Online Appendix for

The Adoption of Proportional Representation – One Phenomenon and a Plethora of Explanations

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→ All table names with subscript "m" (such as Table 1_m) refer to a table in the manuscript.

Appendix A1: How Vote Abstention Recommendations led to Social Democratic Victories

To illustrate how recommendations to their voters for abstention made by parties on the right contributed to the victory of the Social Democratic candidate, consider the following examples (from the 1912 election): In *Potsdam-Osthavelland Spandau*, the candidates in the runoff were a representative of the Imperial Party and a Social Democratic candidates. The Free Liberal Party ('Fortschrittliche Volkpartei'), which had received 24 percent of the votes in the first round, recommended their voters to abstain, which led to the victory of the Social Democratic candidate. (Reibel 2007: 163). In *Heiligenstadt Worbis*, a Free Liberal candidate encountered a Socialist in runoffs. In this case, an electoral committee of the 'united conservative parties' ('Vereinigte Rechtstehende Parteien'), which included National Liberals, Conservatives and the Economic Union recommended their voters abstention during runoffs. This led to the victory of the Social Democratic candidate, Cohn (Reibel 2007: 530). This within-country variation in the electoral strategies during runoffs is conditioned by distinct distributions of voter preferences across districts, by previous patterns of electoral competition and so on. One specific form of failed coordination occurs when a right party recommends abstention in the second round and supports neither of the candidates. This is most severe if one of the two remaining candidates belongs to the Social Democrats. During the 1912 election, we can identify at least 13 districts in which a non-socialist party recommended abstention and the Social Democrats eventually won the district in the run-off. While runoffs offer an opportunity to coordinate, due to conflicts within the right the presence of runoffs is not sufficient to assure coordination.

Appendix A2: A Measure of Skill Level

The data on skill distributions has the following structure. Every occupation is classified first according to agriculture, mining and producing industry, or trade and commerce. Within these broad categories there are two further levels. To illustrate this, consider the occupational classification of goldsmiths. This person makes jewelry and therefore (s)he is in the second sector (mining and producing industry), within that sector (s)he belongs to the vocational group "V" (metalworking class) . If the person does not use copper but gold (s)he is in the vocational group "V" and a type "a" (metalworking with gold or silver). Germany's 1895 occupational census collected information on the ratio of skilled to unskilled workers at this very low level of occupational aggregation. We know exactly how many people employed in "Va" were skilled.

Unfortunately, as part of the 1905 census, the German Statistical Office did not collect similar data measuring the ratio of skilled to unskilled workers for each occupation. The only information that exists in the 1905 census is a comparative table on the number of apprentices (*Lehrlinge*) for each occupation, which compares the 1895 and 1905 census. Given that this table reveals that the overtime change in these

ratios is very small, one can assume that the skill ratio remains constant over time for each occupation. What changes, however, is the occupational make-up of a district. This requires us to recalculate the skill ratio using the information collected as part of the 1905 census, the last census of the period. We use the same procedure as in the calculation of the skill ratios for 1895, using this time the information on the distribution of voters across localities that is presented in the 1905 Gewerbezählung (Statistik des Deutschen Reiches 1909: volumes 218 and 219). Again, we construct two measures that measure the share of skilled workers to industrial workers only and the share of skilled workers to the entire labor force.

Appendix A3: Alternative Skill Measures

Here we present the estimates of models 1 through 8 (Table 2_m and Table 3_m in the manuscript) for a number of alternative measures for the skill variable. Instead of relying on a measure of the skill of the industrial workforce, we use a measure of the skill ratio in the total workforce (SKILL ALL). In a second step we use regional average values instead of district measures, and finally, we will aggregate it over party districts and compute a party-level variable, similar to seat-vote disproportionality. We believe that the best specifications are the ones we present in the main body of the paper, but use this appendix to present alternative specifications to increase the confidence in our main results. All results in this appendix confirm our substantive claims. Changes in operationalization do not lead to changes in the magnitude or the statistical significance of our estimates. Table 1 replicates the results in Table 2_m using the alternative skill measure, while Table 2 replicates the results of Table 3_m.

A3.1: Skill Level of Entire Labor Force

We first perform a robustness check for an alternative measure of skill level. Instead of relying on the share of skilled industrial labor force, we use the average skill level over the entire labor population. We present here replications of all eight models in Table 2_m and Table 3_m and will name the models 1a through 8a. The results are presented in Table 1 and Table 2. The substantive results remain unchanged; seat-vote disproportionality and the left threat are significant explanatory factors of support for adoption of proportional representation, whereas the coefficient for the skill level has no significant effect.

Table 1: Replication of Table 2_m with Alternative Skill Measure

		Model 1a	Model 2a	Model 3a	Model 4a
Partisan	SEAT VOTE DISPR.	-0.316***	-0.391***	-0.407***	-0.414***
		(0.040)	(0.057)	(0.058)	(0.061)
District	SOCIALVOTE	0.020*	0.026**	0.110**	0.099**
		(0.011)	(0.013)	(0.044)	(0.047)
District	SECOND*SOC.VOTE			-0.094**	-0.092**
				(0.039)	(0.042)
District	RIGHT MARGIN*SOC.VOTE			-0.001	-0.001*
				(0.001)	(0.001)
District	RIGHT MARGIN		-0.003	0.014	0.020
			(0.009)	(0.015)	(0.016)
District	SECOND		-0.493	1.158	1.192
			(0.467)	(0.822)	(0.859)
Economic	SKILL ALL	0.030	-0.037	-0.027	-0.048
		(0.019)	(0.057)	(0.058)	(0.068)
Control	CATHOLICS		0.008	0.005	0.001
			(0.005)	(0.006)	(0.006)
Control	NON AGRICULTURAL		0.047	0.040	0.055
			(0.035)	(0.035)	(0.041)
	CONSTANT	-1.342**	-1.735**	-2.863***	-1.268
		(0.635)	(0.727)	(0.991)	(1.137)
	Regional Fixed Effects	X	X	X	✓
	R^2	0.693	0.712	0.729	0.765
	CPC	94.72%	94.72%	94.72%	96.48%
	N	284	284	284	284
	$\ell\ell$	-59.870	-56.170	-52.989	-45.924
	$p(\chi^2)$	0.000	0.000	0.000	0.000
	BIC	142.336	157.532	162.468	176.582

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$, McFadden's R^2, $E(y) = 0.553$

Table 2: Replication of Table 3_m with Alternative Skill Measure

		Model 5a	Model 6a	Model 7a	Model 8a
Partisan	SEAT VOTE DISPR.	-0.328***	-0.362***	-0.382***	-0.393***
		(0.104)	(0.112)	(0.107)	(0.106)
District	SOCIALVOTE	0.030**	0.035**	0.086*	0.087*
		(0.013)	(0.015)	(0.048)	(0.052)
District	SECOND*SOC.VOTE			-0.072	-0.078
				(0.045)	(0.049)
District	RIGHT MARGIN*SOC.VOTE			-0.000	-0.001
				(0.001)	(0.001)
District	RIGHT MARGIN		-0.004	0.006	0.015
			(0.010)	(0.017)	(0.018)
District	SECOND		-0.951	0.483	0.723
			(0.613)	(0.999)	(1.045)
Economic	SKILL ALL	0.027	-0.033	-0.023	-0.033
		(0.020)	(0.069)	(0.070)	(0.079)
Control	CATHOLICS		-0.000	-0.003	-0.007
			(0.008)	(0.008)	(0.009)
Control	NON AGRICULTURAL		0.041	0.034	0.040
			(0.040)	(0.040)	(0.047)
	CONSTANT	-1.619*	-1.353	-2.026*	-0.565
		(0.846)	(1.004)	(1.185)	(1.337)
	$\ln(\sigma_j^2)$	0.030	0.086	-0.070	-0.162
		(0.855)	(0.851)	(0.869)	(0.927)
	Regional Fixed Effects	X	X	X	✓
	CPC	94.36%	95.07%	94.71%	96.13%
	N	284	284	284	284
	$\ell\ell$	-49.723	-47.732	-45.992	-41.038
	$p(\chi^2)$	0.000	0.003	0.003	0.007
	BIC	127.691	146.304	154.122	172.460

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$, McFadden's R^2, $E(y) = 0.553$

A3.2: Skill Level as a Regional Measure

So far we have used measures of skills at the level of the electoral district and measured either the share of skilled workers in the industrial labor force or in the entire labor force. In a next step we will use a skill measure which aggregate skills to the level of the region. The economic argument for the adoption of proportional representation, advanced by Cusack Iversen and Sokice can be understood as an argument about regional political economies. In this interpretation, politicians do not respond to the skill composition of a district but rather of the larger political economy in which they are embedded. To test this proposition, we derive a final measure of skill level (SKILL REGION) where we use the average value for each of the 29 political units of Imperial Germany. We name all models 1b through 8b analogous to section A3.1.

Table 3: Replication of Table 2_m with Regional Skill Measure

		Model 1b	Model 2b	Model 3b	Model 4b
Partisan	SEAT VOTE DISPR.	-0.314***	-0.405***	-0.417***	-0.427***
		(0.040)	(0.058)	(0.059)	(0.063)
District	SOCIALVOTE	0.028***	0.028**	0.113**	0.098**
		(0.011)	(0.013)	(0.044)	(0.049)
District	SECOND*SOC.VOTE			-0.091**	-0.084*
				(0.040)	(0.044)
District	RIGHT MARGIN*SOC.VOTE			-0.001	-0.001*
				(0.001)	(0.001)
District	RIGHT MARGIN		-0.003	0.015	0.022
			(0.009)	(0.015)	(0.016)
District	SECOND		-0.470	1.109	1.130
			(0.470)	(0.827)	(0.889)
Economic	SKILL REGION	-15.590*	-16.207*	-14.245	-33.747**
		(8.366)	(8.865)	(9.203)	(14.134)
Control	CATHOLICS		0.009	0.006	0.001
			(0.005)	(0.006)	(0.006)
Control	NON AGRICULTURAL		0.026**	0.024*	0.031**
			(0.013)	(0.013)	(0.015)
	CONSTANT	8.749*	7.747	5.456	18.328**
		(4.939)	(5.242)	(5.472)	(8.377)
	Regional Fixed Effects	X	X	X	✓
	R^2	0.695	0.720	0.734	0.774
	CPC	95.07%	95.07%	94.72%	96.83%
	N	284	284	284	284
	$\ell\ell$	-59.505	-54.756	-51.928	-44.104
	$p(\chi^2)$	0.000	0.000	0.000	0.000
	BIC	141.606	154.704	160.345	172.943

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$, McFadden's R^2, $E(y) = 0.553$

As in the above replication, there is no model in which the skill level – however measured – is positively related to supporting a change of the electoral system. When using the regional measure the relationship is actually negative and significant. Hence, these results here outright refute the claim of Cusack et al. (2007, 2010). Again, we present the best operationalization and specification in the main part of the paper and add these models only for the critical reader.

Table 4: Replication of Table 3_m with Regional Skill Measure

		Model 5b	Model 6b	Model 7b	Model 8b
Partisan	SEAT VOTE DISPR.	-0.357***	-0.389***	-0.398***	-0.407***
		(0.129)	(0.131)	(0.125)	(0.123)
District	SOCIALVOTE	0.037***	0.038**	0.083*	0.080
		(0.013)	(0.015)	(0.048)	(0.055)
District	SECOND*SOC.VOTE			-0.058	-0.062
				(0.046)	(0.052)
District	RIGHT MARGIN*SOC.VOTE			-0.000	-0.001
				(0.001)	(0.001)
District	RIGHT MARGIN		-0.005	0.006	0.016
			(0.010)	(0.017)	(0.018)
District	SECOND		-0.930	0.254	0.474
			(0.626)	(1.046)	(1.130)
Economic	SKILL REGION	-32.006***	-30.358**	-27.442**	-47.295***
		(12.370)	(12.582)	(13.423)	(17.957)
Control	CATHOLICS		-0.001	-0.003	-0.009
			(0.007)	(0.008)	(0.009)
Control	NON AGRICULTURAL		0.020	0.019	0.024
			(0.014)	(0.014)	(0.016)
	CONSTANT	18.130**	16.670**	14.303*	26.990**
		(7.328)	(7.559)	(8.069)	(10.670)
	$\ln(\sigma_j^2)$	0.481	0.439	0.306	0.214
		(0.879)	(0.866)	(0.899)	(0.991)
	Regional Fixed Effects	X	X	X	✓
	CPC	93.66%	92.96%	93.31%	96.48%
	N	284	284	284	284
	$\ell\ell$	-46.875	-44.684	-43.730	-38.343
	$p(\chi^2)$	0.000	0.003	0.006	0.010
	BIC	121.995	140.209	149.598	167.070

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$, McFadden's R^2, $E(y) = 0.553$

In Table 1, Table 2, Table 3, and Table 4, we present the results of the models with alternative measures of skill levels. We find again support for the two driving factors of legislators' decisions; the partisan SEAT VOTE DISPR as well as the strength of the Social Democrats in a district. Only in one models the direct effect of SOCIALVOTE loses statistical significance, but the direction of the effect and the size of the coefficient are almost unchanged in comparison to other models. In these models we do find a significant effect of SKILL REGION. But this effect is in the opposite direction of the theoretical prediction. The higher the average skill level is in a region, the lower the predicted probability for a legislator to support the adoption of proportional representation. These model illustrate the robustness of our empirical findings.

Appendix A4: Effect of District Population Size

Here we present the estimates of models 1 through 8 and add population size as an explanatory variable. These results serve the purpose of illustrating the robustness of our results to possible considerations about malapportionment. The models are labeled 1c to 8c and display the same substantive estimates as all the other models; the larger the seat-vote disproportionality is the lower is the probability that a member of the *Reichstag* will support a change of the electoral system. The stronger the SPD vote is in a district, the higher is the probability that a legislator will support the introduction of proportional representation. Finally, once we control for a number of factors, we find that population size has an effect only in some model specifications and that effect is negative.

Table 5: Replication of Tables 2_m & 3_m with Malapportionment

		Model 1c	Model 2c	Model 3c	Model 4c	Model 5c	Model 6c	Model 7c	Model 8c
Partisan	SEAT VOTE DISPR.	-0.303***	-0.412***	-0.423***	-0.421***	-0.321***	-0.374***	-0.391***	-0.395***
		(0.038)	(0.059)	(0.060)	(0.062)	(0.103)	(0.113)	(0.108)	(0.106)
District	SOCIALVOTE	0.027**	0.029**	0.105**	0.099**	0.036***	0.038**	0.085*	0.087*
		(0.011)	(0.013)	(0.045)	(0.048)	(0.013)	(0.015)	(0.046)	(0.053)
District	SECOND*SOC.VOTE			-0.085**	-0.090**			-0.066	-0.076
				(0.040)	(0.043)			(0.043)	(0.049)
District	RIGHT MARGIN*SOC.VOTE			-0.001	-0.001			-0.000	-0.001
				(0.001)	(0.001)			(0.001)	(0.001)
District	RIGHT MARGIN		-0.006	0.009	0.018		-0.007	0.002	0.013
			(0.009)	(0.015)	(0.016)		(0.010)	(0.017)	(0.019)
District	SECOND		-0.664	0.872	1.079		-1.072*	0.301	0.650
			(0.482)	(0.836)	(0.876)		(0.625)	(0.988)	(1.061)
Economic	SKILL	-4.475	-4.129	-4.161	-4.355	-4.044	-3.868	-3.641	-2.931
		(3.351)	(3.719)	(3.848)	(4.383)	(3.908)	(4.424)	(4.509)	(5.069)
Control	CATHOLICS		0.010*	0.008	0.003		0.002	0.000	-0.006
			(0.006)	(0.006)	(0.007)		(0.008)	(0.008)	(0.010)
Control	NON AGRICULTURAL		0.030**	0.030**	0.029*		0.027**	0.028*	0.023
			(0.013)	(0.013)	(0.015)		(0.013)	(0.014)	(0.017)
Malapportionment	POPULATION	-1.187	-2.972**	-3.594*	-1.712	-1.397	-2.408*	-2.919	-1.012
		(1.332)	(1.250)	(1.878)	(2.251)	(1.287)	(1.331)	(1.816)	(2.355)
	CONSTANT	2.363	0.888	-0.135	1.337	1.801	1.001	0.159	1.098
		(2.064)	(2.444)	(2.629)	(2.962)	(2.411)	(2.976)	(3.071)	(3.361)
	$\ln(\sigma_j^2)$					0.019	0.072	-0.087	-0.188
						(0.856)	(0.862)	(0.879)	(0.935)
	Regional Fixed Effects	X	X	X	✓	X	X	X	✓
	CPC	94.72%	94.72%	95.07%	96.48%	94.72%	94.72%	95.42%	96.13%
	N	284	284	284	284	284	284	284	284
	$\ell\ell$	-60.224	-54.180	-51.324	-45.527	-49.896	-46.480	-44.876	-40.899
	$p(\chi^2)$	0.000	0.000	0.000	0.000	0.000	0.004	0.003	0.010
	BIC	148.693	159.200	164.786	181.437	133.686	149.451	157.540	177.830

Standard errors in parentheses; * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$ – R^2: McFadden's R^2; CPC: correctly predicted cases, baseline 55.28%.

Appendix A5: Skills as a Party Level Variable

We present the estimation results for the hierarchical models with yet another measure of skills. One could presumably argue that the average skill level in a district is not the correct test of the economic explanation of proportional representation, but rather whether a party holds a lot of seats from districts with higher skill level or not. To that end we have generated a variable which captures the average skill level across all districts won by the respective party.

$$\begin{aligned} Pr(\text{Vote}_{ij} = 1) &= \mathbf{\Phi}(\beta_{0j} + \boldsymbol{\beta} \boldsymbol{X}_{ij}) \\ \beta_{0j} &= \alpha_0 + \alpha_1 \cdot \text{SVD}_j + \alpha_2 \cdot \text{Skill}_j + u_j \\ u_j &\sim N(0, \sigma_u) \end{aligned}$$

We estimate a number of hierarchical models in which the two second level variables are SEAT VOTE DISPR. and SKILL PARTY LEVEL. The substantive results are identical to the ones presented in Table 3_m.

Table 6: Replication of Table 3_m with skill measured at the level of the party

		Model 5d	Model 6d	Model 7d	Model 8d
Partisan	SEAT VOTE DISPR.	-0.291**	-0.351***	-0.358***	-0.365***
		(0.119)	(0.134)	(0.124)	(0.122)
District	SOCIALVOTE	0.034***	0.036**	0.088*	0.089*
		(0.013)	(0.015)	(0.048)	(0.053)
District	SECOND*SOC.VOTE			-0.074*	-0.081
				(0.045)	(0.050)
District	RIGHT MARGIN*SOC.VOTE			-0.000	-0.001
				(0.001)	(0.001)
District	RIGHT MARGIN		-0.005	0.006	0.014
			(0.009)	(0.017)	(0.018)
District	SECOND		-0.941	0.538	0.794
			(0.614)	(1.003)	(1.059)
Economic	SKILL PARTY LEVEL	-33.058	-15.334	-30.286	-35.350
		(84.592)	(91.136)	(84.120)	(82.461)
Control	CATHOLICS		0.001	-0.003	-0.006
			(0.007)	(0.007)	(0.008)
Control	NON AGRICULTURAL		0.023*	0.021	0.021
			(0.013)	(0.013)	(0.015)
	CONSTANT	18.849	7.646	15.857	20.308
		(50.160)	(54.107)	(49.904)	(48.898)
	$\ln(\sigma_j^2)$	-0.041	0.094	-0.101	-0.212
		(0.860)	(0.854)	(0.878)	(0.942)
	Regional Fixed Effects	X	X	X	✓
	CPC	94.72%	94.01%	95.07%	96.13%
	N	284	284	284	284
	$\ell\ell$	-50.606	-47.832	-45.984	-41.033
	$p(\chi^2)$	0.000	0.004	0.003	0.006
	BIC	129.456	146.505	154.107	172.450

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$, McFadden's R^2, $E(y) = 0.553$

Appendix A6: Model Estimation on Non-Left Politicians

The final robustness check presented in this appendix is based on a sub-sample. We re-estimate the models from Table 2_m on a restricted sample that includes only non-left politicians in the *Reichstag*. The first Rokkanian hypothesis formulates hypotheses about the incentives of politicians on the right that

face a Social Democratic threat on decision of the latter to support proportional representation. These empirical tests evaluate the relative effects of seat vote disproportionality and social democratic threat on the political decisions of right wing politicians only. Models 1e to 4e show the results if this analysis. The results demonstrate that both Rokkanian hypotheses *jointly* explain the variation in the support for proportional representation among politicians on the political right. The choice of electoral system can be explained by a combination of seat vote disproportionality and left threat.

Table 7: Replication of Table 2_m with Non-Left Members of the *Reichstag*

	Model 1e	Model 2e	Model 3e	Model 4e
SEAT VOTE DISPR.	-0.339***	-0.610***	-0.617***	-0.636***
	(0.044)	(0.100)	(0.103)	(0.118)
SOCIALVOTE	0.017	0.024	0.080*	0.090*
	(0.011)	(0.015)	(0.046)	(0.053)
SECOND*SOC.VOTE			-0.074*	-0.094**
			(0.040)	(0.048)
RIGHT MARGIN*SOC.VOTE			-0.001	-0.001
			(0.001)	(0.001)
RIGHT MARGIN		-0.005	0.005	0.015
		(0.009)	(0.016)	(0.017)
SECOND		-1.469**	-0.100	0.223
		(0.630)	(0.922)	(0.970)
SKILL	-4.300	-3.980	-3.643	-3.927
	(3.336)	(4.032)	(4.009)	(4.722)
CATHOLICS		0.017**	0.015**	0.013
		(0.007)	(0.007)	(0.008)
NON AGRICULTURAL		0.027**	0.024*	0.024
		(0.013)	(0.014)	(0.016)
CONSTANT	2.391	1.203	0.394	2.178
	(2.020)	(2.615)	(2.702)	(3.163)
Regional Fixed Effects	X	X	X	✓
CPC	93.26%	93.78%	92.23%	95.85%
N	193	193	193	193
$\ell\ell$	-56.105	-46.240	-44.172	-37.719
$p(\chi^2)$	0.000	0.000	0.000	0.000
BIC	133.261	134.582	140.971	154.377

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$, McFadden's R^2, $E(y) = 0.653$

Appendix A7: Party Defection

In Section 4.2 of the manuscript we model the conditions under which politicians defect from the party line and support the introduction of proportional representation, even though their respective party opposes this change in electoral system. In Table 8 we re-estimate the models for a sub-sample that includes only members of Zentrum.

Table 8: Logit Models on Party Defection for Zentrum

	Model 9	Model 10	Model 11	Model 12	Model 13
SOCIALVOTE	0.093**		0.118**		0.110**
	(0.040)		(0.053)		(0.052)
SKILL LEVEL		0.019		-0.145	-0.087
		(0.045)		(0.204)	(0.228)
RIGHT MARGIN			0.007	-0.018	0.010
			(0.027)	(0.026)	(0.028)
NON AGRICULTURAL			0.000	0.107	0.047
			(0.031)	(0.107)	(0.120)
CATHOLICS			-0.061	-0.026	-0.064
			(0.043)	(0.043)	(0.044)
SECOND			-2.857	-2.208	-2.740
			(1.932)	(1.779)	(1.939)
CONSTANT	-3.768***	-2.929*	0.888	-0.093	1.417
	(0.885)	(1.689)	(3.493)	(3.834)	(3.945)
N	72	72	72	72	72
$\ell\ell$	-14.039	-16.593	-1.913	-5.542	-0.307
$p(\chi^2)$	0.020	0.677	0.210	0.589	0.320
BIC	36.632	41.739	29.487	36.744	30.551

Standard errors in parentheses; * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$ – Logit model with penalized maximum likelihood function, "firthlogit" (Firth 1993).

To further probe the robustness of these results, we also estimate models using an alternative measure of skill level (average skill of total labor force). The results are unchanged with respect to statistical significance and magnitude of the effects Table 9. Again, the only significant explanatory factor affecting defection from party line among politicians of the *Zentrum* is the strength of left candidates in a district. Finally, in Table 10 we present the models again but rely on linear probability model instead of a probit or Firth's logic model. As with all other model specifications, here again, the strength of left contenders in a given district explains why members of *Zentrum* defect from party line and support the introduction of proportional representation.

Appendix A8: Historical Summary PR Vote

The German *Reichstag* took up the issue of the reform of proportional representation only during the 13th legislative period (and not on previous occasions). The deputies that were willing to engage in this difficult question of electoral reforms had been elected during the 1912 election. In contrast to previous elections, the 1912 election yielded for the first unfavorable ratios of translation of votes to seats for two of the parties on the political right, the National Liberals and the Free Liberals. The translation of votes into seats was also negative for Social Democrats, but this event did not constitute in itself a change in

Table 9: Logit Models on Party Defection with Alternative Skill Measure

	Model 9	Model 10	Model 11	Model 12	Model 13
SOCIALVOTE	0.092**		0.118**		0.110**
	(0.040)		(0.052)		(0.052)
SKILL LEVEL		0.019		-0.145	-0.072
		(0.045)		(0.203)	(0.230)
RIGHT MARGIN			0.006	-0.019	0.008
			(0.026)	(0.026)	(0.027)
NON AGRICULTURAL			0.002	0.108	0.043
			(0.032)	(0.108)	(0.123)
CATHOLICS			-0.058	-0.019	-0.058
			(0.043)	(0.042)	(0.044)
SECOND			-3.116	-2.127	-2.905
			(1.976)	(1.763)	(1.980)
CONSERVATIVE	-2.911*	-1.911	-5.336	-2.445	-5.280
	(1.599)	(1.485)	(3.549)	(3.147)	(3.675)
Constant	-3.754***	-2.934*	0.554	-0.710	0.812
	(0.883)	(1.689)	(3.522)	(3.696)	(3.907)
N	108	108	108	108	108
$\ell\ell$	-14.871	-17.416	-2.401	-6.009	-0.709
$p(\chi^2)$	0.040	0.380	0.202	0.556	0.309
BIC	43.789	48.878	37.577	44.793	38.874

Standard errors in parentheses; * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$ – Logit model with penalized maximum likelihood function, "firthlogit" (Firth 1993).

Table 10: Linear Probability Model on Party Defection

	Model 9	Model 10	Model 11	Model 12	Model 13
SOCIALVOTE	0.005**		0.006**		0.005**
	(0.002)		(0.002)		(0.002)
SKILL		-1.038		-1.048	-0.826
		(0.658)		(0.671)	(0.668)
RIGHT MARGIN			-0.001	-0.002	-0.001
			(0.001)	(0.001)	(0.001)
NON AGRICULTURAL			0.001	0.002	0.001
			(0.002)	(0.002)	(0.002)
CATHOLICS			-0.000	-0.001	-0.001
			(0.001)	(0.001)	(0.001)
SECOND			-0.163**	-0.129*	-0.167**
			(0.071)	(0.070)	(0.071)
CONSERVATIVE	-0.112**	-0.076	-0.116	-0.111	-0.111
	(0.048)	(0.046)	(0.106)	(0.108)	(0.106)
Constant	0.026	0.705*	0.051	0.763*	0.566
	(0.038)	(0.395)	(0.162)	(0.445)	(0.447)
R^2	0.070	0.052	0.116	0.090	0.130
N	108	108	108	108	108
$\ell\ell$	9.840	8.796	12.596	10.987	13.416
$p(\chi^2)$	0.022	0.061	0.048	0.140	0.047
BIC	-5.633	-3.546	7.584	10.801	10.625

Standard errors in parentheses; * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$ – Logit model with penalized maximum likelihood function, "firthlogit" (Firth 1993).

trend for this party. The 1912 election created, thus, favorable political preconditions for the constitution of a political alliance among these three parties – National Liberals, Free Liberals and Social Democrats – in support of a change in electoral institutions and the adoption of proportional representation that was rooted in the dissatisfaction with the seat vote disproportionality of the existing electoral system. By contrast, both the Zentrum and the conservatives were winners of the translation of votes into seats and were, thus, likely to oppose changes in electoral institutions.

In response to the comments raised by the reviewer, we have conducted additional research that traced the process of adoption of the proportional representation bill. We have traced both the parliamentary and extra-parliamentary discussions of the bill. For the latter, we have examined the unpublished documents available in the Archive of the German Ministry of Interior, which carried out a range of studies of the feasibility and implications of the adoption of proportional representation for political parties (source: Bundesarchiv Berlin Lichtenberg, Reichsministerium des Innern, R 1501). The Ministry of Interior voiced the position of the German government for this change in electoral law. Since representatives of the Ministry of Interior displayed strong political support for the Conservative Party, these internal publications explored at greater length the potentially adverse implications of the adoption of proportional representation for the electoral fate of the conservatives. In the ministry, many of the meetings discussing a potential change in the electoral system took place between 1912 and 1914, prior to the onset of WWI. Representatives of this Ministry brought also this position of skepticism and opposition to the adoption of proportional representation to the deliberations of the parliamentary commission of the Reichstag, voicing particularly strong opposition to the change in electoral rules (Stenographische Berichte des Reichstages 13 LP, Nr 895, page 1670).

The German parliament delegated the discussion about the reform of the electoral system to a constitutional committee (*Verfassungsausschuss*) that included representatives of all political parties. This committee published its first (and only report) on July 4th, 1917. Thus, the delay in the adoption of proportional representation – about which Reviewer 1 is inquiring – can be largely attributed to the lengthy process of deliberations of the electoral reform within this committee. The constitutional commission submitted its report to the Reichstag on July 4, 1917 (StBer 13 LP, Aktenstück Nr. 985, page 1917). On the floor of the Reichstag, the PR bill is discussed on three distinct occasions (these meetings take place on March 12, July 8 and July 12, respectively). The bill was adopted during the third meeting.

Appendix A9: Robustness Check - Lost Territories

Did deputies in districts which ultimately ended up not being part of Germany vote in a distinct manner? We coded all districts which were not part of Germany following the loss of territories and added a dummy variable (0=remain German territory, 1=not part of Germany) and replicated all models presented in Table 2_m of the manuscript.

The estimation results indicate that those deputies did not behave in a distinct manner which is somewhat surprising (results in Table 11). One explanation for this may be that at the time of the vote, it was not clear what the details of the Treaty of Versailles would be. Posen was lost to Poland but only after an uprising (which started almost half a year after the vote on PR) which eventually led to Posen being included in the territorial agreements of the Treaty of. Another example is Northern Schleswig which was lost to Denmark but only following the 1920 plebiscite. Danzig became a free city as part of the Treaty of

Table 11: Lost Territories

		I	II	III	IV
Partisan	SEAT VOTE DISPR.	-0.30***	-0.39***	-0.41***	-0.42***
		(0.04)	(0.06)	(0.06)	(0.06)
	LOST IN WWI	**-0.01**	**0.00**	**-0.03**	**-0.27**
		(0.28)	**(0.32)**	**(0.33)**	**(0.42)**
District	SOCIALVOTE	0.03**	0.03**	0.11**	0.10**
		(0.01)	(0.01)	(0.04)	(0.05)
District	SECOND*SOC.VOTE			-0.09**	-0.10**
				(0.04)	(0.04)
District	SECOND		-0.51	1.15	1.20
			(0.48)	(0.82)	(0.87)
District	RIGHT MARGIN		-0.00	0.01	0.02
			(0.01)	(0.02)	(0.02)
District	RIGHT MARGIN*SOC.VOTE			-0.00	-0.00
				(0.00)	(0.00)
Economic	SKILL	-3.73	-2.77	-2.51	-3.66
		(3.26)	(3.61)	(3.69)	(4.35)
Control	CATHOLICS		0.01	0.00	0.00
			(0.01)	(0.01)	(0.01)
Control	NON AGRICULTURAL		0.03**	0.02*	0.02
			(0.01)	(0.01)	(0.02)
	CONSTANT	1.78	-0.08	-1.32	1.29
		(1.98)	(2.42)	(2.58)	(2.99)
	Regional Fixed Effects	X	X	X	✓
	R^2	0.69	0.71	0.73	0.77
	N	284	284	284	284
	$\ell\ell$	-60.55	-56.08	-52.87	-45.57
	$p(\chi^2)$	0.00	0.00	0.00	0.00
	BIC	149.35	163.00	167.87	181.53

Standard errors in parentheses
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Versaille, a treaty which was ratified an entire year after the vote on PR. The treaty negotiations, taking place after the armistice, lasted for over half a year. At the time of the vote, Germany was still at war. The outcome and consequences of the war might have not been clear. It is important to note, that in spring 1918 German forces launched several spring initiatives (*Frühjahrsoffensiven*) and were only 120 km away from Paris. The outcome of the war might have been less foreseeable than one might assume with hindsight. Altogether, deputies might have just not known their faith when they voted on the PR bill.

Table A10: Skilled and Unskilled workers in 1895 – *"Die gelernten und ungelernten Arbeiter im Jahre 1895"*

Sector	Type	Category	Descr.[1]	Skill M[2]	Skill F[3]	Skilled	Unskill M[4]	Unskill F[5]	Unskilled[6]
III. Mining, Saltworks and smelting operations	IIIa) Ore mining	Ore mining	B 1	42876	3	42879	24313	3523	27836
	IIIb) Iron steel works	Iron Steel Works	B 2	22914	18	22932	112400	4210	116610
	IIIb) Salt mines	Salt Mine	B 3	2853	5	2858	6349	98	6447
	IIIc) Exploitation of rocks, browncoal, oil, amber	Rocks and browncoal	B 4	184186	7	184193	124326	6076	130402
	IIIc) Exploitation of peat	Exploitation of peat	B 5	179	1	180	4915	1328	6243
IV Stonecutting	IVa) Stonemasonry	Stonemasonry	B 6	48373	40	48413	3491	254	3745
		Quarryworkers	B 7	19526	200	19726	43488	1766	45254
		Maker of delicate stone objects	B 8	4102	30	4132	1904	510	2414
	IVb) Workers with gravel, sand	Workers with gravel, sand	B 9	3746	74	3820	29343	1644	30987
		Maker of cement objects	B 10	902	11	913	2734	158	2892
	IVc) Workers with loam and clay	Worker with loam and clay	B 11	232	3	235	3249	149	3398
	IVd) Potters, Bricks	Brick maker	B 12	10360	54	10414	149902	12653	162555
		Potter maker	B 13	14721	122	14843	6450	1229	7679
		Maker of refined potter	B 14	669	44	743	1143	266	1409
		Porcelain former	B 15	19193	4082	23275	10752	7114	17866
	IV e) Glasprocessing	Glas works	B 16	17274	182	17456	12062	3306	15368
		Glas finishing	B 17	6780	580	7360	712	937	1649
		Mirror glas and mirror fabrication	B 18	2545	666	3211	1894	590	2484
		Toys made out of stone, porcelain or glas	B 19	694	266	960	164	125	289
V Metalprocessing/ Metallurgy	Va) Noble metals	Goldsmiths, Jewelers	B 20	15418	4368	19786	724	487	1211
		Other precious metal processing	B 21	5089	2277	7366	893	2508	3401
	Vb) Non-noble metals with the exception of Iron and Steel	Coppersmiths	B 22	9167	17	9184	499	86	585
		Brass founder	B 23	5569	4	5573	673	39	712
		Tin founder	B 24	1301	28	1329	409	224	633
		Producers of metal toys	B 25	196	107	303	234	579	813
		Other producers of non-precious metals (ex. iron)	B 26	11112	489	11601	3968	1955	5923
	Vc) Iron and Steel	Brass caster	B 27	324		324	194	19	213
		Worker in bronze	B 28	7472	82	7554	1480	985	2465
		Metal founder	B 29	6588	263	6851	5566	2117	7683
		Iron founder	B 30	41814	57	41871	26396	2000	28396
		Black and	B 31	553	3	556	2097	200	2297
		Plumber	B 32	44643	46	44689	1036	306	1342
		Tin worker	B 33	3833	215	4048	5468	3912	9380
		Maker of nails	B 34	1488	1	1489	288	52	340

Sector	Type	Category	Descr.	Skill M	Skill F	Skilled	Unskill M	Unskill F	Unskilled

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		Maker of wires	B 35	2320	3	2323	2373	143	2516
		Makers of screws and chains	B 36	3329	52	3381	6348	1575	7923
		Blacksmith	B 37	127152	53	127205	3402	161	3563
		Locksmith	B 38	259294	164	259458	8318	626	8944
		Knife smith	B 39	11955	21	11976	4754	512	5266
		scissor sharpener	B 40	5136	13	5149	613	73	686
		File cutter	B 41	4914	17	4931	740	63	803
		Maker of small iron pieces	B 42	4268	129	4397	5248	745	5993
		Producer of needles, wire objects	B 43	4809	470	5279	3060	2424	5484
		Producers of writing tools made of steel	B 44	54	7	61	135	418	553
VI Machine tools	VI a) Producers of machines	Producer of machine tools	B 45	63089	217	63306	49611	2792	52403
	VI b) Builder of mills	Builder of mills	B 46	2342	2	2344	282	13	295
	VI c) Builders of carriages and ships	Wheelwright	B 47	44875	23	44898	1100	316	1416
		Cart/ carriage builder	B 48	3530	11	3541	4482	118	4600
	VI d) Gunsmith	Shipbuilder	B 49	10014		10014	10080	22	10102
		Gunsmith	B 50	2846		2846	75	5	80
		Worker in gun foundries	B 51	2133	3	2136	4180	270	4450
	VI e) Watchmakers	Watchmaker	B 52	14154	801	14955	1560	759	2319
	VI f) Musical instruments (excluding musical toys for children)	i) Producer of artificial fertilizers	B 53	3804	20	3824	1386	255	1641
		ii) Manufacturers of other musical instruments	B 54	5213	371	5584	1698	681	2379
	VIg) Mathematical and surgical instruments	iii) Producer of surgical tools	B 55	18649	239	18888	916	616	1532
	Vih) Lamps	Lampmaker	B 56	435	6	441	2424	1316	3740
	Vii) Electrical machines	Maker of electrical machines	B 57	3480	12	3492	5669	1066	6735
VII Chemical Industry	VIIa) Chemist	Chemist	B 58	2912	109	3021	24206	2216	26422
	VIIb) Druggist	Druggist	B 59	5921	7	5928	2144	376	2520
	VIIc) Producer of colored materials	Producer of colored materials	B 60	3422	254	3676	10032	2431	12463
	VIId) Producer of explosive materials	Producer of explosive materials	B 61	1339	241	1580	8577	7727	16304
	VIIe) Producer of artificial fertilizers	i) Producer of artificial fertilizers	B 62	354	3	357	8283	620	8
		ii) Knacker	B 63	373	1	374	222	50	272

Sector	Type	Category	Descr.	Skill M	Skill F	Skilled	Unskill M	Unskill F	Unskilled
VIII Secondary pro-	VIIIa) Sec. prdc of frstr	Charcoalburner	B 64	265		265	545	19	564

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ducts of forestry (Soaps,		Gas	B 65	769	4	773	11238	102	11340
Fats, Oils, Varnishes)	VIIIb) Soap-making	Soap makers	B 66	1763	117	1880	4191	1909	6100
	VIIIc) Oil mills	Oil mills	B 67	919	16	935	3717	251	3968
	VIIId) Oils, varnishes	Workers with oils,	B 68	946	137	1083	4512	1237	5749
	VIIId) Oils, varnishes	varnishes							
IX Textile industry	IX) Preparation of	Preparation of	B 69	1185	811	1996	6679	6913	13592
	spinning materials	spinning materials							
	IXa) Spinner	Spinner	B 70	23570	33397	56967	38085	62068	100153
		Cloth maker	B 71	19943	10552	30495	14481	13815	28296
	IXb) Weaver	Weaver	B 72	102633	87322	189955	49661	55741	105402
	IXc) Ribbon manufacturer	Ribbon manufacturer	B 73	428	386	814	286	245	531
	IXd) Knitter	Knitter	B 74	17053	19962	37015	3925	5983	9908
	IXe) Embroiderer	Embroiderer	B 75	3771	6940	10711	1426	5727	7153
	Ixf) Dyer	Dyer	B 76	16089	543	16632	13672	3228	16900
		Bleacher	B 77	10335	8094	18429	12673	10505	23178
	Ixg) Fringe maker	Fringe maker	B 78	5757	5180	10937	3392	4580	7972
	Ixh) Rope maker	Rope maker	B 79	4915	195	5110	1881	1710	3591
		Sailmaker	B 80	726	253	979	204	603	807
X Paper Industry	X) Paper and	Paper and card-	B 81	8031	2540	10571	34650	18887	53537
	cardboard makers	board makers							
		Toys manufacturered	B 82	1085	440	1525	130	192	322
		from papermache							
	Xb) Bookbinder	Bookbinder	B 83	26954	2505	29459	4563	12258	16821
XI Leatherworking	XIa) Workers with leather	Leather Industry	B 84	287	2	289	178	23	201
		Tanner	B 85	24111	879	24990	12066	890	12956
		Leather colorer	B 86	1239	41	1280	2576	204	2780
	XIb) Oilcloth, rubber	Oilcloth	B 87	425	27	452	1399	147	1546
		Producer of	B 88	477	147	624	6025	3116	9141
		rubber objects							
		Producers of toys manu-	B 89	4	1	5	180	85	265
		facturered out of rubber							
		Manufacturer of toys	B 91	206	230	436	58	182	240
		made out of leather							
	XIc) Saddle makers	Saddle Maker	B 90	37903	589	38492	1538	1208	2746
		Wallpaperer	B 92	19401	247	19648	634	276	910
XII Woodworking	XIIa) Woodworking	Woodworkers	B 93	15461	83	15544	29341	831	30172
		Manufacturer of	B 94	7458	277	7735	5339	1442	6781
		large wood objects							

Sector	Type	Category	Descr.	Skill M	Skill F	Skilled	Unskill M	Unskill F	Unskilled
	XIIb) Manufacturers of	Cabinet maker	B 95	235594	240	235834	6704	822	7526
	polished wood objects								
	XIIb) Barrel makers	Barrel maker	B 96	29997	23	30020	1385	68	1453
	XIId) Basket maker	Basket maker	B 97	11529	1522	13051	1174	393	1567

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	XIIe) Weaver of straw	Other weaver of wood and straw	B 98	1406	2112	3518	884	1018	1902
	XIIf) Turner	Turner	B 99	19400	33	19433	595	161	756
		Maker of wood toys	B 100	1758	519	2277	804	735	1539
		Maker of cork objects	B 101	8679	776	9455	2253	1322	3575
	XIIg) Combmaker, brushmakers and makers of other wood objects	Combmaker	B 102	975	44	1019	273	129	402
		Brushmaker	B 103	6832	1133	7965	1946	2261	4207
		Umbrella maker	B 104	1407	1091	2498	1528	666	2194
		Maker of picture and and mirror frames	B 105	13141	497	13638	1623	691	2314
XIII Food processing and production	XIII) Producer of vegetarian food items	Miller	B 106	50381	41	50422	15621	806	16427
		Baker	B 107	114448	474	114922	5951	8654	14605
		Pastrybaker	B 108	14230	351	14581	1849	3988	5837
		Sugar producer	B 109	1543	52	1595	22785	3766	26551
		Producer of other vegetable food items	B 110	1245	923	2168	7191	8329	15520
	XIIIb) Producer of animal food items	Butcher	B 111	86303	295	86598	4545	7010	11555
		Other animal food items	B 112	5817	824	6641	3589	2154	5743
		Manufacturer of mineral products	B 113	563	21	584	5868	405	6273
	XIIIc) Drinks	Malter	B 114	1570	7	1577	1280	59	1339
		Brewer	B 115	35784	36	35820	31308	1438	32746
		Manufacturer of wine	B 116	4347	16	4363	7265	810	8075
		Winemaker	B 117	3733	26	3759	918	66	984
		Vinegar distiller	B 118	250	5	255	851	55	906
	XIIId) Tobacco	Tobacco maker	B 119	43756	41344	85100	12323	23344	35667
XIV Fashion & Bekleidung	XIVa) Clothes	Seamstress	B 120		97190	97190		957	957
		Tailor	B 121	131486	58846	190334	550	415	965
		Maker of linen	B 122	3170	24667	27837	2264	3035	5299
		millinery	B 123	112	15429	15541	174	1071	1245
		Dollmaker	B 124	568	1153	1721	137	565	702
		Maker of artificial flowers	B 125	631	5966	6597	541	2134	2675
		Hatmaker	B 126	5712	2690	8402	4087	3032	7119
		Bonnet maker	B 127	751	276	1027	56	68	124
		Furrier	B 128	5376	864	6240	813	517	1330

Sector	Type	Category	Descr.	Skill M	Skill F	Skilled	Unskill M	Unskill F	Unskilled
		Glove maker	B 129	4678	3373	8051	381	949	1330
		Maker of ties and suspenders	B 130	187	1758	1945	129	201	330
		Corsetmaker	B 131	446	4334	4780	268	1301	1569
	XIVb) Shoes	Shoemaker	B 132	147655	7431	155086	4462	3383	7845
	XIVc) Barber	Barber	B 133	21920	18	21938	50	14	64

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		Haidresser and makers of wigs	B 134	8214	496	8710	43	34	77
	XIVd) Workers in public baths and cleaners	Worker in public baths	B 135	315	112	427	1727	1363	3090
		Washer	B 136	555	19947	20502	2175	26710	28885
		Clothescleaner	B 137	81	14	95	54	49	103
XV Construction	Xva) Construction worker	Construction worker	B 138	9779	23	9802	312062	8116	320178
	XVb) Field surveyor	Field surveyor	B 139	1467	3	1470	4379	82	4461
	XVc) Bricklayer	Bricklayer	B 140	372234	182	372416	44547	2172	46719
	XVd) Carpenter	Carpenter	B 141	155391	84	155475	4594	271	4865
	Xve) Glasier	Glasier	B 142	10763	15	10778	219	36	255
	Xvf) Painter	Painter	B 143	92589	104	92693	2494	232	2726
	XVg) Stucco worker	Stucco worker	B 144	11276	11	11287	757	45	802
	XVh) Roofer	Roofer	B 145	19512		19512	2301	31	2332
	Xvi) Stonemasonry	Stonemasonry	B 146	11653	13	11666	5350	37	5387
	XVj) Maker of wells	Maker of wells	B 147	1434	2	1436	1065	13	1078
	XVk) Plumber	Plumber	B 148	3477	4	3481	3224	24	3248
	XVl) Gasstove maker	Gasstove maker	B 149	11393	3	11396	773	48	821
	XVm) Chimney sweeper	Chimney sweeper	B 150	5351		5351	21	3	24
XVI Printing and photography	XVIa) Wood carver	Wood carver	B 151	3181	43	3224	283	312	595
	XVIb) Bookprinter	Bookprinter	B 152	51884	1461	53348	5610	7191	12801
		Lithographer	B 153	16646	353	16999	1472	2593	4065
		Lithographer using	B 154	879	22	901	98	263	361
		copper and iron	B 154	879	22	901	98	263	361
		Color printer	B 155	489	294	783	182	490	672
	XVIc) Photographer	Photographer	B 156	5943	599	6542	248	219	467
XVII Artistic occupations	XVIIa) Painter and carver	Painter and carver	B 157	2130	92	2222	158	24	182
	XVIIb) Engraver	Engraver	B 158	8881	170	9051	396	72	468
	XVIIc) Caligrapher	Caligrapher	B 159	3229	173	3402	24	30	54
	XVIId) Other artistic occupations	Other artistic occupations	B 160	1472	193	1665	135	118	253
		Commerce with merchandise	B 161	928	127	1055	20412	6331	26743
XVIII Trade	XVIII) Commerce with goods	Shopping agent	C 1	179611 **and commerce**	80866	260477	96974	13901	111875
	XVIIb) Commerce with credit	Money	C 2	849	41	890	4078	75	4153
		Credit	C 3	773	9	782	8548	96	8644

Sector	Type	Category	Descr.	Skill M	Skill F	Skilled	Unskill M	Unskill F	Unskilled
	XVIIIc) Commerce with books, art including antiques	Commerce with books, art including antiques	C 4	5029	473	5502	3518	209	3727
		Newspaperprinter	C 5	135	42	177	1571	3167	4738
		Peddler	C 6	619	358	977	278	148	426
		Business mediator	C 7	363	10	373	748	21	769
		Trading apprentice	C 8	226	10	236	26963	2018	28981
		Auctioner	C 9	198	38	236	1765	91	1856

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XIX Insurance	IXIa) Actuary	Actuary	C 10	283	3	286	1145	32	1177
XX Transportation	XXa) Transportation on land	Driver of pers. vehicles	C 13	700	2	702	25703	86	25789
		Streetcar worker	C 14	557		557	13843	117	13960
		Railway workers	C 15	1080	14	1094	39160	237	39397
	XXb) Watertransportation	Navigator	C 16	179		179	724	12	736
		Navigator on ships on seas and coasts	C 17	7045		7045	5098	80	5178
		Navigator on rivers	C 18	18488	21	18509	13846	103	13949
		Longshoreman	C 19	639		639	2420	12	2432
	XXc) Parcel carrier	Parcel carrier	C 20	192	14	206	7144	2062	9206
	XXd) Mortician	Mortician	C 21	78	7	85	2115	740	2855
XXI Hotels and restaurants	XXIa) Hotels and restaurants	Hotels and restaurants	C 22	52370	37121	89491	42737	125924	168661

[1]Description and classification of the Imperial Statistical Office. This is the finest categorization level.

[2]Number of skilled men in a certain category.

[3]Number of skilled women in a certain category.

[4]Number of skilled employees in a certain category.

[5]Number of *unskilled* men in a certain category.

[6]Number of *unskilled* women in a certain category.

[7]Source: "Die gelernten und ungelernten Arbeiter im Jahre 1895". 1899. *Kaiserliches Statistisches Amt. Die berufliche und soziale Gliederung des Deutschen Volkes nach der Berufszählung vom 14 Juni 1895*, pages 77-80.

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