Incentive Properties and Political Acceptability of Workfare: Evidence from Real Effort Experiments

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1 Introduction

This paper studies the incentive properties and the political acceptability of workfare.[1] Unlike traditional welfare programs that provide means tested assistance for the needy, workfare requires recipients to spend some time on mandatory activities such as community work, job training, etc. Workfare programs have been introduced in several European countries and the US (see, e.g. Ochel (2005) for a survey).

Economic theory suggests that workfare can increase the incentives to take up a regular job and can lower implicit minimum wages introduced by welfare programs. The obligation to spend some time in a workfare activity reduces the attractiveness of public assistance. Therefore a person should be willing to take up a regular job for a lower wage than under a means tested welfare program. For this reason, taxpayers may anticipate a tax reduction due to a reduced caseload in the system of public assistance. This can be a reason for taxpayers to prefer workfare programs to means tested assistance. The theoretical literature on workfare, pioneered by Besley and Coate (1992, 1995), formally identifies the conditions under which workfare is part of a expenditure minimizing income maintenance program.[2][3] Obviously, people who rely on public assistance, are worse off under workfare because their leisure time is reduced.

Our first experiment shows the incentive effect of workfare. We elicit reservation wages in two worlds which differ in the alternative participants have to the job. In the workfare setting there is a work requirement in the outside option and in the welfare setting, there

[1]We thank the German Science Foundation (DFG) for financial support through SPP1169 "Potential for more Flexibility in Heterogeneous Labor Markets".

[2]Workfare only becomes part of the optimal transfer system if the objective is income maintenance rather than welfare.

[3]See also Leblanc (2004), Brett (1998, 2005), Beaudry and Blackorby (1998), Kreiner and Tranæs (2004).

is no such requirement. The experimental approach allows us to reconstruct *individual* supply curves which is usually not possible with field data. This way we also avoid selection biases that complicate the identification of policy effects in the field. We find that workfare indeed lowers reservation wages.

The literature on preferences for redistribution of earned income, points to other motivations that may be relevant for workfare support. Three recent studies (Fong, 2001; Corneo and Grüner, 2002; Alesina and La Ferrara, 2005) provide evidence that people who believe that poverty is determined by factors beyond individual control (e.g. luck, inherited wealth, family background, social background) support redistribution more strongly than people who attribute poverty to reasons that can be influenced by an individual (such as effort, work attitude, etc.). This suggest that fairness-assessments of the income distribution are guided by the equity principle, i.e. that income should be increasing in achievement and effort. People who value an equitable income distribution are willing to redistribute money from the rich to the poor, if the reason for the skewness of the income distribution is due to individual luck, social background or inheritance rather than differences in effort or work attitude. In an n-donor dictator game, Fong (2006) finds that this is an important determinant for the dictators' willingness to give money to welfare recipients.[3]

In experiments that investigate purely distributional preferences, the driving factors in the decision on redistribution seem to be concerns for efficiency and the well-being of the worst-off members of the group (Frohlich, Oppenheimer, and Eavey, 1987; Frohlich and Oppenheimer, 1990; Lissowski, Tyszka, and Okrasa, 1991; Engelmann and Strobel, 2004). These findings point out the relationship between redistribution and income maintenance. A program that provides a minimal standard of living for the worst-off members of the society under the constraint that income maintenance has to have minimal costs, implements the distributional goals found in these experiments.

In the second experiment, we take support for redistribution of income as given and explore the preferences over different institutional arrangements that provide redistribution. We explore whether and for which reasons *workfare* is preferred to *welfare*. Self-interest has already been mentioned as a potential motivation. In light of the literature on preferences for redistribution it seems worthwhile to investigate other reasons, in particular fairness considerations, preferences for equality and efficiency, or the equity principle. Fair

[3]The recipients in this experiments were single mothers on public assistance that differed in their willingness to work. This information was provided to the dictators and was used as a proxy for the perceived worthiness of recipients.

minded voters may disapprove the undue usage of public assistance as a source of income by people who are in principle able to earn their living without public assistance. They feel exploited by such abusive behavior and may desire to reciprocate by forcing welfare claimants to work for their benefits. A related motive for workfare support is the equity principle.[4] According to the equity principle, the relation between input and output should be equal for everyone. Inputs can for instance be personal effort, work attitude or risky financial investments. Outputs can be income, social status, general well-being, etc.. For example, a person that shows more effort at work should be rewarded by higher income according to the equity principle. Our discussion of questionnaire studies and experimental results shows that inputs which can be controlled by an individual(i.e. effort rather than talent and ability) are likely to be more important in equity considerations. In contrast to means tested assistance, workfare respects the equity principle because it demands some input from recipients (even if the contribution is totally unproductive).

In the experiment, subjects vote over the institutional arrangement of social assistance. The advantage of our laboratory experiment is that all voters are in the same situation and do not not know their position in the experimental group when making their vote. Hence, we can observe support for work requirements controlling for people earnings abilities and their personal risk of having to depend on public assistance. Personal earning abilities and the perception of one's own social mobility may be important for workfare support. Voters who have to fear to become unemployed themselves, be it because of (lack of) personal ability or of a general risks of loosing the job, may consider the welfare system as an insurance which becomes more attractive when no work requirements are enforced in the case of welfare dependence. Furthermore our discussion of the equity principle has shown that taxpayers' attitudes towards workfare may depend crucially on whether they believe that recipients have the opportunity to get a regular job, or that they have no option but to rely on public assistance. In our experiment, this source variation is excluded because voters are fully informed about the choice problem facing potential benefit recipients.

In our design, transfer recipients are free to chose a regular job. This promotes workfare support and we observe more than 80 percent votes for workfare. The high number of workfare supporters allows a detailed analysis of their motivations. We find evidence for selfish motivations, fairness concerns and the equity principle. Preferences for equality only play a minor role.

The next section presents the experimental design. In sections 3 and 4 the experimental

[4]Equity theory was pioneered by Adams (1965).

results of both experiments are presented and discussed. Section 5 concludes.

2 Experimental Design

Our design implements a very parsimonious labor market in which participants have to provide real effort in order to earn money. Real effort is necessary in this experiment because purely monetary effort costs, which are often used in economic experiments (e.g. Fehr, Gächter, and Kirchsteiger (1997)???), are inappropriate to study support for workfare. If effort costs are purely monetary, only preferences over monetary allocations or the intentions that lead to decisions over monetary allocations play a role. If income is earned by a real work task, however, the equity principle or other motivations the depend on effort, achievement or more generally, the source of entitlements, may become important. Bargaining experiments have shown that outcomes differ between treatments with earned endowments and random endowments (Hoffman and Spitzer, 1985; Burrows and Loomes, 1994; Hoffman, McCabe, Shachat, and Smith, 1994).

Subjects received sheets of paper with a field of zeros and ones. The task was to count correctly the number of zeros on each sheet. This counting exercise is neither demanding nor interesting. Hence we control a possible influence of ability and intrinsic motivation on reservation wages. The amount of work can be varied easily by changing the number of units (1 Unit = 1 Sheet).

Typically, jobs outside the lab are associated with disutility of foregone leisure. This is the most important feature of real jobs, that we wish to replicate in our design. It is essential for the incentive effect of workfare. Completing a number of units of the task in the lab may create disutility in itself. To increase this disutility, all work had to be done at the very end of the experiment and subjects were allowed to leave the lab as soon as they had completed their task. By allowing subjects to leave earlier if they worked less, we tried to induce preferences for lower amounts of work. A caveat of this design is that subjects may differ in their opportunity cost of staying in the laboratory.

In the following description of the experimental design, (X/Y) denotes a work option which includes X units of work and a payment of Y €. We use the terms *regular job* and *outside option* to distinguish between options that subjects can choose. A regular job is always of the form $(10/x)$ or $(5/x)$, i.e. it involves either five or ten units of work. The outside option yields a payment of 4 €, the *benefit*. If the benefit is financed by taxation of other subjects it is called a *transfer*. An outside option without work $(0/4)$ is called *welfare* in analogy to traditional social assistance. An outside option of the form $(x/4)$,

$x > 0$, is called *workfare* where x is the *work requirement*.

2.1 General Procedure

The experiments were conducted at the Bonn EconLab and programmed with the software z-Tree (Fischbacher, 1999). All participants received a show-up fee of 8 € which was paid together with all other earnings at the end of the experiment. For the work task, sheets of zeros and ones were handed out and the subjects could use pencils to count the zeros.

Both experiments had the same general structure. At the beginning, all subjects received one counting sheet and had 200 seconds to count the correct number of zeros. They were paid 1.5 cents for each second remaining after they entered the correct number. This trial was intended to give them an experience of the task. Successful subjects needed on average two minutes to count the zeros. 9 out of 49 did not find the correct number within 200 seconds. After the trial, all subjects received detailed instructions for the rest of the experiment. In the second experiment, a summary of the instructions was read to the participants and they had to answer a short quiz before the experiment proceeded to ensure that they had understood the consequences of their voting decisions. The instructions were followed by a phase where all decisions that are relevant for the final payoffs and the amounts of work, had to be made (see sections 2.2 and 2.3). After this, all subjects answered a questionnaire (section 2.4). Presenting the questionnaire after the decisions ensured that the wording of the questions could not influence choices and voting behavior. In the second experiment, the questionnaire gathered information about the motivations of support for workfare. A slightly shorter and modified version was included in the first experiment, in order to maintain the structure, length, and show-up fee of the experiment. After everyone had finished the questionnaire, all subjects started with their respective work task. In order to prevent subjects from guessing of the correct number of zeros, only four attempts to enter the correct number were allowed per sheet and the supply of extra sheets was limited. After four incorrect answers, the computer automatically asked for the next sheet. Time was not limited. After a participant had finished the her own work task, she was paid immediately and could leave the lab. Subjects were informed about the course of the experiment in the instructions, i.e. before they made their choices.

2.2 Experiment 1: Incentives of Workfare

In the first experiment we elicited participants' reservation wages for the regular jobs $(10/x)$ and $(5/x)$ under the outside options $(0/4)$ (welfare) and $(9/4)$ (workfare). In addi-

Choice Table	Option 1	Option2	Range	estimated parameter
I	(10/6)	$(x/4)$	$x = 0 \dots 9$	threshold work requirement
II	(0/4)	$(5/x)$	$x = 1 \dots 12$	res. wage for 5 sh., welfare
III	(0/4)	$(10/x)$	$x = 1 \dots 12$	res. wage for 10 sh., welfare
IV	(9/4)	$(5/x)$	$x = 1 \dots 12$	res. wage for 5 sh., workfare
V	(9/4)	$(10/x)$	$x = 1 \dots 12$	res. wage for 10 sh., workfare

Table 1: Choice Tables in Experiment 1

tion to reservation wages, we elicited the minimal work requirement that induces subjects to choose the regular job (10/6). Henceforth, we will call this amount the *threshold work requirement*. For each parameter, subjects were presented a choice table with one choice in each row. Choice table I contained decisions between (10/6) and $(x/4)$, $x = 0, 1, \dots, 9$, and elicited the threshold work requirement. Choice tables II–V elicited reservation wages (see Table 1). For example, choice table II contained choices between $(5/x)$ and (0/4), $x = 1, 2, \dots, 12$ and elicited the reservation wage for five sheets under welfare. In each table, choices were ordered ascendingly, in order to assist subjects in their decisions. After subjects had made their choices, one row from one table was chosen at random by the computer to determine the work/payoff combination for the final phase of the experiment. It was emphasized to the subjects that it was in their interest to make all choices according to their true preferences because any choice could be relevant in determining their amount of work and the amount of money they would earn.

To sum up, this design allows to answer the following questions:

1. How does the reservation wage react to a variation in the amount of work in the regular job? (II vs. III and IV vs. V)

2. How does the work requirement in the outside option influence the reservation wage? (II vs. IV and III vs. V)

3. What level of work requirement is necessary to make subjects choose (10/6), rather than the outside option? (Choice table I)

2.3 Experiment 2: Voting on Workfare

In the second experiment we explored the motivations of support for and opposition to workfare. Subjects were assigned into groups of three, according to cabin numbers which they had drawn from a stack of cards at the beginning of the experiment. Subjects did neither know the identity nor the cabin numbers of their fellow group members. In each group there were two *positions*, A and B. Two group members were assigned to position A

and had to work the regular job (10/6) in order to earn money. One person was assigned to position B and could *decide* between the same regular job and an outside option. The outside option yielded a transfer payment of 4€ which was financed by a tax of 2€ per capita on the income of subjects in position A. The tax was raised only if the B-person chose the outside option. Prior to the assignment of positions, group members held a vote on the outside option. The alternatives were workfare (3/4) and welfare (0/4). Note that the work requirement of three sheets was much lower than in the first experiment. Subjects could chose between welfare and workfare but the benefit and the work requirement were fixed. The vote was decided by majority rule. With two alternatives it is a dominant strategy to state true preferences under a majority rule.[5] The person in position B was informed about the vote before she decided between the regular job and the outside option and this was known to all subjects before the vote took place. Hence, voters knew that their vote could have an influence on the B's decision.

The design resembles a situation where able-bodied persons who have the opportunity to earn money beyond the welfare level can nevertheless claim transfers. The imposition of the work requirement resembles a mandatory work task which is totally unproductive, reduces leisure of recipients and does not affect them in any other way. The productivity of effort in the experiment deserves attention. The innate productivity of our work task is null in both positions. The regular job and the work requirement differ, however, in their effect on the total revenue for the group. The regular job increases total revenue whereas the work requirement does not change the total revenue at all. Because of this difference, participants may view the regular work task as a productive activity and the work requirement as unproductive. In order to emphasize the perception of different productivities the instructions say that some subjects *earn* money by working the regular job whereas those who choose the outside option *receive* money from other subjects. This may also strengthen the entitlement in the case of the regular job compared to the outside option. Apart from that, we used neutral wording in the instructions.

The situation in which participants vote over workfare is special because they have to make their decision in a position of ignorance about their own role in the group. Therefore their decision is not biased by the role they are going to be cast into. The uncertainty about their future role also forces them to take both perspectives, position A and position B, into account.[6]

[5] Another incentive compatible mechanism is the random dictator rule (see e.g. Rutström and Williams (2000)). Hoffman, McCabe, Shachat, and Smith (1994) conjecture that this may influence subjects' fairness perception. Fairness preferences may already be satisfied if everyone has the same chance to be decisive.

[6] Situations in which subjects are held ignorant about their own position at the time of decision have

2.4 The questionnaire

We only discuss the questionnaire for the second experiment. While the Bs decided between the regular job and the benefit, the As have been asked about their beliefs concerning the behavior of the Bs. These data are not analyzed in this paper.[7] The main questionnaire was organized such that the most important questions appear in the beginning. Further questions that are not presented in this paper have been added at the end. The main purpose of the questionnaire was to explore the motivations behind voting decisions. The first question was an open ended question that asks all subjects to explain their motivation for their vote.[8] After that, the Bs were asked to explain the motivation for their work decision in a similar open ended question and were presented several closed ended questions regarding their work decision. Then, all subjects answered closed ended questions regarding the voting decision.

The remainder of the questionnaire asked for socio-demographic information, asked about participants' beliefs about the reasons for poverty and wealth, and presented several psychological scales.[9]

3 Pure Incentives of Workfare (Experiment 1)

3.1 Predictions

On the assumption that subjects have rational preferences, prefer more money to less and prefer to leave rather than stay in the lab, the reservation wage is increasing in the amount of work. Moreover, the outside option should have an influence on the reservation wage. The difference between the reservation wage and the payment in the outside option is just the minimal compensation for the extra units of work. If the regular job involves more work than the outside option (choice tables II, III, V), this compensation has to be positive, hence the reservation wage is predicted to be greater of equal than 4€. If the outside option involves more units than the regular job the compensation has to be

been compared to the Rawlsian veil of ignorance in the literature. Another interpretation that is relevant if there is significant ignorance between positions is that the ignorance corresponds to social mobility. For a socially mobile person her current position is a poor indicator of her future position in society. Hence she acts more like an ignorant person than a fully informed person.

[7] All questionnaire data has been analyzed thoroughly, but an exhaustive report would be rather lengthy. In this paper we focus on the main insights.

[8] This question was added in sessions four and five.

[9] The scales measure support for achievement, neediness, chance and equality as principles of distribution (Schmitt, Maes, and Schmal, 1995, 1997), belief in a just world (Dalbert, Montada, and Schmitt, 1987; Schmitt, Maes, and Schmal, 1995, 1997), protestant work ethic (Maes and Schmitt, 2001), attitudes towards vengeance (Stuckless and Goranson, 1992; Cohrs, Kielmann, Maes, and Moschner, 2002) and humanitarianism and egalitarianism (Katz and Hass, 1988).

Choice Table	$N = 49$	mean	std. dev	25%	median	75%
II	5 sh., welfare	6.02(5.72)	1.71(0.93)	5	6	6
III	10 sh., welfare	6.78(6.37)	1.99(1.22)	5	6.5	7
IV	5 sh., workfare	3.27(3.30)	0.83(0.78)	3	3	4
V	10 sh., workfare	5.34(5.17)	1.22(0.49)	5	5	5
I	threshold work. req.	4.92	2.96	3	5	8

Table 2: Reservation wages (means/std. dev. without outliers in parentheses)

negative (choice table IV), hence the reservation wage is predicted to be below the benefit of 4 €.

For a correct elicitation of reservation wages subjects must be willing to choose at least one option in each row. The answers of a participant who plans to refuse the task anyway would be meaningless. The fact the no subject declined to work at all, suggests that participation constraints were not binding.[10]

3.2 Subjects and Excluded Observations

55 Subjects participated in three sessions. On average, the sessions lasted about ninety minutes. Total earnings were between 12 € and 22.92 €. The average was 16.37 €. Almost all subjects were students from various departments at the University of Bonn. Economics majors were not invited to the experiment.

The choices of 6 subjects showed a non-monotonous pattern in at least one choice table, i.e. they switched from one alternative to the other more than once within a single table. Such choices reveal non-monotonous preferences and do allow the determination of a unique reservation wage. For four subjects, the pattern of answers suggests that the non-monotonicities are mere errors; only one choice per table deviates from monotonicity in these cases. The remaining two subjects show an almost random pattern in at least two tables. All six non-monotonous observations were excluded from the analysis because we suspect that they do not represent the true preferences of the subjects.

3.3 Results

Summary statistics for the threshold work requirement and reservation wages of the remaining 49 subjects are shown in Table 2. The first column contains the choice table. In choice table II, for instance, the reservation wage for 5 sheets of work is elicited with the outside option of welfare (0/4). In tables II, III and V, there are subjects that never chose

[10] Another reason could be that, since the was no explicit option to refrain from working, subjects feared exclusion from further experiments if they refused to work. But this only slackens the participation constraint.

the regular job. This was counted as a reservation wage of 13€. Means and variances excluding these outliers are reported in parenthesis.

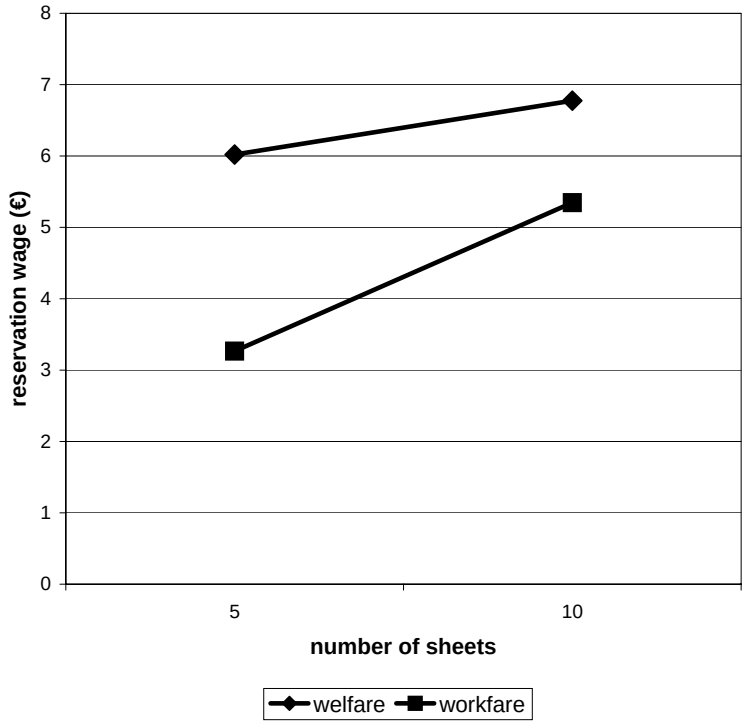

Figure 1: Reservation Wages (means)

Figure 1 shows average reservation wages graphically (See Figure 3 for graphs of individual reservation wages).

Observation 1 (Incentives of workfare)**.** *(i) Average reservation wages are increasing in the amount of work.*

(ii) The work requirement in the outside option decreases average reservation wages.

These observations are statistically significant. For both outside options, the sign test for dependent observations rejects the hypothesis that reservation wages for five and ten sheets are equal at the 0.1% level.[11] The decrease in reservation wages in response to the work requirement is also significant at the 0.1% level (sign test) for both reservation wages. Excluding outliers does not change these results. Figure 2 shows the effect of the work requirement on labor supply based on elicited threshold work requirements. The fraction of participants that take the regular job (10/6) is on the vertical axis. The horizontal

[11]The sign test is appropriate because the data is only ordinal. The fact that observed reservation wages are the true reservation wages rounded up to the next integer forbids the use of tests for interval scaled data.

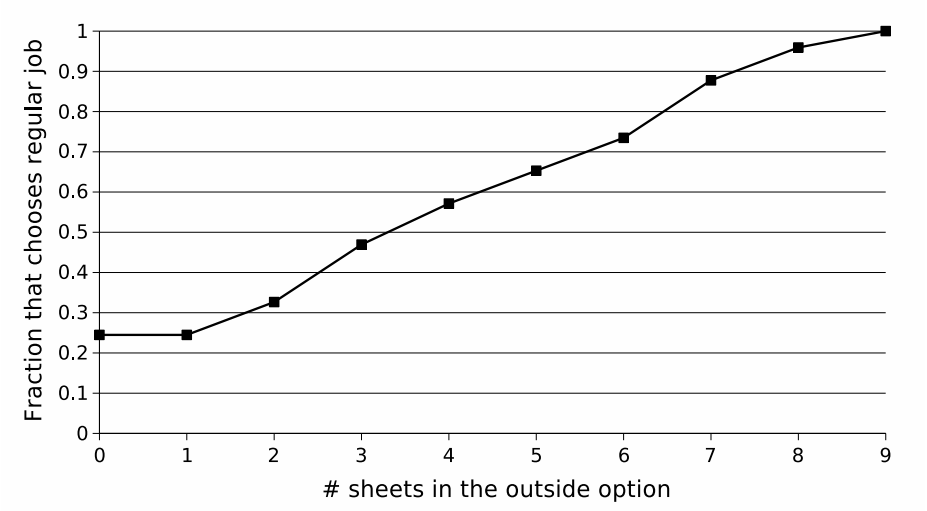

Figure 2: Labor supply for different amount of work in the outside option

axis shows the number of sheets in the outside option. Labor supply is monotonically increasing in the number of sheets in the outside option.

The predicted boundaries for the reservation wages are violated by only two subjects. For another subject the lines connecting the reservation wages are crossing. For two subjects, the reservation wages under workfare are always (weakly) above those under welfare (one of them also violates the boundary condition). For the remaining 45 subjects the reservation wage under workfare is strictly increasing. Under welfare, two subjects have strictly decreasing reservation wages, 23 have strictly increasing reservation wages and for 20 subjects the reservation wage does not respond to the amount of work in the regular job. It is not surprising that we do not observe constant reservation wages in the workfare case as the boundary conditions impose the restriction that the reservation wage for five sheets be smaller or equal to 4€ and the reservation wage for ten sheets be strictly greater than 4€. The observation that almost half of the subjects do not increase their reservation wages under welfare, suggests that for these subjects, the disutility of staying in the lab is not very large.

4 Political Acceptability of Workfare (Experiment 2)

4.1 Subjects and Excluded Observations

84 subjects participated in 5 sessions. Almost all were students from various departments at the University of Bonn. Economics majors were not invited. 11 observations have been excluded because the subjects did not understand enough German to understand

the instructions. One subject wanted to leave the lab during the experiment, but left after most subjects had already finished the questionnaire. Therefore, decisions of the other subjects have not been influenced even if they noticed that the person left the lab. Among the 73 remaining subjects, 48 have been in position A and 25 in position B.

4.2 Results

The data on votes and choices yield the following

Observation 2 (Decisions)**.** *(i) A majority of 61 subjects (84%) voted for workfare.*
(ii) Among the 23 subjects in position B that were in groups with work requirement, 20 (87%) chose the regular job and 3 (13%) chose the outside option.

Both observations differ significantly from random choices at the 0.1 percent level (binomial test). The large number of workfare supporters allows a statistical analysis of their motivations. We have two sources of information regarding motivations for voting behavior from the questionnaire. An open-ended question that asks participants to explain the reasons for their vote in free form and several closed-ended questions explored the relevance of specific motivations.

Answers the the open-ended question

For several reasons, the relationship between open-ended answers and true motivations may not be one-to-one. Firstly, it is not clear whether subjects already considered consciously different aspects of the decision in the decision phase. It is possible that they chose on instinct and contemplated the reasons only after they had been asked about them.[12] Secondly, it is possible that subjects mention only a subset of their motivations. For example they might want to limit the amount of text they write. Our interpretations of the data rest on the assumption that important aspects are more likely to be mentioned than less important aspects. Correlations between the occurrence of aspects may be biased negatively because a limit on the amount of text reduces the likelihood of mentioning additional aspects.

Disregarding aspects that where mentioned by less then 10 subjects the free form answers can be classified in the following categories. (Many subject belong to more than one category.)

[12]The experimenters had the impression, that most subjects started writing their free form answers immediately after they saw the question. This may be a hint that they were already aware of their motivations at that time. Another argument against the hypothesis that subjects acted on instinct is that the vote did not come as a surprise. All participants had thoroughly read the instruction and had much time to think about their decision.

Aspect	# subjects	% (of supporters)
1.) Standard	16	26%
2.) Achievement	35	57%
3.) "Fairness"/"Justice"	27	44%
4.) Reciprocity	8	13%
Social (2 or 3)	43	70%

Table 3: Reasons of workfare support ($N = 61$)

1. *Standard:* Subjects explicitly mention self-interest or the desire to increase incentives to do the regular job in position B.

2. *Achievement:* Subjects state that B should not get money from the As without working, or make a general statement like: "One should work for the money one receives."

3. *"Fairness"/"Justice":* Subjects use terms like "fair", "just", etc.

The first category is labelled "standard" because it corresponds to the *homo oeconomicus* modelled by standard economic theory. The two other categories describe social preferences.

Observation 3 (Motivations for workfare support, cf. Table 3)**.** *About one fourth of the workfare supporters mentions standard motives. Aggregating the achievement and fairness into one group shows that 70 percent belong to at least one of these categories.*

There is a fourth category which can also be subsumed under social preferences.

4. *Reciprocity:* Subjects regard the imposition of the work requirement as a compensation for B taking money from them (without working).

Correlations between this and the other three categories reveal that reciprocity is more frequent among people that mention standard motives than among people in the "social" category. Therefore we do not include reciprocity in "social". Five subjects from the "social" category also mention that the situation becomes more equal if the work requirement is imposed. We neglect this aspect in the quantitative analysis as only very few subjects belong to this group and they each mention at least one of the other aspects from the "social" category.

In order to analyze the relationship between the different aspects, dummy variables have been created for each category that equal one for subjects that mentioned the respective aspect and zero otherwise. Table 4 shows non-parametric correlations between these

variables. We observe strong and significantly negative correlations between standard motivations and achievement, fairness and the aggregate category social, respectively. Also, there is a positive correlation between the components of social. As described above, reciprocity is correlated positively with standard and negatively with achievement. This is the reason to exclude reciprocity from social. Five subjects mention 'standard' as well as 'social'. A small overlap is not surprising as social preferences and self-interest are aligned and subjects do not have to decide which aspect is more important in order to make a decision.

Answers to closed-ended questions

Each of the closed form questions presented a statement about the voting decision and seven possible responses. Exactly one response had to be selected by the subject. The statements are listed in Table 5. For each statement, participants where asked whether they agreed with the statement and how important it was for their own voting decision. The extreme responses were labeled by "I totally agree"/"I do not agree at all" and "did not play a role"/"was very important for my decision", respectively. The answers to the closed ended questions are weakly consistent with the open ended answers. We draw this conclusion based on correlations between the closed form answers and the dummy variables for the open ended categories (see Table 6). For statements that express similar motivations as a category of the open ended answers, we would expect that agreement and importance for the vote is positively correlated with the respective dummy variable. Although we cannot reject independence between many pairs of open and closed form question we do not observe significant correlations with the wrong sign. Hence there is no obvious inconsistence between the two answer formats and in some cases the closed-ended questions capture the results from the open-ended questions quite well.

$N = 61$	Standard	Social	Achievement	"Fair"/"Just"	Reciprocity
Standard	16	$-.51^{***}$	$-.47^{***}$	$-.38^{***}$	$.32^{**}$
Social (2 or 3)	5	43	–	–	$-.28^{**}$
Achievement	3	–	35	$.23^{*}$	$-.45^{***}$
Fairness	2	–	19	27	$-.05$
Reciprocity	5	3	0	3	8

Above main diagonal: Non-parametric correlations (Kendall's τ, tie corrected).
Independence rejected * at the 10% level, ** at the 5% level, *** at the 1% level.
On and below main diagonal: Number of subjects that mention both aspects.

Table 4: Correlations between free form answers of workfare supporters.

	Statement presented to participants
Incentives	The work requirement of 3 sheets provides an incentive for B to do the regular job.
Self Interest	It is good for me if B has a greater incentive to the the regular job, as this may increase my payment.
Efficiency 1	If B receives money from the As, the total payments in the group are lower because B does not earn any money.
Efficiency 2	It does not make sense to impose a work requirement for B, because no extra money is earned by the work.
Inequality	Due to the work requirement, the differences between the As and the Bs are decreased.
Achievement	If B does not work, he should not be allowed to just go; after all he profits from the other's work.
Reciprocity	Unsocial behavior should be punished, therefore a work requirement has to be imposed.

Table 5: Statements from closed-ended questions

$N = 61$	Standard	Social	Achievement	"Fair"/"Just"	Reciprocity
incentive (agr.)	–	–	–	–	$.20^{*}$
incentive (vote)	–	–	–	$-.19^{(*)}$	–
self interest (agr.)	$.24^{**}$	$-.25^{**}$	$-.24^{**}$	–	–
self interest (vote)	$.25^{**}$	$-.26^{**}$	–	$-.20^{*}$	–
inequality (agr.)	–	$.21^{*}$	$.21^{*}$	–	–
inequality (vote)	$-.32^{***}$	$.20^{*}$	–	$.24^{**}$	–
achievement (agr.)	$-.24^{**}$	$.23^{**}$	0.26^{**}	–	–
achievement (vote)	$-.21^{*}$	$.30^{**}$	$.30^{***}$	–	–
reciprocity (vote)	$-.20^{*}$	–	–	$.20^{*}$	–

Non-parametric correlations (Kendall's τ, corrected for ties),
Omitted values/Missing rows: Independence not rejected.
*significance level: 10% (in parentheses: 11%), **significance level: 5%, ***significance level: 1%

Table 6: Correlations between free form answers and specific answers.

Decisions in Position B

In position B, all but two subjects were in groups with a majority for workfare. We only examine the decisions in these groups. The decision under workfare is a choice between (10/6) and (3/4) where the payment in the latter alternative is financed by the other group members. In the first experiment, subjects also had to decide between these two alternatives. The difference is that the payment in the second option was financed by the experimenter instead of the other subjects. Also the framing of the decision is different. The decisions of purely self-interested subjects, however, should not be affects by these differences because the payoffs and amounts of work are the same. Nevertheless we observe a significant difference in this between-subject comparison. Under workfare in the second experiment, 20 out of 23 subjects (87%) chose the regular job. But in the first experiment, only 47% chose the regular job (23 out of 49). The difference is statistically significant at the five percent level (Fisher test, one-sided $p = 0.021$). This is a clear contradiction to the prediction based on self-interest.

The questionnaire presented several closed-ended questions to subjects in position B. The format is the same as for the closed questions about the voting decision. We briefly summarize the answers: Firstly, subjects that chose the regular job are more likely to report the higher payment as important, and the larger amount of work as irrelevant for

their decision. Secondly, the fact that the transfer harms the other group members was reported to be more important for the decision by subjects that chose the regular job than by subjects that chose the benefit. To sum up, we make the following

Observation 4 (Choice of workfare)**.** *The negative effect on tax-payers of a tax financed transfer in the outside option decreases welfare take-up compared to a payoff equivalent situation where the payment in the outside option is financed by the experimenter.*[13]

4.3 Discussion

Support for workfare is very strong and almost all groups implement workfare. This is not surprising because the experimental design is special in several ways. Usually, benefit recipients are worse off than tax payers. This relationship is reversed in our design. Both groups are equally well off as regards their initial endowments, i.e. their ability, and also as regards the rewards they can achieve for effort (the same regular job is available to both groups). With respect to their opportunities, potential recipients are even better off than (potential) tax payers. They are free to choose between the regular job and the benefit.[14] This reversed situation promotes support for workfare because the work requirements does not make poor people worse off but rather decreases the amount of inequality in the opportunities of different groups. Fairness considerations that might decrease workfare support because the work requirement also harms those who are unemployed by no fault of their own are thus excluded by design. Due to the reversed situation of inequality, the voting results should not be used as a predictor for workfare support outside the lab.

The interesting result of the second experiment is the *motivational pattern* that leads to workfare support. A considerable fraction mentions motives that we classify as self interest. A great majority, however, mentions social preferences first of all. Many subjects only reveal unspecific concerns for fairness (our category "Fairness" above), but more than half of the workfare supporters state that "the Bs should work for the money they get (from the As)". In this experiment, this statement corresponds to the equity principle.

[13] In the literature, welfare take up has been related to welfare stigma (see e.g. Moffitt (1983) or Yaniv (1997) for models of welfare stigma, Riphahn (2001) presents evidence for Germany). Two hypotheses have been put forward. Firstly, stigma may arise from interaction with other people. Secondly, instead of being related to interactions, stigma may reflect suffering from being dependent on others. The first hypothesis is unlikely to be pertinent to our experiment. The situation in the lab is rather anonymous, subjects do not know each other and it is almost impossible to observe transfer take-up because subjects sit in computer cabins and are screened by curtains. The second effect could in principle be reflected by a bad conscience or be the origin of concerns for the payoff of the other group members. Other explanations for the higher labor supply are fairness concerns, respect for the earned income of other participants or pure altruism. Especially the first two are also very frequent among the reasons given for workfare support.

[14] The decomposition of inequality into the dimensions endowment, rewards and opportunities was introduced by ???.

The Bs are able to provide effort in the same way as the As and get the same income if they fulfil the job. Therefore, according to the equity principle, they should work for the money they get. Furthermore, if they receive money from the other group members, this should not be paid unconditionally. Equity requires that only those who show some effort shall be rewarded. A small group of voters even views the work requirement as a *compensation* for the negative effect that the benefit imposes on tax payers. We interpret this finding as reciprocity, because theses voters try to harm Bs that claim the benefit and view this as a retribution of unfair behavior.

There are several reasons for the comparatively low fraction of self interested voters. First of all, the incentive effect of a work requirement of three sheets is rather weak. In the first experiment, only 23 percent of the subjects switched from the outside option to the regular job when a work requirement of 3 sheets was imposed (cf. Figure 2). Secondly, comparing self interest and fairness preferences we see that motivations are aligned in this experiment, at least from the perspective of tax payers: Self interest as well as fairness concerns induce support for workfare. It is possible that the motivations reported in the open-ended question are biased against self-interest. This could for example be the case if participants do not want to reveal themselves as egoists. It is well known from dictator experiments that egoism is more prevalent in completely anonymous situations than in situations where actions are observed. This effect may also be present in the self-reported motivations. On the other hand, there is considerable anonymity in our experiment. Subjects cannot identify their fellow group members and the only occasion where subject IDs are matched with names is when participants sign the receipts for their payments. Therefore the potential bias should not be overestimated.

5 Conclusion

Our analysis of reservation wages confirms the predictions of economic theory. If one option in each choice table is interpreted as a *regular job* and the other one as an *outside option*, we find that the work requirement in the outside option decreases reservation wages. Furthermore, individual reservation wages are weakly increasing and average wages are strictly increasing when the units in the regular job are doubled from five to ten. Apart from our interpretation in terms of workfare, our investigation of the properties of a simple real effort task could be useful for future experiments that require real effort.

In the second experiment, we find strong support for workfare in a situation where voters can decide about the institutional arrangement of income maintenance (welfare or

workfare) but do not have the option to reject or change the transfers paid to those who do not take a regular job. When asked about their motivations to support workfare, about one quarter of the supporters mentions self-interest, more than two thirds mention fairness concerns. More than half of the workfare supporters and more than eighty percent of the fair minded voters seem to be motivated by the equity principle.

We have presented explorative results about the motivations for workfare support in a special situation. This is a first step towards a more general understanding of the forces that drive support for workfare in public decision making. Further research is needed to increase our understanding of the factors that determine which motivation is decisive for workfare support and the robustness of these relationships with respect to changes in the design. Also, the question which motivational differences exists between welfare supporters and workfare supporters remains largely unanswered. This requires treatments where more people oppose workfare so that a thorough analysis of their motivations can be conducted. Moreover, additional treatments will allow us to exclude single motivations by design. This way, results that are based on questionnaire data undergo an important robustness test and can be verified (or refuted) by experimental control.

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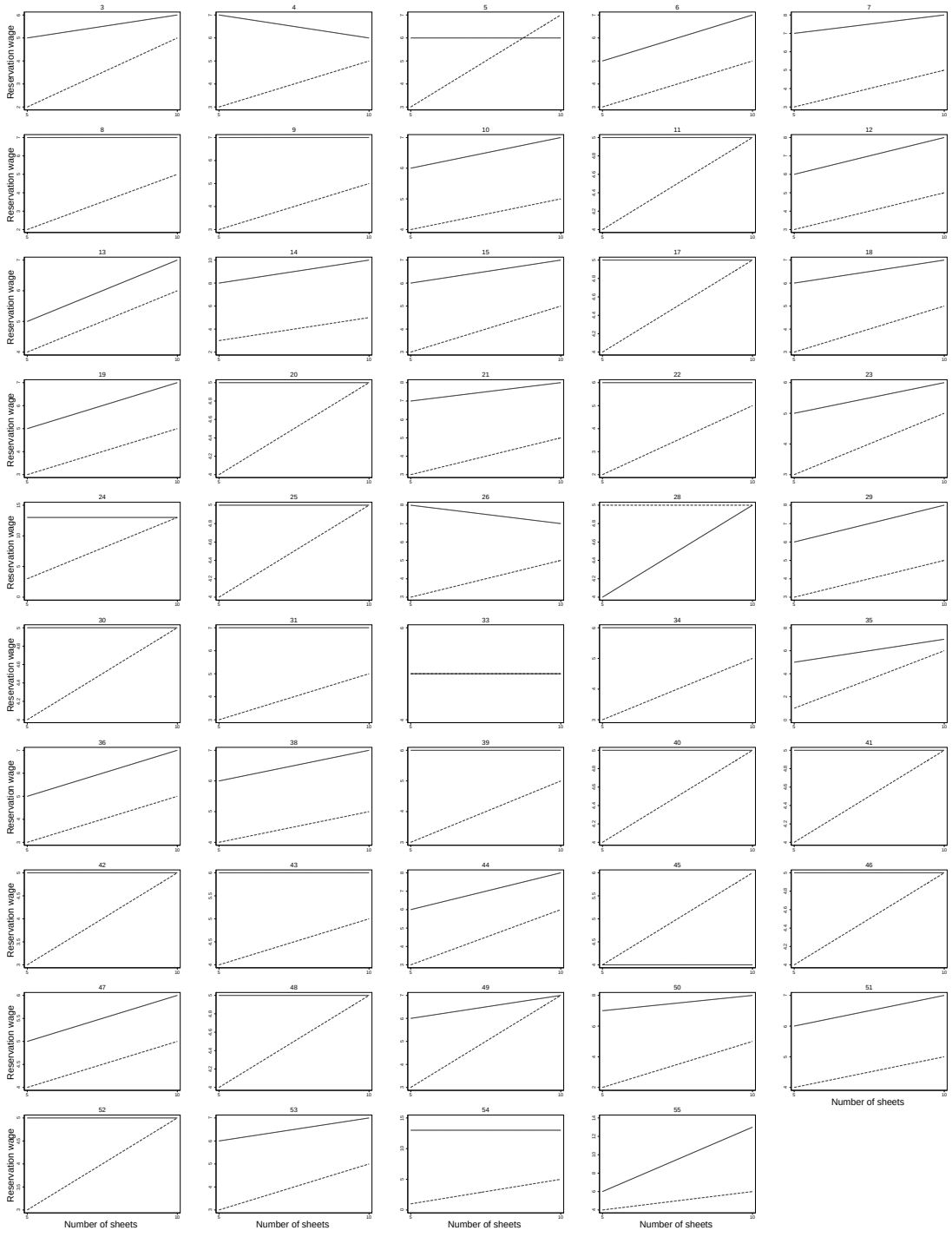

Figure 3: Individual reservation wages