



## Knowledge-Based Banking: the Bankers' Experience on OKS (Online Knowledge Sharing)

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### Abstract

This paper outlines the results from a web-based survey of first time users of a bankers online knowledge sharing. Palmer's web metrics were used to investigate the effects of key website characteristics on intention to return, satisfaction and self-efficacy. Partial least squares estimation was used to estimate both the measurement and structural parameters in our structural equation model. Statistical significance of the main relationships provided strong empirical support for author conceptual framework.

**Keywords:** Online knowledge sharing, Human interaction, Web evaluation

### 1. Introduction: Adopting online knowledge sharing

The crucial importance of having an effective web presence for the competitive advantage of a business has now become apparent. Research on how to organise e-knowledge management and how to design websites has grown rapidly in recent years. The topic attracts the interests from different management disciplines such as marketing (Wolfenbarger and Gilly, 2003; Szymanski and Hise, 2000; Childers et al, 2001), information management, knowledge management and information technology (Koufaris, 2002; Palmer, 2002; Gelderman, 1998) and tourism (Chung and Law, 2003).

For the success of knowledge management initiatives in the banks, it has become paramount to entice existing bankers to adopt the options of online knowledge sharing. This creates huge cost savings by means of scale effects in bank operations (Chen and Hitt, 2002). Compared to traditional knowledge sharing transactions (face-to-face), personalized knowledge sharing on the web cost next to nothing. As web technology is rather recent, the challenge becomes one of overcoming the resistance of bankers to adopt the new technology in transferring their knowledge.

Hence, the web competency and online experiences of existing bankers should be a matter of great managerial concern and a strategic challenge for the banks.

### 2. Human interaction with websites: attributes and outcomes

Many bankers carry out other e-knowledge transfer over the internet and may display varying degrees of web skills (Huizingh, 2002). Adopting web operations can be seen as one form of technology adoption (Rowley, 2002). Recent IT research, for instance O'Casey and Fenech (2003), have found support for the TAM (Technology Acceptance Model) model of technology acceptance (Davis, 1989) among web retailing adopters. More specifically, online or internet knowledge sharing has been studied with regard to user acceptance (Bock and Kim, 2004; Wang et al, 2003). The authors found that the TAM model of technology acceptance was strongly supported but could be supplemented with

the concept of "perceived credibility". The latter construct is thought to mediate (together with the other two TAM concepts "usefulness" and "ease of use") the effect of self-efficacy on intention to use online knowledge sharing. Hence, issues of security and the non-divulgence of personal information are clearly important to users.

In general, website attributes also need to be comprise "relationship-benefit" features such as confidence building measures and special treatment effects in order to enhance user trust (Shankar et al, 2002), satisfaction and loyalty (Yen and Gwinner, 2003). Recently, it has been found that knowledge management system (KMS) is a critical factor behind e-knowledge success, especially in banking and finance contexts (Schoder and Madeja, 2004). Partial satisfaction with certain website attributes are also important. For instance, it has been found that satisfaction with information, and with information richness (Chung and Law, 2003), in websites were strongly linked to perceived performance and usage intentions (Jeong et al, 2003). Recently, website research has shifted focus from users' evaluation of website attributes to comprise more aspects of user relationships and human web-interaction. Barnes and Vidgen (2002), for instance, have proposed the WEBQUAL instrument with three underlying quality dimensions of a site: information quality, usability and service interaction quality.

Website performance is most likely a multidimensional and rather complex concept. As the literature is of an emergent character we are not yet in a position to pinpoint exactly what website (or other) attributes are necessary to generate high levels of user evaluations of the site. The start-up phase can be considered critical for the successful outcome of technology adoption. We continue this interactive and cognitive strand of website research by applying a quantitative e-survey to model the initial experiences of online knowledge sharing users. This study aims at investigating the experiences of new online knowledge sharing users with the aim to understand what website features impact positive user evaluations. We structure our paper as follows. First, we discuss our research setting and method with regard to the implementation of the e-survey. We also briefly elaborate on the model we aim to test. Second, we outline some of the results.

### **3. Method**

We have narrowed the situation in which experience is investigated to how first-time users manage the web site and how they get access to the e-knowledge services of a commercial bank. One important decision is how and what kind of data to collect about a first time attempts to master a website. This attempt may be comparable to a so called critical incident (CIT) (Flanagan 1954). Different data sources and approaches can be used in conjunction with CIT methods (Roos, 2002). Critical incidents are normally investigated with traditional face-to-face interviews when respondents talk about a particularly satisfying or unsatisfying incident. The incident selected should deviate from what is normal either in a positive, or in a negative way (Bitner et al, 1991, p. 73). We have used a web survey to tap experiential information about critical incidents in a web setting.

For several reasons, a particular Malaysian commercial bank was chosen. First, we were promised total access to user data and support in developing our web survey. Second, the selected bank had seen a recent surge in the propensity among its users to use its online knowledge sharing. Third, the bank has few traditional branches and is dependent upon the success of its web operations. Finally, the bank is a leading niche player focusing only on private commercial banking.

The sample (N=117) consisted of all new online users (bankers) who logged on to the online knowledge sharing during two weeks in March 2007. In this sample, respondents (N=89) with less than three months' experience of online knowledge sharing were considered a sub-sample of "beginners". We assume that this is a fairly representative sample of online users of the bank. We have not corroborated that in a statistical way.

Other practical issues with relevance to the design of the web survey were agreed on with the IT (Information Technology) department of the bank. The survey was introduced to users in the following way. When logging out from their first transaction with the online knowledge sharing, a pop-up window appeared (with a link to the survey included) asking the user to participate in a web-based survey about the performance of its website. Respondents were asked about personal information such as: telephone contact numbers, experience of online knowledge sharing (in months) and if they were interested to participate in a follow-up telephone interview.

Items were taken from Palmers (2002) study. Instead of conceptualizing web metrics as antecedents of website success, we differentiated between three types of outcomes: self efficacy, satisfaction and intention to use/return the site. The constructs comprising web metrics used by Palmer (2002, p. 165) were somewhat modified. Website features included in our conceptual framework were: Download delay, Interactivity, Knowledge, Structure of site, Ease of navigating. We made some slight changes as to the conceptualizations of the individual five constructs developed by Palmer (2002, p. 158).

Our model (see Figure 1) comprised the above website constructs and their effect on key experiential outcomes: satisfaction, intention to return and self-efficacy. The latter construct is of special interest as this may be a proxy for the effect of learning in this first time attempt to handle the website of the bank.

We used the partial least squares estimation (PLS-Graph Version 3.0, Chin, 2001) approach to estimate both the measurement and structural parameters in our structural equation model. PLS does not require multivariate normal data, places minimum requirements on measurement levels, and is more suitable for small samples (Chin, 1998; Wold, 1985). We specified reflective indicators for all the constructs, and we examined the reliability, convergent validity, and discriminant validity for the measurement instruments used (Chin, 1998; Fornell and Larcker, 1981). Our results indicate adequate reliability (in terms of composite reliability and average variance extracted), convergent and discriminant validity.

To test the hypothesis in our conceptual framework we used PLS to estimate the parameters in our structural model. To test the statistical significance of the parameters in the structural model we used a bootstrapping procedure with 500 resample (Chin, 1998).

#### 4. Results

Overall, the statistical significance of the main relationships provides strong empirical support for our conceptual framework. Our results suggest that the model explains a substantial amount of the variance in the endogenous constructs significant at  $\alpha=0.05$  (satisfaction with web site:  $R^2=0.70$ ; web site behavioral intention to use:  $R^2=0.35$ ) (see Figure 1). This leads to a GOF value (Tenenhaus et al., 2005) of 0.55 which exceeds the cut-off value of 0.36. Satisfaction with web site is positively affected by information provided by the web site and structure of the web site. Web site behavioral intention to use is positively influenced by download time and satisfaction by the web site.

#### 5. Conclusions

Even at this stage any conclusions drawn from this research must remain to some extent provisional. The data paint a picture of what is, or is not happening with online knowledge sharing in local banks in Malaysia. It is apparent that as in the banking sector, knowledge sharing has entered the argot of local bank. Whether this results in a longer-term commitment or just lip service remains to be seen. At this stage in the research project it seems safe to generalize that a majority of local banks are responding to the challenges and opportunities of knowledge sharing. This is particularly evident in the extent not just of technology adoption but specifically in the widespread employment of a range of mechanisms for sharing and reusing knowledge within banks. It is also apparent in moves to address concerns of loss of knowledge and subsequent attempts to leverage knowledge value across the bank. It is strongly apparent in the widespread regard for the importance of learning, with or without recognition of the value of knowledge sharing. All in all there are indications that local banks in Malaysia is growing increasingly knowledge-focused and that local banks are becoming knowledge-based banks. The follow up interviews for this research project are continuing. Even now however, they point to the need not simply for observations of organizational knowledge sharing practices but for some means of testing and measuring these. To this end work is underway on the construction of a number of knowledge-related indices for local bank, work that will be reported in a subsequent paper.

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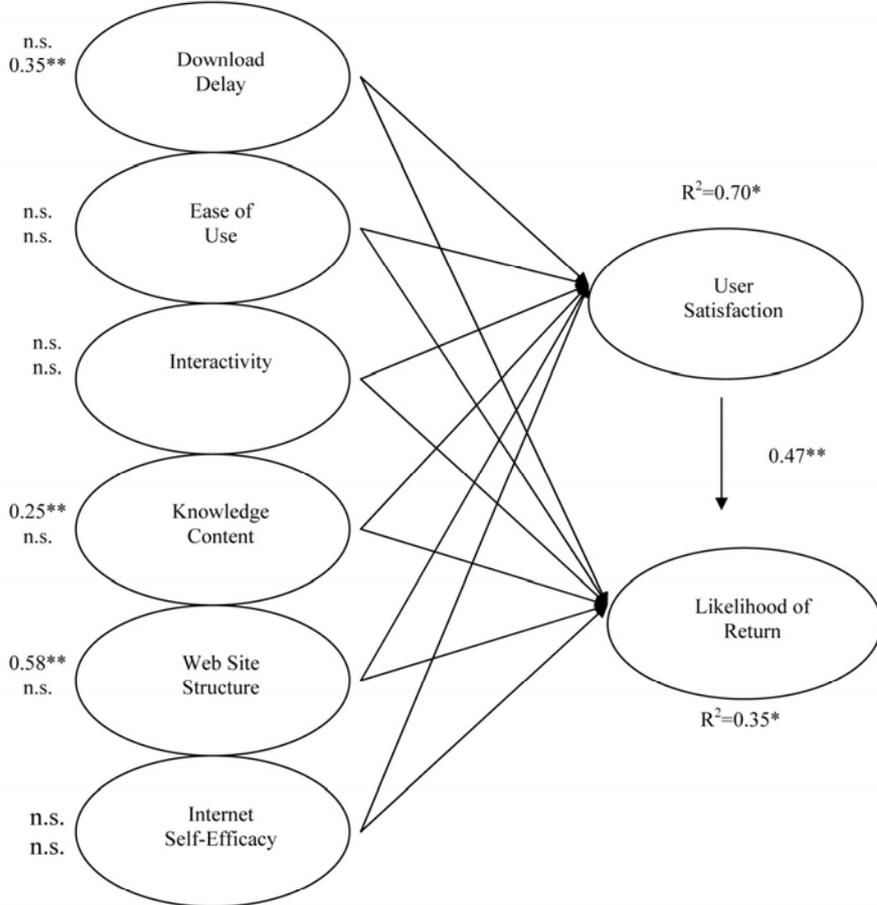


Figure 1. Empirical Finding: Structural Model