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# An Empirical Investigation of the Determinants of Online Information Disclosure

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## Abstract

*Organizations collect customer information in order to understand and meet their customers' needs. However, consumers are becoming increasingly aware of the potential value of their personal information and the potential risks associated with disclosing it. Using the Theory of Reasoned Action and Transaction Cost Theory, a model was developed that examines the central role of risk in disclosure decisions as well as the factors (risk and information relevance) that mitigate individuals' risk perceptions. Overall, our findings provide insight into the nomological network of salient beliefs that affect individuals' intent to share information with a website. The analysis of the measurement model demonstrated satisfactory validity for the instrument, while the testing of the structural model provided support to all of the hypotheses proposed. The high variance (>50%) explained for attitudes and intent reflects the strength of our model. Theoretical and practical implications are also discussed.*

**Keywords:** online information disclosure, information sharing, trust, risk, information relevance, Theory of Reasoned Action, Transaction Cost Theory.

## Introduction

In today's competitive business environment, firms are constantly pressured by customers who, empowered by advanced IT, demand greater product variety at lower prices (O'Grady 1999). Businesses are attempting to tailor their product offerings to customers rather than giving them the one-size-fits-all products. This requires customer information. As a heterogeneous, specific, and non-imitable resource (Barney 1991, Zahay & Griffin 2004), customer information could be a true source of long-term competitive advantage (see Zahay & Griffin 2004). Therefore, communicating with customers effectively and understanding customers' individual needs is more important than ever.

Collecting customer information is the first step to understanding customer needs. The online environment is particularly suitable for acquiring such information, which needs to be collected quickly and processed in large amounts (Adomavicus & Tuzhilin, 2005). Rapid improvements in computing, communication and storage technologies allow companies to acquire and store more detailed information about more customers (Culnan & Armstrong, 1999). A survey research by the Federal Trade Commission (FTC) reported that 99% of online companies collect personal information from the individuals visiting their web sites (Seligman & Taylor, 2000).

Ideally, collecting the right information from consumers and building customer profiles that include who they are and how they behave creates a win-win situation for both parties (Hagel & Rayport, 1997; Adomavicus & Tuzhilin, 2005). However,

this task is not an easy one because consumers are becoming increasingly aware of the potential value of their personal information and the potential risks associated with disclosing it (Hagel & Rayport, 1997; Ponemon 2004).

Customer information can be explicitly solicited (e.g. surveys) or implicitly tracked (e.g. transactions) (Adomavicus & Tuzhilin, 2005). The goal of this study is to understand customer behavior when the customer voluntarily shares her information with the website. Hence, we examine the question: *What are the factors that affect an individual's intent to voluntarily disclose personal information to a website?*

## Literature Review and Theory Development

Studies that primarily focus on information disclosure have identified numerous factors that impact intent of disclosure such as concerns for privacy, trust in website, and risk (Hart and Dinev 2006, Culnan 1993, Malhotra et al. 2004; Smith et al. 1996). Malhotra, Kim and Agarwal's (2004) findings indicate that privacy concerns negatively affect behavioral intentions to disclose information through trust and risk perceptions. These authors suggest that there may be other forms of salient beliefs which would play an important role in consumer behavior. In the present study, we look beyond privacy concerns, and develop a model to examine the beliefs that shape individuals' intent to disclose personal information to websites.

### *Theory of Reasoned Action*

Since the disclosure behavior under investigation is voluntary, the theory of reasoned action (TRA) is an appropriate lens to view this phenomenon. TRA allows us to explain how individuals form their intention to behave voluntarily based on their attitudes and subjective norms towards this behavior (Ajzen & Fishbein, 1980). According to TRA, human behaviors are positively influenced by intentions, which are in return affected by individuals' attitudes towards that particular behavior. These attitudes are formed by salient beliefs which may interact with each other. Following this line of logic, we propose that individuals' intentions to disclose are formed by their attitudes toward disclosing information to a web site, which are shaped by a set of salient beliefs. Because behavioral intention is known as a reliable predictor of actual behavior, we find it appropriate to use it as a proxy to actual disclosure behavior (Malhotra et al 2004).

### *Transaction Cost Theory*

Transaction cost theory (TCT) provides us with a unique perspective that helps us predict the beliefs that affect individuals' attitudes towards information disclosure. Having its origins in economics (Williamson 1985), TCT has traditionally been used to examine firm governance structures. We contend that disclosing information to an organization is a type of transaction and that individuals' salient beliefs are a type of transaction cost. Hence actions the organization can implement that will help minimize these costs will help enhance disclosure instead of diminishing it. Below, we describe variables that can reduce transaction costs for the consumer, thereby facilitating disclosure behavior.

Transaction costs consist of two major components. *Coordination costs* represent the cost of exchanging information and incorporation of that information to the decision process, while *transaction risk* includes the risk that the other party in the transaction will shirk its agreed upon responsibilities (Grover and Malhotra 2003). Within the scope of our study, we focus on the transaction risk component of transaction costs since the individual will not be able to monitor what the organization will do with his information once she discloses it. We posit that risk associated with information disclosure is a central belief that is associated with attitudes towards the disclosure behavior. This risk manifests itself when disclosed personal information is used without knowledge or permission of the individual. Sharing personal information makes one potentially vulnerable to loss of privacy, misuse of the information by the vendor, or even the theft of one's identity (Wang et al. 1998).

One of the key factors that increase transaction risk is *uncertainty* (Williamson 1985). Both environmental and behavioral uncertainty effects risk perceptions negatively because of the increased information asymmetry due to bounded rationality between the involved parties (Grover and Malhotra 2003). Mainly due to the spatial and temporal separation among interacting parties, online exchange relationships have been found to consist of many sources of uncertainty such as perceived information asymmetry, seller opportunism, information privacy concerns, and information security concerns (Pavlou et al 2007). Therefore, it is important for websites to minimize the transactions costs associated with user perceptions of disclosure risk due to uncertainty. The variable that reduces disclosure risk is "trust in the website." Consumers that trust the website believe that there is more predictability (less uncertainty) regarding usage of information by the exchange party. In turn, this belief reduces transaction risk for the consumer.

Another important factor in TCT is asset specificity which refers to the transferability of the asset to another transaction (Grover & Malhotra 2003, Williamson 1985). If the item is highly asset specific, then it only has value in the current exchange. In this instance highly asset specific information we argue would actually minimize transaction risk and enhance disclosure. By collecting information germane to the operation and content domain of the website (e.g. medical information at a medical website) organizations reduce the perceived risk associated with disclosure. In contrast, an organization that collects information that seems to have no relevance to the website signals higher risk to the consumer – perhaps reflecting the organizations inclination to “sell” the information. Information relevance is largely ignored in the IS research. However, there are indications that it could be an important factor in the context of information disclosure and completing a transaction (Culnan 1993). We propose that the relevance of information required from individuals would also mitigate the disclosure transaction risk and create positive attitudes. Figure 1 summarizes our research model:



ERROR: invalidaccess  
OFFENDING COMMAND: --filter--

STACK:

/LZWDecode  
-filestream-  
[168 0 0 -120 0 120 ]  
true  
120  
168  
-savelevel-