Standing United or Falling Divided?
High Stakes Bargaining in a TV Game Show
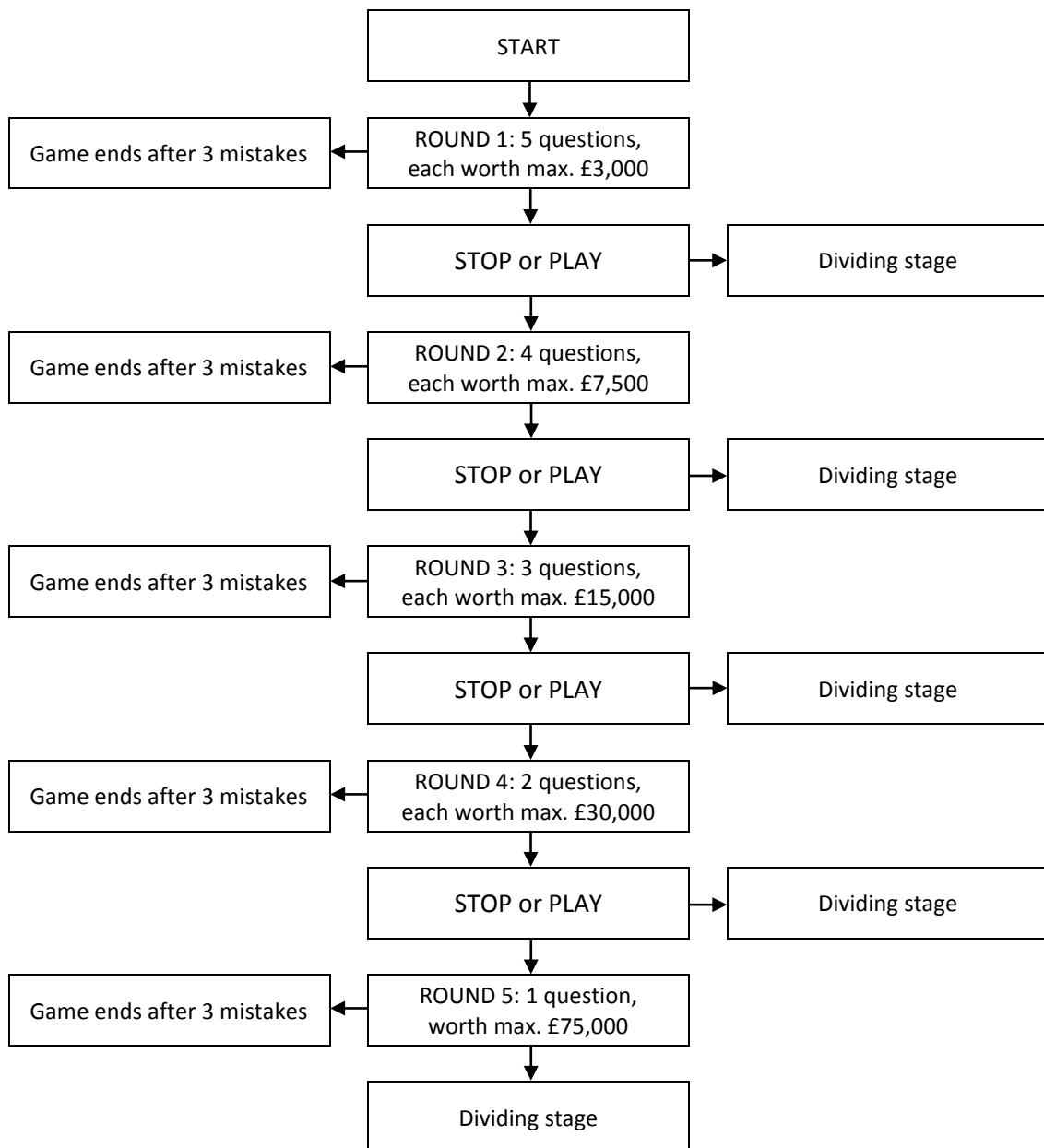
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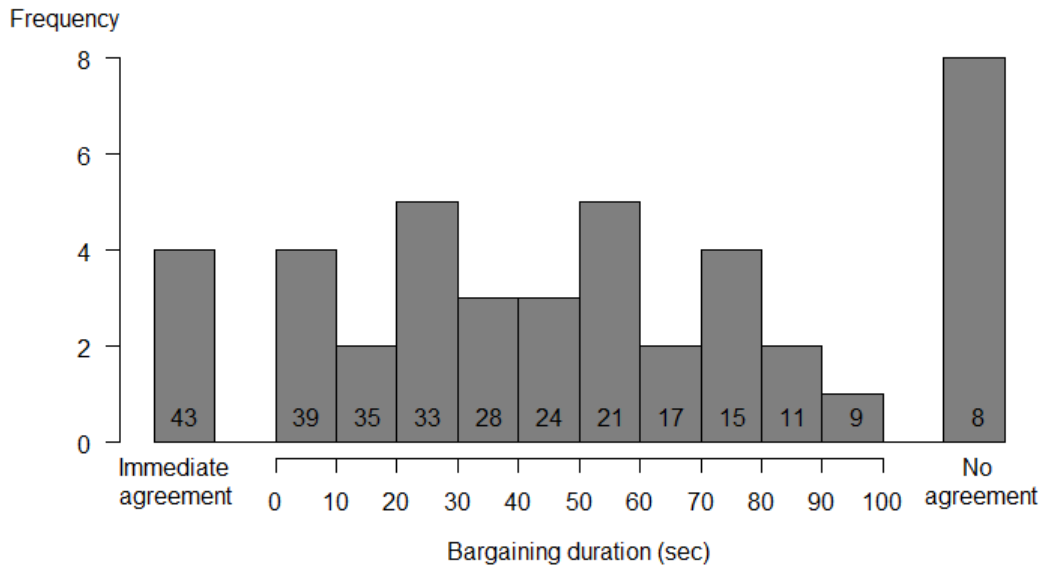
Figures:

Tables:

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│ Game ends after 3 mistakes│◄─│ ROUND 1: 5 questions,│
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│ Game ends after 3 mistakes│◄─│ ROUND 2: 4 questions,│
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│ Game ends after 3 mistakes│◄─│ ROUND 3: 3 questions,│
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│ Game ends after 3 mistakes│◄─│ ROUND 4: 2 questions,│
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│ Game ends after 3 mistakes│◄─│ ROUND 5: 1 question,│
└──────────────────────────┘  │ worth max. £75,000  │
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Figure A1: Flow Chart of the First Stage of the Game. Three contestants first play a maximum of five rounds of quiz questions in which they team up to accumulate a jackpot. Correct answers increase the jackpot, while incorrect answers halve it. A third mistake ends the game, and all contestants then leave empty-handed. At the end of each of the first four rounds, the team can voluntarily decide to proceed to the second stage. In this final part of the game they have to divide the accumulated money between them.

Figure A2: Bargaining Duration. The histogram shows the distribution of bargaining duration for the 43 teams in our sample, where the time frame is divided into ten-second intervals. The leftmost (rightmost) bar corresponds to the teams that reach immediate agreement (fail to reach agreement). The number of teams not yet in agreement immediately prior to a given duration category is displayed at the bottom of the bar.

Table A1: Selected Game Show Characteristics

The table shows selected characteristics for the British TV game show *Divided*, extracted from our sample of 53 episodes. *Answer in Round r* (*r* = 1, 2, … ,5) is the status of the team's answer to a question in Round *r*, with a value of 1 (0) for a correct (incorrect) answer. *Jackpot change Round r* (*r* = 1, 2, … ,5) records the difference between the size of jackpot at the end and at the start of Round *r* for all teams still in play at the end of the round. *Quiz rounds* measures the number of quiz rounds completed before elimination or entering the bargaining stage. *Mistakes* is the accumulated number of incorrect answers when the team enters the bargaining stage. *Jackpot* describes the size of the jackpot. *Prize A* (*Prize B*, *Prize C*) */ jackpot* expresses the size of the largest (middle, smallest) share as a fraction of the jackpot. *Initial claim* indicates the share that the contestant claims before the timer starts counting down, with a value of 3 (2, 1) for A (B, C). *Final claim* is the share that the contestant claims at the end of the bargaining process, with a value of 3 (2, 1) for A (B, C). *Resolution before t=0* (*t=50*, *t=100*) is a dummy variable taking the value of 1 if the team reaches agreement before the timer starts (before 50 seconds have passed, before 100 seconds have passed). *Time to resolution* measures the duration of the bargaining process in seconds. *Prize won* (*if non-zero*) records the prize the contestant takes home (if she did not leave empty-handed). *Prize won* (*if non-zero*) */ initial jackpot* records her prize as a fraction of the initial jackpot (if she did not leave empty-handed). All monetary values are in UK Pounds and can be translated into US dollars using a rate of $1,60 per pound, an approximate average of the exchange rate during the period in which the show ran.

	N	Mean	Stdev	Min	Median	Max
All teams						
Answer Round 1 (correct=1)	280	0.90	0.30	0.00	1.00	1.00
Answer Round 2	219	0.87	0.33	0.00	1.00	1.00
Answer Round 3	119	0.68	0.47	0.00	1.00	1.00
Answer Round 4	37	0.65	0.48	0.00	1.00	1.00
Answer Round 5	7	0.29	0.49	0.00	0.00	1.00
Jackpot change Round 1	55	9,010	3,135	2,963	9,360	13,170
Jackpot change Round 2	54	14,170	8,112	-5,648	16,125	25,500
Jackpot change Round 3	34	9,665	19,762	-25,342	5,293	37,950
Jackpot change Round 4	17	5,698	31,528	-51,919	-2,280	53,400
Jackpot change Round 5	5	-6,319	28,695	-41,040	-17,887	27,750
Teams eliminated after three mistakes						
Quiz rounds	13	2.23	1.09	0.00	2.00	4.00
Teams playing bargaining stage						
Quiz rounds	43	3.16	1.00	2.00	3.00	5.00
Mistakes	43	1.70	0.51	0.00	2.00	2.00
Jackpot	43	33,512	26,154	7,282	23,288	115,755
Prize A / jackpot	43	0.62	0.04	0.59	0.60	0.70
Prize B / jackpot	43	0.27	0.04	0.19	0.30	0.30
Prize C / jackpot	43	0.10	0.00	0.10	0.10	0.12
Initial claim (A=3, B=2, C=1)	129	2.74	0.53	1.00	3.00	3.00
Final claim (A=3, B=2, C=1)	129	2.14	0.83	1.00	2.00	3.00
Resolution before t=0 (resolution=1)	43	0.09	0.29	0.00	0.00	1.00
Resolution before t=50	43	0.51	0.51	0.00	1.00	1.00
Resolution before t=100	43	0.81	0.39	0.00	1.00	1.00
Time to resolution (in seconds)	43	50.26	35.39	0.00	50.00	100.00
Prize won	129	5,633	8,616	0	2,615	56,895
Prize won if non-zero	105	6,921	9,075	135	4,030	56,895
Prize won / initial jackpot	129	0.17	0.18	0.00	0.10	0.66
Prize won if non-zero / initial jackpot	105	0.20	0.17	0.01	0.15	0.66

Table A2: Descriptive Statistics

The table shows descriptive statistics for our sample of 129 contestants who bargain over their share of the jackpot in the final stage of the British TV game show *Divided*. *Age* is the contestant's age measured in years. Contestants normally mention their age when they introduce themselves. In eight exceptions, we had to estimate a contestant's age on the basis of her physical appearance and other information given in the introductory talk. *Gender* is a dummy variable taking the value of 1 if the contestant is male. *Education* is a dummy variable taking the value of 1 if the contestant has completed or is enrolled in higher education (bachelor degree or higher) or has equivalent working experience. This variable is estimated on the basis of the contestant's occupation and other available information. Contestants who provided no job or other relevant information (seven cases) are included in the lower education category. *Variance shares* denotes the variance across the three percentage shares to be divided. The contribution variables measure the contestant's entitlement to the communal jackpot. *Contribution overall* measures her contribution across all quiz questions. *Contribution correct* (*incorrect*) measures her contribution to the team's correctly (incorrectly) answered questions only. *Announce hardball, Opp. announce hardball* and *Concession* are dummy variables taking the value of 1 if the contestant stated not to back down from her initial claim, faced at least one opponent who had stated not to back down, or gave in during the bargaining process, respectively. *Concession* is not defined if the team agrees immediately or if the contestant initially picked share C; withdrawn concessions are ignored. All monetary values are in UK Pounds and can be translated into US dollars using a rate of $1,60 per pound, an approximate average of the exchange rate during the period in which the show ran.

	N	Mean	Stdev	Min	Median	Max
Age	129	36.16	12.23	18.00	34.00	70.00
Gender (male=1)	129	0.50	0.50	0.00	0.00	1.00
Education (high=1)	129	0.30	0.46	0.00	0.00	1.00
Variance shares	129	0.05	0.01	0.04	0.04	0.07
Contribution overall	129	0.33	0.12	0.07	0.33	0.70
Contribution correct	129	0.33	0.09	0.10	0.33	0.56
Contribution incorrect	129	0.33	0.20	0.00	0.33	1.00
Announce hardball (hardball=1)	129	0.23	0.42	0.00	0.00	1.00
Opp. announce hardball (hardball=1)	129	0.39	0.49	0.00	0.00	1.00
Concession (concession=1)	115	0.50	0.50	0.00	0.00	1.00

Table A3: Ordered Probit Regression Results on Initial Claims

The table displays results from the ordered probit regression analyses of contestants' decisions to initially claim share A (3), B (2), or C (1) in the bargaining stage of the British TV game show *Divided*. *First mover* is a dummy variable taking the value of 1 if the contestant was the first to make her claim. The stakes quartile dummies are used as a flexible specification for the effect of stakes. Definitions of other variables are as in Table 2. Standard errors are corrected for clustering at the team level, *p*-values are in parentheses.

	Model 1		Model 2	
Demographic characteristics				
Age	-0.012	(0.233)	-0.013	(0.227)
Gender (male=1)	-0.187	(0.517)	-0.230	(0.428)
Education (high=1)	0.005	(0.988)	-0.008	(0.980)
Situational variables				
First mover (first=1)	0.018	(0.949)	0.007	(0.981)
Stakes 2nd quartile	0.279	(0.529)	0.288	(0.510)
Stakes 3rd quartile	0.082	(0.820)	0.090	(0.799)
Stakes 4th quartile	-0.235	(0.515)	-0.208	(0.558)
Variance shares	12.265	(0.313)	11.742	(0.335)
Contribution variables				
Contribution overall	3.007	(0.002)		
Contribution correct			4.133	(0.004)
Contribution incorrect			-0.660	(0.206)
α_1	-0.742	(0.373)	-0.680	(0.475)
α_2	0.219	(0.793)	0.288	(0.762)
Log pseudo-likelihood	-74.45		-73.71	
McFadden R^2	0.075		0.084	
Observations	129		129	
Clusters	43		43	

Table A4: Probit Regression Results on Hardball Announcements and Concessions

The table displays results from the probit regression analyses on contestants' hardball announcements (Model 1 and 2) and concessions (Model 3, 4, 5 and 6) in the bargaining stage of the British TV game show *Divided*. The hardball (concession) analyses are performed on the subset of contestants who initially claimed share A (who initially claimed share A or B and did not reach agreement immediately). Definitions of variables are as in the previous tables. Standard errors are corrected for clustering at the team level, *p*-values are in parentheses.

	Hardball announcements		Concessions			
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Demographic characteristics						
Age	-0.008 (0.553)	-0.007 (0.625)	0.000 (0.998)	-0.007 (0.562)	-0.003 (0.798)	-0.009 (0.433)
Gender (male=1)	-0.161 (0.576)	-0.123 (0.696)	0.080 (0.773)	-0.096 (0.715)	0.005 (0.987)	-0.184 (0.522)
Education (high=1)	0.011 (0.972)	0.033 (0.920)	-0.003 (0.992)	-0.057 (0.852)	0.064 (0.847)	0.034 (0.920)
Situational variables						
First mover (first=1)	-0.106 (0.701)	-0.121 (0.664)	0.179 (0.559)	0.300 (0.359)	0.154 (0.623)	0.278 (0.394)
Stakes 2nd quartile	0.942 (0.040)	0.934 (0.044)	-0.529 (0.029)	-0.532 (0.032)	-0.503 (0.056)	-0.535 (0.046)
Stakes 3rd quartile	0.767 (0.092)	0.746 (0.106)	-0.583 (0.009)	-0.545 (0.018)	-0.541 (0.013)	-0.508 (0.022)
Stakes 4th quartile	1.032 (0.015)	1.009 (0.021)	-0.239 (0.302)	-0.156 (0.514)	-0.175 (0.479)	-0.090 (0.720)
Variance shares	30.679 (0.033)	31.002 (0.032)	-6.632 (0.524)	-9.183 (0.385)	-4.396 (0.639)	-7.050 (0.461)
Contribution variables						
Contribution overall	-0.006 (0.996)		-1.273 (0.273)		-1.620 (0.201)	
Contribution correct		-0.533 (0.772)		0.085 (0.961)		-0.539 (0.764)
Contribution incorrect		-0.005 (0.994)		1.801 (0.035)		2.001 (0.027)
Claim variables						
Initial claim A (A=1)					0.388 (0.239)	0.524 (0.143)
Announce hardball (hardball=1)					-0.985 (0.002)	-1.000 (0.003)
Opp. announce hardball (hardball=1)					0.491 (0.098)	0.499 (0.099)
Constant	-2.397 (0.023)	-2.293 (0.049)	0.992 (0.233)	0.330 (0.726)	0.806 (0.322)	0.044 (0.961)
Log pseudo-likelihood	-53.84	-53.79	-76.59	-74.24	-69.87	-67.48
McFadden R^2	0.102	0.103	0.039	0.069	0.123	0.153
Observations	102	102	115	115	115	115
Clusters	43	43	39	39	39	39

Table A5: Ordered Probit Regression Results on Share Won

The table displays results from the ordered probit regression analyses on contestants' final claims A (3), B (2) or C (1) when agreement is reached in the bargaining stage of the British TV game show *Divided*. Definitions of variables are as in the previous tables. Standard errors are corrected for clustering at the team level, *p*-values are in parentheses.

	Model 1	Model 2	Model 3	Model 4
Demographic characteristics				
Age	-0.011 (0.357)	-0.010 (0.386)	0.000 (0.979)	0.002 (0.887)
Gender (male=1)	-0.011 (0.956)	0.066 (0.748)	0.138 (0.521)	0.245 (0.275)
Education (high=1)	-0.020 (0.925)	-0.003 (0.989)	-0.146 (0.590)	-0.120 (0.659)
Situational variables				
First mover (first=1)	-0.132 (0.687)	-0.181 (0.590)	-0.115 (0.735)	-0.160 (0.639)
Contribution variables				
Contribution overall	2.871 (0.002)		2.300 (0.030)	
Contribution correct		2.969 (0.037)		2.216 (0.167)
Contribution incorrect		-1.260 (0.049)		-1.243 (0.043)
Claim variables				
Initial claim A (A=1)			6.302 (0.000)	5.927 (0.000)
Initial claim B (B=1)			5.780 (0.000)	5.511 (0.000)
Announce hardball (hardball=1)			0.889 (0.011)	0.869 (0.017)
Opp. announce hardball (hardball=1)			-0.522 (0.018)	-0.547 (0.014)
α_1	0.059 (0.900)	-0.285 (0.644)	6.299 (0.000)	5.558 (0.000)
α_2	0.979 (0.040)	0.642 (0.299)	7.404 (0.000)	6.676 (0.000)
Log pseudo-likelihood	-110.10	-109.52	-94.37	-93.70
McFadden R^2	0.046	0.051	0.182	0.188
Observations	105	105	105	105
Clusters	35	35	35	35

Table A6: OLS Regression Results on Prize Won / Initial Jackpot

The table displays results from the OLS regression analyses on the fraction of the initial jackpot that the contestant takes home in the British TV game show *Divided*. Definitions of variables are as in the previous tables. Standard errors are corrected for clustering at the team level, *p*-values are in parentheses.

	Model 1		Model 2		Model 3		Model 4	
Demographic characteristics								
Age	-0.003	(0.022)	-0.003	(0.032)	-0.002	(0.030)	-0.002	(0.041)
Gender (male=1)	-0.019	(0.484)	-0.017	(0.551)	-0.014	(0.614)	-0.012	(0.682)
Education (high=1)	-0.017	(0.620)	-0.017	(0.641)	-0.025	(0.496)	-0.025	(0.495)
Situational variables								
First mover (first=1)	-0.004	(0.899)	-0.009	(0.809)	0.002	(0.951)	-0.001	(0.963)
Stakes 2nd quartile	-0.089	(0.056)	-0.089	(0.057)	-0.083	(0.124)	-0.082	(0.127)
Stakes 3rd quartile	-0.082	(0.063)	-0.083	(0.061)	-0.079	(0.126)	-0.079	(0.123)
Stakes 4th quartile	0.020	(0.655)	0.019	(0.671)	0.033	(0.531)	0.032	(0.543)
Variance shares	-4.037	(0.009)	-4.002	(0.011)	-3.769	(0.032)	-3.726	(0.036)
Contribution variables								
Contribution overall	0.388	(0.000)			0.374	(0.001)		
Contribution correct			0.437	(0.007)			0.436	(0.003)
Contribution incorrect			-0.114	(0.092)			-0.115	(0.086)
Claim variables								
Initial claim A (A=1)					0.071	(0.059)	0.079	(0.049)
Initial claim B (B=1)					0.072	(0.091)	0.089	(0.068)
Announce hardball (hardball=1)					0.053	(0.175)	0.054	(0.170)
Opp. announce hardball (hardball=1)					-0.068	(0.050)	-0.070	(0.050)
Constant	0.380	(0.000)	0.397	(0.000)	0.298	(0.003)	0.303	(0.003)
R^2	0.185		0.186		0.238		0.241	
Observations	129		129		129		129	
Clusters	43		43		43		43	