ABSTRACT

The purpose of this research is to examine previous literatures which focus on trust in Business to Consumer (B2C) of e-commerce transactions between 2001 and 2006. All selected papers are analyzed through a conceptual framework to recognize the context and nature of trust. The working process includes three primary phases: selecting and focusing phase, analyzing phase, and concluding and outcome-converging phase, which enhance the fulfillment of analysis and the accumulation of knowledge in the domain of B2C trust researches. In the future, the research in this area need clearly indicate how proposed models are tested base on theory, and the nature of B2C trust researches must be identified more detailed, additionally, improving the oversimplification of the trust nature. Moreover, the researchers should associate the focal point with comprehensive in the future.

Keywords: E-Commerce, Trust, Trust in E-Commerce, Literature Review

INTRODUCTION

Trust is a key factor that determines the success of Business to Consumer (B2C) e-commerce transactions [20]. With the most mature of the Internet technique environment, the concept of trust has been the kernel of the matter when people interactions with e-commerce web portals. Over 4 in 5 users (80%) say that being able to trust a web site is very important for them in making a decision to interact with that site (Princeton Survey Research Associates, 2002). Issues relating to trust have crucial economic ramifications as the Taiwan online market will grow treble from 2005 to 2009 (Market Intelligence Center, 2005).

Unfortunately, there are 36% practitioners failed between 2003 and 2005 that inspire trust in the user (Market Intelligence Center, 2005). Internet shopping involves more uncertainty and risk than traditional shopping. In the context of B2C e-commerce transactions, transactions don’t involve simultaneous exchange of goods and money regularly where the intended purchase may be from a supplier that is operating in a different country, time zone, currency and legal system. Moreover, consumers are required to share sensitive personal information (such as mailing address, telephone number) and financial information (such as credit card numbers).

The unclear and underdeveloped legal environment increase uncertainty and risk in e-commerce, some institutional mechanisms used in online marketplaces do not enjoy the same legal protection and enforcement provided by governmental agencies in traditional markets. Trust is an especially important factor under conditions of uncertainty and risk. Lack of trust is one of the most frequently cited reasons for consumers not purchasing from Internet shops. Thus, how to reduce the perceived risk of customers is an important issue. Trust helps consumers overcome perceptions of uncertainty and perceived risk and engages in “trust-related behaviors” with Web-based vendors, such as sharing personal information or making purchases [31].

Understanding the nature of trust is a major issue for both Internet researchers and practitioners since Internet shopping is a relatively new phenomenon with enormous potential. Both economists and sociologists agree that trust is a crucial enabling factor in relations where there is uncertainty, interdependence, and fear of opportunism as is the case in online markets [30]. The purpose of this research is to analyze published B2C trust literature in major IS journal and conference proceedings between 2001 and 2006, to recognize the nature of the trust, and categorize them within the main streams of research theory. This categorization enables us to reflect critically on a number of conceptual concerns and much of the current researches. After reviewing the academic literatures, this research hopes to identify the future research direction in B2C trust.

LITERATURE COLLECTION AND REVIEW METHODOLOGY

The methodology used in this research included three primary phases: selection and focus phase, analysis phase, and outcomes and convergence phase. Figure
A literature review of online trust in business to consumer e-commerce transactions, 2001-2006

Selection and Focus Phase

The survey scope for B2C trust is defined at this phase. A preliminary literature review of B2C trust research was carried out by drawing on researches from prominent peer reviewed journals and conference proceedings with high prestige. The published period is between 2000 and 2006 in the IS field. The list of selected IS journals are MIS Quarterly (MISQ), Information System Research (ISR), Journal of Management Information System (JMIS), and Information & Management (I&M). Furthermore, several highly recognized journals in management, strategy, marketing and e-commerce research are included in the initial selection criteria, such as Journal of Marketing Research (JMR), International Journal of Electronic Commerce (IJEC), International Journal of Information Management (IJJM), Journal of Strategic Information Systems (JSIS), Journal of Business Research (JBR), Academy of Management Review (AMR), Electronic Markets (EM), International Journal of Bank Marketing (IJBMI), Marketing Management (MM), Information Technology and Management (ITM), e-Services Journal (eSJ), International Journal of Service Industry Management (JISIM), Information Systems and E-Business Management (ISEBM), Psychology & Marketing (P&M), and IEEE Transactions on Engineering Management (ITEM). Other publication sources such as Interacting with Computers (IC), ACM SIGMIS Database (ASD), Computers in Human Behavior (CHB), Journal of the American Society for Information Science and Technology (JASIST), Advances in Applied Microeconomics (AAM), books, and conference proceedings are included in this research. In order to research into an issue or a phenomenon, our primary focus was on identifying novel and original researches. The collection and integration of past researches is a purpose which could facilitate future researches. After manually reviewing the abstract of selected articles and screening out the unfitted articles. The final set of the 37 key researches is shown in table 1. In examining the results of the 37 key researches we noted that B2C trust have four type of the nature between the different researches. The nature of B2C trust researches includes comprehensive, ongoing trust, overall trust and initial trust.

Table 1. Summary of B2C Trust Literatures

<table>
<thead>
<tr>
<th>Nature Type</th>
<th>Researches</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall trust</td>
<td>[3], [7], [36], [21], [27], [11], [15], [22], [30], [39], [6], [18], [35], [40], [43], [37], [13], [44], [25], [12], [29], [9]</td>
</tr>
<tr>
<td>Initial trust</td>
<td>[4], [24], [32], [38], [28], [33], [26], [19]</td>
</tr>
<tr>
<td>Ongoing trust</td>
<td>[17], [20], [45], [8]</td>
</tr>
<tr>
<td>Compare between initial and ongoing trust</td>
<td>[16], [23], [46]</td>
</tr>
</tbody>
</table>

The statistical result is shown in Figure 2. The majority (59.5%) of the researches was focused on overall trust, secondly the research rate of initial trust was 21.6%; thirdly the research rate of ongoing trust was 10.8%. The research rate of comprehensive was only 8.1%. The appearance of researches reflects the trend of the further research efforts in this field. These researches were subsequently analyzed by the theories. This analysis was complemented in light of the current empirical fieldwork.
A literature review of online trust in business to consumer e-commerce transactions, 2001-2006

Nature of B2C Trust Researches

Figure 2. Nature of B2C Trust Researches Statistics

Analysis Phase

According to the selection phase, several theories are used in B2C trust researches, such as social exchange theory (SET), expectation-confirmation theory (ECT), theory of reasoned action (TRA), theory of planned behavior (TPB), technology acceptance model (TAM). Those trust building models are developed under the base on theories in the environment of e-commerce. Table 2 summarizes these articles in various theories.

Table 2. B2C Trust Research Theories

<table>
<thead>
<tr>
<th>Theories</th>
<th>Researches</th>
</tr>
</thead>
<tbody>
<tr>
<td>Others or N/A</td>
<td>[3], [7], [36], [27], [11], [4], [15], [24], [32], [39], [6], [16], [40], [28], [44], [45], [12], [8]</td>
</tr>
<tr>
<td>SET</td>
<td>[30], [23], [46]</td>
</tr>
<tr>
<td>ECT</td>
<td>[23], [46], [25]</td>
</tr>
<tr>
<td>TRA</td>
<td>[35], [38], [43], [28], [33], [37], [46], [29]</td>
</tr>
<tr>
<td>TPB</td>
<td>[28], [46]</td>
</tr>
<tr>
<td>TAM</td>
<td>[21], [22], [17], [18], [35], [43], [26], [13], [19], [20], [46], [25], [29], [9]</td>
</tr>
</tbody>
</table>

(1) Social Exchange Theory (SET)
Social exchange explains social change and stability as a process of negotiated exchanges between parties. Social exchange theory (SET) posits that all human relationships are formed by the use of a subjective cost-benefit analysis and the comparison of alternatives [5]. According to the SET, customers perceive higher risks compared to conventional shopping environment on the Internet as a result of long distances, virtual identities, or lack of regulations [44]. Relevant to SET, Lou [30] concludes that characteristic-based trust, process-based trust and institutional-based trust are antecedents of general trust online, and that building customers’ trust, a core component of SET and relationship marketing, can be one of these solutions. Trust becomes more critical than ever in the new era of Internet and web media. Kim et al. [23] utilized two important factors related to SET are time discrepancy and satisfaction to contrast consumer trust and purchase behavior between pre-purchase and post-purchase stage. Zhang and Zhang [46] adopt SET in their proceeding paper to prove trust is significant in the initial stage of transaction on Internet.

(2) Expectation-Confirmation Theory (ECT)
Expectation-confirmation theory (ECT) is proposed by Oliver [34] to widely study consumer satisfaction, repurchase intention and behavior. The underlying logic of the ECT framework is: consumers firstly form an initial expectation prior to purchase, and then engage perceptions about its performance after a period of initial consumption. Thus, they may decide the satisfaction level based on the extent to which their expectation is confirmed through assessing the perceived performance by their original expectation. Finally, the satisfied consumers form repurchasing intentions. Trust is the expectation that other individuals or companies with whom one interacts will not take over advantage of a dependence upon them [18]. Since trust involves in expecting of transaction, it must relate to ECT for deciding which store is trustworthy. Kim et al. [23] accept the trust-satisfaction relationship is developed through repeated interactions, and it is expected that trust is related to the level of satisfaction. Furthermore, a consumer’s trust positively affects a consumer’s expectation with an e-retailer’s product or service in the research model. Zhang and Zhang [46] have also conducted the ECT in their proceeding paper for develop a model which could explain the repurchase intention as well we long term trust formation. Koppius et al. [25] integrated ECT with the TAM model, since in both models Perceived Usefulness plays a central role and thus provides a natural connection point even though trust and perceived risk played no significant role at this research.

(3) Theory of Reasoned Action (TRA)
The theory of reasoned action (TRA) originated by Fishbein and Ajzen [14] is to analyze the correlation of belief, attitude, intention and behavior. TRA has been widely applied on studying trust online. In an e-
commerce context, attitudes regarding a vendor are formed from the perceptions of trust in the vendor. Attitudes have an effect on purchase intentions and thereby should follow the belief–attitude–intention sequence described in the TRA. Moreover, perceived trust reflects a belief system that leads to attitudes and intentions. Pennington et al. [38] tested predictive validity of the constructs in the widely accepted TRA framework. The research described below examines system trust within its nomological network of constructs, including specific trust mechanisms that can affect system trust. The model is tested under various conditions of reputation in order to demonstrate its robustness. By extrapolating from TRA, trust can be viewed as an antecedent belief (a confident expectation) that creates a positive attitude toward the transaction behavior, which in turn leads to transaction intentions. Suh and Han [43] prove that trust has a positive impact on a customer's attitude toward using ecommerce for trade transactions. Using the same logic, McKnight et al. [33] and Pavlou [35] show that trusting beliefs in specific online vendors are correlated with transaction intentions with those same vendors. These researches find significant effect that trust in e-vendor positively influence attitude to purchase online. Liao et al. [29] conducted the TAM and compared with TRA in their research for develop a model. The result exhibited habitual activity with a web site will positively affect user's trust in the web retailer.

(4) Theory of Planned Behavior (TPB)
Ajzen [1] found attitude and subjective norms could not fully determine intention. He found that perceived behavioral control determine intention too. Perceived behavioral control reflects the degree that an individual feels successfully engaging is completely up to them. Thus, according to the theory of planned behavior (TPB) expanded by Ajzen [2]: a person’s behavioral intention is viewed as a function of three factors: attitude towards the behavior, subjective norms, and perceived behavioral control. TPB hasn’t widely been extended for model that research trust online. Li et al. [28] reviewed and compared two initial trust formation models. The first model was proposed by McKnight et al. [32]. The second model that trust was defined as a four-form composite construct, including trusting behavior, trusting intention, trusting attitude, and trusting belief, is based on the TRA and TPB. Zhang and Zhang [46] include SET, TRA, and TPB in their proceeding model. They approve TPB in their model where attitude toward trust is influenced by general trust beliefs, system trust, interaction between customer and e-vendor, and situational decision to trust.

(5) Technology Acceptance Model (TAM)
TAM [10] based on the Theory of Reasoned Action [14], suggests that users’ voluntary decision to accept (i.e., use) a new Information Technology (IT) is based on their rational assessment of its expected outcomes. According to TAM, the intention to accept or use a new technology is determined by its perceived usefulness (PU) and perceived ease of use (PEOU) of the technology. In addition, PEOU primarily influences intended acceptance through its effect on PU [10]. TAM has a history of use in the e-Commerce and is considered robust in a wide variety of contexts. These researches mostly follow the logic of TAM includes the concept for their models which research trust online [21, 16, 18, 17, 26, 24, 9]. Furthermore, some of these researches extend TAM by more related constructs and more interesting issues. Gefen et al. [16] research the difference between potential and repeat customers when building trust online. Their experimental research also concludes that the PU didn’t influence the purchase intentions of potential customer but PU did influence the purchase intentions of repeat customer. Gefen and Straub [18] found the PEOU and PU affect purchase intentions positively. Gefen et al. [17] develop an integrated model for purchase intention of repeat online customer. They found that there are two kinds of trust antecedents (institution-based situational normality & knowledge-based familiarity) which positively affect PEOU. Koufaris and Hampton-Sosa [26] include TAM in their research for studying initial trust in e-commerce. They found that PU and PEOU of the web site were significant antecedents of initial trust in the company. Cyr et al. [9] used TAM and proposed a model for e-Loyalty to examine how varied conditions of social presence in a B2C e-Services context influence e-Loyalty and its antecedents of perceived usefulness, trust and enjoyment. The results show that higher perceived social presence will effect in higher levels of trust and higher levels of trust will effect in higher e-Loyalty toward an e-Services website.

Outcomes and Convergence Phase
The outcome phase aims at description the research phenomenon for B2C trust based on the classification and providing with the suggestions for future research in the field. A key criticism of much of the current literature concerns the trust nature. From Figure 2 the current researches were focused on overall trust. Different phases of trust can be distinguished [40]: the phase of trust building, where
trust is formed; the phase of stabilizing trust, where trust already exists; and the phase of dissolution, where trust declines. Only in eight of the reviewed researches the authors explicitly point to the phase of initial trust, and four researches relate to ongoing trust. It is suitable for applying three phase of building trust into commerce strategy. E-vendor attract customer via forming initial trust in the phase of trust building. E-vendor keeps customer loyalty by maintain customer trust in the phase of stabilizing trust. After that, when it goes into the phase of dissolution, trust needs to be rebuilt. The phase of dissolution that previous researchers never mention on trust building online isn’t still full discussion. It may be an issue for future research. Other researches that research on ongoing trust that overlapping both overall trust and multi-dimensions, and initial trust that overlapping multi-dimensions. Hence we argue that the perspectives of ongoing trust and initial trust should be reflected in this field. Moreover, the comprehensive and the ongoing trust researches were both only three, the researchers should associate the focal point with comprehensive in the future.

In a recent paper Shankar, Urban, and Sultan [42] also have emphasized the lack of clear distinctions between the underlying dimensions and antecedents of on-line trust. They noticed that the investigated trust constructs are blurred and not well differentiated, and elements and determinants of online trust often are used interchangeably. Gefen et al. [17] identifies five trust antecedent categories that include knowledge-based trust, institution-based trust, calculative-based trust, cognition-based trust, and personality-based trust. The summary is shown in table 3. According to the research views of Gefen et al. [17], the nature of B2C trust researches should recognize more detailed, besides the oversimplification of the trust nature.

Table 3. Five trust antecedent categories from Gefen et al. (2003b)

<table>
<thead>
<tr>
<th>Category</th>
<th>Trust Antecedents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knowledge-based trust</td>
<td>Familiarity, Social presence, PU, PEOU, Process-based trust, Graphic design, Content design, Web site appeal</td>
</tr>
<tr>
<td>Institution-based trust</td>
<td>Structural Assurances, Situational normality, System trust, Trust in intermediary, Privacy statements Escrow service, Perceived security of control, Structure design</td>
</tr>
<tr>
<td>Calculative-based trust</td>
<td>Perceived size, Perceived reputation</td>
</tr>
</tbody>
</table>

From Table 2, SET, ECT and TPB haven’t widely been extended for model that research trust online. Only in two of the reviewed researches the authors adopted TPB to develop model and accompanied the trust with model. The researches relate to SET and ECT is both three articles. Such seven articles [35, 22, 43, 46, 24, 29] used over two theories. The researchers should try to utilize the theories and associate the theories more with comprehensive in the future. The testing isn’t rigorous due to the lack of theories. This does not constitute a sufficiently rigorous theory base. Hence there is a need for research theories aimed at testing current models. The future research in this area should clearly indicate how proposed models should be tested base on theory.

CONCLUSION

Customer trust can reduce perceived social complexity of an on-line transaction by allowing consumers to reduce the perceived possible opportunism of e-Vendor behaviors. This paper’s primary objective was to provide an overview of empirical research on trust in electronic commerce from 2001 to 2006 to allow cumulative analysis of results. Even though this literature review can not claim to be exhaustive, it provided reasonable insights and showed the incidence of research on this subject. This paper provides a detailed table of research trends and patterns in B2C trust researches. The nature of B2C trust researches can be recognized and categorized by literature review. Those include comprehensive, ongoing trust, overall trust and initial trust. It may be an issue for future research that the trust rebuilding when dissolution phase, and the nature of B2C trust researches should recognize more detailed, besides the oversimplification of the trust nature. Additionally, several theories are used in B2C trust researches, such as social exchange theory (SET), expectation-confirmation theory (ECT), theory of reasoned action (TRA), theory of planned behavior (TPB), technology acceptance model (TAM). Those trust building models are developed under the base on theories in the environment of e-commerce. Researches on trust in e-commerce mostly apply TAM and/or TRA in their search model.
A literature review of online trust in business to consumer e-commerce transactions, 2001-2006

between 2001 and 2006. Although SET, ECT and TPB didn’t be adopted repeatedly, they are still suit for applying in model which is studying trust in e-commerce because of their definition in essence. Furthermore, this paper suggests a conceptual framework that includes three primary phases: selection and focus, analysis, and outcomes and convergence to build up the knowledge in B2C trust researches. The findings of 37 selected previous researches through the framework can help us to understand the researchable trend.

REFERENCES


