Online Appendix of the paper Flip a coin or vote? An experiment on the implementation and efficiency of social choice mechanisms

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B Online Appendix to Flip a Coin or Vote?

This is the online Appendix to the paper ’Flip a coin or Vote? An experiment on the implementation and efficiency of social choice mechanisms’ published in Experimental economics. Appendix B deals with the additional tests, Appendix C shows translated instructions and screen shots of the experiments in Z-tree. The data and code and used to generate all the results, as well as the Z-tree code used to run the experiments can be found in the data repository of the Erasmus University Rotterdam in the record with DOI: 10.25397/eur.14687301
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B.1 Mechanism choices

In this Subsection of the Appendix we perform additional tests in regard to the Mechanism choices in the experiment.

B.1.1 Binomial tests on ex ante mechanism choices

The prediction that subjects select the most efficient mechanism corresponds to completely unanimous choices in every comparison. Unanimity by all is clearly not supported by the data, but in most comparisons one mechanism is preferred by a large majority. In the main text we use binary models and cluster our standard errors on the matching group to compare mechanism choices. An alternative approach is to look at smaller sets of choices that have less correlation to begin with. Table 10 presents the modal choice in each comparison in the first block of 6 rounds, i.e. one choice per subject per comparison is used, the second and third time the same subject makes the same comparison is ignored. Below the modal mechanism choice, the p-value of a two-sided binomial test against a 50/50 distribution is reported. Since we are dealing with binary choices and about 80% of the mechanism rankings obtained from individual binary comparisons within a block of 6 rounds satisfy *strict* transitivity, this aggregation is consistent with the preferences of our ‘average’ or median subject. The modal stated preference goes in the theoretically predicted direction for all but three comparisons. In the Symmetric and the Right-skewed treatments the AGV is not preferred to the SM mechanism and in the Left-skewed treatment the NSQ mechanism is not preferred over the RAND mechanism.

Table 10: Mechanisms chosen by a majority of subjects in the first 6 ex ante rounds

Treatment	AGV / SM	AGV / NSQ	AGV / RAND	SM / NSQ	SM / RAND	NSQ / RAND
Symmetric	SM**	AGV	AGV	SM	SM	NSQ ∽ RAND
	($p = 0.016$)	($p < 0.001$)	($p < 0.001$)	($p < 0.001$)	($p < 0.001$)	($p = 0.766$)
Right-skewed (+7)	SM ∽ AGV *	AGV	AGV	SM	SM	RAND
	($p = 0.644$)	($p < 0.001$)	($p < 0.001$)	($p < 0.001$)	($p < 0.001$)	($p = 0.003$)
Left-skewed (-7)	AGV	AGV	AGV	SM	SM	NSQ ∽ RAND*
	($p = 0.016$)	($p < 0.001$)	($p < 0.001$)	($p = 0.002$)	($p < 0.001$)	($p = 0.233$)
Robustness	SM ∽ AGV *	AGV	AGV	SM	SM	NSQ ∽ RAND
	($p = 0.815$)	($p = 0.031$)	($p = 0.001$)	($p < 0.001$)	($p = 0.031$)	($p = 0.815$)

Notes: The mechanism in each cell was chosen by the majority of subjects in the respective treatment, between brackets is the p-value of a two-sided binomial test against a 50/50 distribution. All results are for the first comparisons (rounds 1-6). The number of observations for the three treatments are: 45 (Symmetric), 42 (Right-skewed), 45 (Left-skewed) and 18 (Robustness). Binomial tests reject a 50:50 split at the 5%-level for all but five comparisons: NSQ vs. RAND in the Symmetric, Left-skewed treatment and Robustness treatment, and AGV vs. SM in the Right-skewed treatment and Robustness treatment. A * indicates that the majority choice is not in line with the theoretical efficiency prediction, ** indicates that the choice is in line with realized but not with theoretical efficiency (see Appendix B.2 for details).

B.1.2 Overview off all mechanism choices in all treatments

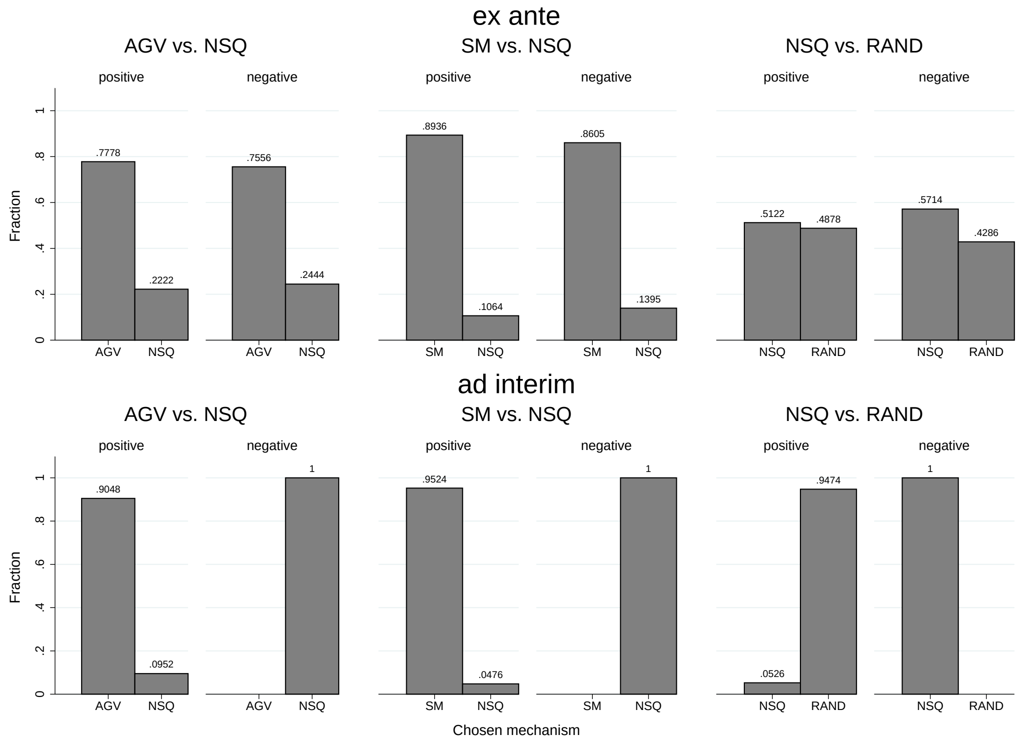
In this appendix we provide an overview of all mechanism choices in all treatments. In the main text we drop some observations from the logistical regression because choices are perfectly determined. This is visible in Figure 2 in bars with a fraction of 1 or 0, as well as in the Tables 11 and 12 in the 0 or 100% fractions.

Figures 2a till 2d below show all choices made in the ex ante rounds (1-12) and ad interim (13-18) between NSQ and the other mechanisms. It shows that the subjects with a negative valuation strongly, almost unanimously, prefer NSQ. An interesting comparison is the NSQ-RAND choices, where subjects with a positive valuation are even willing to flip a coin.

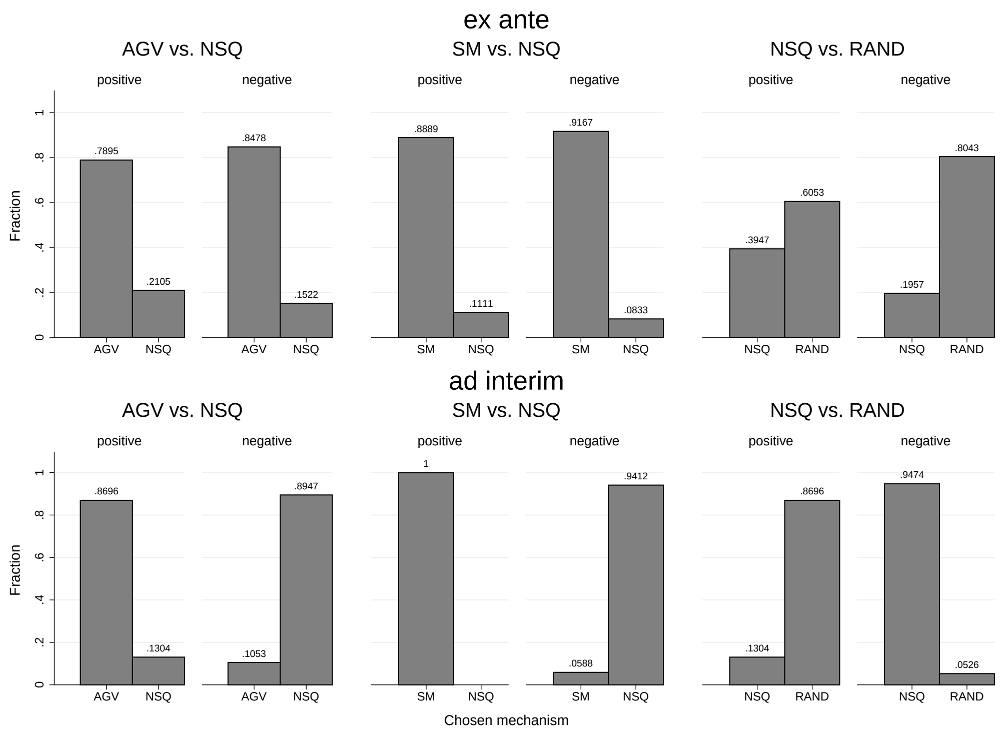
In Table 11 the results for all binary comparisons in the ex ante rounds are shown. The mechanism stated in each cell is the mechanism chosen by a majority of subjects for the binary comparison in this column. E.g. the 69% in the row *'Symmetric treatment, block 1'* in the third column *(AGV vs. SM)* mean that 69% of subjects chose the SM over the AGV mechanism (consequently 31%

chose the AGV mechanism) in the first comparison of these mechanisms.

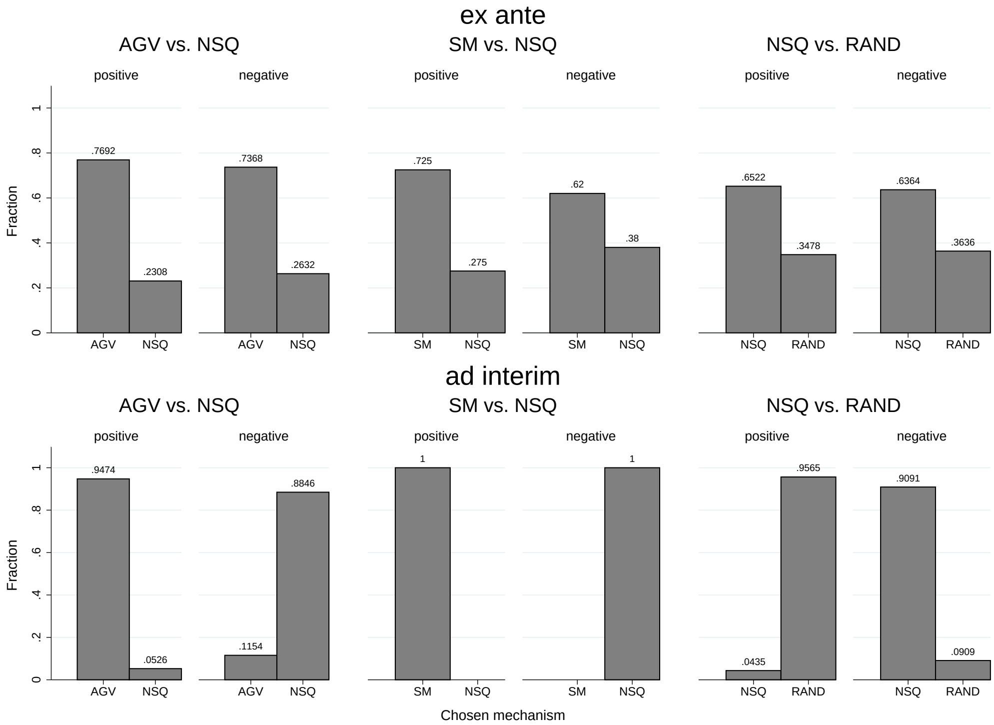
Figure 2: Comparing mechanism choices with positive and negative valuation in all treatments.



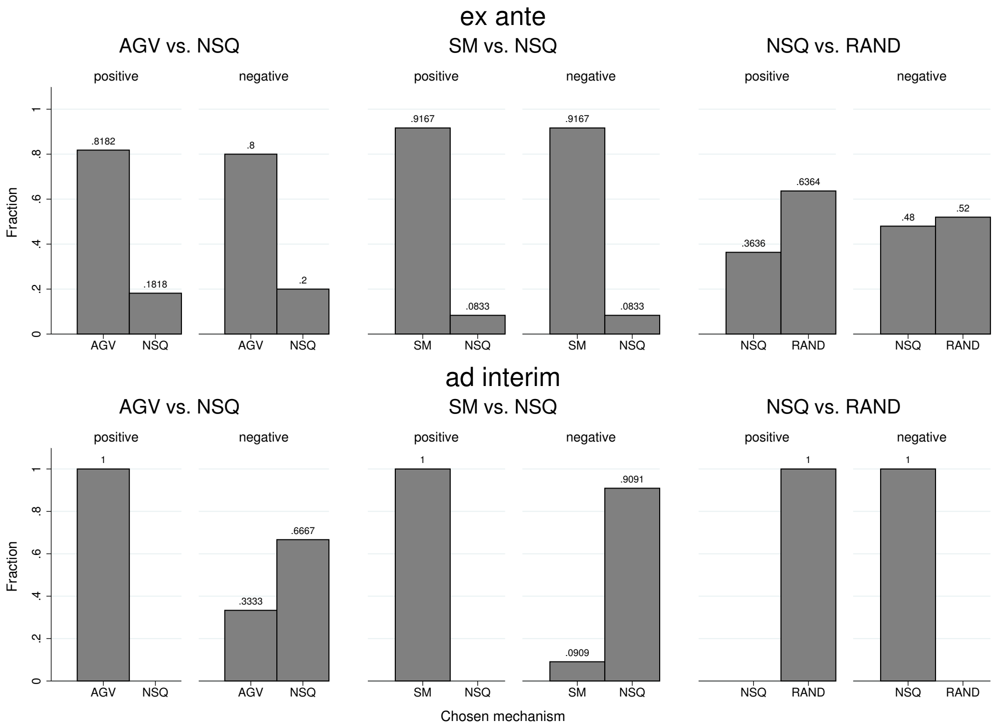
(a) Mechanism choice by positive/negative private valuation (Symmetric treatment)



(b) Mechanism choice by private valuation (Right-skewed treatment)



(c) Mechanism choice by private valuation (Left-skewed treatment)



(d) Mechanism choice by private valuation (Robustness treatment)

Notes: The subfigures show, per treatment, the distribution of choices in each binary mechanism choice. Choices are shown for subjects with positive and negative valuation separately in both the ex ante (before valuation is known) and ad interim (after the valuation is known) stage.

In Table 12 the mechanism that was chosen by the majority of subjects for each binary comparison in the ad interim round of all treatments is listed. The table reports the proportions of subjects for each valuation, e.g. the cell in the row *'Symmetric, 3'* and second column *(AGV vs. SM)* states that 11 of 13 subjects with a valuation of +3 chose the AGV mechanism over the SM mechanism (consequently 2 of 13 subjects selected the SM mechanism).

Table 11: Percentage of subjects who chose each mechanism in the ex ante rounds

Treatment	# of subjects	Binary choice AGV vs. SM	AGV vs. NSQ	AGV vs. RAND	SM vs. NSQ	SM vs. RAND	NSQ vs. RAND
Symmetric							
block 1	45	SM (69%)	AGV (78%)	AGV (76%)	SM (89%)	SM (89%)	RAND (53%)
block 2	45	SM (60%)	AGV (76%)	AGV (87%)	SM (87%)	SM (84%)	NSQ (62%)
Right-skewed (+7)							
block 1	42	SM (55%)	AGV (81%)	AGV (79%)	SM (90%)	SM (88%)	RAND (74%)
block 2	42	SM (62%)	AGV (83%)	AGV (90%)	SM (90%)	SM (88%)	RAND (69%)
Left-skewed (-7)							
block 1	45	AGV (69%)	AGV (78%)	AGV (82%)	SM (73%)	SM (93%)	NSQ (60%)
block 2	45	AGV (71%)	AGV (73%)	AGV (82%)	SM (60%)	SM (93%)	NSQ (69%)
Robusteness							
block 1	18	SM (56%)	AGV (78%)	AGV (89%)	SM (94%)	SM (78%)	RAND (55%)
block 2	18	AGV (61%)	AGV (83%)	AGV (83%)	SM (89%)	SM (72%)	RAND (55%)

Notes: The mechanism named in each cell was chosen by the majority of subjects (percentage). Each subject made every choice once in each block.

Comparing subjects' choices with the realized surplus in Section 5.3 in the main text, shows that a majority chooses the mechanism with the highest realized surplus in all comparisons, except in the Right-skewed treatment for the comparison between AGV and SM and in the Left-skewed treatment for the comparison between NSQ and RAND. It seems that the modal mechanism choice of subjects is almost perfectly in line with the ordering predicted by realized efficiency. Simultaneously, the pattern of individual choices between AGV and SM appears to be consistent with the relative advantage of the AGV over SM.

B.1.3 Additional information for the GLM models in Table 7

In the main text we argue that we need a quasi-binomial model with standard errors clustered on the treatment due to the distribution of the variables. Figure 3 shows the distribution of the dependent and independent variables in the GLM models.

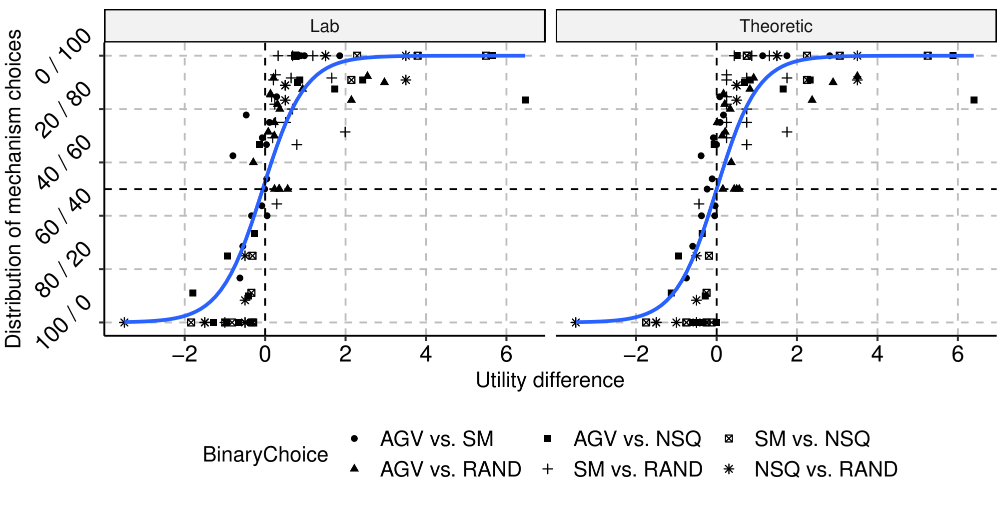
Each of the markings is one particular comparison between two mechanisms for a specific treatment-type. The smooth lines show the GLM predictions for each the two models using only the lab, or theoretic differences respectively. To facilitate interpretation, we added a bold dashed line on the 50/50 split (horizontal)

Table 12: Proportion of subjects who chose each mechanism in the ad interim rounds

Treatment / Valuation	Binary choice											
	AGV vs. SM		AGV vs. NSQ		AGV vs. RAND		SM vs. NSQ		SM vs. RAND		NSQ vs. RAND	
Symmetric												
3	AGV	(11/13)	AGV	(10/11)	AGV	(7/8)	SM	(10/11)	SM	(11/12)	RAND	(10/10)
1	SM	(6/10)	AGV	(9/10)	AGV	(9/11)	SM	(10/10)	SM	(9/12)	RAND	(8/9)
−1	AGV	(9/13)	NSQ	(5/5)	AGV	(12/14)	NSQ	(14/14)	SM	(10/11)	NSQ	(11/11)
−3	AGV	(7/9)	NSQ	(19/19)	AGV	(11/12)	NSQ	(10/10)	SM	(8/10)	NSQ	(15/15)
Right-skewed (+7)												
7	AGV	(6/6)	AGV	(10/12)	AGV	(9/10)	SM	(14/14)	SM	(5/7)	RAND	(10/11)
1	AGV	(9/12)	AGV	(10/11)	AGV	(12/15)	SM	(11/11)	SM	(13/14)	RAND	(10/12)
−1	SM	(9/16)	NSQ	(9/10)	AGV	(5/7)	NSQ	(8/9)	SM	(11/13)	NSQ	(11/12)
−3	AGV	(5/8)	NSQ	(8/9)	AGV	(6/10)	NSQ	(8/8)	SM	(6/8)	NSQ	(7/7)
Left-skewed (-7)												
3	SM	(10/14)	AGV	(7/8)	AGV	(5/10)	SM	(16/16)	SM	(6/9)	RAND	(14/14)
1	AGV	(5/10)	AGV	(11/11)	AGV	(9/12)	SM	(17/17)	SM	(9/11)	RAND	(8/9)
−1	AGV	(7/13)	NSQ	(6/9)	AGV	(7/10)	NSQ	(5/5)	SM	(9/13)	NSQ	(6/8)
−7	AGV	(8/8)	NSQ	(17/17)	AGV	(12/13)	NSQ	(7/7)	SM	(11/12)	NSQ	(14/14)
Robustness												
7	SM	(4/4)	AGV	(6/6)	AGV	(5/6)	SM	(7/7)	RAND	(5/9)	RAND	(5/5)
−1	AGV	(2/3)	AGV	(2/3)	AGV	(2/4)	SM	(0/0)	SM	(1/1)	NSQ	(4/4)
−2	SM	(3/5)	NSQ	(1/1)	AGV	(2/4)	NSQ	(7/7)	SM	(5/5)	NSQ	(5/5)
−3	SM	(1/6)	NSQ	(6/8)	AGV	(2/4)	NSQ	(3/4)	SM	(3/3)	NSQ	(4/4)

Notes: The mechanism named in each cell was chosen by the majority of subjects with the specified treatment and valuation (number of subjects who chose the stated mechanism/total number of subjects with given valuation). Each subject makes each binary choice one time with a randomly drawn valuation. For each treatment the sum of choices of all four valuations within a binary comparison is the number of subjects: 45 in Symmetric, 42 in Right-skewed, 45 in Left-skewed treatment, and 18 in the Robustness treatment.

Figure 3: Distribution of expected utility differences and mechanism choices including GLM prediction.



Notes: The figure displays the difference in utility between two mechanisms and the fraction of types that preferred a mechanism. Every marker shows a particular treatment-type in either the ex ante or the ad interim stage. In the left panel, utility calculations are based on observed behavioral strategies in the lab, in the right panel the Bayes-Nash equilibria are used. The smooth lines show the fitted probability estimate from a quasi-binomial GLM model.

and on 0 utility difference (vertical) to indicate the point where indifference is expected and shown by subjects. As the lines show, a sigmoid function fits the data quite well in both cases.

B.2 Play within mechanisms

B.2.1 Reporting behavior in the AGV

In the AGV truthful reporting forms a Bayes-Nash equilibrium. To make sure that our subjects were aware of this, our subjects were told that if the other subjects report truthfully, it maximizes their expected payoff to report their true valuation as well. Since we also provided complete payoff tables, we go a step further than the treatment with most information in Kawagoe and Mori (2001) to give the AGV the best chance possible. However, there is no guarantee that subjects understand and act in accordance with those statements, let alone that they believe others do. For the SM mechanism no such instruction was necessary, as the game is dominance solvable. In SM, voting in line with ones preferences is (part of) the best-response strategy regardless of the behavior of other players.

Table 13 shows four tables, one for each of the 4 treatments. Each table shows the reported valuations as a function of private valuations for the ex ante rounds in which the AGV mechanism was used.

Table 13: AGV reports (ex ante)

(a) Symmetric treatment

True valuations	Reported valuations 3	1	−1	−3	Total
3	41	7	0	0	48
1	16	28	1	0	45
−1	1	3	28	16	48
−3	4	6	7	25	42
Total	62	44	36	41	183

(b) Right-skewed treatment

True valuations	Reported valuations 7	1	−1	−3	Total
7	43	1	0	0	44
1	13	29	1	0	43
−1	3	8	11	24	46
−3	6	5	5	37	53
Total	65	43	17	61	186

(c) Left-skewed treatment

True valuations	Reported valuations 3	1	−1	−7	Total
3	35	10	1	0	46
1	23	36	0	0	59
−1	1	5	35	14	55
−7	4	3	2	53	62
Total	63	54	38	67	222

(d) Robustness session

True valuations	Reported valuations 7	−1	−2	−3	Total
7	19	1	1	0	21
−1	1	9	4	11	25
−2	1	0	8	8	17
−3	0	0	0	15	15
Total	21	10	13	34	78

Notes: Overview of the Reported valuation per type in the ex ante rounds per treatment.

If all subjects reported their true valuation, all entries would be on the main diagonal of the tables. However, as all the off-diagonal elements show, many subjects misreport. We consider two types of false reports separately. Over- or under-reporting is defined as sending a report that is more (or less) extreme than the subjects' true valuation but has the same sign. This kind of reporting can be caused by the desire to ensure (non-)implementation or avoid paying transfers. Misreporting the sign of the valuation, e.g. reporting +1 with a valuation of -1, is of a different caliber. There is no reason to misreport the sign of the valuation if a subject is maximizing her expected payoff. A subject with a negative valuation does not want the project to be implemented. By reporting a positive valuation she increases the probability of implementation, which can never be optimal. The same argument, with reversed signs, holds for positive valuations. Therefore, over- or under-reporting can be rationalized by small mistakes(at least to some extent), but misreporting the sign of the valuation cannot.

Table 13b shows that the reports that involve an incorrect sign in the Right-skewed treatment are concentrated on subjects with a negative valuation. Only one of the subjects with a positive valuation misreports the sign. In striking contrast, 22 of the 51 misreports from subjects with a negative valuation include an incorrect sign (43%). This pattern is not limited to the Right-skewed treatment as we show in Tables 13a and 13c. This pattern is also not caused by a few individuals, 30% of reports differ from true valuations and 25% of subjects incorrectly report the sign of their valuation at least once. These averages are also quite stable over rounds. Such that it seems unlikely that the underlying behavior is driven by confusion in the early rounds. This pattern of reports is not found in Attiyeh et al. (2000) where there appeared to be more symmetry between the positive and negative valuations in misreporting.[1] However, the fraction of subject reporting truthfully is higher in our experiment, which could be due to the information structure and slightly simpler setting, see Kawagoe and Mori (2001).

We ran an additional, Robustness treatment that eliminates most reasons for misreporting as a robustness check. In this session, private valuations were drawn from the set {-3€, -2€, -1€, 7€}. These valuations result in identical transfers and implementation probabilities for all negative reports, such that under-

[1]The distribution of the reports is not reported in the original paper, but they are available on the websites of the original authors. In Attiyeh et al. (2000) there are 25 truthful reports for subjects with positive and 29 with negative valuations, in their experiment 48% of subject-periods have a positive valuation.

or over-reporting has no effect on payoffs. Furthermore, all valuations had a unique absolute value, decreasing the probabilities of accidentally selecting -1 rather than +1 and vice versa (the experimental screens in all treatments displayed the + and - signs for all valuations). The AGV reports in the ex ante rounds of this session are shown in Table 13d.

Eliminating most misunderstanding possibilities in the Robustness treatment results in fewer reports with an incorrect sign. In total, 35% are false reports, but only 4 (15%) include an incorrect sign and most notably only 2 are from subjects with a negative valuation. In the Robustness treatment, subjects with a negative valuation are substantially less likely to misreport the sign compared to the other treatments. We conclude that some, but not all, of the misreported signs in our main treatments are likely to have been mistakes.

B.2.2 Surplus consequences of false reporting

In order to approximate the loss in expected group surplus caused by the two different types of false reports, we adjust the calculations of Table 5 in the main text by respectively excluding over- and under-reporting or misreporting the sign from the observed strategies. Table 14 shows both the original (columns 4-5) and the adjusted results. Comparing the adjusted efficiency without misreported signs (columns 6-7) with the adjusted efficiency without under- and over-reporting (columns 8-9) shows that efficiency loss compared to theoretical expectations is mostly caused by the falsely reported signs. Depending on the treatment between 11% (Right-skewed treatment) and 23% (Symmetric treatment) of the theoretical group surplus is lost due to valuation reports with an incorrect sign.[2]

Unlike the reports in the AGV mechanism, the voting behavior of subjects is very close to theoretical predictions and almost perfectly rational. For all treatments and private valuations, subjects vote according to their valuations in 89% to 100% of the rounds. There is no pattern of non-sincere votes in relation to

[2]The sum of surplus lost by the individual types of false reports does not add up to the difference between the theoretical and realized group surplus, since both types of misreports can occur together and thus interact in the realization of actual efficiency.

Table 14: Effects of different types of false reports (ex ante)

Treatment	Theory	Actual reports Realized	Lost	(%)	No incorrect signs Adjusted	Lost	(%)	Effect of sign misreports Adjusted	Lost	(%)
Symmetric	1,59	1,18	0,41	(26%)	1,46	0,13	(8%)	1,22	0,37	(23%)
Right-skewed (+7)	4,36	3,84	0,52	(12%)	4,12	0,24	(6%)	3,88	0,48	(11%)
Left-skewed (-7)	1,36	0,93	0,43	(32%)	1,12	0,24	(17%)	1,08	0,28	(21%)
Robustness	3,28	2,93	0,35	(11%)	3,28	0,00	(0%)	2,70	0,58	(18%)

Notes: The columns *No incorrect signs* [*Effect of sign misreports*] calculate the group surplus in Euros after removing all reports with a false sign [that over- or under-report with correct sign] from the behavioral strategy of the subjects. The *lost* columns show the absolute (relative) loss of group surplus compared to the theoretical group surplus under truthful reporting.

the sign of the valuation. Subjects are about equally unlikely to vote against their private valuations for positive and negative valuations. Given that voting sincerely is weakly dominant in any situation, and the valuations/votes of the other players are random variables from the point of view of any given subject, this was to be expected. Voting sincerely is always part of best response and the only best-response in Bayes-Nash equilibrium.

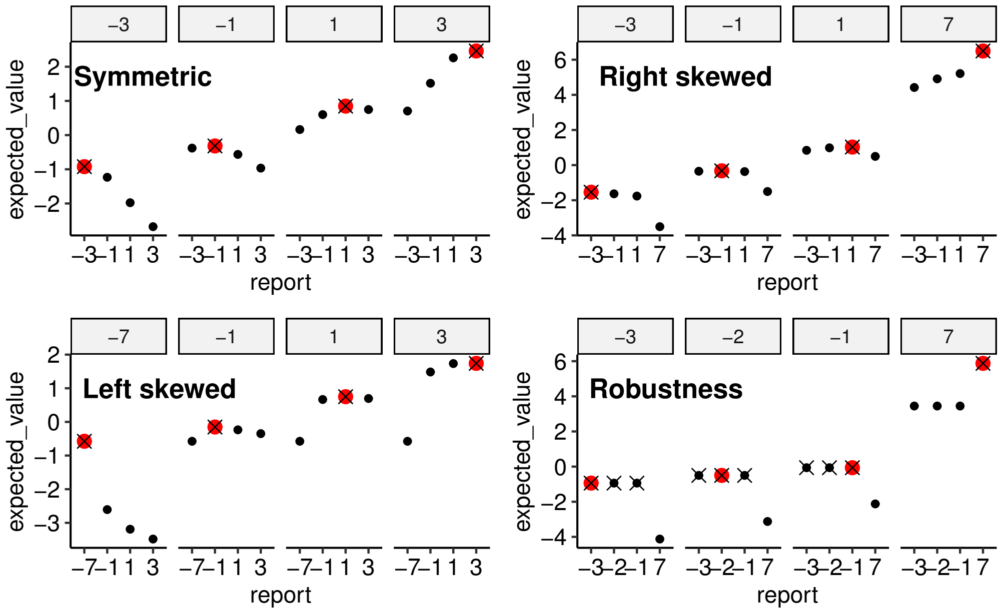
The different rates of rational reporting/voting drive the relatively small realized efficiency advantage of the AGV over the SM mechanism. Especially the incorrectly reported signs result in large efficiency losses of the AGV. The higher percentage of misreports in the AGV compared to the non-sincere votes in the SM mechanism can be partially explained by familiarity of subjects with the SM. However, the systematic difference in the reporting behavior of individuals with positive and negative types is unlikely to be explained by mistakes alone, and our data does not reveal the reason for the asymmetric behavior.

B.2.3 Best responses AGV

In the previous section we looked at the effect on group surplus if all subjects simultaneously changed to a strategy without misreported signs or without exaggeration, but not if it is best-response for individual subjects to adopt the truthful strategy given what the other subjects are doing. In this section we show the payoff effects of each possible report, per type-treatment, under the assumption that other subjects use the behavioral strategies identified before.

Figure 4 shows per treatment-type combination the expected value of sending

Figure 4: Empirical best responses in the AGV mechanism.



Notes: Treatments are indicated in the panels. Types are indicated in the boxes in each panel. Each black dot is a possible, non-truthful, report. The red dots indicate the truthful report. Crosses indicated the empirical best-response correspondence for each treatment-type.

each of the possible reports. The red dots highlight the truthful report in each sub-figure. The crosses indicate the best-responses of each type. In every sub-figure we see that the red-dots are on a cross, such that truthful reporting was part of the best-response for every type in the experiment. In all treatments except the Robustness treatment, the best-responds is unique for all types. In the Robustness treatment all negative reports have the same expected value for all types, so they are all either part of best-response or not.

B.2.4 Extra results efficiency and surplus

For the calculation of the surplus in Section 5.3 we normalize the surplus by first calculating the observed strategy per type-treatment and then use the distributions of random variables to calculate the expected value of the next, unplayed period. In the table Table 15 we show the average surplus over the actual ex ante rounds in the experiment. To make the comparison with the theoretical expectations possible, we calculate the surplus that would have been generated in each subject-period if subjects had played the truthful / sincere voting Nash-equilibrium. The results are shown in Table 15.

Table 15: Theoretical and non-normalized average group surplus with AGV and SM (ex ante)

	AGV Group surplus			SM Group surplus		
Treatment	theoretical	realized	difference (%)	theoretical	realized	difference (%)
Symmetric	1.56	1.28	0.28 (17.89%)	1.50	1.34	-,16 (-11%)
Right-skewed (+7)	3.92	3.32	0.60 (15.23%)	3.75	3.68	-0.066 (-2%)
Left-skewed (-7)	1.00	0.51	0.49 (48.65%)	0.75	0.66	-0.09 (-13%)
Robustness	4.04	3.69	0.35 (8.57%)	2.02	2.24	0.22 (+11%)

Notes: Group surplus of an average round in Euro. Theoretical surplus is based on Bayes-Nash equilibrium of the mechanisms. Realized payoff is based on directly, without normalization for random draws, on the average payoff earned in the lab. The difference columns show the by how much lab play differs from theoretical expectations both in Euro and in percentages of theoretical surplus.

In Section 5.3 we test for the difference in efficient implementation between the mechanism through Fisher exact tests because of the small number of observations with inefficient choices. We could have done a similar test using logistical regression with clustered standard errors on the match level. These results are very similar and shown in Table 16. Again, the only differences found are in the Robustness treatment.

To demonstrate that the null-results for three out of four treatments is not simply due to lack of statistical power, we repeat the same test for the comparison between AGV and the mechanism with the highest variance in efficient implementation, RAND. Both the Fisher-exact tests reported in Table 17 and the logistical regression shown in 18 show that for three out of four treatments there is no problem to distinguish an efficient mechanism from a noisy inefficient mechanism. Only in the Symmetric treatment where RAND, by chance, has a 2/3rds efficient implementation is the comparison not clean cut.

B.2.5 Individual differences in strategies

In the main analysis we have largely ignored individual differences driven by underlying cognitive processes or characteristics of the subjects in the experiment. In this appendix we look at individual differences between subjects in their choices within the AGV and SM mechanism. First we generate a set of statistics of choices in the mechanisms. For each player, we summarize their

Table 16: Logistic regression on efficient implementation decisions in SM and AGV

	Dependent variable:				
	Efficient implementation				
	(1)	(2)	(3)	(4)	(5)
SM	0.048	0.048	−0.387	−0.644	−1.910
	(0.447)	(0.499)	(0.297)	(0.420)	(1.319)
Right-skewed	0.259				
	(0.304)				
Left-skewed	0.128				
	(0.435)				
Robustness	0.971				
	(0.832)				
Right-skewed X SM	−0.435				
	(0.520)				
Left-skewed X SM	−0.692				
	(0.592)				
Robustness X SM	−1.958*				
	(1.064)				
Constant	1.514***	1.514***	1.773***	1.642***	2.485**
	(0.252)	(0.282)	(0.190)	(0.382)	(1.083)
Treatment(s)	all	Symmetric	Right-skewed	Left-skewed	Robustness
Clusters	15	4	4	5	2
Cl level	Match group	Match group	Match group	Match group	Match group
Null deviance	421.12	126.75	112.06	128.29	53.18
Residual deviance	411.10	126.74	111.41	126.18	46.77

Notes: Logistic regressions investigating the difference in implementation efficiency of the AGV and SM. Dependent variable is a dummy that equals 1 if the implementation choice in this group-round was efficient. Independent variables are dummies indicating the mechanism and treatment.

Table 17: Contingency and Fisher exact test of the efficiency of AGV and RAND.

Treatment:	**All**		**Symmetric**		**Right-skewed**		**Left-skewed**		**Robustness**	
	AGV	RAND	AGV	RAND	AGV	RAND	AGV	RAND	AGV	RAND
Inefficient	34	34	11	8	9	10	12	11	2	5
Efficient	189	48	50	16	53	21	62	7	24	4
Total	223	82	61	24	62	31	74	18	26	9
odds-ratio:		0,255	0,444		0,361		0,127		0,075	
Fisher-Exact, p=-value:	<0,001		0,153		0,058		<0,001		0,006	

Notes: Contingency tables and Fisher exact tests comparing the distributions of efficient and inefficient project implementation choices between AGV and RAND.

Table 18: Logistic regression on efficient implementation decisions in AGV with RAND.

	Dependent variable:				
	Efficient implementation				
	(1)	(2)	(3)	(4)	(5)
RAND	-0.821^{***}	-0.821^{***}	-1.031^{***}	-2.094^{***}	-2.708
	(0.150)	(0.168)	(0.262)	(0.435)	(1.683)
Right-skewed	0.259				
	(0.304)				
Left-skewed	0.128				
	(0.435)				
Robustness	0.971				
	(0.832)				
Right-skewed X RAND	-0.210				
	(0.279)				
Left-skewed X RAND	-1.273^{***}				
	(0.430)				
Robustness X RAND	-1.887				
	(1.241)				
Constant	1.514^{***}	1.514^{***}	1.773^{***}	1.642^{***}	2.485^{**}
	(0.252)	(0.282)	(0.190)	(0.382)	(1.083)
Treatment(s)	all	Symmetric	Right-skewed	Left-skewed	Robustness
Clusters	15	4	4	5	2
Cl level	Match group	Match group	Match group	Match group	
Null deviance	323.68	90.328	94.173	103.47	35.028
Residual deviance	294.60	88.123	90.349	89.656	26.467

Notes: Logistic regressions investigating the difference in implementation efficiency of the AGV and RAND. Dependent variable is a dummy that equals 1 if the implementation choice in this group-round was efficient. Independent variables are dummies indicating the mechanism and treatment.

strategies by creating a variable that summarizes the fraction of rounds in which the SM (AGV) Bayes-Nash equilibrium is played. That is, we create a variable that shows the fraction of SM (AGV) rounds in which the subject voted sincerely (truthfully revealed their type). Table 19 shows the distribution of both strategies. We split the fraction of AGV in to three groups of roughly equal size, since most subjects in the SM mechanism always vote sincerely we created a dummy that captures whether the subject always votes sincerely. A Fisher's exact test clearly rejects the independence of the distributions. Subjects that are more likely to vote against their interest in SM are also more likely not to report truthfully in the AGV.

Table 19: Distribution of strategies in AGV and SM.

Fraction of	Always Sincere (SM)		
Truthful rounds (AGV)	0	1	Row total
0 - 0.6	13	37	50
0.6 - 0.833	4	49	53
0.833-1	0	47	47
Column total	17	133	150

Notes: Contingency table of strategies profiles in AGV and SM mechanism.

Such insincere votes and untruthful reports can have several causes, misunderstanding of the mechanism, experimentation, or simply noisy choice behavior common to real-life and lab data. We checked subjects understanding of the game by asking a set of control questions. Subjects could only proceed to the actual experiment unless they answer all questions correctly. We use the time subjects spend on this questions as a measure of understanding. If subjects take longer to correctly answer all questions, they presumably had more issues identifying the correct answers. In the table below we see how the time spent on the test questions is related to the strategies used in the mechanisms. We first report a quasi-binomial (logistic) model against the fraction of periods for the AGV (SM) against the time spend on the test questions (in seconds). Since the relationship is likely not linear, we then split the group of subjects into 5 equals sized bins and estimate the same equation using dummies for each quintile. To give an easier interpretation of the effect on fraction of periods played honestly (sincerely), we produce a simple linear probability model in column 3 (6).

Table 20: Relation between time spend on test questions and behavioral strategies in the mechanisms.

	Dependent variable:					
	Fraction truthful AGV			Always Sincere in SM		
	glm: quasibinomial link = logit		*OLS*	*logistic*		*OLS*
	(1)	(2)	(3)	(4)	(5)	(6)
Question time (sec)	−0.001*			−0.004***		
	(0.001)			(0.001)		
Quintile 2 [120, 183)		0.016	0.003		0.881	0.049
		(0.381)	(0.084)		(0.714)	(0.038)
Quintile 3 [183, 279)		0.237	0.049		0.124	0.014
		(0.368)	(0.078)		(1.215)	(0.076)
Quintile 4 [279, 417)		−0.210	−0.047		−0.997	−0.093
		(0.344)	(0.077)		(1.035)	(0.093)
Quintile 5 [417,1122]		−0.295	−0.067		−1.484	−0.169**
		(0.360)	(0.083)		(0.906)	(0.075)
Right-skewed	−0.155	−0.166	−0.037	−1.006*	−0.883	−0.090
	(0.243)	(0.211)	(0.049)	(0.570)	(0.567)	(0.070)
Left-skewed	0.234	0.268	0.057	−0.405	−0.202	−0.020
	(0.287)	(0.278)	(0.060)	(0.368)	(0.238)	(0.019)
Robustness	−0.248	−0.169	−0.038	−0.977**	−0.842***	−0.072***
	(0.261)	(0.224)	(0.051)	(0.417)	(0.306)	(0.020)
Constant	1.021***	0.737*	0.676***	3.758***	3.048***	0.966***
	(0.332)	(0.388)	(0.087)	(0.654)	(0.796)	(0.049)
Observations	150	150	150	150	150	150
R^2			0.038			0.072
Adjusted R^2			−0.010			0.026
Log Likelihood				−48.610	−47.741	
Akaike Inf. Crit.				107.220	111.483	
Clusters	15	15	15	15	15	15
Cl level	Match group	Match group	Match group	Match group	Match group	Match group
Null deviance	69.1	69.1				
Residual deviance	66.61	66.98				

Notes: *p<0.1; **p<0.05; ***p<0.01 Quasi-binomial (binomial) models to predict how often (whether) a subject plays the truthful Bayes-Nash equilibrium in the AGV (SM) mechanism. Independent variables are the time spend on the pre-experimental test questions, either as a continuous variable (*Question time*), or by dummies for each quintile (*Quintile2-4*, first quintile is used as baseline). Each model uses treatment specific intercepts.

What the table mostly shows is that there is very little indication of poor understanding being an issue. Although the signs on the few significant coefficients point in the correct direction, these coefficients tend to be small, and the relationship is only sporadically found in these tests. The likelihood of someone deviating from Nash-equilibrium in the AGV is positively correlated to the likelihood that the same individual deviates from Nash-equilibrium in SM. However, these likelihoods are only marginally related to the time spend on the test-questions for the AGV in one out of 3 regressions. The correlation between Nash-deviations in SM and the test questions appears to be driven by a small group of extreme outliers. Furthermore, the relationship between the test questions and the strategies is strongest for the Simple Majority mechanism. If we treat this as a sign of misunderstanding, we would have to conclude that misunderstanding is a larger problem in the simple, well-known mechanism of Simple Majority voting in a group of 3, then for the unfamiliar AGV. Alternative explanations like experimentation, non-Nash beliefs, and noisy response seem more likely drivers of the deviations found. This is further strengthened by the insignificant treatment dummies for the AGV regression. The Robustness treatment was specifically meant to reduce the likelihood of small mistakes in reporting (misreading of the sign of the valuations/reports). There is, however, no effect found on the strategies used in the AGV, if anything, there is an insignificant effect in the opposite direction. This is probably due to the fact that all negative reports had the same expected payoff in this treatment (see Appendix B.2.3)

B.3 Relation with demographic variables.

In the main analysis we have largely ignored individual differences driven by underlying cognitive processes or characteristics of the subjects in the experiment. In this appendix we look if some of these differences are related to demographic characteristics of the subjects. We relate these demographic variables to the strategy variables defined in Appendix B.2.5 and two similar variables capturing the fraction of the rounds a subject chose AGV (*Support AGV*) or SM (*Support SM*) from the rounds that that mechanism was part of the stage-one choice set. After the experiment, the post-experimental questionnaire asked subjects about *Age* (in year), gender (dummy *Female*), their political orientation (*Orientation* (measured from 1 "Extreme left" to 11 "Extreme right"), study subject (*Econ/Business student* is a dummy that equals 1 for students Economics, Business, or Business mathematics) and their risk tolerance. The variable *Risk tolerance* is measured using the general risk-tolerance question of Dohmen et al.

(2011). Subjects indicated on an 11-point scale from 0 to 10 how risk tolerant they considered themselves to be, where 0 meant "Not willing to take risks" and 10 "Very willing to take risks".

In Appendix B.2.5 we found that the strategies played in SM and AGV by the same subject are related. It is likely that similar relations exist between the strategies played in the mechanism and the preferences over the mechanisms. For instance, a subject that beliefs that the truthful Nash-equilibrium is played by his fellow group members is both more likely to play it themselves, and more likely to select it in stage one since it is then believed to be the most efficient mechanism. We explicitly control for this possibility by using the strategy (mechanism choice) summary variables as controls in the regressions against the mechanism choice (strategy) variables.

The dependent variables are fractions between 0 and 1, so a binomial model is used. Beliefs and strategies played are possibly correlated at the level of the matching group, therefore all standard errors are clustered at the matching group level. The results of these regressions are shown in Table 21.

The expected positive relation between support for a mechanism and Nash-equilibrium play is seen in all four columns of Table 21. Although the significance is marginal, this effect seems to be consistent. In both mechanisms, the sincere/truthful Nash-equilibrium is quite efficient, and much more efficient than noisy or random choices. Hence, the belief that others play accordingly should make these mechanisms more appealing and with those beliefs playing the Nash-strategy is best response by definition. Hence, the effect makes theoretical sense.

If we look at the relation with demographics, we see few consistent effects. We do see some effects in individual regressions. Economics and business students are slightly more likely to vote sincerely in SM, and insignificantly more likely to truthfully report in the AGV. Right leaning students are less likely to choose the SM mechanism, but little effect is found in the support for AGV, such that it seems they are more likely to choose NSQ or RAND. Subjects with a higher

Table 21: The effect of demographics on mechanism choice and strategies played.

	Dependent variable:			
	Truthful rounds (AGV)	Sincere rounds (SM)	Support AGV	Support SM
	(1)	(2)	(3)	(4)
Support AGV	0.936*			
	(0.499)			
Support (SM)		2.631*		
		(1.495)		
Truthful rounds (AGV)			0.764*	
			(0.447)	
Sincere rounds (SM)				0.787*
				(0.478)
Age	−0.022	−0.014	−0.016	−0.041***
	(0.027)	(0.037)	(0.015)	(0.008)
Female	0.330	−0.196	−0.018	−0.053
	(0.287)	(0.701)	(0.145)	(0.147)
Orientation	0.003	0.373*	−0.003	−0.093***
	(0.073)	(0.206)	(0.046)	(0.034)
Risk tolerance	−0.029	0.184	0.147***	−0.006
	(0.057)	(0.146)	(0.054)	(0.024)
Econ/Business student	0.269	1.413**	0.095	−0.089
	(0.178)	(0.716)	(0.253)	(0.136)
Right-skewed	−0.267	−0.724	0.323***	−0.057
	(0.260)	(0.490)	(0.051)	(0.192)
Left-skewed	0.128	0.333	0.560**	−0.897***
	(0.271)	(0.613)	(0.235)	(0.222)
Robustness	−0.268	−0.652	0.336	−0.539**
	(0.261)	(0.693)	(0.282)	(0.246)
Constant	0.412	−1.611	−0.299	2.250***
	(0.992)	(2.744)	(0.694)	(0.548)
Observations	150	150	150	150
Clusters	15	15	15	15
Cl level	Match group	Match group	Match group	Match group
Null deviance	69.1	41.01	55.79	38.8
Residual deviance	63.45	30.8	48.77	32.53

Notes: Quasibinomial regressions relating demographic variables with the strategies used by individual subjects in the mechanism and in the mechanism choices. Clustered standard errors between brackets, *p<0.1; **p<0.05; ***p<0.01. All dependent variables are fractions.

(self-reported) risk tolerance are more likely to support the AGV. A small effect is found for age, but the variance in age in our subject pool is limited, so that effect is small economically. The treatment dummies clearly show that the SM is chosen more often in the Symmetric treatment than in the other treatments. This is quite closely in line with the expected extra surplus of the AGV over the SM.

References

Attiyeh, G., R. Franciosi, and R. M. Isaac (2000). Experiments with the pivot process for providing public goods. *Public Choice 102*(1-2), 93–112.

Dohmen, T., A. Falk, D. Huffman, U. Sunde, J. Schupp, and G. G. Wagner (2011). Individual risk attitudes: Measurement, determinants, and behavioral consequences. *Journal of the European Economic Association 9*(3), 522–550.

Hlavac, M. (2018). *Stargazer: Well-Formatted Regression and Summary Statistics Tables*. Bratislava, Slovakia: Central European Labour Studies Institute (CELSI). R package version 5.2.2.

Kawagoe, T. and T. Mori (2001). Can the pivotal mechanism induce truth-telling? An experimental study. *Public Choice 108*(3-4), 331–354.

C Translated instructions

This is the translation of the original instructions used for treatment one (symmetric distribution). The instructions for other treatments only differ with respect to the described distribution and therefore the used examples and tables. All emphasizes are in the original. The original instructions for all treatments are available from the authors upon request.

Instructions

Thank you for taking part in this experiment. The amount of money you can earn in this experiment depends on your choices and the choices of the other participants. It is therefore important that you understand the instructions. Please do not communicate with the other participants during the experiment. If you have any questions after reading the instructions, please raise your hand. We will then clarify your question.

All the information you provide will be treated anonymously.

You will begin the experiment with a starting budget of 9€. This amount can be increased or decreased depending on all participants' choices in one of the 18 rounds of this experiment. In each round each participant receives a payment. This payment can be zero, positive or negative. At the end of the 18 rounds, one round will be randomly determined for payment. The payment of the selected round will be added to or subtracted from your starting budget. The sum of your starting budget and the payment of the selected round yields your final payoff. In each round you should act as if the round was selected for payment. You will receive your final payoff in cash at the end of the experiment. The payments are chosen in such a way that you cannot make losses under any circumstances. Each participant can earn between 5.75€ and 12.25€. Your payment will be treated anonymously.

The entire experiment is organized in two phases. Phase I consists of rounds 1-12 and phase II of rounds 13-18. You will now receive information about phase I. We will explain any changes in phase II after round 12, but before the start of round 13 (the start of phase II).

Thank you for participating.

STRUCTURE OF THE EXPERIMENT

In each round of the experiment you will be part of a group with 3 members (you and two randomly selected other participants). Each group has the possibility to conduct a project, called project A. If you do not conduct the project each group member receives a payoff of 0€ for this round. If your group conducts project A, then each group member receives his or her private valuation for the project as payment for this round. The private valuation of project A can be different for each member of your group. If your group decides not to conduct project A, all group members receive a payoff of zero. The valuation for project A is newly determined each round and each participant receives a new private valuation in each round. Groups are newly formed in each of the 12 rounds.

The experiment is computer based. Therefore individual participants cannot identify the other group members. You will not know which other participants are in your group in which round, neither during nor after the experiment.

One round consists of two parts. In the first part each group chooses a decision rule which is used to determine whether project A is implemented or not. In the second part your group uses the selected rule to determine whether project A is implemented or not. You will be informed about your private valuation for project A **after** part one of a round. We will now describe the two different parts of each round as well as the possible decision rules in detail.

PART ONE

In part one you have the choice between two different decision rules, which will be used in part two to determine whether project A is implemented or not. The two available rules change from round to round. **Each of the three group members suggests one of the two available rules for part two of this round. The computer randomly picks one of these suggestions as group rule. This decision rule determines how in part two the question whether project A is implemented or not is resolved.** The different rules are explained below. In part one you do not know whose rule suggestions will be the group decision rule. Your suggestion can be selected, but also the suggestion of another group member. Each group member has the same chance in each round for his or her suggestion to be selected. Non selected suggestions will not be made known to the other group members. Please note that the decision rule is important, because dependent on the decision rule the implementation of project A is easier or more difficult.

PART TWO

In part two the selected decision rule is used to determine whether project A is implemented or not. The group decision arises directly from the decisions of all group members in part two. The decision is announced and each participant is informed about his or her payment in this round.

VALUATIONS

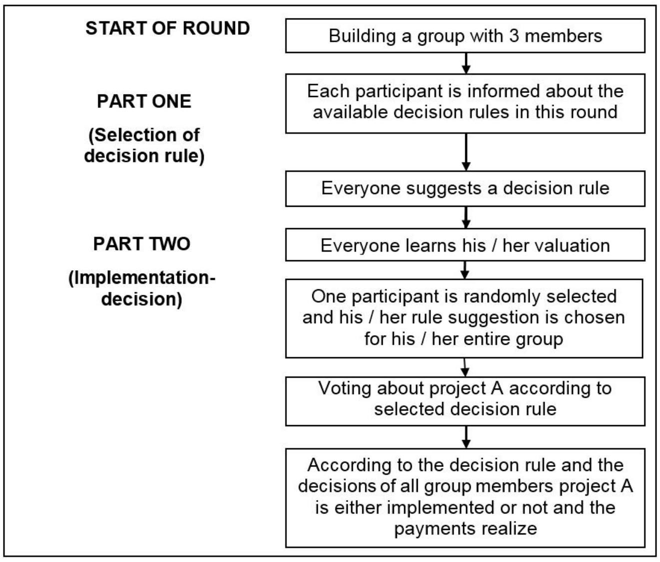
In case project A is implemented all group members receive a payment dependent on their project valuations. This means, if your valuation for project A is positive, you benefit from the implementation of project A, and when your valuation for project A is negative, then you have to pay if the project is implemented. **Your valuation for project A is randomly given to you in each round anew. You learn your valuation after part one.** Therefore you do not know your valuation when you decide between the different decision rules in part one, but you know your valuation in part two, when you decide about the implementation of project A according to the selected decision rule.

Please note that you will know your exact valuation for the project, but not the valuations of the other group members. The valuation of each group member can be -3€, -1€, +1€ or +3€. All values are equally likely. The values are independently distributed, such that your valuation in one round does not allow any conclusions for the valuation of other members in your group. Furthermore your valuations are independent between rounds. Therefore your valuation in one round does not depend on previous or future valuations.

Example: Assume your valuation in round 1 is -1€ and +3€ in round 2. If your group decides to implement project A in both rounds, then your payment (not necessarily your final profit) in these rounds is your valuation. If round 1 would be randomly selected for payment, then your final profit in the experiment would be 8€ (=9€ - 1€). If round 2 would be selected your final profit would be 12€ (= 9€ +3€).

If your group does not implement project A, each group member receives 0€ for this round, meaning in this round you neither gain nor lose anything, independently of your valuation for project A. Therefore if such a round is selected for payment, your final profit is your starting budget of 9€.

Here is the structure of the experiment in a short overview:



POSSIBLE DECISION RULES

In part one each group member has the choice between two decision rules. The rules are identical for all group members in each round. The following four decision rules (I.-IV.) are possible:

Rule I. Whether project A is implemented or not depends on the stated valuations of all group members. With this decision rule each group member states his or her valuation for the project in part two of the round. **If the sum of all stated valuations is larger than 0, then project A is implemented. If the sum is smaller, the project is not implemented.** Each participant has to state a possible valuation (-3€, -1€, +1€ or +3€). He can state his true valuation, but also any other possible valuation. The calculation of the sum only depends on the three **stated valuations**. The true valuations are not taken into account.

With this decision rule there are transfer payments between the group members additionally to the payments from an implementation of project A. The transfer payments depend on the stated valuation and the stated valuations of the other group members. You can see which transfers you receive / pay dependent on the stated valuations in Table 1 below. Please note: A transfer payment is independent of your true valuation and the implementation of project A. You can also receive or pay a transfer if project A is **not** implemented. Transfer payments **only** exist in this decision rule.

Transfers are chosen in such a way that your expected payoff is maximized if you state your true valuation and also the other group members state their true valuation. The table states the transfers for all possible situations. The first column contains your statement and the respective columns to the right list the transfers dependent on the statements of the other group members.

	Stated valuations of the other group members:									
Your statement:	**3, 3**	**1, 3 or 3, 1**	**-1, 3 or 3, -1**	**-1, 1 or 1, -1**	**-1, -1**	**3, -3 or -3, 3**	**1, -3 or -3, 1**	**-1, -3 or -3, -1**	**1, 1**	**-3, -3**
3	0	-0.125	-0.125	-0.25	-0.25	0	-0.125	-0.125	-0.25	0
1	0.25	0.125	0.125	0	0	0.25	0.125	0.125	0	0.25
-1	0.25	0.125	0.125	0	0	0.25	0.125	0.125	0	0.25
-3	0	-0.125	-0.125	-0.25	-0.25	0	-0.125	-0.125	-0.25	0

Table 1

Example 1: Assume you state a valuation of -1€. If the other two group members state valuations of -1€ and 3€, then you receive a transfer of 0.125€.

Example 2: Assume you state a valuation of 1€. If the other two group members state valuations of -3€ and 3€, then you receive a transfer of 0.25€.

Example 3: Assume you state a valuation of -3€. If the other two group members state valuations of -1€ and 3€, then you receive a transfer of

-0.125€. Therefore you have to pay 0.125€.

Example 4: Assume you state a valuation of 3€. If the other two group members state valuations of -3€ and -3€, then you receive a transfer of 0.

Please note that transfers payments are always made, independent of whether project A is implemented or not. You receive / pay a transfer **on top** of the payments from project A.

Rule II. At least two group members have to vote for the implementation of project A. In part two all group members vote either for or against the implementation of project A. At least 2 group members have to vote for the implementation, otherwise project A is not implemented **(simple majority)**.

Rule III. Project A is never implemented. Group members do not make any further statements in part two. There is no voting and no valuations are stated.

Rule IV. The decision for or against implementation of project A depends on the result of a coin flip. There is no voting. If the coin flip results in HEADS, the project is implemented. If the result is TAILS, the project is **not** implemented. Both results, HEADS and TAILS, are equally likely. Therefore with rule IV. project A is implemented in 50% of all cases and not implemented in the other 50%.

Please note that in decision rules I and II each participant has to state a valuation / vote. It is not possible to abstain.

We now ask you to answer several understanding questions regarding the various decision rules and your possible payments. Please answer these questions on the computer screen. After all participants have answered the seven understanding questions all participants will take part in four practice rounds. In each round you will apply one of the four possible decision rules (I.-IV.). In these rounds there is no choice between two rules, but the rule is predetermined.

In these four rounds you are not in a group with two other participants. The computer simulates the decisions of your group members. The computer randomly chooses between all available actions. E.g. with rule II the computer will vote “YES – implement project A” in 50% of all cases and “NO – do not implement project A” in the other 50%.

These four rounds do **not** count towards your final profit. They are just meant to familiarize you with the four possible decision rules. After all participants have completed these four rounds the actual experiment starts.

C.0.1 Transfer tables used in the experimental instructions

Since the only real difference between the treatments in the type space used and the transfers in the AGV that different type reports cause, translations of the transfer tables from the instructions are reproduced below. The transfers of the Symmetric treatment can be found in the sample instructions above.

Table 22: Transfers in the Right-skewed treatment

Stated valuations of the other group members:										
Your statement:	**7, 7**	**1, 7 or 7, 1**	**-1, 7 or 7, -1**	**-1, 1 or 1, -1**	**-1, -1**	**7, -3 or -3, 7**	**1, -3 or -3, 1**	**-1, -3 or -3, -1**	**1, 1**	**-3, -3**
7	0	-0.42	-0.42	-0.84	-0.84	-0.375	-0.79	-0.79	-0.84	-0.75
1	0.84	0.42	0.42	0	0	0.46	0.04	0.04	0	0.08
-1	0.84	0.42	0.42	0	0	0.46	0.04	0.04	0	0.08
-3	0.75	0.33	0.33	-0.08	-0.08	0.375	-0.04	-0.04	-0.08	0

Table 23: Transfers in the Left-skewed treatment

Stated valuations of the other group members:										
Your statement:	**3, 3**	**1, 3 or 3, 1**	**-1, 3 or 3, -1**	**-1, 1 or 1, -1**	**-1, -1**	**3, -7 or -7, 3**	**1, -7 or -7, 1**	**-1, -7 or -7, -1**	**1, 1**	**-7, -7**
3	0	-0.04	-0.04	-0.08	-0.08	0.375	0.33	0.33	-0.08	0.75
1	0.08	0.04	0.04	0	0	0.46	0.42	0.42	0	0.84
-1	0.08	0.04	0.04	0	0	0.46	0.42	0.42	0	0.84
-7	-0.75	-0.79	-0.79	-0.84	-0.84	-0.375	-0.42	-0.42	-0.84	0

Table 24: Transfers in the Robustness treatment

Stated valuations of the other group members:										
Your statement:	**7, 7**	**-1, 7 or 7, -1**	**-2, 7 or 7, -2**	**-3, 7 or 7, -3**	**-1, -1**	**-2, -1 or -1, -2**	**-1, -3 or -3, -1**	**-2, -3 or -3, -2**	**-2, -2**	**-3, -3**
7	0	-0.75	-0.75	-0.75	-1.5	-1.5	-1.5	-1.5	-1.5	-1.5
-1	1.5	0.75	0.75	0.75	0	0	0	0	0	0
-2	1.5	0.75	0.75	0.75	0	0	0	0	0	0
-3	1.5	0.75	0.75	0.75	0	0	0	0	0	0

C.1 Screen shots

The following Figures 5 to 10 show original screen shots of the German zTree program. All screen shots are from the Symmetric treatment.

Figure 5: Screen shot: Mechanism choice in ex ante round

Figure 6: Screen shot: Voting in the SM Mechanism

Figure 7: Screen shot: Feedback in the SM Mechanism

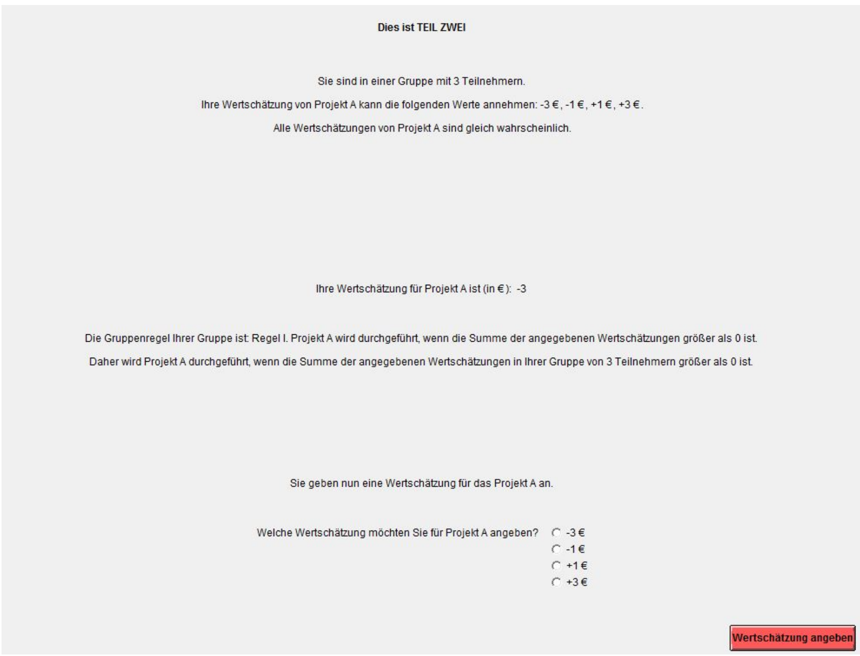


Figure 8: Screen shot: Reporting valuation in AGV Mechanism

Figure 9: Screen shot: Feedback in the AGV Mechanism

Figure 10: Screen shot: Mechanism choice in ad interim round