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The deadweight loss of christmas - Reply

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**THE DEADWEIGHT LOSS OF
CHRISTMAS – REPLY**

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The Deadweight Loss of Christmas – Reply

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Abstract

In this paper, we study the welfare effects of Christmas presents with a focus on the effect of presents for gift-givers. Based on a survey among students at the University of Göttingen, Germany, we find that the vast majority of gift-givers prefers in-kind gifts compared to gifts of money. The average present in our survey has a price of 36 Euro and results in a “giver’s surplus” of 10 Euro. This indicates a welfare gain of approximately 143% from the average giver’s perspective. The welfare gain for presents to friends and partners is lower than for presents to close family members. Our empirical analysis shows a negative effect of a present’s price on the welfare gain for gift-givers.

JEL classification: D61, D64, H42, Z1, XM45

Keywords: presents, gift-giving, Christmas, welfare

1 Introduction

In 2018, the average person in Germany intended to spend approximately € 472,30 on Christmas presents, amounting to aggregate retail sales of roughly € 100,3 bn. in the pre-Christmas period (Statista, 2018a; Statista, 2018b).¹

While many people readily attribute a reflationary effect to (the money spent on) Christmas presents, economists are worried about the potential welfare loss of presents. This concern goes back to Waldfogel (1993), who argues that Christmas presents may entail a deadweight loss, as recipients value gifts less than gift-givers have spent on them. Waldfogel (1993) estimates that in-kind gifts lose 10-33 percent of their value compared

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¹Per capita expenditure for Christmas presents in other European countries ranges from 320 Euros in the Netherlands to 646 Euros in Great Britain (Statista, 2018c).

to gifts of money. On average, recipients value the gifts they receive 13 percent less than their estimated price. This implies that gift-givers fail to predict correctly which gifts receivers appreciate. Waldfogel (1993) conducted two surveys regarding Christmas presents with students at Yale, asking for the maximum amount the students would be willing to pay for the gifts and the minimum amount the students would be willing to accept in compensation for the gift. For Waldfogel, the consequence of the welfare loss of in-kind gifts is that gifts of money may be superior in welfare terms. He also shows that gifts of money are preferred by some gift-givers, esp. those for which the welfare loss is higher. On the downside, gifts of money may be socially less accepted than in-kind gifts and as a result, a gift of money may be stigmatized either by the recipient or society (Waldfogel, 2002).

Waldfogel's findings have sparked a debate amongst economists whether and to what extent in-kind gifts actually may go along with a deadweight loss. In a series of replies and comments with different methodological approaches (see Birg & Goeddeke, 2016 for a survey), the evidence regarding the welfare effect of Christmas presents is mixed: Solnick & Hemenway (1996) find a 214 percent welfare gain, when asking students and staff at Harvard and members of the general public for the amount recipients would be willing to accept in compensation for the gift. Also, List & Shogren (1998) find a 121 to 135 percent welfare gain for an experimental auction where the subjects indicated at which price they were willing to sell their gifts. Waldfogel (2002) asks for the minimum amount the students would be willing to accept in compensation for the gift, finding an average deadweight loss of 5.6 percent. Waldfogel (2005) shows that consumers' own purchases generate between 10 percent and 18 percent more value per dollar spent than items received as gifts. Principe & Eisenhauer (2009), who focus on the actual market price rather than the recipients' estimate of costs of presents, find an average deadweight loss of more than 7 percent. For German students, Bauer & Schmidt (2012) find a deadweight loss of 12 percent based on a willingness to pay-question and a 109 percent welfare gain based on a willingness to accept-question. The potential negative welfare effect of presents has also been documented for other occasions of gift-giving (see Waknis (2017) for the deadweight loss of Diwali).

Another strand of literature presents alternative explanations for gift-giving. For instance, Solow (1993) shows that in-kind gifts can be preferable to gifts of money and that gift-giving can be a Pareto-superior. Kaplan and Ruffle (2009) argue that gift-giving might be optimal because it reduces the recipient's search cost when the giver is better informed. Prendergast and Stole (2001) show that the inefficiency of in-kind gifts relative to gifts of money allows gift-givers to use gifts to signal the donor's

quality of information about the recipient's preferences. Ruffle (1999) uses a game theoretic model to analyze two players interacting in gift-giving. Depending on the players' beliefs and the presents' costs, gift-giving, non-gift-giving or mixed-strategy equilibria exist. In all equilibria of the game, givers are worse off, even if emotions and fairness are considered. Flynn and Adams (2009) show that gift-givers and gift-recipients have different beliefs about the cost of a gift and the value of a gift from the perspective of recipients. While givers tend to assume that higher cost increase the value from the perspective of recipients, because high-cost gifts signal a high level of thoughtfulness, recipients do not believe in this correlation. Ellingsen & Johannesson (2011) present a model where all actors aim to appear generous. In-kind gifts signal generosity and occur frequently in equilibrium, although they are inefficient. The authors use their model's results to explain the prevalence of inefficient in-kind Christmas presents.

The literature on the welfare effect of (Christmas) presents typically focuses on the "demand side" of presents. But gift-giving is a social interaction in that both a demand side and supply side are involved. So just like in any market-transaction, also effects on the supply side should be taken into account in the analysis of gift-giving. Gift-giving is not only a transfer of goods, but may result in a "surplus" for the gift-giver as well. For instance, s/he likes to be a gift-giver or enjoys the pleasure of the recipient. Therefore, a welfare-enhancing "giver's surplus" should be considered. To our knowledge, this is the first paper to analyze the welfare effects of Christmas presents from the givers' perspective.

Based on a survey among students at the University of Göttingen, Germany, we find that gift-giving may entail a welfare gain. The average present in our survey has a price of 36 Euro and results in a "giver's surplus" of 10 Euro. Our findings indicate a welfare gain of approximately 143% from the average giver's perspective.

This implies that even if the valuation of the recipient is below the market value of the present, the welfare effect of gift-giving may be positive. A gift on which the giver spent 100 Euros and which is valued 13% below its price by the recipient and 43% of above its price by the giver then creates an overall welfare gain of 130% (of its price).

The welfare gain for presents to friends and partners is lower than for presents to close family members. Our empirical analysis shows a negative effect of a present's price on the welfare gain of gift-givers.

The rest of the paper is organized as follows. Section 2 describes the data and the survey. Section 3 provides a descriptive analysis, section 4 presents an empirical analysis. Section 5 concludes.

2 Survey and Data

The following analysis is based on a survey among students who were recruited via the online recruitment system for economic experiments (ORSEE) at the Faculty of Economic Sciences of the University of Göttingen. The original survey (in German) can be found in Appendix A1. A link to the online survey was sent to the students. Participation in the survey was possible from December 15, 2015 to December 26, 2015. The timing of the survey is of importance to identify the realized or at least imminent purchases of Christmas presents. We assumed that by the start of the survey, the majority of participants had already started or even completed their holiday shopping.²

At the beginning of the survey, participants were asked whether they celebrate Christmas and if they give presents to other people. Participants who responded to this latter question negatively were excluded from the survey at this point. Participants were asked about the number of Christmas presents and their expenditure for presents.

Participants were then asked to provide detailed information on the three gifts that were most important to them.³ Asking participants to focus on three presents helps to safeguard that participants provide details on presents they have already bought, minimizing hypothetical responses. In addition, it reduces the time participants spend on the survey⁴, minimizing the likelihood that participants terminate the survey. We asked participants to describe the three gifts in their own words.

In addition, inspired by Waldfogel (1993), participants were told to provide information on the recipients of the presents. We used Waldfogel (1993)'s options ("partner", "mother/father", "sibling", "friend", "grandparent", "aunt/uncle"). But as our participants are on average older than Waldfogel (1993)'s students, we added the options "son/daughter", "grandchild", "niece/nephew", "other person".

Participants were asked to classify the gifts by the categories "in-kind gift", "gift card", "gift of money" or "idealistic gift". We define "in-kind gifts" as items with a quantifiable value and "idealistic gifts" as non-monetary presents without quantifiable value. Presents that offer the recipient a choice among several items are defined as "gift card" in our survey, whereas for "in-kind gifts" the giver decides on the specific item for the recipient.⁵

²According to Ernst & Young (2015), 77% of consumers purchase Christmas gifts in the period from October to about 3-4 weeks before Christmas.

³By restricting the survey to the three most important gifts, we follow Solnick and Hemenway (1996).

⁴On average, participants who provided details on at least one present completed the survey in less than 8 minutes.

⁵Some participants failed to classify their presents correctly. Using the descriptions of presents in question 5 allowed the reclassification.

Participants were then asked if they had bought their Christmas presents already. This question allows us to study whether participants' subjective valuation differs for gift that has already been purchased and a gift that still has to be purchased. Furthermore, participants were asked to state the price, value of the gift card or a gift of money in euros for each gift. Following, participants were also asked how time-consuming or stressful the search, selection and/or purchase of the gifts was and how fitting they thought the present to be. The former question aims at givers' search cost, the latter questions helps us to explore whether the givers' valuations depends on the recipient's benefit.

Participants were then asked to provide information on their motives for making the respective presents. Participants were asked whether they made the present because they thought i) the present gives the recipient pleasure, ii) the present gives themselves pleasure, iii) presents are common at Christmas, iv) they wanted to buy something for the recipient that s/he *would* not buy her/himself, v) they wanted to buy something for the recipient that s/he *could* not buy her/himself, vi) the present supports the recipient's development or vii) the present probably pleases the recipient, but s/he does not know it yet.

In the following part of the survey, participants were asked to provide only information on in-kind gifts. First, participants were asked for each in-kind gift to state an amount (in Euro), they would have spent on the present, if they had chosen a gift of money instead of an in-kind gift. Second, participants were asked to indicate an amount (in Euro) for which they would be willing to give a gift of money (according to the value of the purchase price of the in-kind gift) instead of an in-kind gift.⁶ This question is intended to identify to what extent participants are willing to revise their decision to make an in-kind gift (and delegate the decision on a specific item to some degree unto the recipient). In the following, participants were asked in a similar way regarding the choice between an in-kind gift and a gift-card and the choice between a gift card and a gift of money (results are reported in Appendix A2). In the last step, participants were asked for information on age, gender, field of study, attendance of lectures in economics, and income.

In total, 338 persons participated in the survey. In the analysis we focus on the 277 participants who completed the survey. Out of the 277 participants, 256 persons make gifts to others.⁷ The majority of participants are female (55%), the average age of

⁶Participants were told to state "0 Euro" if they are indifferent between the in-kind gift and cash, "x Euro" if they are willing to waive the in-kind gift and give cash instead, if offered x Euro, and "n.s." if they are not willing to give cash instead of the in-kind gift under any circumstances.

⁷This seems to support Waldfogel (2009)'s argument of cultural and economic proximity and similar consumption patterns among the US and Germany.

participants is 24 years. The majority of participants are students of various disciplines of the University of Göttingen (95%), mainly students of economics (36%).⁸ In addition, 54% of the participants report to have attended lectures in economics. About 5% of participants are graduates and employees at the University of Göttingen. 84% of the subjects report that they have a monthly income of less than Euro 1000, 33% report that they have less than Euro 500 a month. It is to be noted that the participants of this survey are not representative for the German population as such.

3 Descriptive Analysis

In total, the survey contains data on 716 presents. We excluded presents without prices from the calculations. The majority of presents are in-kind gifts (87%). 9% of presents are gift cards and 4% are idealistic gifts. Only in one case, a gift of money was given. On average, participants spent 129 euros for 7 gifts.

Table 1 summarizes prices of presents and valuation of presents from the givers' perspective.

Table 1: Average Amount Paid and Values of Gifts

Variable	Mean	Std. Dev.	Min.	Max.	N
Price	35.867	45.007	1	550	362
Relative Value	143.342	98.429	100	1000	362
Absolute Value	46.249	53.871	2	550	362

On average, participants spend 36 Euros for the presents. Participants were asked to state an amount (in Euro), for which they would be willing to give a money gift (with the same value of the in-kind gift, question 17). This hypothetical compensation indicates a surplus stemming from the in-kind gift they give. The average reported subjective value is 46 Euros (absolute value). On average, the value of a present was 143% of the present's price (relative value). This indicates that gift-giving creates a giver's surplus.

If participants reported an in-kind gift, they were asked how much they would give as a gift of money instead of an in-kind gift (question 16). The answer of this question could indicate the presumed value of the present in the eye of the recipient. If the gift of money exceeds the price of the in-kind gift, this could indicate that the giver assumes that the recipient values the in-kind present higher than the price. A gift of money below the price of the in-kind present could indicate that the gift-giver assumes a welfare loss

⁸Other disciplines reported in the survey are law, medicine, mathematics, social sciences, natural sciences, agricultural sciences, computer science, and philosophy.

of the Waldfogel type for the recipient. On the other hand, the hypothetical gift of money could indicate a mismatch in budget planning: If a giver planned to make an in-kind gift of 100 Euro but only find his favorite gift for 120 Euro, which s/he accepts to buy, s/he would maybe switch back to the original plan when asked for a hypothetical gift of money and state an amount of 100 Euro. Therefore, the interpretation of the hypothetical gift of money may be difficult.

The answers are summarized in Table 2. 31% of participants (98) reported no difference to the price of their in-kind present. 30% (93) reported a lower gift of money, while 37% (118) to spend more for a gift of money than for the in-kind present.

On average, participants stated to make a gift of money of 33 Euro. On average, the participants stated to pay 1.2 times the amount for the gift of money than they would pay for their in-kind gift (last row).

Table 2: Summary Statistics – Equiv. Gift of Money

Variable	Mean	Std. Dev.	Min.	Max.	N
Price	35.032	47.038	1	550	309
Gift of Money	32.78	31.663	1	200	309
Gift of Money rel.	1.245	1.408	0.017	20	309

We cannot exclude that answers are affected by an endowment effect. With regard to recipients, Bauer & Schmidt (2008) find a deadweight loss based on willingness to pay and a welfare gain based on willingness to accept, with the difference being explained by an endowment effect. Also gift-givers may value a gift they have bought already higher than a gift they intend to buy. This is why we analyze answers with regard to presents that have already been bought separately from answers with regard to presents participants plan to buy. We find a systematic difference between both cases.

Tables 3 and 4 show the average prices of gifts and givers' valuation of the gifts that have been bought already (144%) and gifts that have not been bought yet (142%). Comparing both tables, we can identify an endowment effect. On average, givers assign

Table 3: Summary Statistics – Presents that have already been bought

Variable	Mean	Std. Dev.	Min.	Max.	N
Price	38.022	49.817	1	550	227
Relative Value	144.351	107.434	100	1000	227
Absolute Value	49.057	58.625	2	550	227

a higher value to presents that they have already bought compared to presents that they only intend to buy. But even in the second case, a giver's surplus is present.

Table 4: Summary Statistics – Presents that have not been bought yet

Variable	Mean	Std. Dev.	Min.	Max.	N
Price	32.244	35.36	5	220	135
Relative Value	141.646	81.423	100	500	135
Absolute Value	41.526	44.564	5	270	135

The endowment effect is not present if we ask for the hypothetical gift of money (Tables 5 and 6). Participants report on average a higher price of the present they have bought already (37 Euro) compared to presents they have not bought yet (33 Euro). But the hypothetical equivalent gift of money for presents that have been bought already is the same as the hypothetical gift of money they have not bought yet (32.78 Euro). While no endowment effect is visible for the hypothetical gift of money, the difference in prices for presents that have been bought already and for presents that have not been bought yet may indicate that on average the problem in budget planning mentioned above could play a role.

Table 5: Summary Statistics – Presents that have already been bought

Variable	Mean	Std. Dev.	Min.	Max.	N
Price	36.96	51.274	1	550	200
Gift of Money	32.78	30.48	1	200	200
Gift of Money rel	1.163	0.981	0.017	10	200

Table 6: Summary Statistics – Presents that have not been bought yet

Variable	Mean	Std. Dev.	Min.	Max.	N
Price	31.495	38.028	5	220	109
Gift of Money	32.78	33.872	1	200	109
Gift of Money rel	1.396	1.962	0.025	20	109

To analyze the impact of the purchase price on the givers' relative valuation of the presents, we group presents according to their price, following Waldfogel (1993). In Table 7, we see that 75% of the gifts in our survey are low-value gifts, whereas Waldfogel (1993) reports only 37% low-value gifts. The average relative valuation of the present from the givers' perspective tends to decrease with the purchase price of the gift (column 2). For presents with a price up to 35 Euro, the average relative value is 152% of the present's price. For presents with a price of more than 140 Euro, the average relative value is 125%.

The same effect is visible for hypothetical gifts of money (Table 8). For low-price

Table 7: Average Value of In-kind Gifts

Price of Presents in €	Ø Value in % (SE)	No. of obs.	Share in %
0-35	152 (6.5)	243	74.5
36-70	130 (7.3)	44	13,5
71-140	125 (7.0)	23	7.0
> 140	125 (7.2)	11	3.4

gifts the amount for the equivalent gift of money is about 1.35 times the price for the in-kind present (first row), but for high-price gifts it is only about 0.55 times the price (last row).

Table 8: Average Hypothetical Gift of Money

Price of Presents	Gift of Money rel (SE)	No. of obs.	Share in %
0-35	1.35 (0.10)	232	74.1
36-70	0.99 (0.06)	42	13.4
71-140	0.95 (0.10)	22	7.0
> 140	0.55 (0.08)	11	3.5

Waldfogel (1993) reports that the recipients' valuation of gifts decreases in social distance to the gift-givers. His findings indicate that the welfare loss of in-kind gifts (for recipients) is the lowest for friends and "significant others". Our findings point in the opposite direction. We find that the relative value of presents is highest for family members and lowest for partners and friends (Table 9). So while Waldfogel's results show that the welfare loss from the recipients' perspective is the lowest for partners and friends (voluntary relations), we find that presents for family members result in a higher giver's surplus than for partners and friends.

Table 9: Value of In-kind Gifts by Recipient

Recipient	Grandparents/ Aunt/Uncle	Brother/ Sister	Parent	Partner	Friend	Total
No of obs.	26	67	121	55	35	321
Value in €	25	36	44	80	27	46
Price in €	18	27	33	63	20	35
Value (rel.) in %	142	140	161	131	134	146
Std. err. value (rel) (%)	12.7	9.6	5.4	9.2	4.4	5.1

When we ask for the hypothetical gift of money, we get qualitatively the same result (Table 10). On average, the relative value of the hypothetical gift of money is higher for family members than for partners and friends.

When we group gifts according to gift categories, we see different average relative

Table 10: Average Hypothetical Gift of Money by Recipient

Recipient	Grandparents/ Aunt/Uncle	Brother/ Sister	Parent	Partner	Friend	Total
No of obs.	25	66	114	52	35	309
Gift of Money	18	27	31	60	20	33
Gift of Money rel	1.18	1.54	1.3	1.02	1.1	1.25
Std. err. Gift of Money rel (%)	0.14	0.31	0.11	0.06	0.09	0.08

values per group (Table 11). For instance, housewares have the highest average relative value (177%), followed by toys and games ("game", 165%), food (158%), and books (157%). The lowest relative value is reported for trips (123%).

Table 11: Value of In-kind Gifts by Gift Category

Gift Category	No of obs.	Value in €	Price in €	Relative Value (SE)
Game	16	34	23	165 (32)
Jewellery	23	86	62	151 (30)
Food	34	27	18	158 (20)
Cosmetics	17	39	28	138 (10)
Clothes	29	50	41	127 (10)
Accessory	23	39	32	133 (18)
Houseware	37	44	28	177 (27)
Photo	13	38	30	136 (19)
Electronics	36	55	40	148 (13)
Decoration	24	38	29	135 (13)
Book	34	22	14	157 (18)
Trip	18	77	67	123 (13)
Other	15	85	74	133 (12)

When we ask for an hypothetical equivalent monetary gift, results differ. The highest average relative monetary gift is reported for decorations (1.81 times the price of the in-kind gift), and food (1.69), whereas the lowest values again are reported for trips (0.87).

Table 12: Average Hypothetical Monetary Gift by Gift Category

Gift Category	No of obs.	Gift of Money in €	Price in €	Gift of Money rel (SE)
Game	14	23	22	1.04 (0.06)
Jewellery	22	59	61	1.03 (0.14)
Food	31	23	18	1.69 (0.32)
Cosmetics	17	31	28	1.12 (0.08)
Clothes	29	41	41	1.13 (0.91)
Accessory	22	32	32	1.11 (0.14)
Houseware	37	29	28	1.35 (0.18)
Photo	12	24	32	0.68 (0.15)
Electronics	34	29	41	1.08 (0.12)
Decoration	24	31	29	1.81 (0.79)
Book	32	15	14	1.26 (0.13)
Trip	18	56	67	0.87 (0.08)
Other	14	51	72	1.53 (0.43)

4 Empirical Analysis

We estimate the following linear model: $Y_i = \alpha + \beta \mathbf{X}_i + \mu_i$, where Y is either the log of the relative value of gifts (measured by the hypothetical compensation for an exchange of the in-kind gift by a gift of money) or the hypothetical gift of money. α is a constant, \mathbf{X} is a vector of explaining variables, and μ is a normal distributed error term. The explaining variables contain the (log of) the price of the gift, whether the acquisition of the gift is/was time consuming, a statement, whether the participants believe that their present is a "perfect gift", and whether they have bought the present already. In addition, we control for the recipient of the present (partner, parent, friend, grandparent, brother/sister). We also control for different motives of gift-giving. "Giver's joy" is a dummy variable that indicates that the giver has stated that s/he takes pleasure in the gift. "Altruistic" is a dummy that indicates that the giver states with a high intensity that s/he wants the present to please the recipient. Obligation is a dummy that measures whether the givers make a present because it is common at Christmas. Paternalism is a dummy that measures that the giver makes a present that the recipient would not buy for him/herself or s/he wishes to support the individual development of the recipient. Redistribution is a dummy that measures the giver makes a present that the recipient cannot afford. The dummy "does not know yet" is one if the participants have reported that they make a present that the recipient is expected to like but that he does not know yet.

We have estimated four specification of the model. In the first specification we only use the (log) price of the present, the variables "time consuming", "perfect gift", and "already bought" as explaining variables (first column). In the second specification

we add the groups of recipients as explaining variables (second column). In the third column, we regress the (log) relative value of the present on the explaining variables of the first specification plus the givers' motives. In the fourth column we regress the (log) value of the present on all variables.

The main findings are summarized in Table 13. In line with our previous findings, the price of a present reduces the relative value of a present from the giver's perspective. A one percent price increase reduces the relative value for givers by 0.09% to 0.1% in all specifications. The estimated coefficient is statistically significant at least at the 1% level. Making a present to a friend reduces the relative value from the giver's perspective c.p. by 23% to 24%. A similar effect is present for presents to brothers or sisters (-22% to -23%). Interestingly, if givers feel obliged to make present, this increases their valuation by 13%. All other explaining variables are statistically insignificant in all specifications.

If the dependent variable is the (log) relative equivalent gift of money (Table 14), relative money gift c.p. decreases in the price of the present with an elasticity of -0.28 to -0.33 . All other explaining variables are statistically not significant. While the sign of the coefficient for "friend" is still negative, the sign for the coefficient of "brother/sister" is now positive.

Table 13: Regression output

	(1)	(2)	(3)	(4)
	logValueRel	logValueRel	logValueRel	logValueRel
logPrice	-0.0999*** (-3.41)	-0.104** (-3.30)	-0.0912** (-3.09)	-0.0951** (-3.02)
Time consuming	0.0790 (1.64)	0.0834 (1.68)	0.0804 (1.63)	0.0852 (1.68)
Perfect gift	0.0434 (0.86)	0.0371 (0.73)	0.0289 (0.54)	0.0184 (0.33)
Already bought	-0.0175 (-0.36)	0.00151 (0.03)	-0.0103 (-0.21)	0.0103 (0.21)
Partner		-0.197 (-1.87)		-0.201 (-1.88)
Parent		-0.143 (-1.51)		-0.147 (-1.52)
Friend		-0.233* (-2.07)		-0.240* (-2.14)
Grandparent		-0.210 (-1.65)		-0.216 (-1.70)
Brother/Sister		-0.222* (-2.20)		-0.228* (-2.23)
Giver's joy			0.0702 (1.05)	0.0674 (1.00)
Altruistic			0.0147 (0.28)	0.0255 (0.49)
Obligation			0.134** (2.74)	0.128** (2.63)
Paternalism			-0.0879 (-1.77)	-0.0883 (-1.77)
Redistribution			-0.0589 (-0.84)	-0.0757 (-1.05)
Does not know yet			0.0331 (0.68)	0.0317 (0.65)
Constant	5.162*** (55.04)	5.335*** (41.13)	5.023*** (44.33)	5.203*** (35.07)
<i>N</i>	320	320	320	320
adj. R^2	0.026	0.031	0.045	0.050

t statistics in parentheses

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table 14: Regression output

	(1)	(2)	(3)	(4)
	logMoneyGiftRel	logMoneyGiftRel	logMoneyGiftRel	logMoneyGiftRel
logPrice	-0.284*** (-5.02)	-0.322*** (-5.28)	-0.297*** (-5.16)	-0.332*** (-5.35)
Time consuming	-0.0346 (-0.37)	-0.0435 (-0.45)	-0.0526 (-0.54)	-0.0652 (-0.65)
Perfect gift	-0.00443 (-0.05)	-0.0112 (-0.11)	0.0518 (0.49)	0.0530 (0.49)
Already bought	0.0433 (0.45)	0.0482 (0.50)	0.0270 (0.28)	0.0295 (0.30)
Partner		0.208 (1.00)		0.219 (1.03)
Parent		0.0558 (0.30)		0.0495 (0.26)
Friend		-0.0941 (-0.43)		-0.0744 (-0.34)
Grandparents		-0.151 (-0.60)		-0.0813 (-0.32)
Brother/Sister		0.0674 (0.34)		0.0767 (0.38)
Giver's joy			0.178 (1.34)	0.175 (1.30)
Altruistic			-0.141 (-1.39)	-0.154 (-1.49)
Obligation			0.161 (1.67)	0.157 (1.62)
Paternalism			0.0702 (0.72)	0.0494 (0.50)
Redistribution			-0.114 (-0.81)	-0.0852 (-0.58)
Does not know yet			-0.0825 (-0.86)	-0.0664 (-0.69)
Constant	0.834*** (4.60)	0.907*** (3.58)	0.725** (3.25)	0.792** (2.68)
<i>N</i>	307	307	307	307
adj. <i>R</i> ²	0.077	0.073	0.079	0.074

t statistics in parentheses

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

5 Conclusion

In this paper, we study the welfare gain of gift-giving with a focus on the “supply side” of gift-giving. Based on a survey among students at the University of Göttingen, we find that the vast majority of gift-givers prefers in-kind gifts as presents compared to gift vouchers. The average present in our survey has a price of 36 Euro and results in a “giver’s surplus” of 10 Euro. This indicates a welfare gain of approximately 143% from the average giver’s perspective.

This implies that even if the valuation of the recipient is below the market value of the present, the welfare effect of gift-giving may be positive. A gift on which the giver spent 100 Euros and which is valued 13% below its price by the recipient and 43% of above its price by the giver then creates an overall welfare gain of 130% (of its price).

The value of a present from the giver’s perspective decreases in the price of the present. On average presents for family members have a higher relative value than for friends and partners.

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Appendix

A.1 Survey

1. Feiern Sie Weihnachten?

- Ja
- Nein

2. Schenken Sie dieses Jahr anderen etwas zu Weihnachten? Falls „Nein“ ist der Fragebogen an dieser Stelle bereits beendet.

- Ja
- Nein

3. Wie viele Weihnachtsgeschenke planen Sie dieses Jahr zu verschenken?

- Anzahl der Geschenke: _

4. Wie viel geben Sie dieses Jahr insgesamt für Weihnachtsgeschenke aus?

- Betrag in Euro, den Sie in etwa ausgeben: _

Ihre drei wichtigsten Geschenke: Bitte geben Sie im Folgenden Auskunft über die drei für Sie wichtigsten Weihnachtsgeschenke. Wenn Sie sich noch nicht für ein bestimmtes Geschenk entschieden haben, versuchen Sie die Fragen danach zu beantworten, wie Ihr Geschenk aller Voraussicht nach aussehen wird.

5. Was verschenken Sie zu Weihnachten?

Bitte benennen Sie Ihre drei wichtigsten Geschenke: Beginnen Sie mit dem Geschenk (Geschenk 1), dem Sie die höchste Priorität beimessen. Sollten Sie einen Gutschein verschenken, schreiben Sie bitte dazu, um was für einen Gutschein es sich handelt.

- Geschenk 1: _
- Geschenk 2: _
- Geschenk 3: _

6. Wer sind die Empfänger Ihrer Geschenke?

- Partner/Partnerin: Geschenk 1: _, Geschenk 2: _, Geschenk 3: _

- Mutter/Vater: Geschenk 1: __, Geschenk 2: __, Geschenk 3: __
- Bruder/Schwester: Geschenk 1: __, Geschenk 2: __, Geschenk 3: __
- Guter Freund/gute Freundin: Geschenk 1: __, Geschenk 2: __, Geschenk 3: __
- Großvater/Großmutter: Geschenk 1: __, Geschenk 2: __, Geschenk 3: __
- Onkel/Tante: Geschenk 1: __, Geschenk 2: __, Geschenk 3: __
- Sohn/Tochter: Geschenk 1: __, Geschenk 2: __, Geschenk 3: __
- Enkel/Enkelin: Geschenk 1: __, Geschenk 2: __, Geschenk 3: __
- Nefte/Nicht: Geschenk 1: __, Geschenk 2: __, Geschenk 3: __
- Sonstige Person: Geschenk 1: __, Geschenk 2: __, Geschenk 3: __

7. Welcher Art sind Ihre Geschenke ?

Ideelle Geschenke sind Geschenke ohne bezifferbaren Gegenwert, z.B. ein gemeinsamer Ausflug oder ein selbstgemaltes Bild. Geschenke, denen ein bezifferbarer Gegenwert gegenüber steht, sind Sachgeschenke, auch wenn diese einen ideellen Charakter haben (z.B. ein Fotobuch, Schmuck, die gemeinsame Lieblingsschallplatte). Sollten Sie nicht sicher sein, in welche der beiden Kategorien Ihr Geschenk einzuordnen ist, behandeln Sie es bitte wie ein Sachgeschenk.

- Sachgeschenk: Geschenk 1: __, Geschenk 2: __, Geschenk 3: __
- Gutschein: Geschenk 1: __, Geschenk 2: __, Geschenk 3: __
- Bargeld: Geschenk 1: __, Geschenk 2: __, Geschenk 3: __
- Ideelles Geschenk: Geschenk 1: __, Geschenk 2: __, Geschenk 3: __
- Sonstiges: Geschenk 1: __, Geschenk 2: __, Geschenk 3: __

8. Haben Sie die Geschenke bereits gekauft?

- Ja: Geschenk 1: __, Geschenk 2: __, Geschenk 3: __
- Nein: Geschenk 1: __, Geschenk 2: __, Geschenk 3: __

9. Welchen Geldbetrag (in vollen Euro) haben Sie für die Geschenke ausgegeben?

Wenn Sie das Geschenk noch nicht gekauft haben, tragen Sie bitte den Geldbetrag ein, den Sie voraussichtlich für das Geschenk ausgeben werden.

- Geschenk 1: Kaufpreis bzw. Höhe des Gutscheins/Geldbetrags in Euro: __
- Geschenk 2: Kaufpreis bzw. Höhe des Gutscheins/Geldbetrags in Euro: __

- Geschenk 3: Kaufpreis bzw. Höhe des Gutscheins/Geldbetrags in Euro: _

10. Wie aufwendig waren Suche, Auswahl und/oder Kauf der Geschenke?

- Geschenk 1: 0 (nicht aufwendig): _, 1: _, 2: _, 3: _, 4: _, 5 (sehr aufwendig): _
- Geschenk 2: 0 (nicht aufwendig): _, 1: _, 2: _, 3: _, 4: _, 5 (sehr aufwendig): _
- Geschenk 3: 0 (nicht aufwendig): _, 1: _, 2: _, 3: _, 4: _, 5 (sehr aufwendig): _

11. Handelt es sich Ihrer Meinung nach um die passenden Geschenke für die Empfänger?

- Geschenk 1: 0 (sehr unpassend): _, 1: _, 2: _, 3: _, 4: _, 5 (sehr passend): _
- Geschenk 2: 0 (sehr unpassend): _, 1: _, 2: _, 3: _, 4: _, 5 (sehr passend): _
- Geschenk 3: 0 (sehr unpassend): _, 1: _, 2: _, 3: _, 4: _, 5 (sehr passend): _

12. Ich verschenke das Geschenk, um dem Empfänger eine Freude zu bereiten.

- Geschenk 1: 0 (trifft nicht zu): _, 1: _, 2: _, 3: _, 4: _, 5 (trifft völlig zu): _
- Geschenk 2: 0 (trifft nicht zu): _, 1: _, 2: _, 3: _, 4: _, 5 (trifft völlig zu): _
- Geschenk 3: 0 (trifft nicht zu): _, 1: _, 2: _, 3: _, 4: _, 5 (trifft völlig zu): _

Ich verschenke das Geschenk, weil ich selbst Freude daran habe, ein Geschenk zu machen.

- Geschenk 1: 0 (trifft nicht zu): _, 1: _, 2: _, 3: _, 4: _, 5 (trifft völlig zu): _
- Geschenk 2: 0 (trifft nicht zu): _, 1: _, 2: _, 3: _, 4: _, 5 (trifft völlig zu): _

- Geschenk 3: 0 (trifft nicht zu): __, 1: __, 2: __, 3: __, 4: __, 5 (trifft völlig zu):

—

Ich verschenke das Geschenk, weil es üblich ist bzw. weil Geschenke zu Weihnachten gehören.

- Geschenk 1: 0 (trifft nicht zu): __, 1: __, 2: __, 3: __, 4: __, 5 (trifft völlig zu):

—

- Geschenk 2: 0 (trifft nicht zu): __, 1: __, 2: __, 3: __, 4: __, 5 (trifft völlig zu):

—

- Geschenk 3: 0 (trifft nicht zu): __, 1: __, 2: __, 3: __, 4: __, 5 (trifft völlig zu):

—

Ich verschenke das Geschenk, um dem Empfänger etwas zu kaufen, das er sich selbst nicht kaufen *würde*.

- Geschenk 1: 0 (trifft nicht zu): __, 1: __, 2: __, 3: __, 4: __, 5 (trifft völlig zu):

—

- Geschenk 2: 0 (trifft nicht zu): __, 1: __, 2: __, 3: __, 4: __, 5 (trifft völlig zu):

—

- Geschenk 3: 0 (trifft nicht zu): __, 1: __, 2: __, 3: __, 4: __, 5 (trifft völlig zu):

—

Ich verschenke das Geschenk, um dem Empfänger etwas zu kaufen, das er sich selbst nicht kaufen *könnte*.

- Geschenk 1: 0 (trifft nicht zu): __, 1: __, 2: __, 3: __, 4: __, 5 (trifft völlig zu):

—

- Geschenk 2: 0 (trifft nicht zu): __, 1: __, 2: __, 3: __, 4: __, 5 (trifft völlig zu):

—

- Geschenk 3: 0 (trifft nicht zu): __, 1: __, 2: __, 3: __, 4: __, 5 (trifft völlig zu):

—

Ich verschenke das Geschenk, um dem Empfänger etwas zu schenken, das ihn in seiner Entwicklung unterstützt.

- Geschenk 1: 0 (trifft nicht zu): __, 1: __, 2: __, 3: __, 4: __, 5 (trifft völlig zu):

—

- Geschenk 2: 0 (trifft nicht zu): __, 1: __, 2: __, 3: __, 4: __, 5 (trifft völlig zu):

—

- Geschenk 3: 0 (trifft nicht zu): __, 1: __, 2: __, 3: __, 4: __, 5 (trifft völlig zu):

—

Ich verschenke das Geschenk, um dem Empfänger etwas zu schenken, das ihm voraussichtlich gefallen wird, was er aber noch nicht kennt.

- Geschenk 1: 0 (trifft nicht zu): __, 1: __, 2: __, 3: __, 4: __, 5 (trifft völlig zu):

—

- Geschenk 2: 0 (trifft nicht zu): __, 1: __, 2: __, 3: __, 4: __, 5 (trifft völlig zu):

—

- Geschenk 3: 0 (trifft nicht zu): __, 1: __, 2: __, 3: __, 4: __, 5 (trifft völlig zu):

—

13. Handelt es sich bei mindestens einem Geschenk um ein Sachgeschenk?

Ideelle Geschenke sind Geschenke ohne bezifferbaren Gegenwert, z.B. ein gemeinsamer Ausflug oder ein selbstgemaltes Bild. Geschenke, denen ein bezifferbarer Gegenwert gegenüber steht, sind Sachgeschenke, auch wenn diese einen ideellen Charakter haben (z.B. ein Fotobuch, Schmuck, die gemeinsame Lieblingschallplatte). Sollten Sie nicht sicher sein, in welche der beiden Kategorien Ihr Geschenk einzuordnen ist, behandeln Sie es bitte wie ein Sachgeschenk.

- Ja
- Nein

14. Wenn Sie anstelle des jeweiligen Sachgeschenks einen **Gutschein** verschenken würden, in welcher Höhe (in vollen Euro) würden Sie diesen Gutschein verschenken wollen?

Beziehen Sie sich im Folgenden nur auf das Sachgeschenk bzw. die Sachgeschenke. Behalten Sie bitte die bisherige Nummerierung bei. Wenn beispielsweise nur Geschenk 2 ein Sachgeschenk ist, füllen Sie bitte nur die Zeile "Geschenk 2" aus.

- Geschenk 1: Höhe des Gutscheins in Euro: __
- Geschenk 2: Höhe des Gutscheins in Euro: __
- Geschenk 3: Höhe des Gutscheins in Euro: __

15. Welchen Betrag (in vollen Euro) müsste man Ihnen zahlen, damit Sie anstelle des jeweiligen Sachgeschenks einen **Gutschein** in Höhe des Kaufpreises des Sachgeschenks verschenken würden?

Wenn es Ihnen egal ist, ob Sie das Sachgeschenk oder einen Gutschein verschenken, geben Sie bitte "0 Euro" an. Wenn Sie für x Euro auf das Sachgeschenk verzichten würden und stattdessen einen Gutschein verschenken würden, schreiben Sie bitte „ x Euro“. Wenn Sie unbedingt das Sachgeschenk und auf gar keinen Fall einen Gutschein verschenken möchten, schreiben Sie bitte "keine Angabe".

- Geschenk 1: Betrag in Euro, den Sie mindestens erhalten müssten: _
- Geschenk 2: Betrag in Euro, den Sie mindestens erhalten müssten: _
- Geschenk 3: Betrag in Euro, den Sie mindestens erhalten müssten: _

16. Wenn Sie anstelle des jeweiligen Sachgeschenks **Bargeld** verschenken würden, in welcher Höhe (in vollen Euro) würden Sie Bargeld verschenken wollen?

- Geschenk 1: Geldbetrag in Euro: _
- Geschenk 2: Geldbetrag in Euro: _
- Geschenk 3: Geldbetrag in Euro: _

17. Welchen Betrag (in vollen Euro) müsste man Ihnen zahlen, damit Sie anstelle des jeweiligen Sachgeschenks **Bargeld** in Höhe des Kaufpreises des Sachgeschenks verschenken würden?

Wenn es Ihnen egal ist, ob Sie das Sachgeschenk oder Bargeld verschenken, geben Sie bitte "0 Euro" an. Wenn Sie für x Euro auf das Sachgeschenk verzichten würden und stattdessen Bargeld verschenken würden, schreiben Sie bitte „ x Euro“. Wenn Sie unbedingt das Sachgeschenk und auf gar keinen Fall Bargeld verschenken möchten, schreiben Sie bitte "keine Angabe".

- Geschenk 1: Betrag in Euro, den Sie mindestens erhalten müssten: _
- Geschenk 2: Betrag in Euro, den Sie mindestens erhalten müssten: _
- Geschenk 3: Betrag in Euro, den Sie mindestens erhalten müssten: _

18. Handelt es sich bei mindestens einem Geschenk um einen Gutschein?

19. Wenn Sie anstelle des jeweiligen Gutscheins Bargeld verschenken würden, in welcher Höhe (in vollen Euro) würden Sie Bargeld verschenken wollen?

- Geschenk 1: Geldbetrag in Euro: _
- Geschenk 2: Geldbetrag in Euro: _
- Geschenk 3: Geldbetrag in Euro: _

20. Welchen Betrag (in vollen Euro) müsste man Ihnen zahlen, damit Sie anstelle des jeweiligen Gutscheins Bargeld in Höhe des Kaufpreises des Sachgeschenks verschenken würden?

Wenn es Ihnen egal ist, ob Sie einen Gutschein oder Bargeld verschenken, geben Sie bitte "0 Euro" an. Wenn Sie für x Euro auf den Gutschein verzichten würden und stattdessen Bargeld verschenken würden, schreiben Sie bitte „ x Euro“. Wenn Sie unbedingt den Gutschein und auf gar keinen Fall Bargeld verschenken möchten, schreiben Sie bitte "keine Angabe".

- Geschenk 1: Betrag in Euro, den Sie mindestens erhalten müssten: _
- Geschenk 2: Betrag in Euro, den Sie mindestens erhalten müssten: _
- Geschenk 3: Betrag in Euro, den Sie mindestens erhalten müssten: _

Allgemeine Informationen

Bitte machen Sie abschließend Angaben zu Ihrer Person.

21. Geschlecht:

- männlich: _
- weiblich: _

22. Wie alt sind Sie?

- Ihr Alter in Jahren: _

23. In welchem Studienabschnitt befinden Sie sich?

- Bachelor: _
- Master: _
- Diplom: _

- Promotion: _
 - Sonstiges: _
24. Wenn Sie Student sind:
In welchem Semester studieren Sie?
- Semesteranzahl: _
25. Sind Sie Student/in bzw. Mitarbeiter/in der Wirtschaftswissenschaftlichen Fakultät:
- Ja
 - Nein, (optional andere Fakultät): _
26. Haben Sie schon einmal Vorlesungen im Bereich Volkswirtschaftslehre besucht?
- Ja
 - Nein
27. Welches Einkommen steht Ihnen monatlich zur Verfügung?
- weniger als 500 EUR
 - 500 EUR - 1000 EUR
 - 1000 EUR - 1500 EUR
 - 1500 EUR - 2000 EUR
 - mehr als 2000 EUR
 - keine Angabe

A.2 In-kind Gift vs. Gift Card

In addition to asking for the amount of money participants would accept as a compensation for exchanging their in-kind gift by a gift of money, and asking for an equivalent hypothetical gift of money, we have also asked participants for the compensation they demand for an exchange of their in-kind gift by a gift card of a monetary value according to the price of the present. This compensation indicates the surplus of the present from the givers' perspective.

Table 15 presents summary statistics.

Table 15: Average Amount Paid and Values of Gifts

Variable	Mean	Std. Dev.	Min.	Max.	N
Price	35.698	44.676	1	550	368
Relative Value	142.837	100.514	100	1000	368
Absolute Value	46.101	56.7	5	550	368

Table 16 and 17 report average values for presents that have (not) already been bought. The value of presents from the givers' perspective is higher for presents that have been already bought than for presents that have not been bought yet. Similar to our findings in the main part of the paper, an endowment effect seems to be present.

Table 16: Summary statistics – presents that have been already bought

Variable	Mean	Std. Dev.	Min.	Max.	N
Price	37.819	49.309	1	550	232
Relative Value	150.787	120.95	100	1000	232
Absolute Value	49.866	62.519	5	550	232

Table 17: Summary statistics – presents that have not been bought yet

Variable	Mean	Std. Dev.	Min.	Max.	N
Price	32.081	35.281	5	220	136
Relative Value	129.275	46.255	100	400	136
Absolute Value	39.676	44.561	5	270	136

If we group presents by price category, we find similar results as in the main part of our paper. The relative value tends to decrease with the price of the present with the exception of presents between Euro 71 and 140 (Table 18).

If we measure the value of a present by the compensation demanded for a gift-card instead of an in-kind gift, results are different from the findings in the main part of the paper when we group the relative value of a present by the group of recipients. The highest value of in-kind gifts is reported for friends and parents. The lowest value is reported for brothers and sisters (Table 19).

If we group the presents' value by gift category, the highest value (measured in gift-cards) on average is reported for houseware, decoration, and food. The lowest value is reported for trips (Table 20).

The regression output for the value of presents measured by the demanded compensation for gift cards instead of an in-kind gift is reported in Table 21. The price of the present reduces the value of the present with an elasticity of -1.4 to 1.6 . Giver's joy

Table 18: Average value of in-kind gifts

Price of Presents in €	Ø Value in % (SE)	No. of obs.	Share in %
0-35	146 (5.6)	247	75.8
36-70	131 (8.6)	45	13,8
71-140	145 (15)	23	7
> 140	122 (4.9)	11	3.3

Table 19: Value of in-kind gifts by recipient

Recipient	Grandparents/ Aunt/Uncle	Brother/ Sister	Parent	Partner	Friend	Total
No of obs.	26	66	126	56	36	326
Value in euro	25	33	45	83	26	46
Price in euro	18	27	32	63	19	35
Value (rel.) in %	139	134	158	136	166	143
Std. err. value (%)	10.3	7.3	11.6	8.2	26.5	4.5

Table 20: Value of In-kind Gifts by Gift Category

Gift Category	No of obs.	Value in €	Price in €	Relative Value (SE)
Game	16	33	23	162 (22)
Jewellery	24	76	61	124 (7)
Food	34	27	18	175 (26)
Cosmetics	17	37	28	127 (6)
Clothes	29	49	41	129 (10)
Accessory	24	47	32	137 (13)
Houseware	38	49	28	183 (26)
Photo	13	37	30	132 (18)
Electronics	36	53	40	140 (10)
Decoration	26	41	28	179 (39)
Book	34	19	14	135 (7)
Trip	19	79	65	121 (8)
Other	15	84	74	151 (27)

increases the value of a present by 16%. The reported obligation to make a present increases the value of a present by 14%. Paternalism tends to reduce the value of a present, but only to a small extent and only in one specification of the estimation.

Table 21: Regression output

	(1)	(2)	(3)	(4)
	logValueRel	logValueRel	logValueRel	logValueRel
logPrice	-0.143*** (-5.41)	-0.159*** (-5.58)	-0.136*** (-5.23)	-0.151*** (-5.40)
Time consuming	0.0161 (0.37)	0.00391 (0.09)	0.00600 (0.14)	-0.00124 (-0.03)
Perfect gift	0.0421 (0.92)	0.0428 (0.93)	0.00278 (0.06)	0.00143 (0.03)
Already bought	0.0683 (1.55)	0.0761 (1.70)	0.0682 (1.56)	0.0779 (1.76)
Partner		0.0240 (0.25)		0.0224 (0.23)
Parent		-0.0251 (-0.29)		-0.00943 (-0.11)
Friend		-0.0562 (-0.54)		-0.0601 (-0.60)
Grandparents		-0.0864 (-0.74)		-0.0761 (-0.66)
Brother/Sister		-0.125 (-1.34)		-0.115 (-1.25)
Giver's joy			0.163** (2.72)	0.159** (2.62)
Altruistic			0.0688 (1.49)	0.0677 (1.45)
Obligation			0.143** (3.29)	0.140** (3.20)
Paternalism			-0.0776 (-1.76)	-0.0881* (-1.98)
Redistribution			-0.0197 (-0.31)	-0.0175 (-0.27)
Does not know yet			-0.000297 (-0.01)	0.00300 (0.07)
Constant	5.273*** (62.41)	5.365*** (45.47)	5.049*** (50.06)	5.137*** (38.65)
<i>N</i>	325	325	325	325
adj. <i>R</i> ²	0.080	0.080	0.128	0.129

t statistics in parentheses

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$