

Just Tell Me What You Want...: The Relevance of Information Transparency on the Use and Handling of Customers' Data

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Abstract:

The collection and goal-oriented use of customer data is considered as a strategic success factor in modern retailing. However, due to privacy concerns gathering of customer data is often not easy from a company perspective. Hence, it is surprising that there is a lack of research on customers' reaction on companies' communication on information transparency regarding the data-use and -handling. To close this gap, our research refers to Information Processing Model as well as Privacy Calculus Theory, manipulating service providers' information transparency in the context of product presentation in an online shop. By conducting an online experiment (N=87), we identified an ambivalent behaviour by the customer, facing a higher interest to purchase, but a lower willingness to pay, given transparent information. Customers mental accounting on companies' information transparency follows divergent pattern, in this regard. Moreover, privacy concerns related to the use of the product mediate this relation. Based on the findings, implications for future research and management are discussed.

Keywords: Information Transparency, Customers' Data-Use and Handling, Privacy Concerns

1. Introduction

As in current days certain customized services are a result of customers' direct or indirect information-disclosure (Bleier & Eisenbeiss, 2015), the access to shopper information is a key advantage for retailers in today's business landscape (Wakefield, 2013). Hereby, the exchange of data for certain added values is a highly discussed phenomenon in current literature (e.g., Krafft, Arden and Verhoef 2017). The presence of a certain form of incentivitation leads to an intuitive weighting or mental processing of perceived benefits and risks (White, Novak, and Hoffman, 2014). In fact, customers seem to attach increasing importance to additional/transparent information regarding the data-use (Benlian, 2015).

Moreover, in terms of correctness and completeness, in today's retail landscape the integration of data-related privacy concerns is of rising relevance (Karwatzki et al., 2017). However, in online retailing most of the companies are forced to offer some form of data-security announcement, a transparent form of communication within the product-presentation is not common sense. Literature generally highlights the fact that companies know the importance of providing a high level of information, resulting in an underlying "transparency strategic" (Zhou et al., 2018). In fact, companies consider a trade-off between using information transparency in order to attract new customers and the corresponding risk of an information-related loss of an advantage to customers and competitors (Tapscott & Ticoll, 2003). Based on the availability/visibility and accessibility of information, information transparency is about quantity of information as well as quality of a corresponding interface and implies the intention of the sender to disclose or withhold information (Granados, Gupta, and Kauffman, 2010). Even though, the open/transparent dealing with certain information might even make the entire core-retailing-process less tangible with regard to the customer as Awad and Krishnan (2006) highlighted, as the interest for information transparency seems to go in line with higher privacy issues with respect to the willingness to be profiled.

By referring to social exchange theory (Homans, 1961; Blau, 1964), suggesting that privacy concerns might be weakened, depending on a specific 'value', customers' might receive in exchange. Hereby a cost-benefit trade-off from customers' side plays a central role. Literature implies that customers are generally sensitive when it comes to questions on data-security and -use (Krafft, Arden and Verhoef, 2017), leading to the assumption that especially today, including all the increasing digital- and data-collecting influences (Bazarova & Choi, 2014), the communication on data-use and -handling might consequently reduce customers' privacy concerns. Concluding, in the following, we are going to answer how customers perceive a transparent communication of companies'/service providers' use and handling of potentially

disclosed/revealed personal data and to what extent customers' privacy concerns related to the use of the product functions as a meaningful mediating influence.

2. Conceptual Framework and Hypotheses Development

The approach of a cost-benefit trade-off has already been frequently applied in the existing literature in connection with (information) exchange relationships, for example by means of the social exchange theory according to Homans (1961) and Blau (1964). Privacy calculus theory picks up here, focusing on the risk-benefit trade-off with regard individuals' potential disclosure of personal data (Laufer & Wolfe, 1977; Dinev & Hart, 2006). By taking this into account, customers' processing on a given information transparency is assumed to play a central role with regard to customers' evaluation of product presentations.

Picking up on Granados et al. (2010), we focus on several aspects of the impact of information transparency on data-use and handling, addressing the relevance of customers' privacy concerns, was left out so far. The information processing model (Bettman, 1979) argues that humans are understood as an information processing system (Johnson-Laird & Shafir, 1993). By using this approach, we focus on customers' perception of transparent information regarding the assessment and reaction on certain forms of product presentation. Al-Qeisi et al. (2014) stress the fact that errors, inferior or inaccurate information negatively affect customers' decision-making process, expressing in a negative overall perception and resulting in a decreased purchase intention, which again is strongly related to customers' perceived value of the product (Chang & Wildt, 1994), which we evaluate in terms of willingness to pay. We see the relevance of customers' product-related privacy concerns to influence with relation accordingly and being decisive for customers' decision to purchase or not purchase resp. for customers' willingness to pay for the product. According to our previous argumentation, we assumed a positive impact of its presence on customers' purchase intention, however, a negative on willingness to pay. The resulting research model is depicted in figure 1.

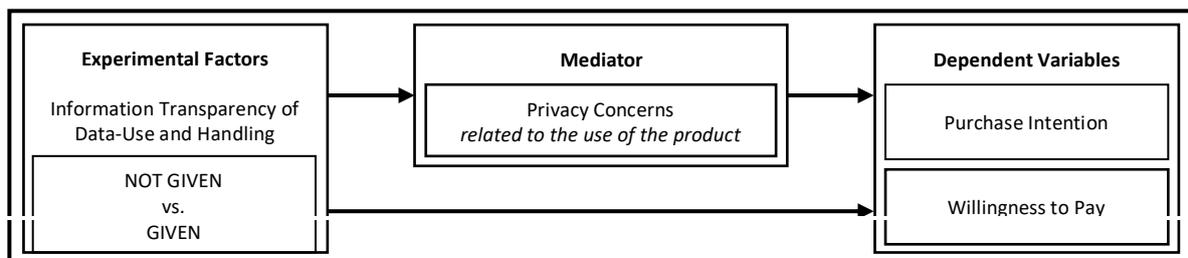


Figure 1: Research Model

Based on social exchange theory (Homans, 1961; Blau, 1964), an optimal level of service interaction is a question of "give and take" (Solomon et al., 1985), meaning that customers',

who are offering certain personal information are expecting some kind of compensation. In turn, retailers' pursuing a strategy of information transparency, seems to expect a certain degree of (often rather unconscious) meeting the customer at her/his desires (Granados et al., 2010). In fact, offering information transparency might facilitate the information processing accordingly, as customers' get the impression to be more appreciated, leading into a lower cognition. Holbrook and Hirschman (1982), motivate a clear relation of product related information, including its communication, as well as on customer-related inputs, including monetary resources, and customers' cognition as well as behavior. Given a high complexity within this decision (e.g., knowledge, attitude, personality, product, promotion, price) (Barber et al., 2012), information transparency is seen as a facilitator in this relation, simplifying this complexity. By understanding information transparency as an abbreviation especially with respect to customers' encoding of information (Bitjttebier, Vasey and Braet, 2003), the decision to purchase might be stimulated hereby:

H1: A given (vs. not given) information transparency of data-use and -handling increases (vs. decreases) customers' purchase intention.

However, given some form of customer accommodation through transparent information (Granados et al., 2010), with respect to the willingness to pay customers might perceive as "too" friendly or polite, assuming that the companies' requested price might be lower than in case of no transparent information. On the other hand, customers' want to get paid for the provision of information in case of information transparency. In fact, a lower price might be seen as some kind of compensation, given a transparent information on the use- and -handling, as if no information transparency on that topic would have been given. As the price is just one criterion within the purchase intention (Barber et al., 2012), in context of questioning the actual willingness to pay, customers are forced to concentrate on this factor. Hereby we see the stage of cognition as not/less considered as in case of purchase intention:

H2: A given (vs. not given) information transparency of data-use and -handling decreases (vs. increases) customers' willingness to pay.

By assuming that information transparency might influence customers' perception of closeness or accommodation of the company, the perceived enhancement of interpersonal would be a consequent result at this point. This in fact is assumed to lead to lower privacy concerns related to the use of the product. As Fortes and Rita (2016) were able to show that privacy concerns negatively effects customers' final purchasing intention, we predict a mediating role of customers' perceived privacy concerns in this regard. Moreover, literature

emphasizes that approaches to mitigate privacy concerns can increase customers' intention to buy (Miyazaki and Fernandez 2000) and their willingness to pay (Tsai et al., 2011):

H3: Customers' privacy concerns related to the use of the product mediates a) the hypnotised relation of a given (vs. not given) information transparency on the data-use and -handling on purchase intention, as well as b) customers' willingness to pay.

3. Empirical Studies: Method and Procedure

We tested our hypotheses in a two-factor (information transparency on data-use and handling: not given vs. given) between-subject experimental design. Primary, in both scenarios, we give the information that the product contains personalized advertisement content. In order to manipulate the different information transparency on data-use and -handling conditions, we used a scenario technique, integrating either no information transparency with regard to the data-use and -handling of potentially provided information, while using the product or an information on that aspect. We argue that, according to information processing model, the fact on potentially receiving personalized adverting content makes the customer use realize that some kind of exchange process is happening between them and the retailer: personalized adverting content vs. data (benefit–cost trade-off). In fact, mention of a concrete equivalent for potentially shared data induces the customer to calculate the benefits of the personalized adverting content versus the underlying risk of disclosure. All scenarios were randomly assigned, and respondents were afterwards supposed to fill out a questionnaire.

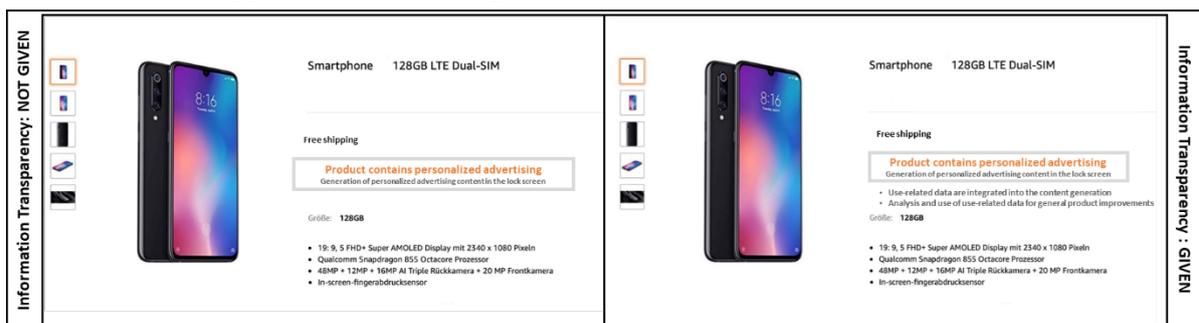


Figure 2: Experimental Design for study

To test our hypotheses, we measured all constructs on a seven-point-likert-scale (1='I do not agree at all' – 7='I totally agree') or on a semantic differential. We adapted the scale of internet privacy concerns used by Dinev and Hart (2005) to measure participants' privacy concerns related to the use of the product (four items, $\alpha=0.963$: e.g., "I am concerned that other companies might find my data that I provide, while using the product."). Regarding customers' purchase intention, we used the scale of Pavlou (2003) (three items, $\alpha=0.928$; e.g., "It would be likely that I would purchase the product shown in the future."). Customers' willingness to pay

was measured by giving a frame between 100€ and 800€. Participants were asked to provide the price, to which they were willing to purchase the product. All participants' responses were mean aggregated. In the study, 87 subjects (women: 57.47%) with an average age of 28.18 (SD=7.61) years took part. All scenarios were equally distributed with respect to age, gender and overall privacy concerns. Moreover, we eliminated the subjects with an above average affinity (>4) towards personalized content. We asked the participants yes/no questions to confirm whether they understood the presented manipulation as such. Finally, we controlled for general privacy concerns ($F(1, 85)=1.543, p=.218$) and general affinity towards smartphones ($F(1, 85)=1.456, p=.231$) of our respondents. Overall, we did not find any systematic distortion between our treatments.

4. Findings

In order to test the hypotheses, we conducted several ANOVAs to analyse our hypotheses. The mean scores of the dependent variables in the experimental conditions and the results of H1 are summarized in table 1.

Dependent Variables	Information Transparency on Data-Use and -Handling	Mean (SD)	F-Value (η^2)
Purchase Intention	NOT GIVEN (N=42)	3.10 (1.45)	5.992* (0.066)
	GIVEN (N=45)	3.85 (1.44)	
Willingness to Pay	NOT GIVEN (N=42)	398.31 (161.00)	4.462* (0.050)
	GIVEN (N=45)	330.89 (135.28)	

*p < .05, **p < .01, ***p < .001

Table 1. Results of ANAOVA-testing

Findings generally imply that the information transparency on data-use and -handling seems to have an impact on customer' purchase intention as well as on the influence on customers' willingness to pay. Results consequently support our assumptions towards an empirical confirmation of H1 and H2. Concentrating on the proposed mediating impact of customers' privacy concerns related to the use of the product, (H3) on the relationship between the information transparency on data-use and -handling and the dependent variables, we conducted multiple analyses of covariance (ANCOVAs) based on Hayes and Preacher (2013) as well as Song and Zinkhan (2008). Here, the experimental factors are included as independent variables and the potential mediators as covariates. The actual mediation is shown by a decrease of the mean square (MS) of the interaction effects (Song & Zinkhan, 2008). Hereby, we followed the causal steps approach of Baron and Kenny (1986). In a first step, we showed the influence of the information transparency on data-use and -handling on the purchase intention and on customers' willingness to pay. Secondly, the information transparency on data-use and

-handling has a significant effect on customers' privacy concerns related to the use of the product ($M_{\text{not_given}}=4.98$ (1.38); $M_{\text{given}}=4.04$ (1.74); $F(1, 85)=7.710$, $p < .01$, $\eta^2=0.083$). Thirdly, the influence of customers' privacy concerns related to the use of the product is positive on customers' purchase intention ($\beta=-.234$; $t\text{-value}=-2.461$). However, on willingness to pay we can just state a slightly, however non-significant negative effect ($\beta=-4.175$; $t\text{-value}=-.415$). In a fourth step, we identify a MS-decrease of 44.99% ($p < 0.1$) regarding customers' purchase intention. MS of customers' willingness to pay, instead did not show any decrease here. Consequently, we can state a mediation of customers' privacy concerns related to the use of the product leading to a support of H3a, whereas H3b cannot be supported.

5. Discussion and Conclusions

We were able to show that customers seem to follow a different approach on processing information transparency respectively the presence of service providers' communication of how to the potentially gathered or revealed data are used and handled (Bettman, 1979). Especially with regard to the interpreting and encoding of information (Bitjttebier et al., 2003), a differentiation between the presences and non-presence on information towards the data-use and handling seems to take place. In this context, we can confirm Zhou et al. (2018) as information transparency seems to have a clear positive impact on customers' purchase intention. Customers' willingness to pay, instead decreases, given information transparency. However, these results are in line with the intuition, as customers' willingness to purchase increases, the lower the price or assumed price is set, this investigated divergence stands in contrast to the common knowledge on the generally positive relation of price/value and purchase intention (Chang & Wildt, 1994). Even if customers have a higher intention to purchase the product, the willingness to pay is lower. At this stage, customers show an ambivalent behaviour, facing a higher interest to purchase, but a lower willingness to pay. One might conclude that this contrary effect can be traced back to a certain form of mental processing respectively calculation on perceived risks (data-disclosure) and the assumed benefit of a lower price of the product. Customers' seem to get the impression that a compensation is necessary for the potential data-disclosure. This compensation should then take the form of monetary compensation/response.

Moreover, we are able to support Fortes and Rita (2016) as privacy concerns related to the use of the product seems to influence customers' purchase intention negatively. Moreover, customers' privacy concerns related to the use of the product mediates the relation of

information transparency of data-use and -handling to the use of the product on customers' purchase intention. In fact, we point out that customers seem to positively evaluate the presence of information transparency with respect to the privacy concerns related to the use of the product. With respect to customers' perception and reaction, the mediating role of privacy concerns related to the use of the product goes in line with Dinev and Hart (2005 & 2006).

Given the fact that knowing how to generate customer-specific offers according to their preferences, requirements, and potential desires is of increasing importance to companies and retailers (e.g., Karwatzki et al., 2017), findings emphasize the importance of a clearer information transparency on data-use and -handling in context of product presentation. As it should be service providers' as well as retailers' aim to pursue a satisfactory exchange of personal data respectively information from service providers' site, the communication of information transparency seems to be a relevant aspect in order to enhance purchase intention. Picking up on customers' information processing as well as on privacy calculus theory (Laufer & Wolfe, 1977) further studies need to deepen the understanding on customers' evaluation of information transparency in order to concretise privacy related accounting on purchasing. More knowledge on the specifics of processing might be necessary, especially with regard to the processes on selecting, interpreting, encoding of presented information (Bitjttebier et al., 2003).

In this context, it might be possible that customers perceive information transparency on data-use and -handling in two steps: first, the transparency of the service provider is rewarded, followed by, second, some form of assumed scepticism, expressed in a lower monetary valuation. One explanation might be customers' underlying sensibility, malaise and inner-conflict, which is still carried around when it comes to data-related disclosure and customers underlying mental processing on benefits and risks. In other words, customers' individual privacy calculus (Laufer & Wolfe, 1977) including an accounting is still a fragile issue, in which a certain form of balance is highly complex and needs further research, especially on customers' inherent and underlying information processing. More data on these aspects could enhance not just the service providers' data-base, but increase the purchase intention and potentially as well customers' willingness to pay.

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