Online Appendix for "Dependency Status and Demand for Social Insurance: evidence from experiments and surveys"

John S. Ahlquist
John Hamman
Bradley Jones

September 16, 2015

A Appendix: screen shots

Figure 1: Screenshot of the sliders task

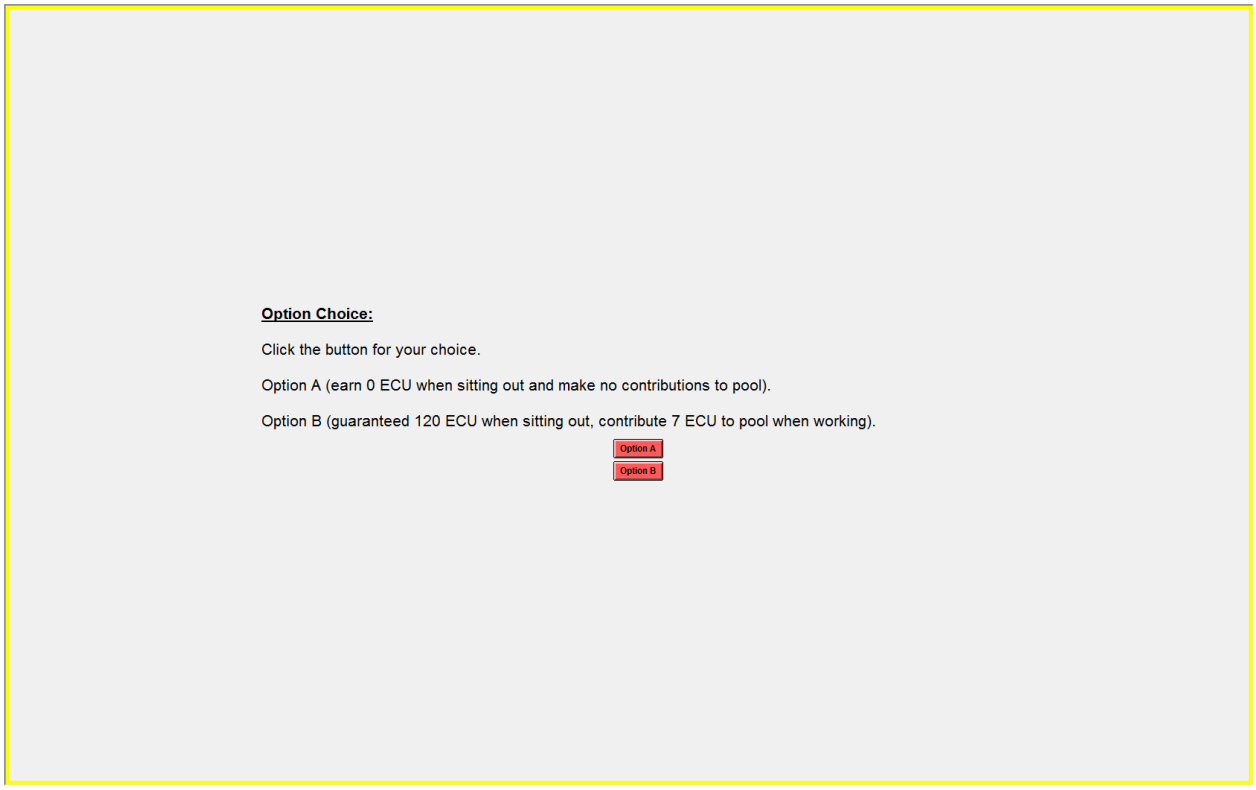

Figure 2: Screenshot of the vote choice screen

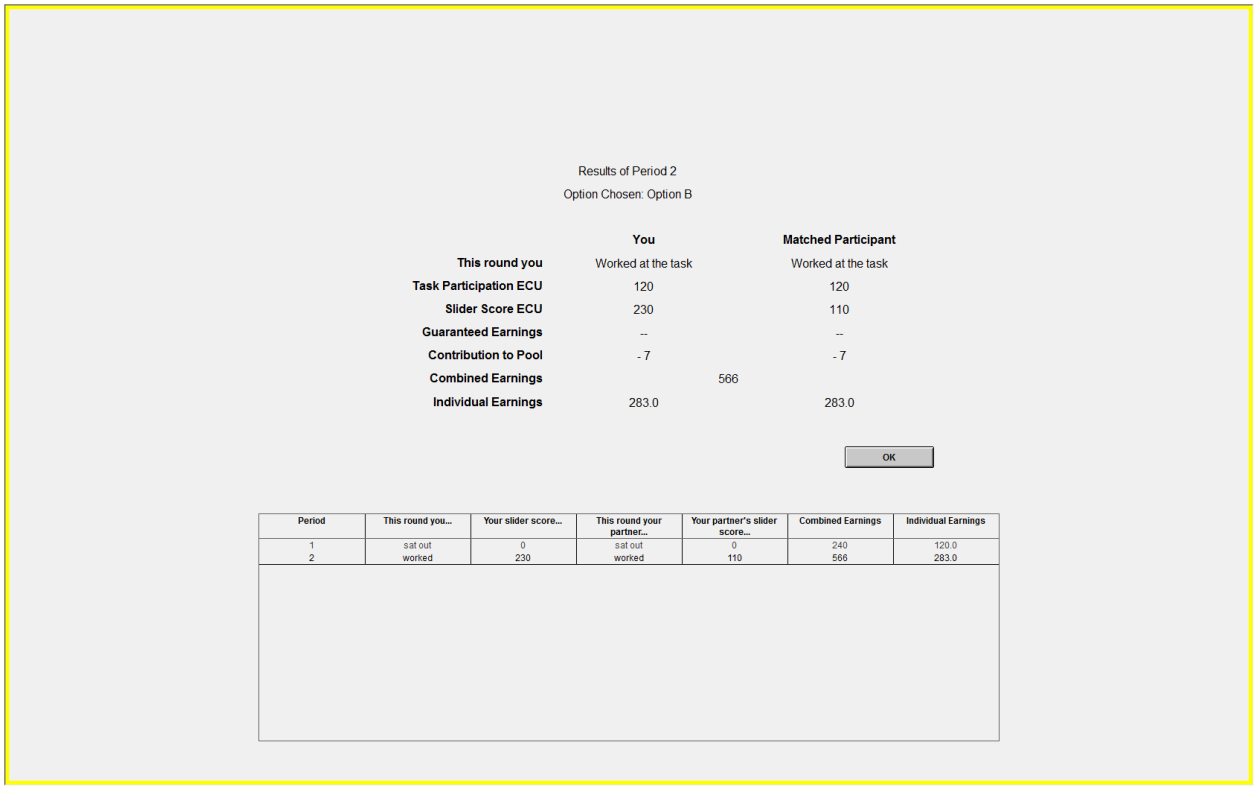

Figure 3: Screenshot of the per round feedback screen seen by participants

B Appendix: Tables for the experiments

Table 1: Participants by session type and location

	Single	Paired, single	Paired, dual
High risk (25%)	Wisconsin: 14 FSU: 24	Wisconsin: 16 FSU: 48	Wisconsin: 26 FSU: 24
Low risk (5%)	Wisconsin: 10 FSU: 24	Wisconsin: 16 FSU: 48	Wisconsin: 8 FSU: 24

Table 2: Participants in the paired, single earner treatment by stage I role, risk, and location

	Active	Passive
High risk (25%)	Wisconsin: 8 FSU: 24	Wisconsin: 8 FSU: 24
Low risk (5%)	Wisconsin: 8 FSU: 24	Wisconsin: 8 FSU: 24

Table 3: Proportions voting for insurance at the first vote by dependency treatment and risk level.

Dependency	**Risk**	**Prop.**	$N =$
single	low	0.65	34
paired, dual	low	0.72	32
paired, single (active)	low	0.78	32
paired, single (passive)	low	0.81	32
single	high	0.87	38
paired, dual	high	0.86	50
paired, single (active)	high	0.91	32
paired, single (passive)	high	0.91	32

C Appendix: Task effort

We briefly discuss task effort, emphasizing that this experiment was not designed to investigate moral hazard effects in social insurance. Recall that each subject's probability of becoming unemployed in any particular round is independent of task performance and that they are explicitly informed of this fact in the instructions phase. Our main interest here is in documenting learning or fatigue effects and gauging whether the risk and dependency treatments had any effect on effort.

To examine subject learning and/or fatigue effects over the course of the experiment we calculate standardized (within subject) effort levels. These quantities allow us to ignore differences in observed effort levels to focus on whether subjects in different treatment conditions behaved differently in terms of learning about the task or fatigue. These results are displayed in figure 4. In this figure the gray background lines are individual subjects; the heavy lines are averages over subjects for each round. All results in this table exclude outliers, i.e., subjects who either gave up and refused to work in a round or subjects who managed to "game the system" on the slider task and get all 48 sliders.[1] Overall there were 48 subject-rounds (out of more than 3,300 subject-rounds where subjects were eligible to work at the task) classified as outliers.

Overall we see clear evidence of learning, with subjects in all treatments improving over the first 7-10 rounds as they become accustomed to the sliders task. Thereafter performance is fairly steady with no evidence of fatigue in any of the treatments. The large drop in the paired-single earner condition at round 10 is due to the fact that subjects in that treatment switched roles after round 10, with a previously "passive" subject becoming active and vice

[1]Participants were instructed to use their computer mice to drag the sliders to the appropriate spot. A few participants discovered that they could use the key board to more precisely move the sliders, and they performed substantially better than those who were moving them manually.

Table 4: Proportions voting for insurance at the second vote by dependency treatment and risk level.

Dependency	**Risk**	**Prop.**	$N =$
single	low	0.62	34
paired, dual	low	0.72	32
paired, single (active)	low	0.72	32
paired, single (passive)	low	0.84	32
single	high	0.92	38
paired, dual	high	0.96	50
paired, single (active)	high	0.84	32
paired, single (passive)	high	0.91	32

versa. Round 11 begins the learning process for a new subject.

Turning to actual effort levels we calculate each round's average effort by treatment condition, along with 80% confidence intervals. Figure 5 displays these results.

Looking at the combined effort plot, we see some evidence that subjects in the high-risk condition appeared to work harder than those in the low risk condition, at least in the early rounds. This difference disappeared by the second half of the experiment. When we look by dependency status it becomes immediately clear that the paired, dual-earner treatment is driving this finding in the combined data: the high risk group works notably harder in this dependency treatment only, but the high-risk/low-risk gap vanishes by round 12. In terms of overall effort levels there is not a strong and consistent difference across dependency treatments. Notably, subjects in the paired, single earner treatment do not appear to work any harder than others even though these subjects have a dependent unable to earn.[2]

In sum, while subjects do appear to learn to do the task better, we find weak evidence linking risk and dependency to effort levels. This is consistent with the experimental set up where the odds of unemployment are orthogonal to effort.

D Mapping GSS employment categorization to experimental conditions

Respondents to the GSS were asked about their own employment status and that of their spouse (if applicable). By combining these two items, we can map respondents from the GSS into mutually exclusive categories that correspond to our experimental conditions. The response options to the employment items allowed for eight responses: Working full time,

[2]These findings are confirmed in more involved parametric models not reported here for space considerations. Results available from the authors.

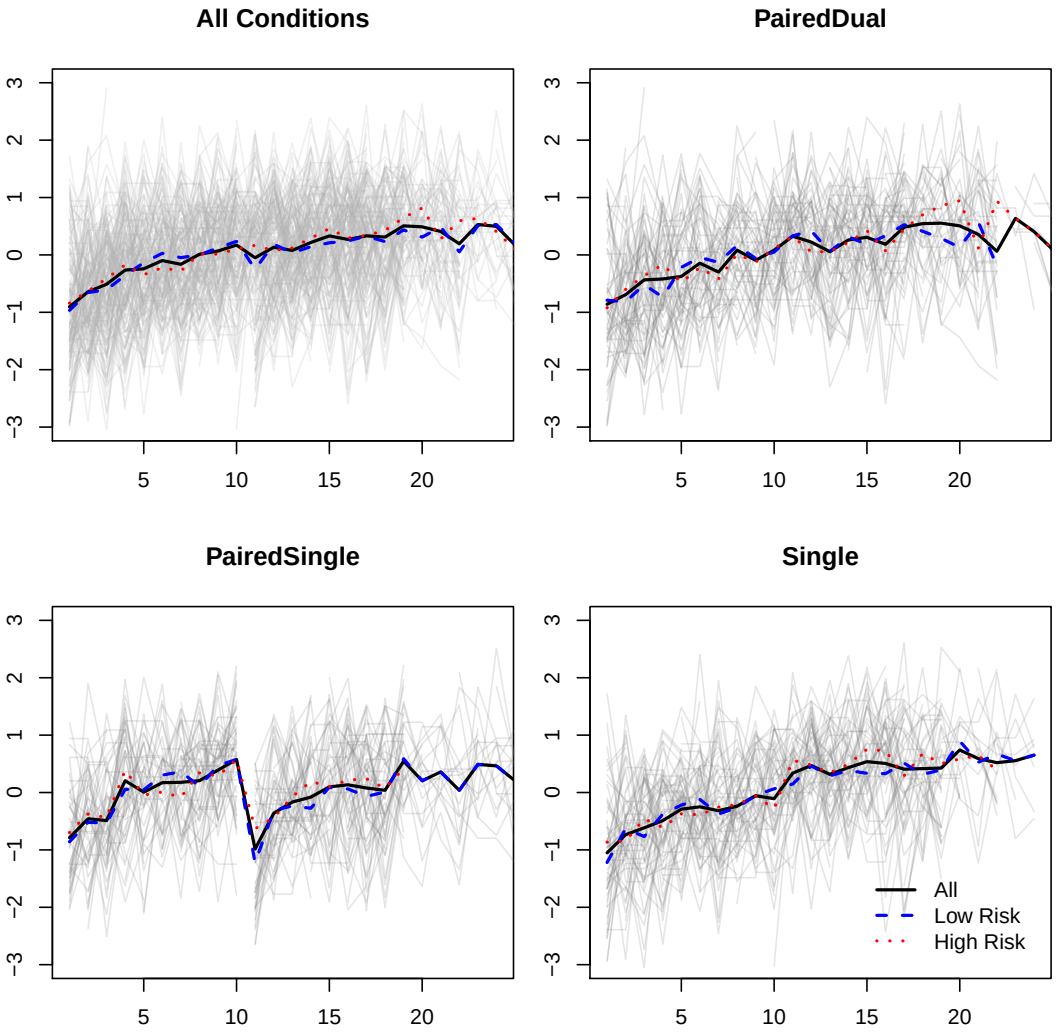

Figure 4: *Evidence of learning in the experiment:* Standardized (within subject) effort levels in the slider task over the course of the experiment by dependency status and risk level (low risk = 5%; high risk = 25%). Light grey lines are individual subjects; heavy lines are means across subjects.

working part time, temporarily not working, unemployed/laid off, retired, student, keeping house, and an other not working category. The table below gives the counts and category assignments for individuals in the GSS data.

Category	Own Employment	Spouse Employment	N
Paired Dual	Working full time	Working full time	754

Paired Dual	Working full time	Working part time	149
Paired Dual	Working full time	Temporarily not working	22
Paired Dual	Working full time	Unemployed/Laid off	15
Paired Dual	Working part time	Working full time	129
Paired Dual	Working part time	Working part time	15
Paired Dual	Working part time	Temporarily not working	2
Paired Dual	Working part time	Unemployed/Laid off	1
Paired Dual	Temporarily not working	Working full time	22
Paired Dual	Temporarily not working	Working part time	4
Paired Dual	Temporarily not working	Temporarily not working	10
Paired Dual	Unemployed/Laid off	Working full time	12
Paired Dual	Unemployed/Laid off	Working part time	3
Paired Dual	Unemployed/Laid off	Temporarily not working	1
Active Single	Working full time	Retired	28
Active Single	Working full time	Student	13
Active Single	Working full time	Homemaker	229
Active Single	Working full time	Other (not working)	10
Active Single	Working part time	Retired	11
Active Single	Working part time	Student	5
Active Single	Working part time	Homemaker	19
Active Single	Working part time	Other (not working)	2
Active Single	Temporarily not working	Retired	3
Active Single	Temporarily not working	Student	2
Active Single	Temporarily not working	Homemaker	10
Active Single	Unemployed/Laid off	Retired	1
Active Single	Unemployed/Laid off	Student	1
Active Single	Unemployed/Laid off	Homemaker	9
Active Single	Unemployed/Laid off	Other (not working)	1
Passive Single	Retired	Working full time	24
Passive Single	Retired	Working part time	14
Passive Single	Retired	Unemployed/Laid off	1
Passive Single	Student	Working full time	15
Passive Single	Student	Working part time	1
Passive Single	Homemaker	Working full time	171
Passive Single	Homemaker	Working part time	8
Passive Single	Homemaker	Temporarily not working	1
Passive Single	Homemaker	Unemployed/Laid off	6
Passive Single	Other (not working)	Working full time	18
Passive Single	Other (not working)	Working part time	2
Passive Single	Other (not working)	Temporarily not working	2
Single (out of lf)	Retired	No Spouse	226
Single (out of lf)	Student	No Spouse	55

Single (out of lf)	Homemaker	No Spouse	126
Single (out of lf)	Other (not working)	No Spouse	43
Paired (out of lf)	Retired	Retired	116
Paired (out of lf)	Retired	Homemaker	56
Paired (out of lf)	Retired	Other (not working)	2
Paired (out of lf)	Student	Retired	1
Paired (out of lf)	Student	Student	1
Paired (out of lf)	Student	Homemaker	3
Paired (out of lf)	Homemaker	Retired	47
Paired (out of lf)	Homemaker	Student	2
Paired (out of lf)	Homemaker	Homemaker	6
Paired (out of lf)	Homemaker	Other (not working)	10
Paired (out of lf)	Other (not working)	Retired	2
Paired (out of lf)	Other (not working)	Homemaker	3
Paired (out of lf)	Other (not working)	Other (not working)	3
Single (in LF)	Working full time	No Spouse	947
Single (in LF)	Working part time	No Spouse	211
Single (in LF)	Temporarily not working	No Spouse	40
Single (in LF)	Unemployed/Laid off	No Spouse	63

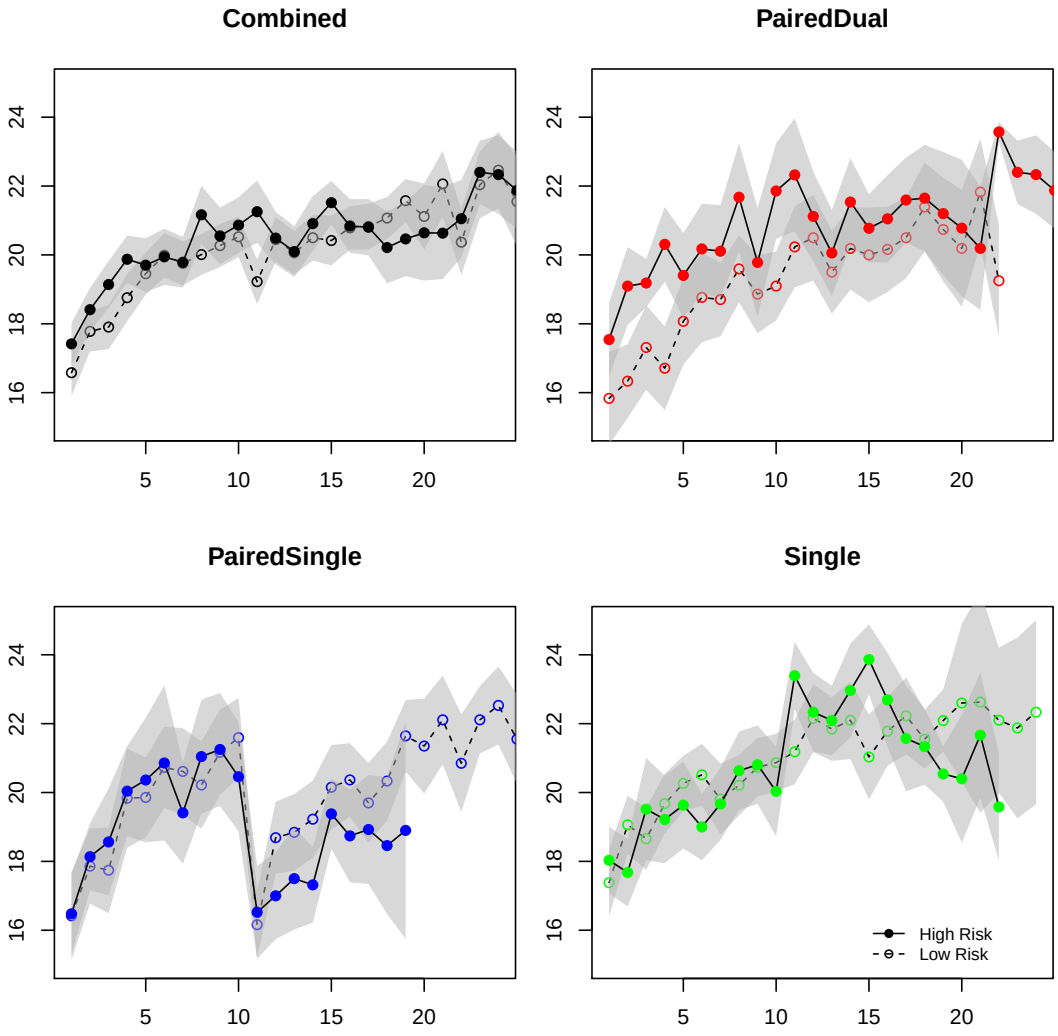

Figure 5: *Task effort by treatment:* Average task effort by round for each of the risk and dependency treatments. The grey shaded regions represent 80% confidence intervals. (low risk = 5%; high risk = 25%).

E Regression results for "placebo" GSS questions

Table 6: Ordered logististic regression parameter estimates for support for other spending GSS.

	Environment	**Health**	**Police**	**Education**
Paired, dual	−0.018 (0.104)	0.001 (0.070)	0.193** (0.098)	−0.044 (0.091)
Active paired single	−0.296*** (0.109)	0.003 (0.132)	0.081 (0.132)	−0.219 (0.144)
Passive paired single	−0.052 (0.149)	−0.005 (0.127)	0.082 (0.162)	0.051 (0.179)
Single (out)	0.262** (0.125)	0.011 (0.108)	0.338*** (0.112)	0.099 (0.128)
Paired (out)	0.117 (0.133)	−0.038 (0.145)	0.186 (0.137)	−0.054 (0.145)
Unemployed self	0.049 (0.183)	0.194 (0.261)	−0.131 (0.214)	0.257 (0.202)
Unemployed spouse	−0.624*** (0.210)	−0.134 (0.432)	−0.498 (0.323)	−0.253 (0.267)
Regional Unemp. Rate	−0.041 (0.046)	−0.029 (0.044)	0.001 (0.051)	0.024 (0.043)
Skill Specificity	0.033 (0.051)	0.067 (0.048)	−0.017 (0.045)	−0.010 (0.047)
Female	−0.139* (0.081)	0.140* (0.072)	0.116 (0.071)	0.114** (0.058)
Children	−0.230*** (0.087)	−0.114* (0.059)	−0.015 (0.069)	0.121 (0.074)
Age	−0.023*** (0.003)	−0.005* (0.003)	0.002 (0.003)	−0.017*** (0.003)
Income ($10,000s)	0.005 (0.011)	−0.043*** (0.011)	0.006 (0.010)	−0.025* (0.013)
White	0.229** (0.093)	−0.558*** (0.091)	−0.158* (0.084)	−0.532*** (0.082)
College Grad	0.298*** (0.096)	−0.196** (0.089)	−0.258*** (0.072)	0.011 (0.093)
Ideology	−0.267*** (0.031)	−0.238*** (0.029)	0.080*** (0.024)	−0.186*** (0.033)
Partisanship	−0.088*** (0.019)	−0.133*** (0.020)	−0.001 (0.018)	−0.080*** (0.017)
Church Attendance	−0.055*** (0.014)	−0.040*** (0.010)	0.006 (0.012)	−0.020 (0.015)
$N =$	3498	3498	3498	3498
Log Likelihood	-4367	-3998	-4144	-3918
AIC	8783	8046	8337	7885

***p < .01; **p < .05; *p < .1

Survey wave dummies and threshold parameters for the ordered logit regression were estimated for all models but are not reported in the table.

Table 7: Ordered Logististic regression parameter estimates for support for other spending GSS.

	Military	**Retirement**	**Arts**
Paired, dual	0.045 (0.078)	0.018 (0.091)	−0.139 (0.093)
Active paired single	0.082 (0.117)	−0.141 (0.129)	−0.406*** (0.106)
Passive paired single	0.085 (0.122)	0.161 (0.134)	−0.202* (0.115)
Single (out)	−0.026 (0.134)	−0.197 (0.120)	0.093 (0.127)
Paired (out)	0.146 (0.146)	−0.171 (0.127)	−0.166 (0.154)
Unemployed self	0.008 (0.181)	0.051 (0.216)	−0.034 (0.165)
Unemployed spouse	−0.323 (0.336)	−0.279 (0.385)	−0.245 (0.329)
Regional Unemp. Rate	−0.014 (0.056)	0.023 (0.044)	−0.064 (0.052)
Skill Specificity	−0.003 (0.055)	0.125*** (0.042)	−0.039 (0.049)
Female	0.052 (0.080)	0.199*** (0.066)	0.105 (0.067)
Children	0.132** (0.066)	−0.023 (0.055)	−0.099 (0.075)
Age	0.008*** (0.002)	−0.002 (0.003)	−0.002 (0.003)
Income ($10,000s)	−0.011 (0.014)	−0.081*** (0.011)	−0.004 (0.009)
White	−0.091 (0.090)	−0.757*** (0.085)	−0.398*** (0.117)
College Grad	−0.664*** (0.097)	−0.757*** (0.099)	0.771*** (0.087)
Ideology	0.240*** (0.023)	−0.044 (0.028)	−0.219*** (0.030)
Partisanship	0.129*** (0.018)	−0.091*** (0.019)	−0.084*** (0.018)
Church Attendance	0.026** (0.013)	−0.021* (0.011)	−0.019 (0.014)
$N =$	3498	3498	3498
Log Likelihood	-4783	-4257	-4606
AIC	9617	8565	9262

***p < .01; **p < .05; *p < .1

Survey wave dummies and threshold parameters for the ordered logit regression were estimated for all models but are not reported in the table.

F Regression results including skill specificity

The models below show that our results are robust to different methods of calculating skill specificity. The first column replicates Model 10 from the main article for comparison. The second and third columns use minimum and average household skill specificity (e.g. in households where there are two individuals with occupational codes, we take either the smaller of the two scores or average them together).

Table 8: Ordered logististic regression parameter estimates for support for social insurance in GSS.

	Max Household (Model 10)	**Min Household**	**Avg Household**
Paired, dual	0.090 (0.089)	0.159* (0.089)	0.124 (0.088)
Active paired single	−0.119 (0.126)	−0.068 (0.126)	−0.094 (0.125)
Passive paired single	0.289** (0.133)	0.350*** (0.133)	0.317** (0.133)
Single (out)	0.045 (0.121)	0.043 (0.121)	0.046 (0.121)
Paired (out)	−0.031 (0.148)	0.025 (0.148)	−0.004 (0.147)
Unemployed self	0.855*** (0.212)	0.861*** (0.212)	0.853*** (0.212)
Unemployed spouse	0.641 (0.391)	0.644* (0.391)	0.638 (0.391)
Regional Unemp. Rate	−0.022 (0.040)	−0.022 (0.040)	−0.022 (0.040)
Skill Specificity (max)	0.129** (0.052)		
Skill Specificity (min)		0.132* (0.069)	
Skill Specificity (avg)			0.160** (0.065)
Female	0.064 (0.068)	0.059 (0.068)	0.067 (0.068)
Children	0.021 (0.074)	0.021 (0.074)	0.022 (0.074)
Age	0.008*** (0.003)	0.008*** (0.003)	0.008*** (0.003)
Income ($10,000s)	−0.086*** (0.012)	−0.086*** (0.012)	−0.086*** (0.012)
White	−1.218*** (0.090)	−1.212*** (0.090)	−1.217*** (0.090)
College Grad	−0.408*** (0.075)	−0.419*** (0.075)	−0.414*** (0.075)
Ideology	−0.061** (0.026)	−0.061** (0.026)	−0.061** (0.026)
Partisanship	−0.107*** (0.018)	−0.107*** (0.018)	−0.107*** (0.018)
Church Attendance	0.005 (0.012)	0.005 (0.012)	0.005 (0.012)
$N =$	3709	3709	3709
Log Likelihood	-4531	-4532	-4531
AIC	9111	9113	9111

***p < .01; **p < .05; *p < .1

Survey wave dummies and threshold parameters for the ordered logit regression were estimated for all models but are not reported in the table.