

# Opting Out: The Effects of Consumer Information Sharing Concerns on Perceived Value in E-Banking Relationships

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## Abstract

This article examines consumer support for the opt-out principle, which is the view that sellers should be allowed to contact prospective customers with offers as long as these customers are provided the opportunity of opting-out of further contact. Consumers with low or no support for opt-out take the opinion that a firm must first have their permission before contacting them. Using survey data, this article examines the moderating effects of consumer opt-out belief on the impact of three consumer anxiety related online banking evaluations. The results show that when consumers have a high opt-out belief, the effect of firm commitment to privacy on perceived value is reduced, the effect of trust in technology on perceived value is increased and the negative effect of information ambiguity of perceived value is attenuated. The findings on the moderating effect of consumer opt-out belief are consistent with the predictions of research on idiocentric/allocentric personality traits. Research and managerial implications are discussed.

**Keywords:** opt-out, customer value, commitment to privacy, trust in technology

## 1. Introduction

There is consensus among researchers that consumer effort to cope with anxieties that are endemic to the online environment is a fundamental influencer of consumer-decision making. Online consumers experience anxieties associated with the use of computerized technology and from the openness of the internet as a communication and transaction medium (Thatcher, Loughry, Lim, & McKnight, 2007; Yao & Liao, 2011). It has been argued that the internet generates additional anxieties in exchange relationships related to perceived risks of “surfing the web” (Chi, Yeh, & Hung 2012). The Internet is a global marketplace with compelling convenience benefits but also with the abiding potential for nefarious activities such as privacy violation, fraud and harassment (Armesh, Salarzahi, Yaghoobi, Heydari, & Nikbin, 2010; Durndell & Haagb, 2002; Hoffman, Novak, & Perlata, 1999). This perspective on consumer online anxieties is also supported by uncertainty reduction theory, which holds that individuals have an innate need to reduce uncertainty in their relationships by seeking (evaluative) information about their partners in order to make their relationships more predictable and stable (Berger & Calabrese, 1975). Uncertainty reduction constitutes a basic motivation for consumers to be mindful of sellers’ information use policy and practices (Pollach, 2006). Motivated by the pervasiveness of online consumer anxiety, the present article examines the impact on perceived customer value of three implicit evaluative consumer responses. More specifically, this article examines *consumer perceived firm commitment to privacy protection* as a reaction to consumer privacy anxiety; *consumer trust in technology* as a reaction to computer and internet anxiety; and *consumer information ambiguity* as a reaction to consumer anxiety concerning the complexity of online products and services (financial services). Perceived customer value reflects consumer assessment of what they give versus what they receive in a relationship (Zeithaml, 1988).

Studies of online services have generally emphasized the link between quality of service experience and customer satisfaction, behavioral intention and loyalty (e.g., Carlson & O’Cass, 2011; Ganguli & Roy, 2011). However, far less research has been done on understanding the more immediate implications of various aspects of consumer online experience for customer value as a precursor to customer loyalty. Yet, understanding these relationships can reveal essential insights into tactical initiatives that can isolate the effects of negative consumer evaluation, leading to increased value delivery and higher customer retention rates.

Consumer privacy concern is an aspect of the consumption experience with tremendous implication for customer value in the age of online consumption and social networks. Research has shown that consumers differ in their level of concern for privacy, resulting in varying consumer reactions to the ways their personal information is used by in firms. Concern for information privacy (CFIP) has been empirically demonstrated as being multi-dimensional comprising *collection concerns*, *unauthorized secondary use*, *improper access* and *errors* (Smith, Milberg, & Burke, 1996). CFIP has been show to influence consumer trust and perception of risk (Slyke, Shim, Johnson, & Jiang 2006). Researchers have conceptualized consumer privacy concerns in different ways and studied specific aspects of the phenomenon. For example, Malhotra, Kim, and Agarwal (2004) proposed collection, control and awareness as aspects of concern for privacy and demonstrated their relationship with trust and perceived risk. Hoffman, Novak and Peralta (1999) proposed environmental control and secondary use of information as dimensions of privacy concern. The present study contributes to this stream of research by examining a specific aspect of consumer privacy concern, namely consumer support for the opt-out principle whereby sellers are allowed to co-opt consumer contact information but must allow the customer to opt out when contacted by the sellers. Consumer opt-out support is defined as the consumers belief that a seller should be allowed to use his/her contact information such as residence or work address or email address without their initial approval as long as each communication allows the consumer the opportunity to prevent further contact by removing themselves from a contact list. A consumer who supports an opt-out principle holds the opinion that sellers should be allowed to pursue this practice. This is less protective than supporting an opt-in view, requiring consumer approval before initial contact can be made with the consumer. The importance of personality trait in determining online shopping behavior has been demonstrated (Chen, 2011). Using theory on idiocentrism or trait-level individualisms, this article assesses whether the effects on perceived customer value of the aforementioned consumer evaluations of firm commitment to privacy, trust in technology and information ambiguity are contingent on consumer opt-out support.

### *1.1 Importance of the Study*

Achieving the sweet spot between balancing consumer privacy concerns and ability to use consumer contact information for profitable gain is of critical importance to the success of many online firms and to the value consumers derive from online relationships. Research has shown that including consumers in a list for further contact and giving them the opportunity of opting-out can double consumer participation rate compared with requesting that consumers opt-in to future contact (Johnson, Bellman, & Lohse, 2002). Within the United States, as against the European Union, online retailers can include consumers in their contact list and afford them the opportunity of opting-out, frequently done by unchecking a box, sending an “unsubscribe” email or by specifying information sharing and access conditions within a social network context. Access to contact information is absolutely critical for online firms since it determines the affiliate marketing relationships a firm can achieve. It also determines the recency, frequency and monetary spend of online consumers, all of which determine customer lifetime value. Consequently, research that provides a more granular understanding of consumer privacy concerns and how it impacts customer value is of critical importance. The present study finds that consumers who highly supporter the opt-out principle tend to derive greater perceived value from trusting technology and less value from believing that the firm is committed to protecting their privacy compared with customers having low support for the opt-out principle.

## **2. Conceptual Background and Hypothesis**

### *2.1 Allocentrism and Idiocentrism*

Although it is safe to assume that all consumers desire control over their personal information such as identity, contact and behavioral foot-print, it is argued that within this confine consumers vary with respect to the degree of control they believe they should have over their personal information. Some consumers are flexible in allowing marketers access to their personal information for target marketing purposes while others desire a degree of absolute control. The following discussion presents some ideas about the nature of opt-out support and draws a contrast with opt-in support, which is not addressed in this study. Consumers who support opt-in take the view that sellers must first get permission from consumers before using their contact information for making sales offers. Consumers who support opt-out, on the other hand, take the view that sellers should have the right to co-opt an individual’s contact information for sales calls as long as customers are given the opportunity to exclude them self from further contact. I draw on allocentric and idiocentric self-construals (Markus & Kitayama, 1991) to underpin my reasoning on consumer support of opt-in and opt-out principles respectively.

Cross-cultural theorists regard many societies as having distinct collectivist or individualist cultural orientations indicated by how members of the society relate to themselves and to others (Hofstede, 1980; Triandis, 1995).

Similar differences exist at the individual level as well. Individuals have trait differences with regard to being collectivist or individualist, referred to as allocentric or idiocentric, respectively (Markus & Kitayama, 1991). Allocentrism (also known as psychological collectivism) and idiocentrism refer to individual level differences (vs. cultural) with regard to the primacy of group goals and the pursuit of personal autonomy. Psychological collectivism has been demonstrated as a key determinant of team member cooperation, citizenship behaviors, task performance and team member withdrawal behavior (Dierdorff, Bell, & Belohlav, 2011; Jackson, Colquitt, Wesson, & Zapata-Phelan, 2006).

Extrapolating from allocentrism, it is argued that opt-in supporters consider the privacy of the collective or all consumers imperative and believe consumers must demonstrate solidarity in protecting their right to privacy. Affirming the right of consumers to control their contact information prevents selfish commercial exploitation and promotes social harmony between consumers and sellers. Sellers may counter by arguing that consumers who strongly support an opt-in perspective deny themselves important social, confidence, and special treatment benefits gained through more specific segmentation and targeting by sellers (Bitner, Gwinner, & Gremler, 1998). However, opt-in supporters may be unsympathetic to such claims since they derive greater satisfaction from acting in the best interest of fellow consumers than from the relational benefits of sharing their preference or contact information with sellers.

This article does not presume that opt-out supporters have less regard for their privacy than opt-in supporters. Both appreciate the possible consequences of a privacy compromise and the value of taking adequate steps to secure their personal information. However, they differ regarding the degree of control they should have over their personal information and where the responsibility to protect their privacy rests. Opt-in believers consider privacy protection the shared responsibility of all consumers and the government, whereas opt-out believers consider privacy protection a matter of personal responsibility to be negotiated between buyers and sellers.

## *2.2 The Conceptual Framework*

The conceptual framework at the center of this study (Figure 1) proposes that consumers make anxiety related evaluations of a firm's commitment to privacy, the level of trust in the firm's electronic channel technology and the level of information ambiguity concerning its products and services and furthermore that these affect the value customers perceive from the service experience. It proposes further that the effects of these reactions on perceived value are moderated by consumer opt-out support regarding how much control they should have over their personal information. The conceptual model draws on theory from different strands of literature. Research on consumer privacy suggests that consumers are motivated to evaluate the privacy of sellers by a need to reduce risks (e.g., Phelps, Nowak, & Ferrell, 2000). Extant research on consumer trust notes the benefits building trust in electronic channels (Johnson, 2007; Pavlou, Liang, & Xue, 2007). Researchers in behavioral finance have pointed to likelihood of investor uncertainties and anxieties arising from ambiguous situations coupled with a strong need for information frequently leading to the spread of rumors with potentially disadvantageous consequences for investors (Kimmel, 2004). Financial products such as certificates of deposits, home equity loans and automated bill-pay initiated within an online banking context are potentially complex and are likely to involve substantial ambiguity in the mind of consumers. Consequently, my conceptual framework evaluates consumer information ambiguity associated with online financial services. The theoretical arguments supporting these relationships are elucidated in the following discussion of the study hypotheses.

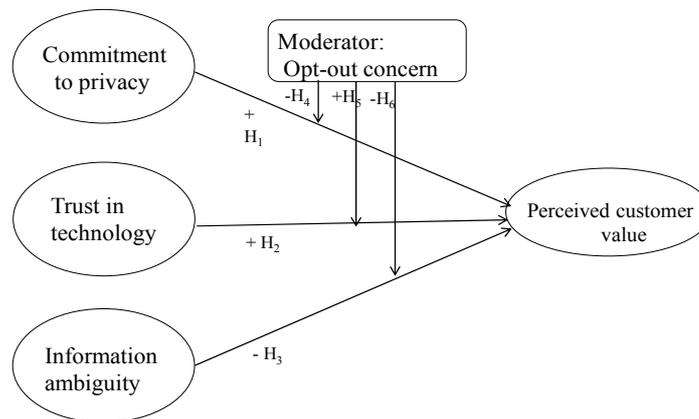


Figure 1. Conceptual framework: the moderating effects of consumer opt-out belief in online service relationships

### 2.3 Perceived Value

Customer value is an overall assessment of a service's utility based on a customer's perceptions of what is given and received (Zeithaml, 1988). Perceived value is determined by customer perception of a good buying experience, good price and good quality (Kerin, Jain, & Howard, 1992). Perceived value is a cognitive appraisal that determines the emotional response of customer satisfaction and subsequently loyalty behavioral intentions (Cronin, Brady, & Hult, 2000). In the retailing context perceived merchandise value has been shown to increase not only repurchase loyalty but also to increase affect towards a store, leading to greater attitudinal loyalty and ultimately higher willingness to pay more (Chaudhuri & Ligas, 2009). Hence perceived value is a key determinant of behavioral and attitudinal loyalty in consumer exchange relationships. Consequently, demonstrating that consumer opt-out belief has a significant influence on perceived value should provide further evidence of the importance of consumer privacy beliefs in consumer purchase decisions.

### 2.4 Perceived Firm Commitment to Privacy

Perceived firm commitment to privacy protection evaluates consumer concern that a firm is committed to protecting the privacy of its customers. Perceived firm commitment to privacy does not evaluate consumers' knowledge of detailed elements of a firm's privacy policy because evidence indicates that many consumers are often inattentive to these details; privacy statements are often too long and filled with overbearing legal technicalities (Antón & Earp, 2004). For instance, a mall intercept study conducted by Meinert, Peterson, Criswell and Crossland (2006) revealed that although 77% of consumers reported having seen privacy policies in the past, only 46% of consumers reported having actually read a privacy policy. Consequently, perceived commitment to privacy focuses more generally on consumers overall perception of a firm's willingness to protect their privacy. This conceptualization assumes that consumers form perceptions about a firm's privacy policy and behavior from multiple sources including interactions with frontline employees and electronic channels, exposure to in-use firm policies, service recovery experiences and perusal of a firm's privacy policy. In summary, perceived firm commitment to privacy protection is defined as consumers' concern that a firm is willing to protect the integrity of consumers' personal information and restrict its use to purposes relevant to the transaction or relationship.

The prevalence of privacy compromises and the difficulty of recovering from an occurrence generate anxiety among consumers. Reducing risk and uncertainty is a fundamental motivation for consumers to engage in a relationship (Sheth & Parvitar, 1995). Therefore building an image of protecting customer information is inherently valuable to customers. Reducing consumer fear by creating a reputation for protecting consumer privacy requires that firms deliver good quality service by respecting customers and their information. Quality service includes effectively communicating the firm's privacy policy, seeking customer approval for policy change, responding promptly to privacy compromises and advising customers on how to better protect their privacy. Service researchers have documented evidence of relationship and trust building initiatives of firms reducing the prominence of negative possibilities in service consumption (Bitner, Gwinner, & Gremler, 1998)

The *service-dominant* logic perspective on value holds that value is not merely an embedded outcome of a transaction, but an interactive partnership between the firm and its customers (Vargo & Lusch, 2004). According to this logic, value is created and enhanced through co-productive customization of the service outcome (Anderson, Pearo, & Widener, 2008). An information privacy policy that engenders a trustworthy environment should create fertile ground for the value co-creation process. Conversely, a firm's opportunistic actions may impede value co-creation by discouraging exploratory use of a service by consumers. For example, consumers are unlikely to accept software intended to improve service quality from a firm if they doubt the firm's intention to protect customer information. On the other hand, consumers are likely to dedicate less resource to protecting themselves and engage more proactively in co-production efforts when their fears are reduced by a positive firm reputation, resulting in a more favorable cost-benefit equation for consumers (Porter & Donthu, 2008). In light of this discussion, the following is anticipated.

H1: Consumer perceived firm commitment to privacy protection is positively related to perceived customer value from online banking service.

### 2.5 Trust in Technology

Research across several fields indicates that technology users evaluate the trustworthiness of the technology they use. Trusting evaluations are relevant in situations involving uncertainty of outcomes and risk of loss. Therefore to the extent that consumers regard technology as less than fully reliable and likely to expose them to personal loss, trusting evaluations of technology becomes a relevant consideration. Trust in technology refers expectations concerning the reliability of a technology. Johnson (2007) defines trust in technology as consumers' expectations of technically competent, reliable and dependable performance. This definition assumes that trust in technology is performance-based rather than emotion-based.

Research has shown that consumer lack of information about online banking has been a source of uncertainty leading to fear of mistakes in using the channel and ultimately becoming a deterrent to online banking acceptance (Dimitriadis & Kyrezi, 2011; Kuisma, Laukkanen, & Hiltunen, 2007). Emerging research in online banking and healthcare services points to trust in technology having significant bearing on the customer experience. Johnson (2007) demonstrated that trust in online banking technology is a critical mediator in getting consumers to increase their transaction frequency and value from online banking. Healthcare researchers find that technology characteristics and trust in care providers influence patient trust in technology (Montague, Winchester III, & Kleiner, 2010). Some have even argued that there is a tendency for individuals such as critical care nurse and airline pilots to place inappropriate levels of trust in technology, leading to complacency and adverse consequences (Browne & Cook, 2011).

Performance based perceptions of reliability and dependability should impact consumers' cost-benefit value equation by both reducing psychological costs and increasing benefits. Psychological benefits are enhanced when consumers become more convinced that the technology is not likely to have failures that compromise access to their accounts or have their money inadvertently transferred out of their account. The realization that adequate safeguards exist reduces the consumer worry and fear and makes the consumption experience less stressful. This realization should lead to increased functional benefits of online banking. Consumers who trust online banking technology are likely to move beyond just checking balances to more complicated transactions like bill pay, which have greater potential for saving them time and money. Additionally, it has been argued that buyers often punish sellers that have high transaction specific risk, but reward reputable sellers with price premiums resulting from the added value gained from lower transaction risk (Rao & Monroe, 1996). These arguments lead to the following hypotheses.

H2: Consumer trust in technology is positively related to perceived customer value from online banking service.

### 2.6 Information Ambiguity

Researchers in behavioral finance have pointed to the likelihood of investor uncertainties and anxieties arising from ambiguous situations coupled with a strong need for information frequently leading to the spread of rumors with potentially disadvantageous consequences for investors (Kimmel, 2004). Financial products such as certificates of deposits, home equity loans and automated bill-pay that can be initiated within an online banking context are sufficiently complex as to create substantial ambiguity in the mind of consumers. Ambiguity is the unanimity of information concerning a focal decision or event that leads to a level of confidence regarding the outcome of a decision or event (Fox & Tversky, 1995). Information ambiguity is concerned with consumer perception of the lack of clarity of information about the focal product or service. This article examines information ambiguity concerning the financial products and services offered via online banking to credit union members. For example, members have the option of establishing a certificate of deposit, automated bill pay and

implementing overdraft protection. To the user, especially new ones, these transactions come with the uncertainty of possible errors such as replicated payment and or paying the wrong entity. Research on decision making under uncertainty find that individuals have an inherent bias against making decisions involving ambiguity. In a number of experiments, Ellsberg (1961) found that individuals preferred to place a bet with a known probability of an outcome than a bet with an unknown probability of an outcome. Ellsberg (1961) concluded from his research that the willingness of people to act is not only dependent on the probability of a desired outcome but also on the clarity of the facts informing the decision. This implies that to the extent that online banking customers find certain transactions ambiguous, they will avoid these transactions. This results in lower usage rates of services such as bill pay, money transfer and loan and credit card applications. Research in behavioral finance has also shown that ambiguity averse investors will not only avoid ambiguous decision but will also rely on aggregate information to inform specific decisions even when the aggregate information is unrelated, while aggressive investors show no such tendency (Caskey, 2009). The implication is that as ambiguity increases, some consumers are likely to rely on irrelevant information to reduce their ambiguity or avoid purchase decisions completely, leading to reduced customer value. In summary information ambiguity reduces the propensity to fully and correctly utilize online banking services, leading to reduced perceived value from using online banking services. Consequently, the following is expected.

H3: Consumer information ambiguity is negatively related to perceived value of online banking services.

### *2.7 The Moderating Effects of Opt-Out Support*

As heretofore mentioned, it is proposed that high opt-out supporters draw on an idiocentric self-construal. An individual's self-construal as being idiocentric or allocentric regulates a variety of psychological processes related to personality traits, concern, motivations, values and behavioral lifestyles (Markus & Kitayama, 1991; Smith & Bond, 1998). Idiocentrics are primarily influenced by internal desires and preferences that are independent over time and invariant of specific others (Markus & Kitayama, 1991). Assuming that opt-out supporters are idiocentric by nature, they can be expected to derive confidence from their record of competitiveness and success, rather than from the goodness of others. A tendency toward competitiveness, rationality and inner-directedness makes opt-out supporters place less value on privacy protection initiatives of firms. Although high opt-out supporters may regard the efforts of their credit union to protect them as sincere, their individualistic outlook causes them to place less value on the efforts of others and more toward their abilities to protect themselves. These consumers may even be suspicious of firms' that emphasize protecting customer privacy. In summary, drawing on the logic of idiocentrism, it is argued that the more consumers support the opt-out principle, the less weight they are likely to place on the efforts of a firm to protect them and consequently the lower the value they will derive from a firm's commitment to protecting their privacy. Consequently the following is hypothesized.

H4: The positive effect of commitment to privacy on perceived value will be weaker when opt-out support is high than when opt-out support is low.

It is also argue that consumers who support the opt-out principle are more likely to view the trustworthiness of technology as a source of value in their online relationships. Idiocentrics value personal control more than allocentrics (O'Connor & Shimizu, 2002). Research has found that individuals in interdependent situations perceive lower levels of self-control than individuals in independent situations (Weisz, Rothbaum, & Blackburn, 1984). It is therefore likely that idiocentrics find technological channels attractive because of the degree of control it affords them. Dabholkar & Sheng (2008) argued that control is an essential mediating factor in consumer online interactions. Within an online context, user control has been defined as a user's ability to control the flow of two-way communication (McMillan & Hwang, 2002) and as user control over the flow of information (Liu, 2003). Browser software allows consumers to specify varying degrees of control over how much of their personal information is shared. It is also likely that as idiocentrics, opt-out supporters regard technology as a more secure option than implicit or explicit polices of the service firm. Following from this logic it is argued that high opt-out supporters will weigh their trust in technology more heavily in determining the value they derive from online services than low opt-out supporters.

H5: The positive effect of trust in technology on perceived value will be stronger when opt-out support is high then when opt-out support is low.

It is also anticipated that opt-out support moderates the effect of product/service information ambiguity on perceived value. The logic for this moderating relationship draws on research suggesting that idiocentrics have a heightened propensity to draw inferences about the personality of others. Spontaneous trait inference (STI) refers to the process of individuals making personality trait inferences without intention, interest and awareness of their actions (Duff & Newman, 1997). Research by Duff and Newman (1997) found that highly idiocentric individuals

are more likely than low idiocentrics to engage in STI. The study illustrated that a differentiating feature of high idiocentrics and low idiocentrics is this tendency to automatically evaluate the personality trait of others. Following from this research, the present article contends that consumers who are high opt-out supporters have a heightened propensity to draw inferences about the reputation of various aspects of sellers, likely leading to acute insights about the firm's likely intentions and actions toward its customers. Similar to highly idiocentrics individuals, it is argued that high opt-out supporters are likely to make inferences about the front-line employees, top management and technology channels of services businesses. High opt-out supporters may also have a heightened tendency to draw inferences concerning web site design, interactivity and availability of clear guidance. These inferences may, for example, be instrumental in consumers predicting the reaction of a customer service representative to an error in their account. The implication is that this heightened tendency to draw inferences will provide an alternate basis for evaluation of the service firm when faced with product information ambiguity. The likelihood of drawing on a wider variety of aspects of firm as a basis of evaluation should make opt-out supporters less likely to rely on ambiguous product and service information in determining customer value. This discussion leads to the following hypothesis.

H6: The negative effect of information ambiguity on perceived value will be weaker when opt-out support is high than when opt-out support is low.

### **3. Method**

#### *3.1 Research Setting*

The credit union retail banking industry provides the context for this study. Credit unions within the United States offer members a comprehensive portfolio of financial products. In this sense credit unions are similar to retail banks with the exception that credit unions are not-for-profit cooperatives owned by customers who are referred to as members of the credit union. From the standpoint of product and service delivery, credit unions operate similarly to for-profit retail banks. Through co-marketing arrangements with for-profit financial institutions, credit unions offer customers a full range of financial services and customer touch-points, competing effectively with retail banks. Data were collected by means of a survey of members of a regional teachers' credit union located in the northwestern United States. The survey targeted the total population of 2,745 members who used online banking services. Online banking customers were considered appropriate subjects for this study due to the salience of privacy concerns to online transactions. The survey yielded 834 responses, representing a 30% response rate. Respondents are 59% female, averaging 45 years of age with an average income of approximately \$50,000. The disproportionate presence of females among the respondents is attributable to the disproportionate presence of women in the teaching profession. An ANOVA test comparing the mean perceived value of males and females in the study indicates no significant difference between the means ( $p > .2$ ).

#### *3.2 Measurement*

All latent constructs were measured using multi-item scales (see Table 1). Perceived firm commitment to privacy is a three-item scale that evaluates consumer perception of the credit union's intention to maintain the integrity of customer information. It evaluates the trustworthiness of a firm as it relates to the management of customer information. The scale taps perceived firm commitment to maintaining customer privacy, intention to pass on customer information and commitment to maintaining the integrity of customer information. Opt-out support is measured using a three-item scale that taps consumer agreement with the act of firms passing on their contact information to third parties as long as they are allowed to opt-out afterwards. Information ambiguity is measured using a new three-item scale that taps the degree to which a consumer finds available information on financial products and services reliable and allows for clear decision-making. The scales for opt-out, commitment to privacy, and information ambiguity were subjected to exploratory factor analysis using maximum likelihood and varimax rotation. The result indicates a robust three-factor solution with all items loading convincingly on their intended constructs and with each factor having an eigenvalue greater than one. Finally, perceived customer value is measured using a three-item semantic differential scale taken from Sirdeshmukh, Singh, and Sabol (2002).

Table 1. Study measures

Study Constructs	<sup>a</sup> Standardized loadings	Variance extracted	Reliability
<b>Perceived firm commitment to privacy</b>		95%	.81
Scale: 1. strongly disagree to 7. strongly agree			
XYZ Credit Union is committed to maintaining my privacy	.91		
XYZ Credit Union will never pass on my personal information to a third party	.88		
ZYX Credit Union is committed to maintaining the integrity of my personal information	.93		
<b>Opt-out Support</b>		93%	.86
Scale: 1. strongly disagree to 7. strongly agree			
As long as customers are given the opportunity to opt out afterward, firms should be able to pass on their customers' information to other firms.	.88		
I have no problem with my information being passed on to another firm, as long as I am able to exclude myself from the new firm's list afterward	.93		
I am comfortable with having my personal information passed on to another firm, as long as I can opt out when the new firm contacts me	.83		
<b>Information Ambiguity</b>		95%	.88
Available information on financial products/services is often conflicting	.81		
Available information on financial products/services does not allow clear decision making	.93		
Available information on financial products/services often proves unreliable	.82		
<b>Perceived value from the firm</b> (Sirdeshmukh, Singh & Sabol 2002)		90%	.86
Scale: 1. strongly disagree to 7. strongly agree			
For the charges you pay for using this credit union, would you say that XYZ Credit Union is:	.74		
1. a very poor deal to 10. a very good deal.			
For the time you spend in order to use the service of XYZ Credit Union, would you say it is:			
1. highly unreasonable to 10. highly reasonable	.84		
How would you rate your overall experience with XYZ Credit Union is: 1. not at all worthwhile to 10. extremely good value.	.98		
<b>Trust in technology</b>		89%	.78
I can rely on PC Branch technology to execute my transactions reliably	.78		
Given the state of existing PC banking technology, I believe that technology related errors are quite rare	.83		
In my opinion, PC Branch technology is very reliable	.92		

Note. <sup>a</sup>All loadings are significant at  $p < .001$ .  $\chi^2 = 101$  (d.f. = 73),  $p = .05$ ; RMSEA = .022; AGFI = .973; CFI = .994; IFI = .997.

### 3.3 Common Method Variance

Because the data on the predictor and criterion variables were collected by means of a single-source cross-sectional survey, steps were taken to mitigate the biasing effects of possible common method variance (CMV). First, procedures recommended by Podsakoff, MacKenzie, Lee and Podsakoff (2003) were enacted in the survey design to minimize various forms of CMV. To reduce social desirability bias, the survey was designed to allow participants to respond anonymously. Data for this study were collected as part of a wider study on consumer online banking activities involving many variables. This allowed me to create psychological distance between the criterion and predictor variables by interspersing scales for the predictor and criterion variables throughout the questionnaire. Following data collection, the effects of CMV on the study results were evaluated—using a method recommended by Lindell and Whitney (2001), involving adjusting the correlations among latent variables to show the effects of common method variance. A *marker variable* is selected that is theoretically unrelated to the predictor variable to serve as a proxy for CMV (Lindell & Whitney, 2001, p. 116). The *create needs* construct was used for this purpose. Create needs evaluates the degree to which consumers think that online banking creates a need to use more of the bank's services. Using this as the best estimate of CMV, the lowest absolute correlation between create needs and other variables ( $r = -.023$ , see Table 1) was selected. Each correlation among latent variables was adjusted by .023 using equation 4 of Lindell and Whitney (2001, p. 116). Table 1 displays the zero order correlations of latent variables below the diagonal and the correlations adjusted for CMV above the diagonal. The statistical significance of the adjusted correlations was determined using equation 5 (Lindell & Whitney, 2001, p. 116). To the extent correlations that are significant prior to the adjustment remain significant after the adjustment; it is unlikely that CMV accounts for the results of the study. Table 2 indicates that none of the

correlations among the latent variables lost significance after the adjustment for CMV. Thus, it can be concluded that CMV does not have a material impact on the study findings.

Table 2. Descriptive statistics and intercorrelations

Variables	Mean	S.D.	Range	1	2	3	4	5	6
1. Commitment to privacy	5.21	1.22	1-7	1	-.027	-.263**	.319**	.369**	-.223**
2. Opt-out	1.52	1.08	1-7	-.004	1	.017	-.095*	-.044	-.047
3. Information ambiguity	2.79	2.70	1-7	-.234**	.040	1	-.267**	-.296**	.362**
4. Trust in Technology	5.47	1.04	1-7	.335**	-.070*	-.238**	1	.309**	-.189**
5. Perceived value	8.07	1.47	1-10	.384**	-.020	-.267**	.325**	1	-.384**
6. Create needs (marker)	3.40	1.15	1-7	-.195**	-.023	.377**	-.162**	-.300**	1

Note. \*Significant at the .05 level (2 tailed), \*\*Significant at .01 level (2 tailed). Zero order correlations are reported below the diagonals. Correlations adjusted for common method bias (CMB) using lowest absolute correlation between the marker variable and model variables (create needs correlated with opt-in = .01) are displayed above the diagonal.

### 3.4 Measurement Model Analysis

To determine the discriminant validity of construct measures, confirmatory factor analysis was conducted using AMOS 18 (Arbuckle, 2006). The results are presented in Table 1. All measures load significantly onto their intended latent construct ( $p < .001$ ). A Chi Square Fit Statistic of 101 (d.f. = 73),  $p = .05$  indicates a reasonable fit of the model with the data. Further support is provided by an RMSEA of .022, AGFI of .973, CFI of .997 and IFI = .997, indicating a robust fit of the measurement model with the data.

Convergent validity of measurement scales is evidenced by the Cronbach Alpha reliability measure for the five latent constructs exceeding the conventional .70 threshold, ranging from .78 for trust in technology to .88 for information ambiguity. Finally, the variance extracted by each latent construct is acceptable, ranging from 89% for trust in technology to .95% for commitment to privacy and each exceeds the squared correlation between the construct and each of the other constructs in the model, supporting discriminant validity. Thus the measurement model adequately represents the data.

### 3.5 Results

Having established the veracity of the measurement model, a structural model was then estimated to test the main-effects hypotheses. The structural model displayed satisfactory fit with a Chi Square of 63.1 (d.f. = 36),  $p = .003$ . The RMSEA of .030, AGFI of .973, CFI of .994 and IFI of .994 also indicate satisfactory fit of the measurement model with the data. The results of the test of hypothesized relationships are displayed on Figure 2. The hypothesized main-effects are supported. Perceived commitment to privacy ( $\beta = .283$ ,  $p < .001$ ) and trust in technology ( $\beta = .235$ ,  $p < .001$ ) positively and significantly affect perceived customer value, supporting hypotheses 1 and 2, respectively. Hypotheses 3 is also supported with information ambiguity having a negative and significant effect on perceived customer value ( $\beta = -.176$ ,  $p < .001$ ).

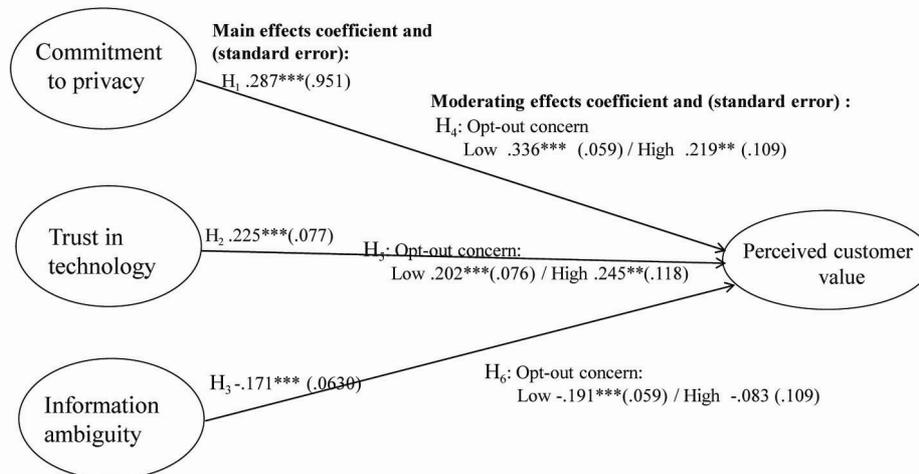


Figure 2. Results: main effects and moderating effects

Note. Multi-group Fit Statistics:  $\chi^2=144$ , d.f.=100,  $p=.003$ , RMSEA=.023, AGFI=.956, CFI=.993, IFI=.98; \*Significant at the .05 level (2 tailed), \*\*Significant at .01 level (2 tailed), \*\*\*Significant at .001 level (2 tailed).

The moderating hypotheses were tested using AMOS multi-group analysis by splitting the data into subsets of low ( $n=623$ ) and high ( $n=211$ ) opt-out support. Invariance across the measurement model applied to both sub-samples was established by constraining the measurement model to be equal across both sub-samples and comparing the model fit to an unconstrained model. A Chi Square difference test revealed no significant difference in model fit between the constrained and unconstrained models ( $\Delta\chi^2=10.85$ ,  $\Delta d.f.=7$ ,  $p=.145$ ), indicating that the measurement model is suitable to both sub-samples. Subsequently, hypotheses 4 to 6 were evaluated by comparing the structural paths between the sub-samples. The effect of commitment to privacy on perceived value is weaker at a high level of opt-out support than at a low level of opt-out support, supporting hypothesis 4 (low opt-out:  $\beta=.336$ ,  $p<.001$ ; high opt-out:  $\beta=.219$ ,  $p<.01$ ). The effect of trust in technology on perceived value is stronger at the high level of opt-out support than at the low level of opt-out support, consistent with hypothesis 5 (low opt-out:  $\beta=.202$ ,  $p<.001$ ; high opt-out:  $\beta=.245$ ,  $p=.001$ ). Finally, Hypothesis 6 is also supported with the negative effect of information ambiguity on perceived value being significant at the low level of opt-out support and insignificant at the high level of opt-out support (low opt-out:  $\beta=-.191$ ,  $p<.001$ ; high opt-out:  $\beta=-.083$ ,  $p=.114$ ). Despite these differences in path coefficients, the Chi Square difference test did not indicate a significant deterioration in model when structural weights were constrained across sub-groups ( $\Delta\chi^2=4$ ,  $\Delta d.f.=3$ ,  $p=.273$ ). However, model fit significantly deteriorated when structural covariance is equated across data sub-groups ( $\Delta\chi^2=24.68$ ,  $\Delta d.f.=9$ ,  $p=.003$ ). On balance it can be concluded that there is moderate evidence in support of the moderating role of opt-out support.

## 4. Discussion

### 4.1 Research Contributions and Implications

The results of this study make significant contributions to research on consumer privacy. This study shows that consumer anxiety related evaluations have a material effect on the value consumers experience with online services. The predicted moderating effects are all confirmed. Collectively the results for the moderating effects of opt-out belief are consistent with the predictions of allocentrism/idiocentrism theory relied on by this study. Consequently it is argued that the present study contributes to the extant literature on privacy by providing additional theoretical explanation for consumer privacy concern. Prior research has demonstrated the relevance of individual differences in influencing consumer privacy concern and in response to sellers' privacy policies (Seounmi, 2008; Sheehan & Hoy, 1999). The findings of this study suggest that consumer allocentric and idiocentric personality trait has predictive value in understanding how consumers are likely to react in response to a seller's privacy related initiatives.

The second contribution of this study is providing deeper insights into the mindset of some consumers' attitude to privacy. The study confirms my expectation that consumers who are highly supportive of opt-out, place less emphasis on their perception that the firm is committed to protecting their privacy and more emphasis on trusting in technology. This is consistent with my aforementioned argument that high opt-out believers are suspicious of firms and see technology as a means to gain greater control over their ability to protect them self. It is likely that

idiocentrics find the notion of a market for information privacy in which consumers can protect themselves through technology-based utilities highly appealing. The implication of this finding is that it is useful for both researchers and managers to recognize that some consumers are likely to be more accepting of technology-based trust verification systems than they are with brand and attitudinal loyalty-based brand imagery. This may be a reason why some consumers use payment service such as PayPal even for online retailers that they trust.

The third contribution of this study is related to the value of consumer opt-out concerns as a potential segmentation variable. An important managerial implication of this study is that it encourages managers to recognize that not all consumers react in the same way to a firm's privacy policy. Consequently, there is an opportunity to increase returns on the firm's customer information assets by matching information use with consumer opt-out support. High opt-out supporters should be more open to negotiating benefits in return for use of their contact and behavioral data if targeted with the appropriate message. High opt-out believers place a higher reliance on technology to protect them and should be more responsive to additional technological safeguards that give them additional controls to protect their privacy. For example, high opt-out believers should be more responsive to security software provided by banks that increase password protection and reduce phishing scams. Privacy related messages to high opt-out believers should emphasize the notion of "giving you better control over your privacy".

Low opt-out believers on the other hand may be more responsive to relationship and trust-building messages that convey commitment to the interest of the customer. It is managerially challenging, however, to determine the opt-out support of each customer. Opt-out support may not be easily surmised from transaction data. Instead it must be assessed by means of a survey. For new customers, privacy concern can be assessed as part of a "getting to know your preference" aspect of the new account application process. For existing customers, opt-out support assessment can be included in changes or updates to a firm's privacy policy designed to require consumer acknowledgment and response to questions.

#### *4.2 Limitations and Future Research Potential*

Like most studies, this study has limitations that may impinge upon the interpretation of its findings. One limitation of this study is that it only examines consumer *choice* of opt-out as an aspect of consumer privacy concern. The study would have been enhanced by also measuring opt-in as well other aspects of consumer privacy concern. It may also be argued that the study would be of greater value to managers if commitment to privacy was examined multi-dimensionally or evaluated at a more micro-level than at the macro level it is considered. The intent of the commitment to privacy construct is to capture at consumer overall impression of a firm, which emanates from different sources and interactions. Finally, idiocentrism is used to provide the theoretical underpinning of opt-out support but it was not measured in this study. The measurement of allocentrism/idiocentrism would have made the findings of this study more robust and should be the subject of further research.

Many firms fail to recognize the strategic opportunity presented by effective management of customer information assets especially with regard to protecting consumer privacy and yielding returns. To date marketing researchers have focused primarily on consumer and public policy issues. More research is needed on the strategic management of customer privacy. To this end empirical research and conceptual studies are required to clarify the effects of consumer privacy and information management on customer acquisition cost. Further research is also warranted to clarify the relative impact on customer value, satisfaction and loyalty of consumer-firm experiences vis-à-vis more trait influences such as allocentrism/idiocentrism. Do opt-in and opt-out supporters or allocentrics/idiocentrics respond differently to privacy failures and recovery attempts? More research is also needed into how consumers cope with privacy compromise and identity theft. Research in this area could lead to prescriptive frameworks for community-based support on avoidance and recovery from privacy compromises. Finally, a variety of technological and procedural solutions are being offered to protect consumers against privacy compromises. More research is required to better understand consumer attitudes concerning these solutions.

### **5. Conclusion**

This article examines the moderating role of a specific aspect of consumer concern for privacy, namely consumer support for the opt-out principle. This study clearly demonstrates that consumers will rely on different factors to feel secure about privacy protection according to how much they support the opt-out principle and that ultimately it influences the amount of value they perceive in the relationship. As consumers continue to struggle to protect their privacy and to achieve the best value for money, firms that are better able to understand the sources of consumer anxiety and the factors governing consumer response will have an advantage in building strong customer relationships.

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