Supplement to "Experimenting with the transition rule in dynamic games"

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This file provides a number of supplementary analyses and tables to the main paper.

TABLE S.I. Unique MPE in an endogenous game.

Player i/j	M_{DD}	M_{CD}	M_{DC}	M_{CC}
M_{DD}	SPE	Player j deviates to D in low	Player j deviates to D in high	Player j deviates to D in low
M_{CD}	–	Either player deviates to D in low	Player i deviates to D in low	Player j deviates to D in low
M_{DC}	–	–	Either player deviates to D in high	Either player deviates to D in high
M_{CC}	–	–	–	Either player deviates to D in high

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TABLE S.II. Initial cooperation rates.

State	Easy			Difficult		
	Static	*Exog.*	*Endog.*	*Static*	*Exog.*	*Endog.*
	Initial cooperation (all supergames)					
Low	0.726	0.719	0.822	0.602	0.591	0.841
	(0.049)	(0.057)	(0.053)	(0.061)	(0.061)	(0.042)
High	0.676	0.552	0.834	0.356	0.316	0.678
	(0.060)	(0.053)	(0.54)	(0.055)	(0.053)	(0.062)
	Initial cooperation (last five supergames)					
Low	0.736	0.733	0.824	0.558	0.610	0.886
	(0.062)	(0.063)	(0.057)	(0.076)	(0.069)	(0.047)
High	0.692	0.510	0.800	0.300	0.302	0.653
	(0.067)	(0.070)	(0.066)	(0.064)	(0.063)	(0.065)

Note: The initial cooperation rate captures the frequency of *C* choices in each state using the first choice a subjects make in that state within the supergame. In the case of the low state, only period-one choices are included.

TABLE S.III. Aggregate cooperation (last five supergames).

Transition	Unweighted			State-Matched	
	Param.			Param.	
	Easy	*Diff.*	Δ_Ψ	*Easy*	*Diff.*
Static	0.604	0.351	−0.252	0.595	0.319
	(0.049)	(0.044)	(0.065)	(0.050)	(0.042)
Exogenous	0.561	0.383	−0.177	0.548	0.357
	(0.049)	(0.047)	(0.067)	(0.050)	(0.047)
Endogenous	0.633	0.613	−0.020	0.633	0.613
	(0.046)	(0.035)	(0.058)	(0.046)	(0.035)

Note: Coefficients in the first two data columns (and standard errors accounting for 252 subject clusters) are recovered from a linear probability model with six treatment-dummy regressors. Coefficients in the state-weighted column are derived from a similar model with the following set of mutually exclusive dummy variables: (i) a treatment dummies for the two *Endogenous* treatments, with coefficients representing $\hat{\Pr}\{C|\Psi_X\}$; and (ii) treatment-state-period dummies for the exogenous treatments, with coefficients representing $\hat{\Pr}\{C|t, \theta, \Psi_X\}$. Reported coefficients for the *Exogenous* and *Static* treatments reflect the weighted sum $Q(\Psi_X)$ across the relevant treatment-state-period coefficient to correct for differing state selection.

Table S.IV. P-values of hypothesis tests between initial cooperation rates (last five supergames).

	S_L^{Esy}	S_L^{Dif}	S_H^{Esy}	S_H^{Dif}	Ex_L^{Esy}	Ex_L^{Dif}	Ex_H^{Esy}	Ex_H^{Dif}	En_L^{Esy}	En_L^{Dif}	En_H^{Esy}	En_H^{Dif}
S_L^{Esy}	–	0.072	0.528	0.000	0.977	0.176	0.017	0.000	0.301	0.056	0.480	0.358
S_L^{Dif}	–	–	0.187	0.001	0.078	0.619	0.642	0.010	0.006	0.000	0.017	0.345
S_H^{Esy}	–	–	–	0.000	0.656	0.391	0.061	0.000	0.137	0.019	0.253	0.673
S_H^{Dif}	–	–	–	–	0.000	0.001	0.028	0.983	0.000	0.000	0.000	0.000
Ex_L^{Esy}	–	–	–	–	–	0.187	0.000	0.000	0.289	0.053	0.465	0.375
Ex_L^{Dif}	–	–	–	–	–	–	0.313	0.000	0.018	0.001	0.047	0.648
Ex_H^{Esy}	–	–	–	–	–	–	–	0.028	0.001	0.000	0.003	0.136
Ex_H^{Dif}	–	–	–	–	–	–	–	–	0.000	0.000	0.000	0.000
En_L^{Esy}	–	–	–	–	–	–	–	–	–	0.405	0.784	0.050
En_L^{Dif}	–	–	–	–	–	–	–	–	–	–	0.290	0.004
En_H^{Esy}	–	–	–	–	–	–	–	–	–	–	–	0.113
En_H^{Dif}	–	–	–	–	–	–	–	–	–	–	–	–

Note: To compute these p-values, we first run a regression in which the unit of observation is the choice a subject makes in a period of a supergame. The sample is constrained to the last five supergames and to periods in which the subject makes the first choice in each state. The dependent variable takes value 1 if the subject decided to cooperate and 0 otherwise. The right-hand side includes a fully saturated set of dummies that account for differences in cooperation rates across three dimensions: the treatment (*Easy-Endog, Easy-Exog, Easy-Static, Easy-Endog, Easy-Exog, Easy-Static*), the state (Low, High). Standard errors are clustered by subject. The table reports the p-values of bilateral comparisons between coefficients for the treatment cross state dummies. The table reports the p-value of a t-test in which the null hypothesis is Row Estimate = Column Estimate. There is one row per (initial-cooperation rate) coefficient estimate and one column per (initial-cooperation rate) coefficient, where notation is as follows. S, Ex, and En capture whether the coefficient corresponds to a static, exogenous, or endogenous treatment, respectively. The superscript (*Esy, Dif*) identifies if the coefficient corresponds to a *easy* or *difficult* parameterization, respectively. The subscript (L, H) identifies if the coefficient corresponds to behavior in the low or high state, respectively. For example, $En_L^{Dif.}$ corresponds to the coefficient estimated for *Diff-Endog* $\times$ Low State.

Table S.V. Common sequences of actions as percent of histories (last five supergames).

Treatment	Five or more observed supergames			
Easy-Endog	CC, **CC, CC, CC, CC** 37.1	DC, DD, DD, DD, DD 10.5	CC, **DC, DC, DD**, DC 6.7	DC, DC, DD, DD, DD 4.8
Diff-Endog	CC, **CC, CC, CC, CC** 20.0	CC, **DC, DD**, DC, DD 6.7	CC, **CC, CC, CC, DC** 5.7	CC, **DC, DD**, DD, DD 4.8
Easy-Exog	CC, CC, CC, CC, CC 36.2	DC, DD, DD, DD, DD 20.0	DD, DD, DD, DD, DD 5.7	
Diff-Exog	DC, DD, DD, DD, DD 22.9	DD, DD, DD, DD, DD 18.1	CC, CC, CC, CC, CC 18.1	DC, DC, DD, DD, DD 4.8
Easy-Static (low)	CC, CC, CC, CC, CC 50.9	DC, DD, DD, DD, DD 18.9	DC, DC, DD, DD, DD 9.4	
Diff-Static (low)	CC, CC, CC, CC, CC 25.0	DC, DD, DD, DD, DD 20.0	DD, DD, DD, DD, DD 13.3	DC, DC, DD, DD, DD 11.7
Easy-Static (high)	**CC, CC, CC, CC, CC** 42.3	**DC, DD, DD, DD, DD** 25.0	**DD, DD, DD, DD, DD** 9.6	
Diff-Static (high)	**DD, DD, DD, DD, DD** 46.7	**DC, DD, DD, DD, DD** 22.2		

Note: In endogenous and static-transition treatments, high-state action pairs are displayed in bold face.