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Understanding the role of equity in leveraging privacy concerns of consumers in ecommerce

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Abstract

Since ecommerce requires individuals to disclose their personal information, an issue of information privacy becomes an impediment towards its adoption. However, a paradox exists whereby individuals claim privacy concerns, yet act contrarily by using ecommerce. Our research aims to investigate the reasoning behind individuals use of ecommerce, despite claiming concerns for their information privacy. Based on previous findings, we argue that consumers undergo a calculation of equal benefits in conducting business with online firms, where they agree to firms utilizing their personal information as long as they retain control over its usage. This paper is a research-in-progress, and as such, our future work would be to validate our argument by collecting and empirically analyzing individuals responses with regards to ecommerce use. We expect that our paper would contribute by better understanding the conditions in which individuals disclose or withhold personal information.

Keywords

Information privacy, equity theory, ecommerce, trust, control, fair information practices.

1. Introduction

The adoption of ecommerce as a medium for conducting business transactions has seen exponential growth within the past decade and a half. For instance, in 2010, a survey revealed that 51% of Canadian internet users transacted online (Statistics Canada, 2013). Furthermore, in 2012, the percentage of internet users shopping online increased to 56% (Statistics Canada, 2013). However, while the survey revealed impressive statistics for ecommerce, there still existed a little less than half the number of internet users which did not shop online. Similarly, in the third quarter of 2014, ecommerce sales rose to $78.1 billion US dollars (US Census Bureau News, 2014). Yet, despite the increase in ecommerce sales within the US, it only represented 6.6% of the total retail sales (US Census Bureau, 2014). Studies have indicated that the advancement of ecommerce is hindered by individuals' concerns for their information privacy (Dinev and Hart, 2006; Li, Sarathy, & Xu, 2011).

In order for consumers to make an online purchase, they are required to disclose personally identifiable information. However, several polls have revealed that consumers are concerned over the privacy of their personal information (Smith, Dinev, & Xu, 2011). Mason's (1986) prediction that privacy would become one of the major concerns within the information age has proven true whereby individuals claimed that it was essential to control access to their personal information (Madden, Fox, Smith, & Vitak, 2007). Information privacy refers to the ability an individual possesses to control the collection, access and use of his/her personal information (Smith, Milberg, & Burke, 1996; Westin, 1967).

Researchers have found that an interesting phenomenon, known as the privacy paradox, exist whereby individuals' concerns are contradictory to their behavior (Dinev & Hart, 2006; Smith et al., 2011). Norberg, Horne, and Horne (2007) found that consumers' intentions to disclose personal information did not match their actual behavior. As such, while studies have found that privacy concerns are an impediment to ecommerce adoption, there are other factors at work that may change the outcome of a person's decision (Dinev & Hart, 2006; Li et al., 2011; Van Slyke, Shim, Johnson, & Jiang, 2006). Our research aims to investigate the reasoning behind individuals use of ecommerce, despite claiming concerns for their information privacy.

We argue that consumers undergo a calculation of equal benefits in conducting business with online firms, where they agree to firms utilizing their personal information as long as they retain control over its usage. Based on the findings of Malhotra, Kim, and Agarwal (2004), the level of control an individual has over his/her personal information is one factor that comprises that individual's overall information privacy concerns. Therefore, if consumers are willing to transact online, yet do so on the basis of the level of control they have, they must rationalize how they will benefit from the trade. Furthermore, studies have indicated that humans seek fairness in social exchanges (Culnan & Armstrong, 1999; Joshi, 1989). In order for consumers to make a judgment on what entails fairness within an online transaction, they would need to undergo some estimation of what would be the benefits and losses of transactions.

2. Literature

Despite the number of studies within the area of information privacy, it is still a fragmented concept whereby nobody can fully articulate what it means (Smith et al., 2011). There are four major definitional streams for information privacy, which are categorized as either value-based or cognate-based. The value-based definitions are privacy as every individual's right, or privacy as a commodity which could be traded for something of equal value (Smith et al., 2011). Yet, the cognate-based definitions explains that information privacy is relative to each individual and not based on some societal value. Therefore, privacy could be defined as a state whereby individuals either seek a privacy or not (Smith et al., 2011). Yet, under the definition that privacy is a control, privacy represents the control of transactions between individuals, whereby the objective is to increase autonomy and minimize vulnerability (Smith et al., 2011).

Based on the definitions of privacy, there exists a rich stream of research which attempts to understand the privacy paradox. Dinev & Hart (2006) explained that consumers are willing to provide personal information based on a cost-benefit analysis of the conflicting salient factors present before transactions. This was consistent with the research model developed by Van Slyke et al. (2006), where conflicting factors of risk, trust, familiarity, and concern for information privacy had moderating effects on each other and significantly influenced the willingness to transact. An important finding was the role that trust had in influencing consumers' intentions to transact online (Dinev & Hart, 2006; Van Slyke et al., 2006). Essentially, the trust a consumer has in an organization would act as an incentive to transact online (Belanger, Hiller, & Smith, 2002), and could mitigate their privacy concerns (Pavlou, Liang, & Xue, 2007). However, in conflict with the prior findings of trust, Norberg et al. (2007) found that trust was not significant in either the intentions of personal information disclosure or actual behavior.

Another argument that was made to explain the privacy paradox was that consumers' behavior are not rational. Acquisti (2004) explained that for any transaction, rational privacy behavior is unrealistic as there is a limit to the information of parameters within a rational calculus an individual has. Furthermore, even if the individual had all the information needed to make a rational decision, he/she would not be able to calculate it since cognitive processing is essentially limited (Acquisti, 2004). Also, psychological distortions of self-control and immediate gratification would affect such consumers' decisions (Acquisti, 2004). However, research has shown that there is some rational thought-process when consumers are considering when to withhold personal information or disclose it. Awad and Krishnan (2006) found that consumers were willing to disclose personal information when they were asked to be profiled for personalized services, as opposed to personalized advertising. This indicated that consumers weighed the value of their information based on the context in which they were asked to disclose it.

Culnan and Armstrong (1999) found that when individuals were informed that fair procedures were implemented in managing their personal information, they were willing to disclose their information. However, when they were not told that fair procedures were used, those with higher privacy concerns were less willing to disclose their personal information (Culnan & Armstrong, 1999). An individual's control over his/her personal information was reflected from the principles of procedural fairness or procedural justice (Malhotra et al., 2004). Essentially, individuals would perceive fairness if they had control of their personal information, which were exhibited through the freedom of approval or rejection of procedures, as well as the ability to opt-out (Malhotra et al., 2004). The influence of procedural justice in individuals' decision to provide personal information was supported by Son and Kim (2008), who found that the greater the individuals perceived fairness when asked to disclose personal information, the less likely they were to refuse or misrepresent the disclosure of their personal information.

3. Theoretical Basis

Equity theory was developed by Adams (1963) to understand the response of employees with regards to inequitable situations within the workplace. Equity theory postulates that during social exchanges, individuals would assess their inputs and outputs and compare them to the other party's inputs and outputs (Adams, 1963). Individuals would therefore seek fairness, whereby there is a balance between the ratio of inputs and outputs of both themselves and the other party within the relationship. If the individual perceives that there is an imbalance on either members of the social relationship, then the person becomes distressed. Equity theory is comprised of four propositions (Adams, 1965) which are:

1. An individual evaluates his/her outcomes and inputs within a social relationship and compares it with his/her perception of outcomes and inputs of the other individual(s) in the relationship.
2. If the individual perceives that the ratio of outcomes and inputs from both members within the relationship are not equivalent, then an inequity exists.
3. The individual becomes distressed with the greater the magnitude of the inequity, whether he/she is overrewarded or underrewarded.
4. A distressed individual would attempt to achieve equity through a number of techniques such as adjusting or cognitively distorting the inputs or outcomes, acting on the comparison, or annulling the relationship.

Equity theory has been adopted in the information systems (IS) field, such as the study of Joshi (1989), where an instrument was developed to measure users' of management information systems perceptions of fairness in the allocation of system resources. Also, Glass and Wood (1996) used equity theory to understand the factors that influenced individuals to engage in software piracy, arguing that social relationships and perceptions of equity influenced individuals to provide illegal copies of software to others. Similarly, when consumers transact online with organizations, they are entering a social relationship (Pavlou et al., 2007). As such, it is reasonable to assume that consumers would seek equity in ecommerce transactions. This is especially the case when information privacy is involved, as individuals would attempt to justify the leveraging of their personal information for control and the organization's use.

3.1 Hypotheses

As previous studies have indicated, an individual's perception of control is related to his/her assessment of fairness when disclosing personal information (Culnan & Armstrong, 1999; Malhotra et al., 2004). Therefore, a consumer would perceive fairness when an organization surrenders control of the consumer's personal information to him/her. This is therefore assumed to be the outcome the consumer would attain in the ecommerce transaction, however, the disclosure of personal information would be the consumer's input to the relationship. Yet, a consumer's personal information could be identifiable such as social security numbers and credit card numbers (Dinev & Hart, 2006), and as such, carry heavy consequences if the information was compromised. The value of consumers' personal information therefore raises privacy concerns which inhibit ecommerce transactions (Dinev & Hart, 2006).

H1: Consumers privacy concerns are negatively related to online transactions.

Organizations would benefit by attaining the personal information, which they could use for competitive advantage. The trade of outcomes and inputs by both consumers and organizations would thus be considered fair through the exchange of personal information with control. Consumers perceive control when they have the access to the information an organization has collected about them, knowledge of how it would be used (Awad & Krishnan), and the ability to opt-out (Malhotra et al., 2004; Son & Kim, 2008).

H2a: Consumers privacy concerns are negatively related to their perception that organizations are surrendering control to them.

H2b: Consumers perception of control is positively related to their access to the information an organization collected about them, knowledge of how it is used and the ability to opt-out.

Organizations could build trust with consumers, which would in turn mitigate privacy concerns (Culnan & Armstrong, 1999; Pavlou et al., 2007; Smith et al., 2011). This would require organizations to invest in privacy-enhancing features such as adopting fair information practices (FIPs) like privacy policies and privacy seals (Hui, Teo, & Lee, 2007). Hui et al. (2007) found privacy seals to be insignificant to consumers disclosure of personal information, but privacy policies did significantly influence consumers' decisions. Culnan and Armstrong (1999) found that when FIPs were implemented, there was no difference in the intentions of consumers with more concern for privacy, than those with less. Therefore, in ecommerce transactions, consumers would be trading their trust for an organizations investment into FIPs and ethical behavior, which would influence them to transact online.

H3a: Consumers' trust is positively related to organizations implementation of FIPs.

H3b: Consumers' trust is positively related to transacting online.

In the privacy calculus model, personal interest was a salient factor which influenced consumers to transact online (Dinev & Hart, 2006). Personal interest was defined as "a belief that reflects a level of enticement to transact" (Dinev & Hart, 2006, p. 67). Through the use of ecommerce, consumers could buy a wide range of products despite their geographic location. Moreover, the limitations of time are removed as consumers could purchase products without regard to the days and hours of a store. This provides an incentive to consumers to purchase online, despite their privacy concerns (Dinev & Hart, 2006). Similarly, Belanger et al. (2002) found that pleasure features of ecommerce use are considered more important by consumers than security and privacy features. We assume, therefore, that the convenience of ecommerce would be an outcome for consumers in exchange for their personal information.

H4: Consumers convenience of ecommerce use is positively related to online transacting.

4. Conclusion

Organizations require consumers personal information for ecommerce transactions. However, individuals' concerns for the privacy of their personal information is an impediment to ecommerce. Yet, the privacy paradox exists whereby consumers' concerns do not match with their actions. As such, our research aims to investigate the reasoning behind individuals use of ecommerce, despite claiming concerns for their information privacy. The use of equity theory aligns with our argument of consumers estimating an equal ratio of benefits between themselves and organizations when transacting online. Equity theory has been used to explain several phenomena with regards to social relationships. As such, we apply it to the field of information privacy, as essentially, consumers are entering a social contract with an organization when transacting online.

Our research would contribute by adding to the current stream of literature that addresses the privacy paradox. While studies have argued that procedural fairness plays an important role in consumers decisions to disclose personal information (Culnan & Armstrong, 1999; Malhotra et al., 2004; Son & Kim, 2008), there is a gap of understanding why and how consumers form these perceptions of fairness. Gaining a better understanding on the conditions in which individuals disclose or withhold personal information should inform organizations how to build better relationships with consumers. Furthermore, organizations would need to provide consumers more control in order to utilize consumers' personal information, thereby, both consumers and organizations could leverage the benefits ecommerce offers. However, our research is a work in progress, and does not have data to confirm our argument.

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