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ABSTRACT

Despite the growth in electronic commerce (hereafter, "e-commerce") usage, consumers are still reluctant to purchase online due to security and privacy concerns. To alleviate this issue, e-commerce vendors may sign up with an independent third-party web assurance service to obtain a seal that is displayed on the vendor's website. The presence of such seal aims at sending a signal of trustworthiness and security to online shoppers. While prior research mainly focused on the impact of these web seals on consumers' perceptions and purchasing behaviors, little research has been conducted on the managerial decision-making process about the adoption, implementation, and the abandonment of such seals. Of particular interest here is the WebTrust seal, jointly developed by the AICPA and the CICA.

We take a qualitative case study approach with the objective of understanding the motivations and rationale of a large North American telecommunications firm's management behind the decisions about the adoption, implementation, and abandonment of its WebTrust seal. Our case company was one of the first to obtain the seal on its online shopping website. Semi-structured interviews were conducted with key executive officers involved in the decision-making process related to the seal.

Results suggest that the implementation and the subsequent abandonment of WebTrust may be explained by several theoretical frameworks: managerial accounting perspective, organizational slack theory, innovation theory, but primarily and best through institutional theory. First, the case firm's needs of legitimacy, coupled with the endorsement of a recognized professional accountants association and the presence of a Big 4 accounting firm, led to the implementation of WebTrust. Second, when the benefits of WebTrust versus its costs were questioned, and that other companies increasingly abandoned the seal, the case firm decided to follow this trend to conform to prevailing values of appropriate business behavior.

Keywords: Accounting information systems; Information systems security; Institutional theory; Innovation theory; Managerial decision-making; Online purchasing; Organizational slack theory; Web assurance seals; WebTrust.

1. Introduction

Business-to-consumer (B2C) electronic commerce (hereafter, "e-commerce") has flourished in the U.S., as illustrated by the estimated US$108 billion in sales for 2007 in comparison to US$26 billion in 2000 (U.S. Census Bureau, 2008). Conducting business online is now an obligation, not an option (Runyan et al., 2008). Despite this explosive growth of e-commerce usage, it appears that a large proportion of consumers is still reluctant to purchase online because of the risks and security concerns associated with the Internet purchasing channel (Culnan, 2000; Kaplan and Nieschwitz, 2003). In order to alleviate this issue, e-commerce vendors may retain independent third-party B2C web assurance services. After an e-commerce vendor's website goes through such procedures regarding information security, customer privacy, or operational reliability, it is granted an assurance seal, which can be displayed on the vendor's website. The presence of such seal aims to send a signal of trustworthiness and security to the consumers' market (Wakefield and Whitten, 2006), and encourage online shoppers to purchase over the Internet (Kovar et al., 2000). Trust in e-commerce is defined as the "consumer's belief in the capability, integrity, and goodwill of the e-commerce site regarding the privacy and security of online transactions" (Bahmanziari et al., in press, p. 3).

While prior research primarily focused on determining the impact of web assurance seals on consumers' perceptions and purchasing behaviors (see, e.g., Kovar et al., 2000; Odom et al., 2002; Mauldin and Arunachalam, 2002), little research has been undertaken on the managerial decision-making process about the adoption, implementation, and the abandonment of such seals. Of particular interest is the WebTrust assurance seal, jointly developed by the American Institute of Certified Public

Accountants (AICPA) and the Canadian Institute of Chartered Accountants (CICA). Notwithstanding important resources devoted by these two major accountancy bodies and accounting firms, however, WebTrust received low market acceptance and recognition in the B2C assurance seal market (Gendron and Barrett, 2004).

This paper aims at stimulating research in this area by providing insightful information about this phenomenon. We take a qualitative case study approach with the objective of understanding the motivations and rationale of a large North American company's management behind the decisions about the adoption, implementation and abandonment of the WebTrust seal. Our case company, which we will refer to as "Telecom", was one of the first to obtain the WebTrust assurance seal on its online shopping website. Because the seal is only granted when the website passes an extensive audit conducted by licensed Certified Public Accountants (CPAs), the AICPA was proud to advertise on its own website that a large firm, such as Telecom, selected "their" seal. Hence, Telecom became highly visible to the larger community, a key characteristic of pioneering adopters (Swanson and Ramiller, 1997). However, after being displayed for a few years on the front page, right-hand top corner of Telecom's website – the most visible place for Internet users – the seal was abandoned and replaced by the VeriSign seal at the end of 2004.

Results suggest that management decisions that led to the implementation and the subsequent abandonment of the WebTrust seal may possibly be explained by several perspectives such as managerial accounting, organizational slack and innovation theories, but primarily through institutional theory. First, Telecom's needs of legitimacy, coupled with the endorsement of a recognized body of professional accountants and the presence

of a Big 4 accounting firm appeared to have triggered the implementation of WebTrust. Second, when questions about the benefits of WebTrust versus its costs arose, and that other companies increasingly abandoned the seal, Telecom decided to follow this trend to conform to prevailing values of appropriate business behavior.

Research contributions are as follows. First, while prior research on assurance seals mostly focused on the consumer's point of view, our study examines the phenomenon from an e-commerce vendor's perspective. In other words, we consider the "B" side (business) of the B2C relationship rather than the "C" side (consumer). Second, previous methodologies used in assurance seals research typically consisted of lab experiments or surveys. In contrast, we conducted semi-structured interviews with key executive officers and managers and obtained different types of evidence. Third, given the nature of our study methodology, we propose alternative theoretical perspectives to analyze and interpret collected qualitative information. This approach helps increase our understanding of management's motivations and rationale on its decision-making about the WebTrust seal.

The remainder of the paper proceeds as follows. Section 2 provides background information on web assurance services, and a review of the literature. Theoretical framework is presented in section 3. Section 4 describes the methods used while section 5 documents the analysis. The last section provides a discussion, limitations and future research opportunities.

2. Background information and literature review

Web assurance seals

A web assurance seal can only be issued and posted on an e-commerce vendor's website once the requirements of an independent third-party web assurance service provider are met. One of the primary objectives of obtaining such a seal is to ease consumers' minds and reduce or eliminate their fears about security and privacy when doing shopping online. Other terms used to indicate web assurance seals are "trustmark" or "seal of approval". There are four major web assurance providers and seals with different service scopes and fees available on the market, which are BBBOnline, TRUSTe, VeriSign, and WebTrust (Runyan et al., 2008). Appendix A exhibits the logos of these assurance seals.

BBBOnline is a reliability and privacy seal granted to firms that (1) are members of a local Better Business Bureau (BBB); (2) have been in business for a minimum of one year; have agreed to comply with BBB rigorous standards in advertising (such as responsible advertising for children); and (3) have committed themselves to resolve disputes with online shoppers. The presence of the BBB seal on a website also means that the e-commerce vendor stands behind its goods and services (Runyan et al., 2008).

The TRUSTe seal primarily addresses privacy concerns of website users. Websites certified by this seal must adhere to TRUSTe's established privacy policy of information collection and disclosure in order to promote the Internet as a trustworthy environment. The seal authenticates an e-commerce vendor's online business and encrypts sensitive data. Online shoppers are notified about which personal information is collected, how the information is used, and the procedures in place to protect the loss,

misuse or alteration of this information. TRUSTe also conducts periodic website reviews and acts as a regulator to help resolve disputes, and has become the most visible seal on the Internet.

VeriSign grants a digital certificate giving online shoppers the assurance that they deal with an authentic website and that personal information provided (such as personal address or credit card number) is protected from interception or alteration over the Internet using encryption technologies. A digital certificate allows verifying the identity and authenticity of a website, acting like an "electronic passport". Accordingly, VeriSign is also called a "certificate authority". For example, it provides assurance that the Secure Sockets Layer technology (SSL) is used.

The WebTrust seal is part of the Trust Services offered by Canadian Chartered Accountants (CAs) and U.S. Certified Public Accountants (CPAs). Both the CICA and the AICPA have jointly developed a set of professional services for assurance seals. Based on professional guidelines, frameworks, principles, and criteria, CAs and CPAs propose assurance services for e-commerce systems. These services aim at evaluating the security, availability, and processing integrity of a website, and the privacy and confidentiality of the information provided on the site. The presence of a WebTrust seal on a website indicates that a successful audit has been completed by professional licensed accountants and the site meets the required standards. Online users shopping on a WebTrust-sealed site will also have access to the vendor's business practices and its independent auditor's report (see Appendix B for an example).[1]

[1] The CPA WebTrust seal also refers to VeriSign. As indicated earlier, VeriSign, as a certificate authority, provides digital certificates, which allow verifying the identity and authenticity of a website. Accordingly, the VeriSign logo is associated with WebTrust to authenticate the site and prevent false usage of the WebTrust seal.

The origin of WebTrust: the CPA Vision Project

Market saturation for traditional assurance services and the advent of information technology brought fundamental changes to the business and accounting world (Glover et al., 2002). This encouraged the public accounting profession to examine new, alternative sources of service revenues (Greenstein and Vasarhelyi, 2002).[2] As a result, in the late 1990s, the U.S. public accounting profession developed a "Vision" of what CPAs should undertake in the future to ensure that the profession remains on top of major changes occurring in the business world. In Canada, the CICA developed a similar document, the "Vision Statement", which was qualified as "excellent" and admired by leaders of the U.S. public accounting profession (Fogarty et al., 2006).[3] With the help of leaders from CPA societies, academics, students, consultants, and practicing CPAs, the AICPA launched an integrated CPA "Vision Project" of the profession's future. This Vision aimed at identifying business opportunities for CPAs and helped leverage their knowledge, skills, and expertise in auditing to provide a broad range of new services. CPAs now considered themselves as "trusted professionals who enable people and organizations to shape their future" (AICPA, 2002).

As part of the CPA Vision Project, the AICPA formed the Elliott Committee (hereafter, the "Committee") to explore new opportunities related to assurance services. The Committee first redefined assurance services as "independent professional services that improve the quality of information, or its context, for decision makers" and

[2] In 1996, for the first time, the top 100 U.S. accounting firms reported that consulting services gave them more revenues than taxation and auditing services (Telberg, 1997; cited in Greenstein and Vasarhelyi 2002).

[3] The following quote from Robert Elliott highlights the similarities between the CAs' Vision Statement and the CPAs' Vision: "we talked to the Canadians….these guys hammered out a Vision. And it was an excellent one. In fact, we said, if we just would shoehorn in a "P" everywhere they had CA, and make it CPA, we could go with that" (Fogarty et al., 2006, p. 9).

concluded that "multibillion-dollar markets for new CPAs services are being created…CPA firms of all sizes — from small practitioners to very large firms — can help decision makers by delivering new assurances services" (AICPA, 2002). This new definition allowed CPAs to extend their role to any services related to information, and to reassess and update their knowledge and competencies to match innovative assurances services. The Committee identified "Electronic Commerce" as one of the six new service areas with high revenue growth potential for assurance service providers.[4] It is in this context that the AICPA and the CICA have jointly developed their own proprietary seal, WebTrust, a "stamp" to post on websites to certify that a third-party verified the electronic security and privacy standard requirements in order to help overcome online shoppers' fears to engage in transactions (Glover et al., 2002). However, this new area of assurance is *not* regulated by governments and generally accepted accounting principles since financial statement audit opinions are exclusive to CPAs and CAs. On the contrary, doors are open to any firm interested in creating its own assurance seal and logo, with different levels of security and privacy standards. This may potentially confuse online shoppers when they attempt to recognize a seal and differentiate its features from others.

Literature review

Prior research results on the effects of web assurance are mixed. While some studies document a positive impact of web assurance on consumers' online purchasing behaviour, others suggest that such assurance service is not as effective. A review of the literature is provided below.

[4] The other five services identified were (1) Risk Assessment, (2) Business Performance Measurement, (3) Information Systems Reliability, (4) Health Care Performance Measurement, and (5) ElderCare.

Miyazaki & Krishnamurthy (2002) report that consumers perceive websites with assurance seals more favorably than websites without seals, and that customers are more willing to disclose information when web assurance seals exist. Lala, Arnold, Sutton, and Guan (2002) conducted a comparative study of different types of web assurance seals. Results suggest that consumers prefer higher level security seals, but vendors do not perceive the high level of assurance provided by WebTrust as a sufficient benefit to justify the expensive costs to comply with the seal standards and fees (Essex and Asman, 2000). Jamal et al. (2003) suggest that WebTrust's prohibitive fees are probably the main reason why it only reaches low market share in the web seal industry. The lower pricing structure of BBBOnline and TRUSTe makes these web assurance seals affordable (Jamal and Maier, 2002). Kaplan and Nieschweitz (2003) examined the relation between web assurance services and attributes of web seal providers on consumer trust. Results of their online purchasing experiment show that trust is built as a consequence of both web assurances and individual provider's attributes. They also find that trust positively influences consumers' intention to buy, their perception about the quality of the product and their perceived risk of online purchasing. Zhang (2005) finds that customers' intention to buy is not affected by previous familiarity with a web assurance seal, thus the mere presence of the seal is enough to positively influence customers. Wakefield and Whitten (2006) report that web assurance seal value is positively related to trust for e-retailer, and that trust is positively related to the purchasing intentions of the customers. Finally, Boo et al. (2007) find that web insurance — where an insurer underwrites the risk when a vendor website breaks its security and privacy standards — and web assurance both increases shoppers' purchasing intentions.

In contrast, other studies indicate that web assurance does *not* effectively mitigate the concerns of online consumers. Kovar et al. (2000) examine the effect of the WebTrust seal on consumer expectations and purchasing intentions over the Internet and report that less than 50% of participants noticed the seal. They also find that the presence of the seal did not have a significant positive impact on shoppers' intentions to purchase online. Houston and Taylor (1999) find that WebTrust does not provide any additional assurance about business and security practices over an e-commerce vendor's disclosure of such practices. Mauldin and Arunachalam (2002) report that there is no association between the presence of an assurance seal and purchasing intentions. Odom et al. (2002) find that leading web assurance seals such as VeriSign, TRUSTe, and WebTrust have limited impact on online shoppers' fears and concerns, and there was a major gap between consumers' needs for assurance and what they think is provided by the web seals. They also report that the potential influence of web assurance seals on shoppers' behavior required knowledge of seals' own characteristics. Cranor et al. (1999) find that online shoppers do not understand how web assurance seals really work. Portz et al. (2000) suggest that consumers' understanding of how web assurance services and seals actually function is insufficient and incomplete. Rosner (2001) finds that only 22% of firms posted a web assurance seal, while 96% disclose their privacy policy on their website, suggesting that vendors do not perceive a demand from online shoppers for seals. According to Kimery and McCord (2006), consumers' attentiveness to the existence of web assurance seals and their familiarity is still underdeveloped. Runyan et al. (2008) find that for several consumers, web assurance seals are not essential to make them feel comfortable to purchase online. They suggest that an important benefit for vendors is

actually the rigorous process to go through in order to obtain a web assurance seal, which forces vendors to meet high standard requirements. Finally, Bahmanziari et al. (in press) find that WebTrust, defined as an externally-provided assurance, does not increase consumers' trust or online purchase intentions, while internally-provided assurance such as privacy statement, return policy, shipping information, low price guarantee, and toll-free number, do increase consumers' trust and online purchase intentions, questioning the value of WebTrust.

Two studies provide a more critical perspective on web assurance seals, in particular WebTrust. First, through a series of interviews with representatives from the Canadian market including managers, accountants, government representatives and representatives of the CICA, Gendron and Barrett (2004) document that WebTrust suffered from low market penetration because of its stringent requirements and extensive work required to obtain the seal in comparison to others. This consequently led to delays of several projects and sent the market a signal about the complexity of WebTrust. Managers of large organizations became suspicious about the incremental contribution of the seal beyond its reputable brand name. As a result, after a period of uncertainty, WebTrust eventually started to lose support from the accounting profession in the B2C market. Second, Fogarty et al. (2006) analyzed the CPA Vision Project and conclude that it may be seen as a failure since professional accountants nowadays distance themselves from the Vision's goals. Fogarty et al. (2006) suggest that WebTrust is "the best example of the non-traditional services" (p. 18) contemplated by the Project, that online shoppers were ignorant about the seal, and corporate managers had no real interest in it.

3. Theoretical underpinnings

Different theoretical perspectives have been identified to interpret Telecom executives' decisions about WebTrust. Due to its characteristics and features, institutional theory is regarded as the most suitable as a potential explanation to the phenomenon under study. Interpretations with the other views are briefly discussed in Section 5.

The evolution of institutional theory resulted in some "neo-institutional" approaches that emphasized the role of cultural-cognitive controls. Scott (2003) suggests that while some theorists (e.g., Berger and Luckmann, 1967; Geertz, 1973) argue that sets of beliefs provide models for governing and guiding behavior in varied social situations, others (e.g., Meyer and Scott, 1983; DiMaggio and Powell, 1983) stress on the application of broader culture-based arguments to organizations. Drawing from the latter perspective, institutional theory can be said to examine "how organizational structure and action are modeled by cultural, political and social forces that surround entities" (Fogarty, 1996, p. 245). Therefore, a characteristic of an institutional framework is the "pressing need for legitimacy" and that "organizational survival is predicated upon some form of conformity to prevailing values or standards for appropriate behavior" (Fogarty, 1996, p. 246). Within such framework, DiMaggio and Powell (1983) discuss the concept of homogenization that they call "institutional isomorphism" in their own terms. Institutional isomorphism is defined as the process through which organizations adopt the same practices over time as a result of influential common institutional pressures or social factors (DiMaggio and Powell, 1983; Westphal et al., 1997; Carpenter and Feroz, 2001). They posit that isomorphism increases the resemblance between organizations but does not necessarily make them better. Three mechanisms of institutionalization are

identified: (1) coercive isomorphism, (2) mimetic isomorphism, and (3) normative isomorphism.

Coercive isomorphism

"Coercive isomorphism results from both formal and informal pressures exerted on organizations by other organizations upon which they are dependent and by cultural expectations in the society within which organizations function. Such pressures may be felt as force, as persuasion, or as invitations to join in collusion" (DiMaggio and Powell, 1983, p. 150). These pressures stem from organizations that have the power to influence a firm's decision making (Carpenter and Feroz, 2001).

Mimetic isomorphism

Mimetic pressures drive organizations to model themselves on others. These pressures are caused by ambiguous goals or symbolic uncertainty (DiMaggio and Powell, 1983). Aligned with this concept, Carpenter and Feroz (2001) further suggest that uncertainty can be a "powerful force that encourages organizations to imitate the actions of those organizations that are viewed as being successful in their organization field" and that "mimetic isomorphism is a response to organizational uncertainty in identifying the best course of action" (p. 571).

Normative isomorphism

Normative pressures arise from organizational networks that provide relevant information about recent organizational practices (Palmer et al., 1993). DiMaggio and Powell (1983) had originally noted that normative isomorphism primarily came from the professionalization movement. However, Carpenter and Feroz (2001) remind us about the notion of "innovation" in relation to normative isomorphism. In fact, they draw from the

works of Meyer and Scott (1983), which suggest and remind us that innovations associated with cultural authority may have more influence, especially when they are supported by national or worldwide professional associations.

4. Research method

The objective of a case study is to "obtain an interpretation of what happens more directly, and to be able to gain insights into all the relevant aspects of the phenomenon under study" (Hägg and Hedlund, 1979, p.139). The present case investigates in depth the "how" and "why" of a phenomenon based on contemporary events within its real-life context, that is Telecom management's decision to adopt, implement and abandon the WebTrust assurance seal. A case study is valuable in providing details (Yin, 1989), and converting private information hidden in reports or management's minds into available knowledge (Cooper and Morgan, 2008). Case study is also valuable for theoretical work in identifying new issues, and permits to understand human behavior (Cooper and Morgan, 2008).

Semi-structured interviews

Semi-structured interviews were conducted at Telecom's offices during summer 2007 with key executive officers and employees who had been involved in the decision-making process about the adoption and implementation of WebTrust. A total of five informants participated in several interview meetings, and provided us with various types of information.

The interviews ranged in length from sixty to ninety minutes and were guided by a set of pre-designed questions focusing on the specific subjects about the adoption,

implementation, and abandonment of the WebTrust assurance seals at Telecom. The list of those pre-designed questions is provided in Appendix C. Because "we, as individuals, continually interpret and reinterpret our past in order to construct and reconstruct our present" (Buhr, 1998, p.169), there is a possibility that informants' responses may have been influenced by various factors related to their personal background, experience, relationship or employment history with the company. However, efforts were made so that information was elicited without leading respondents, in order to allow them to freely tell their story and provide their own opinions.

The case company and its website

Telecom, our case subject firm is a publicly traded large North American telecommunications company providing innovative services to residential and business customers. Services include telephone, Internet, and cable/satellite television. Information on the company's website was obtained during the interview meetings from various informants and summarized as follows.

Telecom's website was initially launched in 1994, at which time it was basically an electronic marketing brochure to promote the company's products and services. In 1995, the site was redesigned to accept online purchase transactions from customers and was managed by the marketing department. Since 2003, the site has been organized as a separate business unit and personnel specifically related to the unit has been allocated in three offices, housing over 80 employees in total. Telecom's website business unit operates with an annual budget of $20 million for daily transactions, plus another $5 to 10 million for development. These amounts do not include the IT costs associated with the operation of the website, as they are integrated in a large IT budget for the entire

company. Online sales from the website generate annual revenue of about $35 million from approximately 242,000 orders, which results to an average transaction of $145 per order. Although the website as a business unit is considered profitable, the proportion for the firm of online sales over offline sales is very low. Hence, part of Telecom's website unit's business plan for the future is to (1) increase the volume of online sales and (2) encourage customers to consult the website to obtain information on products and services in order to reduce the number of calls at the company's call center.

5. Analysis

After obtaining some background information from informants about the history of Telecom's website and its current operation, the interview questions (see Appendix C) and discussions specifically focused on web assurance seals at Telecom. An attempt was made to lead the interviews on a *chronological* basis in order to maximize the understanding of different events related to the adoption, implementation and abandonment of the WebTrust assurance seal. As a starting point (and as mentioned earlier), it is important to highlight that Telecom's website was not certified and did not post any assurance seal when it initially launched in 1994. Interestingly, the advent of WebTrust in 1997 appears to have triggered a sudden interest in obtaining a web certification and its resulting assurance seal. Telecom eventually became one of the very first companies to obtain the WebTrust seal on its website.

When asked about the criteria for adoption of assurance seals and the motivations as to why Telecom had to obtain the WebTrust seal versus another one, an informant responded as follows:

> The motivation for a seal was the online virtual store, reassuring people that the processes are clear, security is here, increasing trust, etc…The WebTrust criteria were very complicated...The VP at that time said 'this is the best one, let's go and get it! Make sure that we get the most impressive seal.' There was no cost-benefit analysis. The goal was to be the best – "let's be the top e-commerce site in the country!" Two VPs later, we are asked: 'what is this, $100,000 per year?"

In addition, some pressure from the accounting profession seemed to have played a role in adopting WebTrust:

> Because for the accounting firms, it is their baby…They had a great interest in having companies use [WebTrust] services as much as possible…CAs in Canada, CPAs in the U.S…WebTrust, it is big business for the auditors…They told us it was a better seal because everything can be audited…There was no talk on the cost/benefit aspect…

This statement is consistent with Gendron and Barrett (2004), who found that large accounting firms promoted WebTrust to their clients, framing its benefits in terms of potential sales increases, new online shoppers, and reduction in transaction costs. Another informant added to the discussion by specifying the underlying reasons as to why the WebTrust seal was also displayed in a conspicuous location of Telecom's website's home page:

> If WebTrust has already been on the first page's top right-hand corner, it was to increase the site's credibility, to show that the site was secure and to satisfy the executives.

In Carpenter and Feroz's (2001) terms, the WebTrust seal itself can be perceived as a "cultural (or institutionally driven) innovation" (p. 570) within a normative isomorphism context. Telecom provides innovative services to residential and business customers, which include telephone, Internet, and cable/satellite television. In addition, support by national or worldwide professional organizations increases the impact of cultural innovation (Meyer and Scott, 1982). The WebTrust seal could thus be seen as a cultural innovation, not only endorsed but also *created* and *recommended* by a

recognized national professional accounting organization. Therefore, the adoption process of the seal could be identified as a result of a normative institutional isomorphic pressure.

Our background investigation about Telecom's WebTrust seal revealed that the seal was eventually abandoned and replaced in 2004 by VeriSign.[5] Therefore, the next part of our discussions with company personnel was directed towards the abandonment decision and the following question was asked during the interviews: "What exactly led to the abandonment of WebTrust?" A clear, straightforward answer was provided by one of our informants:

> We had stopped paying…we [didn't] love WebTrust anymore so we stopped paying…[we] gave it up in 2004…but I remember very well that in 2004, the VP had asked me: "Are you able to find me some research that would show that we should continue to pay for this business?"…There was nobody who told us having a seal or not having a seal would prevent them from buying from the site…I had personally recommended not to pay…suddenly we received the order to remove it [the WebTrust seal]. This cost hundreds of thousand of dollars.

Another informant invoked the lack of popularity of WebTrust in general. Although not directly commented by our informants, the unpopularity and the fall of the WebTrust service in the B2C web seal assurance market is well documented here:

> WebTrust launched in December 1997, ahead of many competing certification programs. However, by the end of August 2000 the seal was used on only 28 websites…in August 2002 the cpawebtrust.org website listed 26 sites as displaying the sign. By contrast a competing seal TRUSTe, backed by major computer companies such as Microsoft and IBM, was shown on more than 1400 websites by Winter 2000…similarly BBBOnline Reliability, a competitor seal offered by the Better Business Bureau, enjoyed considerably greater success than did WebTrust. BBBOnline Reliability, shown on some 700 websites in 1997, had grown to some 11,000 by May 2002…accountants themselves were faltering in their support…by the creation of competing web seal programs by some of the major accounting firms" (Fogarty et al., 2006, p. 18).

[5] The VeriSign seal has recently changed to the Entrust seal, another third-party web assurance seal. This shift is not quite as significant as the one studied within the scope of this paper, which is from no seal to WebTrust.

As more and more large companies started abandoning the WebTrust services they had originally contracted, and based on the uncertainty situations invoked by informants, we can infer that Telecom decided to *follow* the rational trend to dismiss WebTrust. The mimetic isomorphism process of institutional legitimacy occurs when "organizations tend to model themselves after similar organizations in their field that they perceive to be more legitimate or successful" (DiMaggio and Powell, 1983, p. 152). Hence, as in Telecom's situation, mimetic isomorphism is also driven by organizational uncertainty (Carpentier and Feroz, 2001; Swanson and Ramiller, 2004).

References about why VeriSign was selected to replace WebTrust remained relatively vague:

> "VeriSign" and "Checked by Visa", I think, advertise in some technology-related magazines and publications that target IT people rather than consumers. VeriSign being so much everywhere, it is logo recognition…I would say it is the most recognized logo in general because we see it everywhere…but people don't know what it is…but they see it everywhere.

We further asked whether any study was conducted to determine the optimal location of the seal logo on Telecom's website, and obtained the following responses:

> I am convinced that there have not been any visibility studies to this effect. It has never been problematic…Even if there were testers, they would not look for this business [the seal]…We have never heard comments such as: "You have a VeriSign seal, so you are OK"…We know where customers look on the webpage…now VeriSign is under the navigation bar, so it is not important.

Another informant added:

> The fact that there is a seal or no seal has never been invoked by anybody to say: "I was online, sir, and there was a seal" or at least I have not seen that happen.

The interviews progressed towards whether informants at Telecom thought online shoppers would be ready to pay a premium to have a more secure transaction and they replied:

> Not at all…They rather expect some offers, rebates since they buy online. They want incentives.[6]

We also asked them what they would value the most between (a) security, (b) privacy, (c) processing integrity and (d) availability/reliability:[7]

> For me, I would say (c), (d), (b), (a)…I would put "processing integrity" so that the purchase order is processed accurately in a timely manner, "availability/reliability", that is being available when you need it, "privacy" so that their information is protected…Security…people expect that it is there…It has to be there.

Finally, the discussions escalated onto whether there was an actual need to have any sort of assurance seal on Telecom's website, given the company's reputation, whether a seal is worth its value for Telecom and the informant's perspectives on the future for assurance seals. Responses and discussions about these subject matters were particularly insightful. As one informant said:

> With Telecom, the business is established; the trust connection has been here for a long time. Their [customers'] only worry is: "Am I going to receive my order?" People expect the certification logo to be there even if they don't look at it [in general]. Therefore, we cannot afford that a very small percentage of customers may look and [see] there isn't any…We will not be able to afford this...the media would jump on it…a site such Telecom's with no assurance seal?…We will not be able to afford this…It's like the confidentiality policy…no one looks at it but we have to put it there.

Another informant followed up more explicitly on this notion of expectations and usefulness of an assurance seal for the company:

> I would personally say that we have a seal simply because people expect that we do. But does it make a difference or not? I would say that if we didn't have it, it

[6] This is generally the attitude we may expect from online shoppers since several rebates are exclusively offered online to encourage purchasing.

[7] We defined these terms to our informants to ensure that we had mutual understanding. We referred to *security* as the secure access to Telecom's website and the latter was well operated by logical access controls. *Privacy* was described as the protection of sensitive/personal information from unauthorized disclosure. *Processing integrity* would occur if the purchase order was processed accurately in a timely manner. Finally, *availability/reliability* would be satisfied if Telecom's website was available when needed to perform transactions.

> would be a serious problem, that much serious because it's Telecom. But on the other hand, that's what people expect from Telecom…whether they see a seal or not, they will buy the same because the name of Telecom is there…I would ask my design team to design a nice seal that would like something very security that we would post it on the site… I am convinced it would have the same effect [as if it wasn't there] …An effective seal, it's when appears the little lock that indicates that we entered a secured connection.
>
> The seal has absolutely no effect on purchasing [behavior]….so the cost benefit analysis is going to be like zero…No, our current seal is absolutely useless![8]

About their views on the future of web assurance seals, informants remained skeptical, as illustrated by the following answers:

> All this is marketing…It can help, like the confidentiality policy. We avoid problems when we post it…So, for the seal, it is important to have it, even if no one looks at it in details. Some people tell us they don't buy online because they want to deal with an actual person…they will never buy online.

Overall, institutional theory appears to provide a suitable framework to interpret the information gathered from interviews. The WebTrust initiative and its adoption by Telecom may be interpreted as an institutionally-driven innovation, within a *normative* isomorphism context. Later, when Telecom decided to *follow* the trend to dismiss WebTrust, a *mimetic* isomorphism process emerged.

However, according to Yin (1989), a case study should consider alternative interpretations, and referring to theories provides the best possible explanations of phenomena (Stake, 2000). Therefore, three other theoretical perspectives have been identified to interpret Telecom executives' decisions about WebTrust. These are the managerial accounting perspective, organizational slack theory, and innovation theory.

[8] In regards to brand name, some pointed out that the CPA brand appearing on the seal's icon does not correlate with consumers' trust in established and reputable firms. In other words, the value of WebTrust to firms with well-known brands is questionable (Gendron and Barrett, 2004).

Managerial accounting perspective

The management accounting field encourages thinking not only about the economic aspects of business decision-making but also considering its organizational context (Chenhall, 2003). For instance, management accounting suggests different approaches to estimate and quantify costs. The usual steps in the cost-benefit decision-making process are (1) gathering information, (2) making predictions on net benefits of alternatives, (3) choosing an alternative, (4) implementing the decision, and (5) evaluating performance. From the interviews conducted, there is no evidence that these steps have been performed in a formal way. In other words, there is no substantiation or documentation about the comparison of costs vs. benefits of the different assurance seals available.

While the cost-benefit approach provides a solid basis to examine business decisions, surveys indicate that managers often tend to use a subjective approach (Horngren et al., 2008). Management usually adopts a personalized approach for deciding among different alternatives and goes with its "best judgment". Such approach may be highly stylized and quite informal, and business decisions are not always reflected by economics-based analysis. Choices are sometimes related to institutional, professional, and cultural factors (Horngren et al., 2008). Therefore, in our current case, managers may have differed in their perceptions of the benefits provided by web assurance services. The decision to adopt WebTrust in 1999 could be considered as "good" but with an unfavorable outcome, which is the failure of the WebTrust seal in the B2C market. This decision was made based on the information provided to managers at that time. As professional accountants appeared to have positively emphasized the importance and

credibility of WebTrust, an excess of enthusiasm by senior managers for WebTrust, being the "best" in the market at that time, may, at least partially, explain the decision to adopt the seal.

Organizational slack perspective

Slack is an important concept in organizational theory and has been used for years to explain organizational phenomena such as goal conflicts and innovation. Slack is defined as "the pool of resources in an organization that is in excess of the minimum necessary to produce a given level of output" (Nohria and Gulati, 1996, p.1246). Examples of slack are unused capacity or unnecessary capital expenditures.

Proponents of organizational slack suggest that it plays a crucial role in allowing firms to innovate by permitting them to experiment with new projects (Cyert and March, 1963). Slack generates funds for risky, uncertain, and uncommon projects that do not appear to be justifiable, encouraging a culture of experimentation (Bourgeois, 1981). A well-known success story resulting from organizational slack is the *Post-it* notes at 3M (Mokyr, 1990).

Opponents of organizational slack argue that it promotes undisciplined investment in activities that seldom provide economic benefits (Leibenstein, 1969). Economists have adopted a negative view of slack since they consider it as a waste, a result of bad performance due to incompetence. Jensen (1993) argued that firms having high amount of resources of slack have a trend to invest in suspicious projects, since just a few turn into successful innovation. To them, an excess of slack may even damage promising innovation initiatives. According to Child (1973), managers' choices "accord better with their own preferences than with economic considerations" (1973, p. 11).

Telecom is a large and profitable firm that had (and still has) access to slack resources. This helps understand why the company could afford to invest on uncertain projects for experimentation such as WebTrust. Having access to *ex post* information, the WebTrust experience could be classified as a non-necessary expenditure since it did not turn into a successful innovation. Managers' preferences, over economic considerations, coupled with additional available funds, may both contribute to explain the adoption of WebTrust.

Innovation theory perspective

According to Rogers (2003), diffusion of innovation is the process by which an innovation is communicated over time among the members of a social system. It is the study of how and why new concepts spread. Rogers (2003) theorized that innovations would spread through the "early adopters". An early adopter is typically a large and mature customer, who likes the new and has enough resources to buy products or services when they first come out in the marketplace. In exchange for being an early adopter, and thus being exposed to the associated risks of early-stage testing, it may be given preferential vendor pricing.

Telecom falls into the definition of an early adopter as it remains one of the first telecommunications company worldwide to be granted the WebTrust seal. Telecom is a large profitable industry-leading firm, which took the risks to implement a new product, and endorsed WebTrust in being in the list of adopters on the CPA website. One exception is that there is no indication from our interviews that the AICPA, or the external auditors, had given any preferential pricing, terms, or conditions to Telecom.

Early adoption may also come with drawbacks. Beta versions of products or services may have glitches, be overpriced, or become quickly obsolete. The information gathered from interviews with Telecom personnel does not indicate any implementation problems or any overpricing issues in relation to the services provided by the external auditor. WebTrust being, at that time, a new and unique assurance service, it was difficult for Telecom's managers to gauge and compare the professional fees charged for WebTrust certification services. As to obsolescence issues, *ex-post* information tells us that while we did not observe a "premature obsolescence" (the seal was on Telecom's website for the period 1999-2004), the acceptance level of the WebTrust seal was very low, it became progressively outdated, leading to its abandonment. This suggests that Telecom could have suffered from the drawbacks of an early adopter.

6. Discussion, limitations and future research

The main objective of this study was to understand the motivations and rationale of Telecom's (a large North American company) management behind the adoption, implementation and abandonment of the WebTrust seal. Results from our qualitative analysis indicate that the company's legitimacy needs combined with the endorsement of a recognized professional accountants association and the presence of a Big 4 accounting firm led to the adoption and implementation of WebTrust. This observation is aligned with those who suggest that firms display assurance seals on their websites to communicate a positive corporate image (Trites et al., 2006). However, when the costs versus the benefits of WebTrust were questioned, and other companies began to abandon the seal, Telecom also decided to follow this trend to conform to business norms.

Institutional theory, more specifically normative and mimetic isomorphisms, appears to best explain this phenomenon. Finally, results also suggest that Telecom's managers were willing to take a risk in adopting and implementing an innovative assurance service such as WebTrust. This behavior finds possible interpretations through managerial accounting perspective, organizational slack, and innovation theories.

The Elliott Committee, in examining innovative assurance service prospects, emphasized on three basic elements to consider: (1) clients' need, (2) CPAs who can satisfy this need and (3) clients' perception that the service provided is worth more than its costs. From these three items, the latter is of particular interest for this discussion. During interviews, we learned that Telecom paid around $100,000 per year to obtain the WebTrust seal, a prohibitive fee compared to other assurance seals. For example, interviews with large accounting firms reported that the TRUSTe seal costs approximately $5,000, or about 20 times less than WebTrust (Gendron and Barrett, 2004). According to Essex and Asman (2000) and Craig (2000), client firms do not perceive the high level of assurance provided by WebTrust as sufficient benefit to justify the much higher costs to comply with the seal standards and fees. Moreover, less expensive but yet recognized and reputable web seals render the acquisition of seals affordable for firms (Jamal et al., 2002). This reasoning could be observed at Telecom. After obtaining the WebTrust seal, management realized its exorbitant cost in comparison to other seal assurance services and eventually decided to replace WebTrust with VeriSign.

This study is subject to limitations. While focusing on a single case firm has allowed an in-depth understanding of the firm management's decisions behind the

adoption, implementation and abandonment of WebTrust, this approach restricts the results to a particular business context and the extent to which the results are generalizable to other scenarios cannot be determined. We also concede that it would have been relevant to conduct interviews with the professional accountants and auditors in charge of the WebTrust dossier for Telecom at that time.

Future research may examine the active roles played by the AICPA and CICA in the promotion of WebTrust. Were there sufficient resources and information provided to accounting firms to properly publicize WebTrust among their clients? More specifically, *what* resources have been devoted by the institutes and accounting firms to train CPA and CA WebTrust licensees? According to Gendron and Barrett (2004), the promotional budget was limited, both institutes finding it very difficult to support marketing expenses in this area. With an important advertising budget, maybe WebTrust could have taken flight. As a reminder, significant resources had already been spent in the design of the "product". For instance, consultant fees to find a name for the new service: "We spent a lot of time, and I forgot the amount of money, using consulting firms that name products to try and look at a whole potential series of names and then verifying or checking if they could be trademarked" (Gendron and Barrett, 2004, p. 578). Basic marketing rules tell us that a good product cannot be sale without important publicity efforts to support it. So, who had the responsibility to take charge of publicity and selling activities?

Is there a future in the web assurance seals business for professional accountants? We do not think so, even with a serious reconsideration about clients' perceptions that the service may be worth more than its costs. At least, the WebTrust adventure has allowed the AICPA, the CICA, and public accounting firms to clarify the role of each player and,

importantly, the role of the profession. First, the institutes will most likely continue to develop other ideas, concepts, and products that may (or may not) be accepted, used and marketed by accounting firms, depending how they may fit their clients' needs. Second, corporate scandals that resulted in legislation such as the Sarbanes-Oxley Act demonstrate the importance and relevance of the role played by professional accountants in the business world. This brings back the accounting profession's focus on what it does best, that is providing traditional auditing and assurance services for firms.

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Appendix A: The logos of different assurance seals
(Drawn from Boo et al., 2007, p. 347)

1. BBBOnline

2. TRUSTe

3. VeriSign

4. WebTrust

Appendix B: Example of an Auditor's Report

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Independent Accountant's Report

Board of Directors
Ariba, Inc.:

We have examined management's assertion that during the period January 1, 2007 through June 30, 2007, Ariba Inc. (Ariba) maintained effective controls over the following applications (collectively referred to as "the systems"):

- Ariba Supplier Network (ASN), accessible from https://service.ariba.com
- Ariba Sourcing (AES), accessible from https://www.sourcingservice.com
- Ariba Category Management (ACM), accessible from https://www.sourcingservice.com
- Ariba Analysis (ANL), accessible from https://www.sourcingservice.com
- On-Demand Basic and Professional versions of: 1) Sourcing, 2) Contract Management, and 3) Spend Visibility (S4), accessible from https://s1.ariba.com
- On-Demand Basic and Professional versions of: 1) Procure-to-Pay, 2) Travel and Expense, and 3) Electronic Invoice Presentment and Payment (SSP), accessible from https://s1.ariba.com

to provide reasonable assurance that, based on the AICPA/CA Trust Services Criteria for Security Confidentiality, Availability and Processing Integrity Criteria:

- The systems were protected against unauthorized access (both physical and logical);
- The systems were available for operation and use as committed or agreed;
- System processing was complete, accurate, timely and authorized;
- Information designated as confidential was protected as committed or agreed; and
- Ariba complied with its commitments regarding security, availability, processing integrity, and confidentiality.

This assertion is the responsibility of Ariba's management. Our responsibility is to express an opinion based on our examination.

Our examination was conducted in accordance with attestation standards established by the American Institute of Certified Public Accountants and, accordingly, included (1) obtaining an understanding of Ariba's relevant security, availability, processing integrity and confidentiality controls, (2) testing and evaluating the operating effectiveness of the controls, (3) testing compliance with its commitments regarding the security, availability, processing integrity and confidentiality of its System, and (4) performing such other procedures as we considered necessary in the circumstances. We believe that our examination provides a reasonable basis for our opinion.

In our opinion, Ariba management's assertion referred to above is fairly stated, in all material respects, based on the AICPA/CA Trust Services Criteria for Security, Availability, Processing Integrity, and Confidentiality Criteria.

Because of inherent limitations in controls, error or fraud may occur and not be detected. Furthermore, the projection of any conclusions, based on our findings, to future periods is subject to the risk that the validity of such conclusions may be altered because of changes made to the system or controls, the failure to make needed changes to the system or controls, or deterioration in the degree of effectiveness of the controls.

Ariba's use of the WebTrust Seal constitutes a symbolic representation of the contents of this report and it is not intended, nor should it be construed, to update this report or provide any additional assurance.

KPMG LLP

San Francisco, California
September 19, 2007

Ariba Management's Assertion

The management of Ariba, Inc. ("Ariba") makes the following assertion pertaining to the following applications (collectively referred to as the "systems"):

- Ariba Supplier Network (ASN), accessible from https://service.ariba.com
- Ariba Sourcing (AES), accessible from https://www.sourcingservice.com
- Ariba Category Management (ACM), accessible from https://www.sourcingservice.com
- Ariba Analysis (ANL), accessible from https://www.sourcingservice.com
- On-Demand Basic and Professional versions of: 1) Sourcing, 2) Contract Management, and 3) Spend Visibility (S4), accessible from https://s1.ariba.com
- On-Demand Basic and Professional versions of: 1) Procure-to-Pay, 2) Travel and Expense, and 3) Electronic Invoice Presentment and Payment (SSP), accessible from https://s1.ariba.com

Ariba maintained effective controls during the period January 1, 2007 through June 30, 2007 to provide reasonable assurance that based on the AICPA/CA Trust Services Criteria for Security Confidentiality, Availability and Processing Integrity Criteria:

- The systems are protected against unauthorized access (both physical and logical);
- The systems are available for operation and use as committed or agreed;
- Systems processing is complete, accurate, timely and authorized;
- Information designated as confidential is protected as committed or agreed; and
- Ariba complied with its commitments regarding security, availability, processing integrity and confidentiality.

September 19, 2007

Robert Calderoni
Chief Executive Officer

Wayne Kimber
VP & Corporate Controller

Appendix C: List of Pre-Designed Questions[9]

1. Background information

- Since when does Telecom (the website) exist?
- How does it operate? Is it a separate business unit/entity from Telecom or is it integrated as part of the organization? What is its approximate operating budget?
- Where are you mainly located?
- How many employees do you have?
- Could you provide rough figures on sales, the number of transactions, and their evolution over the last few years?
- Is the website's unit/entity profitable in general?
- Can we obtain any information on the online shoppers' profile at Telecom, such as their demographics, the size of transactions in terms of the number of items purchased, the average dollar amount spent per transaction (and/or a range min/max.), repeat customers, etc…
- What do they buy? Durable goods, services? In what proportions?
- What is the percentage of volume for "personal" versus "business" (small, medium, large)?
- Do you have any strategic plans for the future?

2. Assurances seals at Telecom

- Were there any assurance seals posted on the website when Telecom was initially launched?
- If so, which one(s)? What were the adoption criteria? If not, why?
- What were the evaluation process and the motivations to obtain and post the WebTrust seal?
- Why this specific seal?
- When and what led to the abandonment of WebTrust? Was it pricing or the low market recognition of WebTrust or both or something else?
- Was there any post-evaluation, cost-benefit analysis and/or shoppers' online survey conducted to assess the impact of this seal?
- From the abandonment of WebTrust to VeriSign today, were there any other seals posted in between the transition time? If so, which one(s)? Was there any intention to obtain or abandon other assurances seals?
- Are there any periodic audits by assurance service providers to maintain the seal?
- Do we have the data, in terms of sales and the number of transactions, to examine the impact of posting assurance seal(s) on the front page of Telecom? Was any difference found with VeriSign?

[9] Interview questions were not asked in a consistent, systematic order and sometimes additional questions and discussion topics were covered during the interview due to the semi-structured and "open" nature of the interviews.

- Is there any type of study or analysis to determine the optimal location (front page top/bottom, right/left corner, etc…) for the seal logo on the actual website to be seen most effectively by online shoppers?
- Do you have any available data on the frequency of clicks on the seal (perhaps in relation to the number of purchases, etc…) made by customers who may want to verify its authenticity?
- Are you aware of certain external factors, such as publicity by VeriSign, TrustE, etc., that may have influenced online shoppers' behavior?
- Do you believe that Telecom's online shoppers know about seals and their value?
- Do you believe that online shoppers are ready to pay a premium to have a more secure transaction?

3. What do online shoppers value the most?

According to you, what do online shoppers value the most?

a) security: access to the Telecom website is secure and well operated by logical access controls
b) privacy: sensitive/personal information is protected from unauthorized disclosure
c) processing integrity: purchase order is processed accurately in a timely manner
d) availability/reliability: the Telecom website is available when needed to perform transactions

4. Business context at Telecom

- Having the reputable and well-established Telecom firm behind Telecom, does Telecom really need to post and/or pay for assurance seal(s)?
- Are seal(s) worth its (their) value for Telecom?
- Are you aware of any other security initiatives (encryption methods, SSL, SET, VPN, etc.)?
- Any reports available on computer fraud involving Telecom?
- Do you see a future in the assurances seal services?