

BUILDING, AND LOSING, CONSUMER TRUST IN B2C E-BUSINESS

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Keywords: Trust, Business to Consumer eBusiness, System Dynamics.

Abstract: In the development of B2C eBusiness trust is an emerging key issue. Indeed, this has prompted the re-examination of our current understanding of trust. The development of trust models have been mainly developed from the traditional research basis of trust or from the multi-disciplinary perspective. Moreover, these have been descriptive and static in nature but the building and losing of trust is a dynamic process. In this paper we present a new perspective into the dynamic process of building and losing trust by presenting a four element model to pictorially demonstrate the particular factors that driving the process.

1 INTRODUCTION

Today, the community as a whole are using Internet technology, using websites, to enhance the provision of goods and services through the usage of Business to Consumer (B2C) eBusiness. Technology has become more established in our daily lives and our dependence on them grows, attention must turn to the factors that impact on us all. Key among these is trust.

As information, services or products are made available electronically, researchers and practitioners are focusing more intently on the factors of trust and its impact. For many people B2C eBusiness (on-line) is an encounter with new dimensions of commerce compared with their traditional experiences (off-line) of doing business (Corritore et al., 2003, Gefen et al., 2003). The change from the off-line to the on-line needs to be researched and the impact on trust examined (Corritore et al., 2003, Egger, 2000, Farrell et al., 2003, McKnight et al., 2000, Winch and Joyce, 2006). The importance of trust in the off-line world is well researched. The fields of sociology, psychology, management, marketing, human-computer interaction (HCI), and electronic commerce all contribute to the rich multidisciplinary nature. However, each producing their own different concepts, definitions, models and

findings (Belanger et al., 2002, Corritore et al., 2003, Farrell et al., 2003, Lewicki and Bunker, 1995, Tan and Thoen, 2001, Wicks et al., 1999). Within each given field there is often a lack of agreement (Lewicki and Bunker, 1995) but this should not distract from the growing push to developing a multidisciplinary approach to understanding the factors of trust.

Consumer trust is acknowledged as a key element in determining the success of B2C eBusiness offerings. As a result, it has attracted research and many models have been developed and published in the literature. The purpose of this paper is not to present yet another model, but to suggest how to move from the information and knowledge those models provide into a better understanding of the problem of trust in B2C. Past models are largely descriptive and static in nature. This work helps to give a new understanding of trust building and maintenance as a dynamic process within what is, in significant part, a closed-loop system. The paper has therefore taken the stock-flow diagramming approach from business dynamics modelling to reflect the structure of the trust building systems. This emphasises that the management of system levels, such as trust, has to be through the control of the in and outflows – if a company needs to build trust it has to work through

the flows resulting from consumers' beliefs about how and whether problems might arise.

The paper is structured in the following way with section 2 we cover the background issues of trust while in section 3 we outline the dynamic model to highlight the forces that determine trust. In section 4 we discuss the management action plans to build and maintain customer trust. Section 5 concludes the paper.

2 BACKGROUND

As in the "real world", trust is an important social construct for cooperative behaviour. Trust enables people to live in risky and uncertain situations and also provides the means to decrease the complex world by reducing the number of options a person has to consider in a given situation (Deutsch, 1960). Moreover, trust can be considered a shared principal that allows coordination and cooperation between people. This can be extended to the world of business where trust is central in successful transactions and the development of long term relationships (Keohn, 1996). It is reasonable to expect that the body of knowledge in off-line trust (traditional) can help build a better picture of the key issues of trust in the on-line environment by drawing on the established off-line trust concepts.

An obvious commonality between off-line and on-line trust is exchange (Baron and Byrne, 1991). In the off-line environment risk, fear, complexity and cost restrict exchange while coordination and cooperation enhance exchange, it is likely that it will also be similar in the on-line environment. Likewise, social rules of interaction between people appear to function in both on-line and off-line environments. Similarly, it is reasonable that in the on-line world the presence of trust in the person – website interactions is essential for the success of the transaction and/or discourse, especially in the B2C scenario. For without trust, it is likely that an on-line environment of B2C would not be possible, just as it would not be possible in the off-line environment. In essence, the fundamental factors of trust are seen in both the off-line and on-line domain (Corritore et al., 2003, McKnight and Chervany, 2001, McKnight et al., 2000).

The trustor/trustee relationships are different as technology mediates the interactions - transactions. The situation in which trust is primarily person-to-website rather than person-to-person communication mediated through technology. In this paper, we will focus on the person to website interaction. Trustors

and trustees, that is, objects of trust can be individuals or groups, families, organisations, and even societies. Moreover, in the B2C eBusiness scenario we must not only consider the interaction of the customer with the website but also the company providing the processes to support the interactions. The trustor/trustee relationships needs to extend not only to the technology mediating the transaction but also the company and its processes in support of the on-line customer. This is made all the more difficult if all communication is performed electronically (on-line).

Interestingly, the definition between the trustor and the objects of trust when technology is an object of trust is a departure from the conventional off-line view of trustor/trustee relationship. The fields of psychology and sociology do not countenance the concept of technology as an object of trust. However, people do enter into relationships of trustor with technology, web sites and computers and they appear to respond to these technologies based on the rules that apply to the social relationship (Nass et al., 1996, Nass et al., 1995, Nass et al., 1994). Indeed, the work by Nass, Reeves and their colleagues highlight the responses to computers by people were polite or rude, identified them as assertive, timid or helpful, and had a physical response to them. Interestingly, technologies of this nature are viewed as social actors in the sense that they have a social presence that people respond to and interact with (Reeves and Nass, 1996).

In summary, the use of technology (computers and web site), especially in the B2C scenario, people see them as social actors and interact with them in a similar manner to that of off-line trust. Moreover, in the B2C scenario they view the technology as a tool that mediates the underlying process of gaining a good, service or information from a business, company or organisation.

2.1 On-line Trust

Trust is the act of the trustor. A person places trust in an object, whether that trust is well founded or not. Importantly, trust emanates from a person and their trust, in part, it is formed by their perception of the competence of that object to be trusted. Moreover, trust is inextricably linked to risk in the on-line environment. Wicks (1999) proposes trust as the notion of an optimal level of risk whereby parties are neither overly trusting and vulnerable, nor mistrusting and missing legitimate opportunities. Deutsch (1960) outlines trust as the willingness of

an individual to behave in a manner that assumes another party will behave in accordance with expectations in a risky situation.

Of course, as Ruppel (2003) observes, when the purpose of a website is simply to provide information and promote products or services, the visitor most probably perceives a smaller level of risk which may require a lower level of trust to function. However, if the site features functionality that includes transaction processing, the risk is increased. Therefore, the level of trust must rise to reach a level of optimal trust where the increased risk is manageable, acceptable and practical. At the most basic level we assume that the trustor acts in a trusting manner in a situation of risk when there is little at stake (e.g., much money, very personal information) and there are recognised systems of reward and punishment. At the intermediate level, a trustor has some experience and familiarity with the web site, and so is in a situation of risk in which knowledge can be used to predicate behaviour and thus assign trust. Last in the development, which is the deepest level of trust the trustor expects that his or her interests will be respected by the website and that he/she does not have to calculate the level of risk anymore.

The building and losing of trust is a dynamic process – people who are initially cautious can be persuaded over time to be more confident in Internet-based transactions and, conversely, people who start out with an open-mind may become less trusting as events and experiences unfold. Doney and Cannon (1997), though talking about B2B dealings in general are clear that developing and maintaining trust is both a dynamic process and an essential investment: *‘Supplier firms must make significant investments to develop and maintain customer trust. Our research suggests that though the process of building customer trust is expensive, time-consuming, and complex, its outcome in terms of forging strong buyer-seller bonds and enhanced loyalty could be critically important to supplier firms, Doney and Cannon (1997), pg 48.’*

While here focussing on B2C interactions, this paper tries to bring some new insights to these processes by presenting models that inherently accept and reflect their dynamic nature.

2.2 Trust and Trust Models in E-business

A fundamental element of eBusiness transactions is that the customers’ interaction with the supplier is via an electronic interface not a person. As Gefen

and Straub (2003) observe, this lack of social presence may impede the growth of B2C by hindering the development of consumer trust in the service provider. They also emphasise that human interaction, or at least the belief that the system has characteristics of social presence, is believed to be critical in the creation of trust. They consequently assert that managing e-services calls for managing the trust that is engendered in the customer experience on the website. But managing trust is both a function of developing trusts but keeping trust is also important because trust can be destroyed (Lewicki and Bunker, 1995), and on the Internet, retailers need to proactively (authors’ emphasis) manage the trust component involved in selling (Ambrose and Johnson, 1998).

The importance of trust has engendered much research and the proliferation of models, many of which have been tested against survey results. Some authors have provided helpful comparative reviews of models that have emerged from diverse disciplinary backgrounds (Farrell et al., 2003). While some have gone further by attempting to integrate them into cross-disciplinary models (see for example (Farrell, 2004), who proposes a further multi-disciplinary trust model and (Keat and Mohan, 2004) who use the Davis’ Technology Acceptance Model (TAM) as their foundation). It is not intended in this paper to provide a further review. These models are worthy and generally comprise a catalogue of selected key trust supporting factors, usually displayed graphically with lines, or sometimes arrows suggesting connectivity. They are however, short of providing a dynamic view and limited in their abilities to provide helping tools for helping managers to think about the processes and building and maintaining consumer trust and formulating strategies to improve it. For example, (Pennington et al., 2003) comment that while perceived trust in vendors has been shown to be an important predictor of purchase behaviour, practical guidelines on interventions to enhance consumer perceptions is limited.

3 DETERMINING CUSTOMER TRUST - A DYNAMIC PERSPECTIVE

Trust is essentially a function of the possible problems in using the Internet process envisaged by potential purchasers and it is suggested here that a

customer could be driven to sense possible problems arising in these three ways:

Expected Problems - The building or depletion of trust based on actual personal experiences – this will be a function of the number of experiences and the perceived quality of outcome that they feel they experienced.

Hypothesised Problems – potential problems that people believe might happen based on the perceived risk of the transactions and individual companies that they are dealing with. Indirectly, this will be moderated by the actual risks or quantifiable risks.

Extrapolated Problems – problems that users might expect resulting from their extrapolation based on their use of technology, especially in support of performing transactions. These are often “first time users” who have analysed the technology and have some knowledge of the technology. This maybe good or bad and hence, this is about the transition of customers entering into to the on-line environment versus the off-line (traditional) environment and understanding their problems.

We suggest four simple inter-linked representations to reflect the processes and interactions in the trust-building system. We use the stock-flow structures from system (or business) dynamics or process control systems to capture the system structure; such diagramming has been shown to support manager’s understanding of complex dynamic processes (see, e.g., (Sterman, 2000, Wolstenholme, 1990)) shows that Trust – represented as a stock or reservoir - can be added to or depleted through three flows – trust derived from a consumer’s envisaged Expected, Extrapolated, and Hypothesised Problems. These are all bi-flows (two-headed flows) suggesting the direction of flow can be either way – the level of

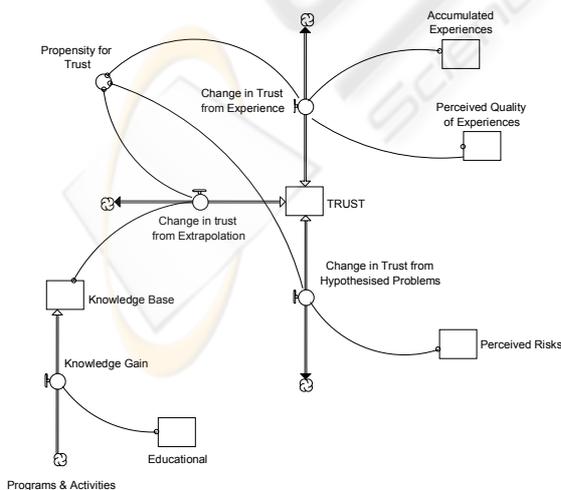


Figure 1: Inflows and Outflows from Customer Trust.

consumer trust can be built up or lost.

The primary driving forces for each of these are also shown in Figure 1, and it is reflected that underlying all the flows are an individual’s propensity to trust – the intrinsic tendency of individuals to trust in others (see, for example, (Egger, 2001, Grazioli and Jarvenpaa, 2000, McKnight et al., 2000, Papadopoulou et al., 2001)).

Change in trust from extrapolation is driven by the customer’s technology understanding and their development of a suitable knowledge level of the technology. This requires an understanding of the risk in utilising the technology. For example, a purchase of a computer monitor, if we see the customer is new to web technology but believes she is capable of utilising the technology for the purchase based on the knowledge that she has over the technology. Without this knowledge, customers are unlikely to utilise this approach in gaining information, goods or service, which is central to B2C eBusiness. As technology changes, from eBusiness to mBusiness for example, different levels of extrapolation (or knowledge base) must be developed by the customer in order for them to understand the risk and trust interplay. Similarly, companies must emphasise the body of knowledge to the customer and the relevance to them.

Once the customer has purchased on-line their experience will inform their trust (risk) and therefore reinforce or detract from knowledge they have developed of the technology: Expected Problems. The accumulated number of experiences and the customer’s impression of the quality of those experiences then also drive the change in trust from experience. In both cases these maybe good or bad experiences and importantly, a customer will draw from their body of knowledge. For example, it may be published information about ensuring a website has a return policy clearly outlined on the website. Initially, return policy maybe something a customer may not understand or care about until they

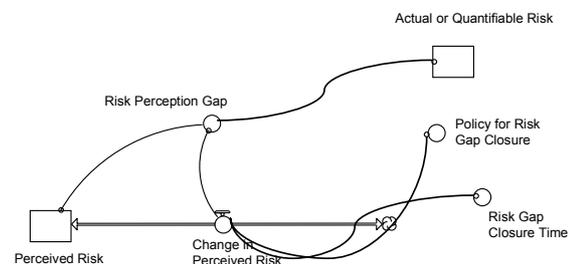


Figure 2: Working to Improve Perception of Actual Risks towards the Perceived Risk.

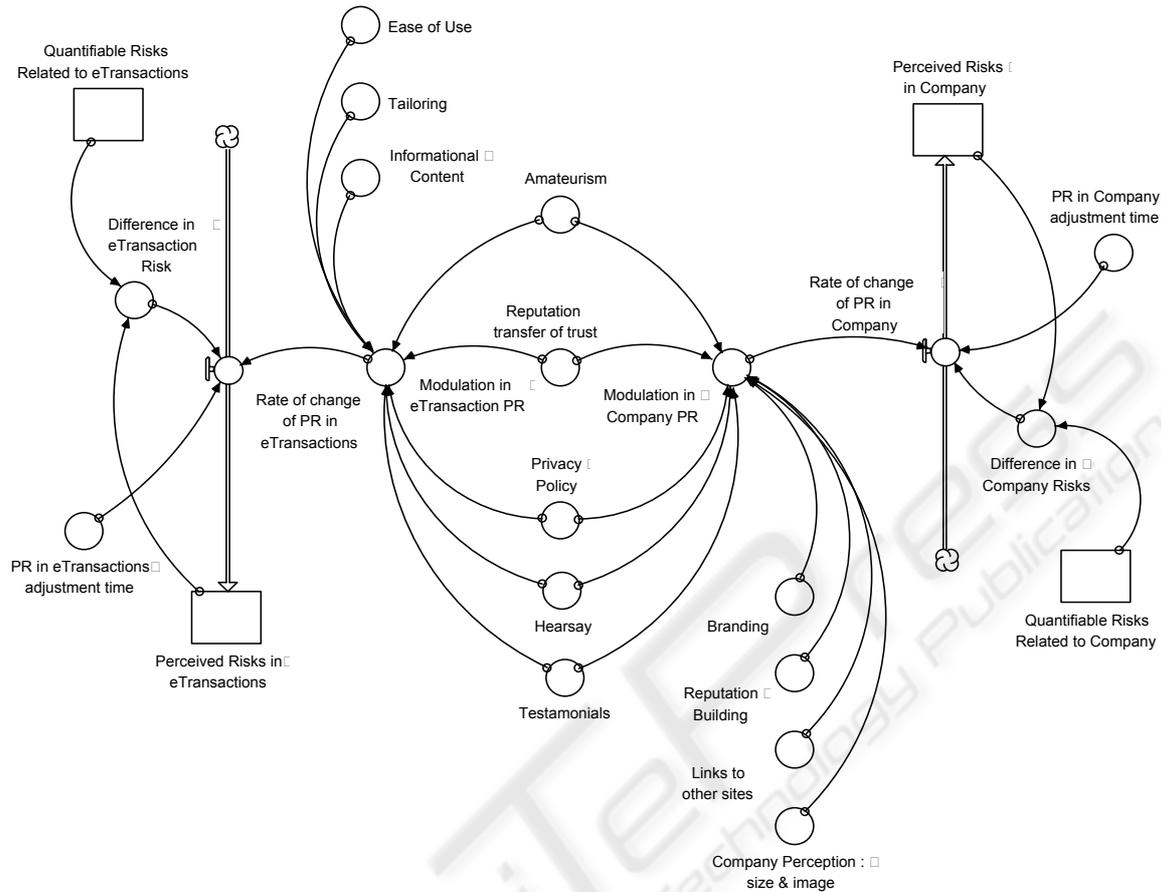


Figure 3: Factors Feeding into Perceived Risks in e-Transactions and in the Company.

accumulate some experience with completing purchases from a website in a B2C scenario. Moreover, when a problem occurs the customer focuses on both their experience and the body of information for direction into how to solving the problem.

The changes in trust from hypothesised problems are those that are perceived by the customer. These may or may not be based on the rationality. In this scenario, cognitive and emotional trust is placed into the domain of the hypothesised problems. The customer can have cognitive trust where good rational reasons as to why the object of trust merits trust. While emotional trust is motivated by strong positive feelings towards that which is being trusted (Lewicki and Bunker, 1995). The change in hypothesised problems is a mixture of cognitive and emotional in nature. Consider an example of purchasing a monitor. In this case, the company only has an on-line presence and exists only as an on-line

company. If the company is a well-known company such as amazon.com this may not be an issue of not providing an off-line presence. In order to understand further the forces in play, additions to this basic model shown in Figure 1. Firstly, an emphasis is that actual risk and perceived risk are not the same thing but they are integrated in our model. For example, a website might be completely secure for credit card transactions, but is this fact fully known and understood by visitors to the site. Similarly, it is possible to provide the actual statistical values (quantifiable) of the success of all purchases from the web site. However, a customer may not see the actual risk as equal to the perceived risk. Hence, companies will be continually striving to reduce the actual risks, but there will be a lag between changes in actual and perceived levels. Most B2C eBusiness systems are a way for an organisation to provide goods and services and it is important that management understand the customer

is interacting with them over a period of time to complete the process. That is, the customer may place an order for a product utilising a website where they perform a transaction with the website. However, customers and hopefully management are also interested in the whole process of delivering the good, information or service. The customer will be interested in the next stage in the process of providing the good, service or information. In this we see that the transaction and the process as two interrelated elements of the risk in B2C eBusiness. In B2C both the e-transaction and the process between the customer and company are important. Indeed, customers may consider the risk of paying a telephone bill utilising a power company's website small, even if their experiences have been poor in

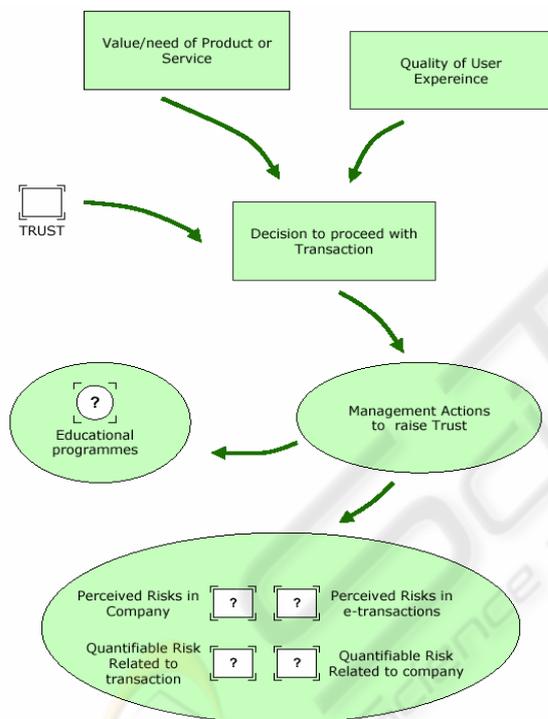


Figure 4: Completing the Management Action Loop.

utilising the website. Primarily, the power company has processes in place that the customer is aware of they can utilise to solve any problem that may arise. This is similar to the eBay model of having dispute processes in place even if the customers perceive the risk in the transaction to be higher than normal. Similarly, a customer may utilise a website to perform an e-transaction even though they may consider the organisation too risky to deal with. Hence, the final element of the graphical model, the factors believed to most influence actual and

perceived risks in both e-transactions and the company can be brought together, shown in Figure 3. The existing literature and the range of descriptive models available include a starting list of factors such as this is beyond the scope of this paper. Farrell (2004) and Farrell et al. (2003) provides a good treatment of these factors that affect trust in the both the e-transaction, company and its processes. Figure 2, shows the loss and gain (bi-flow) relationship between the actual (or quantifiable) and perceived risk highlighting the possible risk perception gap the customer may perceive. The model shows a generic risk adjustment mechanism emphasising two key management variables that determine the relationship between actual and perceived risk: policy for risk gap closure and risk gap closure time. The effort or emphasis placed on company developing policies to narrow the perception gap and the adjustment time by which companies would want to bridge the gap. In this case, we can see that management must develop policies that are capable of influencing the customer to understand how the actual (quantifiable) risks of their B2C offerings have acceptable levels of risk. Similarly, management must be aware that it will take time for the message to be received, processed and acted on by the customer.

Of course, the same factors might influence both risks in e-transactions and in the company's processes, though clearly in the case of the former the perception is going to be influenced to some extent by experiences of other sites as well as with the companies. This might take the form of simple FAQ pages explaining principles and processes to site users, through site use training, even to the level of supporting formal education activities in understanding computer and the Internet. The model, in Figure 1, already suggests that a company, acting either individually or in consortium with other B2C providers, can directly influence consumer trust, by supporting processes that educate consumers in eBusiness processes. The diagram in Figure 3 includes a starting list of factors from the literature, but an individual company could tailor the list to its own market place and offerings.

4 BUILDING AND MAINTAIN THE LEVEL OF CONSUMER TRUST - MANAGEMENT ACTION PLANS

The mechanisms described above are to a significant extent contained within a closed-loop system. All factors that feed into the trust building model in Figure 1, with the possible exception of the accumulated number of consumer experiences, are factors over which a company has control or at least partial control. Figure 4, therefore includes the mechanisms that close the loops with the other diagrams. It firstly reflects that any purchase decision is at the conjunction of three factors – the value or need for the product or service, the quality of the user experience, and the potential purchaser's trust. The notion of optimal trust (Wicks et al., 1999) links the value/need and trust factors, and also reflects that, for example, a site that is only offering information demands less trust of a visitor than a site offering transaction functionality. The magnitude of the purchase may also affect the risk/trust trade-off – visitors might be more willing to risk losses in small transactions than big ones (Cheung and Lee, 2001, Corritore et al., 2003, Papadopoulou et al., 2001, Tan and Thoen, 2001).

The resulting representation is presented in four interlinked parts. The first reflects three basic in- and out-flows to trust that will determine how trust might be built, or lost. That is why consumers believe problems could arise based on either the expectation of problems derived from previous personal experience, extrapolation from their technical understanding of web-based activities, or problems they hypothesise based on their perception of the risks associated with e-transactions and specific companies. The second gives a general view of the relationship between actual and perceived risk and that there is a company policy issue to do with how and in what time frame they would want consumers' perceptions to follow reality. The third element outlines the range of factors that could influence actual or perceived risks relating to both e-transactions, companies and its processes. This is a suggested diagram based on the authors' selected factors from the literature, but other models and research could be used as the starting point for this, and the structure could be tailored to individual companies' situations. The final diagram suggests that the loops are closed through a variety of management actions and a coherent B2C trust strategy should involve the exploration of the

balance of benefits deriving from combination of actions and initiatives.

If we consider example of the purchase of the computer monitor we can see the management strategies that could help in moving customers from visitors to purchasers by ensuring that that trust and therefore, risks are addressed. Firstly, the company should provide a core body of knowledge on the technology used in the purchase, basic details of the acceptable web site design, and the processes offered by the company, e.g., dispute resolution procedures, the details of return policies and procedures. Similarly, the company should provide an outline of the actual (or quantifiable) risks in using the site and the statistics of the website (extrapolated problems). This should allow the customer to adjust their perceived risk in using the site and using this company. Another loop that management can pursue is to provide education programs. This education program can allow customers to perform transactions for goods, services or information for free or minimal charge (expected problems). This increases the customer's user experience decreasing the perceived risk in both the transaction, company and its processes (hypothesised problem). Clearly, the product, service or information must be of value to the customer but trust (and risk) must be managed by the development of an on-line offering.

5 CONCLUSIONS

Building, and losing of consumer trust in a B2C eBusiness is a dynamics process requiring all stakeholders to consider the drivers and their impact on consumer trust.

The four element model then suggests the cycle of management actions the company must consider if potential customers progressing to purchases is unsatisfactory – can they reduce trust from extrapolated problems by improving visitor's knowledge and understanding of web processes and the processes of the organisation?

The paper provides a new perspective of the complex problem and provides managers with a possible checklist of potential drivers in the trust cycle. Importantly, it does not provide a new model but place some perspective on the current research in the area of B2C consumer trust in eBusiness.

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