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James Stacey

*University of Buckingham*, james.stacey@buckingham.ac.uk

Andreas Schroeder

*University of Buckingham*, andreas.schroeder@buckingham.ac.uk

Deba Bardhan Correia

*University of Buckingham*, deba.bardhan-correia@buckingham.ac.uk

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# INITIAL TRUST FORMATION IN A SAAS CONTEXT

**James Stacey, Andreas Schroeder, Deba Bardhan Correia**

*Business School, The University of Buckingham, Buckingham, UK*

James.Stacey@buckingham.ac.uk, Andreas.Schroeder@buckingham.ac.uk, Deba.bardhan-correia@buckingham.ac.uk

## **Abstract**

*The proliferation of the software as a service (SaaS) model challenges our understanding of trust formation in the external software acquisition. In the SaaS model vital software applications are often sourced over the internet with very limited personal interaction between representatives of user and provider. The present research seeks to explore how the subscribers of software services develop the necessary trust that facilitates their decision to use these external software services. In order to investigate the initial trust formation in a SaaS context the study draws on data from ten UK-based SME's that have recently subscribed to SaaS services. Findings reveal an interesting confluence of factors that contribute to the trust formation and include aspects of provider size, reputation and functionalities. These findings create a range of theoretical and managerial implications.*

**Keywords:** Software as a service, SaaS, trust, initial trust, SME, UK

## **1.0 Introduction**

The provision of software in the form of a service (SaaS) rather than a product, constitutes a significant change in organisational computing (Cusumano 2010). The SaaS model describes a new method of internet-based software provision where software users access the applications through the internet, often through a browser. The software code and data are hosted and maintained by a service provider allowing the software users to utilize the application without having to be involved in the development, installation or upgrade efforts. While the industry has offered externally hosted applications for a number of years (e.g. by application service providers), they were generally limited to dedicated applications that are usually hosted on behalf of a specific user organisation that can maintain some level of control. However, with the SaaS model, user organisations subscribe to generic software applications that provide little to no opportunity for the users to control or direct the software deployment.

The limited opportunities to directly control the software and data processes requires the SaaS users to trust the provider. Decision makers, who decide to use an external software

service for some of their business functions, need to believe that the third provider will fulfil its obligations. Research on software outsourcing described in detail the importance of creating direct relationships as a source of trust between the business partners (Kishore et al. 2003). However, the SaaS acquisition process provides very little opportunities for user organisations to develop personal relationships and deeper insides into the providing company. Acquisitions are often done over the internet with limited call-center support or interactions. Such a transactional acquisition of computing resources challenges our assumptions of how trust is in the SaaS context is developed.

The present study seeks to investigate the trust formation in the SaaS acquisition context. We will focus on the pre-acquisition stage to explore the initial trust formation and to determine the mechanisms that contribute to the trust formation. To this end we have collected data from ten UK-based SME's which are analysed following multiple case research methods. Our research could establish how provider characteristics such as size, reputation or the functionalities of their software product contribute to the trust formation. Following from the research a number of research and managerial implications are provided.

The remainder of the paper is structured as follows. We will first review the literature on trust formation before we focus on the particular case of trust in the SaaS acquisition process. We will then conceptualize our research and detail the methodology and analysis employed. We conclude by discussing the core contributions of our research and their implications for further studies in the field.

## **2.0 Literature Review:**

In order to conceptualize our investigations of initial trust formation in the SaaS context we will first review the relevant concepts of trust before we focus on the SaaS context.

### **2.1 Initial trust**

The notion of trust has been conceptualized in a large variety of ways (see Schoorman et al. 2007). One of the most comprehensive trust definitions in a business context is provided by Mayer et al (1995) who define trust as “the willingness of a party to be vulnerable to the actions of another party based on the expectation that the other will perform a particular action important to the trustor, irrespective of the ability to monitor or control that other party” (p712). Hence, a trust situation is characterised by three important elements: (1) one party (trustor) is prepared to depend on the actions of another party (trustee); (2) the trustor

seizes control over the trustee's actions; (3) the action may harm the trustor if not carried out as expected. In a business context the trustworthiness of a business partner is determined by its *ability* (skills or competencies), *benevolence* (belief that the trustee will behave beyond personal gain), and *integrity* (belief that the trustee will adhere to an expected ethical or moral code) (Mayer et al. 1995).

While trust (the willingness to rely on another party) develops during the course of a collaboration, the literature has frequently shown that the level of trust does not necessarily start from zero and develop gradually (Li et al. 2008). *Initial trust* describes the early confidence in the ability, benevolence and integrity of a business partner prior to first hand experience or first hand knowledge. The *initial trust* describes the willingness to rely on an unfamiliar party (McKnight et al. 1998). The notion of *initial trust* has been of particular relevance in the e-commerce domain where several studies show how users agree to depend on an unknown party for critical services (e.g. Kim et al. 2007).

The literature has put forward a considerable variety of models that explain the initial trust formation in a B2B context. A summary of the most salient trust models is provided in Table 1.

Trust model	Explanation
Cognition based trust	Development of trust on the basis of obtained information. Accumulated information leads the decision maker to develop confidence that the focal partner will live up to the obligations (Johnson & Grayson 2005). Initial interactions are an opportunity to confirm or disconfirm prior perceptions.
Characteristic based trust	Development of trust on the basis of similarities. Shared commonality (e.g. background, values, culture) leads the decision maker to develop trust in the business partner (Cazier et al. 2006). In the B2B context, technologies and business practices similar to those of other organisations can reduce uncertainty (Van Buuren et al. 2004).
Calculative trust	Development of trust on the basis of rational considerations. The mutual benefit of a relationship leads the decision maker to believe that both parties will behave honestly as breaches of trust result in negative outcomes (Dasgupta & Gambetta 1988). By analysing potential outcomes, the likelihood of fulfilment or betrayal forms the basis for the trust formation (Doney & Cannon 1997).
Transference based trust	Development of trust on the basis of third party references. The decision maker is inclined to trust the focal partner based on references received from a trusted source (Milliman & Fugate 1988). To be effective, the third-party has to be recognized as a valid assessor and the linkage between the assessor and the unfamiliar party would need to be genuine (Walczuch & Lundgren 2004).
Institution based trust	Development of trust on the basis of third parties that provide guarantees. The trustworthiness of an organization is assured by a recognised label or institution that assures that certain practices or policies are in place (Cazier et al. 2006).

### **Table 1. Trust models**

The diverse trust models indicate that a large variety of factors impact on the initial trust formation. A decision maker consciously or sub-consciously interprets these factors as part of the trust formation. Focusing on the B2B context Doney & Cannon (1997) integrated the diverse trust literature and conceptualized a model that recognises two main groups of aspects that impact on a decision maker's trust formation: aspects related to the supplier firm and aspects related to the salesperson they are interacting with. Supplier firm aspects that are considered with their impact on trust formation include firm size and reputation, but also willingness to customize and considerations of confidentiality. Salesperson aspects that are considered with their impact on trust formation include the displayed expertise likeability and similarity. Doney and Cannon's (1997) model has been successfully used in a large variety of studies to structure the initial trust formation in a B2B context.

Initial trust (i.e. the willingness to rely on another party) is formed as a result of a diverse range of factors. A potential business partner may not have the reputation and industry accolades but the contractual specifications and the comparable organisational circumstances which facilitates the decision to risk becoming a dependent on its actions. The trust threshold at which a decision maker is prepared to take the risk, is dependent on the confluence of the diverse trust models and the value of the transaction (Tan & Thoen 2002). The trust threshold will be higher if the value of the transaction or the business relationship is high. In the context of the initial trust formation where no prior direct experiences can guide the decision making the decision maker relies on the diverse impressions conceptualised in the trust models.

## **2.2 Software as a service**

Software-as-a-Service (SaaS) describe a software provision and distribution model where a standard piece of software is owned and managed by the provider and delivered as a service over the Internet (Xin & Levina 2008). The software code, the data and processes remain within the control of the provider who offer access to the software user. A vast range of software applications is currently provided on the basis of the SaaS model ranging from email to groupware and many other common business applications (Cusumano 2010). The SaaS model provides a range of benefits to the user organisation and the software provider: up-front investments for the client are significantly reduced and a small, stable cash flow for the provider ensured (Choudhary 2007). However, in addition to the economic benefits SaaS

adoption has important implications for the client organisation (Xin & Levina 2008): The SaaS model severely constrains the clients' options for customizing the main functionalities and data structures. In most cases only a single instance of the common code and data definitions exists on the provider's server for a given application. Hence, the SaaS model gives control over the future software development to the provider with clients having to adopt future software upgrades if they want to continue using the service.

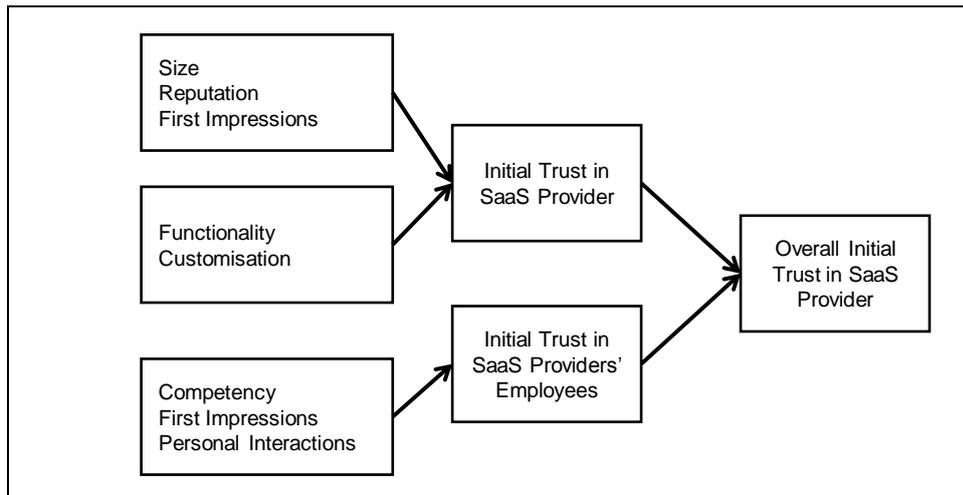
Although the SaaS model creates a considerable level of dependency for the client organisation there is very limited research on the role of trust formation (i.e. the willingness to rely on other party) in this context. Heart (2010) in his study seeks to explain the SaaS adoption decision as the sum of perceived risk and trust. He can show how trust, perceived reputation and perceived capabilities positively affect the SaaS adoption decision. However, instead of focusing on the individual software provider, the study focuses on the clients trust in the entire SaaS provider industry. Sandler (2007) has focused on the barriers to SaaS adoption thereby identifying concerns about data security as a prominent adoption barrier. The report concludes that marketing efforts of SaaS providers should specifically focus on the issues of trust in order to better deal with the concerns. Wu et al (2011) in their study could show how trust in the SaaS context links to perceived benefits and perceived risks suggesting that a systematic evaluation of these benefit and risks would allow for better trust development. The emerging literature shows that the role of trust has been recognized and is of particular importance in the SaaS context.

### **3.0 Conceptualisation of the present research**

The present study seeks to investigate the initial trust formation in a SaaS adoption context. For the purpose of our research we conceptualize initial trust as the clients' belief that the SaaS provider is competent (ability), acts beyond personal gain (benevolence) and adheres to the expected ethical or moral code (integrity). Following Doney and Cannon's (1997) model, different aspects of the service provider and its staff impact on the initial trust formation. Hence, the present investigation will focus on aspects of the SaaS provider and the providers' employees to investigate the initial trust formation (see Figure 1).

Aspects of the SaaS provider that seem to be of particular interest for investigating the initial trust formation include the organisation's characteristics and the actual service offering. To explore the impact of the organisational characteristics we will focus on the SaaS provider

size (with literature suggesting that larger providers are more trustworthy, Hill 1990; Doney & Cannon 1997; van der Meer-Kooistra & Vosselman 2000) and the role of the provider’s reputation (Ganesan 1994). To explore the role of the service offering we will focus on the software functionalities and opportunities for customization (which have both been shown to alter the confidence in the application, Benlian et al. 2009). To investigate the role of the provider’s employees we will focus on the employees competency and personal interactions as a source for trust formation (as highlighted by Doney & Cannon 1997).



**Figure 1: Research model**

## 4.0 Methodology

To investigate the initial trust formation in the SaaS adoption, multiple case research was identified as a suitable methodology due to the exploratory nature of the research context (Benbasat et al. 1987; Yin 2003). Case research methodology is defined as “an empirical enquiry that investigates a contemporary phenomenon within its real-life context“ (Yin, 2003, p.13). For the present research the unit of analysis (the case) is the organisation with the key decision maker of the SAAS acquisition as its representative. Our case selection followed a purposeful selection strategy focusing on small and medium sized organisations that have recently subscribed to a SaaS. Following the recommendation from Eisenhardt (1989) ten cases were used as the basis for our multiple case research.

Data was collected in the form of interviews with the key decision makers of the SaaS acquisition context. Prior to the interviews pre-interview surveys were administered, normally by telephone, to verify the nature of the SaaS acquisition, whilst also providing information detailing the characteristics of each case. The interviews focused on semi-

structured questions that dealt with the most recent SaaS acquisition. The interviewees were provided with prompts to facilitate the recall of specific information including the key stages of the acquisition process. Interviews lasted between 30-60 minutes and were recorded. Following every interview, reminder notes were taken and a full transcription was completed within 24 hours.

Data analysis focused on initial data processing and subsequent cross-case examination (Huberman & Miles 1994). Initial processing included the close examination of the interview transcripts, the development of a coding scheme and preparation of case write-ups. Subsequent cross-case analysis employed two data display techniques to allow for identification of patterns (Huberman & Miles 1994): meta matrices (to categorize organizations based on their core characteristics) and clustered summary tables (to show the distribution of case organizations based on their SaaS or trust aspects).

## 5.0 Analysis & Findings

The analysis will first describe the core characteristics of the case organisations and their SaaS acquisition context before focusing on the underlying themes and patterns that have emerged in the course of the analysis. The case organisations represent a variety of characteristics and SaaS acquisition scenarios (see Table 2). Education and health care were the sectors that were most represented. A considerable variety was also encountered in the previous SaaS acquisition experience represented in the range of case organisations. Each of the case organisations had a previous acquisition experience and the majority of organisations had been involved in several prior acquisitions.

Industry	Code Organisation	Size	Number of previous Acquisitions
Education	EDORG1	450	2
	EDORG2	21	3
	EDORG3	50	5
Health Care	HEALTHORG1	3	5
	HEALTHORG2	245	5
	HEALTHORG3	300	3
Professional	PROFORG1	400	5
	PROFORG2	3	5
Other Services	OTHERORG1	5	1
	OTHERORG2	15	1

**Table 2. Characteristics of case organisations**

The interview data provided extensive details regarding the nature and role of the individual SaaS acquired and the strategies employed in the selection process (see Table 3). The SaaS acquisitions described included a variety of software types ranging from email applications to advanced analytical software services. The case information obtained allowed us to categorize the particular software services into those that fulfil a rather strategic role in the organisation (i.e. performing a high risk task) and those that fulfil a rather operational role (i.e. performing a low risk task). The remote transaction software acquired by HEALTHORG2, for example, would be considered a strategic application as it was linked to critical business processes.

Interestingly, the role of the software (strategic vs. operational) was also reflected in patterns of the acquisition process. In the case of critical business applications, a diverse range of references, demo applications and extensive interactions with the representatives of the SaaS provider were conducted. In contrast, in a number of low risk software services no reference were consulted nor any direct interaction with the service providers was performed.

Role of software	Type of Software	Number of users	Use of references	Interactions with SaaS staff	Case
High Risk + Strategic	Statistical performance analysis	10	Multiple sources	Extensive	EDORG1
	Remote transaction software	100	Multiple sources + Demo	Extensive	HEALTHORG2
	Pharmaceutical dispensing	28	Multiple sources + trial	Extensive	HEALTHORG3
Low Risk + Operational	Email	21	Single reference	Minimal telephone only	EDORG2
	Email	100	Multiple sources + Demo	Extensive (middle man)	PROFORG1
	Email	1	No reference	None	OTHERORG1
	Email	2	Single reference	None	OTHERORG2
	Document & collaboration	3	Single reference	None	PROFORG2
	Administration platform	3	Single reference	None	EDORG3
	Virtual Learning	3	Multiple sources	None	HEALTHORG1

**Table 3. Characteristics of the software**

## 5.1 Cross-case analysis

Following our research model (figure 1) the cross-case analysis focuses on determining how the provider characteristics, the service offerings, the supplier-firm relationships and the employee characteristics impacted on the initial trust formation of the diverse SaaS acquisition instances examined.

### *Provider characteristics*

Our analysis of the software provider characteristics considered the size and reputation of the SaaS provider. Among these factors, the provider size emerged as the most important factor in the initial trust formation. In all but one cases, interviewees described how a large provider size would positively impact on the impression of trust-ability, ability to deliver, integrity and the level of security provided. However, interesting considerations were brought forward by some of the smaller case organisations who could also see trust aspects among small SaaS providers. These smaller case organisations valued the ability of small providers to accommodate and be responsive, as indicated in these comments.

*“A one man band can often give really good service” (HEALTHORG1)*

*“Small means flying by the seat of your pants, everything matters.” (OTHERORG1)*

Interestingly, none of the larger case organisations would describe these additional trust-inducing aspects.

The case data further suggested that the reputation of the SaaS provider would be another important contributor to initial trust formation. In all but one cases, the decision makers proactively sourced references to help form an impression about the provider. The fact that providers opened up opportunities for their prospective clients to contact already existing clients, had an impact on the providers being considered honest and trustworthy. However, the interviews revealed that the trust formation was not only impacted by the quality assurance of a reference but to a large degree by the background of the party providing the particular reference. Having a well recognised company give a positive reference would disproportionally add to the trust formation. In contrast, industry recognitions such as awards, logos and approvals from regulatory bodies were largely belittled by the interviewees who considered these to be marketing gimmicks.

### *Service Offering*

In addition to the provider characteristics, the SaaS service offering was recognized for its direct role in the initial trust formation. Well-thought out functionalities would give a positive impression of the competence of the provider. However, interviewees highlighted that it would be important to see the functionalities in use in to develop the trust. A simple check-list of functionalities would not provide such impressions. The representative from HEALTHORG3 specifically highlighted how the provision of trial access to the software service directly contributed to the appreciation of the provider competence as it provided access without restrictions. The trial period even provided access to the helpdesk which could resolve a problem through remote access, thereby demonstrating functionality, competency and a high level of support.

The role of software customization opportunities was also investigated in the interviews. Interestingly, opportunities for software customization were not of significant concern in the initial trust formation as in most cases the expectation to customise were minimal. Instead, the software was selected based on specific functionalities and where customisation was offered there were significant costs attached and excessive day rates were charged.

### *Employee characteristics*

Interviewees also described how the first impression from the vendor constituted an important factor contributing to the initial trust formation, although not in a positive sense. In the large majority of cases the initial interactions between provider and case organisations were conducted through a website with subsequent generic email exchanges. The lack of direct contact with personnel from the provider was frequently lamented as it limited the opportunity to form an impression of the employees. As the representative from OTHERORG2 commented:

*“They try to get you NOT TO PHONE THEM”*

In most cases the expectations for personal interaction with a representative had been diminished during the acquisition process and interviewees had resigned to the fact that email, FAQ's and forums were the most likely way to obtain additional answers. However, the larger case organisations were treated differently by the providers who were willing to directly respond to the client's requirements. These cases had multiple interactions with the provider and significant discussions prior to the acquisition were held. In one case the

apparent lack of competence of the representative led the case organisation to look for an alternative provider.

## **6.0 Discussion**

Trust is a multifaceted topic with a range of trust models suggesting a diversity of factors impacting on the trust formation. We set out to investigate the initial trust formation in the SaaS acquisition process. By drawing on Doney and Cannon's (1997) trust model, we conceptualized the initial trust formation as the confluence of factors relating to aspects of the SaaS provider and its staff. We will now discuss the implications of the themes identified in our exploratory study and their relationship to theory and literature.

The organisational characteristic that seemed to have the most apparent impact on the initial trust formation was the provider's size. In our research, provider size impacted on the initial trust formation in two ways: 1) as an indicator of resource and technical ability, but also 2) as a relationship barrier. The notion that a larger size contributes to initial trust formation is also supported by previous literature (e.g. Doney and Cannon, 1997). Larger organisations are often considered trust-worthy as their large client base suggests well-established processes and ability. The consideration of organisational size as an important factor in the initial trust formation corresponds with the notion of *cognition based trust* which focuses on the decision makers' accumulation of information in order to develop confidence in the supplier (Johnson & Grayson 2005). Information about the size of a supplier is very easy to obtain, and yet it carries a significant weight with its connotation of technical and resource availability.

However, our observation that size can also form a relationship barrier is of particular interest. Our research showed that, although all organisations acknowledged that the resource advantage of larger organisations would provide confidence in their overall ability, this does not equate with confidence in their commitment. The smaller organisations in particular, were concerned about the limited service attention they would get from large service providers and the risk of having to deal with incompatible processes. These SaaS-specific concerns are grounded in the characteristic based trust model which highlights how similarities and commonalities among stakeholders foster trust formation (Cazier et al. 2006). Common technologies and business practices are sources of trust among business partners. In the present study, differences in organisation size seem to represent one of these dissimilarities which cause concerns over the other party's priorities and interests. Hence, the size of the

SaaS provider seems to affect the initial trust formation in two partly opposing ways: as an indicator of technical and resource availability as well as a relationship barrier.

From a trust perspective, it is of particular interest to observe that SaaS providers offer very limited personal interaction to their client. The outsourcing literature has repeatedly emphasised how trust is formed through the personal interaction between provider and client representative (Kishore et al. 2003). However, the SaaS business model is based on high sales volumes, high level of standardisation and automation with little scope for personal interaction. This depersonalized interaction creates particular challenges for clients who consider using SaaS for their critical application. The clients are looking for additional assurance as one case representative reported:

*“Without meeting them, you can never be certain”*

An interesting solution to this size imbalance and the issue emanating from the depersonalized interaction was adopted by one of the small case organisations, PROFORG1, which used a local agent to source their SaaS application. The agent hereby acted as a middle man by providing support in the acquisition process and mediating the interaction with the large provider. The case representative reported that the model provided them access to the large technical resource pool but also allowed them to have a business partner who was sufficiently small to care about the individual client:

*“We have learnt that we can trust middle men more as they provide the support for the service. We want a large provider, delivered through a third party that has a vested interest in serving our needs.”*

Only one of the case organisations used such an arrangement but it can be expected that the role of such agents becomes more prominent in the future. The clear trend towards the establishment of large SaaS providers opens up this new intermediary role. SME's seek to benefit from the capabilities of large providers but have concerns about their commitment and support. Agents can provide access to these technical capabilities while at the same time constituting an organizational size that is similar to that of their clients. Considering the dominance of large SaaS providers may lead to an increasing number of agents who will directly cater for the trust-requirements of their clients.

As expected from the literature, the provider reputation was identified as another important factor in the initial trust formation. The positive perceptions of the sellers' reputation increase credibility and facilitate initial trust formation (Ganesan 1994). However, our findings show

that the trust was not gained by the obvious industry based reputation indicators (e.g. awards and rankings) but instead through actual references with a considerable emphasis on the reputation of the referee. This finding indicates the convolution of two important trust models that play a role in the SaaS acquisition: the cognitive trust with a focus on the message (i.e. good provider), but also transference based trust with a focus on the provider of the message (i.e. good referee). SaaS providers who want to establish a successful relationship with their clients from the outset are well-advised to consider these two important aspects in the introduction of their services and to strategically develop relationships with reputable clients who have the necessary credibility in the industry.

## **7.0 Conclusions and Implications**

The organisational use of the SaaS model, the utilization of a standard piece of software that is owned and managed externally and delivered as a service over the Internet, has started to become a widely accepted form of software use which is expected to grow even further in the near future. The apparent benefits of this form of software delivery (e.g. cost-saving, scalability) are widely accepted thereby fuelling the wider growth of this sector. But the use of SaaS has further reaching implications. Organisations using these software services, to some extent give up control over their essential software and data processes. Adopting a SaaS reduces the level of control and oversight that can be applied by the organisation and puts the focus on the notion of trust: in order to adopt the SaaS model, decision makers need to develop the necessary trust in the provider. The present study has investigated this initial trust formation in the SaaS adoption, with a particular focus on determining how the initial trust is developed.

The formation of trust has emerged as a complex confluence of a diverse set of factors. This study has helped to identify several mechanisms that contribute to the initial trust formation in the SaaS acquisition process, thereby showing the complexity in which the trust unfolds. While our findings confirmed established trust models by showing how diverse factors, such vendor size, reputation and personal interaction, contribute to trust formation, we could also show that these are not universally applicable. In particular, smaller organisations, while having confidence in the technical abilities of larger providers, are concerned about the lack of responsiveness they would receive. Moreover, although reputation is an important trust-facilitating mechanism, the case organisations did generally not consider industry-wide

accolades but relied more heavily on references from reputable referees as the basis of their trust formation.

Findings of this study are of interest to those organisations that consider the acquisition of software services and providers that offer these software services as they help to close the gap between their distinct perspectives. SaaS providers are very focused on highlighting the important economic and technical benefits of their services but will be held back if they do not establish the trust among their range of customers. The potential service users want to reap the benefits of this software model but will be reluctant if they do not establish the required trust. A focused look on how the initial trust is formed among the range of customers will help both parties to engage with this SaaS model.

The identification of a role for a middle-man was an unexpected finding of our research. The emerging role of agents who help SME's in their interaction with the large providers fills an important gap in the market bridging the diverse trust models. The middle man role allows the SME's to draw on the technical sophistication while at the same time receiving the local support thereby filling an important niche that will contribute to the wider acceptance of the SaaS model.

Several of the insights obtained in our research are of particular interest to organisations considering the use of SAAS: 1) use of recommendations/references: a large diversity of software applications are now being offered which makes it difficult to judge their trustworthiness. Eliciting recommendations of comparable client organisations and spending time in learning from the experiences of other's seems to be very important in order to judge the trustworthiness of a provider. 2) use of the middle-man: the technical capabilities of large SaaS providers are very attractive to client organisations even though the individual attention the client organisation can be expecting to receive is limited. Engaging a middle man/agent who mediates the relationship between small client and large provider and provides hand-on support to the user organisation should be considered.

Despite these interesting findings and important managerial implications, this study also had some limitations. In particular, with our exploratory research focus we were interested in including a diverse range of case organisations and SaaS applications into our study, which limits our ability to derive widely generalizable conclusions. Considering the hugely diverse roles different software applications fulfil in an organisation, future research should consider focusing their investigations on the strategic applications as the trust requirements are of

particular importance. Moreover, our study has focused on the initial trust formation of software that was eventually acquired. This limits our study to ‘successful’ trust formation scenarios where sufficient levels of trust have been developed culminating in the acquisition. However, an additional understanding of the initial trust formation process might be created in a longitudinal study that would follow decision makers in their acquisition processes. Such a study would include SaaS providers where the appropriate trust level was not achieved and the acquisition was not completed.

Significant further research will need to be carried out in order to fully understand the role of trust in the SaaS acquisition process. As more and more software applications will be provided in a SaaS model, the notion of trust will become even more important. We hope that our initial exploratory study will contribute to these further research developments.

## 8.0 References

- Benbasat, I., Goldstein, D.K. & Mead, M., 1987. The case research strategy in studies of information systems. *MIS Quarterly*, 11(3), pp.369–386.
- Benlian, A., Hess, T. & Buxmann, P., 2009. Drivers of SaaS-adoption—an empirical study of different application types. *Business & Information Systems Engineering*, 1(5), pp.357–369.
- Van Buuren, R., Strating, P. & Faber, E., 2004. A Theoretical Approach To Trust Services In eBusiness. In 17th Bled eCommerce Conference. Bled, Slovenia.
- Cazier, J.A., Shao, B. & St Louis, R.D., 2006. E-business differentiation through value-based trust. *Information & Management*, 43(6), pp.718–727.
- Choudhary, V., 2007. Comparison of software quality under perpetual licensing and software as a service. *Journal of Management Information Systems*, 24(2), pp.141–165.
- Cusumano, M., 2010. Cloud computing and SaaS as new computing platforms. *Communications of the ACM*, 53(4), pp.27–29.
- Dasgupta, P. & Gambetta, D., 1988. *Trust: making and breaking cooperative relations*. John Wiley & Sons.
- Doney, P.M. & Cannon, J.P., 1997. An examination of the nature of trust in buyer-seller relationships. *Journal of Marketing*, 61(2), pp.35–51.
- Eisenhardt, K.M., 1989. Building theories from case study research. *The Academy of Management Review*, 14(4), pp.532–550.
- Ganesan, S., 1994. Determinants of long-term orientation in buyer-seller relationships. *Journal of Marketing*, 58(2), pp.1–19.
- Heart, T., 2010. Who is out there?: exploring the effects of trust and perceived risk on saas adoption intentions. *ACM SIGMIS Database*, 41(3), pp.49–68.
- Hill, C.W.L., 1990. Cooperation, opportunism, and the invisible hand: Implications for transaction cost theory. *Academy of Management Review*, 15(3), pp.500–513.

- Huberman, M.A. & Miles, M.B., 1994. Data management and analysis methods. In N. K. Denzin & Y. S. Lincoln, eds. *Handbook of Qualitative Research*. Thousand Oaks: Sage, pp. 428–445.
- Johnson, D. & Grayson, K., 2005. Cognitive and affective trust in service relationships. *Journal of Business Research*, 58(4), pp.500–507.
- Kim, G., Shin, B.S. & Lee, H.G., 2007. Understanding dynamics between initial trust and usage intentions of mobile banking. *Information Systems Journal*, 19(3), pp.283–311.
- Kishore, R. et al., 2003. A relationship perspective on IT outsourcing. *Communications of the ACM*, 46(12), pp.86–92.
- Li, X., Hess, T.J. & Valacich, J.S., 2008. Why do we trust new technology? A study of initial trust formation with organizational information systems. *The Journal of Strategic Information Systems*, 17(1), pp.39–71.
- Mayer, R.C., Davis, J.H. & Schoorman, F.D., 1995. An integrative model of organizational trust. *Academy of Management Review*, 20(3), pp.709–734.
- McKnight, D.H., Cummings, L.L. & Chervany, N.L., 1998. Initial trust formation in new organizational relationships. *Academy of Management Review*, 23(3), pp.473–490.
- Van der Meer-Kooistra, J. & Vosselman, E.G., 2000. Management control of interfirm transactional relationships: the case of industrial renovation and maintenance. *Accounting, Organizations and Society*, 25(1), pp.51–77.
- Milliman, R.E. & Fugate, D.L., 1988. Using trust-transference as a persuasion technique: an empirical field investigation. *The Journal of Personal Selling and Sales Management*, 8(2), pp.1–7.
- Sandler, M., 2007. *The Adoption of Software as a Service in Small and Medium-Sized Businesses*, IDC.
- Schoorman, F.D., Mayer, R.C. & Davis, J.H., 2007. An integrative model of organizational trust: Past, present, and future. *Academy of Management Review*, 32(2), pp.344–354.
- Tan, Y.H. & Thoen, W., 2002. Formal aspects of a generic model of trust for electronic commerce. *Decision Support Systems*, 33(3), pp.233–246.
- Walczuch, R. & Lundgren, H., 2004. Psychological antecedents of institution-based consumer trust in e-retailing. *Information & Management*, 42(1), pp.159–177.
- Wu, W.W., Lan, L.W. & Lee, Y.T., 2011. Exploring decisive factors affecting an organization's SaaS adoption: A case study. *International Journal of Information Management*, 31(6), pp.556–563.
- Xin, M. & Levina, N., 2008. Software-as-a-Service model: elaborating client-side adoption factors. In *Proceedings of the 29th International Conference on Information Systems (ICIS)*. Paris, France.
- Yin, R.B., 2003. *Case Study Research: Design and Methods*, Thousand Oaks, CA: Sage Publications, Inc.