

Raw Experimental Results
for
Rubinstein 1985 Incomplete Information
Bargaining Problem

Nanlin Jin and Edward Tsang
Department of Computer Science
University of Essex

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Table 1: Notations and Explanation

Explanation	Notation
The player who makes the first offer	1
The second player	2
Discount factor of i	δ_i
Discount factor of the weak player 2	δ_w
Discount factor of the strong player 2	δ_s
Discount factor of the inactive player 2	δ'_2
Player 2 whose discount factor is δ_w	2_w
Player 2 whose discount factor is δ_s	2_s
Player 2 whose discount factor is δ'_2	$2'$
The possibility of 1' initial belief that player 2's discount factor is δ_w	ω_0
Player 1' share from an agreement in the theoretic solution	x_1^*
Player 1' average experimental shares from agreements of 100 runs of the game setting	\bar{x}_1
Player 2' share from an agreement in the theoretic solution	x_2^*
Player 2' average experimental shares from agreements of 100 runs of the game setting	\bar{x}_2
The bargaining time for reaching agreements by the theoretic solution	t^*
The average bargaining time for reaching experimental agreements of 100 runs of the game setting	\bar{t}
Deviation of 100 x_1 s of the game setting	σ

<i>Exp No.</i>	<i>Game Setting</i>				<i>PBE</i> x_1^*	V_s	x^{ω_0}	y^{ω_0}	<i>Exp. Results</i>	
	δ_1	δ_2	δ_2'	ω_0					\bar{x}_1	σ
# 1	0.1	0.1	0.2	0.1	0.8163	0.8163	0.9009	0.0091	0.9162	0.0316
# 2	0.1	0.1	0.2	0.3	0.8163	0.8163	0.9027	0.0273	0.9272	0.0262
# 3	0.1	0.1	0.2	0.5	0.8163	0.8163	0.9045	0.0455	0.9269	0.0269
# 4	0.1	0.1	0.2	0.7	0.8163	0.8163	0.9064	0.0636	0.9340	0.0255
# 5	0.1	0.1	0.2	0.9	0.9082	0.8163	0.9082	0.0818	0.9367	0.0242
# 6	0.1	0.1	0.9	0.1	0.1099	0.1099	0.9009	0.0091	0.9273	0.0277
# 7	0.1	0.1	0.9	0.3	0.9027	0.1099	0.9027	0.0273	0.9294	0.0310
# 8	0.1	0.1	0.9	0.5	0.9045	0.1099	0.9045	0.0455	0.9335	0.0253
# 9	0.1	0.1	0.9	0.7	0.9064	0.1099	0.9064	0.0636	0.9359	0.0287
# 10	0.1	0.1	0.9	0.9	0.9082	0.1099	0.9082	0.0818	0.9387	0.0250
# 11	0.1	0.5	0.4	0.1	0.5263	0.5263	0.6024	0.0061	0.6273	0.0184
# 12	0.1	0.5	0.4	0.3	0.5263	0.5263	0.6073	0.0183	0.6290	0.0180
# 13	0.1	0.5	0.4	0.5	0.5263	0.5263	0.6123	0.0308	0.6329	0.0196
# 14	0.1	0.5	0.4	0.7	0.5263	0.5263	0.6173	0.0433	0.6296	0.0201
# 15	0.1	0.5	0.4	0.9	0.0561	0.5263	0.6224	0.0561	0.6356	0.0199
# 16	0.1	0.5	0.9	0.1	0.1099	0.1099	0.5025	0.0051	0.6318	0.0175
# 17	0.1	0.5	0.9	0.3	0.5077	0.1099	0.5077	0.0153	0.6391	0.0185
# 18	0.1	0.5	0.9	0.5	0.5129	0.1099	0.5129	0.0258	0.6362	0.0178
# 19	0.1	0.5	0.9	0.7	0.5182	0.1099	0.5182	0.0364	0.6348	0.0191
# 20	0.1	0.5	0.9	0.9	0.5236	0.1099	0.5236	0.0472	0.6318	0.0196
# 21	0.1	0.9	0.1	0.1	0.1099	0.1099	0.9009	0.0091	0.1486	0.0311
# 22	0.1	0.9	0.1	0.3	0.0273	0.1099	0.9027	0.0273	0.1460	0.0286
# 23	0.1	0.9	0.1	0.5	0.0455	0.1099	0.9045	0.0455	0.1507	0.0312
# 24	0.1	0.9	0.1	0.7	0.0636	0.1099	0.9064	0.0636	0.1591	0.0270
# 25	0.1	0.9	0.1	0.9	0.0818	0.1099	0.9082	0.0818	0.1492	0.0314
# 26	0.1	0.9	0.8	0.1	0.1099	0.1099	0.2016	0.0020	0.1488	0.0315
# 27	0.1	0.9	0.8	0.3	0.1099	0.1099	0.2050	0.0062	0.1461	0.0280
# 28	0.1	0.9	0.8	0.5	0.1099	0.1099	0.2084	0.0105	0.1572	0.0285
# 29	0.1	0.9	0.8	0.7	0.0149	0.1099	0.2119	0.0149	0.1574	0.0272
# 30	0.1	0.9	0.8	0.9	0.0194	0.1099	0.2155	0.0194	0.1543	0.0271

Table 2: \bar{x}_1 s, x_1^* s and σ s. $\delta_1 = 0.1$.

<i>Exp No.</i>	<i>Game Setting</i>				<i>PBE</i> x_1^*	V_s	x^{ω_0}	y^{ω_0}	<i>Exp. Results</i>	
	δ_1	δ_2	δ_2'	ω_0					\bar{x}_1	σ
# 31	0.5	0.1	0.2	0.1	0.8889	0.8889	0.9058	0.0584	0.9304	0.0312
# 32	0.5	0.1	0.2	0.3	0.8889	0.8889	0.9167	0.1667	0.9374	0.0252
# 33	0.5	0.1	0.2	0.5	0.8889	0.8889	0.9265	0.2647	0.9378	0.0250
# 34	0.5	0.1	0.2	0.7	0.8889	0.8889	0.9354	0.3539	0.9385	0.0272
# 35	0.5	0.1	0.2	0.9	0.8889	0.8889	0.9435	0.4355	0.9373	0.0244
# 36	0.5	0.1	0.9	0.1	0.1818	0.1818	0.9058	0.0584	0.9391	0.0254
# 37	0.5	0.1	0.9	0.3	0.9167	0.1818	0.9167	0.1667	0.9424	0.0257
# 38	0.5	0.1	0.9	0.5	0.9265	0.1818	0.9265	0.2647	0.9391	0.0233
# 39	0.5	0.1	0.9	0.7	0.9354	0.1818	0.9354	0.3539	0.9431	0.0222
# 40	0.5	0.1	0.9	0.9	0.9435	0.1818	0.9435	0.4355	0.9445	0.0246
# 41	0.5	0.5	0.4	0.1	0.6667	0.6667	0.6159	0.0397	0.6309	0.0194
# 42	0.5	0.5	0.4	0.3	0.6667	0.6667	0.6471	0.1176	0.6320	0.0196
# 43	0.5	0.5	0.4	0.5	0.6667	0.6667	0.6774	0.1935	0.6307	0.0207
# 44	0.5	0.5	0.4	0.7	0.6667	0.6667	0.7070	0.2675	0.6307	0.0177
# 45	0.5	0.5	0.4	0.9	0.3396	0.6667	0.7358	0.3396	0.6406	0.0182
# 46	0.5	0.5	0.9	0.1	0.1818	0.1818	0.5167	0.0333	0.6354	0.0172
# 47	0.5	0.5	0.9	0.3	0.5500	0.1818	0.5500	0.1000	0.6419	0.0179
# 48	0.5	0.5	0.9	0.5	0.5833	0.1818	0.5833	0.1667	0.6356	0.0184
# 49	0.5	0.5	0.9	0.9	0.6500	0.1818	0.6500	0.3000	0.6397	0.0187
# 50	0.5	0.5	0.9	0.7	0.6167	0.1818	0.6167	0.2333	0.6371	0.0183
# 51	0.5	0.9	0.1	0.1	0.1818	0.1818	0.9058	0.0584	0.1072	0.0191
# 52	0.5	0.9	0.1	0.3	0.1667	0.1818	0.9167	0.1667	0.1134	0.0208
# 53	0.5	0.9	0.1	0.5	0.2647	0.1818	0.9265	0.2647	0.1088	0.0195
# 54	0.5	0.9	0.1	0.9	0.4355	0.1818	0.9435	0.4355	0.1106	0.0180
# 55	0.5	0.9	0.1	0.7	0.3539	0.1818	0.9354	0.3539	0.1084	0.0256
# 56	0.5	0.9	0.8	0.1	0.1818	0.1818	0.2109	0.0136	0.1111	0.0206
# 57	0.5	0.9	0.8	0.3	0.1818	0.1818	0.2340	0.0426	0.1077	0.0202
# 58	0.5	0.9	0.8	0.5	0.1818	0.1818	0.2593	0.0741	0.1097	0.0233
# 59	0.5	0.9	0.8	0.7	0.1085	0.1818	0.2868	0.1085	0.1096	0.0172
# 60	0.5	0.9	0.8	0.9	0.1463	0.1818	0.3171	0.1463	0.1113	0.0196

Table 3: \bar{x}_1 s, x_1^* s and σ s. $\delta_1 = 0.5$.

<i>Exp No.</i>	<i>Game Setting</i>				<i>PBE</i> x_1^*	V_s	x^{ω_0}	y^{ω_0}	<i>Exp. Results</i>	
	δ_1	δ_2	δ_2'	ω_0					\bar{x}_1	σ
# 61	0.9	0.1	0.2	0.1	0.9756	0.9756	0.9309	0.3092	0.9269	0.0290
# 62	0.9	0.1	0.2	0.3	0.9756	0.9756	0.9599	0.5985	0.9382	0.0263
# 63	0.9	0.1	0.2	0.5	0.9756	0.9756	0.9736	0.7364	0.9400	0.0243
# 64	0.9	0.1	0.2	0.7	0.9756	0.9756	0.9817	0.8170	0.9436	0.0255
# 65	0.9	0.1	0.2	0.9	0.9756	0.9756	0.9870	0.8699	0.9415	0.0280
# 66	0.9	0.1	0.9	0.1	0.5263	0.5263	0.9309	0.3092	0.9293	0.0322
# 67	0.9	0.1	0.9	0.3	0.9599	0.5263	0.9599	0.5985	0.9430	0.0233
# 68	0.9	0.1	0.9	0.5	0.9736	0.5263	0.9736	0.7364	0.9443	0.0233
# 69	0.9	0.1	0.9	0.7	0.9817	0.5263	0.9817	0.8170	0.9449	0.0236
# 70	0.9	0.1	0.9	0.9	0.9870	0.5263	0.9870	0.8699	0.9446	0.0238
# 71	0.9	0.5	0.4	0.1	0.9091	0.9091	0.6919	0.2298	0.7151	0.0413
# 72	0.9	0.5	0.4	0.3	0.9091	0.9091	0.7994	0.4985	0.7243	0.0384
# 73	0.9	0.5	0.4	0.5	0.9091	0.9091	0.8602	0.6506	0.7287	0.0407
# 74	0.9	0.5	0.4	0.7	0.9091	0.9091	0.8994	0.7485	0.7283	0.0350
# 75	0.9	0.5	0.4	0.9	0.9091	0.9091	0.9267	0.8168	0.7225	0.0416
# 76	0.9	0.5	0.9	0.1	0.5263	0.5263	0.5996	0.1991	0.7338	0.0382
# 77	0.9	0.5	0.9	0.3	0.5263	0.5263	0.7265	0.4530	0.7163	0.0420
# 78	0.9	0.5	0.9	0.5	0.8041	0.5263	0.8041	0.6081	0.7272	0.0358
# 79	0.9	0.5	0.9	0.7	0.8563	0.5263	0.8563	0.7127	0.7247	0.0378
# 80	0.9	0.5	0.9	0.9	0.8940	0.5263	0.8940	0.7879	0.7304	0.0397
# 81	0.9	0.9	0.1	0.1	0.5263	0.5263	0.9309	0.3092	0.4708	0.0273
# 82	0.9	0.9	0.1	0.3	0.5985	0.5263	0.9599	0.5985	0.4830	0.0310
# 83	0.9	0.9	0.1	0.5	0.7364	0.5263	0.9736	0.7364	0.4779	0.0309
# 84	0.9	0.9	0.1	0.7	0.8170	0.5263	0.9817	0.8170	0.4792	0.0325
# 85	0.9	0.9	0.1	0.9	0.8699	0.5263	0.9870	0.8699	0.4817	0.0295
# 86	0.9	0.9	0.8	0.1	0.5263	0.5263	0.2724	0.0905	0.4817	0.0301
# 87	0.9	0.9	0.8	0.3	0.5263	0.5263	0.3991	0.2488	0.4825	0.0322
# 88	0.9	0.9	0.8	0.5	0.5263	0.5263	0.5064	0.3830	0.4864	0.0313
# 89	0.9	0.9	0.8	0.7	0.4980	0.5263	0.5984	0.4980	0.4818	0.0335
# 90	0.9	0.9	0.8	0.9	0.5978	0.5263	0.6782	0.5978	0.4780	0.0278

Table 4: \bar{x}_1 s, x_1^* s and σ s. $\delta_1 = 0.9$.

<i>Exp</i> <i>No.</i>	Game Setting				<i>PBE</i>	<i>Experimental</i>
	δ_1	δ_2	δ'_2	ω_0	t^*	\bar{t}
# 1	0.1	0.1	0.2	0.1	0	0.00
# 2	0.1	0.1	0.2	0.3	0	0.00
# 3	0.1	0.1	0.2	0.5	0	0.00
# 4	0.1	0.1	0.2	0.7	0	0.00
# 5	0.1	0.1	0.2	0.9	0	0.00
# 6	0.1	0.1	0.9	0.1	0	0.00
# 7	0.1	0.1	0.9	0.3	0	0.00
# 8	0.1	0.1	0.9	0.5	0	0.00
# 9	0.1	0.1	0.9	0.7	0	0.00
# 10	0.1	0.1	0.9	0.9	0	0.00
# 11	0.1	0.5	0.4	0.3	0	0.04
# 12	0.1	0.5	0.4	0.1	0	0.04
# 13	0.1	0.5	0.4	0.5	0	0.05
# 14	0.1	0.5	0.4	0.7	0	0.05
# 15	0.1	0.5	0.4	0.9	1	0.05
# 16	0.1	0.5	0.9	0.3	0	0.05
# 17	0.1	0.5	0.9	0.1	0	0.05
# 18	0.1	0.5	0.9	0.5	0	0.05
# 19	0.1	0.5	0.9	0.7	0	0.05
# 20	0.1	0.5	0.9	0.9	0	0.05
# 21	0.1	0.9	0.1	0.1	0	0.34
# 22	0.1	0.9	0.1	0.3	1	0.35
# 23	0.1	0.9	0.1	0.5	1	0.40
# 24	0.1	0.9	0.1	0.7	1	0.31
# 25	0.1	0.9	0.1	0.9	1	0.48
# 26	0.1	0.9	0.8	0.1	0	0.41
# 27	0.1	0.9	0.8	0.3	0	0.43
# 28	0.1	0.9	0.8	0.5	0	0.37
# 29	0.1	0.9	0.8	0.7	1	0.36
# 30	0.1	0.9	0.8	0.9	1	0.41

Table 5: \bar{t} s and t^* s. $\delta_1 = 0.1$.

<i>Exp</i> <i>No.</i>	Game Setting				<i>PBE</i>	<i>Experimental</i>
	δ_1	δ_2	δ'_2	ω_0	t^*	\bar{t}
# 31	0.5	0.1	0.2	0.1	0	0.00
# 32	0.5	0.1	0.2	0.3	0	0.00
# 33	0.5	0.1	0.2	0.5	0	0.00
# 34	0.5	0.1	0.2	0.7	0	0.00
# 35	0.5	0.1	0.2	0.9	0	0.00
# 36	0.5	0.1	0.9	0.1	0	0.00
# 37	0.5	0.1	0.9	0.3	0	0.00
# 38	0.5	0.1	0.9	0.5	0	0.00
# 39	0.5	0.1	0.9	0.7	0	0.00
# 40	0.5	0.1	0.9	0.9	0	0.00
# 41	0.5	0.5	0.4	0.1	0	0.05
# 42	0.5	0.5	0.4	0.3	0	0.05
# 43	0.5	0.5	0.4	0.5	0	0.05
# 44	0.5	0.5	0.4	0.7	0	0.05
# 45	0.5	0.5	0.4	0.9	1	0.05
# 46	0.5	0.5	0.9	0.1	0	0.05
# 47	0.5	0.5	0.9	0.3	0	0.04
# 48	0.5	0.5	0.9	0.5	0	0.05
# 49	0.5	0.5	0.9	0.7	0	0.05
# 50	0.5	0.5	0.9	0.9	0	0.05
# 51	0.5	0.9	0.1	0.1	0	0.20
# 52	0.5	0.9	0.1	0.3	1	0.22
# 53	0.5	0.9	0.1	0.5	1	0.23
# 54	0.5	0.9	0.1	0.7	1	0.24
# 55	0.5	0.9	0.1	0.9	1	0.23
# 56	0.5	0.9	0.8	0.1	0	0.22
# 57	0.5	0.9	0.8	0.3	0	0.29
# 58	0.5	0.9	0.8	0.5	0	0.29
# 59	0.5	0.9	0.8	0.7	1	0.28
# 60	0.5	0.9	0.8	0.9	1	0.23

Table 6: \bar{t} s and t^* s. $\delta_1 = 0.5$.

<i>Exp</i> <i>No.</i>	Game Setting				<i>PBE</i>	<i>Experimental</i>
	δ_1	δ_2	δ'_2	ω_0	t^*	\bar{t}
# 61	0.9	0.1	0.2	0.1	0	0.00
# 62	0.9	0.1	0.2	0.3	0	0.00
# 63	0.9	0.1	0.2	0.5	0	0.00
# 64	0.9	0.1	0.2	0.7	0	0.00
# 65	0.9	0.1	0.2	0.9	0	0.00
# 66	0.9	0.1	0.9	0.1	0	0.00
# 67	0.9	0.1	0.9	0.3	0	0.00
# 68	0.9	0.1	0.9	0.5	0	0.00
# 69	0.9	0.1	0.9	0.7	0	0.00
# 70	0.9	0.1	0.9	0.9	0	0.00
# 71	0.9	0.5	0.4	0.1	0	0.32
# 72	0.9	0.5	0.4	0.3	0	0.22
# 73	0.9	0.5	0.4	0.5	0	0.26
# 74	0.9	0.5	0.4	0.7	0	0.22
# 75	0.9	0.5	0.4	0.9	0	0.32
# 76	0.9	0.5	0.9	0.1	0	0.28
# 77	0.9	0.5	0.9	0.3	0	0.28
# 78	0.9	0.5	0.9	0.5	0	0.34
# 79	0.9	0.5	0.9	0.7	0	0.25
# 80	0.9	0.5	0.9	0.9	0	0.33
# 81	0.9	0.9	0.1	0.1	0	3.99
# 82	0.9	0.9	0.1	0.3	1	3.74
# 83	0.9	0.9	0.1	0.5	1	3.64
# 84	0.9	0.9	0.1	0.7	1	3.75
# 85	0.9	0.9	0.1	0.9	1	3.98
# 86	0.9	0.9	0.8	0.1	0	3.76
# 87	0.9	0.9	0.8	0.3	0	3.92
# 88	0.9	0.9	0.8	0.5	0	3.73
# 89	0.9	0.9	0.8	0.7	1	3.78
# 90	0.9	0.9	0.8	0.9	1	3.83

Table 7: \bar{t} s and t^* s. $\delta_1 = 0.9$.