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UNDERSTANDING TRUSTWORTHINESS BELIEFS IN ELECTRONIC BROKERAGE USAGE

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1. INTRODUCTION

Online investing is one of the most important financial innovations in recent times. It now accounts for approximately 33% of retail securities trades and about 4.5 million individuals have online accounts. There are currently more than 80 online brokers offering a wide range of services. Despite the dramatic growth in online investing, there have been no systematic studies of the process involved in the selection of the World Wide Web (WWW) as a transaction medium, nor the determinants of investors’ satisfaction with the trading process. This research investigates investor characteristics, operational factors, and related issues that influence trust formation and usage patterns in the context of online trading. This research draws upon knowledge and theoretical perspectives from several disciplines, including management information systems, marketing, psychology, and economics.

Our particular focus in the current research concerns individual investors’ beliefs about the trustworthiness of online transactions and of electronic brokerage firms. We focus on beliefs about trustworthiness for several reasons. First, trustworthiness of the process of online investing is assumed to be necessary to an investor’s intention to utilize electronic brokerages (Doney and Cannon 1997; McKnight, Cummings and Chervany 1998). Second, electronic brokerages are interested in establishing long-term relationships with their customers, and long-term relationships are founded on trust (Ganesan 1994). Trust in a relationship is based on observable and unobservable cues or signals that each party gathers about the other (Konana, Menon and Abramowitz 1998).

1Prabhudev Konana’s participation in this research is supported by the NSF Career Award under contract No. IIS-9875746.
1999; Konana, Menon and Balasubramanian 1999). Although other beliefs may also be relevant to the decision to use electronic brokerages for financial trades, in this research we focus on trustworthiness beliefs.

2. CONCEPTUAL MODEL

To understand the relationship between trust and intention to use brokerage services, it is useful to model the cognitive process of investors. A conceptual model of this process appears in Figure 1. The basic premise of the model is that investors use various factors to construct beliefs about the trustworthiness of brokerages, and that these beliefs act as influential determinants of behavioral intentions. The construction of beliefs about trustworthiness relies on a number of characteristics of the investors themselves and the investing environment, and on the arguments made by investors. We now describe the elements of the model in detail.

2.1. Factors Influencing Trust

We hypothesize that there are three categories of factors that influence investors’ beliefs: investor characteristics, investor perceptions of the broker, and investor perceptions of the transaction process.

2.1.1 Investor Characteristics

The first group of characteristics hypothesized to be influential relates to the investor, namely risk factors and trust factors. Both risk and trust can be measured using relatively stable personality characteristics and transient context-specific characteristics. One aspect of risk is the investor’s attitude toward risk. Risk attitude has traditionally been defined in terms of inherent risk seeking, risk averse, and risk neutral behaviors, operationalized as expected values and standard deviations (e.g., Mas-Colell, Whinston and Green 1995). Measuring the risk attitudes of individuals has typically been accomplished using lotteries and what-if questions that compare a person’s preferences for “sure things” and uncertain alternatives (von Winterfeldt and Edwards 1986). This aspect of risk is considered to be relatively stable and independent of context (Weber and Milliman 1997).
The other aspect of risk concerns investors’ reactions to context-specific elements. March and Shapiro (1987) argued against the bi-directionality of the risk construct (as with, for example, standard deviation), providing evidence that most managers consider only the likelihood and extent of loss in assessing risk in a given situation. Empirical studies in management have mostly adopted this position (cf. Bearden, Netemeyer and Mobley 1992, pp. 143-146) and we operationalize context-specific risk primarily in terms of likelihood and extent of loss.

We measure trust factors using two characteristics: trust propensity and trust. To define trust propensity, we adopt the definition of Mayer, Davis and Schoorman (1995), who stated that trust propensity is a “generalized expectation about the trustworthiness of others” (see also McKnight, Cummings and Chervany 1998). A person with a high trust propensity ascribes good intentions to others in uncertain situations regardless of the context. Trust propensity is a “stable within-party factor” (Mayer et al. 1995); that is, it is a personality characteristic of some permanence. Trust propensity may thus be distinguished from trust, which is situation specific. Trust may also be influenced by the institutional regulations designed to protect investors. The crucial element of trust is the willingness to be vulnerable to others’ actions (Mayer, Davis and Schoorman 1995). As with risk, we attempt to capture both the stable trust propensity and the context specific trust elements in the present research.

2.1.2 E-brokerage Characteristics

The characteristics of the trustee are just as important to the construction of trustworthiness beliefs as those of the trustor (Mayer, Davis and Schoorman 1995). Since the e-brokerage is the trustee in this context, we measure some of the important characteristics that may influence trustworthiness belief formation. The customer subjectively perceives e-brokerage characteristics such as reputation and price of service. Further, the size of a firm may influence the trustworthiness belief for the customers (Doney and Cannon 1997), since greater size may imply more resources and expertise.

2.1.3 Transaction Characteristics

An investor perceives various characteristics of the transaction process, such as complexity, transparency, and timeliness, that may have an impact on his or her trustworthiness beliefs. Complexity concerns the ability of the communication interface to allow investors to express their preferences easily. Transparency is the ability of the investor to observe the execution of the transaction and to discover hidden (unobservable) costs, if any. Timeliness refers to how quickly investors’ transactions are executed when requested and whether investors’ price expectations were matched.

2.2 Argument Formation

An investor is hypothesized to use evidence drawn from the environment and past experiences to construct arguments about his investing experience (characteristics of the investor himself also influence the arguments made, albeit unconsciously). This hypothesis is drawn from theory developed by Smith, Curley and Benson (1991), who stated that beliefs are based on judgments and reasoned arguments people make in response to decision-making or problem-solving situations. Central to this belief formation process is the formation of arguments for and against various propositions (Browne, Curley and Benson 1997). Arguments important in the current context relate to trust, risk, and the trust-risk interaction (since trust and risk are closely associated concepts). An example of an argument is: “The costs associated with executing a transaction using this e-brokerage are easily understood because it is clear about its fees.” Such arguments act as direct inputs to the trustworthiness belief formation process.

2.3 Trustworthiness Beliefs

We now define trustworthiness as a belief held by an investor about either the individual broker or the online investing process. Trustworthiness beliefs are the culmination of a process in which investors use various characteristics perceived in the environment to construct arguments and then use those arguments to draw conclusions in the form of beliefs. An example of a belief is: “I believe this electronic brokerage is trustworthy.” Investors use these beliefs to develop their behavioral intentions.
2.4 The Behavioral Intention

The output of typical behavior prediction models is the behavioral intention (Ajzen and Fishbein 1980). The behavioral intention in the present context measures the investor’s intention to use the WWW for transactions in the future and to use a particular e-brokerage in the future. Although this intention is not of primary interest in the current study, we measure behavioral intentions to see how well revealed beliefs correlate with intentions.

3. OPERATIONALIZATIONS

Central to the research issue is the trustworthiness belief construct. Trustworthiness is a difficult construct to measure directly. Therefore, various researchers have adopted surrogates that are assumed to reflect aspects of trustworthiness. For example, competence and integrity have been deemed important aspects of trustworthiness (Mayer, Davis and Schoorman 1995) and these are used in present research as ways of measuring trustworthiness. In this context, competence measures the belief that the broker has the investing expertise, technical skill, underlying infrastructure, etc., to execute the transaction efficiently. Integrity reflects a belief that the broker will conduct the transaction to the best of its ability and will act in the investor’s best interests in doing so. The usage intention is operationalized as the proposed frequency of use.\(^2\)

4. REFERENCES


\(^2\)The authors contributed equally in the preparation of this article.