MANAGERIAL GAPS IN E-BANKING QUALITY DRIVERS: AN EMPIRICAL ASSESSMENT

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ABSTRACT

Providing quality service to the customer is a main issue for e-banking. The extant literature on e-services has preferentially examined quality factors as perceived by customers. On the other hand, quality depends on the managerial perceptions about quality drivers and the decisions that would follow from these perceptions. According to SERVQUAL - the most known service quality model - any gaps between management's and customers' perceptions would affect the experienced quality and then the customer satisfaction. The aim of this paper is to explore how bank managers perceive quality drivers for e-banking through a preliminary empirical survey.

Keywords

Electronic Banking, Internet, Quality, Quality Gaps

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INTRODUCTION

E-banking can be defined as the delivery of financial services through electronic means and networks (Rust, Kannan, 2003), including the Internet (Bradley, Stewart, 2002). Strictly speaking, electronic banking can include other remote distribution channels, such as television (Daniel, 1999), but the Internet is the most relevant and interesting case. Acceptance of e-banking is much faster than previous technologies, such as ATM (Bradley, Stewart, 2002). The benefits brought by e-banking to banks are numerous: reduced operational costs, mass customization, reputational advantages, enhancement of marketing activities, attraction and retention of customers (Bradley, Stewart, 2002). Benefits are relevant for customers too; technology can improve the quality of services delivered to customers: customization/flexibility, service recovery, spontaneous delight (Bitner, Brown, Meuter, 2000).

For the success of any e-banking project, management should focus on service quality design and delivery to customers. Quality (and the resulting satisfaction) derives from a comparison between what the e-company delivers on one hand and the perceptions of the customer on the other. The extant literature has extensively dealt with the latter, which is the system of drivers of e-service quality as assessed by customers. Less attention has been spent studying management perceptions of what is relevant in e-banking quality. This paper aims to fill this gap, by addressing the factors that are perceived by bank managers as being more relevant for e-banking quality.

QUALITY IN E-SERVICES AND E-BANKING

The literature has developed various models of web quality (Bauer et al., 2006; Loiacono et al.; Yoo, Donthu, 2001). This current literature has focused mainly on customer perceptions of quality. However, as the service management literature shows, quality is a twofold phenomenon: on one hand there is the perception by the customer, on the other hand there is the design and delivery of the service by the company. Quality as experienced by customers emerges from the appreciation by the customer herself of the quality delivered by the organization and received by the client. A key and consolidated model of service quality is SERVQUAL (Parasuraman, Zeithaml, Berry, 1998). According to SERVQUAL, five factors are generally considered by subjects in their assessment of service quality: tangibles, reliability, responsiveness, assurance, and empathy. Although some authors (Cronin, Taylor, 1992) would challenge the paradigm of the disconfirmation-based model of SERVQUAL, the comparison between delivered quality and customer expectations is a widespread and well consolidated tenet of service marketing literature (Joseph *et al.*, 1999).

E-banking quality has not been extensively investigated (Jun, Cai, 2001). Like any other technologies, e-banking is adopted by the customers following the guidelines of the Technology Adoption Model (TAM) (Davis, 1989). However, e-banking shows a peculiar relevance of trust. Safety is a requirement for any Internet experience, since risks are many, such as privacy violations, fraud, software viruses. E-banking presents all these aspects, magnified by the fact that what money is at stake is the customer's money. The literature that focuses on e-banking adoption adds trust as a further dimension to the ease of use and usefulness devised by TAM. In their study, Eriksson *et al.* (2005) include trust, measured as reliability and integrity of the bank. In their empirical model, trust is an antecedent of ease of use and usefulness. Reliability, safety, and privacy are considered by Polagotlu and Ekin (2001). Sathye (1999) discovers that security concerns are the main factor in explaining the adoption propensity of Australian customers. Jun and Cai (2001) consider security among other 13 quality factors. According to them, two dimensions form the construct of security: privacy and safety of transactions. Joseph *et al.* (1999) identify six dimensions of e-banking quality: convenience, feedback, efficiency, queue management, accessibility, and customization. Among them, customization and queue management score substantially below the overall average of importance for the customer, showing a moderate relevance as compared to the other factors. On the contrary, convenience/accuracy and accessibility are above the average. Jun and Cai (2001) discover 17 dimensions of e-banking service quality, divided into 3 broad categories: customer service quality, online system quality and banking service product quality. The 10 dimensions that form customer service quality confirm the five SERVQUAL factors and add two new variables, namely collaboration with the customer and continuous improvement. Access (another factor of customer service quality) gains a peculiar relevance for Internet banking compared to the general SERVQUAL model. Clients seem to prefer e-mail to other means of communication when they use e-banking. Customers want quick replies to their requests and enquiries. A second aspect related to access is the integration between ATMs and the Internet. Customers who are abroad may encounter difficulties in getting cash, since the ATMs of the home bank may be not available. The factors that form the online system quality according to Jun and Cai (2001) are six fold: content, ease of use, accuracy, timeliness, aesthetics, and security. The research by Jun and Cai (2001) adds to the current literature aesthetics as a relevant dimension. Finally, banking service product quality includes one factor referring to the variety of financial products and their features. A bank cannot compensate a weak financial offer with a sophisticated electronic system.

E-BANKING QUALITY DRIVERS IN THE MANAGEMENT PERSPECTIVE

Moving from customers to banks, the literature has mainly focused on the innovation diffusion of e-banking among banks (Bradley and Stewart, 2001). Daniel (1999) studies the adoption drivers of e-banking by British banks whereas Bradley and Stewart (2001) researched the inhibitors of such adoption. The academic literature is less focused on how to design and deliver actual e-banking offerings. There is little research on the perception held by bank managers about how to deliver an e-banking service of high quality.

In order to empirically study the management approach, we consider together the gaps model by Zeithaml *et al.* (2002) and the e-banking quality factors devised by the literature. The gaps model provides a general frame where the variables of e-quality can be allocated. SERVQUAL has been refined to be applied to the virtual environment (Zeithaml et al., 2002). The model eventually developed is an e-Service Quality (e-SQ) model. E-SQ is based on the gaps paradigm that is at the foundations of service quality. These gaps are adapted to the peculiarities of websites.

E-SQ pinpoints three gaps that management should avoid:

- Information gap. This gap represents the lack of correct understanding by the management about what the customers wish to have in the website. One of the risks, for instance, might be that management overestimates the technological elements of the website. This is the most relevant gap and it is at the root of the other ones.
- Design gap. Even though the management understands the clients' desires for a website, the actual design and operation of the website can diverge from what is required to satisfy clients.
- Communication gap. This gap occurs when the marketing department does not understand the characteristics of a website and its limitations. An example of this gap is the case of a promise given on the website that the company cannot comply with.

The mentioned three gaps – and their possible combinations – determine a resulting inclusive gap: the fulfillment gap. That gap is the overall divergence between what is required by customers and what is actually delivered by the website. This gap determines a low perceived quality and thus dissatisfaction.

E-SQ would suggest four dimensions that management may address to reduce the gaps: efficiency, fulfillment, system availability, and privacy.

Each of the three gaps has corresponding variables in the literature on e-banking quality. Table 1 shows the items that can be used in the empirical research, grouped into the three gaps. For each item, the corresponding variable in banking e-quality are shown in parentheses. In the last row there is a list of other strategic factors drawn from a

previous study by Shah, Braganza and Morabito (2006). Their study focused on the key success factors for e-banking.

Information gap
✓ Gathering information about customers' online purchasing behavior
✓ Gathering useful information about customers
Design gap
✓ User-friendly and attractive web site
✓ Secure web site and other related systems
✓ 24h/365 days availability of service
✓ Fast responsive customer service (better that usual)
✓ Rapid delivery of products/services (quicker than usual)
Communication gap
✓ Web-specific marketing
✓ Personalizing products/services/ advertisements
Other factors relevant to e-banking
✓ Increasing revenues from electronic channels
✓ Changeable (flexible) organizational structure
✓ Expansion of current markets
✓ Fast responsive and integrated business processes
✓ Availability of human/financial resources
✓ Support for e-commerce from top management
✓ Offering incentives to customers to conduct business on Internet
✓ Selecting software systems from a single vendor
✓ Integration of information systems
✓ Flexible workforce ready to adapt to new business models
✓ Promotion of electronic commerce culture in the organization
✓ Selecting and mixing best software products from different vendors

Table I: Quality Gaps applied to e-banking

The research is aimed at exploring which gap is considered more relevant by managers when e-banking is concerned.

METHOD

In order to get preliminary findings and to fine tune the theory, we draw our current data from the previous study conducted by Shah, Braganza and Morabito (2007). In that study the authors conducted a postal survey among U.K. financial institutions. The sample included medium and large organizations (more than 100 employees) listed in "The Euromoney Bank Register". The questionnaire was targeted at senior Information Technology managers, since they represent the more informed and competent figures in an organization to handle e-banking; E-banking is their responsibility. The questions asked in the survey referred to the relative importance of items of e-banking. Out of the 510 questionnaires sent, 114 were returned (22%). The return rate is in line with other similar research in the U.K. Finally 77 questionnaires were considered viable for the research. The fairly high rate of non-usable responses could be due to the lack of any e-banking from some surveyed organizations. This would confirm the validity of excluding smaller organizations as they would be even more unlikely to initiate e-banking projects.

FINDINGS AND DISCUSSIONS

We now proceed to a factor analysis of the variables. The results are in the following tables:

	Components					
Variables	**1**	**2**	**3**	**4**	**5**	**6**
Gathering information about customers' online purchasing behaviour	-.159	.194	.183	**.640**	-.315	.266
Increasing revenues from electronic channels	**.495**	-3.294E-02	-3.968E-02	.454	-.108	-4.115E-02
Flexible organisationnel structures	.231	**.583**	.196	.314	-.218	-.147
Web-specific marketing	.237	.149	.152	**.732**	.206	.112

Expansion of current markets	**.698**	.293	.260	-4.187E-02	1.126E-02	.105
Rapid delivery of products/services (quicker than usual)	.191	.289	-.104	.475	**.450**	-.331
Fast responsive and integrated business processes	.242	.249	.258	**.397**	.247	-.274
Availability of human/financial resources	.229	**.505**	.227	.307	.287	-.182
Personalising products/services/advertisements	.321	.142	.405	**.409**	.287	-7.357E-03
Support for e-Commerce from top management	**.635**	.144	-.202	.191	.235	-1.712E-02
24 x 365 days availability of service	**.544**	.236	.371	.259	-1.466E-02	2.835E-02
Offering incentives to customers to conduct business on Internet	.156	8.601E-02	-3.324E-02	.114	.105	**.848**
User-friendly and attractive website	**.739**	7.029E-02	.165	5.090E-02	9.751E-02	5.263E-02
Secure website and other related systems	.254	-8.519E-02	4.355E-03	6.098E-02	**.781**	5.625E-02
Gathering useful information about customers	4.575E-02	5.166E-02	**.592**	.426	9.828E-02	2.358E-02
Fast responsive customer service (better that usual)	-.159	.241	.223	-2.285E-02	**.702**	9.441E-02
Selecting software systems from a single vendor	-6.047E-02	.327	**.758**	4.731E-03	-5.583E-02	9.093E-02
Integration of Information Systems (IS)	.316	3.668E-02	**.755**	7.333E-02	.159	-.177
Flexible workforce ready to adapt to new business models	.144	**.658**	.263	8.799E-02	.102	.107
Promotion of electronic commerce culture in the organisation	.394	**.724**	-1.357E-02	5.595E-03	-4.554E-02	-.109
Selecting and mixing best software products from different vendors	-9.284E-02	**.731**	5.627E-02	.120	.211	.247

Table II: Factor Analysis

Factors	**Cronbach's α**	**Variables**
1	0.72	Changeable (flexible) organizational structure Selecting and best of breed software products Promoting e-Commerce culture in the organisation Flexible workforce ready to adapt changes
2	0.78	Web-specific marketing (COMMUNICATION) Rapid delivery of services (quicker than usual) (DESIGN) Fast responsive and integrated business processes (DESIGN)

		Availability of human/financial resources Personalising products/services/advertisements (COMMUNICATION)
3	0.69	Increasing revenues from electronic channels Expansion of current markets 24 x 365 days availability of service (DESIGN) User-friendly and attractive website (DESIGN)
4	0.65	Gathering information about customers' online purchasing behaviour (INFORMATION) Selecting software systems from a single vendor Integration of IS
5	0.52	Secure website and other related systems (DESIGN) Fast responsive customer service (better that usual) (DESIGN)
6	0.20	*2 variables eliminated from the analysis because of too low score*

Table II: Factors and their Cronbach's Alpha

As to information gaps, we notice that one of the items aggregates with technological variables like integration of IS and partnerships with a single vendor. This can signal information is considered an issue that can be solved through technology. The design gap variables do not aggregate in a single common factor. Instead they are spread in different factors and combined with other general variables. Particularly interesting is factor 2 which combines together some design gap variables and the variables of the communication gap. Probably, in the view of the bank managers, designing a good e-banking website (especially in terms of fast response and delivery) means developing good marketing actions. Communication and design gaps are probably addressed as similar issues by banks.

This preliminary overall frame seems to show that banks consider technology as a main solution for e-banking issues. What can be suggested is an increased attention towards marketing and market research as distinct and useful disciplines to develop an e-banking service of high quality.

REFERENCES

Bauer, Hans H., Tomas Falk, Maik Hammerschmidt, eTransQual: A transaction process-based approach for capturing service quality in online shopping, Journal of Business Research, Volume 59, Issue 7, July 2006, pp. 866-875

Bitner, M.J., Brown, S.W., Meuter, M.L., Technology Infusion in Service Encounters, Journal of the Academy of Marketing Science, 28, 1 (2000), 138-149.

Bradley, L., Stewart, K., A Delphi Study of the Drivers and Inhibitors of Internet Banking, International Journal of Bank Marketing, 20, 6 (2002), 250-260.

Cronin, J.J., Taylor, S.A., Measuring Service Quality: an Examination and Extension, Journal of Marketing, 56, (July 1992), 55-68.

Daniel, E., Provision of Electronic Banking in the UK and the Republic of Ireland, International Journal of Bank Marketing, 17, 2 (1999), 72-82.

Davis, F.D., Perceived Usefulness, Perceived Ease of Use, and User Acceptance of Information Technology. MIS Quarterly, 13, 1 (1989), 319-40.

Eriksson, K., Kerem, k., Nilsson, D., Customer Acceptance of Internet banking in Estonia, International Journal of Bank Marketing, 23, 2 (2005), 200-216.

Hofacker, Charles F., Ronald E. Goldsmith, Eileen Bridges, Esther Swilley, E-Services: A Synthesis and Research Agenda, Journal of Value Management, 2007, Vol. 1 No. 1, pp. 13-44.

Joseph, Mathew, Cindy McClure, Beatriz Joseph, Service quality in the banking sector: the impact of technology on service delivery International Journal of Bank Marketing; Volume 17, Issue: 4; 1999

Jun, M., S., Cai, The Key Determinants of Internet Banking Service Quality: a Content Analysis, International Journal of Bank Marketing, 19, 7 (2001), 276-291.

Loiacono, E.T., Watson, R.T., and Goodhue, D.L. WebQual: An Instrument for Consumer Evaluation of Web Sites. International Journal of Electronic Commerce, 11, 3 (Spring 2007), 51–87.

Parasuraman, A.; Zeithaml, V.A., Berry, L.L. SERVQUAL: A multiple-item Scale for Measuring Consumer Perceptions of Service Quality. Journal of Retailing, 64, 1 (1988), 12–40.

Parasuraman, A.; Zeithaml, Valarie A., Malhotra, Arvind, E-S-QUAL: A Multiple-Item Scale for Assessing Electronic Service Quality.. Journal of Service Research, Feb2005, Vol. 7 Issue 3, pp. 213-233.

Polatoglu, V.N., Ekin, S., An Empirical Investigation of the Turkish Consumers' Acceptance of Internet Banking Services, International Journal of Bank Marketing, 19, 4 (2001), 156-165.

Rust, R.T. Kannan, P.K. E-Service: A New Paradigm for Business in the Electronic Environment, Communications of the ACM, 46, 6 (2003), 37-42.

Sathye, M., Adoption of Internet banking by Australian consumers: an empirical investigation, International Journal of Bank Marketing, 17, 7 (1999), 324-334.
Shah, Mahmood, Braganza A., Morabito V. A survey of critical success factors in e-Banking: an organisational perspective, European Journal of Information Systems, Vol. 16 Issue 4 (2007), 511-524.
Yoo Boonghee, Naveen Donthu (2001), Developing a Scale to Measure the Perceived Quality of an Internet Shopping Site (SITEQUAL), Quarterly Journal of Electronic Commerce, 2 (1), pp. 31-47.
Zeithaml, V.A., Parasuraman, A., Malhotra, A., Service Quality Delivery through Web Sites: a Critical Review of Extant Knowledge, Journal of the Academy of Marketing Science, 30, 4 (2002), 362-375.