**THE RISE OF SWEDISH SOCIAL DEMOCRACY -- APPENDIX**

**APPENDIX A. TAXABLE INCOME IN SWEDEN**

Taxpayers with an income below 1,200 crowns were entitled to an overall allowance of up to 300 crows. Taxpayers with an income between 1,200 and 1,800 crowns received a general deduction of up to 450 crowns. According to parliamentarian debates around the 1911 tax reform, those allowances reduced the individual income tax base between 10 and 15 percent on average (Statistika Centralbyråns 1911; SFS 1910: 112). Besides all labor income, the tax law treated one sixth of wealth as state taxable income. However, only very few people had taxable wealth-derived income – basically right-skewing our income distribution only for very high values (Du Rietz et al. 2015).

**APPENDIX B. LOCAL AND NATIONAL ELECTIONS: A COMPARISON.**

To examine the correlation between the results at the district level between local and national elections, Table 1 reports three versions of the following linear model:

Ndt = α + β Ldt + ε

Ndt is, respectively, the total number of eligible individuals, total number of socialist votes, and percentage of socialist votes over eligible individuals in district d and national election at time t. Ldt represents the same quantities in district d but in local elections at time t. For each estimation, we match the local election and the national election that are closest in time to each other: the local election of 1910 with the national election of 1911; the local electoral cycle of 1912-14 with the national election of 1914 (March); and the local electoral cycle of 1916-18 with the national election of 1917. For each estimation we have 47 observations (electoral districts divided in urban and rural areas) in 1910 and 48 afterwards.[[1]](#footnote-1) For each estimation we report the point estimate β and the adjusted r2.

**TABLE 1. A COMPARISON OF LOCAL AND NATIONAL RESULTS AT THE DISTRICT LEVEL**

Number of Eligible Number of Socialist Socialist Votes Number of

Voters Votes over Eligible Votes Observations

Election Cycle β Adj.-R2 β Adj. R2 β Adj. R2

National Local

1911 1910 1.24\*\*\* 0.92 1.79\*\*\* 0.89 1.19\*\*\* 0.65 47

1914 1912-14 1.06\*\*\* 0.93 1.30\*\*\* 0.90 1.33\*\*\* 0.63 48

1917 1916-18 0.99\*\*\* 0.93 1.21\*\*\* 0.93 1.14\*\*\* 0.81 48

\*\*\* p<0.01. Observations: Local district level (rural and urban areas separately). OLS. β reports coefficient of local elections data.

The level of explained variance is very high: over 0.90 for total raw numbers (Models 1 and 2) and rising to 0.81 by the end of the period for percentage of socialist votes (Model 3). Unsurprisingly, the number of eligible individuals and socialist voters was higher in national than local elections: the point estimates are over 1 in all but one estimation. However, over time we see a process of convergence between national and local elections: in the last electoral cycle, β ranges from 0.99 to 1.21.

**APPENDIX C. INCOME AND CLASS**

Although our income data conveys no direct information about class structure, several sources allow us to relate some occupations to income levels. According to Bagge et al. (1933), male and female farm workers earned Kr. 306 and Kr. 192 respectively in the period 1910-13. That masked substantial geographical differences. Male (female) annual earnings ranged from Kr. 399 (220) to Kr. 269 (123) across Swedish regions. Taking into account the general deduction applied to determine taxable income, it seems plausible to conclude that the bottom half in the rural income distribution (below Kr. 200 in Figure 3) corresponded to agricultural laborers and the like. Across manufactures, annual earnings varied substantially.[[2]](#footnote-2) In the textile industry, men earned Kr. 978 and women Kr. 613 on average. Hence, in urban districts, and taking into account tax allowances in the computation of the tax base, the annual earnings of a male textile worker arguably corresponded to the 60th percentile of the income distribution. In ironworks, unskilled workers, skilled workers and highly skilled male workers made Kr. 847, Kr. 1,289 and Kr. 1,911 respectively in 1914. The income of the skilled worker in an ironwork was close to the 70th percentile. The income of the unskilled worker was at the 55th percentile.

**APPENDIX D. ESTIMATION OF LOCAL ELECTIONS**

**Introduction**

In this appendix we present the tables estimated with multinomial logistic regressions. Each table represents a single model.

First, we estimate the vote choice of the people in the pooled sample, that is all people in all local elections during this time period. The results are reported in Table D.1. In Table D.2 we report the results with year dummies because fixed effects may bias non-linear models estimations (Beck 2020). In Table D.3 we report the results of the multinomial logistic regression with year and lan dummies. In Table D.4 we also include the type of the district as a dummy. Tables D.5 and D.6 (which include he interaction of log income and year) split the sample into urban and rural districts to estimate the tables that we use to plot Figure 4 in the main paper.

Tables D.7 to D.9 repeat all the estimations in D.1 through D.3 for urban districts. Tables D.10-D.12 do the same for rural districts. We draw the predicted probabilities in Figure 5 and in Figure 6 based on models reported in Tables D.7 and D.10. The results are robust to the inclusion of these dummies. Log-income has a concave relationship to the socialist vote choice in all Tables.

Tables D.13 and D.14 report our estimations after we exclude free chuches and temperance membership respectively.

**Table D. 1. Estimation of Multinomial Logit: Pooled Sample**

|  |  |  |  |
| --- | --- | --- | --- |
|  | | | |
|  | Dependent variable Vote Choice: | | |
|  |  | | |
|  | Liberal | Conservative | Socialist |
|  | (1) | (2) | (3) |
|  | | | |
| Log Income | 1.433\*\*\* | 0.594\*\*\* | 2.616\*\*\* |
|  | (0.011) | (0.010) | (0.014) |
|  |  |  |  |
| Log Income2 | -0.091\*\*\* | -0.005\*\*\* | -0.177\*\*\* |
|  | (0.001) | (0.001) | (0.001) |
|  |  |  |  |
| Union Density | -24.185\*\*\* | -21.349\*\*\* | 2.192\*\*\* |
|  | (0.199) | (0.199) | (0.182) |
|  |  |  |  |
| Temperance | 19.536\*\*\* | -7.111\*\*\* | 1.653\*\*\* |
|  | (0.173) | (0.131) | (0.019) |
|  |  |  |  |
| Free Church | -12.972\*\*\* | -24.850\*\*\* | -0.605\*\*\* |
|  | (0.060) | (0.068) | (0.021) |
|  |  |  |  |
| Gini | 3.893\*\*\* | -0.032 | 6.996\*\*\* |
|  | (0.072) | (0.070) | (0.081) |
|  |  |  |  |
| Log Income\*Union Density | 3.102\*\*\* | 2.545\*\*\* | 0.082\*\*\* |
|  | (0.030) | (0.029) | (0.028) |
|  |  |  |  |
| Log Income\*Temperance | -2.112\*\*\* | 0.883\*\*\* | -0.495\*\*\* |
|  | (0.030) | (0.021) | (0.013) |
|  |  |  |  |
| Log Income\*Free Church | 2.251\*\*\* | 2.836\*\*\* | 1.322\*\*\* |
|  | (0.016) | (0.017) | (0.016) |
|  |  |  |  |
| Constant | -8.746\*\*\* | -3.534\*\*\* | -15.152\*\*\* |
|  | (0.060) | (0.057) | (0.070) |
|  |  |  |  |
|  | | | |
| Akaike Inf. Crit. | 6,419,738.000 | 6,419,738.000 | 6,419,738.000 |
|  | | | |
| Note: \*p\*\*p\*\*\*p<0.01 | | | |

**Table D.2. Estimation Results with Year Dummies**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | | | | |
|  | *Dependent variable: Vote Choice* | | | |
|  |  | | | |
|  | Liberal | Conservative | Socialist | |
|  | (1) | (2) | (3) | |
|  | | | | |
| Log Income | 1.437\*\*\* | 0.595\*\*\* | 2.620\*\*\* | |
|  | (0.011) | (0.010) | (0.014) | |
|  |  |  |  | |
| Log Income2 | -0.091\*\*\* | -0.005\*\*\* | -0.177\*\*\* | |
|  | (0.001) | (0.001) | (0.001) | |
|  |  |  |  | |
| Union density | -23.366\*\*\* | -21.888\*\*\* | 1.011\*\*\* | |
|  | (0.198) | (0.200) | (0.185) | |
|  |  |  |  | |
| Free Church | -13.193\*\*\* | -25.242\*\*\* | -0.925\*\*\* | |
|  | (0.062) | (0.070) | (0.020) | |
|  |  |  |  | |
| Temperance | 19.586\*\*\* | -6.973\*\*\* | 2.790\*\*\* | |
|  | (0.172) | (0.134) | (0.019) | |
|  |  |  |  | |
| Gini | 4.301\*\*\* | -0.285\*\*\* | 6.092\*\*\* | |
|  | (0.073) | (0.072) | (0.083) | |
|  |  |  |  | |
|  |  |  |  | |
| Log Income\* Union Density | 3.052\*\*\* | 2.584\*\*\* | 0.130\*\*\* | |
|  | (0.030) | (0.029) | (0.029) | |
|  |  |  |  | |
| Log Income\* Temperance | -2.165\*\*\* | 0.937\*\*\* | -0.396\*\*\* | |
|  | (0.030) | (0.022) | (0.013) | |
|  |  |  |  | |
| Log Income \*Free Church | 2.309\*\*\* | 2.835\*\*\* | 1.219\*\*\* | |
|  | (0.017) | (0.017) | (0.016) | |
|  |  |  |  | |
| Constant | -9.028\*\*\* | -3.541\*\*\* | -15.074\*\*\* | |
|  | (0.060) | (0.058) | (0.071) | |
|  |  |  |  | |
|  | | | | |
| Akaike Inf. Crit. | 6,393,211.000 | 6,393,211.000 | 6,393,211.000 | |
|  | | | | |
|  |  | | | |
| Year Dummies Y Y Y | | | |
| *Note:* | \*p\*\*p\*\*\*p<0.01 | | | |

**Table D. 3. Estimation Results with Lan and Year Dummie**s

|  |
| --- |
|  |
|  | | | |
|  | Dependent variable: Vote Choice | | |
|  |  | | |
|  | Liberal | Conservative | Socialist |
|  | (1) | (2) | (3) |
|  | | | |
| Log Income | 1.273\*\*\* | 0.132\*\*\* | 2.346\*\*\* |
|  | (0.011) | (0.011) | (0.014) |
|  |  |  |  |
| Log Income2 | -0.069\*\*\* | 0.016\*\*\* | -0.158\*\*\* |
|  | (0.001) | (0.001) | (0.001) |
|  |  |  |  |
| Union Density | -31.459\*\*\* | -35.906\*\*\* | -11.929\*\*\* |
|  | (0.164) | (0.131) | (0.195) |
|  |  |  |  |
| Free Church | -24.163\*\*\* | -90.082\*\*\* | -22.653\*\*\* |
|  | (0.034) | (0.026) | (0.021) |
|  |  |  |  |
| Temperance | 15.170\*\*\* | -5.742\*\*\* | -3.102\*\*\* |
|  | (0.064) | (0.042) | (0.021) |
|  |  |  |  |
| Gini | -1.629\*\*\* | 7.014\*\*\* | -4.858\*\*\* |
|  | (0.125) | (0.140) | (0.133) |
|  |  |  |  |
|  |  |  |  |
| Log Income\* Union Density | 4.125\*\*\* | 4.780\*\*\* | 1.402\*\*\* |
|  | (0.024) | (0.020) | (0.029) |
|  |  |  |  |
| Log Income\* Temperance | -1.457\*\*\* | 0.739\*\*\* | 1.060\*\*\* |
|  | (0.019) | (0.019) | (0.022) |
|  |  |  |  |
| Log Income\* Free Church | 2.673\*\*\* | 11.661\*\*\* | 1.530\*\*\* |
|  | (0.032) | (0.034) | (0.035) |
|  |  |  |  |
| Constant | -4.237\*\*\* | -5.841\*\*\* | -6.617\*\*\* |
|  | (0.092) | (0.102) | (0.100) |
|  |  |  |  |
|  | | | |
| Akaike Inf. Crit. | 6,365,725.000 | 6,365,725.000 | 6,365,725.000 |
|  | | | |

|  |  |  |  |
| --- | --- | --- | --- |
| Year Dummies | Y | Y | Y |
| Lan Dummies | Y | Y | Y |
|  | | | |
| Note: | \*p\*\*p\*\*\*p<0.01 | | |

**Table D. 4. Estimation Results with Lan and Year and Type (Urban, Rural) Dummie**s

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | |  | | | | | | | |  | | Dependent variable: Vote Choice | | | | | |  | |  | | | | | |  | | Liberal | Conservative | | | Socialist | |  | | (1) | (2) | | | (3) | |  | | | | | | | | Log Income | | 1.050\*\*\* | -0.073\*\*\* | | | 1.821\*\*\* | |  | | (0.011) | (0.010) | | | (0.013) | |  | |  |  | | |  | | Log Income2 | | -0.044\*\*\* | 0.051\*\*\* | | | -0.113\*\*\* | |  | | (0.001) | (0.001) | | | (0.001) | |  | |  |  | | |  | | Union Density | | -19.457\*\*\* | -9.193\*\*\* | | | -4.933\*\*\* | |  | | (0.147) | (0.147) | | | (0.174) | |  | |  |  | | |  | | Free Church | | -7.187\*\*\* | -84.231\*\*\* | | | -1.670\*\*\* | |  | | (0.016) | (0.013) | | | (0.014) | |  | |  |  | | |  | | Temperance | | 11.273\*\*\* | 10.099\*\*\* | | | -2.666\*\*\* | |  | | (0.031) | (0.019) | | | (0.016) | |  | |  |  | | |  | | Gini | | 2.905\*\*\* | -6.765\*\*\* | | | -8.003\*\*\* | |  | | (0.139) | (0.150) | | | (0.153) | |  | |  |  | | |  | |  | |  |  | | |  | | Log Income\* Union Density | | 3.095\*\*\* | 1.124\*\*\* | | | 0.460\*\*\* | |  | | (0.021) | (0.020) | | | (0.025) | |  | |  |  | | |  | | Log Income\* Temperance | | -1.049\*\*\* | -1.587\*\*\* | | | 0.448\*\*\* | |  | | (0.016) | (0.019) | | | (0.022) | |  | |  |  | | |  | | Log Income\* Free Church | | 1.791\*\*\* | 9.627\*\*\* | | | 0.601\*\*\* | |  | | (0.036) | (0.037) | | | (0.039) | |  | |  |  | | |  | | Constant | | -7.654\*\*\* | 3.677\*\*\* | | | -2.966\*\*\* | |  | | (0.102) | (0.109) | | | (0.112) | |  | |  |  | | |  | |  | | | | | | | | Akaike Inf. Crit. | | 6,386,709.000 | 6,386,709.000 | | | 6,386,709.000 | |  | |  |  | | |  | | Year Dummies | Y | | | Y | Y | | | | Lan Dummies | Y | | | Y | Y | | | | Type Dummies | | Y | Y | | | Y | | Note: | | \*p\*\*p\*\*\*p<0.01 | | | | | |  |  |  |

**Table D. 5. Urban Districts by Years**

|  |  |  |  |
| --- | --- | --- | --- |
|  | | | |
|  | Dependent variable: Vote Choice | | |
|  |  | | |
|  | Liberal | Conservative | Socialist |
|  | (1) | (2) | (3) |
|  | | | |
| Log Income | 2.612\*\*\* | 0.243\*\*\* | 5.303\*\*\* |
|  | (0.038) | (0.032) | (0.050) |
|  |  |  |  |
| Log Income2 | -0.137\*\*\* | 0.061\*\*\* | -0.374\*\*\* |
|  | (0.003) | (0.002) | (0.004) |
|  |  |  |  |
| Union Density | 0.853\*\* | 1.892\*\*\* | -0.987\*\* |
|  | (0.375) | (0.345) | (0.406) |
|  |  |  |  |
| Temperance | 9.140\*\*\* | 9.362\*\*\* | 11.870\*\*\* |
|  | (0.052) | (0.082) | (0.024) |
|  |  |  |  |
| Free Church | 12.834\*\*\* | -10.821\*\*\* | 3.142\*\*\* |
|  | (0.066) | (0.063) | (0.056) |
|  |  |  |  |
| Gini | 1.215\*\*\* | 4.007\*\*\* | -5.325\*\*\* |
|  | (0.193) | (0.177) | (0.189) |
|  |  |  |  |
| 1912-1914 | 0.075 | 0.942\*\*\* | 0.618\*\*\* |
|  | (0.072) | (0.068) | (0.087) |
|  |  |  |  |
| 1916-1918 | -0.772\*\*\* | 0.677\*\*\* | -0.259\*\*\* |
|  | (0.076) | (0.071) | (0.089) |
|  |  |  |  |
| Log Income\*Union Density | -0.129\*\* | -0.202\*\*\* | 0.458\*\*\* |
|  | (0.055) | (0.049) | (0.062) |
|  |  |  |  |
| Log Income\*Temperance | -1.018\*\*\* | -1.067\*\*\* | -2.235\*\*\* |
|  | (0.017) | (0.018) | (0.021) |
|  |  |  |  |
| Log Income\*Free Church | -0.853\*\*\* | 1.653\*\*\* | 0.388\*\*\* |
|  | (0.027) | (0.024) | (0.027) |
|  |  |  |  |
| Log Income\*1912-1914 | 0.016 | -0.066\*\*\* | -0.031\*\* |
|  | (0.011) | (0.010) | (0.013) |
|  |  |  |  |
| Log Income\*1916-1918 | 0.106\*\*\* | -0.052\*\*\* | 0.074\*\*\* |
|  | (0.011) | (0.010) | (0.013) |
|  |  |  |  |
| Constant | -13.497\*\*\* | -8.174\*\*\* | -16.664\*\*\* |
|  | (0.183) | (0.163) | (0.208) |
|  |  |  |  |
|  | | | |
| Akaike Inf. Crit. | 1,074,022.000 | 1,074,022.000 | 1,074,022.000 |
|  | | | |
| Note: \*p\*\*p\*\*\*p<0.01 | | | |

**Table D.6. Rural Districts by Years**

|  |  |  |  |
| --- | --- | --- | --- |
|  | | | |
|  | Dependent variable: Vote Choice | | |
|  |  | | |
|  | Liberal | Conservative | Socialist |
|  | (1) | (2) | (3) |
|  | | | |
| Log Income | 1.497\*\*\* | 0.784\*\*\* | 2.365\*\*\* |
|  | (0.013) | (0.011) | (0.016) |
|  |  |  |  |
| Log Income2 | -0.089\*\*\* | -0.010\*\*\* | -0.151\*\*\* |
|  | (0.001) | (0.001) | (0.001) |
|  |  |  |  |
| Union Density | -13.568\*\*\* | -24.952\*\*\* | 13.321\*\*\* |
|  | (0.046) | (0.017) | (0.010) |
|  |  |  |  |
| Temperance | 16.283\*\*\* | -9.442\*\*\* | -3.997\*\*\* |
|  | (0.213) | (0.161) | (0.011) |
|  |  |  |  |
| Free Church | 1.068\*\*\* | -15.789\*\*\* | -7.261\*\*\* |
|  | (0.076) | (0.075) | (0.005) |
|  |  |  |  |
| Gini | 1.985\*\*\* | -3.040\*\*\* | 4.037\*\*\* |
|  | (0.101) | (0.105) | (0.126) |
|  |  |  |  |
| 1912-1914 | 0.165\*\*\* | 0.611\*\*\* | 1.481\*\*\* |
|  | (0.022) | (0.023) | (0.033) |
|  |  |  |  |
| 1916-1918 | 0.071\*\*\* | 1.043\*\*\* | 1.779\*\*\* |
|  | (0.022) | (0.023) | (0.032) |
|  |  |  |  |
| Log Income\*Union Density | 0.884\*\*\* | 1.892\*\*\* | -0.930\*\*\* |
|  | (0.017) | (0.016) | (0.016) |
|  |  |  |  |
| Log Income\*Temperance | -0.959\*\*\* | 1.436\*\*\* | 0.825\*\*\* |
|  | (0.039) | (0.029) | (0.018) |
|  |  |  |  |
| Log Income\*Free Church | -0.232\*\*\* | 1.129\*\*\* | 2.849\*\*\* |
|  | (0.022) | (0.022) | (0.022) |
|  |  |  |  |
| Log Income\*1912-1914 | -0.024\*\*\* | -0.062\*\*\* | -0.134\*\*\* |
|  | (0.004) | (0.004) | (0.006) |
|  |  |  |  |
| Log Income\*1916-1918 | -0.042\*\*\* | -0.129\*\*\* | -0.188\*\*\* |
|  | (0.004) | (0.004) | (0.005) |
|  |  |  |  |
| Constant | -7.924\*\*\* | -2.415\*\*\* | -13.398\*\*\* |
|  | (0.081) | (0.081) | (0.101) |
|  |  |  |  |
|  | | | |
| Akaike Inf. Crit. | 5,258,958.000 | 5,258,958.000 | 5,258,958.000 |
|  | | | |
| Note: \*p\*\*p\*\*\*p<0.01  **Table D.7. Urban Districts Base Model**   |  |  |  |  | | --- | --- | --- | --- | |  | | | | |  | *Dependent variable: Vote Choice* | | | |  |  | | | |  | Liberal | Conservative | Socialist | |  | (1) | (2) | (3) | |  | | | | | Log Income | 2.609\*\*\* | 0.164\*\*\* | 5.259\*\*\* | |  | (0.038) | (0.031) | (0.049) | |  |  |  |  | | Log Income2 | -0.136\*\*\* | 0.062\*\*\* | -0.372\*\*\* | |  | (0.003) | (0.002) | (0.004) | |  |  |  |  | | Union Density | -1.253\*\*\* | 1.821\*\*\* | -2.772\*\*\* | |  | (0.346) | (0.317) | (0.367) | |  |  |  |  | | Temperance | 10.572\*\*\* | 7.454\*\*\* | 12.486\*\*\* | |  | (0.306) | (0.363) | (0.034) | |  |  |  |  | | Free Church | 10.652\*\*\* | -10.514\*\*\* | 1.618\*\*\* | |  | (0.057) | (0.053) | (0.044) | |  |  |  |  | | Gini | 1.683\*\*\* | 4.633\*\*\* | -4.724\*\*\* | |  | (0.191) | (0.176) | (0.188) | |  |  |  |  | | Log Income\*Union Density | 0.131\*\*\* | -0.178\*\*\* | 0.728\*\*\* | |  | (0.051) | (0.045) | (0.056) | |  |  |  |  | | Log Income\*Temperance | -1.223\*\*\* | -0.910\*\*\* | -2.432\*\*\* | |  | (0.046) | (0.051) | (0.021) | |  |  |  |  | | Log Income\*Free Church | -0.569\*\*\* | 1.654\*\*\* | 0.651\*\*\* | |  | (0.026) | (0.024) | (0.026) | |  |  |  |  | | Constant | -13.704\*\*\* | -7.755\*\*\* | -16.558\*\*\* | |  | (0.179) | (0.160) | (0.199) | |  |  |  |  | |  | | | | | Akaike Inf. Crit. | 1,076,856.000 | 1,076,856.000 | 1,076,856.000 | |  | | | | | *Note\** | \*p\*\*p\*\*\*p<0.01 | | |  |  |  |  |  | | --- | --- | --- | --- | | **Table D.8. Urban Districts Year Dummies** | | | | |  | *Dependent variable: Vote Choice* | | | |  |  | | | |  | Liberal | Conservative | Socialist | |  | (1) | (2) | (3) | |  | | | | | Log Income | 2.612\*\*\* | 0.177\*\*\* | 5.271\*\*\* | |  | (0.038) | (0.031) | (0.049) | |  |  |  |  | | Log Income2 | -0.136\*\*\* | 0.063\*\*\* | -0.372\*\*\* | |  | (0.003) | (0.002) | (0.004) | |  |  |  |  | | Union Density | -0.855\*\* | 2.188\*\*\* | -2.559\*\*\* | |  | (0.348) | (0.320) | (0.369) | |  |  |  |  | | Free Church | 11.037\*\*\* | -10.365\*\*\* | 1.834\*\*\* | |  | (0.057) | (0.053) | (0.044) | |  |  |  |  | | Temperance | 10.703\*\*\* | 8.428\*\*\* | 13.166\*\*\* | |  | (0.305) | (0.369) | (0.034) | |  |  |  |  | | Gini | 1.211\*\*\* | 4.005\*\*\* | -5.313\*\*\* | |  | (0.193) | (0.177) | (0.189) | |  |  |  |  | |  |  |  |  | | Log Income\*Union Density | 0.123\*\* | -0.232\*\*\* | 0.699\*\*\* | |  | (0.051) | (0.045) | (0.056) | |  |  |  |  | | Log Income\*Temperance | -1.243\*\*\* | -0.947\*\*\* | -2.435\*\*\* | |  | (0.046) | (0.051) | (0.021) | |  |  |  |  | | Log Income\*Free Church | -0.587\*\*\* | 1.600\*\*\* | 0.589\*\*\* | |  | (0.027) | (0.024) | (0.026) | |  |  |  |  | | Constant | -13.556\*\*\* | -7.775\*\*\* | -16.541\*\*\* | |  | (0.180) | (0.161) | (0.199) | |  |  |  |  | |  | | | | | Akaike Inf. Crit. | 1,074,253.000 | 1,074,253.000 | 1,074,253.000 | | Year Dummies | Y | Y | Y | |  | | | | | *Note\** | \*p\*\*p\*\*\*p<0.01 | | |   **Table D.9. Urban Districts Year and Lan Dummies**   |  |  |  |  | | --- | --- | --- | --- | |  | | | | |  | *Dependent variable: Vote Choice* | | | |  |  | | | |  | Liberal | Conservative | Socialist | |  | (1) | (2) | (3) | |  | | | | | Log Income | 2.677\*\*\* | 0.187\*\*\* | 4.928\*\*\* | |  | (0.039) | (0.032) | (0.048) | |  |  |  |  | | Log Income2 | -0.136\*\*\* | 0.063\*\*\* | -0.349\*\*\* | |  | (0.003) | (0.002) | (0.004) | |  |  |  |  | | Union Density | 0.348 | 2.327\*\*\* | -3.983\*\*\* | |  | (0.394) | (0.356) | (0.390) | |  |  |  |  | | Free Church | 28.023\*\*\* | 12.156\*\*\* | 18.805\*\*\* | |  | (0.045) | (0.044) | (0.030) | |  |  |  |  | | Temperance | 10.168\*\*\* | 4.639\*\*\* | 11.044\*\*\* | |  | (0.096) | (0.129) | (0.020) | |  |  |  |  | | Gini | 4.846\*\*\* | 3.761\*\*\* | -6.560\*\*\* | |  | (0.198) | (0.301) | (0.128) | |  |  |  |  | | Log Income\*Union Density | 0.057 | -0.219\*\*\* | 0.661\*\*\* | |  | (0.054) | (0.047) | (0.055) | |  |  |  |  | | Log Income\*Temperance | -1.639\*\*\* | -0.754\*\*\* | -1.993\*\*\* | |  | (0.038) | (0.035) | (0.040) | |  |  |  |  | | Log Income\*Free Church | -0.677\*\*\* | 1.545\*\*\* | 1.251\*\*\* | |  | (0.103) | (0.093) | (0.105) | |  |  |  |  | | Constant | -16.730\*\*\* | -8.327\*\*\* | -15.398\*\*\* | |  | (0.151) | (0.198) | (0.117) | |  |  |  |  | |  | | | | | Akaike Inf. Crit. | 1,055,511.000 | 1,055,511.000 | 1,055,511.000 | |  |  |  |  | | Year Dummies | Y | Y | Y | | Lan Dummies | Y | Y | Y | |  | | | | | *Note\** | \*p\*\*p\*\*\*p<0.01 | | |  |  |  |  |  | | --- | --- | --- | --- | | **Table D.10. Rural Districts Base Model** | | | | |  | *Dependent variable: Vote Choice* | | | |  |  | | | |  | Liberal | Conservative | Socialist | |  | (1) | (2) | (3) | |  | | | | | Log Income | 1.478\*\*\* | 0.723\*\*\* | 2.211\*\*\* | |  | (0.012) | (0.011) | (0.015) | |  |  |  |  | | Log Income2 | -0.089\*\*\* | -0.010\*\*\* | -0.149\*\*\* | |  | (0.001) | (0.001) | (0.001) | |  |  |  |  | | Union Density | -13.268\*\*\* | -19.563\*\*\* | 17.992\*\*\* | |  | (0.044) | (0.019) | (0.011) | |  |  |  |  | | Temperance | 15.561\*\*\* | -10.927\*\*\* | -7.564\*\*\* | |  | (0.213) | (0.161) | (0.011) | |  |  |  |  | | Free Church | 1.866\*\*\* | -13.662\*\*\* | -6.352\*\*\* | |  | (0.074) | (0.076) | (0.004) | |  |  |  |  | | Gini | 1.828\*\*\* | -2.873\*\*\* | 3.776\*\*\* | |  | (0.102) | (0.104) | (0.123) | |  |  |  |  | | Log Income\*Union Density | 0.641\*\*\* | 1.177\*\*\* | -1.473\*\*\* | |  | (0.016) | (0.015) | (0.015) | |  |  |  |  | | Log Income\*Temperance | -0.792\*\*\* | 1.603\*\*\* | 1.134\*\*\* | |  | (0.039) | (0.028) | (0.018) | |  |  |  |  | | Log Income\*Free Church | -0.401\*\*\* | 0.880\*\*\* | 2.825\*\*\* | |  | (0.021) | (0.022) | (0.022) | |  |  |  |  | | Constant | -7.729\*\*\* | -2.019\*\*\* | -11.839\*\*\* | |  | (0.080) | (0.079) | (0.096) | |  |  |  |  | |  | | | | | Akaike Inf. Crit. | 5,284,209.000 | 5,284,209.000 | 5,284,209.000 | |  | | | | | *Note\** | \*p\*\*p\*\*\*p<0.01 | | |  |  |  |  |  | | --- | --- | --- | --- | | **Table D.11. Rural Districts Year Dummies** | | | | |  | *Dependent variable: Vote Choice* | | | |  |  | | | |  | Liberal | Conservative | Socialist | |  | (1) | (2) | (3) | |  | | | | | Log Income | 1.482\*\*\* | 0.720\*\*\* | 2.220\*\*\* | |  | (0.012) | (0.011) | (0.015) | |  |  |  |  | | Log Income2 | -0.090\*\*\* | -0.010\*\*\* | -0.150\*\*\* | |  | (0.001) | (0.001) | (0.001) | |  |  |  |  | | Union Density | -12.503\*\*\* | -20.710\*\*\* | 17.167\*\*\* | |  | (0.048) | (0.018) | (0.012) | |  |  |  |  | | Free Church | 1.639\*\*\* | -13.726\*\*\* | -5.560\*\*\* | |  | (0.077) | (0.076) | (0.005) | |  |  |  |  | | Temperance | 15.568\*\*\* | -11.286\*\*\* | -7.004\*\*\* | |  | (0.213) | (0.159) | (0.011) | |  |  |  |  | | Gini | 1.992\*\*\* | -2.999\*\*\* | 4.082\*\*\* | |  | (0.101) | (0.105) | (0.126) | |  |  |  |  | |  |  |  |  | | Log Income\*Union Density | 0.672\*\*\* | 1.161\*\*\* | -1.611\*\*\* | |  | (0.017) | (0.016) | (0.016) | |  |  |  |  | | Log Income\*Temperance | -0.815\*\*\* | 1.776\*\*\* | 1.367\*\*\* | |  | (0.039) | (0.028) | (0.018) | |  |  |  |  | | Log Income\*Free Church | -0.348\*\*\* | 0.763\*\*\* | 2.532\*\*\* | |  | (0.022) | (0.022) | (0.022) | |  |  |  |  | | Constant | -7.836\*\*\* | -2.091\*\*\* | -12.629\*\*\* | |  | (0.080) | (0.080) | (0.098) | |  |  |  |  | |  | | | | | Akaike Inf. Crit. | 5,260,786.000 | 5,260,786.000 | 5,260,786.000 | |  |  |  |  | | Year Dummies | Y | Y | Y | | *Note\** | \*p\*\*p\*\*\*p<0.01 | | |   **Table D.12. Rural Districts Year and Lan Dummies**   |  |  |  |  | | --- | --- | --- | --- | |  | | | | |  | *Dependent variable: Vote Choice* | | | |  |  | | | |  | Liberal | Conservative | Socialist | |  | (1) | (2) | (3) | |  | | | | | Log Income | 1.757\*\*\* | 0.609\*\*\* | 2.554\*\*\* | |  | (0.013) | (0.011) | (0.016) | |  |  |  |  | | Log Income2 | -0.097\*\*\* | 0.0001 | -0.178\*\*\* | |  | (0.001) | (0.001) | (0.001) | |  |  |  |  | | Union Density | -2.932\*\*\* | -14.359\*\*\* | 0.580\*\*\* | |  | (0.028) | (0.028) | (0.006) | |  |  |  |  | | Free Church | 10.303\*\*\* | -31.316\*\*\* | 12.502\*\*\* | |  | (0.014) | (0.016) | (0.003) | |  |  |  |  | | Temperance | 28.218\*\*\* | -7.143\*\*\* | -2.380\*\*\* | |  | (0.015) | (0.013) | (0.009) | |  |  |  |  | | Gini | 17.625\*\*\* | -12.531\*\*\* | -4.333\*\*\* | |  | (0.139) | (0.163) | (0.025) | |  |  |  |  | |  |  |  |  | | Log Income\*Union Density | 1.164\*\*\* | 0.107\*\*\* | -1.197\*\*\* | |  | (0.037) | (0.040) | (0.039) | |  |  |  |  | | Log Income\*Temperance | -3.185\*\*\* | 1.934\*\*\* | 0.130\*\* | |  | (0.044) | (0.046) | (0.064) | |  |  |  |  | | Log Income\*Free Church | 1.171\*\*\* | 2.112\*\*\* | 3.109\*\*\* | |  | (0.082) | (0.082) | (0.103) | |  |  |  |  | | Constant | -20.138\*\*\* | 5.526\*\*\* | -8.139\*\*\* | |  | (0.100) | (0.114) | (0.032) | |  |  |  |  | |  | | | | | Akaike Inf. Crit. | 5,178,621.000 | 5,178,621.000 | 5,178,621.000 | | Year Dummies | Y | Y | Y | | Lan Dummies | Y | Y | Y | |  | | | | | *Note\** | \*p\*\*p\*\*\*p<0.01 | | |   **Figure D13. The Effect of Free Churches Excluding the Temperance Movement**   |  |  |  |  | | --- | --- | --- | --- | |  | | | | |  | Dependent variable: | | | |  |  | | | |  | L | M | S | |  | (1) | (2) | (3) | |  | | | | | lnIncome | 1.166\*\*\* | 0.528\*\*\* | 2.582\*\*\* | |  | (0.010) | (0.010) | (0.013) | |  |  |  |  | | I(lnIncome2) | -0.070\*\*\* | 0.008\*\*\* | -0.174\*\*\* | |  | (0.001) | (0.001) | (0.001) | |  |  |  |  | | free\_church | -12.054\*\*\* | -34.989\*\*\* | 1.121\*\*\* | |  | (0.002) | (0.002) | (0.002) | |  |  |  |  | | Gini | 7.446\*\*\* | 3.444\*\*\* | 3.960\*\*\* | |  | (0.063) | (0.059) | (0.067) | |  |  |  |  | | lnIncome\*free\_church | 2.561\*\*\* | 4.294\*\*\* | 0.916\*\*\* | |  | (0.013) | (0.012) | (0.014) | |  |  |  |  | | Constant | -10.214\*\*\* | -6.189\*\*\* | -12.946\*\*\* | |  | (0.053) | (0.050) | (0.061) | |  |  |  |  | |  | | | | | Akaike Inf. Crit. | 6,482,733.000 | 6,482,733.000 | 6,482,733.000 | |  | | | | | Note: | \*p\*\*p\*\*\*p<0.01 | | | | | | |
| **Figure D14. The Effect of the Temperance Movement Excluding Free Churches Memebership**   |  |  |  |  | | --- | --- | --- | --- | |  | | | | |  | Dependent variable: | | | |  |  | | | |  | L | M | S | |  | (1) | (2) | (3) | |  | | | | | lnIncome | 1.239\*\*\* | 0.412\*\*\* | 2.611\*\*\* | |  | (0.011) | (0.010) | (0.013) | |  |  |  |  | | I(lnIncome2) | -0.065\*\*\* | 0.017\*\*\* | -0.171\*\*\* | |  | (0.001) | (0.001) | (0.001) | |  |  |  |  | | temperence | 11.537\*\*\* | -21.068\*\*\* | 3.456\*\*\* | |  | (0.206) | (0.097) | (0.031) | |  |  |  |  | | Gini | 6.574\*\*\* | 5.212\*\*\* | 1.828\*\*\* | |  | (0.057) | (0.054) | (0.060) | |  |  |  |  | | lnIncome\*temperence | -0.922\*\*\* | 2.583\*\*\* | -0.357\*\*\* | |  | (0.034) | (0.016) | (0.012) | |  |  |  |  | | Constant | -10.479\*\*\* | -7.011\*\*\* | -11.617\*\*\* | |  | (0.050) | (0.047) | (0.057) | |  |  |  |  | |  | | | | | Akaike Inf. Crit. | 6,486,681.000 | 6,486,681.000 | 6,486,681.000 | |  | | | | | Note: | \*p\*\*p\*\*\*p<0.01 | | | | | | |

**Figure D1. Probability of Abstaining and of Partisan Voting by Temperance Movement Density**

**D1.A. Urban Districts**

**C:\Users\cboix\Dropbox (Princeton)\BIRTH OF PARTY DEMOCRACY -- SWEDEN\Replication_Files_Local_Elections\Replication-local2\Figures_re\FigureD1a.tiff**

**D1.B. Rural Districts**

C:\Users\cboix\Dropbox (Princeton)\BIRTH OF PARTY DEMOCRACY -- SWEDEN\Replication_Files_Local_Elections\Replication-local2\Figures_re\FigureD1b.tiff

Note: The predicted probabilities are calculates using models α + β1 logYit + β2 logYit2 + β3 UNIONitn + β4 UNIONitn \* logYit + β5 FREEitn + β6 FREEitn \* logYit + β7 TEMPitn + β8 TEMPitn \* logYit + β9 Giniitn + ε, separately for urban and rural districts

**Figure D2. Probability of Abstaining and of Partisan Voting by Taxable Income and Free Church Movement.**

**D2.A. Urban Districts**

**C:\Users\cboix\Dropbox (Princeton)\BIRTH OF PARTY DEMOCRACY -- SWEDEN\Replication_Files_Local_Elections\Replication-local2\Figures_re\FigureD2a.tiff**

**D2.B. Rural Districts**

**C:\Users\cboix\Dropbox (Princeton)\BIRTH OF PARTY DEMOCRACY -- SWEDEN\Replication_Files_Local_Elections\Replication-local2\Figures_re\FigureD2b.tiff**

Note: The predicted probabilities are calculated using models: α + β1 logYit + β2 logYit2 + β3 UNIONitn + β4 UNIONitn \* logYit + β5 FREEitn + β6 FREEitn \* logYit + β7 TEMPitn + β8 TEMPitn \* logYit + β9 Giniitn + ε, separately for urban and rural districts.

**Figure D3. Probability of Abstaining and of Partisan Voting by Taxable Income and Free Church Movement – Not Controlling for the Temperance Movement (Based on Table D13)**

**C:\Users\cboix\Dropbox (Princeton)\BIRTH OF PARTY DEMOCRACY -- SWEDEN\Replication_Files_Local_Elections\Replication-local2\Figures_re\FigureD3.tiff**

**Figure D4. Probability of Abstaining and of Partisan Voting by Taxable Income and Temperance Movement – Not Controlling for the Free Churches Movement (Based on Table D14)**

**C:\Users\cboix\Dropbox (Princeton)\BIRTH OF PARTY DEMOCRACY -- SWEDEN\Replication_Files_Local_Elections\Replication-local2\Figures_re\FigureD4.tiff**

**APPENDIX E. ESTIMATIONS AND GRAPHS WITHOUT LOGARITHMIC FUNCTION OF INCOME.**

Although it is standard procedure to use a log-transformed income variable to generally a normally distributed variable, there could be legitimate concerns about its impact (in conjunction with the use of a quadratic term of income) on artificially generating the bell-shaped prediction we find in the paper. As a further robustness check, here we report our estimations without log-transforming income variable. In addition, we use the same predictive plots in the paper to present the results. As Figures E.1-E.5 show the results do not depend on this modelling choice.

**Table E.1. Multinomial Logit Estimation of Vote Choice (Urban Districts by Year)**

|  |  |  |  |
| --- | --- | --- | --- |
|  | | | |
|  | Dependent variable: | | |
|  |  | | |
|  | 2.Liberal | 3.Conservative | 4.Socialist |
|  | (1) | (2) | (3) |
|  | | | |
| Income | 0.001\*\*\* | 0.001\*\*\* | 0.001\*\*\* |
|  | (0.000) | (0.000) | (0.000) |
|  |  |  |  |
| I(Income2) | -0.00000\*\*\* | -0.00000\*\*\* | -0.00000\*\*\* |
|  | (0.000) | (0.000) | (0.000) |
|  |  |  |  |
| Union\_density | -0.244\*\*\* | -0.127\*\*\* | -0.046\*\*\* |
|  | (0.000) | (0.000) | (0.000) |
|  |  |  |  |
| Temperance | -0.021\*\*\* | -0.082\*\*\* | -0.119\*\*\* |
|  | (0.000) | (0.000) | (0.000) |
|  |  |  |  |
| Free\_church | -0.001\*\*\* | -0.130\*\*\* | -0.038\*\*\* |
|  | (0.000) | (0.000) | (0.000) |
|  |  |  |  |
| Gini | -0.752\*\*\* | -0.961\*\*\* | -0.805\*\*\* |
|  | (0.000) | (0.000) | (0.000) |
|  |  |  |  |
| as.factor(Year)191214 | -0.175\*\*\* | 0.086\*\*\* | -0.012\*\*\* |
|  | (0.000) | (0.000) | (0.000) |
|  |  |  |  |
| as.factor(Year)191618 | -0.517\*\*\* | -0.143\*\*\* | -0.139\*\*\* |
|  | (0.000) | (0.000) | (0.000) |
|  |  |  |  |
| Income:Union\_density | 0.0001\*\*\* | 0.0001\*\*\* | 0.001\*\*\* |
|  | (0.000) | (0.000) | (0.000) |
|  |  |  |  |
| Income:Temperance | 0.0001\*\*\* | 0.0001\*\*\* | -0.003\*\*\* |
|  | (0.000) | (0.000) | (0.000) |
|  |  |  |  |
| Income:Free\_church | 0.002\*\*\* | 0.001\*\*\* | 0.003\*\*\* |
|  | (0.000) | (0.000) | (0.000) |
|  |  |  |  |
| Income:as.factor(Year)191214 | 0.0001\*\*\* | 0.0001\*\*\* | 0.0002\*\*\* |
|  | (0.000) | (0.000) | (0.000) |
|  |  |  |  |
| Income:as.factor(Year)191618 | 0.0002\*\*\* | 0.0001\*\*\* | 0.0002\*\*\* |
|  | (0.000) | (0.000) | (0.000) |
|  |  |  |  |
| Constant | -1.239\*\*\* | -1.682\*\*\* | -1.138\*\*\* |
|  | (0.000) | (0.000) | (0.000) |
|  |  |  |  |
|  | | | |
| Akaike Inf. Crit. | 1,104,745.000 | 1,104,745.000 | 1,104,745.000 |
|  | | | |
| Note: | \*p\*\*p\*\*\*p<0.01 | | |

|  |  |  |  |
| --- | --- | --- | --- |
| **Table E.2. Multinomial Logit Estimation of Vote Choice**  **(Rural Districts by Year)** | | | |
|  | Dependent variable: | | |
|  |  | | |
|  | 2.Liberal | 3.Conservative | 4.Socialist |
|  | (1) | (2) | (3) |
|  | | | |
| Income | 0.001\*\*\* | 0.001\*\*\* | 0.001\*\*\* |
|  | (0.000) | (0.000) | (0.000) |
|  |  |  |  |
| I(Income2) | -0.00000\*\*\* | -0.00000\*\*\* | -0.00000\*\*\* |
|  | (0.000) | (0.000) | (0.000) |
|  |  |  |  |
| Union\_density | -8.370\*\*\* | -13.037\*\*\* | 8.806\*\*\* |
|  | (0.000) | (0.000) | (0.000) |
|  |  |  |  |
| Temperance | 10.771\*\*\* | -2.242\*\*\* | -1.820\*\*\* |
|  | (0.000) | (0.000) | (0.000) |
|  |  |  |  |
| Free\_church | 0.006\*\*\* | -8.458\*\*\* | 8.603\*\*\* |
|  | (0.000) | (0.000) | (0.000) |
|  |  |  |  |
| Gini | 0.951\*\*\* | -4.380\*\*\* | 3.145\*\*\* |
|  | (0.000) | (0.000) | (0.000) |
|  |  |  |  |
| as.factor(Year)191214 | 0.017\*\*\* | 0.215\*\*\* | 0.704\*\*\* |
|  | (0.000) | (0.000) | (0.000) |
|  |  |  |  |
| as.factor(Year)191618 | -0.151\*\*\* | 0.306\*\*\* | 0.703\*\*\* |
|  | (0.000) | (0.000) | (0.000) |
|  |  |  |  |
| Income:Union\_density | 0.0001\*\*\* | 0.0003\*\*\* | -0.001\*\*\* |
|  | (0.000) | (0.000) | (0.000) |
|  |  |  |  |
| Income:Temperance | -0.001\*\*\* | 0.001\*\*\* | 0.003\*\*\* |
|  | (0.000) | (0.000) | (0.000) |
|  |  |  |  |
| Income:Free\_church | -0.0001\*\*\* | 0.0002\*\*\* | 0.002\*\*\* |
|  | (0.000) | (0.000) | (0.000) |
|  |  |  |  |
| Income:as.factor(Year)191214 | 0.00001\*\*\* | 0.00002\*\*\* | -0.00005\*\*\* |
|  | (0.000) | (0.000) | (0.000) |
|  |  |  |  |
| Income:as.factor(Year)191618 | 0.00000\*\*\* | -0.00002\*\*\* | -0.00003\*\*\* |
|  | (0.000) | (0.000) | (0.000) |
|  |  |  |  |
| Constant | -2.118\*\*\* | 2.064\*\*\* | -4.979\*\*\* |
|  | (0.000) | (0.000) | (0.000) |
|  |  |  |  |
|  | | | |
| Akaike Inf. Crit. | 5,376,456.000 | 5,376,456.000 | 5,376,456.000 |
|  | | | |
| Note: | \*p\*\*p\*\*\*p<0.01 | | |

**Figure E.1 Predicted Turnout and Socialist Votes-Urban (Income is not transformed)**

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**Figure E. 2. Predicted Turnout and Socialist Votes-Rural (Income is not transformed)**

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|  |  |  |  |
| --- | --- | --- | --- |
| **Table E.3. Multinomial Logit Estimation of Vote Choice (Income is not transformed)** | | | |
|  | Dependent variable: | | |
|  |  | | |
|  | 2.Liberal | 3.Conservative | 4.Socialist |
|  | (1) | (2) | (3) |
|  | | | |
| Income | 0.001\*\*\* | 0.001\*\*\* | 0.002\*\*\* |
|  | (0.000) | (0.000) | (0.000) |
|  |  |  |  |
| I(Income2) | -0.00000\*\*\* | -0.00000\*\*\* | -0.00000\*\*\* |
|  | (0.000) | (0.000) | (0.000) |
|  |  |  |  |
| Union\_density | -4.366\*\*\* | -4.315\*\*\* | 3.288\*\*\* |
|  | (0.000) | (0.000) | (0.000) |
|  |  |  |  |
| Temperance | 7.636\*\*\* | -3.241\*\*\* | -0.390\*\*\* |
|  | (0.000) | (0.000) | (0.000) |
|  |  |  |  |
| Free\_church | 0.111\*\*\* | -6.558\*\*\* | 5.570\*\*\* |
|  | (0.000) | (0.000) | (0.000) |
|  |  |  |  |
| Gini | 1.651\*\*\* | -2.170\*\*\* | 3.943\*\*\* |
|  | (0.000) | (0.000) | (0.000) |
|  |  |  |  |
| Income:Union\_density | -0.0001\*\*\* | -0.0004\*\*\* | -0.001\*\*\* |
|  | (0.000) | (0.000) | (0.000) |
|  |  |  |  |
| Income:Temperance | -0.001\*\*\* | 0.0005\*\*\* | -0.001\*\*\* |
|  | (0.000) | (0.000) | (0.000) |
|  |  |  |  |
| Income:Free\_church | -0.0001\*\*\* | -0.0002\*\*\* | -0.0004\*\*\* |
|  | (0.000) | (0.000) | (0.000) |
|  |  |  |  |
| Constant | -2.623\*\*\* | 0.551\*\*\* | -4.796\*\*\* |
|  | (0.000) | (0.000) | (0.000) |
|  |  |  |  |
|  | | | |
| Akaike Inf. Crit. | 6,569,649.000 | 6,569,649.000 | 6,569,649.000 |
|  | | | |
| Note: | \*p\*\*p\*\*\*p<0.01 | | |

**Figure E.3 Probability of Abstaining and of Partisan Voting by Trade Union Density (Income is not transformed)**

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**Figure E. 4. Probability of Abstaining and of Partisan Voting by Temperance Movement Density (Income is not transformed)**

C:\Users\cboix\Dropbox (Princeton)\BIRTH OF PARTY DEMOCRACY -- SWEDEN\Replication_Files_Local_Elections\Figures_re\Figures_re\FigureE4.tiff**Figure E. 5. Probability of Abstaining and of Partisan Voting by Free Church Movement density (Income is not transformed)**

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**APPENDIX F. NATIONAL ELECTIONS, 1911-1940**

As discussed earlier, the elections for regional councils were similar if not broader in coverage than national elections. National elections data has two disadvantages: it comes at a much higher level of aggregation (the municipality at most) and we only have indirect information on class. Still, we examine national elections for two reasons: first, to explore the process of electoral mobilization of voters in general and social democratic voters in particular.

**F. 1. Ecological Inference Estimations, 1911-1940**

To estimate the proportion of individuals employed in both the industry sector and in the agricultural sector that abstained, voted for the SAP, and support left-wing parties in general (SAP, left socialist, and communists) in the elections of 1911, 1921, 1932 and 1940, we take the following steps:

(1) We employ electoral results reported at either the municipal or the county (härad) level and available from Berglund (1988).

(2) We match the electoral data to information about the sectoral composition of each geographical unit from the census of 1910 (Brantgärde 1991a), 1920 (Brantgärde 1991b), 1930 (Brantgärde 1991c) and 1940 (Brantgärde 2013). The sectoral data is provided at the municipal level for 1910 and 1940 and at the county level for 1920 and 1930.

(3) To reduce the ecological inference (EI) problems inherent in aggregate data, we apply the EI estimation procedures advanced in King (1997).

We report our estimations for the industrial and agricultural sector but not for the service sector because the latter has substantial internal variation in terms of social status (from doesmtic service to high-income professionals) and results in imprecise estimations

In the interpretation of the results reported in Figure 6, notice that the population of eligible voters changed after 1920. Before the extension of the franchise to all men and women in that election, women could not vote in national elections and only 79 percent of adult men were eligible to vote. Moreover, eligibility varied by class. According to Sweden’s Statistical Office, whereas over 80 per cent of the urban middle classes were enfranchised and 96 percent of farmers had the right to vote, only 64 percent of the urban working class could vote (Statistiska Centralbyran 1912). Hence the vote estimate for the SAP in 1911 overestimates the level of support for the whole male population.

**F.2. Elections of 1911**

We use currently available individual-level 1910 census data in Sweden collected by the North Atlantic Population Project (NAPP) to construct more fine-grained social classes or groups, and then match those figures to 1911 electoral records and to the 1910 union membership data at the municipality level, which are the lowest administrative level for which electoral data is reported. Out of the 2,576 parishes listed in the census, we have been able to match 2,422 to the municipalities with the help of GIS maps published by the Swedish National Archives. For each municipality we calculate the proportion of men older than 24 years (the age threshold to vote) by occupational group. Starting from the 1,675 different occupational categories reported in the NAPP (North Atlantic Population Project) dataset, we employ Van Leeuwen and Maas’ (2011) HISCLASS classification to construct the following social groups: urban upper and middle class; skilled industrial workers; farmers; semiskilled and unskilled industrial workers; and agricultural laborers. In addition, we add union density -- as union members divided by the total number of workers (men and women of any age) in each district.

The estimations reported in Table F.1 are in line with the results for local elections and income. Social democrats were particularly strong in districts with large numbers of skilled industrial workers and, although less so, in localities with many semiskilled and unskilled workers. By contrast, they fared poorly in municipalities with moneyed urban classes and/or farmers. The SAP vote covaried positively with union density. A fully unionized district implies an increase of 6.05 percentage points in the support for the SAP. These results confirm, using variation within one country, that, even though social democracy relied on the vote of industrial workers, it benefited from the organizational support of unions.

**TABLE F.1. Workers, Unions and the 1911 SAP Vote, OLS Estimations.**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | | | | |
|  | Dependent variable: Vote Share | | | |
|  |  | | | |
|  | Socialists | Liberals | Conservatives | Turnout |
|  | (1) | (2) | (3) | (4) |
|  | | | | |
| Union Density | 0.605\*\*\* | -0.559\*\*\* | -0.055 | 0.356\*\*\* |
|  | (0.133) | (0.173) | (0.169) | (0.099) |
|  |  |  |  |  |
| Higher managers, professionals, lower managers & professionals, clerical and sales personnel | -1.707\*\*\* | 1.232\*\*\* | 0.413 | -0.883\*\*\* |
|  | (0.240) | (0.312) | (0.305) | (0.180) |
|  |  |  |  |  |
| Foremen and skilled workers | 1.945\*\*\* | -1.211\*\*\* | -0.599\*\* | 0.925\*\*\* |
|  | (0.218) | (0.283) | (0.276) | (0.163) |
|  |  |  |  |  |
| Farmers and fishermen | -1.593\*\*\* | -0.238\* | 1.722\*\*\* | -0.379\*\*\* |
|  | (0.095) | (0.123) | (0.120) | (0.071) |
|  |  |  |  |  |
| Lower-skilled and unskilled workers | 0.459\*\*\* | -0.637\*\*\* | 0.168\* | -0.156\*\*\* |
|  | (0.073) | (0.094) | (0.092) | (0.054) |
|  |  |  |  |  |
| Lower-skilled and unskilled farm workers | 0.061 | 0.086 | -0.150 | -0.364\*\*\* |
|  | (0.077) | (0.100) | (0.097) | (0.057) |
|  |  |  |  |  |
| Constant | 0.219\*\*\* | 0.553\*\*\* | 0.225\*\*\* | 0.649\*\*\* |
|  | (0.020) | (0.026) | (0.025) | (0.015) |
|  |  |  |  |  |
|  | | | | |
| Observations | 2,414 | 2,414 | 2,414 | 2,414 |
| R2 | 0.275 | 0.043 | 0.129 | 0.041 |
| Adjusted R2 | 0.273 | 0.040 | 0.126 | 0.039 |
| Residual Std. Error (df = 2407) | 0.172 | 0.223 | 0.218 | 0.129 |
| F Statistic (df = 6; 2407) | 152.334\*\*\* | 17.813\*\*\* | 59.219\*\*\* | 17.133\*\*\* |
|  | | | | |
| Note: \*p\*\*p\*\*\*p<0.01. Standard errors in parentheses. | | | | |

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1. Sweden was divided in twenty-four län. Each one was divided into a rural and urban section except for Gottlands, which had no urban district before 1912. [↑](#footnote-ref-1)
2. Bagge et al. (1933) relied on wage rates paid to individual workers based on information from about one hundred firms whose payrolls had been preserved. Among workers, they selected those whose employment exceed eleven months, thereby excluding temporary workers, and workers whose wage had been recorded no more than 5 to 10 years (to attenuate seniority effects). It is likely that those decisions give us a sample biased toward the labor aristocracy of the manufacturing sector. [↑](#footnote-ref-2)