Appendix: Regression Results for Identifying External Predictive Validity of Value Orientations

Each unit of observation in the regressions is an individual's investment decision in one period of the social dilemma game described in Buckley, Mestelman and Shehata (2000). The dependent variable is the voluntary contribution made in that period. The independent regressors are treatment dummies (three variants of an input subsidy), the other group members' lagged contributions (since the Nash contribution in the game is a unique group total), a subject pool dummy pertinent to this paper, and a value orientation variable.

Due to multi-collinearity, it is inappropriate to simultaneously include the value-orientation measure for each individual from each treatment in a regression. Therefore, a different regression is reported using the continuous value-orientation resultant-vector angles from each treatment as a regressor. All of the regressions use White's variance-covariance estimators to account for heteroscedasticity and account for first-order autocorrelation using the Prais-Winsten transformation (these are affected through the statistical software STATA).

The inclusion of a measure of individuals' value orientations should be able to explain some portion of the variation in contributions. Larger vector angles, identifying more cooperative individuals, should be positively related to voluntary contributions. As vector angles approach zero, voluntary contributions should approach the predicted Nash equilibrium contribution.

The results of the four regressions are presented in the following table.

Appendix Table. Prais-Winsten FGLS Regression Results: Value Orientation and Public Input Contributions in Period t by Treatment

Independent Variables	Regression (100)		Regression (150)		Regression (100d)		Regression (150d)	
	Coefficient	p-value	Coefficient	p-value	Coefficient	p-value	Coefficient	p-value
Constant	**4.182** (9.401)	0.000	**4.179** (9.491)	0.000	**4.510** (8.824)	0.000	**4.630** (8.535)	0.000
C1 Subsidy	**6.270** (12.31)	0.000	**6.266** (12.29)	0.000	**6.096** (8.519)	0.000	**6.096** (8.535)	0.000
C2 Subsidy	**4.478** (6.977)	0.000	**4.475** (6.987)	0.000	**4.387** (6.198)	0.000	**4.386** (6.210)	0.000
U1 Subsidy	0.636 (1.186)	0.118	0.636 (1.185)	0.118	.....		.....	
Others' Contribution in Period t-1 (OC)	**- 0.075** (4.582)	0.000	**- 0.075** (4.561)	0.000	**- 0.068** (3.063)	0.002	**- 0.068** (3.060)	0.002
Value Orientation (VO)	**0.025** (2.063)	0.020	**0.025** (2.243)	0.013	- 0.002 (0.214)	0.415	- 0.012 (0.926)	0.178
Subject Pool Dummy (S)	0.629 (1.238)	0.216	0.681 (1.318)	0.188	.....		.....	
VO x S	-0.030 (1.625)	0.104	-0.038 (1.881)	0.060	....		....	
Observations	1168		1168		648		648	
R-Squared	0.1687		0.1696		0.1422		0.1434	
Durbin-Watson (original model)	0.874		0.874		0.828		0.830	
Durbin-Watson (transformed model)	2.076		2.077		2.125		2.125	

Notes: All regressions use White's variance-covariance estimators and account for autocorreltation using the Prais-Winsten transformation.. If Subject Pool 1, S = 1. Regressions (100), (150), (100d), (150d) represent VO games with radius and origin of (100, 0), (150, 0), (100, 100) and (150,150) respectively. t-statistics are reported in parentheses. Bolded coefficients are statistically significant at the five percent level (one-tail test for subsidy treatments and value orientation, two-tail tests for other variables). There is no significant subject pool effect in the first two regressions (an F-test on S and VOxS yield p-values of 0.22 and 0.15 for each regression respectively).