No. 51 may 2010

Urs Fischbacher
Simeon Schudy

Reciprocity and Resistance to Comprehensive Reform

Research Paper Series
Thurgau Institute of Economics and Department of Economics
at the University of Konstanz

Member of

thurgauwissenschaft

www.thurgau-wissenschaft.ch

THURGAU INSTITUTE
OF ECONOMICS
at the University of Konstanz

Reciprocity and resistance to comprehensive reform

Urs Fischbacher[1] Simeon Schudy[2]

May 2013

Abstract

Comprehensive reforms often fail, despite being beneficial to society. Politicians may block comprehensive reforms in an attempt to form vote trading coalitions in which they benefit from a piecemeal reform at the expense of others. Because formal commitment devices for vote trading are frequently missing, trust and reciprocity among legislators can play an important role for vote trading. We investigate in a laboratory experiment whether legislators will impede comprehensive reforms in an attempt to form vote trading coalitions even if formal commitment devices for vote trading after reform failure are missing. We find that open ballots allow for vote trading without commitment, based on trust and reciprocity. In turn, legislators frequently reject efficient comprehensive reforms in such institutions.

Keywords: Vote trading, comprehensive reform, committee voting, experiment

JEL-Classification: C92, D70, P16

[1] University of Konstanz and Thurgau Institute of Economics, Post Box 131, 78457 Konstanz, Germany; Urs.Fischbacher@uni-konstanz.de.

[2] University of Konstanz and Thurgau Institute of Economics, Post Box 131, 78457 Konstanz, Germany; Simeon.Schudy@uni-konstanz.de; Phone +497531884677; Fax +41 (0) 71 / 677-0511 (Corresponding Author).

1 Introduction

Comprehensive reforms often fail or become piecemeal during the preparatory phase of legislation. Such resistance to comprehensive reforms has been explained by uncertainty about outcomes of reforms (see, e.g., Fernandez and Rodrik 1991; Cason and Mui 2003), the existence of veto players (see, e.g., Tsebelis 2002; Kagel et al. 2010), interest groups or wars of attrition (Alesina and Drazen 1991; Saint-Paul 2002), social preferences (e.g., inequality aversion) which may hinder societies in implementing efficiency increasing but equality reducing reforms (Paetzel et al. 2012) and psychological constraints such as confirmatory bias (Samuelson and Zeckhauser 1988; Rabin and Schrag 1999).[1] We provide a different rationale for resistance to comprehensive reforms which has so far been neglected: trust and reciprocity among legislators, which allow for vote trading among legislators, without commitment devices, after comprehensive reform failure.

Facing a comprehensive reform, legislators in favor of a subset of individual bills included in the comprehensive reform will be willing to impede it if they expect their favorable subset to be implemented by a vote trade after comprehensive reform failure. For selfish legislators, such a vote trade requires formal commitment devices. On the contrary, if legislators trust and reciprocate, commitment devices for vote trading will not be necessary to trade votes. The aim of this paper is thus twofold: First, we investigate institutional circumstances that facilitate trust and reciprocity among legislators and in turn vote trading. Second, we study how vote trading based on trust and reciprocity affects resistance to efficient comprehensive reforms.

While vote trading can be observed in real world policy making (see, e.g., Stratmann 1992) the determinants of vote trading without commitment, for instance trust and reciprocity, are difficult to identify with real world data. Legislators may be involved in

[1] For a comprehensive survey on resistance to reform see also Heinemann (2004).

individual reputation building, favor specific vote trading partners or vote under voting procedures that allow for long-term relations with potential vote trading partners. To restrict the determinants for vote trading to trust and reciprocity and thereby exclude any alternative reasons for vote trading, we investigate vote trading in a laboratory experiment.

The aim of our experiment is to simplify the complex procedures of real world policy making to the basic features of voting institutions. The experiment allows us to manipulate the transparency of the voting institution and thereby vary the extent to which legislators may trust and reciprocate. Further, the experimental setup offers the possibility to model powerful legislators (i.e., veto players), who are nevertheless equally attractive vote trading partners after reform failure. The experimental approach also permits us to control for individual reputation building possibilities as well as for the knowledge about others' preferences.

In our experiment, a three member committee votes on an efficient comprehensive reform comprising three independent bills. The approval of each individual bill is efficient, but only preferred by a minority. Members vote on the comprehensive reform using unanimity rule. Thus, we model each legislator as a powerful veto player. If the comprehensive reform fails, the committee may still pass all or a subset of the bills in a sequential bill-by-bill voting procedure. In the sequential voting procedure the committee votes independently on each bill under simple majority rule. This means each bill can be accepted or rejected and each voter is an equally attractive vote trading partner. Because each bill is only preferred by a minority, vote trading becomes necessary to pass bills. In our setup, standard economic theory predicts no bill to be passed in the sequential procedure without commitment devices for vote trading. Consequently, in a subgame perfect equilibrium selfish legislators vote for the comprehensive reform. However, a vast amount of theoretical (see, e.g., Rabin 1993; Levine 1998; Bolton and Ockenfels 2000; Charness and Rabin 2002; Dufwenberg and Kirchsteiger 2004; Falk and Fischbacher 2006; Cox et al., 2007) and

experimental work (e.g., Fehr et al. 1998; Fehr and Gächter 1998; Charness and Rabin 2002; Falk et al. 2008; Dohmen et al. 2009) has underlined the importance of reciprocity in human interactions. People reward kind actions and punish unkind actions. Humans not only reciprocate, but also trust in reciprocal behavior by others (see, e.g., Berg et al. 1995; McCabe et al. 1998; Strassmair 2009). If legislators trust in others' reciprocity in our setup, legislators will also expect vote trading on individual bills to be possible after reform failure, even without commitment. In turn, resistance to comprehensive reform may emerge.

The importance of trust and reciprocity for vote trading on individual bills after reform failure may crucially depend on the transparency of the voting procedure ex post. If the voting procedure provides information on each legislator's vote (open ballot), legislators may identify their potential vote trading partners. If, instead, information on individual voting behavior is missing (secret ballot), it will be impossible to direct rewards to specific trading partners. We study resistance to comprehensive reform with both institutional settings, open and secret ballots, with the possibility of voting for a comprehensive reform.

We find that transparency in the sequential voting procedure is crucial for vote trading based on trust and reciprocity. In the open ballot treatments of our experiment we frequently observed vote trades in which two legislators passed their preferred bills at the expense of the third legislator. In the secret ballot treatments, vote trading based on trust and reciprocity turned out to be difficult. Vote trading possibilities in the open ballot treatment were sufficient to cause resistance to the efficient comprehensive reform. Legislators who expected vote trading to be possible (and beneficial to them) strategically impeded comprehensive reforms when the sequential voting procedure was transparent. Thus, an imperfect device for vote trading, namely a transparent sequential bill-by-bill voting procedure, was sufficient to cause resistance to comprehensive reform. In contrast, secret voting procedures (i.e., wherein

individual voting behavior is not observable) reduced legislators' trust and, in turn, resistance to comprehensive reform.

Discussion of the welfare effects of vote trading based on the seminal work of Tullock (1959) has been extensive. Buchanan and Tullock (1962) argue that vote trading allows for the representation of degrees of intensities of preferences: Legislators can trade votes on issues for which their preferences are relatively weak against votes on issues for which their preferences are relatively strong. Thus vote trading is mutually beneficial to those involved in the trade. Brams and Riker (1973) point out that although each vote trade may be beneficial to traders, there is a risk that third parties not involved in the trade bear a substantial share of the cost involved in the respective trade. When the cost for third parties exceeds the benefits from trades, subsequent vote trades may lead to a situation under which vote trades eventually make everyone worse off (the paradox of vote trading). McKelvey and Ordeshook (1980) were the first to test Brams and Riker's paradox of vote trading experimentally. They observe the vote trading patterns predicted by Brams and Riker in a series of experiments with three- and five-person committees and a face to face communication environment with formal commitment devices for bilateral vote trades. However, in some of their experiments, committee members were allowed to cancel vote trades when all members involved in trading agreed to do so. Consequently, Pareto-dominated outcomes eventually were replaced by canceling all trades under unanimous agreement or by a majority coalition implementing its preferred outcome.[2] In contrast to the study by McKelvey and Ordeshook (1980), our contribution focuses on the impact of vote trading in the absence of commitment devices. Our subjects could not communicate, nor was there any possibility to sign agreements on the disposition of bills. They had no commitment devices at hand and cancellation of trades was

[2] McKelvey and Ordershook also ran treatments in which any majority of participants could agree on passing or failing bills by signing an agreement card (with unrestricted discussion beforehand). In these treatments they mainly observe fair outcomes in three-player games and support for the competitive solution in five-player games.

not possible. Hence, we demonstrate that legislators can succeed in vote trading even when formal commitment devices and communication possibilities are missing. Legislators trust in their counterparts' reciprocity and vote for bills contrary to their (induced) preferences. Transparency of the decision making procedure allows legislators to observe who supports them and thus increases trust in others' reciprocity. In turn, when the alternative voting procedure was transparent, vote trading occurred and resistance to the comprehensive reform was profitable for those involved in trading.

Since the aim of our experimental setup was to simplify the complex procedures of real world policy making to the basic features of voting institutions, we consider our results to be only a first step in understanding how trust and reciprocity affect voting behavior in political institutions. So far we modify only one particular aspect of the political process exogenously, namely transparency. Nevertheless, we note that our design may be easily extended to further important aspects of the political process. In the concluding section of this paper we provide several potential extensions that may be introduced to our design in the future.

2 Experimental design

In the experiment, subjects form three-member committees and decide on an efficient comprehensive reform. The comprehensive reform includes three individual bills. Each bill is efficient, but preferred by only one member of the committee. A committee member's preferred bill yields six additional points for herself, whereas the other two members of the committee incur a loss of two points each. Thus, if an individual bill is passed, the gross payoff will increase by two points. Because only one participant of the group gains from each individual bill, each individual bill is disadvantageous to a majority of the group. Table 1

shows how each bill affects the participants' payoffs. The participants are informed about both their own and their counterparts' payoffs. [3]

If the comprehensive reform is approved, all bills will be implemented, i.e., each participant receives two additional points. Passing the comprehensive reform requires unanimity and we do not display information on who vetoes the comprehensive reform. By doing so, we model powerful legislators (i.e., veto players) when it comes to comprehensive reforms, who nevertheless are equally attractive vote trading partners after reform failure. Further, we minimize fear of revenge as a reason to accept the comprehensive reform.

	Bill A	**Bill B**	**Bill C**
Member A	+6	-2	-2
Member B	-2	+6	-2
Member C	-2	-2	+6

Table 1: Bills and resulting payoff changes

If at least one member vetoes the comprehensive reform, the committee will decide sequentially on the three individual bills under simple majority rule. We decided for a sequential procedure because it allows us to study the implications of reciprocal behavior among committee members for vote trading in a controlled environment. In the sequential bill-by-bill procedure, each bill can be passed or not passed. First, all committee members simultaneously cast their votes on the first bill. Then, we inform the committee about the outcome of the vote. Second, each member casts her vote for the second bill. The second vote is displayed and the group decides on the third bill. Eventually, the outcome of the third vote and the resulting payoff changes are displayed.

To test whether trust in others' reciprocity leads to resistance to comprehensive reform, we vary the information about other individuals' votes in the bill-by-bill voting

[3] We do so in order to abstract from additional reasons affecting coalition formation such as overrepresentation of own preference intensities (see, e.g., Myerson and Satterthwaite 1983; Casella 2005; Jackson and Sonnenschein 2007; Engelmann and Grimm 2012).

procedure. Transparency allows legislators to observe individual voting behavior and thereby allows for directed reward. In turn, we suppose transparency increases trust in others' reciprocity. The committee either votes in a transparent bill-by-bill voting procedure (open ballot), in which individual voting behavior is observable, or in a secret ballot, where only the outcome of each vote is displayed (secret ballot).

Before committee members decide on the comprehensive reform, we inform them about the alternative voting procedure and about the (random) order of bills in the alternative procedure. This allows us to infer committee members' reaction to information about potential gainers and losers from each procedure. As further controls, we run additional treatments without the possibility of agreeing on a comprehensive reform. In these treatments the committee decides on the three bills either in an open (OpenBallotNoCR) or secret (SecretBallotNoCR) bill-by-bill voting procedure with simple majority rule. We can thus investigate the effect of transparency on trust in others' reciprocity in a controlled environment and test whether the failure of a comprehensive reform affects trust and reciprocity among committee members.

We repeat the game for 12 periods to allow for learning and changes of voting behavior over time. In each period, each participant is assigned randomly to a group of three participants (stranger matching). The random matching procedure excludes individual reputation building. In sessions with at least 24 subjects we divided subjects into two separate matching groups. Table 2 summarizes the number of subjects, sessions and treatments in detail. None of the subjects participated in more than one session.

Each subject sat at a randomly assigned and separated PC terminal and was given a copy of instructions.[4] A set of control questions ensured the understanding of the game. If any participant repeatedly failed to answer correctly, the experimenter provided an oral ex-

[4] A copy of translated instructions can be found in Appendix C.

planation. No form of communication was allowed during the experiment. We conducted all sessions at the LakeLab (University of Konstanz, Germany). The data were collected over nine sessions, with 219 participants in total. Participants received a show-up fee of two euros ($2.40 at that time). The experiment took about one hour and 15 minutes; average income (including the show-up fee) was about 14.40 euros ($17.30). The experiment was programmed and conducted using z-Tree (Fischbacher, 2007). We recruited participants using the online recruiting system ORSEE (Greiner, 2004). Participants were part of the LakeLab subject pool, including undergraduate and graduate students from all fields of study.

Treatment	# Subjects	# Sessions	# Matching Groups
Comprehensive reform and open ballot (OpenBallotCR)	63	3	5
Comprehensive reform and secret ballot (SecretBallotCR)	51	2	4
No Comprehensive reform and open ballot (OpenBallotNoCR)	51	2	3
No Comprehensive reform and secret ballot (SecretBallotNoCR)	54	2	3

Table 2: Treatments, sessions and matching-groups

3 Behavioral predictions

3.1 The sequential bill-by-bill voting procedure

Committees comprised of selfish members will vote down all bills in the sequential bill-by-bill voting procedure if commitment devices for vote trading are missing. This holds irrespective of whether the voting procedure is transparent or not. However, if legislators expect their counterparts to reward support (with a sufficiently high probability[5]) they will court reward by voting in favor of bills preceding their own bill on the sequential voting agenda. Assuming, first, that legislators are reciprocal and do not support bills preferred by legislators who voted down their own preferred bill, and, second, that legislators do not treat counterparts about whom they have the same behavioral information differently, the approval

[5] For a risk-neutral subject, the probability of reward p_r is sufficiently high if $p_r > 1/3$ because voting for another's bill costs two points whereas reward yields six additional points.

of the first bill is weakly more likely than the approval of the second and third bill (Proposition 1).[6] Assuming additionally that the legislator, who prefers the last bill on the agenda does not vote more frequently for the first bill than the legislator preferring the second bill, it follows that the approval of the second bill is weakly more likely than the approval of the third bill (Proposition 2).[7]

3.2 The comprehensive reform

Standard economic theory predicts that the committee will approve the efficient comprehensive reform because committees comprised of selfish members will vote down all bills in the alternative sequential bill-by-bill procedure. For resistance to reform to be caused by something other than decision errors, at least one legislator needs to expect another legislator to vote for her bill in the sequential bill-by-bill voting procedure. If legislators indeed expect reciprocal behavior by their counterparts with a sufficiently high probability (such that counterparts are willing to vote for bills preceding their own bill on the alternative sequential bill-by-bill agenda), it will be worthwhile to veto the comprehensive reform. As explained above, approval of the first bill is weakly more likely than approval of the second or third bill on the alternative agenda. In addition, the probability of a veto is (weakly) higher for legislators preferring the first bill than for legislators preferring the second or third bill on the agenda.

3.3 Transparency and reform failure

Standard economic theory predicts that the committee will approve the efficient comprehensive reform irrespective of transparency in the alternative bill by bill voting procedure. Similarly, if voting for another legislator's bill is expected to result from decision errors, approval will occur irrespective of transparency and so will resistance to reform. If

[6] The proof of this proposition can be found in appendix A.
[7] Proof of Proposition 2 can be found in appendix B. Note also that due to the random matching procedure, there is no incentive for individual reputation building across periods, which might induce any additional motives for supporting monetarily unfavorable reforms.

voting for another legislator's bill instead is expected to result from other legislators courting for rewards, and the probability of reward depends on transparency, resistance to reform will depend on transparency as well. We consider it as plausible to assume that because transparency allows subjects to observe individual voting behavior, subjects expect a higher probability of reward in the open ballot treatments. Consequently, we expect legislators to trust more in their counterparts, i.e., we expect votes for bills preceding one's preferred bill on the alternative bill-by-bill agenda to occur more frequently in the open ballot treatments, in which the bill-by-bill voting procedure is transparent. Resistance to the comprehensive reform is thus also more likely to occur in OpenBallotCR.

4 Results

To understand why some members may veto the comprehensive reform it is necessary to shed light on the behavioral pattern in the alternative bill-by-bill voting procedures. Therefore, we will first discuss the effects of transparency on voting behavior in the sequential bill-by-bill voting procedure and, second, present the results with respect to resistance to comprehensive reform.

4.1 Trust and reciprocity in the sequential bill-by-bill voting procedure

Committee members in our experiment frequently vote for monetarily unfavorable bills. Figure 1 illustrates acceptance rates of monetarily unfavorable reforms in the bill-by-bill voting procedure for OpenBallotCR and SecretBallotCR, after the failure of the comprehensive reform, as well as for treatments OpenBallotNoCR and SecretBallotNoCR, in which no comprehensive reform was available. Each column represents the share of members voting for a reform bill that is monetarily disadvantageous to them. In the open ballot treatments (OpenBallotCR and OpenBallotNoCR), the earlier a bill is voted on in the bill-by-bill procedure, the higher is the probability of its approval. For the first bill two committee members have an incentive to court for positive reciprocity toward members preferring the

bills second and third on the agenda. When voting on the second bill, the member in favor of the first bill has a strong monetary incentive to reject the second bill whereas the member preferring the third bill still has an incentive to vote for the second bill as long as she expects to be rewarded by the member preferring the second bill. Consequently, the actual approval rate for the second bill is clearly lower than for the first. The same logic applies to the third bill, which is clearly less frequently accepted than the first or second bill.

We observe 67% of members voting for the first bill in OpenBallotNoCR even though they incur a loss from the approval of this bill, and 40% for the second bill. In SecretBallotNoCR only 35% vote for the first bill and 22% for the second. The regressions in Table 3 show that transparency, i.e., information on individual voting behavior, increases the individual acceptance of the first reform significantly.[8] Transparency also increases the acceptance of the second bill statistically significantly in the NoCR treatments but insignificantly in the CR treatments. The acceptance of the third bill by members preferring earlier bills is not affected by transparency.[9] We summarize this finding in Result 1.

Result 1- Transparency increases the probability of acceptance of early bills (first and second) in the sequential bill-by-bill voting procedure.

In order to understand whether transparency increases reward, trust in others' reciprocity, or both, the further analysis focuses on those two motives across treatments. In the open ballot treatments, *reward* refers to a situation when a committee member recompenses her helping counterpart by accepting a bill favored by that member. In the secret ballot treatments, committee members cannot identify supporters. If one's preferred bill is passed, voting for an

[8] The number of observations in Table 3 is calculated as follows: In OpenBallotCR reform failure occurred in 158 out of 252 cases. In SecretBallotCR reform failure occurred in 97 out of 204 cases. Thus in total there exist 255 situations in the CR treatments in which two subjects can cast a vote for an unfavorable bill which yields (2*255)=510 observations. For the NoCR treatments the number of observations can be easily derived from the number of subjects (51+54=105). Two-thirds of 105 subjects make a decision in 12 periods which yields a total of 540 observations. Note further that we cluster on the matching groups in order to control for players' experience.

[9] In order not to crowd the table unnecessarily we do not here include the regressions results for the third bill.

unfavorable subsequent bill will refer to *reward* with respect to the group. In order to make *reward* in the open and closed ballot treatments comparable, we focus on the share of committee members who accept at least one subsequent bill, provided that their preferred bill is approved. With respect to trust in others' reciprocity, we draw conclusions from the acceptances of preceding but monetarily unfavorable bills. We understand trust as a behavior based on an optimistic belief, namely based on the belief of

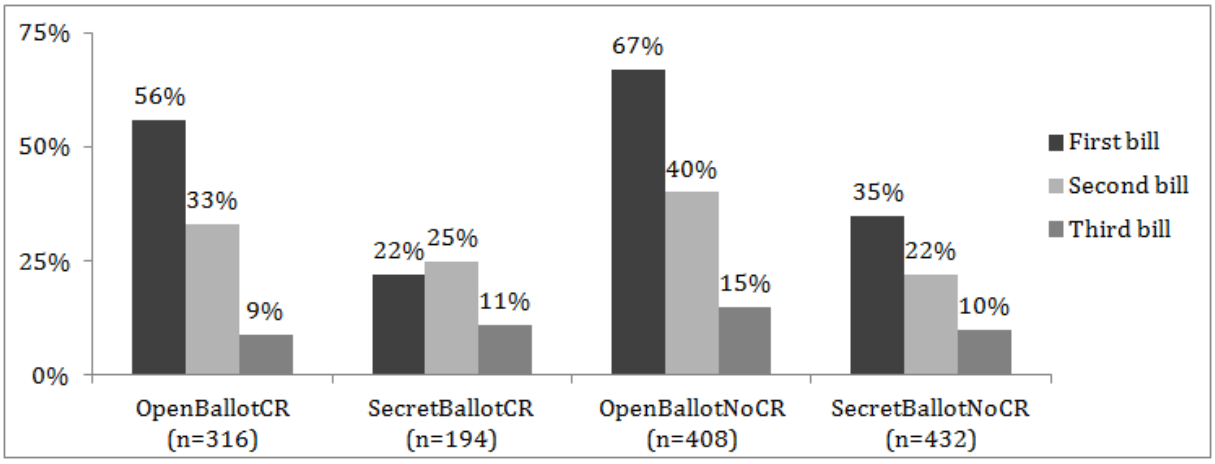


Figure 1: Share of members accepting monetarily unfavorable bills in NoCR and CR treatments (after reform failure)

Probit - marginal effects (robust std. errors)	**CR Treatments - after failure of CR**		**No CR Treatments**	
Dep.Var.: Acceptance of…	…first bill	…second bill	…first bill	…second bill
Period-1	-0.0250*	-0.0121	-0.00484	-0.00964
	(0.0134)	(0.0141)	(0.0106)	(0.00868)
Transparency	0.261***	0.116	0.281***	0.145***
	(0.0983)	(0.0752)	(0.0208)	(0.0423)
(Period-1) x Transparency	0.0185	-0.00434	0.00901	0.00743
	(0.0164)	(0.0165)	(0.0118)	(0.00967)
Pseudo R^2	0.0927	0.0163	0.0791	0.0347
Number of Observ.	510	510	840	840
Std.Err. adjusted for # clusters	9	9	6	6

Table 3: Transparency and the acceptance of monetarily unfavorable reforms,
*p-val.< 0.10, ** p-val.< 0.05, *** p-val.< 0.01;

reward by one's counterpart. We use the probability of the acceptance of at least one unfavorable preceding bill as a measure of trust. We are aware that efficiency concerns might also affect this probability because efficiency seekers will always vote for all bills. However, our data suggest efficiency concerns to be of minor importance. Only five percent of subjects vote for an unfavorable bill when their preferred bill failed.[10] Further efficiency concerns should not vary significantly across treatments and thus cannot explain treatment differences in the probability of the acceptance of at least one unfavorable preceding bill.

Table 4 summarizes the share of members rewarding (accepting at least one subsequent unfavorable bill after the approval of one's own bill) and trusting in others' reciprocity (accepting at least one preceding bill) for the four treatments. The share of members rewarding their counterparts is slightly higher in transparent than in secretive procedures. Twenty-five percent of members reward their counterparts in OpenBallotCR, 18% do so in SecretBallotCR, 30% do so in OpenBallotNoCR and 24% in SecretBallotNoCR. In open ballot treatments a substantially larger share of members trusts in others' reciprocity. In OpenBallotCR 66% of members accept preceding bills detrimental to their induced preferences; in SecretBallotCR only 37% do so. In OpenBallotNoCR this share amounts to 75% whereas in SecretBallotNoCR it is only 41%. Using Probit regressions controlling for the development of choices over time (Table 5) we find that transparency increases reward and trust. Further it becomes clear that the probability of reward decreases over time.[11] We summarize our finding in Result 2.

Result 2 - Transparency increases trust and reciprocity.

[10] This share has to be considered as a lower bound for efficiency concerns, because not accepting subsequent bills after one's own bill failed can be caused by negative reciprocity too.

[11] To control for possible end-game effects, we also ran the regressions in Table 5 including a last period dummy. For both, *reward* and trust, the last period dummy is negative, but statistically insignificant. The coefficient of transparency is robust. For *reward,* the time trend variable is still negative but statistically insignificant. The coefficient of the interaction term (Period-1) x Comprehensive Reform Treatment is robust.

Treatment	**Reward** Share of members accepting at least one subsequent unfavorable bill when own bill is approved	**Trust** Share of members accepting at least one preceding unfavorable bill
OpenBallotCR	0.25	0.66
SecretBallotCR	0.18	0.37
OpenBallotNoCR	0.30	0.75
SecretBallotNoCR	0.24	0.41

Table 4: Share of members rewarding / trusting

Probit **(robust std. errors)**	**Dependent Variable:** **Reward** (Probability of the acceptance of at least one unfavorable subsequent bill when own bill is approved)	**Dependent Variable:** **Trust** (Probability of the acceptance of at least one unfavorable preceding bill)
Comprehensive	-0.0743	0.0629
Reform Treatment	(0.170)	(0.164)
Transparency	**0.292****	**0.755*****
	(0.148)	(0.103)
(Period-1)	**-0.0317***	-0.00937
	(0.0183)	(0.0291)
Comprehensive	0.0647	-0.0823
Reform Treatment	(0.227)	(0.236)
x Transparency		
Comprehensive	**-0.0299***	-0.0352
Reform Treatment	(0.0155)	(0.0266)
x (Period-1)		
Transparency	-0.0129	0.0193
x (Period-1)	(0.0190)	(0.0279)
Constant	**-0.559*****	**-0.165*****
	(0.0368)	(0.0482)
Number of Observ.	814	1,350
Pseudo R^2	0.0220	0.0762
Prob>X^2	0.000	0.000
Std.Err. adjusted for # clusters	15	15

Table 5: Transparency, reward and trust in others' reciprocity
*p-val.< 0.10, ** p-val.< 0.05, *** p-val.< 0.01;

4.2 Resistance to reform

We are now ready to turn to our main research question, namely whether trust in others' reciprocity is sufficient to induce resistance to comprehensive reform. Result 1 makes clear that vetoing a comprehensive reform is most attractive for members preferring the first bill on

the alternative agenda when the alternative bill-by-bill procedure is an open ballot. We observe that committee members who prefer the first bill on the alternative agenda veto the comprehensive reform in 47% of cases in OpenBallotCR and 25% in SecretBallotCR. Members in favor of later bills on the alternative agenda do so in about 16% of cases in OpenBallotCR and 20% in SecretBallotCR,[12] resulting in comprehensive reform failure in 64% of cases in OpenBallotCR and 48% in SecretBallotCR.[13] The regression results in Table 6 make clear that members preferring the first bill on the alternative agenda expect profitable vote trades to be possible when the sequential alternative procedure is transparent, and thus impede the comprehensive reform. Members preferring later bills mainly opt for the comprehensive reform and are not affected by the transparency of the alternative voting procedure. We summarize this finding in Result 3.

Result 3 – Legislators impede comprehensive reforms when they anticipate profitable vote trading possibilities on the basis of trust and reciprocity.

Using actual probabilities, the expected payoff terms from blocking the comprehensive reform for a member preferring the first bill amounts to 7.5 points in OpenBallotCR, whereas the acceptance of the package yields only 6 points. Thus, vetoing behavior by members preferring the first bill is profitable in the open ballot procedure (OpenBallotCR). The expected payoff terms from resistance to comprehensive reform in the secret ballot treatment (SecretBallotCR) is 5.96, which is slightly lower than the payoff of 6 points for comprehensive reform. Thus, impeding the comprehensive reform in the secret ballot treatment does not pay off for members preferring the first bill. The same holds for members preferring later bills on the agenda. The expected payoffs terms from vetoing the package for members preferring the second bill (third bill) are 5.37 (2.27) in OpenBallotCR

[12] The latter difference is not statistically significant (Probit with robust standard. errors, p-val.> 0.10).
[13] The latter difference is statistically significant (Probit with robust standard. errors, p-val.< 0.10).

and 4.89 (3.11) in SecretBallotCR, i.e., these members have no monetary incentive to impede the comprehensive reform. Why do members preferring the first bill succeed in vote trading after they block the comprehensive reform? First note that in expected terms it is not worthwhile for the second beneficiary to support the first bill. However the expected payoff from voting for the first bill (for the member preferring the second bill) is only 0.08 points lower than the expected payoff from voting against the first bill. By supporting the first bill, a member preferring the second bill loses two points with certainty but receives a reward of six points by the member preferring the first bill with a probability of 35%. Without supporting the first bill she receives no support from the member preferring the first bill. Additionally, voting for the first bill increases the probability of support for the second bill by the third beneficiary from 36% to 48%.[14] Due to the small differences in expected payoffs, it is difficult for second beneficiaries to judge whether they gain or lose from voting for the first bill. Also, second beneficiaries may perceive voting for the first bill to be a "gamble" in which errors are not very costly.

Figure 2 indicates that members preferring the first bill on the alternative agenda change their behavior over time. In open ballot treatments resistance to reform increases from about 20% in early periods to about 70% in late periods. The regression in Table 7 confirms that members preferring the first bill on the agenda learn to block the comprehensive reform when facing a transparent voting procedure whereas resistance to reform remains constant in the secret ballot treatment.

Result 4 - Legislators whose favorable bill is first on the alternative bill-by-bill agenda learn that resistance to comprehensive reforms pays off

[14] We cannot infer whether the latter increase is due to positive signaling or because members preferring the third bill expect the second bill to be passed anyway and therefore have nothing to lose by voting for the second bill.

Probit - Marginal effects (robust standard errors)	**Dependent Variable: Probability to vote against Comprehensive Reform**		
	Member preferring first bill	Member preferring second bill	Member preferring third bill
Transparency	0.247***	-0.00980	-0.0472
	(0.0639)	(0.0679)	(0.0700)
Pseudo R^2	0.0512	0.000110	0.00987
Prob>X^2	0.0001	0.89	0.47
Number of Observ.	456	456	456
Std.Err. adjusted for # clusters	9	9	9

Table 6: Transparency and resistance to reform
*p-val.< 0.10, ** p-val.< 0.05, *** p-val.< 0.01

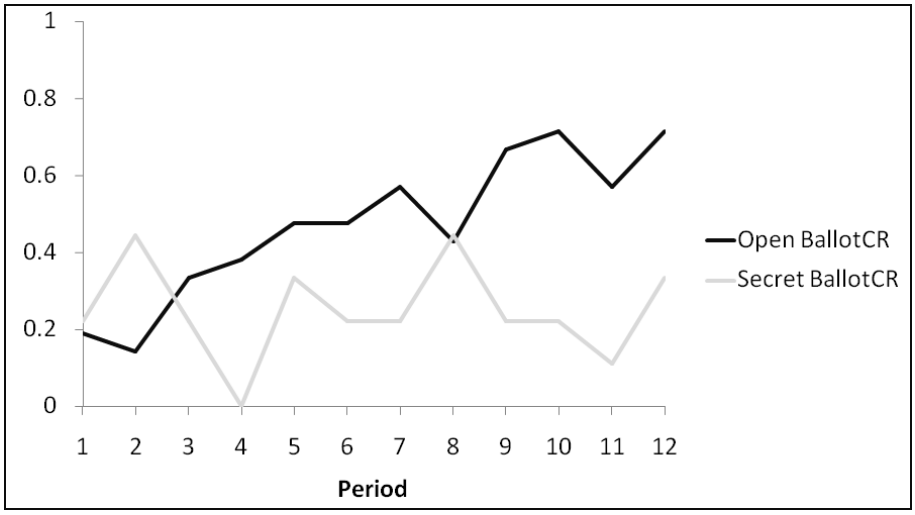


Figure 2: Resistance to reform by members preferring the first bill, over time (N=114)

Although we did not display individual voting decisions for the comprehensive reform, one may expect negative reciprocity (or a loss in trust) towards those legislators who had the strongest incentive to block the comprehensive reform. Indeed, participants seemed to be aware that in the open ballot treatment (OpenBallotCR) the beneficiaries of the first bill on the agenda were most likely to impede the comprehensive reform. As Figure 1 indicates, the support for the first bill by members preferring the second or third bill is significantly stronger in the NoCR treatments than in the CR treatments after comprehensive reform failure.[15] When the comprehensive reform failed, members in favor of the comprehensive

[15] Probit regressions with robust standard errors, p-values < 0.06.

reform voted less frequently for the first bill whereas they voted more frequently for the second and third bills (see Table 8). Negative reciprocity (or a loss in trust) towards the member preferring the first bill did not increase over time and its quantitative effect on actual approval rates was small. Thus, beneficiaries of the first bill on the agenda still had an incentive to impede the comprehensive reform.

Finally, we turn to the question of whether the failure of the comprehensive reform causes a general loss in trust and reciprocity among committee members. To do so, we compare the

Probit (robust standard errors)	**Dependent Variable: Probability to vote against Comprehensive Reform**		
	Member preferring first bill	Member preferring second bill	Member preferring third bill
Constant	**-0.800*** **	**-0.698*** **	**-1.234*** **
	(0.132)	(0.117)	(0.418)
Transparency	0.0216	-0.236	-0.123
	(0.356)	(0.159)	(0.503)
Period	0.00841	0.00974	0.0128
	(0.00767)	(0.00646)	(0.0379)
Transparency x Period	**0.119*** **	0.0359	-0.0277
	(0.0342)	(0.0255)	(0.0432)
Pseudo R^2	0.0991	0.00668	0.0111
Prob>X^2	0.00	0.1089	0.6428
Number of Observ.	456	456	456
Std.Err. adjusted for # clusters	9	9	9

Table 7: Transparency and resistance to reform over time
*p-val.< 0.10, ** p-val.< 0.05, *** p-val.< 0.01

Probit (robust standard. errors)	**Vote for first Bill**	**Vote for second Bill**	**Vote for third Bill**
Constant	0.55*** (0.170)	-0.83*** (0.184)	-1.60*** (0.105)
Vote for CR	-0.51** (0.237)	0.66*** (0.197)	0.53*** (0.202)
Pseudo R^2	0.02	0.05	0.04
Number of Observ.	316	316	316
Robust Std.Err. adjusted for # clusters	5	5	5

Table 8: Discrimination after comprehensive reform failure (OpenBallotCR)
Dep. Variables: Acceptance of monetarily unfavorable bills (first, second or third bill)
*p-val.< 0.10, ** p-val.< 0.05, *** p-val.< 0.01

share of members trusting/reciprocating in the treatments with the possibility of voting on a comprehensive reform with treatments in which no comprehensive reform is available. Table 4 illustrates that after the failure of comprehensive reform 25% of members rewarded others' support in OpenBallotCR and 18% did so in SecretBallotCR, whereas these shares amount to 31% in OpenBallotNoCR and 24% in SecretBallotNoCR. With respect to trust in others' reciprocity we observe 66% of members voting for at least one preceding bill in OpenBallotCR and 37% in SecretBallotCR after the comprehensive reform failed, whereas these shares amount to 75% in OpenBallotNoCR and 41% in SecretBallotNoCR when no comprehensive reform was available. The regressions in Table 9 provide further insights into how comprehensive reform failure affects trust and reciprocity. It becomes clear that comprehensive reform failure mainly accelerates the decline in the probability of rewarding others over time whereas trust is not statistically significantly affected.[16]

Probit (robust standard errors)	**Dependent Variable: Reward**		**Dependent Variable: Trust**	
	Open Ballot	Secret Ballot	Open Ballot	Secret Ballot
Constant	**-0.274***	**-0.549*****	**0.627*****	**-0.196*****
	(0.149)	(0.00386)	(0.0293)	(0.0116)
Reform Failure	0.00983	-0.116	-0.109	0.171
	(0.187)	(0.245)	(0.183)	(0.188)
Period-1	**-0.0433*****	-0.0338	0.00315	-0.00374
	(0.0105)	(0.0229)	(0.0135)	(0.0335)
Reform Failure x (Period-1)	**-0.0335****	-0.0208	-0.0199	-0.0552
	(0.0169)	(0.0373)	(0.0290)	(0.0488)
Pseudo R^2	0.0211	0.0125	0.00675	0.00683
Prob>X^2	0.000	0.000	0.3485	0.2372
Number of Observ.	532	282	724	626
Std.Err. adjusted for # clusters	8	7	8	7

Table 9: The Impact of Failure of Comprehensive Reform on Trust and Reciprocity
*p-val.< 0.10, ** p-val.< 0.05, *** p-val.< 0.01

[16] To control for possible end-game effects, we also ran the regressions in Table 9 including a last period dummy. For *reward* (Open and Secret Ballot) and trust (Secret Ballot), the regression results are robust and the last period dummy is statistically insignificant. For trust in Open Ballot, the last period dummy is negative and statistically significant at the ten percent level.

5 Conclusion

We showed in a laboratory experiment that the expectation of profitable vote trades can lead to resistance to comprehensive reform. According to standard economic theory, vote trading in our experiment is impossible because commitment devices for vote trading are missing. Consequently, resistance to comprehensive reform should not occur. Nevertheless we observe resistance to the comprehensive reform. Comprehensive reform failure materializes because legislators expect profitable vote trades even with an imperfect device for vote trading, namely a transparent sequential bill-by-bill voting procedure. The transparent voting procedure allows legislators to observe individual votes and, in turn, legislators court positive reciprocity. Because legislators expect others to trust in their reciprocity, they impede efficient comprehensive reforms and trade votes after comprehensive reform failure. Minimum winning coalitions, which trade votes at the expense of third parties, eventually emerge.

Trust in others' reciprocity abates substantially when individual voting behavior is not observable. In turn, vote trading becomes difficult and resistance to comprehensive reform subsides. We do not claim secretive procedures can solve the reform deadlock in real world policy making. Instead, we take our results as a warning that resistance to comprehensive reform can stem from any source that facilitates vote trades or secret agreements.

The importance of trust and reciprocity for resistance to reform might be smaller with asymmetric payoffs, private knowledge about preferences over bills and a larger number of decision makers. However, the importance of trust and reciprocity might also be larger, because, in contrast to real world voting decisions, legislators could communicate directly to agree on a vote trade. Also, the small size of the voting body does not have to be interpreted as a small number of legislators in general. In representative democracies, usually only a small number of political parties exist. If party members toe strictly to their party's line,

decisions will eventually be made by a small number of groups. Resistance to reform may then result from parties (instead of individual legislators) strategically vetoing comprehensive reforms.

In light of the points raised above we consider our work a first step in studying the importance of trust and reciprocity in sequential committee decision making. Our contribution is mainly to provide a novel experimental design which can be easily adjusted to explore several aspects of political decision making. For instance our setup makes it possible to study the effects of direct communication of legislators, which may on the one hand strengthen trust and reciprocity and thus increase resistance to reform. On the other hand, communication may reduce resistance to reform since it allows for the expression of emotions (Xiao and Houser 2005). Further, our design may be adapted to investigate the effects of asymmetric payoffs, provide new insights into how trust and reciprocity may affect the power of a committee chairman (Fischbacher and Schudy 2013) or demonstrate how a voting system in which elected representatives have to decide sequentially on a series of bills may affect trust and reciprocity among decision makers.[17] The latter environment could also allow for cheap talk promises to the electorate and thereby contribute to the discussion on promise keeping and guilt aversion of elected representatives.[18]

Our results underline the importance of trust and reciprocity when designing political institutions. We find that changing one institutional factor, namely the transparency of the voting procedure, affects trust and reciprocity among legislators and in turn affects welfare. Typically trust and reciprocity are associated with positive welfare effects, for instance in

[17] We thank an anonymous referee for pointing this out.

[18] See, for instance, Geng et al. (2011), who investigate how two different types of electoral campaigns (self-descriptions of personality and promises regarding prospective in-office behavior) affect choices by elected representatives. The authors find supporting evidence for the guilt aversion hypothesis (Charness and Dufwenberg 2006). When elections were promise-based elected candidates transferred more money to recipients than candidates selected by a random draw (although promises did not differ). Also, promises and beliefs on voter expectations were positively correlated but correlations between dictators' second-order beliefs and their choices were weaker than predicted. Further, results from Weiss and Wolff (2013) cast doubt on the robustness of the finding that a voting mechanism may create or strengthen an entitlement effect in political-power holders.

trust games or public goods games. However, it is not uncommon that trust and reciprocity can lower social welfare. For instance, trust and reciprocity may facilitate collusion in oligopolies or within group cooperation in rent seeking contests between groups (in which within-group cooperation increases the amount of wasted resources).[19] In a similar way, trust and reciprocity foster coordination and, in turn, cooperation against others in our voting experiment. Trust and reciprocity increased total payoffs as long as the possibility for a comprehensive reform was missing. If instead a comprehensive reform were available, trust and reciprocity would lead to resistance to the comprehensive reform and thus to lower total payoffs.

[19] See, e.g., Leibbrandt and Sääksvuori (2012).

Acknowledgements

We would like to thank two anonymous referees as well as Katharine Bendrick, Lisa Bruttel, Gerald Eisenkopf, Franziska Heusi, Sabrina Teyssier, Verena Utikal, Irenaeus Wolff and participants of the ESA European Meeting 2009, the GfeW Meeting 2009, the annual meeting of the Verein für Socialpolitik 2011 and the Thurgau Experimental Economics Meeting 2012 for helpful thoughts and comments.

Appendix A: Proof of Proposition 1

With the following two assumptions, we derive Proposition 1:

(i) Legislators are reciprocal and do not support bills of legislators who turned down their own bill

(ii) Legislators do not discriminate against particular counterparts, i.e., they treat agents differently only when they have different information about their behavior

Proposition 1 - The approval of the second bill and the approval of the third bill are not more likely than the approval of the first bill

Proof. If the first bill is not accepted then both the second and the third beneficiary have turned down the first bill. According to (i) the first beneficiary will not vote for any subsequent bill. Further, because of (ii), the third beneficiary will also vote against the second bill. Finally, the third bill also will be turned down because the third beneficiary did not support any preceding bill. Thus, it is not possible that the second or the third bill is approved more frequently than the first bill. | |

Appendix B: Proof of Proposition 2

Assuming (i), (ii) and

(iii) Subjects in the role of the third beneficiary do not vote more frequently for the first bill than subjects in the role of the second beneficiary,

we derive proposition 2.

Proposition 2 – The approval of the third bill is not more likely than the approval of the second bill.

Proof. We first prove the proposition for voting with partial information. Let us start with the case in which the first bill fails. As we have seen in the proof for proposition 2.1, both the second and the third bills will be turned down in this case. We now turn to the case in which the first bill is approved. From (ii), the first beneficiary either votes for both or none of the subsequent bills. If she accepts both bills, both the second and third bills are approved.

If she votes against the second and third bills, the second bill can fail only if the third beneficiary votes against it. However, in this case the third bill will also receive no support by the second beneficiary (due to (i)) and likewise will fail.

Let us now turn to the full information case. So far, we have shown that when a bill fails, the subsequent bills fail as well. This is not necessarily true in the full information condition. Here it is possible that the third beneficiary supports only the first beneficiary and receives reward from the first beneficiary whereas the second beneficiary does not support the first bill and receives support neither from the first beneficiary (due to (i)) nor from the third beneficiary because the third beneficiary knows that the second beneficiary turned down the first bill. Hence it is in general possible to observe the committee passing only the first and the third bills. We will now show that it is nevertheless not possible that the third bill is on average approved more frequently than the second due to (iii). Consider two different matching protocols: In matching 1, participant A is the first beneficiary, participant B is the second and participant C is the third beneficiary. Thus participant A received support from participant C and therefore also voted for participant C's bill. In matching 2 instead the participants are matched differently so that participant A is still the first beneficiary, but participant C is now second beneficiary and participant B is now the third beneficiary. This means that participant A received support from participant C, who is now second beneficiary, and participant B, who is now third beneficiary, does not vote for the first bill, and due to (i) and (ii) does not receive any support. Thus with random matching we can conclude that on average the third bill cannot be approved more frequently than the second bill. ||

Appendix C: Instructions (translated from German)

We present a full translation of the instructions for the OpenBallotCR. Instructions for OpenBallotNoCR are identical, except for the decision on the comprehensive reform, which is missing there. In the treatments with a secret ballot we modified the instructions at the relevant parts. We indicate these modifications after the translated instructions for OpenBallotCR. The general information is identical in all treatments.

General information (Participant A)

Today you take part in an economic decision making experiment. If you read the following instructions carefully, you will be able to earn money additionally to your show-up fee of 2 Euro. Therefore it is important that you read the instructions completely.

For the entire duration of the experiment, communication with other participants is not allowed. We therefore ask you not to talk to each other. If you have problems understanding the experiment, please have a second look at the instructions. If you still have questions, please raise your hand. We will come to your cubicle and answer your questions personally. During the experiment, we do not talk about euro, we talk about points. The numbers of points you earn in the experiment are converted into euro with the following exchange rate.

1 Point = € 0,20

At the end of the experiment, you will receive the 2 euro show-up fee plus the equivalent of all points received in the experiment in cash. The following pages will explain the experiment in detail. At the end of the instructions we have added some control questions to help you understand the sequence of events. The experiment does not start until all participants have solved the control questions and are completely familiar with the procedure of the experiment.

Summary

This experiment has 12 periods. In each period you will form a group with two randomly determined participants. At the beginning of a period each participant receives 4 points. Then you and the other two members of the group decide on three different bills. The bills affect the points of each group member. A period ends when the group has made a decision on all three bills. Then, a new period starts. You form a new group with two randomly chosen participants. You decide on three bills in all 12 Periods. After the final period you will see a summary table on screen showing your points earned in each period.

At the end of the experiment you receive the 2 euro show-up fee plus the euro equivalent of points earned in cash.

The Experiment

In this experiment we speak of three different participants, Participant A, B and C. **You are a Participant A.** In each period you form a group of three members with a randomly chosen Participant B and a randomly chosen Participant C. At the beginning of each period each participant receives 4 points. There are three bills to be voted on in each period. We label them Bill A, B and C, respectively. First the group chooses whether all three bills shall be accepted simultaneously or not.

If all members of the group decide to vote on the acceptance of all three bills, the vote on this package of bills takes place. Each member votes (simultaneously) for or against the acceptance of all three bills. If a majority of the group (at least two members) votes for the acceptance of all three bills, the bills are accepted.

If the group does not unanimously agree on voting on all three bills at once, the group decides sequentially on the three bills. If a majority (at least two members of the group) accepts a bill, it is passed.

The bills in detail: Each of the three bills yields 6 additional points for one group member but subtracts two points from each of the other two members.

Bill A: Participant A receives 6 additional points, 2 points are subtracted from Participant B and C (each).

Bill B: Participant B receives 6 additional points, 2 points are subtracted from Participant A and C (each).

Bill C: Participant C receives 6 additional points, 2 points are subtracted from Participant A and B (each).

Each bill can be accepted or rejected by the group. Thus it is possible that more than one bill is accepted or rejected. The order in which the bills are voted on is determined randomly. The six possible sequences are:

Sequence	**1st Bill**	**2nd Bill**	**3rd Bill**
1	Bill A	Bill B	Bill C
2	Bill A	Bill C	Bill B
3	Bill B	Bill A	Bill C
4	Bill B	Bill C	Bill A
5	Bill C	Bill A	Bill B
6	Bill C	Bill B	Bill A

At the beginning of each period, namely before the decision on the first bill, the sequence of bills is displayed on your computer screen.

Procedures are the following:

Step 1 – Decision on the voting procedure

Participants of each group see the three bills and the possible sequence, given the group decides for the sequential procedure.

Each participant states in Step 1 if she is for or against voting on all bills at once. If all participants of a group decide to vote on all bills at once **Step 2a comes next**, otherwise **Step 2b** follows.

Step 2a – Simultaneous Procedure (only if all members of the group agreed on voting on the three bills at once)

Each participant of the group states if she is for or against accepting all bills at once. **Step 3** follows.

Step 2b – Sequential Procedure (only if at least one member of the group disagreed on voting on the three bills at once in Step 1)

In this step, you see the bill put to vote. You state whether you are for or against this bill. **Step 2c** follows.

Step 2c – Outcome of the vote on a single bill (only if at least one member of the group disagreed on voting on the three bills at once in Step 1)

After all participants of a group made their choice, the result of the current vote will be displayed on the computer screen. A bill is accepted if a majority of the group voted for the bill, i.e., if two or three group members voted for the bill.

In this step you can also see which participant of your group decided for/against the current bill.

The decision on the next bill follows. This means you see the next bill put for vote and decide on this bill (see Step 2b). Then, you see the outcome of this vote (see Step 2c).

Then you decide on the third bill and see the result of the group decision.

Step 3 – Result

After voting on the three bills, a summary table is presented on your computer screen. It shows which bills passed or failed in this period. Also, it displays the number of points earned.

After Step 3 you are again randomly matched with two participants and form a new group.

When the new period starts, no participant receives any information on your voting behavior from previous periods. Also, you do not receive any information on the voting behavior from previous periods of the new group's participants. Neither before nor after the experiment will you receive any information about your counterparts' identities. The randomly selected participants who interact with you also do not receive any information on your identity.

Payment

At the end of the experiment you receive the 2 euro show-up fee plus the euro equivalent of points earned in cash.

We now present an example which will help you to understand the course of the experiment on screen in more detail. At the end of this example you will find some control questions. Please write down your answers to these questions. **Your answers to these questions will not affect the amount of money you will receive at the end of the experiment.**

Course of the experiment on the computer screen– an example

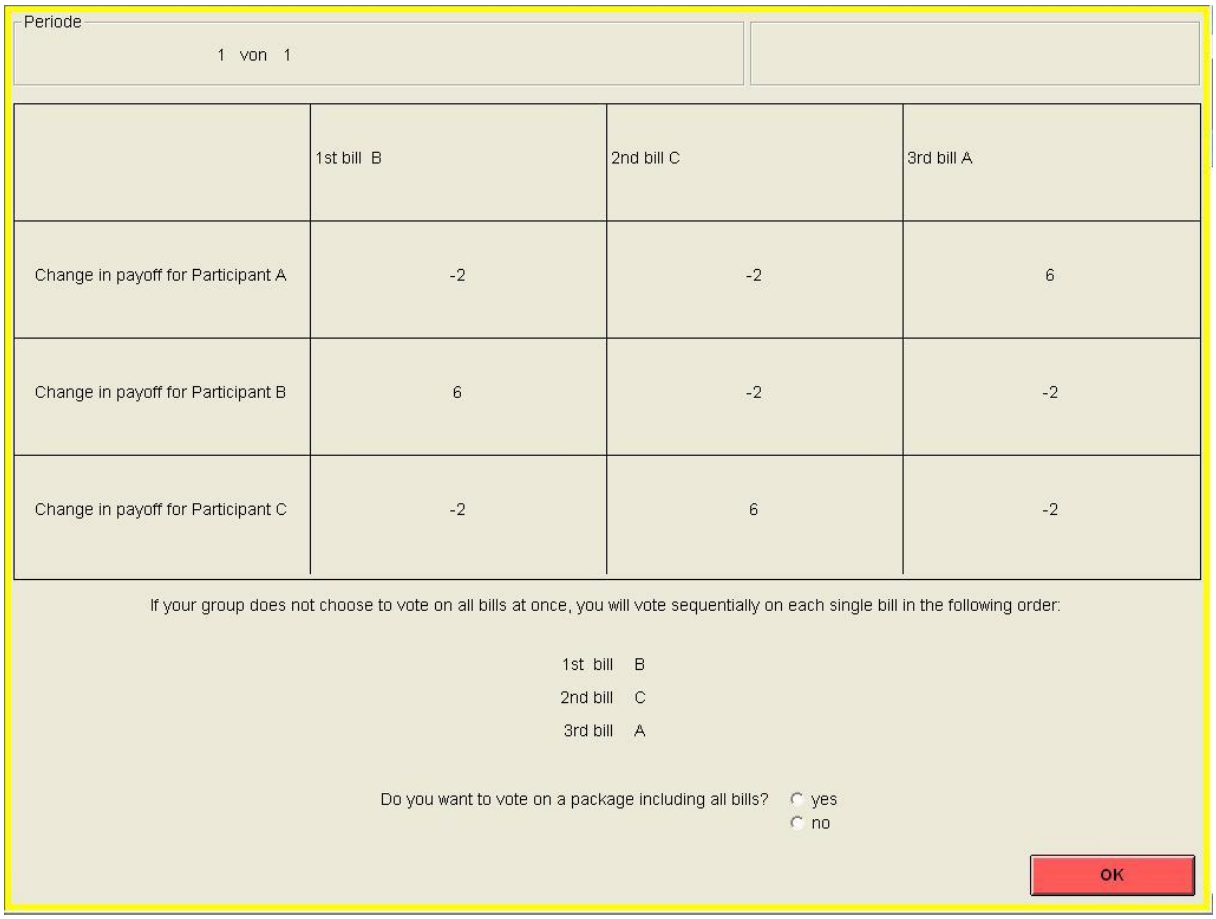
Step 1 – Decision on the voting procedure

All group participants see the three bills and the randomly selected order in which they will be voted on in case of a sequential voting procedure.

Each participant decides in this step whether she is for or against voting on the three bills at once.

If all participants of a group decide for voting on the three bills at once **Step 2a** will follow, otherwise continue with **Step 2b**.

A screenshot of Step1 (in this example):



The first line in the table shows the randomly selected order of bills (in this example: 1st Bill B, 2nd Bill C and 3rd Bill A).

Below we present how each bill will change each participant's number of points if a majority accepts this bill.

In this example:

1st Bill B: Participant B receives 6 additional points, 2 points are subtracted from Participants A and C.

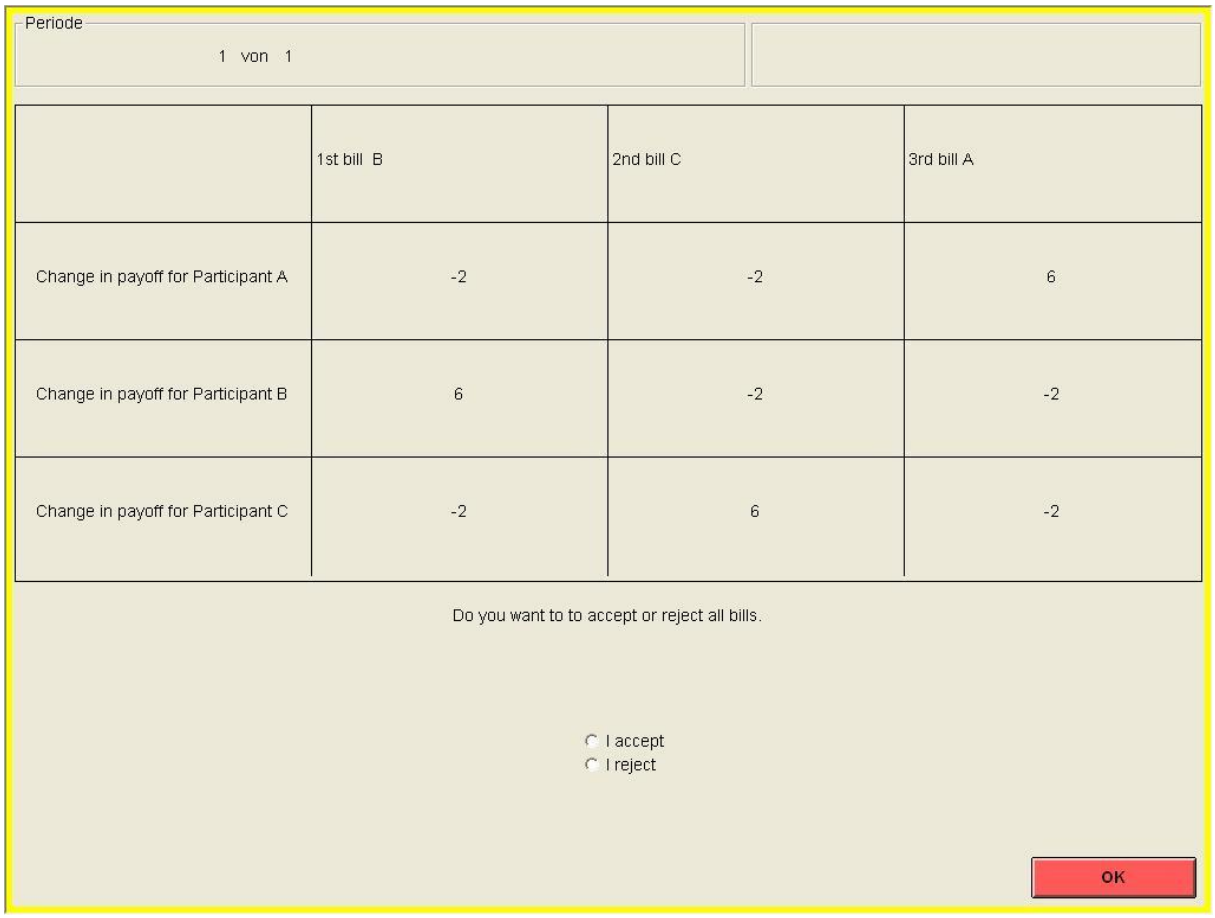
2nd Bill C: Participant C receives 6 additional points, 2 points are subtracted from Participants A and B.

3rd Bill A: Participant A receives 6 additional points, 2 points are subtracted from Participants B and C.

If a bill is not accepted by a majority, it does not affect the points of any participant.

Step 2a – Simultaneous voting Procedure

We now look at the case in which all participants of a group decided to vote on the three bills at once. Then the participants see the following screen:



Each Participant of the group now chooses to accept or reject all bills at once.

If a majority, at least 2 participants of the group, decides to accept all bills at once, all three bills are accepted. If a majority votes against all three bills, the bills are rejected. **Step 3** follows.

Step 2b – Sequential procedure

Now we look at the case in which at least one participant of a group decided not to agree on voting on the three bills at once. This means, bills are now voted on sequentially, in the previously displayed order. In our example, first Bill B, then Bill C and finally Bill A:


Periode

1 von 1

	1st bill B	2nd bill C	3rd bill A
Change in payoff for Participant A	-2	-2	6
Change in payoff for Participant B	6	-2	-2
Change in payoff for Participant C	-2	6	-2
Decision by participant A			
Decision by participant B			
Decision by participant C			
Outcome of the vote			

The first bill to be voted on is: Bill B

Please vote now on the first bill: ○ accept ○ reject

OK

You decide whether to accept/reject the current bill and click the „OK"-Button. After all participants of the group have made their decision, the voting result is displayed.

Let us assume that, in our example, Participant B accepted the 1st bill, you (Participant A) and Participant C, however, rejected the 1st bill. The intermediate result (Step 2c) is displayed on your computer screen:

Step 2c – Outcome of the vote on a single bill


Periode

1 von 1

Result for 1st bill (Bill B)

	1st bill B	2nd bill C	3rd bill A
Change in payoff for Participant A	-2	-2	6
Change in payoff for Participant B	6	-2	-2
Change in payoff for Participant C	-2	6	-2
Decision by participant A	no		
Decision by participant B	yes		
Decision by participant C	no		
Outcome of the vote	rejected		

weiter

The table again shows the order in which the bills are voted on, and who voted for or against a bill. In the last line you see whether a bill was accepted or rejected by the majority of the group. In our example a majority (you and Participant C) voted against the first bill. Thus in this example the table shows that the 1st bill was rejected by a majority. Consequently, the points of all participants in your group are not affected. By clicking on the "continue" button you will come to the next decision.

Now voting on the second bill begins. Then you see the result of the group's decision on screen. Let's assume a majority of the group accepted the second bill.

Then voting on the third bill starts. You see the third bill and decide for or against it. Let's assume for our example that again a majority accepted the third bill.

We continue with **Step 3**.

Step 3 – Result

At the end of a period and independent from the voting procedure chosen by your group, you will see a summary table showing points received by you and your group members.

In the following we explain how the points received in the period of our example are calculated.

In case of voting on the three bills at once, (continued from **Step 2a**) there are two possible outcomes:

The majority accepts all bills at once.

This yields for each participant of the group:

4 points (endowment)

+6 points (by the one bill in favor of the participant)

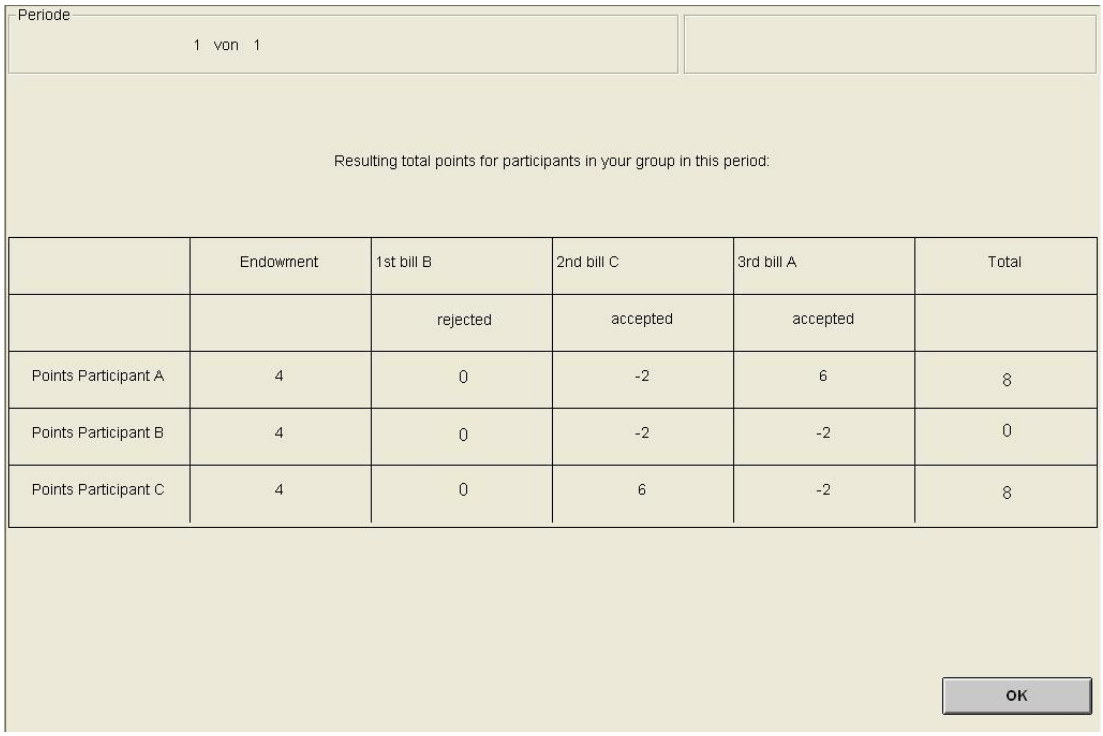
-4 points (by the two bills in favor of the other two group members)

= 6 points

All bills were rejected at once.

This yields 4 points for each participant (the endowment)

Given the group decided for the sequential procedure, (continued from **Step 2c**) points received at the end of a period are calculated as follows:



	Endowment	1st bill B	2nd bill C	3rd bill A	Total
		rejected	accepted	accepted	
Points Participant A	4	0	-2	6	8
Points Participant B	4	0	-2	-2	0
Points Participant C	4	0	6	-2	8

The table displays again the order in which bills where voted on. Additionally you see in the second line whether a bill was accepted or rejected by the majority of the group. In our example the first bill was rejected, whereas the other two bills were accepted. Endowment is 4 points.

The first bill did not affect the points received by participants in this group, because it was rejected. The second bill was accepted and yields Participant C six additional points, whereas 2 points are subtracted from Participant A and B each. The third bill was accepted too in our example. It yields six additional points for Participant A, and subtracts two points from each of the other two participants.

Points received at the end of the period by each participant are calculated as follows:

Points Participant A = 4 + 0 - 2 + 6 = 8

Points Participant B = 4 +0 - 2 -2 = 0

Points Participant C = 4 + 0 + 6 – 2 = 8

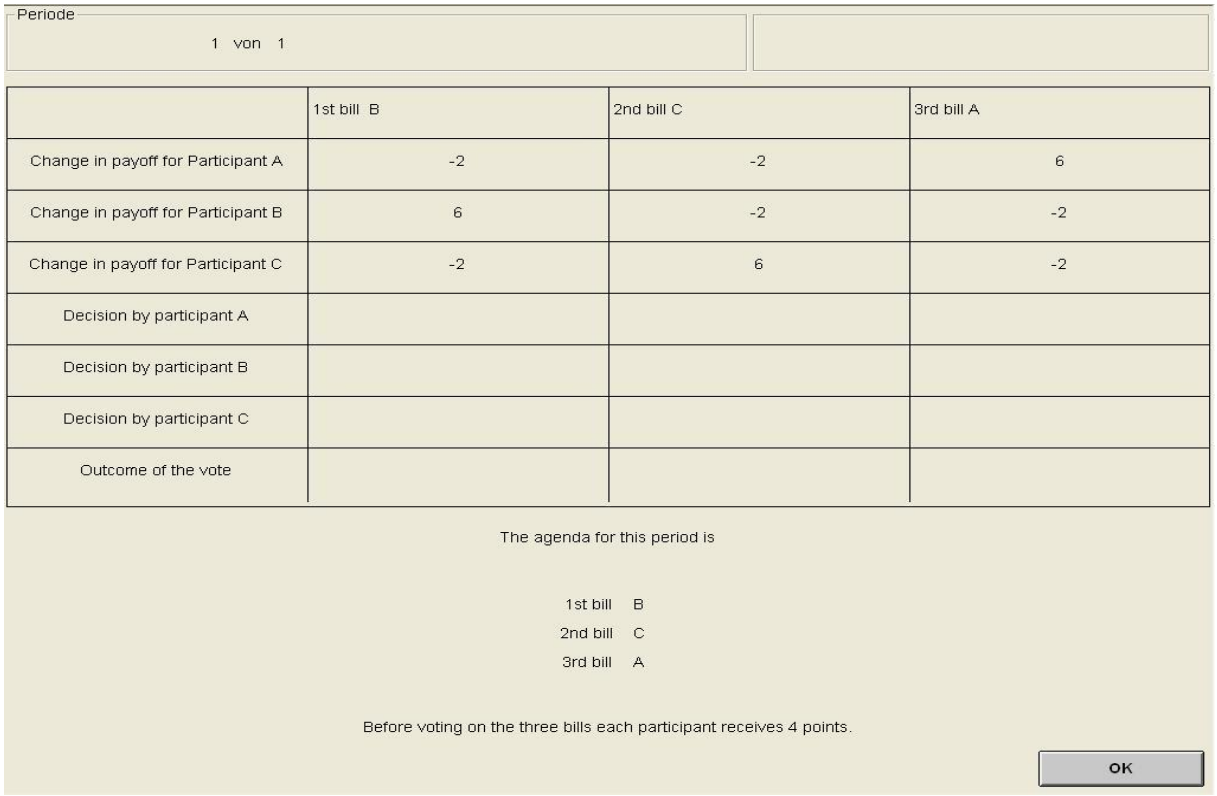
After clicking the “OK”– Button, you are randomly matched into a new group.

Control questions

Please read the new example on this page and answer the control questions.

Your answers to these questions will not affect the amount of money you will receive at the end of the experiment.

Example:



Periode

1 von 1

	1st bill B	2nd bill C	3rd bill A
Change in payoff for Participant A	-2	-2	6
Change in payoff for Participant B	6	-2	-2
Change in payoff for Participant C	-2	6	-2
Decision by participant A			
Decision by participant B			
Decision by participant C			
Outcome of the vote			

The agenda for this period is

1st bill B
2nd bill C
3rd bill A

Before voting on the three bills each participant receives 4 points.

OK

Assume that at least one participant of the group decided against voting all at once on the three bills.
Assume further…
You accept the 1st and 3rd bill.
Participant B accepts the 1st and 3rd bill.
Participant C accepts the 1st and 2nd bill

Which bills are accepted by a majority of the group? _____
How many points do you receive in this period? _____
How many points does Participant B receive in this period? _____
How many points does Participant C receive in this period?

_____

□True or □False: If two of three group members decide for voting on the three bills at once, the group will decide on the three bills at once.

[Change of instructions for Treatments SecretBallotCR OpenBallotNoCR and Secret NoCR]

The Experiment

In this experiment we speak of three different participants. Participant A, B and C. **You are a Participant A.** In each period you form a group of three members with a randomly chosen Participant B and a randomly chosen Participant C.

At the beginning of each period each participant receives 4 points.

There are three bills to be voted on in each period and group. We label them Bill A, Bill B and C respectively. Each group chooses whether to pass or fail each bill sequentially. If a majority (at least two members of the group) accepts a bill, it is passed. The order of bills is random.

The bills in detail: … **[See instructions for OpenBallotCR]**

Procedures are the following…

Step 1 – Determination of the agenda
A random process determines the order of the bills.

Step 2 Agenda display
Participants can see the current order of bills on their computer screens. Step 3 follows...

Step 3 – Sequential Procedure
In this step you see which bill is currently voted on. You decide if you accept or reject the bill.

Step 4 – Result
After all participants of a group have made their choice, the result of the current vote will be displayed on the computer screen. A bill is accepted if a majority of the group voted for the bill, i.e., if two or three group members voted for the bill.
[Only the open ballot treatments OpenBallotCR and OpenBallotNoCR:] In this step you can also see which participant of your group decided for/against the current bill

After voting on the three bills, a summary table is presented on your computer screen. It shows which bills passed or failed in this period. Also, it displays the number of points earned. After Step 4 you are again randomly matched with two participants and form a new group.

References

Alesina, A. & Drazen, A. (1991). Why are stabilizations delayed? *American Economic Review* (81), 1170-1188.

Berg, J., Dickhaut, J. & McCabe, K. (1995). Trust, reciprocity, and social history. *Games and Economic Behavior* (10), 122-142.

Bolton, G. E. & Ockenfels, A. (2000). ERC: a theory of equity, reciprocity, and competition. *American Economic Review* (90), 166-193.

Brams, S. J. & Riker, W. H. (1973). The paradox of vote trading. *The American Political Science Review* (67), 1235-1247.

Buchanan, J. M. & Tullock, G. (1962). *The calculus of consent*. Univ of Michigan Pr.

Cason, T. N. & Mui, V. L. (2003). Testing political economy models of reform in the Laboratory. *American Economic Review* (93), 208-212.

Casella, A. (2005). Storable votes. *Games and Economic Behavior*, 51(2), 391-419.

Charness, G., Dufwenberg, M. (2006). Promises and partnership. *Econometrica* (74), 1579-1601.

Charness, G. & Rabin, M. (2002). Understanding social preferences with simple tests. *Quarterly Journal of Economics* (117), 817-869.

Cox, J. C., Friedman, D. & Gjerstad, S. (2007). A tractable model of reciprocity and fairness. *Games and Economic Behavior* (59), 17-45.

Dohmen, T., Falk, A., Huffman, D. & Sunde, U. (2009). Homo reciprocans: survey evidence on behavioural outcomes. *The Economic Journal* (119), 592-612.

Dufwenberg, M. & Kirchsteiger, G. (2004). A theory of sequential reciprocity. *Games and Economic Behavior* (47), 268-298.

Engelmann, D. & Grimm, V. (2012). Mechanisms for efficient voting with private information about preferences. *The Economic Journal*, 122(563), 1010-1041.

Falk, A., Fehr, E. & Fischbacher, U. (2008). Testing theories of fairness-intentions matter. *Games and Economic Behavior* (62), 287-303.

Falk, A. & Fischbacher, U. (2006). A theory of reciprocity. *Games and Economic Behavior* (54), 293-315.

Fehr, E. & Gächter, S. (1998). Reciprocity and economics: the economic implications of homo reciprocans. *European Economic Review* (42), 845-859.

Fehr, E., Kirchsteiger, G. & Riedl, A. (1998). Gift exchange and reciprocity in competitive experimental markets. *European Economic Review* (42), 1-34.

Fernandez, R. & Rodrik, D. (1991). Resistance to reform: status quo bias in the presence of individual-specific uncertainty. *The American Economic Review* (81), 1146-1155.

Fischbacher, U. (2007). z-Tree: zurich toolbox for ready-made economic experiments. *Experimental Economics* (10), 171-178.

Fischbacher, U. & Schudy, S. (2013). Agenda setting and reciprocal vote trading. *TWI Research Paper Series, No. 60*.

Geng, H., Weiss, A.R., Wolff, I. (2011). The limited power of voting to limit power. *Journal of Public Economic Theory* 13, 695-719.

Greiner, B. (2004). An online recruitment system for economic experiments. In: K. Kremer and V. Macho (Eds.), *Forschung und wissenschaftliches Rechnen Gwdg Bericht 63*. (pp. 79-93). Göttingen: Gesellschaft für wissenschaftliche Datenverarbeitung.

Heinemann, F. (2004). Explaining blockades to beneficial policy reforms–an empirical investigation. *Applied Economics Quarterly* (55), 9–26.

Jackson, M. O. & Sonnenschein, H. F. (2007). Overcoming incentive constraints by linking decisions. *Econometrica*, 75(1), 241-257.

Kagel, J., Sung, H. & Winter, E. (2010). Veto power in committees: an experimental study. *Experimental Economics* (13), 1-22.

Leibbrandt, A., Sääksvuori, L. (2012). Communication in intergroup conflicts. *European Economic Review* (56), 1136-1147.

Levine, D. K. (1998). Modeling altruism and spitefulness in experiments. *Review of Economic Dynamics* (1), 593-622.

McCabe, K. A., Rassenti, S. J. & Smith, V. L. (1998). Reciprocity, trust, and payoff privacy in extensive form bargaining. *Games and Economic Behavior* (24), 10-24.

McKelvey, R. D. & Ordeshook, P. C. (1980). Vote trading: an experimental study. *Public Choice* (35), 151-184.

Myerson, R. B. & Satterthwaite, M. A. (1983). Efficient mechanisms for bilateral trading. *Journal of Economic Theory*, 29(2), 265-281.

Paetzel, F., Sausgruber, R. & Traub, S. (2012). Social preferences and voting on reform-an experimental study, Available at SSRN 2066455.

Rabin, M. (1993). Incorporating fairness into game-theory and economics. *American Economic Review* (83), 1281-1302.

Rabin, M. & Schrag, J. (1999). First impressions matter: a model of confirmatory bias. *Quarterly Journal of Economics* (114), 37-82.

Saint-Paul, G. (2002). The political economy of employment protection. *Journal of Political Economy* (110), 672-704.

Samuelson, W. & Zeckhauser, R. (1988). Status quo bias in decision making. *Journal of Risk and Uncertainty* (1), 7-59.

Strassmair, C. (2009). Can intentions spoil the kindness of a gift? - an experimental study. *Munich Discussion Paper*.

Stratmann, T. (1992). The effects of logrolling on congressional voting. *American Economic Review* (82), 1162 -1176.

Tsebelis, G. (2002). *Veto players: how political institutions work*. Princeton, Princeton University Press.

Tullock, G. (1959). Problems of majority voting. *Journal of Political Economy* (67), 571-579.

Weiss, A.R., Wolff, I. (2013). Does being elected increase subjective entitlements? Evidence from the laboratory. *TWI Research Paper Series, No. 82.*

Xiao, E., Houser, D. (2005). Emotion expression in human punishment behavior. *Proceedings of the National Academy of Sciences of the United States of America* 102, 7398-7401.

THURGAU INSTITUTE
OF ECONOMICS
at the University of Konstanz

Hauptstr. 90
CH-8280 Kreuzlingen 2

Telefon: +41 (0)71 677 05 10
Telefax: +41 (0)71 677 05 11

info@twi-kreuzlingen.ch
www.twi-kreuzlingen.ch