "unemployment," "industrial," "exchange," "table," "fluctuation," "demand," "depression," "trades," "reserve," "percentage," "organisation," "situation," "cyclical," "skilled," "dock," "note," "seasonal," "unskilled," and "production." Standard errors clustered by industry in parentheses.

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Table A-40: Effects of import competition on newspaper references to Germany and the naval race, exposure-robust standard errors

| | "germany" | | German terms | | Navy terms | | Militarist groups | |
|---|---|---|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
| $\Delta$IPW$_{1885}$ | 0.083*** | 0.055* | 0.091*** | 0.062** | −0.004 | 0.009 | −0.116** | −0.033 |
| | (0.031) | (0.032) | (0.028) | (0.031) | (0.013) | (0.017) | (0.048) | (0.052) |
| Initial Mf x year | | x | | x | | x | | x |
| First stage F-stat | 7.4 | 7.2 | 7.4 | 7.2 | 7.4 | 7.2 | 7.4 | 7.2 |
| Observations | 665 | 665 | 665 | 665 | 665 | 665 | 665 | 665 |

*Note:*  *p<0.1; **p<0.05; ***p<0.01

This table replicates the results of Table A-18 using the aggregation and standard error calculation methods recommended by Borusyak, Jaravel, and Hull (2018). Newspaper-level data aggregated to the industry level. Dependent variable is number of uses of specified term per newspaper issue, standardized. All models include newspaper and year fixed effects. For newspapers in cities, $\Delta$IPW is calculated at the city-, not constituency-level. "German terms" are "germany," "kaiser," "teuton," "prussia," and "fatherland," "Navy terms" are "navy," "naval," "dreadnought," "battleship," and "fleet," "Militarist groups" are "national service league" and "navy league." Standard errors clustered by industry in parentheses.

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Table A-41: Effects of import competition on manifesto references to Germany and the naval race, exposure-robust standard errors

| | "germany" | | German terms | | Navy terms | | Militarist groups | |
|---|---|---|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
| $\Delta\text{IPW}_{1885}$ | 0.038* | 0.058 | 0.034 | 0.054 | −0.035 | 0.004 | −0.041** | −0.035 |
| | (0.022) | (0.036) | (0.023) | (0.037) | (0.034) | (0.030) | (0.018) | (0.025) |
| Initial Mf x year | | x | | x | | x | | x |
| First stage F-stat | 9.4 | 9.4 | 9.4 | 9.4 | 9.4 | 9.4 | 9.4 | 9.4 |
| Observations | 570 | 570 | 570 | 570 | 570 | 570 | 570 | 570 |

*Note:*  *p<0.1; **p<0.05; ***p<0.01

This table replicates the results of Table A-19 using the aggregation and standard error calculation methods recommended by Borusyak, Jaravel, and Hull (2018). Manifesto-level data aggregated to the industry level. Dependent variable is number of uses of specified term relative to total length of manifesto, standardized. All models include constituency, party, and year fixed effects. "German terms" are "germany," "kaiser," "teuton," "prussia," and "fatherland," "Navy terms" are "navy," "naval," "dreadnought," "battleship," and "fleet," "Militarist groups" are "national service league" and "navy league." Standard errors clustered by industry in parentheses.

Table A-42: Effect of local trade shocks on references to immigration in Conservative campaign manifestos, exposure-robust standard errors

| | "immigrant" | | "alien" | | "jew" | | "foreigner" | | All | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) |
| $\Delta$IPW$_{1885}$ | 0.059*** | 0.087*** | 0.084 | 0.215*** | 0.069* | 0.095* | −0.006 | 0.025 | 0.061 | 0.165** |
| | (0.022) | (0.032) | (0.063) | (0.064) | (0.036) | (0.053) | (0.041) | (0.057) | (0.061) | (0.065) |
| Initial immigrants x year | x | | x | | x | | x | | x | |
| Initial Mf x year | | x | | x | | x | | x | | x |
| First stage F-stat | 8.6 | 9.1 | 8.6 | 9.1 | 8.6 | 9.1 | 8.6 | 9.1 | 8.6 | 9.1 |
| Observations | 570 | 570 | 570 | 570 | 570 | 570 | 570 | 570 | 570 | 570 |

*Note:*

*p<0.1; **p<0.05; ***p<0.01

This table replicates the results of Table A-20 using the aggregation and standard error calculation methods recommended by Borusyak, Jaravel, and Hull (2018). Manifesto-level data aggregated to the industry level. Dependent variable is number of uses of specified term relative to total length of manifesto, by Conservative candidates, standardized. All models include constituency and election fixed effects. Standard errors clustered by industry in parentheses.

Table A-43: Effect of local trade shocks on newspaper coverage of immigration, exposure-robust standard errors

| | "immigrant" | | "alien" | | "jew" | | "foreigner" | | All | |
|---|---|---|---|---|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) |
| $\Delta$IPW$_{1885}$ | 0.054* | 0.045 | 0.037* | 0.029 | 0.068*** | 0.028 | 0.118*** | 0.116*** | 0.123*** | 0.111*** |
| | (0.028) | (0.046) | (0.022) | (0.034) | (0.026) | (0.044) | (0.026) | (0.038) | (0.025) | (0.038) |
| Initial immigrants x year | x | x | x | x | x | x | x | x | x | x |
| Initial Mf x year | | x | | x | | x | | x | | x |
| First stage F-stat | 6.5 | 5.9 | 6.5 | 5.9 | 6.5 | 5.9 | 6.5 | 5.9 | 6.5 | 5.9 |
| Observations | 665 | 665 | 665 | 665 | 665 | 665 | 665 | 665 | 665 | 665 |

*Note:*

*p<0.1; **p<0.05; ***p<0.01

This table replicates the results of Table A-21 using the aggregation and standard error calculation methods recommended by Borusyak, Jaravel, and Hull (2018). Newspaper-level variables aggregated to the industry level. Dependent variable is number of uses of specified term per newspaper issue, standardized. All models include newspaper and year fixed effects. For newspapers in cities, ΔIPW is calculated at the city-, not constituency-level. (9) and (10) use mentions of all four terms. Standard errors clustered by industry in parentheses.

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