Do consumers choose to stay ignorant?
The role of information in the purchase of ethically certified products

Simon Felgendreher[*]

Abstract

The paper analyzes how consumers access information about ethical certificates and how access to this information influences consumers' purchasing decisions. Using an experimental market game and letting consumers choose between a certified and an uncertified product, this study finds that consumers do not ignore information about the effectiveness of ethical certificates in a systematic manner. Also, as long as the access to information is costless, varying the way it is provided to consumers does not influence the purchasing decision between a certified and an uncertified product. However, consumers are extremely price sensitive: once a small cost for information is introduced, most consumers are not willing to access it, and the share of consumers buying the certified product decreases significantly.

Keywords: information, strategic ignorance, experiment, market, ethical consumption, Fair Trade, Fairtrade, ethical labels

JEL Classification: C91; D12; D64; D89

1. Introduction

A broad range of voluntary ethical certificates have been established to guarantee minimal security and living standards for workers in developing countries. These certificates are ubiquitous in the market, and in recent years, the growth rate of the market for certified products has been dramatic (Fairtrade International 2017). Even though there is plenty of information available about the different ethical certificates, little information is provided to consumers about the effectiveness of turning the price markup paid by consumers into improvements of the living conditions of the primary good producers. Some scholars have therefore suggested that ethical certificates should display the information about the share of the price markup that is send to the producers in developing countries directly on the packaging (Griffith 2010; Durevall 2017). This could increase transparency on how the additional funds of the price markup are used, similar to the common practice of aid organizations to provide information about the distribution of funds for administrative and actual developing projects (Barrett 2011).

However, little is known about how consumers perceive ethical certificates and if they are willing to take additional information into account when making their purchasing decisions. More specifically, the question arises whether consumers actually want to access such information, even when it is provided to them without any extra cost. In a variety of situations, researchers have shown that individuals prefer not to access information about the consequences of their behavior for others (e.g., Conrads and Irlenbusch 2013; Dana et al. 2007; Kajackaite 2015). This can be explained by the desire to comply with social norms or self-image concerns (Krupka and Weber 2013; Nyborg 2011). This interpretation would imply that individuals are not genuinely interested in the well-being of others, but rather behave pro-socially to avoid disutility from uncomfortable feelings that their selfish actions might trigger otherwise.

This might also be true when consumers are confronted with the decision whether to buy ethically certified products. Here, avoiding additional information about certificates might be a welcome excuse for consumers not to learn about the consequences of their choice for others. If this behavioral pattern is observed in the market for certified goods, it has implications for the way information should be displayed. Therefore, the aim of this study is to learn more about the way individuals access information about ethical certificates. By using an experimental market where individuals have to choose between a certified and an uncertified product, I analyze whether and under which specific conditions consumers access

information about the effectiveness of an ethical certificate and whether the way consumers access the information also influences the purchasing decision of certified goods.

The results of the experimental study show no evidence that individuals ignore information about the effectiveness of certificates in a systematic manner. Also, varying the way information is provided does not influence the product choice of consumers as long as the information is costlessly accessible. In a further step, the sensitivity of consumers to a change in price of information about the certificate is studied. I find that individuals react strongly to a slight change in price. Consistent with the findings of the first part of the experiment, results show that most consumers are not willing to pay for information about the ethical certificate. If information about the ethical premium becomes costly, the share of individuals who do not request the information increases drastically, and the share of individuals buying the certified product decreases significantly, compared with the case where information is costless.

2. Background

2.1. Related Literature

There have been different theoretical explanations as to why individuals contribute to public goods and donate to charities. Economic models of social preferences explain giving by the utility individuals receive from their donations. For example, for individuals with altruistic motives, their utility is increasing in the output that their donation causes on others wellbeing (Becker 1976). Another motive to donate is the feel of a "warm glow" when contributing to a good cause (Andreoni 1990). Here, individuals derive utility from the act of giving itself, regardless of its effect on the specific consequences for the payoff of another party.

Individuals with purely altruistic motives that have to decide how to allocate a fixed amount of money between themselves and another party might want to access all information as long as it is costless and potentially relevant for the payoff consequences of the involved subjects. For instance, consider a dictator game where the money sent by the dictator to the recipient will be multiplied by a factor such that the actual amount the recipient gets is either smaller or larger than the amount sent. Since the utility of the dictator is an increasing function in the monetary payoff of the recipient, the exact factor by which the amount sent is multiplied would be relevant information for the dictator. In contrast, individuals that solely want to contribute because of a feeling of warm glow might be indifferent to additional

information about the payoff consequences for the recipient, since it does not influence the utility they receive from the donation.

There may be also cases where individuals with other-regarding preferences actively choose to forgo information about the payoff consequences of their actions. For example, if self-image concerns are taken into account in the utility function, it can be shown that under specific conditions, individuals might prefer not to learn about the effectiveness of their contributions to a public good (Nyborg 2011). The logic is that the additional information has the potential to damage the self-image of a person if he or she decides not to contribute to the public good. These self-image concerns are therefore closely related to the psychological concept of cognitive dissonance, which describes individuals as experiencing discomfort when not behaving in line with their moral values (Festinger 1962).

Also, models that explain contributions to public goods or charities by the existence of social norms rather than other-regarding preferences can predict that individuals prefer not to access information about payoff consequences (Krupka and Weber 2013). In the model by Krupka and Weber, an individual's utility decreases if his or her behavior is not in line with an existing social norm. A social norm is defined as "collective perceptions, among members of a population, regarding the appropriateness of different behaviors" (Krupka and Weber 2013, 499). Thus, the utility for an individual is context dependent, contingent on the individual's behavior in specific situations. Krupka and Weber show that their approach is able to explain why the choices made by individuals in a broad range of dictator games differ depending on how the situation is presented, even if the final outcomes individuals have to choose between are the same. This result holds even when individuals are not observed when making their decision and are anonymous. When referring to social norms in the following, one can think about internalized norms that influence individual's behavior even if decisions are made in private.

In the following experiment, individuals can decide whether they want to access information about the effectiveness of specific ethical certificates in terms of improving the living conditions of primary good producers. Ignoring this costless information will be subsequently defined as strategically ignorant behavior. If it is observed that individuals choose to systematically ignore information about the effectiveness of ethical certificates and at the same time become less likely to buy certified products, it will be an indication that self-image or social norm compliance concerns are at play when individuals make their decisions in the market for ethically certified goods.

A product is defined as ethically certified if it is certified by an independent third party and complies with a range of principles that aim to improve the living conditions of the primary good producer in developing countries. The most well-known certificate in this context is the Fairtrade Label, issued by Fairtrade International (Dragusanu et al. 2014). In the case of the Fairtrade Label, the two main principles are a price floor and a product premium. The price floor is the guaranteed minimum price paid to the producer, even if the world market price for the commodity is lower. It is determined in a way that will guarantee a living wage for the producer and people employed in the sector. The product premium is paid to the cooperative of producers, who themselves decide on the use of the funds. Typical areas of investment are new machinery to increase farmers' productivity and community infrastructure, such as investments in schools or health facilities (Dragusanu et al. 2014).

Fairtrade products are normally more expensive, and the price markup consumers pay finances the activities described before. However, as Durevall (2017) shows for the Swedish coffee market, the actual price markup consumers pay in the supermarket for Fairtrade coffee exceeds by far the amount that is send to the producer country. Conservative calculations by the author estimate that of the price markup charged to consumers for non-organic Fairtrade coffee, 61% goes to roasters and retailers, 8% to Fairtrade Sweden and only 31% to the producer countries. Durevall explains the high rents to roasters and retailers of Fairtrade certified products by the market power of only a few big companies dominating the Swedish coffee market. Therefore, transparent information on the packaging of products on the share of the price markup that is actually send to the primary good producers might allow consumers to make better informed decisions. Over time, it might also lead to more competition in the market for Fairtrade products and a decrease in the rents for retailers.

Besides Fairtrade, other ethical certificates are also available. These vary widely in terms of the standards a producer has to fulfill to be certified (Potts et al. 2014). In contrast to other certificates, such as the organic label, there is no legal regulation of minimal standards that have to be fulfilled for introducing an ethical certificate (Butler and Vossler 2017). As a consequence, the beliefs of consumers about the credibility of such certificates can vary widely. Even without any additional information, they might believe that certain ethical certificates improve the living conditions of primary producers while others do not. Thus, if the additional information about a specific certificate implies that it yields a considerable contribution to a public good in a developing country, this information probably has a stronger impact on consumers' choice when the initial belief about the size of the contribution entailed in the certificate has been low.

The following section formulates hypotheses of consumers' behavior in the market for ethically certified products with respect to their product choice and their choice to access information. These hypotheses specifically focus on testing to which extent norm compliance and self-image concerns are present in the market for certified goods and are subsequently tested in a laboratory market.

2.2. Hypotheses

Assume that individuals have to decide between two variants of a product. The variants are homogenous such that the direct utility from consumption is the same for both. One of the variants, product B, includes a price markup for compliance with a voluntary ethical standard. This price markup, called the ethical premium, is exclusively reserved to contribute to a public good. However, knowing only the total price of product B, individuals cannot automatically deduce the size of the ethical premium and distinguish it from other price components. As a starting point, it is assumed that individuals are explicitly informed about the exact size of the ethical premium and that the price of product B is strictly higher than the price of the alternative, product A.

For completely selfish individuals, the optimal product choice is always the cheaper one, product A. Individuals that are motivated by a feeling of a warm glow might choose the certified product. However, the exact size of the ethical premium does not matter for their choice, since they derive utility from the donation regardless of its effectiveness. For pure altruists, the size of the ethical premium is crucial since their utility is increasing in the effect their donation has on the wellbeing of others. As a consequence, pure altruists become more likely to buy the certified product B the higher the ethical premium as a share of the total price. The same is true for individuals motivated by social norm compliance: if buying the uncertified product is seen as increasingly socially inappropriate the larger the ethical premium of product B, individuals might feel more willing to buy product B to avoid disutility from noncompliance to the social norm. Thus, if we assume that at least a share of consumers either has altruistic motives or cares about social norm compliance, we expect that the purchasing decision of buying the certified product B is positively correlated with the ethical premium.

Hypothesis 1:
The higher the ethical premium, the more likely consumers are to choose the ethically certified product over an uncertified alternative.

For now, we have assumed that individuals are automatically informed about the exact size of the ethical premium. In reality, this might not always be the case, because information may not be displayed directly, but rather may be hidden on the back of the packaging. For purely altruistic individuals (but who do not care about warm glow, their self-image or norm compliance), there is no reason to avoid such information. Learning about the exact size of the ethical premium can only lead to a better decision that increases their utility. Instead, individuals that are only motivated to give due to a feeling of warm glow might ignore such information, but we do not expect that the decision whether to ignore the information or not changes their actual product decision.

The situation is different if individuals derive utility from norm compliance. If an individual acquires information about the size of the ethical premium, she can update her belief about whether it is seen as socially appropriate to buy the certified product. If the information is not available, the belief about what constitutes a socially appropriate behavior is much vaguer, since she has to decide based on a general belief about the size of the ethical premium. Hence, compared with the case when the ethical premium is high *and* she has access to this information, she might be better off not having the information, because the social norm under ignorance is vaguer. This will give her the opportunity to buy the cheaper product A while avoiding disutility from noncompliance to a stronger social norm. The predictions will be identical if individuals have self-image concerns instead, since here again, accessing additional information might lead to disutility from a deterioration of self-perception. Thus, for individuals that are eager to act in accordance with social norms or are concerned about their self-image, we expect to observe the following behavior in the market for ethically certified goods.

Hypothesis 2:
Individuals having the option to ignore information about the ethical premium are less likely to buy the certified product B than individuals who are automatically informed about the size of the ethical premium.

The choice of whether to access information about the ethical premium might also depend on the individuals' ex ante belief about the size of the premium. As an example, imagine a consumer in a supermarket who is confronted with the choice whether to buy an ethically certified product. Further, assume that the consumer recognizes the certificate on the product

and believes that it is trustworthy in terms of representing a sizable price markup that is reserved for the ethical premium. In this case, ignoring information about the *exact* price markup of the ethical premium cannot increase the utility of a consumer motivated by norm compliance, because even if she ignores this specific information, she knows about the general effectiveness of the certificate and that it would be socially appropriate to buy the certified product.

The situation is different if the consumer ex ante does not believe that the certificate represents a sizable price markup reserved for the primary good producer. Here, she might have an incentive to ignore the information. Not knowing the exact size of the ethical premium, she might choose the cheaper uncertified product without disutility from not following a specific norm. Thus, for individuals driven by concerns for social norm compliance (or self-image), their ex ante beliefs about the ethical premium can influence their decision whether to stay ignorant. For purely altruistic consumers, differences in ex ante beliefs do not influence their behavior, since accessing the information should be chosen regardless of belief. Similarly, ex ante beliefs about the size of the premium should not influence the behavior of individuals with warm glow preferences. Hence for the share of consumers that care about norm compliance or self-image, the following hypothesis should hold.

Hypothesis 3:
The lower the ex ante belief about the size of the ethical premium included in the product price, the higher the share of consumers ignoring information about the exact size of the premium.

The next section describes the laboratory setting that is used to test these three hypotheses empirically.

3. Part 1 of the Experiment

3.1. Experimental Design

The experimental design is based on the posted offer market game that was first used by Plott and Smith (1978). Cason and Gangadharan (2002), Rode et al. (2008), and Valente (2015) have used this market game to study different aspects of markets for ethically certified products. These studies focus on the interaction of supply and demand and the emergence of market equilibria. The following experiment focuses only on the demand side of certified goods, since the aim is to analyze consumers' consumption choices and control for strategic interactions.

The experiment was carried out at MELESSA, the computer laboratory at the University of Munich, and the software used was z-Tree (Fischbacher 2007). Participants were recruited using the software ORSEE (Greiner 2015). Twelve experimental sessions were conducted, with a total of 287 participants. The sessions lasted for approximately one hour, and participants earned on average €12.4, including a €4 show-up fee. The experiment consisted of parts 1 and 2, each with seven rounds, two of which were randomly selected for payoff. In all but one session, 24 individuals participated and were divided into groups of 8 players, in which they stayed over the course of the whole experiment. Out of the 8 players, 2 were randomly assigned the role of producers and the other 6 were assigned the role of consumers.[1]

In each round, the course of action was as follows: In the first stage, the producers each offered one product for a given price. In the second stage, the consumers had to choose which producer's product they wanted to buy. They had to buy one unit of the good from one of the producers in each round. Consumers were exogenously endowed in each round with a budget of 50 points. One point was equivalent to 10 euro cents. Consumers would keep the money they did not spend on the product purchase, paid to them if the round were randomly selected for payoff. They did not get any direct utility from the goods they purchased. After the consumers made their purchase decisions, the round payoffs were calculated and a new round started.

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[1] There were 24 participants in each session, except for one session that had only 23 because not enough participants showed up. In the session with only 23 participants, one group consisted only of 7 individuals instead of 8, but otherwise there was no difference.

One producer was uncertified, designated as producer A, while producer B was certified. Their products were offered at exogenously given prices.[2] These prices consisted of two or three components, depending on the producer's type. The first component was the baseline cost, which amounted to 20 points for both types and was constant over all periods. The second component was the producer rent, representing the profit a producer would get from selling one unit of the good. The third component, charged only by producer B, was an ethical premium called the Fair Work premium, which would be donated to a hospital in rural Ethiopia that was a partner project of the well-known charity Misereor in Germany.[3] In the instructions, participants were informed that even small contributions could have an impact on providing basic health services for up to a million inhabitants in the region.

The experiment consisted of two treatments that differed in the minimum amount of the Fair Work premium charged by producer B. In the Strong Certificate Treatment (SCT), the Fair Work premium was at least 5 points. In the Weak Certificate Treatment (WCT), the Fair Work premium had a lower bound at 0 points. In both treatments, participants were informed in the instructions before the start of the first round about the lower bound of the Fair Work premium.

Table 1 gives an overview of the average price structure in the treatments in the first seven rounds of the experiment. The prices were chosen such that the total price of products A and B were always the same in each round across treatments, to avoid differences in behavior due to income effects. Thus, only the price structure differed across treatments. The Fair Work premium in product B was on average one point higher and the profit of the producer one point lower in the SCT than in the WCT. For product A, the price structure was identical in both treatments. For details on the specific prices in each round and treatment, see section A.1 in the appendix.

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[2] Thus, the producers could not decide on the prices at which they offered their goods. At the end of the experiment, the producers were informed of the prices at which they had offered their goods and how many units they had sold in each round.

[3] According to a report by the Diakonie (2002), Misereor is among the 20 best-known charity organizations in Germany.

Table 1. Average price structure in the treatments in rounds 1–7 (part 1)

| | Strong Certificate Treatment | | | | Weak Certificate Treatment | | | |
	Mean	Std. dev.	Min.	Max.	Mean	Std. dev.	Min.	Max.
Product A								
Baseline Cost	20.00	0	20	20	20.00	0	20	20
Profit	10.29	2.25	7	13	10.29	2.25	7	13
Total price	30.29	2.25	27	33	30.29	2.25	27	33
Product B								
Baseline Cost	20.00	0	20	20	20.00	0	20	20
Profit	7.57	2.13	4	10	8.57	3.33	4	14
FW premium	8.14	3.64	5	13	7.14	4.71	1	13
Total price	35.71	2.92	31	41	35.71	2.92	31	41

The information about the Fair Work premium was provided differently to half the consumers in each group. For three consumers, the prices of products A and B and the exact size of the Fair Work premium were displayed on the screen when they were making their decision (Full Info group). Since they knew from the instructions that the baseline production cost for both producers was 20 points, they could infer the rent for both producers before making their decision. For the other three consumers, the Fair Work premium was not initially displayed on the screen, but only a button saying "Fair Work Premium" (Hidden Info group). These consumers were informed that the exact amount of the Fair Work premium would be displayed if they decided to click the button without any additional cost. Nothing else differed between the two types of consumers. For an illustration how the screens for the consumers looked in the experiment and a translation of the instructions, see section A.3. and A.4. in the appendix.

The two treatments and the two different consumer groups led to a 2×2 design in the first seven rounds. An overview of the treatments is given in table 2.

Table 2. Overview of the treatments in part 1 of the experiment

Treatment	Lower bound for FWP	Size of FWP displayed initially on screen	Number of observations
Strong Certificate Treatment			
Full Info	*Yes*	*Yes*	54
Hidden Info	*Yes*	*No*	54
Weak Certificate Treatment			
Full Info	*No*	*Yes*	53
Hidden Info	*No*	*No*	54

3.2. Results

Table 3 shows the average share of consumers in each treatment that chose the product with the Fair Work premium. The share is relatively high in both treatments, with an average of 38 percent choosing the certified product. Figure 1 shows the frequency of consumers'

choice of the certified product in each treatment. As can be seen, this frequency is relatively uniformly distributed in the SCT, with a lot of variation among individuals. In comparison, the share of consumers that never chose the certified product is much higher in the WCT (15.7 versus 22.4 percent), and no consumer in this treatment chose the certified product B in six or seven rounds. This latter observation can be explained by the fact that the Fair Work premium was extremely low in two rounds (only 1 or 2 points) in the WCT.

Further, different factors influencing the consumers' choice can be disentangled. Table 4 depicts average marginal effects for regressions with the probability of choosing product B as the dependent variable, taking into account only Full Info consumers from both treatments at this point. Both the size of the Fair Work premium and the general price difference between products B and A had a significant influence on the purchasing decision of the consumers. Consumers seem to be more sensitive to a change in the price difference (defined as price of product B minus price of product A) than to a change in the Fair Work premium. Thus, the results from tables 3 and 4 characterize consumers as we encounter them in many real-world markets: individuals who are not entirely driven by selfish interests but are highly sensitive to changes in the price structure of substitute goods.

Table 3. Average share of the certified product B in rounds 1–7

	Mean	Std. Dev.	Min.	Max.
Strong Certificate Treatment	0.41	0.49	0.20	0.71
Weak Certificate Treatment	0.35	0.47	0.02	0.71

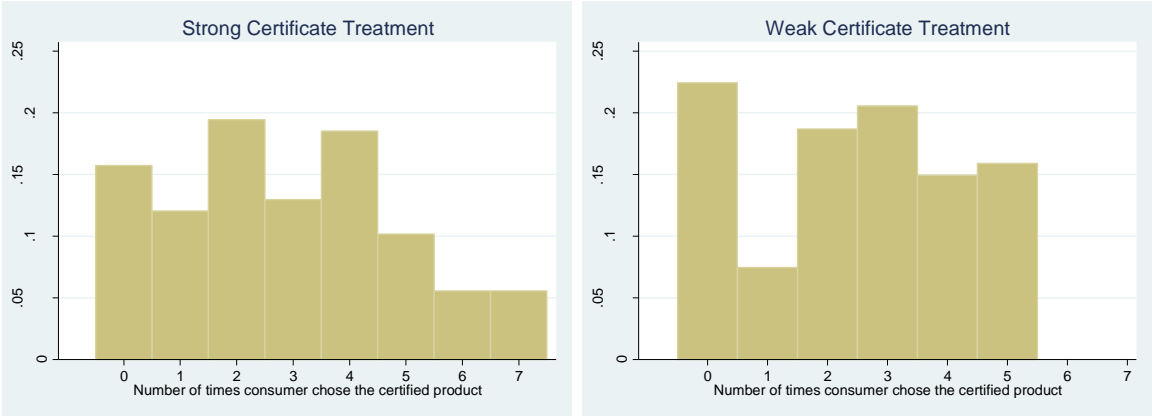*Figure 1. Frequency of consumers choosing the certified product*

Table 4. Consumers' product choice under Full Info

Dependent Variable	Purchase of Certified Product	
	Probit	Random Effects Probit
FW premium	0.031***	0.029***
	(0.003)	(0.004)
Price difference	-0.122***	-0.119***
	(0.010)	(0.010)
Strong Certificate Treatment	0.037	0.040
	(0.032)	(0.057)
Observations	749	749

Note: Average marginal effects; robust standard errors in parentheses.*** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

The first result is therefore in line with hypothesis 1.

Result 1:

The size of the ethical premium has a significant and positive effect on the decision to buy the certified product.

Turning to hypothesis 2, we expect to see a divergence in the product choice when comparing Full Info to Hidden Info consumers. When motivated by concerns about norm compliance or their self-image, according to hypothesis 2, consumers in the Hidden Info group are expected to take the opportunity to avoid the information about the exact premium and choose the uncertified good directly, whereas Full Info consumers lack this opportunity. For purely altruistic consumers, we do not expect to observe such a divergence.

Figures 2 and 3 depict the share of consumers choosing the certified products disaggregated by consumer groups. The continuous lines show the consumers in the Full Info group, and the dashed lines indicate the Hidden Info consumers. Within each treatment, the lines follow each other closely. It is apparent that there are no considerable differences in consumer choice within each of the treatments.

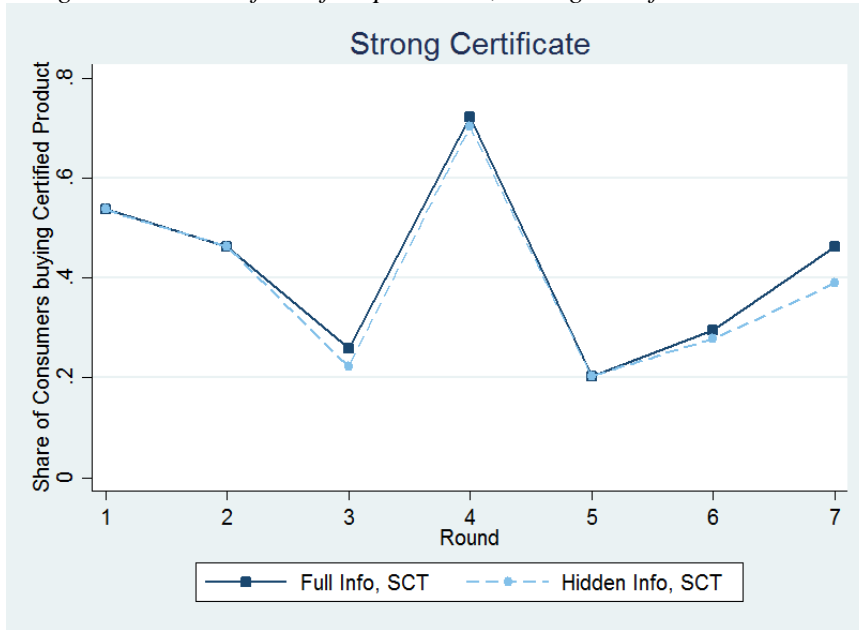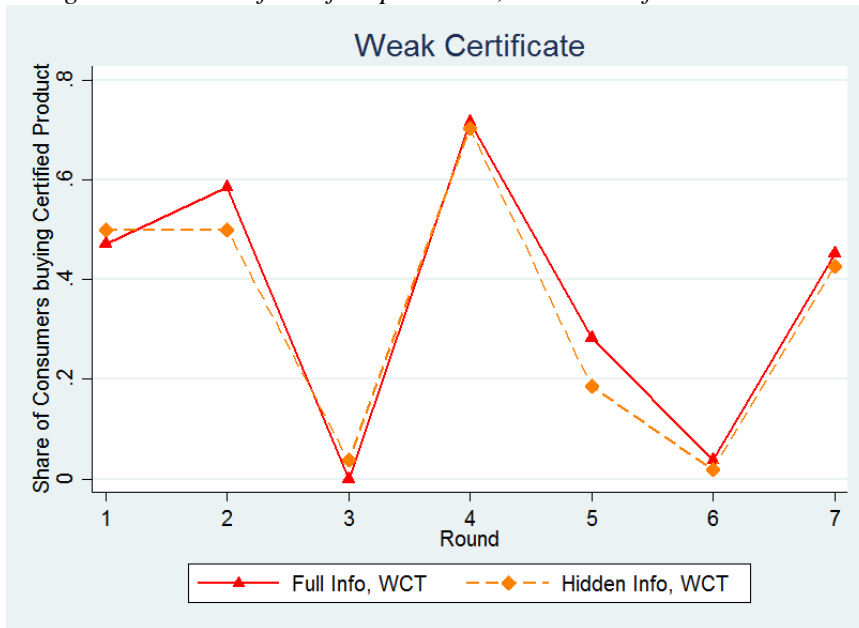*Figure 2. Choice of certified product B, Strong Certificate Treatment*

Figure 3. Choice of certified product B, Weak Certificate Treatment

The result is corroborated by the regression results in table 5. In columns 1 and 2, no significant difference in product choice can be found between consumer groups within each treatment. In columns 3 and 4, an additional variable for the actual choice to stay ignorant or not is included, taking the value 1 for those choosing to stay ignorant in the Hidden Info case. This subgroup is significantly less likely to buy the product with the Fair Work premium.

Table 5. Product choice under Full Info and Hidden Info

Dependent Variable	Purchase Certified Product			
	Weak Certificate	Strong Certificate	Weak Certificate	Strong Certificate
Hidden Info	-0.019	-0.020	0.010	0.010
	(0.049)	(0.056)	(0.047)	(0.054)
Ignore Info			-0.513***	-0.401***
			(0.180)	(0.104)
Observations	749	756	749	756
Number of id	108	108	107	107

Note: Random effects probit model, Average marginal effects. Baseline category: Full Info. Robust standard errors in parentheses. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

However, the ignorance rate of Hidden Info consumers is much lower than the rate reported in Dana et al. (2007). The Hidden Info consumers that chose to stay ignorant amounted to 11 percent in the SCT and 10 percent in the WCT, compared with 44 percent in the study by Dana and colleagues. These consumers that chose to stay ignorant were much less likely to buy the certified product in both treatments (see table 6 for summary statistics), but it did not have an effect on the overall probability of all consumers in the Hidden Info group to buy the certified product.

Table 6. Average share of the certified product B in rounds 1–7,
disaggregated by consumer groups

	Obs.	Mean	Std. Dev.	Min.	Max.
Strong Certificate Treatment					
Full Info	378	0.42	0.49	0	1
Hidden Info					
All subjects	378	0.40	0.49	0	1
Access information	337	0.43	0.50	0	1
Do not access information	41	0.07	0.26	0	1
Weak Certificate Treatment					
Full Info	371	0.36	0.48	0	1
Hidden Info					
All subjects	378	0.34	0.47	0	1
Access information	341	0.37	0.48	0	1
Do not access information	37	0.03	0.16	0	1

Thus, it is seems that mainly selfish consumers ignored the additional information and that their behavior would not have been different if they were informed about the premium automatically. Hence, I do not find evidence in favor of hypothesis 2.

Result 2:

There is no difference in product choice between Hidden Info and Full Info consumers. Consumers do not ignore information for strategic purposes.

The third hypothesis focuses on ex ante differences in beliefs about the ethical premium. To test hypothesis 3, the ignorance rate of Hidden Info consumers is compared between the SCT and WCT. The ex ante belief about the size of the Fair Work premium should be lower in the WCT than in the SCT. If norm compliance or self-image concerns are the driving force for consumers to buy the certified product, they might ignore information about the exact premium to a larger extent in the WCT. In the SCT, however, we do not expect to observe such a behavior, since even consumers ignoring the information know that the ethical premium implies a considerable contribution to a public good.

Table 7 shows regression results with the ignorance rate as the dependent variable and a dummy for the SCT included as a regressor. Independent of the specification, there is no significant difference in the ignorance rate between the two treatments, leading to the third result.

Result 3:

There is no difference in the ignorance rate between the SCT and WCT. Ex ante beliefs about the size of the ethical premium do not influence consumers' decisions to stay ignorant.

Table 7. Ignorance rate depending on treatment

Dependent Variable	Ignore Info	
	(1)	(2)
Strong Certificate Treatment	0.032	0.033
	(0.035)	(0.035)
Price difference		0.012*
		(0.006)
Observations	756	756

Note: Random effects probit model, Average marginal effect. Robust standard errors in parentheses. Baseline category: Weak Certificate. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

3.3. Discussion

The results above show no evidence for strategic ignorant behavior by consumers in the market for certified goods. Consumers that buy the certified product seem to be motivated altruistic motives, while social norm compliance and self-image concerns do not seem to be pivotal in this market.

These results are in line with recent evidence in related experiments. Lind et al. (2016) played a dictator game similar in the design to that of Dana et al. (2007). The only difference was that the recipient was not a person, but an NGO collecting funds for climate mitigation. The authors find no significant difference in the choices between individuals in their baseline and the hidden information treatment. Also, the ignorance rate in their hidden information treatment is 22 percent and thus much lower than the ignorance rate found by Dana and colleagues. A possible explanation for the low ignorance rate in both the experiment discussed in this paper and the one by Lind and colleagues might be that the recipient was not an individual, but a more anonymous organization. Thus, social norms prescribing how to behave in certain situations might be much more stringent when they concern other people, rather than more abstract institutions. This might shield individuals from feeling the urge to comply with certain norms when confronted with a more anonymous good cause, and thus strategic ignorant behavior might not be observed.

Pigors and Rockenbach (2016) used a variant of the ultimatum game in which individuals had to choose between different products varying with respect to the wage paid to a person involved in the production process. Over 95 percent of the participants chose to disclose information about wages in this setting. Further, the authors do not find a significant difference in purchasing behavior between participants that were informed about the wages and those that had the option to ignore it. Here, the information that can be disclosed concerns another person, but still the authors do not find evidence for strategic ignorant behavior. However, the framing of the experiment differs. Pigors and Rockenbach frame their experiment as a market for products rather than a dictator game. It is likely that individuals perceive market situations, and the norms associated with them, differently from interpersonal interactions. For instance, (Falk and Szech 2013) show how markets can have a detrimental effect on moral values. In an experiment, individuals had to decide about the life of a mouse in a market situation together with another player. Falk and Szech find that individuals are significantly more likely to sacrifice the life of the mouse in a market exchange with another person than in a situation where individuals make the decision on their own. Bartling et al.

(2015) report similar results when comparing socially responsible behavior between market and nonmarket conditions.

My results suggest that a substantial share of individuals acts in line with altruistic motives even though the experiment was framed as a market. Nevertheless, this situation might be perceived differently than a nonmarket situation. If the social norms how to behave are less stringent in a market context than in an interpersonal interaction, individuals that care for social norm compliance might have more leeway in their actions. Thus, potential factors as to why consumers did not choose to stay ignorant in my experimental setting are, first, that the recipient was a rather anonymous institution, and second, that the experiment was framed as a market game.

The evidence so far suggests that consumers do not ignore information about ethical certificates when it is costless. In many situations, however, information is not entirely accessible without any cost. Reading information on the back of product packaging requires time, as does searching for information on the internet or downloading an application that provides additional information on one's mobile phone. Therefore, part 2 of the experiments analyzes the sensitivity of individuals toward a change in cost to access the information about the ethical premium.

4. Part 2 of the Experiment

4.1. Experimental Design

In part 2, the six consumers in an experimental group were divided into three subgroups consisting of one individual each from the Full Info and the Hidden Info groups in part 1. During the following seven rounds, the Fair Work premium button was displayed to all consumers, but they differed in terms of the cost associated with clicking the button. For the Costly Info consumers, clicking the button was associated with a cost of 1 point (10 Eurocents) during the round. For the Zero Cost consumers, gaining the information was equivalent to the Hidden Info in part 1 of the experiment, and clicking the button was costless. For the Costly Ignorance consumers, not clicking the button resulted in a cost of 1 point during the round.

Further, consumers remained in the same treatment as in part 1 (either WCT or SCT). The price components for both products were identical to those in part 1 of the experiment: baseline cost and producer profit for product A, and the Fair Work premium as an additional component for product B. Summary statistics and the exact prices can be found in appendix

tables A.1.1 and A.1.2. An overview over number of observations in each treatment is displayed in table 8.

Table 8. Overview of the treatments in part 2 of the experiment

| Treatment	Lower Bound for FWP	Size of FWP Displayed Initially on Screen	Number of Observations
Strong Certificate Treatment			
Costly Info	*Yes*	*No*	36
Zero Cost	*Yes*	*No*	36
Costly Ignorance	*Yes*	*No*	36
Weak Certificate Treatment			
Costly Info	*No*	*No*	35
Zero Cost	*No*	*No*	36
Costly Ignorance	*No*	*No*	36

Round 13 was only conducted to serve as a control to check whether individuals understood the setup of the experiment. In this round, the price of the uncertified product was higher than the price of the certified product (36 points compared with 31). Thus, even for purely selfish individuals, the certified product was the optimal choice. Overall, 97 percent of the participants chose the certified product in this round. Thus, it can be assumed that most participants understood the experiment and stayed focused until the end. This round is omitted from the analysis, and only the remaining six rounds are considered.

4.2. Results

Figure 4 shows the average ignorance rate for all three consumer subgroups in the six relevant rounds. For the Costly Info consumers, the ignorance rate is around 80 percent (first column), and for Hidden Info consumers, it is around 20 percent (second column). The ignorance rate for Costly Ignorance consumers is close to zero (third column). In line with the results of part 1 of the experiment, the results do not differ significantly between WCT and SCT, and therefore the focus is on the aggregated data. For a disaggregation by treatment, see figure A.2.1 in the appendix.

Looking at the confidence interval in figure 4, it is apparent that the ignorance rate differs significantly between consumers in the Costly Info and the Zero Cost groups. This is confirmed when including the ignorance rate as a dependent variable and additional controls as explanatory variables, as shown in table A.2.1 in the appendix.

Figure 4. Ignorance rates in each round for each of the information groups
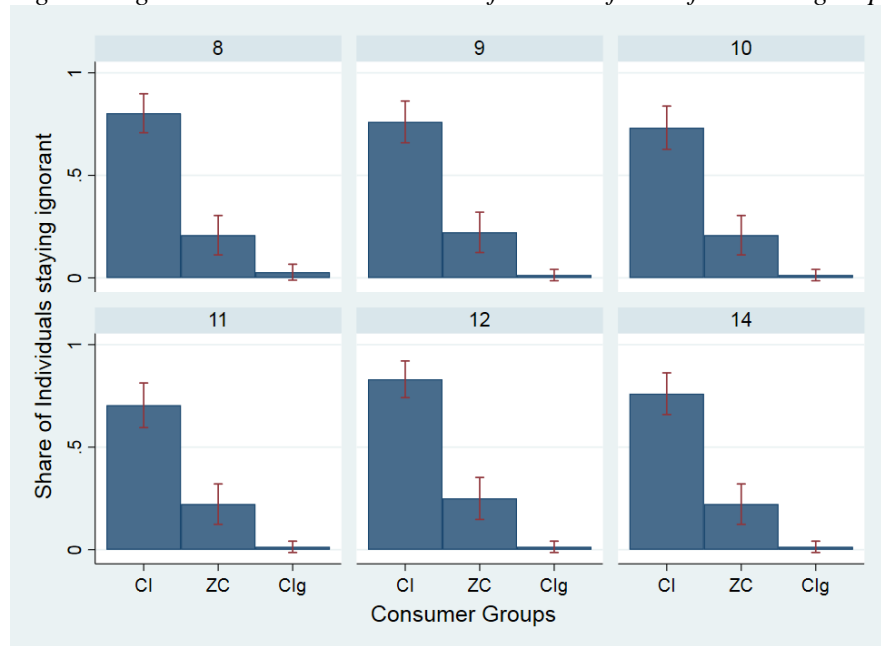
Notes: The abbreviations in the table stand for the following consumer subgroups:
CI: Costly Information, ZC: Zero Cost and CIg: Costly Ignorance. The vertical lines
show 95% confidence intervals.

The six rounds shown in figure 4 can be split into two categories: in four rounds (rounds 9, 10, 12, and 14), the Fair Work premium of product B exceeded the price difference between products A and B. If, for example, the Fair Work premium was six points and the price difference only five points, consumers could contribute six points to the hospital at the cost of paying only five additional points. Hence, if the consumers were informed about the size of the Fair Work premium in these four rounds, probably a relatively high share would choose the certified product, given the behavior observed in part 1 of the experiment. In the two remaining rounds (rounds 8 and 11), the Fair Work premium was smaller than or equal to the price difference. Here, the consumers were probably less likely to choose the certified product, even when informed about the Fair Work premium.

Hence, we expect that the difference in the ignorance rate between the subgroups shown in figure 4 will have an effect on the actual product choice only in the four rounds with a relatively high Fair Work premium. Figure 5 depicts the share of consumers buying the certified product in each of these four rounds. In all four rounds, the share of consumers choosing the certified product is the lowest for Costly Info consumers. Looking at the regression results in table 9, it can be seen that the difference in product choice is significant and substantial: compared with Zero Cost, Costly Info consumers have on average a 16

percentage point lower probability of buying the certified product. Costly Ignorance consumers have a higher probability of buying the product with the product premium than Zero Cost consumers, but the difference is not statistically significant. In summary, varying the price of information for consumers leads to the following result.

Result 4:

Introducing a small cost for information leads to a higher ignorance rate. In rounds with a relatively high ethical premium, this results in fewer consumers buying the certified product.

Figure 5. Share of consumers that purchased the product with the Fair Work premium
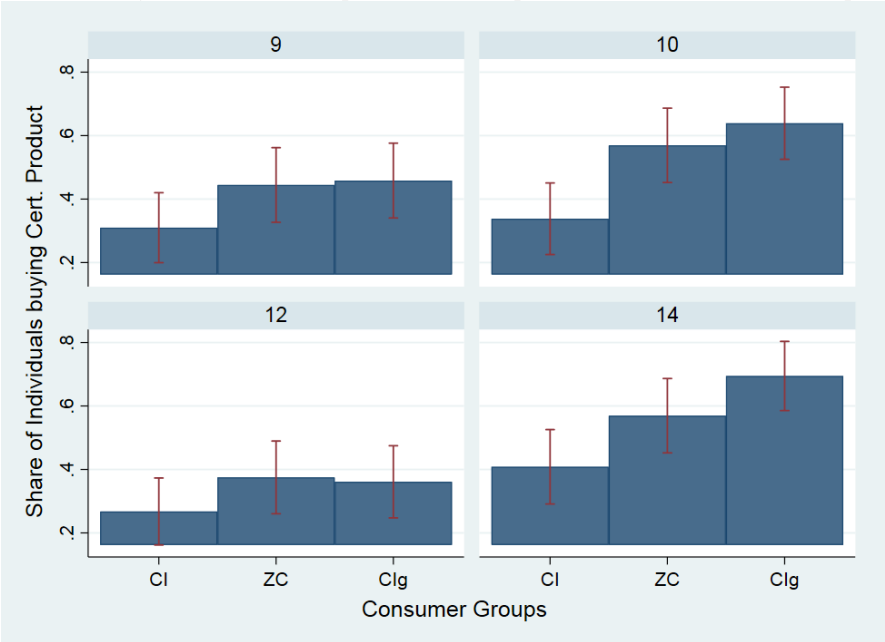
Notes: The abbreviations in the table stand for the following consumer subgroups: CI: Costly Information, ZC: Zero Cost and CIg: Costly Ignorance. The vertical lines show 95% confidence intervals.

Table 9. Impact of varying the cost of information on purchase decision

Dependent Variable	Purchase Certified Product		
	(1)	(2)	(3)
Costly Info	-0.162**	-0.162**	-0.162**
	(0.069)	(0.069)	(0.069)
Costly Ignorance	0.054	0.054	0.054
	(0.062)	(0.062)	(0.062)
Treatment control	*No*	*Yes*	*Yes*
Control for type in part 1	*No*	*No*	*Yes*
Observations	860	860	860
Number of id	215	215	215

Notes: Random effects probit model. Average marginal effects. Baseline category: Zero Cost. Robust standard errors in parentheses. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

It is also possible to categorize the consumers according to how often they chose to purchase the certified product in part 1 of the experiment. In figure 6, this information is displayed on the *x*-axis, whereas the *y*-axis shows how many of the individuals in the Costly Info group chose to ignore the information on average in part 2 of the experiment. Consumers that never or only once bought the certified products in part 1 were not willing to pay to get informed in the second part of the experiment. The same is true for those consumers that always bought the certified products in part 1. Thus, consumers seem to be rational in their decision whether to pay for additional information. Only in the case when new information might change their product choice was a share of consumers willing to pay for it. For those consumers that chose the same product all the time, there was no reason to invest in new information.

Figure 6. Frequency of buying the certified product in part 1 and ignoring information in part 2 for Costly Info group
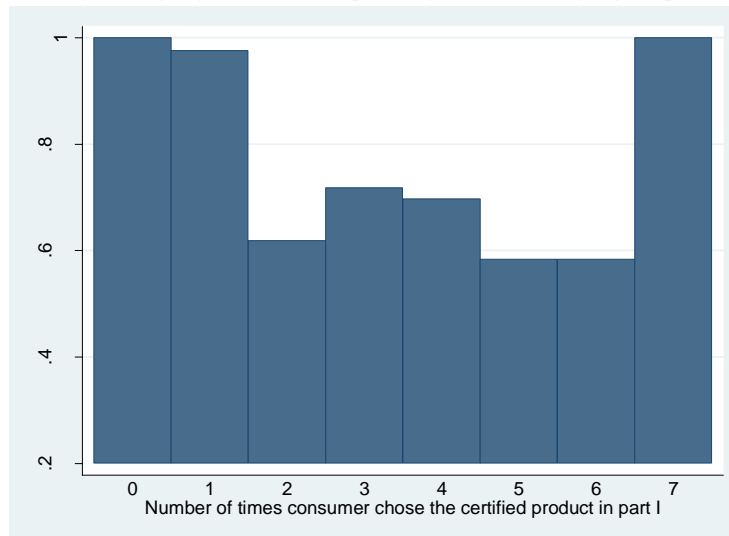
4.3. Discussion

Looking first at the subgroup of Costly Ignorant consumers, I do not find that individuals are willing to pay to stay uninformed about the exact size of the premium. This is in contrast to experimental findings in dictator games where such behavior was observed (Cain and Dana 2012; Grossman and van der Weele 2017). It is, however, in line with the finding in the first part of the experiment that strategic ignorance of information does not seem to be a feature in the market for ethically certified goods. Thus, it would be surprising if individuals who did not avoid costless information would start ignoring the information once it is costly to do so.

Introducing a cost for information has a drastic effect on consumers' behavior. Once the cost is introduced, consumers are more than three times less likely to access information than when the cost of information is zero. The cost of getting informed is relatively small in the experiment and probably similar in magnitude to the opportunity cost of spending time looking at additional information for a short moment. For example Kesternich et al. (2016) find similar results in a field experiment, where customers of a booking website for long-distance bus trips could offset the emissions of the trip and access additional information about the offsetting program by clicking a button. On average, less than 2 percent of customers accessed the information, even though it had no monetary cost to them.

Nevertheless, once consumers are exposed to the information, it influences their product choice in the experiment: for consumers in the Zero Cost group, the choice of the certified product was on average 16 percentage points higher than for consumers in the Costly Info

group in the relevant rounds. Hence, information seems to have an effect, even though consumers are not especially interested in accessing it.

5. Conclusions

This study analyzes whether consumers ignore information about the size of an ethical premium in an experimental market. I do not find any evidence that consumers ignore such information systematically when it is costless. Thus, the results do not confirm theoretical predictions about the behavior that we would expect if consumers' motivation to buy certified products mainly stemmed from concerns to comply with social norms or to protect their self-image. Rather, the results suggest that altruistic preferences seem to be the driving factor in this market. In this respect, concerns that consumers ignore costless product information for strategic reasons seem to be unnecessary. Reasons why information ignorance is not observed in this experiment, although it has been found in many other studies, are likely to be the market framing and the anonymous organization receiving the contribution made.

Once a small price for information is introduced, the share of consumers who ignore the information increases drastically and the share that chooses the certified product decreases significantly. This finding highlights the importance of making additional information about ethical certified products easily accessible. Nowadays, information about ethical certificates is freely available on the internet, but the search costs might be too high for many consumers to actually access it. Displaying concise information about the effectiveness on the front of the packaging instead could therefore be an effective way to provide consumers with important information in order to well-grounded decisions.

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Appendix

A.1. Prices

Table A.1.1. Prices in the Strong and Weak Certificate Treatment

Strong Certificate Treatment

Round	Producer A Baseline Cost	Profit	Total Price	Producer B Baseline Cost	Profit	Fair Work Premium	Total Price
First Part							
1	20	7	27	20	6	5	31
2	20	13	33	20	6	12	38
3	20	9	29	20	10	5	35
4	20	12	32	20	4	12	36
5	20	13	33	20	8	13	41
6	20	8	28	20	9	5	34
7	20	10	30	20	10	5	35
Second Part							
8	20	8	28	20	8	5	33
9	20	7	27	20	5	9	34
10	20	8	28	20	3	12	35
11	20	11	31	20	11	5	36
12	20	9	29	20	7	9	36
13	20	16	36	20	3	8	31
14	20	9	29	20	1	14	35

Weak Certificate Treatment

Round	Producer A Baseline Cost	Profit	Total Price	Producer B Baseline Cost	Profit	Fair Work Premium	Total Price
First Part							
1	20	7	27	20	6	5	31
2	20	13	33	20	6	12	38
3	20	9	29	20	14	1	35
4	20	12	32	20	4	12	36
5	20	13	33	20	8	13	41
6	20	8	28	20	12	2	34
7	20	10	30	20	10	5	35
Second Part							
8	20	8	28	20	10	3	33
9	20	7	27	20	5	9	34
10	20	8	28	20	3	12	35
11	20	11	31	20	14	2	36
12	20	9	29	20	7	9	36
13	20	16	36	20	3	8	31
14	20	9	29	20	1	14	35

Table A.1.2. Average price structure in the treatments in rounds 8–14 (part 2)

	Strong Certificate Treatment				Weak Certificate Treatment			
	Mean	Std. dev.	Min.	Max.	Mean	Std. dev.	Min.	Max.
Product A								
Baseline Cost	20.00	0	20	20	20.00	0	20	20
Profit	9.71	2.81	7	16	9.71	2.81	7	16
Total price	29.71	2.81	27	36	29.71	2.81	27	36
Product B								
Baseline Cost	20.00	0	20	20	20.00	0	20	20
Profit	5.43	3.20	1	11	6.14	4.23	1	14
FW premium	8.86	3.09	5	14	8.14	4.05	2	14
Total price	34.29	1.67	31	36	34.29	1.67	31	36

A.2. Additional Analysis

Figure A.2.1. Ignorance rates in part 2,
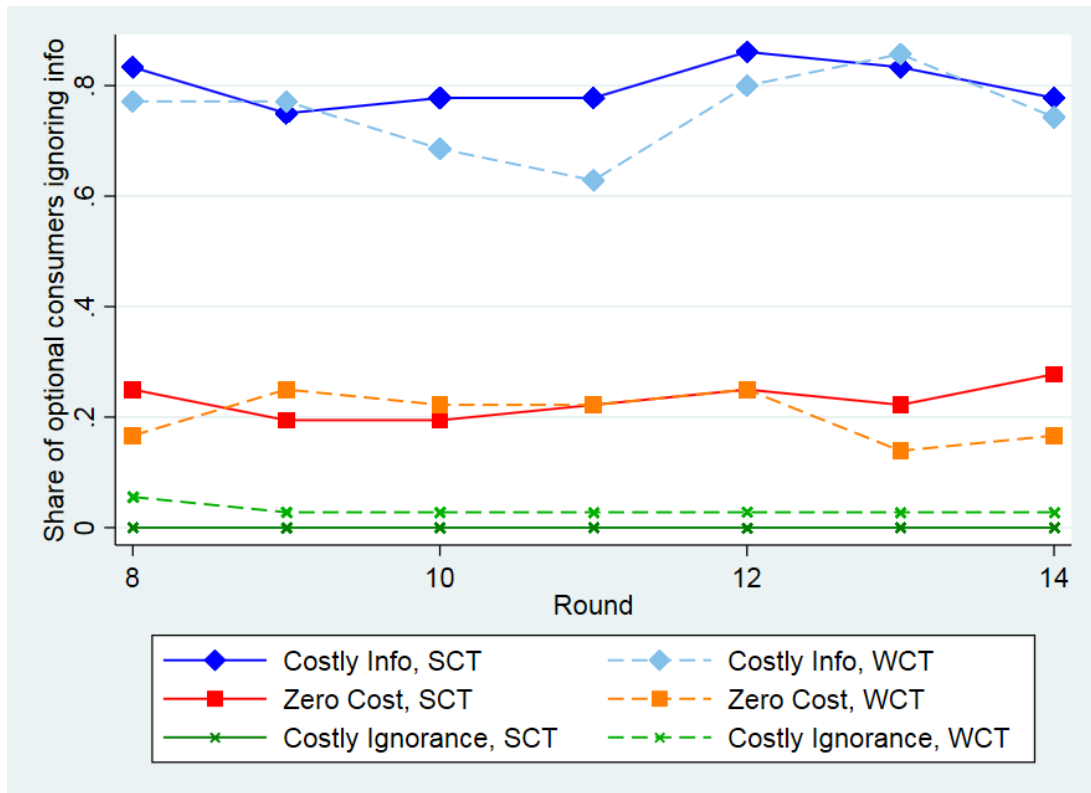*disaggregated by information cost and treatment*

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Table A.2.1. Impact of varying the cost of information on ignorance rate

Dependent Variable	Ignore Info		
	(1)	(2)	(3)
Costly Info	0.449***	0.450***	0.452***
	(0.012)	(0.013)	(0.014)
Treatment controls	*No*	*Yes*	*Yes*
Control for type in part 1	*No*	*No*	*Yes*
Observations	858	858	858
Number of id	143	143	143

Note: Random effects probit model. Average marginal effects. Observations of Costly Ignorance consumers were not included in the regression, since there was no variation in the ignorance rate. Baseline category: Zero Cost. Robust standard errors in parentheses. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

A.3. Screenshots of What Consumers and Producers See When Making Their Decisions

Figure A.3.1. Screenshot for consumers in the Full Info group

Figure A.3.2. Screenshot for consumers in the Hidden Info group

A.4. Instructions (translated into English, here for participants in the Strong Certificate Treatment)

Welcome to the experiment and thank you very much for your participation!

From now on, please do not speak with other participants of the experiment

General information of the procedures

We welcome you to the experiment! Please read the instructions carefully. We ask you and other participants to make decisions. <u>At the end of the experiment you will be paid depending on the decisions you and the other participants have made and you will be paid in cash.</u> In addition, you will be paid 4 Euro for you punctual appearance.

During the experiment, it is not allowed to communicate with the other participants, to use your mobile phones or to start other programs on the computer. In case you violate on of these rules, we unfortunately have to exclude you from the experiment and all payments. If you have a question, please raise your hand. The person in charge of the experiment will then come to you and answer the question. If the question is relevant for all participants, we will repeat it loudly and answer it. During the experiment, there is also a calculator available and you are free to use it.

General Structure

During the experiment, we do not speak about Euro, but points. Your payoff will be calculated first in points. At the end of the experiment, the total number of points you have earned will be converted to Euro with the conversion rate:

1 point = 10 Eurocent.

Hence, 10 points are equivalent to one Euro.

The experiment consists of two phases with seven rounds each. Out of each of the two phases, two rounds will be selected at random and the payoff of these four rounds will be paid out at the end of the experiment.

In total, 24 participants will participate at the experiment today. Before the start of the first round, the participants will be divided into three groups of eight participants. The allocation is made by the computer following a randomized process. The participants stay in the same group during the whole course of the experiment. We will not communicate your identity to the other participants during and after the experiment.

Procedure of the experiment

Within a group, two participants are assigned the role of a producer (producer A and B) and six participants the role of a consumer. The allocation in producers and consumers will be determined by a random mechanism by the computer. You maintain the role that was assigned to you as a producer or a consumer during the whole experiment.

In each round, each consumer has 50 points to his or her disposal. They are offered one product by producer A and one product by producer B and the products are identical. Every consumer is obliged to buy one product of one of the producers in each round.

The price of the product consists of several components. The first component is the baseline cost. This cost is equal to 20 points and is the same for both producers. The second component is the profit of the respective producer. This can be different for each of the producers. For producer B, the price has an additional component, the so-called "Fair Work" premium.

The revenues of the Fair Work premium will be converted to Euro and donated to the Attat Hospital in Ethiopia after the experiment. The Attat Hospital is a partner project of the charity organization Misereor and is located in Guraghe, a rural area 200 kilometers southwest of the capital of Ethiopia Addis Ababa. For around one million people in the region it is the only accessible hospital.

With help of donations, the medical care for these people is made possible and already small donations can make a difference. For instance, already 8 Euros can guarantee the treatment of a sick person. Besides, the hospital offers vaccination programs, prenatal care, health education of the population and first aid provision. With the help of the hospital, the mortality of children under the age of five could be decreased in the area around the hospital to one fortieths of the average value in Ethiopia.

The amount of the Fair Work Premium can change in each round. However, the minimum is equal to 5 points in each round. Hence, the price of the product of producer B cannot be below 25 points.

The prices for the producer will not be determined by the producers themselves, but have been already be determined before the start of the experiment.

Payoff calculation

The earnings for the consumers are equivalent to the endowment of 50 points in each round minus the amount that was spent for the purchase of one of the products.

The earnings for the producer are equivalent to the profit component of the price of each product unit that was sold. The profit component is the part of the price that exceeds the baseline cost and if applicable the Fair Work premium. Furthermore, the producers have the possibility to earn additional points by answering producer-specific questions. The producers will be informed later about the specific content of these questions.

An example of the exact payoff calculation will be shown to your on the computer screen in a short moment.

If one of the rounds is among the four randomly selected rounds, all earnings and the donations to the Attat Hospital in this round will be realized. The entire revenues of the Fair Work Premium will be donated to Misereor with the specific purpose for the Attat Hospital directly after the end of the experiment. The donation receipt will then be published on the information board of MELESSA. Besides, you can find the receipt under the following link: http://www.melessa.lmu.de/spenden/01_Quittung.pdf.

At the end of the experiment you will see a summary of all rounds and the four rounds that were randomly selected for payoff.

Summary of the Experiment

- In each round, consumers are endowed with a budget of 50 points
- Consumers are offered one product from producer A and B respectively and have to decide from whom to buy a product
- While the consumers make their purchase decision, the producers have time to answer a producer-specific question
- After the consumers have made their purchase decision, the summary of their decision and their respective earnings in the round will be displayed to them
- A new round starts