No. 66

UNIVERSITY OF COLOGNE

WORKING PAPER SERIES IN ECONOMICS

NON-BINDING DEFAULTS AND VOLUNTARY CONTRIBUTIONS TO A PUBLIC GOOD - CLEAN EVIDENCE FROM A NATURAL FIELD EXPERIMENT

FELIX EBELING

Department of Economics
University of Cologne
Albertus-Magnus-Platz
D-50923 Köln
Germany

http://www.wiso.uni-koeln.de

Non-binding Defaults and Voluntary Contributions to a Public Good – Clean Evidence from a Natural Field Experiment*

Felix Ebeling

October 13, 2013

Abstract

We conducted a large scale field experiment to test whether framing a voluntary contribution decision with different non-binding defaults affect people's behavior. On an electricity provider's website, we manipulated non-binding green energy defaults in electricity contract offers. The default was either green or non-green. Buying green is costly and protects the environment. Hence, it is a voluntary contribution to a public good. Our core results are: First, defaults have a strong effect on contributions. 69% of new customer buy green, when the default was green, but only 7% when the default was non-green. Second, the fraction of website visitors signing an electricity contract is similar across treatments. Third, regional election results affect green energy choice of customers.

JEL Classification: D03, D12, Q4

Keywords: Framing, Defaults, Public Goods, Randomized Field Experiments

* Felix Ebeling, University Duisburg Essen, felix.ebeling@uni-due.de. I would like to thank Axel Ockenfels who provided very insightful remarks that considerably influenced the content, structure and readability of this study. Daylian Cain, Bernd Irlenbusch, John List, Alessandro Lizzeri and Matthew Rabin also provided comments that significantly improved the manuscript. Furthermore, participants at University of Cologne's seminars, Yale University's seminar and the ECORE Summer School in Leuven also provide very helpful comments.

1. Introduction

The effect of frames on preferences has been documented in consumer choices, bargaining behaviors, responses to social dilemmas, and many other economically relevant decisions. For example, Andreoni (1995) shows that framing externalities in a laboratory public good game positively or negatively strongly affects voluntary contributions.[1] Depending on the exact frame, observed framing effects might be attributed to explanations such as warm glow, prospect theory, or social preferences. From an economist's perspective, these observations are not trivial: if people behave according to the rationality hypothesis, frames should not affect their behavior.

In our field experiment we focus on framing a voluntary contribution to a public good with differing non-binding defaults. So far, only a few laboratory public good studies focus on this kind of framing. Messer et al. (2007) scrutinize in a laboratory experiment whether non-binding defaults can be harnessed to increase voluntary contributions to a public good. They show that non-binding default rules significantly affect voluntary contribution and that an almost efficient level of contributions is achieved when different cooperative framings are combined. Altmann & Falk (2011) showed that non-binding defaults in laboratory public good games particularly influence contribution decisions of individuals with lower levels of cognitive reflection. To our best knowledge, our paper is the first to go further and test the effect of non-binding defaults on voluntary contributions in a field experiment.

In our field-experiment, conducted on an electricity provider's website, we manipulated non-binding green energy defaults in electricity contract offers. The more costly 100% green energy option was either set or not-set by default. Buying green energy is costly

[1]Furthermore, we are aware that Sonnemans et al. (1998), Cooksen (2000), Rege & Tell (2004), Fosgaard et al. (2011) and Ellingsen et al. (2012) scrutinize the effect of positive / negative framing in social dilemma situations.

and protects the environment. Therefore, it can be considered as a voluntary contribution to a public good. The analysis of our experiment reveals three main results. First, we find a strong effect of non-binding green energy defaults on customers' choice: 69% of customers take this feature in their contract when the option is set by default, while only 7% buy it when it is not set by default. This result suggests that non-binding default rules can effectively be used to increase voluntary contributions to a public good in the field. Second, our data shows that from business perspective green energy defaults seemingly matter less, as the fraction of website visitors signing an electricity contract (conversion rate) is almost similar across treatments. Third, we find a correlation between regional voting behavior and green energy choice.

Our paper is organized as follows. In the next section we present the experimental design. In section three we present the results. In the final section we review possible explanation for the results. Furthermore, in the spirit of articles on behavior and energy policy (e.g. Allcott & Mullainathan 2010), we depict possible applications for policies targeting green consumer behavior.

2. Design of Field Experiment

2.1 Environment

Our natural field experiment (Harrison & List 2004) was conducted on an electricity provider's website in early summer 2012 for four and a half weeks. The electricity provider delivers electricity to households throughout the whole country. On the firm's website, visitors can purchase typical consumer electricity contracts. Contracts are generally addressed to households with 1 to 6 persons.

2.2 Procedure

Independent of treatment, prospective customers have to go through three steps to receive a binding contract offer from the electricity supplier by mail.

First, on the welcome website visitors have to type in their zip code and their yearly electricity consumption. The zip code is necessary, because power grid charges differ between German regions and consequently offered electricity prices also differ. The yearly electricity consumption is used to show customers later on the monetary amount they can save per year in comparison to the local electricity provider, if they choose our provider.[2] After the prospective customer entered his zip code and his yearly consumption, they have to click the "show contract" button and the second screen with detailed contract offers appears. Figure A1 in Appendix A shows the welcome website in a stylized way.

In the *second* step, prospective customers have to choose the contract. Two contracts of similar structure are offered. In both contracts, households have to pay a consumption independent base price plus a certain price per unit. However, one contract provides less service (e.g. no telephone hotline) and is cheaper. In the following, we will call these two contracts low-service and high-service contract. Exact prices of contracts are, due to differing power grid charges, region dependent. In the high service contract, the base price is on average 7.33€ (SD=1.33) and the price per kwh is on average 23.86€cent (SD=0.81). In the low service contract, in every region the base price is always exactly 2€ lower than in the high service contract. The price-per-unit is on average 1.69€cent (SD=0.65) cheaper than in the high service contract. Customers can choose which of the

[2] In Germany, households receive electricity by default from the local public utility if they do not actively switch to another provider. The shown savings result from the comparison with prices of the local public utility. Unfortunately, our electricity provider does not calculate the savings, but receives the saving amounts from an external service provider. Therefore, we do not have access to the exact savings.

two contracts they would like to order by clicking the respective "order now" button. Figure A2 in Appendix A shows the web screen with the contract offers.

Third, customers have to provide their personal information and confirm their order. They receive the chosen binding contract offer by mail a few days later. The consumer only concludes the contract, when she signs the contract that she received by mail and sends it back to the electricity provider.

2.3 Treatments

There are two treatments. The treatments differ in their default rule for the green energy option in the contract offer on the second screen. In the control treatment the check box for 100% green energy is not set by default. In the green treatment the check box is set by default. If a participant would like to change the default, he simply has to click on the check box and the respective other option is implemented. In both treatments, the additional costs for 100% green energy is 0.3€cent /kwh. This represents an additional payment of ≈ 9€/year for the average customer from our experiment. As can be seen in Figure A2 and A3 in the Appendix, it is clearly visible which green option is activated and which costs are connected to the option.[3]

In case that customers order a non-green energy contract, they receive their electricity from the standard electricity mix in Germany.[4] It is important to mention that the green

[3]Furthermore, as soon as a customer clicks the checkbox, the centrally shown price per kwh *directly* changes by the green energy mark-up. Hence, when activating green energy, the displayed price per kwh directly increases by 0.3€cent. When deactivating green energy, the displayed price per kwh directly decreases by 0.3€cent. Similarly, the displayed *yearly* costs of green energy are visible to prospective customers when clicking the checkbox. As soon as the prospective customer clicks the check box, the yearly savings achievable in comparison to the local utility directly changes. Hence, when activating green energy, the savings decrease by the respective yearly costs, when deactivating green energy, the savings increase by the respective yearly costs.

[4] In this mix in 2012 about 45% of electricity came from coal, about 22% from renewable sources, about 16% from nuclear plants, about 11% from gas and about 6% from other sources.

energy check box was always similarly set for the low-service contract and the high-service contract. Either in both contracts the check box was set, or for none.

2.4 Randomization & Technical Issues

Independent of the information participants provide on the first website screen, prospective customers were allocated randomly in one of the two treatments on the second website screen. More precisely, the randomization function "rand()" of the programming language PHP was used to ensure a random allocation.[5] Furthermore, to make sure that the visitor saw only one treatment in case he visited the website more than once, cookies were used.

While it is almost as easy to program an experiment for a website as for the laboratory, the environment provides less control. The most severe problem in our experiment is visitors' opportunity to bypass parts of the experimental procedure. In particular, prospective customers might use websites which compare electricity providers' offers to receive the low priced electricity for their household. Such comparing websites grab information from our electricity providers' website and thereby are counted as a visitor. However, even if we were not able to control these bypassing visitors, we were able to identify them and generally excluded them from our analysis, as we lack control otherwise.

3. Results

In this section we first present some descriptive figures of our experiment. We then study the treatment effect on the green energy choice and the conversion rate. Finally, we analyze how regional election results affect the green energy choice.

[5] The final HTML website which is seen by the user is generated by the server-side scripting language PHP. Due to confidential reasons we cannon present the complete source code.

3.1 Descriptive Figures

Table 1 summarizes the collected data. The first row contains the visits of the second website screen. Overall, there were 41,952 visits on the second website screen, 21,960 in the control treatment and 19,992 in the green treatment.[6] The second row contains the number of purchased contracts. Overall, 3,512 electricity contracts were bought; 1,905 in the control treatment and 1,607 in the green treatment.[7] The final row contains the means of the yearly consumption of customers that purchased a contract (based on customers' own statement on the first website screen).

The split of prospective customers between treatments is not equal. 52,3% of visits were allocated to the control treatment and 47,7% to the green treatment. A binomial test rejects the hypothesis of an equal split of visits (p=0.00). We were somewhat puzzled by this result as the used randomization function of the programming language should lead to an equal split. As our post-research showed, this slight inequality is most probably due to the use of a Windows operation system on the electricity provider's server. The PHP rand function produces slightly skewed random distribution in combination with this operation system.[8] However, even if not done by purpose, the skewness of the distribution does not affect the randomness of the treatment allocation. To test this, we analyzed all variables customers provide previously to the treatment allocation (on the first website). If there would have been any non random selection process it could only have been done by these variables. We do not find any difference in these variables. A Mann-Whitney U Test shows no difference in the yearly electricity consumption as well

[6] The firm estimates that each visitor makes on average 1.3 to 1.5 visits. This implies between 28,000 and 32,200 visitors.

[7] The electricity provider does not provide us with figures on how many households receive a contract by mail, but did not sign it.

[8] For a discussion between programmers on this topic, see: stackoverflow.com/questions/11531992/rand-function-yields-uneven-results

as in the zip-code/origin of customers between treatments (p-value=0.8396 and 0.4506, respectively).

TABLE 1. DATA SUMMARY

	Control	Green
Visits of second screen	21,960	19,992
Purchased contracts	1905	1607
Average yearly consumption (purchased only)	3038kWh	3011kWh

3.2 Fraction of Green Contracts

The left hand side of Figure 1 shows the fraction of green contracts in both treatments. As can be seen, the fraction of green contracts strongly differs between treatments. In the control treatment only 7.2% choose the 100% green-energy option, while 69.1% in the green treatment accept the 100% green-energy option. A Chi-squared test confirms this treatment difference (two-tailed Chi-squared test, p=0.00).

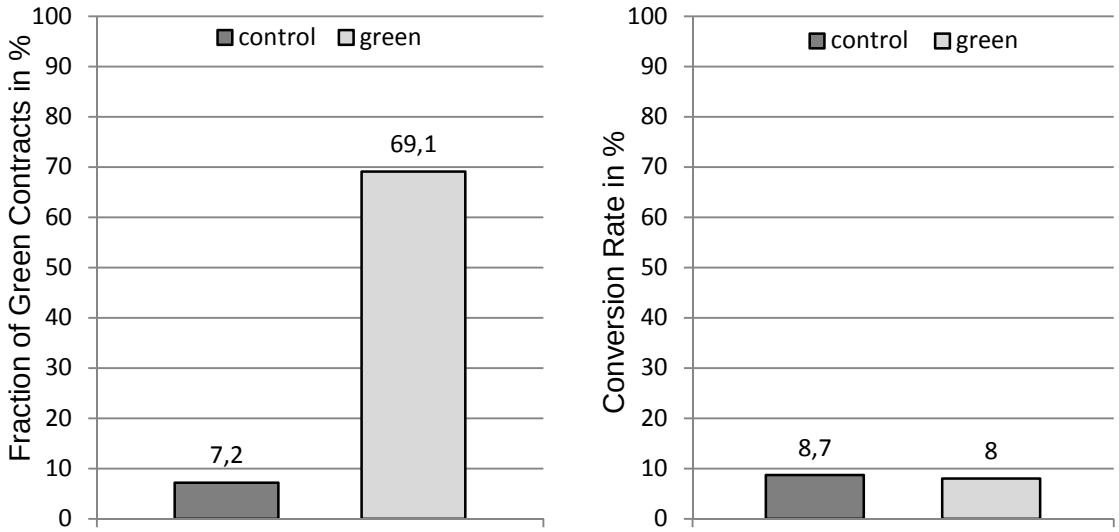


FIGURE 1. FRACTION OF GREEN CONTRACTS AND CONVERSION RATE

Furthermore, we use probit models to substantiate our analysis on customer's contract choices. Thereby, we benefit from differences of several contract variables between regions. Remember that customers have to type in their yearly consumption as well as their zip code before receiving the contract offers. While the yearly consumption naturally differs between customers, there are also differences in the contract offers

towards customers depending on the customer's zip code. The base-price, the price per unit as well as the difference in price per unit between the high-service and the low-service contract depend on the region. This allows us to control for the influence of these variables on green energy choice. Table 2 presents the results of our probit analysis. The models supports that the treatment is by far the best predictor for the green energy choice.

TABLE 2: GREEN CONTRACT CHOICE

Model	(1)	(2)
Treatment	1.968***	2.100***
	(0.05)	(0.09)
Additional Controls on Individual Level		Yes
Observations	3512	3512
Pseudo R-squared	0.3520	0.3575

Notes: Probit analysis with green contract choice as dependent variable. Figures in columns represent coefficients. Standard errors in parentheses. "Treatment" represents a binary variable for the green treatment (0=control, 1=green). A detailed description of variables contained in "Additional Controls on Individual Level" and exact coefficients of these variables can be found in Table A.1 in the Appendix. Level of significance: *p<0.10, **p<0.05, ***p<0.01.

3.3 Conversion Rate

For the company collaborating in our experiment, the fraction of website visits concluding a contract (= the conversion rate) was the most interesting figure. The right hand side of Figure 1 shows the conversion rates of both treatments. The conversion rate is 8.7% in the control treatment and 8% in the green treatment. Using a two-tailed Chi-squared test, we find significant differences in the conversion rates between treatments ($p<0.05$). However, even if significant, the size of the treatment effect is limited. Furthermore, the probit model in Table A.2 in the Appendix shows that several of the in section 3.2 elucidated control variables have a significant, but similarly small effect on the conversion rate. For some of these significant correlations there not even

exists a clear economic explanation.[9] In light of the large sample (which quickly leads to significant effects), we are therefore cautious to declare these significant but small influences of variables on the conversion rate as economically relevant. Finally, the collaborating company concluded that treatments do not change conversion rates.

3.4 Influence of regional voting behavior

Several previous studies provide evidence that people who vote political parties with environmental friendly programs are more responsive towards "green policy" interventions (e.g. Kotchen& Moore 2008, Costa & Kahn 2013). As we do not have data on experiment participants voting behavior, we matched our individual level data via the zip code with regional election results to examine heterogeneity in responsiveness towards our "green policy" intervention.

We find that regional election results substantially correlate with household behavior. Especially, there is a clear relation between fraction of voters of the German green party ("Bündnis 90 / Die Grünen") and green energy choice of customers. As can be seen in left hand side of Figure 2, this effect is substantial. The figure groups customers from regions with different green party voter fractions into quintiles. It shows that the percentages of customers' actively buying green energy range from 4.6% for the bottom quintile to 9.9% in the top quintile. A spearman rank correlation test confirms this picture. There is a highly significant positive correlation between fraction of green party voters and customers' green energy choice in the control treatment (p=0.00). The higher the fraction of green party voters in a region, the higher the probability a household from this region actively buys green energy. Furthermore, the probit model (3) in Table

[9] For example, the probit models show that the difference in price per unit between the high-service and the low-service contract has the strongest effect of all price-effects on the conversion rate. More specifically, the higher the difference in price per unit between the high-service and the low-service contract, the lower the conversion rate. To our best knowledge there exists no economic (or psychologic) theory which can explain this effect.

A.1 in the Appendix detects in the control treatment a positive, highly significant effect of the regional fraction of green party voters on customers' green energy choice. In the green treatment, however, the fraction of green party voters does not correlate with behavior. As can be seen in the right hand side of Figure 2, the percentage of customers accepting the green contract is not correlated with quintiles. A spearman rank correlation test also shows no correlation (p=0.8205). An intuitive interpretation of this result is that the high fraction of green customers in the green treatment already includes all customers that have intrinsic preferences for green energy.

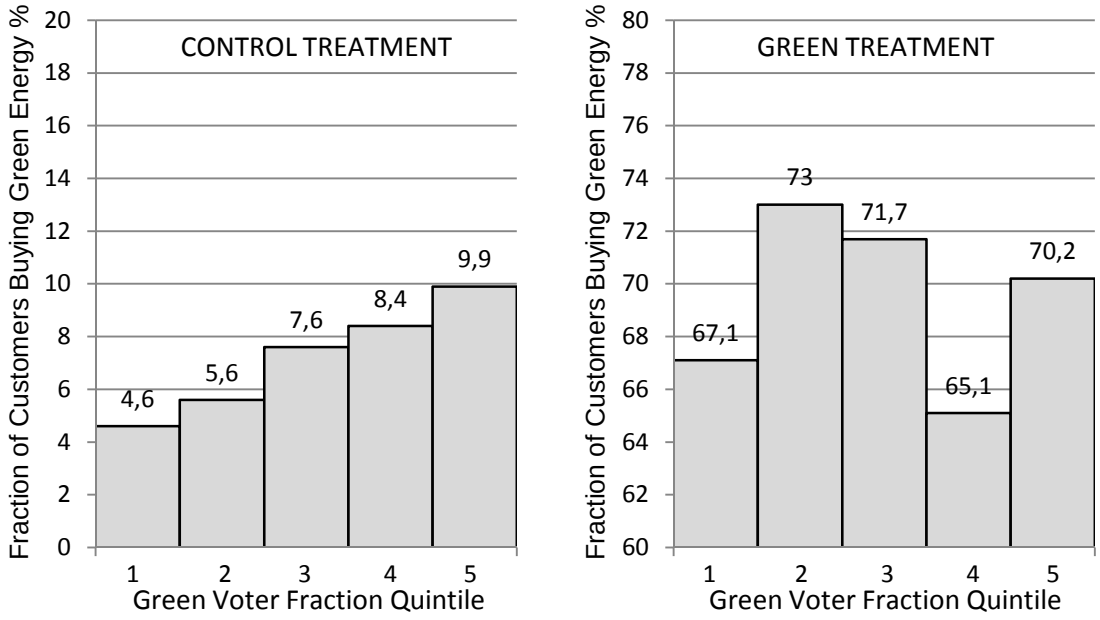


FIGURE 2. INFLUENCE OF GREEN VOTER FRACTION ON GREEN ENERGY CHOICE

Note: This figure shows the influence of regional green party voter fraction on green energy choice. The fraction of green party voters is divided in quintiles. The first quintile is the quintile with the lowest fraction of green party voters. That means the first quintile contains all customers from regions with the lowest fifth of green party voter fractions. Of those customers, 4,6% buy a green contract in the control treatment and 67,1% buy a green contract in the green treatment, respectively.

We find that the fraction of social-democratic-party (SPD) voters also affects green energy choice, even if the relation is less clear than for the fraction of green voters.[10] Furthermore, the fraction of SPD voters does not affect the green energy choice in the control treatment, but in the green treatment. Considering the right hand side of Figure

[10]Voters of the social democratic party can be considered as „light" green / environmental friendly.

3, shows that this effect is sizeable. A spearman rank correlation test confirms this picture. There is a significant positive correlation between fraction of SPD voters and customers' green energy choice in the control treatment (p=0.0125). The higher the fraction of SPD voters in a region, the higher the probability a household from this region actively buys green energy. Furthermore, the probit model (4) in Table A.1 in the Appendix detects in the green treatment a positive, significant effect of the regional fraction of SPD voters on customers' green energy choice.[11] In the control treatment, however, the fraction of SPD voters does not correlate with behavior. As can be seen in the left hand side of Figure 3, the percentage of customers accepting the green contract is not correlated with quintiles. A spearman rank correlation test also shows no correlation (p=0.7844). A possible interpretation is that in regions with a high fraction of SPD voters more participants have a "light" green mind, these participants are not actively seeking for green energy but are easier to nudge into green energy contracts.

[11] Fraction of voters of other political parties does not correlate with green energy choices. Furthermore, we checked how education, available income and some other demographic variables affect green energy choice. We only find a significant positive relation between available income and green energy choice in the control treatment. However, when controlling for the fraction of green voters this relation becomes only weakly significant.

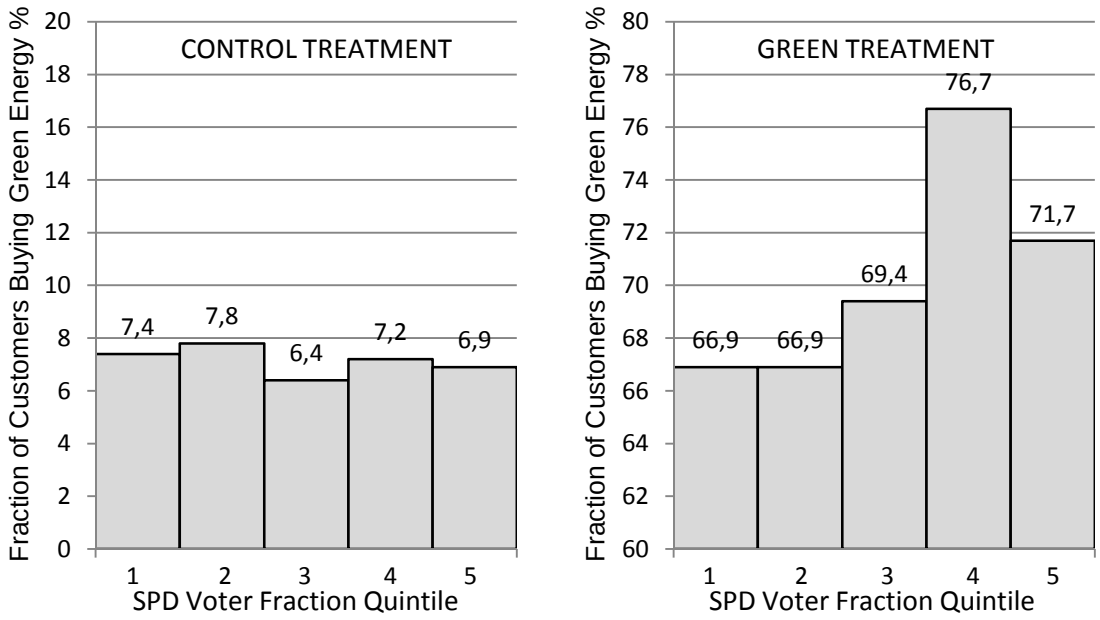


FIGURE 3. INFLUENCE OF SPD VOTER FRACTION ON GREEN ENERGY CHOICE

Note: This figure shows the influence of regional green voter fraction on green energy choice. The fraction of green voters is divided in quintiles. The first quintile is the quintile with the lowest fraction of SPD voters. That means the first quintile contains all customers from regions with the lowest fifth of SPD voter fractions. Of those customers 7.4% buy a green contract in the control treatment and 66.9% buy a green contract in the green treatment, respectively.

4. Discussion

The large-scale field experiment presented in this paper tested whether framing a voluntary contribution decision with different non-binding defaults affect people's behavior. Our results suggest that non-binding defaults have a strong impact on people's contribution behavior. When the default is to contribute, 69% of experiment participants do so, while only 7% contribute when the default is non-cooperative. This constitutes a first test of the influence of non-binding defaults on voluntary contributions in a field experiment.

The behavior observed in our experiment can be ascribed to several theoretical approaches: first, people might have preferences in line with prospect theory. In this case, we observe an endowment effect, which implies that people evaluate the option they endow by default higher (Knetsch 1989, Kahneman et al. 1991). Alternatively, the default might change beliefs about other customers' behavior (Altman & Falk 2011) and

people behave conditional cooperative (Fischbacher et al. 2001, Frey & Meyer 2004). Furthermore, the default might provide people with superior information or a social norm on appropriate behavior (Brown & Krishna 2004, Altmann et al. 2013). Finally, it is worth to mention that previous laboratory studies (e.g. Boyce et al. 1992) found that WTP-WTA gaps are particularly large for environmental goods, which might explain the large treatment effect in our experiment.[12]

Our results may have practical application. Most important, observed customer behavior might be harnessed by behavioral policies targeting sustainable electricity consumption. Previous research focuses on reducing electricity consumption with behavioral interventions. For example, Schultz et al. (2007) and Allcott (2011) show that households decrease electricity consumption when receiving information comparing their own electricity consumption with their neighbors' consumption. Our results present a complementary approach to reduce carbon emissions. Instead of reducing electricity consumption, our results show how customers can be nudged to consume more expensive, but pollution free electricity.

[12]Our experiment can also be considered as a test of WTP-WTA disparities: When the contract offer is endowed with green energy by default, customers passively *accepting* this feature in their contract when not actively opting out. When the contract offer is not endowed with green energy by default, customers actively *paying* for the green energy when choosing the green energy in the contract offer.

References

Allcott, Hunt. 2011. “Social norms and energy consumption.” *Journal of Public Economics*, 95, 1082-1095.

Allcott, Hunt and Sendhil Mullainathan. 2010. “Behavior and Energy Policy.” Science, 327, 1204-1205.

Altmann, Steffen and Armin Falk. 2011. "The Impact of Cooperation Defaults on Voluntary Contributions to Public Goods.“ *Working Paper*.

Altmann, Steffen, Armin Falk and Andreas Grunewald. 2013. „Incentives and Information as Driving Forces of Default Effects.“*Working Paper*.

Andreoni, James. 1995. “Warm-Glow Versus Cold-Prickle: The Effects of Positive and Negative Framing on Cooperation in Experiments.“ *Quarterly Journal of Economics*, 110(1), 1-21.

Boyce, Rebecca R., Thomas C. Brown, Gary H McClelland, George L. Peterson, William D. Schulze. 1992. "An Experimental Examination of Intrinsic Values as a Source of the WTA-WTP Disparity.” *American Economic Review*, 82, 1366-1373.

Brown, Christina L. and Aradhna Krishna. 2004. “The Skeptical Shopper: A Metacognitive Account for the Effects of Default Options on Choice.” *Journal of Consumer Research*, 31(3), 529-539.

Cooksen, Richard. 2000. “Framing Effects in Public Goods Experiments.” *Experimental Economics*, 3(1), 55-79.

Costa Dora L. and Matthew E. Kahn. 2013. “Energy Conservation „Nudges“ and Environmentalist Ideology: Evidence from a Randomized Residential Electricity Field Experiment,” *Journal of European Economic Association*, 11(3), 680-702.

Ellingsen, Tore, Magnus Johannesson, Johanna Mollerstrom and Sara Munkhammar. 2012. "Social Framing Effects: Preferences or beliefs?" *Games and Economic Behavior*, 76(1), 117-130.

Fischbacher, Urs, Simon Gächter and Ernst Fehr. 2001. "Are People Conditionally Cooperative? Evidence from a Public Good Experiment." *Economics Letters*, 71(3), 397 – 404.

Frey, Bruno and Stephan Meier. 2004."Social Comparisons and Pro-social Behavior - Testing 'Conditional Cooperation' in a Field Experiment." *American Economic Review, 94(5),* 1717–22.

Fosgaard, Toke, Lars Garn Hansen and Erik Wengström. 2011. "Framing and Misperceptions in a Public Good Experiment." *Working Paper*.

Harrison, Glenn W. and John A. List. 2004. "Field Experiments." *Journal of Economic Literature*, 42(4),1009-1055.

Kahneman, Daniel, Jack L. Knetschand Richard H. Thaler. 1991. "Anomalies: The Endowment Effect, Loss Aversion, and Status Quo Bias." *The Journal of Economic Perspectives*, 5(1), 193-206.

Knetsch, Jack L. 1989. „The Endowment Effect and Evidence of Nonreversible Indifference Curves." *American Economic Review*, 79 (5), 1277-1284.

Kotchen, Matthew and Micheal Moore. 2008. "Conservation: From Voluntary Restraint to a Voluntary Price Premium." *Environmental and Resource Economics*, 40, 195-215.

Messer, K.D., Zarghamee, H., Kaiser, H.M. and Schulze, W.D. 2007. „New Hope for th Voluntary Contribution Mechanism: The Effect of context" *Journal of Public Economics*, 91 (9), 1783-1799.

Rege, Mari and Kjetil Telle. 2004. „The Impact of Social Approval and Framing on Cooperation in Public Good Situations.“ *Journal of Public Economics*, 88 (7-8), 1625-1644.

Schultz, P. Wesley, Jessica M. Nolan, Robert B. Cialdini, Noah J. Goldstein and Vladas Griskevicius. 2007. “The Constructive, Destructive, and Reconstructive Power of Social Norms.” *Psychological Science,* 18, 429–434.

Sonnemans, Joep, Arthur Schram and Theo Offerman.1998. “Public Good Provision and Public Bad Prevention.” *Journal of Economic Behavior & Organization,* 34(1), 143–161.

Appendix A. Figures and Tables

FIGURE A1. WEBSITE SCREEN FOR CONTRACT REQUEST

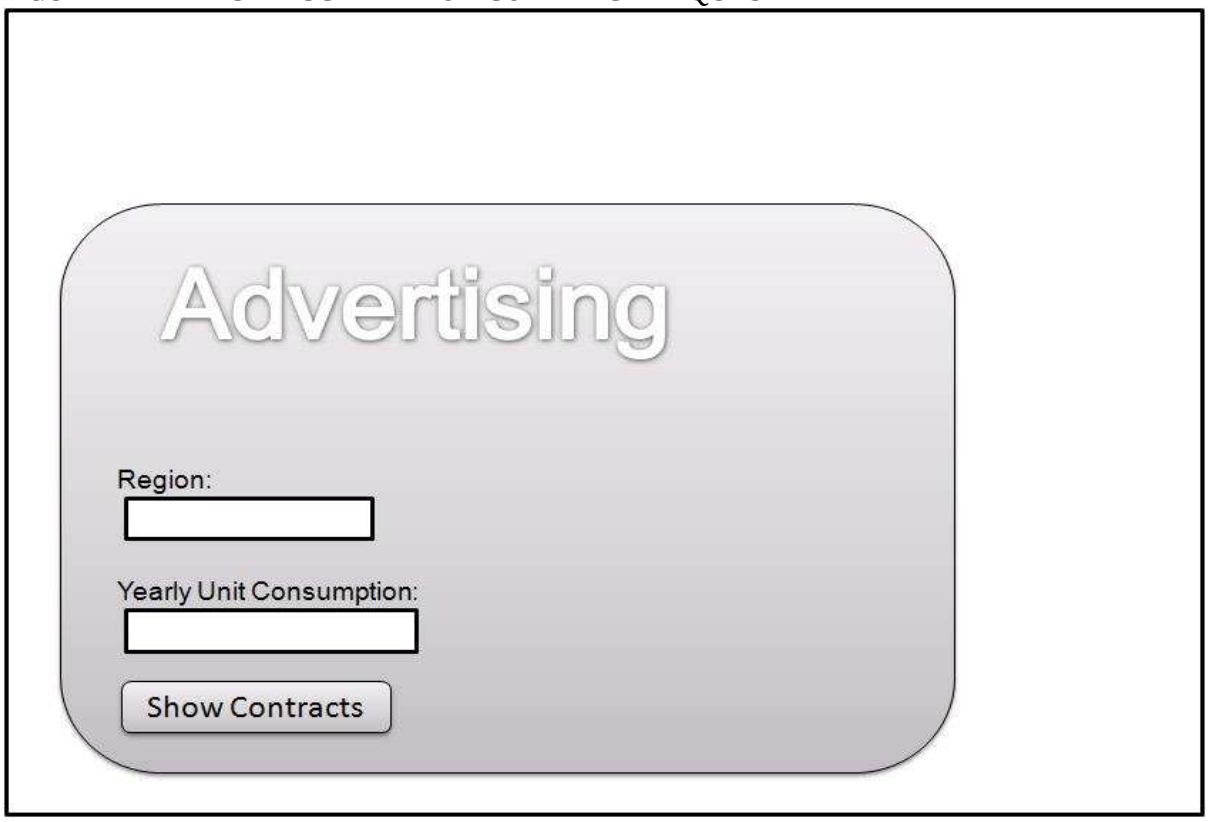
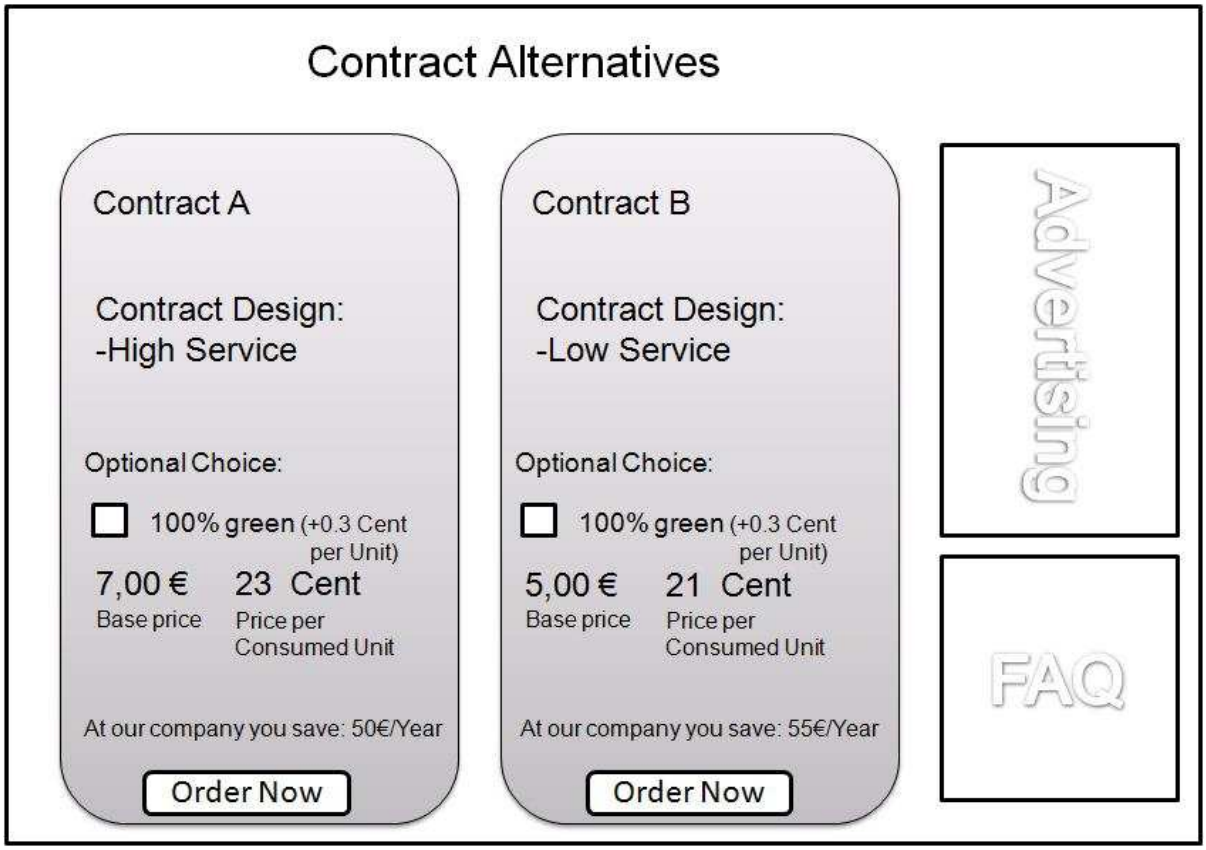
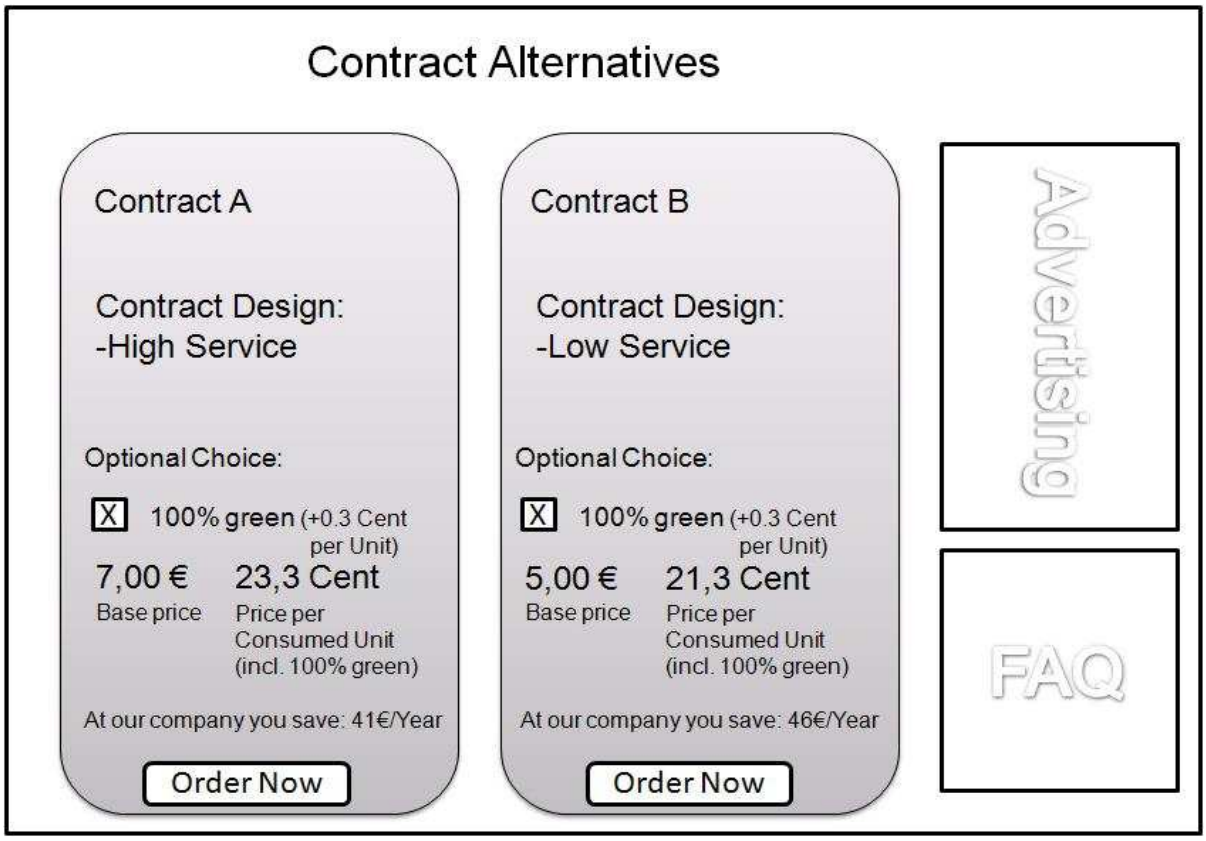


FIGURE A2.WEBSITE SCREEN FOR CONTRACT CHOICE IN CONTROL TREATMENT



Notes: Prices are exemplary, but size / proportion of letters as on website

FIGURE A3.WEBSITE SCREEN FOR CONTRACT CHOICE IN GREEN TREATMENT



Notes: Prices are exemplary, but size / proportion of letters as on website

TABLE A.1: GREEN CONTRACT CHOICE

	(1)	(2)	(3)	(4)
Treatment	1.968***	2.1***	2.105***	2.105***
	(0.05)	(0.09)	(0.09)	(0.09)
Additional Controls				
Contract Type		0.029	0.033	0.028
		(0.1)	(0.24)	(0.09)
Treatment ×		−0.139	−0.14	−0.143
Contract Type		(0.24)	(0.12)	(0.12)
Base Price		−0.082	−0.052	−0.095*
		(0.05)	(0.05)	(0.05)
Treatment ×		0.065	0.026	0.098
Base Price		(0.06)	(0.06)	(0.06)
Price/kwh		−0.083*	−0.085*	−0.08
		(0.05)	(0.05)	(0.05)
Treatment ×		0.143**	0.14**	0.137**
Price/kwh		(0.06)	(0.06)	(0.06)
Online Discount		0.045	0.01	0.048
		(0.05)	(0.05)	(0.05)
Treatment ×		0.053	0.097	0.049
Online Discount		(0.6)	(0.06)	(0.06)
Yearly Consumption		−0.161*	−0.141*	−0.162**
		(0.08)	(0.08)	(0.08)
Treatment×		0.172*	0.147	0.173*
Yearly Consumption		(0.1)	(0.1)	(0.1)
Voter Fractions				
Green Voter Fraction			0.129***	
			(0.05)	
Treatment ×			−0.167***	
Green Voter Fraction			(0.06)	
SPD Voter Fraction				−0.043
				(0.05)
Treatment×				0.115**
SPD Voter Fraction				(0.06)
Observations	3512	3512	3512	3512
Pseudo R-squared	0.3520	0.3572	0.3594	0.3587

Notes: probit analysis with green contract choice as dependent variable. Figures in columns represent coefficients. Standard errors in parentheses. "Treatment" represents a binary variable for the green treatment (0=control, 1=green). "Contract Type" represents the type of contract (high or low) a household chooses. Base Price" represents the base price in a region. "Price/kwh" represents the price per consumption unit (kwh) in a region. "Online Discount" represents the price difference in Price/kwh between the low and the high service contract in a region. "Yearly Consumption" represents the yearly consumption of a household by his own account. *All additional control variables are standardized with mean=0 and standard deviation=1. This was done to avoid otherwise occurring strong correlations between some interaction effects and main effects. "*Green Voter Fraction" represents the percentage of green party

voters in customer's region of origin. "SPD Voter Fraction" represents the percentage of SPD voters in the region of customer's region of origin. Level of significance: *p<0.10, **p<0.05, ***p<0.01.
A Wald test shows that there is no significant relationship between "Green Voter Fraction" and green energy choice in the green treatment. More precisely, we used a Wald test to test the hypothesis whether the variables "Green Voter Fraction" and "Treatment × Green Voter Fraction" of Model (3) in Table 2 are jointly different from zero. The Wald test cannot reject the hypothesis that the variables do not jointly differ from zero (p=0.3064).

TABLE A.2: CONVERSION RATE

	(1)	(2)	(3)
Treatment	−0.041**	−0.035**	−0.039**
	(0.018)	(0.018)	(0.018)
Additional Controls			
Base Price		−0.031***	−0.052***
		(0.01)	(0.014)
Treatment ×			0.044**
Base Price			(0.019)
Price/kwh		−0.015	−0.029**
		(0.009)	(0.013)
Treatment ×			0.029
Price/kwh			(0.019)
Online Discount		−0.145***	−0.148***
		(0.009)	(0.01)
Treatment ×			0.005
Online Discount			(0.018)
Yearly Consumption		−0.177***	−0.16***
		(0.014)	(0.018)
Treatment×			−0.035
Yearly Consumption			(0.027)
Observations	41952	41952	41952
Pseudo R-squared	0.0002	0.0194	0.0197

Notes: probit analysis with contract concluded as dependent variable. Figures in columns represent coefficients. Standard errors in parentheses. "Treatment" represents a binary variable for the green treatment (0=control, 1=green). "Base Price" represents the base price in a region. "Price/kwh" represents the price per consumption unit (kwh) in a region. "Online Discount" represents the price difference in Price/kwh between the low and the high service contract in a region. "Yearly Consumption" represents the yearly consumption of a household by his own account. *All additional control variables are standardized with mean=0 and standard deviation=1. This was done to avoid otherwise occurring strong correlations between some interaction effects and main effects.* Level of significance: *p<0.10, **p<0.05, ***p<0.01.