

8-2010

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Recommended Citation

Brown, Irwin; Licker, Paul; and Kashora, Kudzai, "Customer Satisfaction with Cell Phone Banking in South Africa" (2010). *AMCIS 2010 Proceedings*. 444.

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Customer Satisfaction with Cell Phone Banking in South Africa

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ABSTRACT

The purpose of this study was to investigate the factors influencing satisfaction with cell phone banking in South Africa. The study followed a qualitative approach in which in-depth interviews were conducted with a set of South African cell phone banking users. Thematic analysis was employed to analyse the data. It was confirmed that factors known to influence satisfaction with other electronic services such as Internet banking were of relevance for cell phone banking too, i.e. Service Quality; Information Quality, System Quality; Transaction and Payment Quality, Perceived Usefulness, Innovativeness, Trust and Security. In addition it was found that prior electronic banking experience, the type of phone used and the type of banking service employed play a secondary role in influencing customer cell phone banking satisfaction. These findings are discussed and implications drawn.

Keywords (Required)

Cell Phone Banking; Customer Satisfaction; Mobile Banking; South Africa

INTRODUCTION

Cell phone banking (CPB) can be compared to the use of an Automated Teller Machine (ATM) to perform banking transactions such as checking account balances, making transfers and paying bills (Brown, Cajee, Davies & Stroebel, 2003). In 2009, almost 70% of South Africans were cell phone subscribers (WorldWideWorx, 2009a). These high numbers indicate a significant potential market for CPB services. CPB adoption levels have soared since Brown, et al (2003) estimated approximately 70,000 in 2002 to an estimate by Finmark Trust (2009) that about 5.6 million South Africans have used CPB, exceeding the number of web-based Internet banking (IB) users (WorldWideWorx, 2009b). Given this increasing rate of adoption, research attention should shift towards developing a better understanding influences on post-adoption satisfaction with CPB especially since user satisfaction is often used as an indicator of information systems success, and hence for the purposes of this study CPB success (Delone & Mclean, 2003).

The main purpose of this paper is to explore the factors influencing customer satisfaction with CPB and to develop a comprehensive research framework from the identified factors. There is currently little research on customer CPB satisfaction, with most research to date focused on acceptance and adoption of this innovation. In the next section, key concepts linked to CPB satisfaction are explored. Following this, the research methodology is described. Findings and their implications are discussed before the paper is concluded.

CONCEPTUAL BACKGROUND

South African retail banks offer a variety of ways for customers to conduct CPB (van Wyk, 2009). The simplest form of CPB is based on short message service (SMS) technology. With SMS, if a customer wishes to obtain a bank balance, for example, an SMS text message must be sent to a bank phone number in a predetermined format. The balance is then returned, again via SMS. Some banks download menus to the phone, allowing the customer to select a banking transaction to perform. The most recent technology to be used is Wireless Application Protocol (Calisir & Gumussoy, 2008; Ratten, 2008), making use of general packet radio service (GPRS), or third generation (3G) technology.

Research on user satisfaction with information systems has a long history (Lindgaard & Dudek, 2003), with electronic commerce (e-commerce) and services such as Internet banking (IB --Wang, Tang & Tang, 2001) and customer satisfaction with IB (Brown & Buys, 2005; Liao & Cheung, 2008). Recent research has looked at mobile commerce (m-commerce) user satisfaction (Wang & Liao, 2007). Wang & Liao (2007) define m-commerce user satisfaction as "a summary affective response of varying intensity that follows mobile commerce activities, and is stimulated by several focal aspects, such as information quality, system quality, and service quality."

Lee & Chung (2009) drew on the IS success framework of DeLone & McLean (2003) to identify factors that influence mobile banking satisfaction. Information quality (IQ), system quality (SYSQ) and service quality (SVCQ) are thus likely factors that influence customer satisfaction along with trust (Molla & Licker, 2001; Lee & Chung, 2009) and perceived usefulness (PU --Brown & Jayakody, 2008; Liao & Cheung, 2008). Additional influences implicated in IB studies include perceived innovativeness (Brown & Buys, 2005; Liao & Cheung, 2008; Riquelme, 2009), security (Brown & Buys, 2005; Liao & Cheung, 2008), and transaction and payment quality (TPQ -- Brown & Buys, 2005, Mossad et al., 2006). Table 1 summarises the findings from a few of the key studies on e-commerce, mobile commerce, IB and mobile banking satisfaction.

Aggregate Factors	Brown & Jayakody (2008)	Brown & Buys (2005)	Liao & Cheung (2008)	Wang & Liao (2007)	Lee & Chung (2009)
Focus	<i>e-commerce success</i>	<i>IB satisfaction</i>	<i>IB satisfaction</i>	<i>M-commerce satisfaction</i>	<i>Mobile banking satisfaction</i>
Service Quality (SVCQ)	SVCQ	Support	Responsiveness	SVCQ	
Information Quality (IQ)	IQ	IQ		Content Quality	IQ
System Quality (SYSQ)	SYSQ	EOU	EOU Reliability	EOU Appearance	SYSQ Interface Design Quality
Transaction and Payment Quality (TPQ)		Transactions and payment			
Perceived Usefulness (PU)	PU		Usefulness		
Innovativeness		Innovation	Continuous Improvement		
Trust	Trust				Trust
Security		Security	Security		

Table 1. Comparison of Key Customer Satisfaction Influences from Different Frameworks

Service Quality

DeLone & McLean (2003) define service quality as the overall support delivered by the service provider, also referred to as *customer support* (Wang et al., 2001). Dimensions of SVCQ include tangibility, reliability, responsiveness, assurance and empathy (Landram et al., 2009). SVCQ is a major determinant of e-commerce satisfaction (Brown & Jayakody, 2008; Massad et al., 2006), and IB satisfaction (Brown & Buys, 2005). Liao & Cheung (2008) identify responsiveness (a key dimension of SVCQ – Landram et al., 2009) as a core factor influencing IB customer satisfaction, while Riquelme (2009) demonstrate how SVCQ attributes such as timeliness and courtesy impact on this satisfaction. Karjaluo et al. (2009) show another SVCQ dimension – reliability -- to be a key factor related to online banking satisfaction. In the mobile commerce environment, SVCQ has been shown as a significant dimension of customer satisfaction (Wang & Liao, 2007).

Information Quality

Information quality refers to the precision, timeliness, sufficiency, accuracy, completeness, currency, clarity, and relevance of information provided by a system (DeLone & McLean, 2003). It is also referred to as *content quality*, especially in the e-commerce context (Wang et al., 2001; Molla & Licker, 2001). The strong influence of information quality on customer satisfaction has been demonstrated in a variety of areas, including e-commerce (Brown & Jayakody, 2008), IB (Brown & Buys, 2005), m-commerce (Wang & Liao, 2007), and CPB (Lee & Chung, 2009).

System Quality

System quality is reflected in the ease of use, usability, navigability, availability, reliability, adaptability and response time of the technical system (DeLone & McLean, 2003). The broad scope of this factor is apparent in the variety of ways it has been operationalised and measured. Ease of use has been the most oft-used measure of SYSQ in the context of e-commerce and IB (Brown & Jayakody, 2008; Brown & Buys, 2005; Liao & Cheung, 2008; Karjaluo, 2009; Wang & Liao, 2007). Wang & Liao (2007) identified ease of use and appearance (both aspects of SYSQ) as key dimensions of customer satisfaction with mobile commerce. Lee & Chung (2009) identified SYSQ and interface design quality as key influences on customer satisfaction with mobile banking. SYSQ is influenced by the consistency of the interface and the ease of use, which implies that interface design quality can reasonably be considered a dimension of SYSQ (Seddon, 1997).

Transaction and Payment Quality (TPQ)

The quality of transaction procedures and payment systems is key to enhancing satisfaction with e-commerce (Wang et al., 2001) inclusive of IB (Brown & Buys, 2005). Mobile devices are also deemed to offer greater security and convenience for managing payment and banking transactions than PC-based online payments (Herzberg, 2003). While several mobile payment applications have been highly successful, others have failed dramatically (Mallatt, 2007). This attests to the criticality of TPQ as an influence on customer satisfaction with mobile commerce, and hence CPB.

Perceived Usefulness

Perceived usefulness (PU) has been shown as a key influence on e-commerce customer satisfaction (Brown & Jayakody, 2008). It has been identified as one of the core factors associated with IB customer satisfaction (Liao & Cheung, 2008; Karjaluo et al., 2009). Turel & Serenko (2006) demonstrate the strong influence of perceived value (a factor of similar nature to usefulness), on satisfaction with mobile services. It is expected therefore that in the context of CPB, PU will be a strong determinant of customer satisfaction.

Innovativeness

Innovativeness and continuous improvement in the delivery of IB services contributes towards customer satisfaction with IB and hence provides banks with a competitive edge (Brown & Buys, 2005; Liao & Cheung, 2008; Riquelme, 2009). CPB is not yet as mature as web-based IB. Innovations will clearly lead to positive impacts on customer satisfaction with CPB.

Trust

Brown & Jayakody (2008) assert that e-commerce vendor trustworthiness leads to heightened levels of customer satisfaction. The importance of trust to IB satisfaction has been demonstrated as well (Hwang et al., 2007). Wati et al. (2009) highlight trust as being especially critical for mobile banking satisfaction due to the relative newness of this channel. This finding is confirmed by Lee & Chung (2009) who demonstrate the strong impact of trust on customer satisfaction with mobile banking.

Security

Security is closely related to trust, but is conceptually different (Hwang et al., 2007). Strong structural assurances lead to positive perceptions of security. These positive perceptions will then result in greater trusting beliefs about the bank or vendor (Gefen et al., 2003). Security has been shown as a key factor related to customer satisfaction with IB (Brown & Buys, 2005; Hwang et al., 2007; Karjaluoto et al., 2009; Liao & Cheung, 2008). The same effect should be apparent with CPB, and may be of greater salience given the relative newness of CPB when compared with IB.

The above eight factors can be integrated into a framework that illustrates the key factors influencing customer satisfaction with CPB. Since the reviewed literature has given ample evidence of the association of these factors with satisfaction, the aim of our research is to gain a better understanding of the identified factors in the context of CPB in South Africa, and how these factors lead to customer satisfaction or dissatisfaction with CPB.

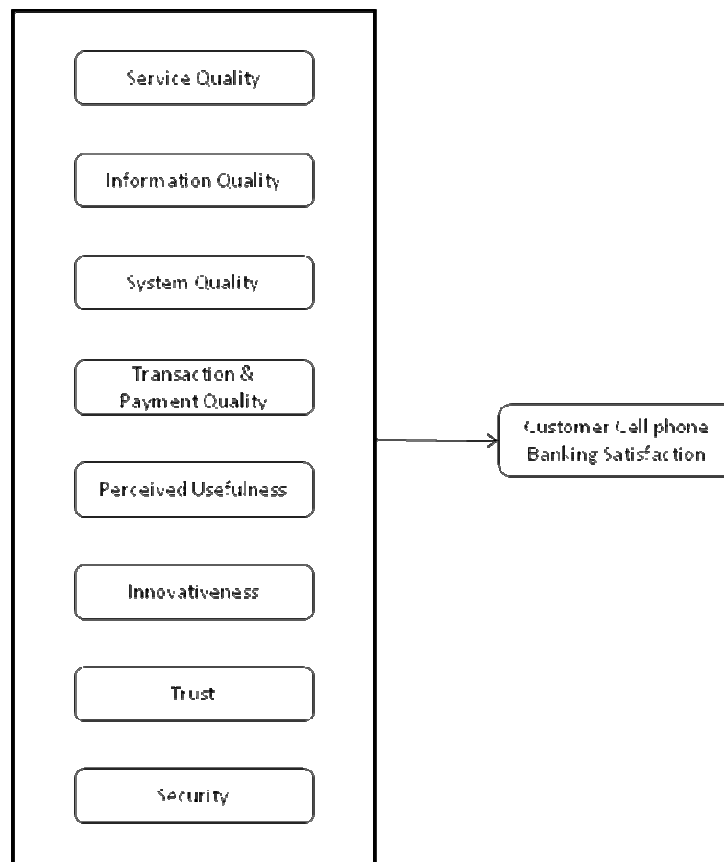


Figure 1. Factors influencing Customer Satisfaction with CPB

RESEARCH METHODOLOGY

This study employed a qualitative approach to illuminate understanding through qualitative insight (Laukkanen, 2007) since little research had been found on this important topic.

Our aim was not to generalise the findings to a statistically representative population but to derive key concepts related to the CPB customer satisfaction (Lee & Baskerville, 2003). Rather than large numbers of questionnaire survey respondents, a few information-rich, semi-structured, face-to-face interviews were expected to yield in-depth understanding of the phenomenon from the customer perspective.

The interview schedule was based on the factors in Table 1. Open-ended questions were derived from the factors and sub-factors as they were defined in their original frameworks. The target population for the research was CPB users in Cape Town, South Africa. Convenience and snowball sampling were employed, as there was no available sampling frame. Hence, it was not possible to pre-determine CPB users. The final sample consisted of eight participants. The participants were customers of the three largest retail banks in South Africa. There was a mix of male and female participants; six also made use of IB. One of the participants made use of CPB services offered by two different banks. Each interview lasted 45 minutes on average. The researchers tape recorded participants' responses, and then transcribed the interviews.

Thematic analysis was used to analyse the data. Key phrases and quotes from participants were grouped and categorised in accordance with the factors in Table 1. Traceability was ensured throughout the data analysis process as direct quotations from participants during the interviews were captured.

DATA ANALYSIS AND FINDINGS

Service Quality

Many participants were not aware of any customer support provided for CPB, never having had need for the support. As stated by a participant, *"There is virtually no customer support. You usually have to be quite intuitive. It's relatively simple so there's not going to be a Help menu telling you to do this or do that ...it's practically the same as using an ATM, so there is no need for customer support in that sense"*.

Those participants aware of customer support cited help-lines and Internet support as examples: *"I've only used the service once; it wasn't for CPB....it was for IB, but it does exist. They always send you a cell phone number that you can call. Oh, and the Internet support is there as well, so if you need to set up CPB features via the Internet you can do it via the Internet so there is that support"*.

A participant who had used the helpline seemed dissatisfied with the service: *"I got the sense that sometimes it doesn't seem like all the people you talk to on the helpline....are not very clued up about CPB. I was enquiring about something and I was referred to a few people; it was a bit of a problem because I thought surely banks know that a lot of people use CPB and IB."*

Information Quality

Many of the participants found the accuracy of CPB information to be high and that the updates to that information occurred in "real time". One said *"It's very instant - as soon as I draw out some money it's reflected instantly [via SMS notification message from the bank] on my CPB, most of the time. Every now and then it comes a bit late, but majority of the time I'd say it's very accurate"*.

Some did not feel that the span of information was comprehensive, as one participant said. *“I think it’s really up to date, but they have restricted some of the information - you can’t view the whole month’s statement or previous transactions that happened a week ago, because it’s just the whole cell phone thing, you can’t see all the information there.”* This participant further stated that CPB does offer users the most recent transactions which the participant felt are often the most relevant.

Another participant found the information incomplete, since basic user banking information was not included: *“I was trying to find my bank account number, and there was no feature whatsoever [for finding my account number] and that’s really basic, so obviously that’s one basic thing they need to fix immediately.”*

One participant wanted practical and cost saving information from the CPB service: *“I think what banks could improve is to inform me – ‘Here’s ways to save money in doing this.’ For instance the service that I use to access my CPB, you pay 20c per minute to use it. I found in a **Please Call Me** [service] there’s another way where you don’t actually have to pay”.*

System Quality

Research participants found CPB straightforward to use and self explanatory, except for the task of remembering codes: *“The only thing that would be challenging is remembering the code to dial in when you want to do it”* But this memorisation task could be alleviated by storing the code on the phone: *“Since I’ve been using it for ...many years now, it’s pretty second nature and I can always store it on my phone.”*

Some participants found the navigation simple and logical; others felt that it was somewhat restricted. One said *“You’re limited because you have a set menu and you can only choose those steps [provided].....you may want to get to a certain point, but it’s not very easy, you have to go through certain steps...”*.

One of the participants expressed displeasure at the sometimes slow response times. *“... [I]t’s reached a point where I’ll rather drive to the ATM because to sit for half an hour trying to get in with my phone, it’s too much of an effort...”*

The type of phone also affected SYSQ (i.e. ease of use, navigation, interface design quality). Participants stated that CPB worked differently on different phones and navigation improved in instances where, for example, a participant used a phone with a bigger screen or with a different operating system.

Transaction and Payment Quality

A majority of the research participants had never actually carried out payment transactions through CPB, citing safety concerns as the main reason for this. Participants generally felt that the payment procedures were standard and similar to those at an ATM. A main concern was the inability to add new beneficiaries with the CPB service – a feature offered through IB. Another concern was shorter time limits associated with performing payments from CPB compared with IB.

The type of CPB service used influenced perceptions of TPQ: *“A logical step to improving CPB ... is to move onto more of an Internet basis, because there are certain things you can’t do on your CPB that relate to payment, that you can do on the Internet.”* The participant, however, had not yet been exposed to CPB on the mobile Internet platform.

Perceived Usefulness

CPB was broadly thought of as being useful and convenient but of limited functionality: *“It is very convenient, because it’s on your cell phone, so you don’t have to go to the bank; you could be at home or anywhere else, although because of the limited functionality, it’s not a substitute for straight banking, but for a subset of features”.* Another said *“It’s convenient for small transactions..., but I think it lacks a lot of sophistication that maybe you might get with IB”.* One participant thought

limited functionality could be viewed as a benefit. For example, with regard to adding beneficiaries through CPB: *“If you make an error while typing the person’s account number, it would be very hard to rectify, so I’m happy with them restricting that”*.

Innovativeness

The interview participants generally regarded CPB as being highly innovative when they first started using it but the service has now become mainstream and normal: *“I’m from Kenya and there [were] no facilities like that whatsoever, so to come here and to be able to use that I was very impressed, but that was over two years now and I haven’t seen any other innovation on the part of CPB. I don’t know what else they can improve on but it’s stagnant at the moment”*.

The participants suggested that CPB should offer a broader range of services, such as buying movie tickets. *“I think it can be better. I think we’ve advanced quite far technologically and the banks are lagging behind. ... People are using cell phones for so many things these days. CPB should be one of the things they are working on regularly to improve”*.

Trust

Some participants trust in the integrity of their bank and the electronic channels such as IB that they offer. The research participants also felt more assured concerning the trustworthiness of CPB due to the warning and confirmation messages that they received. However, some participants contradicted expressed doubts concerning the payment system: *“I get worried I suppose, I don’t trust [making] payments [through CPB] as much as I trust buying airtime or checking my balance, I only did it when I had to, I think I was late or they were closing and I needed to pay my beneficiary, so that’s when I did it. I don’t feel as comfortable with it as I do when doing other transactions.”*

Participants were concerned with perceived lack of transparency of the banks about transaction price information of CPB: *“I think the technology seems pretty stable and predictable. I trust more the technology and how stable it is and that it will work, and at times when it doesn’t work, it’s probably because of a network technical glitch, so I think it’s pretty straightforward. What I’m not sure of is the honesty of the bank as far their charges are concerned”*. Another stated *“What I found is even though you don’t complete a transaction, you’re charged for it. So it’s very annoying when you keep trying to log on and you get disconnected and you lose money, so in that sense it’s not very predictable”*.

Security

Many participants felt that CPB was as secure as an ATM. Both require a bank card number and PIN number to gain access to an account: *“The weakest link basically is the human chain, because if I give someone my phone with my PIN and everything, that would be a security breach, other than that I’m pretty confident and secure”*. Other participants cited CPB features such as encryption and the integrity that they associate with secure banking services.

However, one participant said *“I could see other ways it could be more secure like perhaps you would have to register your cell phone number or something, because if somebody did manage to find out my PIN, I think they could probably access my account from anybody’s cell phone, so in that sense I don’t think it is as secure as it could be, but I do still think it is secure.”*

DISCUSSION AND IMPLICATIONS

Service Quality

Those participants who felt proficient in their ability to use CPB didn’t seek support from the service provider and thus were not aware of any customer support offered; for them SVCQ had no effect on their satisfaction with CPB. But one participant used a helpline and experienced unsatisfactory service; this in turn affected satisfaction with CPB. These views are consistent

with literature that shows SVCQ as affecting customer satisfaction (Liao & Cheung, 2008; Riquelme, 2009). But this effect only takes place amongst those customers who attempt to make use of the support being provided.

Information Quality

The responses received from the interview participants showed that accuracy and timeliness of information provided by CPB led to satisfaction with the service consistent with the Mallat's (2007) view that there is a need for accurate information to ensure satisfaction. Respondents cited the restricted amount of information available to users on CPB and the unavailability of basic information such as bank account numbers as limiting satisfaction. .

Those with prior experience of using IB were more acutely aware of the limited information provided by CPBIB, consistent with conclusions concerning the importance of prior experience in shaping perceptions of innovations on IB adoption (Tan & Teo, 2000; Shan & Lu, 2009).

System Quality

The navigational capability, which may vary by type of phone, influenced the satisfaction of participants. The findings confirm research which points to ease of use, interface design quality (e.g., menus and navigation) and reliability (response times) as affecting customer satisfaction (Lee & Chung, 2009; Wang & Liao, 2007). The findings also extend literature by highlighting type of phone as influencing the SYSQ experience of customers.

Transaction and Payment Quality

Some participants perceived transaction and payment systems on CPB as lacking sophistication (e.g., the ability to add payment beneficiaries). Again, prior IB experience seems to affect perceptions of TPQ and customer satisfaction with CPB consistent with Shan & Lu (2009).

TPQ also seems to depend on the type of service used. WAP-based CPB was perceived as providing better quality transaction and payment mechanisms than SMS-based and other less sophisticated CPB services.

Perceived Usefulness

The usefulness and convenience of CPB was acknowledged by all participants. This perception of usefulness was tempered by the fact that there was limited functionality offered on CPB when compared against the richer set of services offered through web-based IB. Hence PU seems influenced by prior IB experience.

Innovativeness

Experience was shown to influence perceptions of innovativeness. For many participants, an initial positive perception had waned. The participants expected that CPB would have continually improved by the introduction of new functionality and services, consistent with Riquelme (2009) that product and service improvements (i.e. innovativeness) leads to greater customer satisfaction.

Trust

The findings show that trust in CPB is influenced by the type of transaction. There was greater trust associated with transactions such as finding an account balance, than making a payment. However, participants indicated that they still performed such payment transactions in cases of necessity. This implies that the convenience of being able to perform payment transactions from any location can override the trust factor in certain instances. Lack of transparency with regards to bank fees also impacted trust.

Security

Participants in general felt a sense of security regarding CPB, analogous to that of an ATM or IB. However, any occurrence of a security breach can reduce satisfaction with CPB. This view is consistent with the findings of Brown & Buys (2005) and Liao & Cheung (2008) that the protection of consumer personal information from unauthorized use during electronic transactions positively influences customer satisfaction

FRAMEWORK OF CPB SATISFACTION

The data analysis revealed how the eight factors identified in Figure 1 plus others shape customer satisfaction with CPB. Prior IB experience was shown as an influence on customer perceptions of Information Quality, TPQ, and PU. CPB experience influenced perceptions of the innovativeness of this service. Type of Service had an influence on TPQ, while Type of Phone influenced SYSQ. Trust in CPB was dependent on Type of Transaction. The findings therefore suggest that there are additional second-order factors that influence CPB satisfaction, through the first order factors shown in Figure 1. An extended framework of CPB is presented in Figure 2 below.

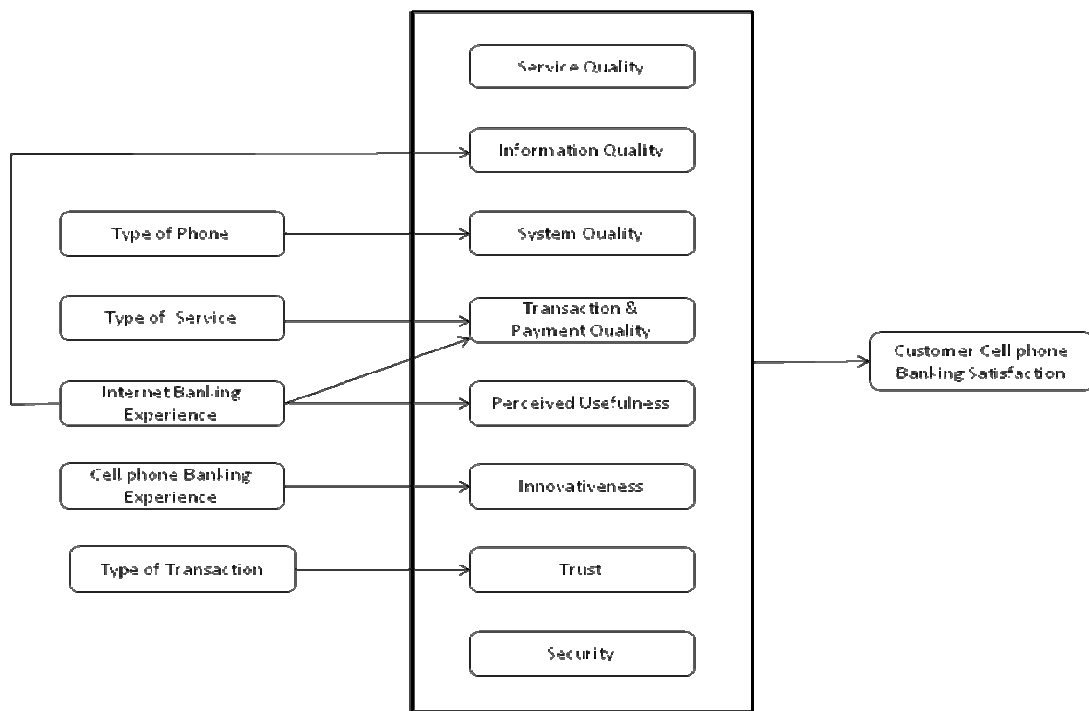


Figure 2. Extended Framework

CONCLUSION

The reviewed literature pointed to eight factors that have an influence on customer satisfaction with electronic services such as CPB, these being SVCQ, SYSQ, Information Quality, TPQ, PU, Innovativeness, Trust and Security. Qualitative data gathered from CPB customers in South Africa illuminated understanding of these factors in this context, illustrating how the factors shape satisfaction. In addition, the qualitative analysis provided insight into to how perceptions are formed. Type of Phone has an influence on System Quality, and Type of Service determines the sophistication of Transaction and Payment mechanisms. Prior CPB experience shapes perceptions of its innovativeness, while prior IB experience affects perceptions of CPB Information Quality, TPQ and Usefulness. Variation in TPQ across different types of CPB service was apparent.

The findings are useful for practice as well as theory. Service providers should note these multiple primary and secondary influences on customer satisfaction and take appropriate measures to address these factors. For example, cognisance should be taken that type of phone has an impact on SYSQ attributes such as the navigation experience of customers. Systems should be flexible to provide similar user experiences regardless of the type of phone the customer has. There is a need for continuous improvement and innovation as CPB customers gain more experience. Finally service providers should realise that many CPB customers have previously employed IB, and therefore expect a service of similar quality and range. Our findings also point out that customers employ a multi-channel banking strategy, (ATM, Internet, cell phone) to meet their banking needs (Laukkanen, 2007; Watie et al., 2009).

Further investigation can be conducted on the second order influences to assess their importance and the extent of their influence on the determinants of customer CPB satisfaction. Given that customers employ a multi-channel banking strategy, future research should investigate this under-researched domain. Finally, given the variations in use and experiences that people have, there needs to be much more research in order to increase the confidence in the conclusions suggested by this study.

REFERENCES

1. Brown, I., Cajee, Z., Davies, D., & Stroebel, S. (2003) Cell phone banking: predictors of adoption in South Africa—an exploratory study, *International Journal of Information Management*, 23, 5, 381-394.
2. Brown, I. & Buys, M. (2005) Customer satisfaction with Internet banking web sites: An empirical test and validation of a measuring instrument, *South African Computer Journal*, 35, 29-37.
3. Brown, I. & Jayakody, R. (2008) B2C e-commerce success: A test and validation of a revised conceptual model, *Electronic Journal of Information Systems Evaluation*, 11, 3, 167-184.
4. Calisir, F. & Gumussoy, C. (2008) Internet banking versus other banking channels: Young consumers' view, *International Journal of Information Management*, 28, 215-221.
5. Delone, W., H., & McLean, E., R., (2003) The Delone and McLean model of information systems success: A ten-year update. *Journal of Management Information Systems*, 19, 4, 9-30.
6. FinMark Trust. (2009) *The Mzansi Bank Account Initiative in South Africa*. Bankable Frontier Associates Report.
7. Gefen, D., Karahanna, E. & Straub, D. (2003) Trust and TAM in online shopping: An integrated model", *MIS Quarterly*, 27, 1, 51-90.
8. Herzberg, L. (2003) Payments and banking with mobile personal devices, *Communications of the ACM*, 46, 5, 53-58.
9. Hwang, H., Chen, R. & Lee, J. (2007) Measuring customer satisfaction with Internet banking: an exploratory study, *International Journal of Electronic Finance*, 1, 3, 321-335.
10. Karjaluoto, H., Jarvenpaa, L. & Kauppi, V. (2009) Antecedents of online banking satisfaction and loyalty: empirical evidence from Finland, *International Journal of Electronic Finance*, 3, 3, 253-269.
11. Landram, H., Prybutok, V., Xiaoni, Z. & Peak, D. (2009) Measuring IS system service quality with SERVQUAL: Users' perceptions of relative importance of the five SERVPERF dimensions, *Informing Science: the International Journal of an Emerging Transdiscipline*, 12, 17-35.
12. Laukkanen, T. (2007) Internet vs mobile banking: comparing customer value perceptions, *Business Process Management Journal*, 13, 788-797.
13. Lee, K. & Chung, N. (2009) Understanding factors affecting trust in and satisfaction with mobile banking in Korea: A modified DeLone and McLean's model perspective, *Interacting with Computers*, 21, 385-392.
14. Lee, A. & Baskerville, R. (2003) Generalizing generalizability in Information Systems research, *Information Systems Research*, 14, 3, 221-243.

15. Liao, Z. & Cheung, T. (2008) Measuring consumer satisfaction in Internet banking: a core framework, *Communications of the ACM*, 51, 4, 236 -241.
16. Lindgaard, G. & Dudek, C. (2003) What is this evasive beast we call user satisfaction? *Interacting with Computers*, 15, 429-452.
17. Mallatt, N. (2007) Exploring consumer adoption of mobile payments – A qualitative study, *Journal of Strategic Information Systems*, 16, 413-432.
18. Molla, A. & Licker, P. (2001) E-commerce systems success: An attempt to extend and respecify the DeLone and Mclean model of information systems success, *Journal of Electronic Commerce Research*, 2, 4, 1-11.
19. Massad, N., Heckman, R. & Crowston, K. (2006) Customer satisfaction with electronic service encounters, *International Journal of Electronic Commerce*, 10, 4, 73-104.
20. Ratten, V. (2008) Technological innovations in the m-commerce industry: A conceptual model of WAP banking intentions, *Journal of High Technology Management Research*, 18, 111-117.
21. Riquelme, H. (2009) Internet banking customer satisfaction and online service attributes, *Journal of Internet Banking and Commerce*, 14, 2, 1-6.
22. Seddon, P. (1997) A respecification and extension of the DeLone and Mclean model of IS success, *Information Systems Research*, 8, 3, 240-253.
23. Shan, C. & Lu, Y. (2009) The effect of online-to-mobile trust transfer and previous satisfaction on the foundation of mobile banking initial trust, *Proceedings of the 2009 Eighth International Conference on Mobile Business*, IEEE Computer Society, 1-6.
24. Tan, M. & Teo, T. (2000) Factors influencing the adoption of Internet banking, *Journal of the Association for Information Systems*, 1, 5, 1-42.
25. Turel, O. & Serenko, A. (2006) Satisfaction with mobile services in Canada: An empirical investigation, *Telecommunications Policy*, 30, 314-331.
26. Van Wyk, Y. (2009) Cellphone banking - some lessons learnt. *BizCommunity.com*, <http://www.bizcommunity.com/Article/196/78/38299.html>, Accessed: 22 Dec, 2009.
27. Wang, Y., & Liao, Y. (2007) The conceptualization and measurement of m-commerce user satisfaction, *Computers in Human Behavior*, 23, 1, 381-398.
28. Wang, T, Tang, T & Tang, J. (2001) An instrument for measuring customer satisfaction toward web sites that market digital products and services, *Journal of Electronic Commerce Research*, 2, 3, 20-48.
29. Wati, Y., Koo, C., Jung, J. & Li, D. (2009). An empirical analysis of end-user satisfaction toward e-banking in Indonesia (A comparison model of ATMs, Internet banking and mobile banking), *Proceedings of the 2009 Americas Conference on Information Systems (AMCIS)*
30. WorldWideWorx. (2009a) *Mobility 2009 reveals SA's cellular gap*, <http://www.worldwideworx.com/archives/204>, Accessed: 22 Dec, 2009.
31. WorldWideWorx. (2009b) *Cellphone overtakes PC for banking*, <http://www.worldwideworx.com/archives/224>, Accessed: 22 Dec, 2009.