

Bond University
Research Repository



Consumer perceptions of Internet banking in Finland
The moderating role of familiarity

Mäenpää, Katariina; Kale, Sudhir H.; Kuusela, Hannu; Mesiranta, Nina

Published in:
Journal of Retailing and Consumer Services

DOI:
[10.1016/j.jretconser.2007.05.007](https://doi.org/10.1016/j.jretconser.2007.05.007)

Licence:
CC BY-NC-ND

[Link to output in Bond University research repository.](#)

Recommended citation(APA):
Mäenpää, K., Kale, S. H., Kuusela, H., & Mesiranta, N. (2008). Consumer perceptions of Internet banking in Finland: The moderating role of familiarity. *Journal of Retailing and Consumer Services*, 15(4), 266-276.
<https://doi.org/10.1016/j.jretconser.2007.05.007>

General rights

Copyright and moral rights for the publications made accessible in the public portal are retained by the authors and/or other copyright owners and it is a condition of accessing publications that users recognise and abide by the legal requirements associated with these rights.

For more information, or if you believe that this document breaches copyright, please contact the Bond University research repository coordinator.

1-1-2008

Consumer perceptions of Internet banking in Finland: The moderating role of familiarity

Katariina Maenpaa

Sudhir H. Kale

Bond University, sudhir_kale@bond.edu.au

Hannu Kuusela

Nina Mesiranta

Follow this and additional works at: http://epublications.bond.edu.au/business_pubs

 Part of the [Marketing Commons](#)

Recommended Citation

Katariina Maenpaa, Sudhir H. Kale, Hannu Kuusela, and Nina Mesiranta. (2008) "Consumer perceptions of Internet banking in Finland: The moderating role of familiarity" „ .

http://epublications.bond.edu.au/business_pubs/89

Consumer perceptions of Internet banking in Finland

Article type

Research paper

Keywords

Internet banking, Internet, Bank services, Consumer behaviour, Expertise

Abstract:

Purpose – This article examines the role of expertise – measured in terms of use frequency and length of use – in moderating consumer perceptions of dimensions of internet bank services.

Design/methodology/approach – A survey of three hundred respondents investigated differences in perceptions of the proposed service dimensions.

Findings – The results reveal that consumers' perceptions differed in four of seven dimensions of internet bank services when examined along the criterion of expertise. The most interesting result is that security is not a concern for any of the user groups. Also, an interesting finding is that the dimensions of status, personal finances and investment proved to be U-shaped.

Practical implications – The findings of this research provide several ideas for marketing of internet banking (IB) and for developing IB websites. For example, appeals of status and ego-gratification in advertising can be used to attract new consumers to IB. Also, designing auxiliary features or tools for personal finance management into banks' websites would prove to be sound investment. This research suggests that expertise has correlates in demographics as well as in perceptions of service dimensions. Thus, it may be possible to apply expertise for segmenting markets along demographic criteria and then to offer appropriate mix of services for each segment.

Originality/value – This study contributes to extensive literature of expertise by examining the effect of expertise on perceptions of internet bank services and analysing the managerial application possibilities.

Biography details and contact information of the authors

Katariina Mäenpää, Ph.D. student, researcher.

E-mail: katariina.maenpaa@uta.fi

Address: Department of Management Studies, FIN-33014 University of Tampere, Finland

Tel: +358 3 3551 4103; Fax: +358 3 3551 6020

Sudhir H. Kale, Ph.D., Associate Professor of Marketing

E-mail: sudhir_kale@bond.edu.au

Address: Bond University, Gold Coast, Queensland 4229, Australia

Tel: +61 7 5595 2214; Fax: +61 7 5595 1160

Nina Koski, Ph.D. student, researcher

E-mail: nina.koski@uta.fi

Address: Department of Management Studies, FIN-33014 University of Tampere, Finland

Tel: +358 3 3551 4103; Fax: +358 3 3551 6020

Hannu Kuusela, Ph.D., Professor of Marketing

E-mail: hannu.kuusela@uta.fi

Address: School of Business Administration, FIN-33014 University of Tampere, Finland;

Tel: +358 3 3551 6907, Fax: +358 3 3551 6020

Introduction

Banking, among other service sector businesses, has witnessed an extensive change what comes to its operational environment. The rapid diffusion of the internet has revolutionised the traditional delivery channel strategies. Globally, the amount of consumers using internet banking (IB) has grown steadily, from a total of 34.4 million users in 2000 to 122.3 million users in 2004, the most users being in the Western Europe (International Data Corporation, 2005). Thus, there is strong consensus among scholars about the increasing importance of the internet in today's competitive and increasingly global banking environment (e.g. Bauer and Colgan, 2001; Hughes, 2001; Li, 2001; Mols, 1999; Thornton and White, 2001, 2000). The issue has produced numerous studies touching several aspects of online banking and its consequences (for more detailed summary of internet banking related studies see Akinci, Aksoy and Atilgan, 2004).

Factors affecting consumer acceptance and adoption of internet banking (IB) have been at the centre of academic interest for some time (e.g. Sathye, 1999; Howcroft, Hamilton and Hewer, 2002; Rotchanakitumnuai and Speece, 2003). As the adoption rate of the internet is continuously escalating and as increasingly more people use the internet for their banking actions, it has become increasingly important to pay attention to examining the behaviour of more experienced customers gaining expertise with IB. Besides focusing on adoption and acquiring new customers, the consumers engaged in IB for a while differ in various ways from their less experienced counterparts as the broad literature on consumer knowledge and expertise suggests.

The article has three objectives: (1) to investigate the expertise in an internet bank, (2) to examine how consumers with differing levels of IB expertise with IB – novice, moderate, and the expert users view various dimensions of an internet bank; and (3) and analyse the differences in demographics between novice, moderate and expert users of IB. In addition, several managerial implications are suggested on the basis of the findings.

Conceptual Framework

Defining Expertise

Consumers have varying amounts of knowledge about the products they use and about the environments in which they access these products (Hammond, McWilliam and Diaz, 1998). Iterative product use in certain medium results behavioural routines, which in turn constitute procedural knowledge (Anderson, 1983; Cohen, 2000). Procedural knowledge refers to knowledge of rules for taking action, and it is stored and organized into production systems that are representations of cognitive skills (Brucks, 1986). Procedural knowledge is task-specific knowledge (Leigh and McCraw, 1989), i.e. knowing how to operate in an environment in question (Colonia-Willner, 2004). According to Philippe and Ngobo (1999), procedural knowledge equates expertise, which divides to objective and subjective expertise. The former corresponds to consumers' actual performance on product-related tasks whereas the latter implies consumer's self-perceived ability to carry out such tasks. Although there are differing views to approach and define expertise (cf. Kuusela, Spence and Kanto, 1998), this research examines the effect of expertise acquired by previous use of IB, and thus, it is appropriate to conceptualise consumers' IB expertise in terms of procedural knowledge, and particularly objective expertise.

Expertise and Experience in Internet context

The increasing use of internet services has allowed investigation of differences between expert (experienced) and novice (less experienced) users. Thus far, research on expert and novice users in the internet context has discussed differences in internet use in general (Hammond et al., 1998), user capabilities, such as internet search performance (Lazonder, Biemans and Wopereis, 2000), impressionability on advertising (Bruner and Kumar, 2000), banner-ad effectiveness (Dahlén, 2001), internet shopping (Ward and Lee, 2000; Martinez-

López, Luna and Martínez, 2005), and trust (Corbitt, Thanasankit and Yi, 2003) across different expertise levels. Also, internet user experience has been found to relate as an antecedent to flow-experience on the internet (eg. Novak, Hoffman and Yung, 2000; Hoffman and Novak. 1996). Some of the studies represent fairly contradictory results that can ensue from differing definitions of expertise.

Hammond et al. (1998) found that consumers' prior experience and expertise were essential moderators of their attitudes towards the internet. Experienced users were enthusiasts for the medium and perceived it as a source of entertainment and fun. Less experienced users saw it mainly as a source of information, and ignored the aspects of entertainment and fun. The study suggests that novices and moderates may never develop heavier usage and/or enduring involvement to the internet, since their perception of the internet as a source of fun do not increase similarly over time like their perception of information does, and does not resemble to the experienced users'.

However, Horrigan (2000) argued that in his study new internet users enjoyed in engaging in fun activities on the internet (e.g., playing games, listening to music), while they were reluctant to conduct financial or commercial transactions online. Also, consumers' willingness to enter into online transactions was found to be a significant threshold point for the internet behaviour. Since novice users have decided to make an online transaction, their internet usage patterns become similar to more experienced users. Additionally, a comparison between new users of 1998 and 2000 revealed that the former engaged quickly in fun activities, but used the internet as an information utility to a greater extent than their 2000 counterparts.

Further, experts and novices are found to differ regarding their search performance. According to Lazonder et al. (2000), experts scored higher than novice users on all performance measures that relate to locating internet sites. They were faster,

produced a greater number of correct responses to the given tasks, and needed fewer actions and less time to find relevant internet sites. However, no differences were found in the search for information within the sites. They concluded that even a limited amount of internet experience provides performance benefits in using search engines to locate internet sites.

Bruner and Kumar (2000) examined the influence of internet experience on the advertising hierarchy of effects. They argued that consumers' internet experience as well as their attitudes toward internet sites should be considered as important antecedents to the typical flow of advertising effects. The greater a consumers' internet experience, the more favourable will be their attitudes toward the internet site and the internet ad.

Interestingly, Dahlén (2001) produced an incompatible outcome in a study of banner ad effectiveness. He argued that novice internet users are clearly the ones that are most susceptible to banner advertising, and thus, are more affected by banner ads than expert users. Further, Mandel and Johnson (2002) reported that visual primes on an internet page caused differences in choice between novices and experts. For novices, priming drove differences in external search causing differences in choice. For experts, differences in choice were not mediated by changes in external search.

Finally, consumers internet expertise or skills attained by previous experiences are crucial in achieving the state of "flow" on the internet. In order to attain a pleasing and compelling online experience, users internet skills and challenges on the medium must be perceived as congruent and above a critical threshold as stated by Hoffman and Novak (1996). They argued that as internet users become more experienced they become more focused in their usage sessions often experiencing "flow", which tends to block out everything else (Hoffman and Novak, 1996; Novak et al., 2000). Overall, according to Novak et al.(2000) internet users' browsing behaviour depends on one's experience. They

argued that because consumers vary in their ability to achieve flow, new bases for market segmentation are needed for online marketing.

Preceding literature review represented studies examining expertise following from use experiences of the internet and established notable differences between experts (experienced users) and novices (less experienced users). As it is established, the results are partly ambiguous. Therefore, it is justified to investigate expertise within the internet banking context, and to presume that consumers' internet expertise does have an impact on their perceptions of IB.

Method

This study seeks to examine consumers with differing levels of IB expertise and the differences in their perceptions of IB dimensions. Accordingly, key research themes and issues were first generated through elaborate open-ended exploratory interviews with eleven active users of IB and the results were compared with findings from extant literature. These exploratory interviews as well as the literature review provided the inputs with which to design a structured interview guide to be used for face-to-face interviews in formal data collection. Altogether seven dimensions of IB were identified and included in the interview guide:

- ***Convenience*** means saving time and increasing the efficiency of service as compared to branch banking. Thus, it can be conceptualised as relative advantage of adopting new service channel (Polatoglu and Ekin, 2001; Gerrard and Cunningham, 2003).

Convenience, defined in terms of time savings, 24/7 access and service quality, is one of the most cited beneficial features of IB (Daniel, 1999; Liao and Cheung, 2002). It is one of the dominating factors in transaction channel preferences (Ramsay and Smith, 1999) and a key determinant of consumer satisfaction (Yang et al., 2003). Consumers

are prone to prefer more leisure-time, dedicating less time to financial matters (Devlin, 1995).

- **Security** stands for the reliability of IB and an overall belief on the part of the user that banking transactions can be completed confidentially and safely. According to Polatoglu and Ekin (2001), security comprises of three dimensions – reliability, safety, and privacy. Consumers’ concerns about security, which arise from the use of an open public network, have been emphasised as the most important factor inhibiting the adoption and use of IB (Sathye, 1999; Daniel, 1999; Cox and Dale, 2001; Howcroft et al., 2002). Security issues have been identified as significant quality attributes of IB (Liao and Cheung, 2002; Jun and Cai, 2001).
- **Status** reflects the social significance of practising internet banking as a mean to express and enhance one’s self-concept. As a dimension of social desirability, status measures relative advantage of IB use (Gerrard and Cunningham, 2003). This dimension implies to impression management, i.e., by consuming certain products or services consumers strive to influence their self-image in the eyes of other consumers (Holbrook, 1999). This discussion can be traced back as far as Grubb and Grathwohl’s (1967) review on self-theory and symbolism. The intention is to probe whether consumers perceive the use of IB affecting positively on their social status and self-concept. While consumers often use products and services for impression management (products as responses), they may also be used for self-definition (products as stimuli) (Solomon, 1983).
- **Auxiliary features** refer to attributes that can be designed into the internet bank in order to improve the overall product. For example, voice effects, virtual figures, and search agents can be added to improve the usability and interactivity of IB, thereby increasing user friendliness and reducing the perceived risk. These features can also be

placed under the heading of multimedia friendliness (Waite and Harrison, 2004).

Dholakia and Rego (1998) argue that pictures, multi-media capabilities and enhancements that enable complex and interactive messages create an interesting electronic environment, thus enhancing the overall quality of the experience. Auxiliary features contribute to experiential value (Mathwick, et al. 2002) by increasing efficiency, enjoyment, visual appeal and entertainment aspects of IB.

- ***Personal finances*** include features that are useful when managing personal accounts and transactions. A calculator for assessing saving possibilities and tools for compiling illustrative charts and figures for account transactions are practical augmented services. Zhu et al. (2002) suggest that such multifunctional capabilities are important features in satisfying consumers' needs. Jun and Cai (2001) cite the compatibility of IB with software like Microsoft Money and Intuit Quicken as examples of effective money management tools. They considered compatibility as a unique characteristic of ease of use dimension.
- ***Investment*** comprises of practical devices and advices that assist and support investment activities. Providing savings and investment services is an important part of banks' product mix (Minhas and Jacobs, 1996; Ülegin, 1998; Beckett et al., 2000; Lee, 2002). In addition, investment services have been identified as high involvement products (Aldlaigan and Buttle, 2001), and thus, it is relevant to examine this dimension in the study. Investment covers issues like an on-line investment course on the bank's website, real-time investment information and personal purchase recommendations. It also includes tailored personal service and interaction otherwise lacking in online services (Mattila et al. 2003; Long and McMellon, 2004).
- ***Exploration*** refers to "exploratory information seeking" as defined by Baumgartner and Steenkamp (1996). Exploratory consumer behaviour involves intrinsically

motivated consumption processes that can be divided to two distinct dimensions: exploratory acquisition of products (EAP) and exploratory information seeking (EIS) (Baumgartner and Steenkamp, 1996). The relevant conceptualisation for this study is the EIS. On a bank's Website, obtaining consumption-relevant knowledge out of curiosity includes activities like reading the daily news, while EIS in terms of browsing and window-shopping involves probing the various links on the site. Joining virtual discussion groups in order to exchange opinions about banking issues with other consumers also falls under EIS. While engaging in exploratory and curiosity-driven browsing, the consumers' probability of exposure to advertising and other marketing communication tends to increase (Raman, 1997).

The interview guide included 22 statements reflecting these seven dimensions of IB. Table I provides the statements as well as reliability statistics.

“Take in Table I”

Respondents were asked to indicate their level of agreement with each statement on a five-point Likert scale. Items to assess consumers' internet and IB expertise as well as demographic variables were also included in the interview guide. The questionnaire was pilot tested with 20 undergraduate marketing students, resulting in only minor modifications in the wording of some questions. The sample comprised of 300 active IB consumers, ranging in age from 15 to 71. Respondents were interviewed in their own homes using the structured interview guide.

Operationalizing the Constructs

To measure the proposed dimensions the twenty-two statements were divided to seven groups representing each dimension. Then each dimension was condensed to one variable using first principal components analysis. Cronbach's alpha for the seven dimensions yielded reliabilities ranging from 0.56 to 0.74. These results can be considered as good or at least acceptable (Nunnally, 1967).

The construct of IB expertise was operationalized by use frequency of IB and length of IB use. Information about how often consumers engage in IB use was gathered by providing the respondents with five options: a) daily, b) 4-6 times per week, c) 1-3 times per week, d) 2-3 times in a month and e) once in a month or more seldom. The length of IB use was measured in months and the responses were then classified into three categories: under one year, between one and three years, and longer than three years. After principal component the data were broken into quartiles (cf. Jacoby et al. 1986; Kuusela et al., 1998). The first quartile was comprised of "novice users" (n=65), whereas the second and the third quartiles were combined into the category of "moderate users" (n=172). The fourth quartile represented "expert users" (n=63). This approach allowed for U-shaped distribution, i.e. novice and expert users may attain similar means, but for differing causes.

Data analysis and Results

Dimensions of IB as perceived by consumers across three levels of IB expertise

Respondents were broken into quartiles along the criterion of IB expertise as described. Differences in means of the seven dimensions of IB were compared by using analysis of variance and contrasted between novice, moderate and expert users. The results are presented in Table II.

“Take in Table II

As evident from Table II, IB expertise affects consumer’ perceptions of the various IB dimensions. There are significant differences along the dimensions of status, auxiliary features, personal finances, and investment. The remaining three attributes – convenience, security, and exploration – turn out to be insignificant in the context of consumers’ IB expertise.

When analysing the results concerning the dimension of status, both novice and moderate users were found to differ in contrast to other consumer groups. Novice users attain the highest mean (0,211), whereas the lowest mean place to moderate users (-0,144). Contrasting perceptions of auxiliary features, novice and expert users differ significantly from other groups. Here, a linear decrease in means is evident when novice users hit the highest mean (0,290) and expert users the lowest mean (-0,291). In personal finances, the contrasts reveal significant differences in means of novice users versus other consumer groups as well as moderate users versus other. Novice users value the dimension of personal finances by obtaining the highest mean (0,272), while moderate users scored the lowest mean (-0,140). Finally, moderate users had the lowest mean (-0,129) in dimension of investment, which denotes that they differ significantly from the other two groups.

IB Expertise and Consumer demographics.

In order to uncover differences in demographics and internet usage patterns among novice, moderate and expert users, a cross-tabulation run was conducted on the relevant data. The results are presented in Table III.

“Take in Table III

Novice users are mainly young, i.e. under 25 years old; their income level is lower than in the other two consumer groups, and women seem to be preponderant in novice users. They use the internet much less frequently than the consumers with more IB expertise, and one third of them has used the internet for only one year.

Moderate users are mostly over 25 years of age, and use the internet on a regular weekly basis. They have been on the net for around two years or longer. This group is distributed quite evenly across all income levels, and a slight majority of them is women.

The overall use of internet is most extensive for expert users. Most of these consumers have used internet for over three years, and they use it daily. They are relatively the oldest consumer group, and they also have relatively the highest annual incomes. Men dominate this consumer group with 60-percentage share.

Discussion

The objective of this research was to investigate how consumers' IB expertise affects consumers' perceptions of IB dimensions. Empirical data show that the dimensions of status, personal finances and investment prove to be U-shaped. Similar results have been evidenced by Dahlén (2001) and Baylor (2001). Moderate users attain the lowest mean on each of these dimensions whereas novice users indicate the most positive perception of the dimensions.

The finding regarding status suggests that using IB reinforces the self-image of novice users, but not that of the moderate users. To novice users, the usage of IB bears an impression of modern consumer and distinguishes them from consumers using traditional branch bank services. Also, expert users scored higher on status than the moderate.

Responses along the dimension of personal finances indicate a U-shaped distribution. Moderate users value this dimension the least whereas novice users register the highest mean. Expert users score higher than moderate users. This indicates that novice users can spend time with their personal account information online. They can enjoy hypothetical scenarios that such features present -- calculate how long it would take them to be millionaires with certain monthly savings, draw illustrative diagrams of account transactions and follow the personal cost and income ratio. Such activities seem to lose their attractiveness as consumers become habituated with the services, and gain in salience as the expertise level reaches a competency adequate for more serious personal finance management.

In addition, investment depicts a U-shaped distribution. Moderate users distinguish from other two consumer groups with the lowest mean. They indicate modest interest towards online investment course, chargeable tips about investments as well as personally focused investment advice.

Further, significant differences were found in perceptions regarding auxiliary features where novice users scored highest mean. This can have twofold explanation. First, their needs for online support are expected to be greater simply because they have not used IB as much as the other groups, and thus, they are uncertain when engaging in IB activities. The second, and perhaps more interesting explanation relates to their demographics. Since novice users are the youngest of the three groups, they are more likely to be impressed by state-of-the-art features such as voice effects, virtual figures and search agents. Auxiliary features would be considered as entertaining and funny (voice effects, virtual figures and search agents), but what cannot be ignored is the role of such features in the IB context. Voice effects signal successful bill-payment, the virtual agent helps in problem situations, while the search agent looks for useful information. In other words, novice users can value

auxiliary features both for its functional as well as entertainment appeal. This is interesting finding, although, it does not solve the contradiction between Hammond et al. (1998) and Horrigan (2000). Perceptions of auxiliary features adapt to the experience curve: novice users perceive them useful and expert users regard auxiliary features worthless.

While four of the seven dimensions proposed in this study yield significant differences on the expertise criterion, the three dimensions yielding insignificant differences also deserve discussion. Convenience, security, and exploration were valued across all three expertise categories equally. It is positive to notice that the usage of IB is perceived fairly convenient also within the group that has had relatively modest amount of experiences with IB. Apparently, taking care of banking transactions online has proven its usefulness as a convenient alternative to traditional branch banking. Exploration, on the other hand, does not appeal to consumers. When reflecting the results to the other dimensions, it seems that IB is an activity where consumers do not want to spend time more than it is necessary, and thus, exploration has been found trifling.

Especially, it is notable that all three consumer groups expressed remarkable confidence in security of IB. Even novice users are convinced that internet banks are reliable and that banking transactions can be undertaken online with complete safety and confidentiality. What makes this finding so interesting is that in several studies consumers' concerns about security have been emphasised as the most important factor inhibiting the adoption and use of IB (Sathye, 1999; Daniel, 1999; Cox and Dale, 2001; Howcroft et al., 2002). Our explanation for the outcome is that consumers have laid to rest their security concerns *before* actually embarking on internet banking (cf. Horrigan, 2000). Once online, they are satisfied with the safety and security measures the banks have in place.

Conclusions, limitations and directions for future research

This study reported interesting differences in perception and behaviour between novice, moderate and expert users in the context of IB. Consumers' IB expertise was measured in terms of how often and for how long IB has been in use. Altogether seven perceived dimensions of IB were proposed and these dimensions were examined along the criterion of consumer experience. Three dimensions were found to have a U-shaped distribution with moderate users attaining the lowest mean in status, personal finances and investment. The fourth significant dimension, auxiliary features, decreased linearly in importance with increasing expertise. The findings of this research add to our reservoir of previous knowledge on consumer familiarity and usage experience. They also have interesting and potentially valuable implications for marketing and designing of internet banks.

The results reveal that novice users value and would utilize service dimensions like auxiliary features and personal finances to support and facilitate their daily actions in IB. Also, they have the highest mean along the status dimension, indicating that IB reinforces their self-image. On the other hand, moderate users have the lowest mean score on all categories with the exception of auxiliary features. It seems that these consumers have the most utilitarian stance towards IB; they want to carry out their basic bank transactions as efficiently as possible without need for any supplemental services. In addition, expert users imply very clearly that they do not need services like auxiliary features.

With respect to the current study itself, a few issues are of concern. For example, several classifications or quality attributes critical to IB have been introduced in previous literature, and thus, the proposed dimensions of IB can be questioned. However, the importance of open-end exploratory interviews when generating the key research themes and issues for the study must be emphasized. For the future research it sets

challenges to build a more extensive study and study larger proportion of dimensions or attributes of IB in the context of consumer expertise.

In addition, previous literature represents several ways to operationalize the concept of expertise as well as to define novice and expert users. Here, a very practical approach was adopted. The use frequency of IB and length of time that consumers have used IB are relatively easy to observe, and hence, to exploit by service providers. Also, the use of quartiles when defining the consumer groups separates the groups from each other distinctly enough. As a note for following research, the operationalization of expertise can be further developed and additional measures can be included. Finally, it must be noticed that IB and internet bank services as well as diffusion of the services are at a very dynamic state, and therefore, the nature of consumers' IB expertise can be transforming within the context. Therefore, it is justified to continue the research in the area.

Managerial implications

The managerial implications of this study are manifold. The findings of this research provide several ideas for marketing of internet banking and for developing IB websites. Based on our results, novice users consider the use of IB as something special, a consumption act that endows them with a feeling of superiority. They consider themselves as technologically enlightened, modern consumers. In their attempts to attract more consumers to internet banking, banks can appeal to status and ego-gratification quite effectively.

The results pertaining to novice users also suggest that the possibility to utilize tools of personal finances and auxiliary features proved to be valued dimensions for novice users. Novice users were found to be young consumers with lowest income level. Though they may not figure among banks' prime customers at the moment, they could

become very lucrative customers in the future. They are probably still studying and therefore have relatively low current income. Designing auxiliary features or tools for personal finance management into banks' websites would prove to be sound investment for the long run. In advertising designed to attract new users, it would be useful to emphasise the possibility to add these helpful auxiliary features to convince novice users about the ease of IB use.

More profitable customers in banks' point of view seem to be consumer groups with more expertise. Moderate users concentrate on the basic functions of IB and settle for core services, wanting to get the job done as soon as possible. Considering their needs, the most efficient strategy is to improve the core functions of IB and design the services so as to facilitate expedient transactions. Moderate users consider additional services dispensable.

This article supports earlier research indicating that expertise is an interesting consumer characteristic that may account for significant variance across consumers. This research suggests that expertise has correlates in demographics as well as in perceptions of service dimensions. It may be possible, therefore, to account for expertise by segmenting markets along demographic criteria and then to offer expertise-appropriate mix for each segment.

REFERENCES

Akinci, S., Aksoy, S. and Atilgan E. (2004), "Adoption of Internet banking among sophisticated consumer segments in an advanced developing country", *International Journal of Bank Marketing*, Vol. 22 No. 3, pp. 212-232

Aldlaigan, A.H. and Buttle, F.A., (2001), Consumer involvement in financial services: an empirical test of two measures, *International Journal of Bank Marketing*, Vol. 19 No.6, pp. 232-245

Anderson, J.R. 1983, *The Architecture of Cognition*, Harvard University Press, Mass.

Bauer, C. and Colgan, J. (2001), Planning for electronic commerce strategy: an explanatory study from the financial services sector, *Logistics Information Management*, Vol. 14 No. 1/2, pp. 24-32

Baumgartner H. and Steenkamp J.-B.E.M. (1996), Exploratory consumer buying behavior: Conceptualization and measurement, *International Journal of Research in Marketing*, Vol. 13 No. 2, pp. 121-137

Baylor, A.L. (2001), A U-shaped model for the development of intuition by level of expertise, *New Ideas in Psychology*, Vol. 19 No. 3, pp. 237-244

Beckett, A., Hewer, P. and Howcroft, B. (2000), An exposition of consumer behaviour in the financial services industry, *International Journal of Bank Marketing*, Vol. 18 No. 1, pp. 15-26

Brucks, M. (1986), A typology of consumer knowledge content, *Advances in Consumer Research*, Vol. 13, pp. 58-63

Bruner II, G.C. and Kumar, A. (2000), Web commercials and advertising hierarchy-of-effects, *Journal of Advertising Research*, Vol. 40 No. 1/2, pp. 35-42.

Cohen, G. (2000), Hierarchical models in cognition: Do they have psychological reality? *European Journal of Cognitive Psychology*, Vol. 12 No. 1, pp. 1-36.

Colonia-Willner, R. (2004), Self-service systems: new methodology reveals customer real-time actions during merger, *Computers in Human Behavior*, Vol. 20 No. 2, pp. 243–267

Corbitt, B.J., Thanasankit, T. and Yi, H. (2003), Trust and e-commerce: a study of consumer perceptions, *Electronic Commerce Research and Applications*, Vol. 2 No. 3, pp. 203-215

Cox, J. and Dale, B.G. (2001), Service quality and e-commerce: an exploratory analysis, *Managing Service Quality*, Vol. 11 No. 2, pp. 121-131

Dahlén, M. (2001), Banner advertisements through a new lens, *Journal of Advertising Research*, Vol. 41 No. 4, July/August, pp. 23-30

Daniel, E. (1999), Provision of electronic banking in the UK and the Republic of Ireland, *International Journal of Bank Marketing*, Vol. 17 No. 2, pp. 72-82

Devlin, J.F. (1995), Technology and innovation in retail banking distribution, *International Journal of Bank Marketing*, Vol. 13 No. 4, pp. 19-26

Dholakia, U.M. and Rego, L.L. (1998), What makes commercial Web pages popular?, *European Journal of Marketing*, Vol. 32 No. 7/8, pp. 724-736

Gerrard, P. and Cunningham, J.B. (2003), The diffusion of Internet banking amongst Singapore consumers, *The International Journal of Bank Marketing*; Vol. 21 No. 1, pp. 16-28

Grubb, E.L. and Grathwohl, H.L. (1967), Consumer self-concept, symbolism and market behaviour: A theoretical approach, *Journal of Marketing*, Vol. 31 (October), pp. 22-27

Hammond, K., McWilliam, G. and Diaz, A.N. (1998), Fun and work on the Web: differences in attitudes between novices and experienced users, *Advances in Consumer Research*, Vol. 25, pp. 372-378

Hoffman, D.L. and Novak, T.P. (1996), Marketing in hypermedia computer-mediated environments: conceptual foundations, *Journal of Marketing*, Vol. 60 (July), pp. 50-68

Holbrook, M. B. (1999), *Consumer Value: A framework for analysis and research*, London: Routledge Kegan Paul

Horrigan, J.B. (2000), New Internet users: What they do online, what they don't, and implications for the Net's future, Pew Internet Project Report. Available (25. September) <http://www.pewinternet.org/reports/roc.asp?Report=>

Howcroft, B. Hamilton, R. and Hewer, P. (2002), Consumer attitude and the usage and adoption of home-based banking in the United Kingdom, *The International Journal of Bank Marketing*, Vol. 20 No. 3, pp. 111-121

Hughes, T. (2001), Market orientation and the response of UK financial services companies to changes in market conditions as a result of e-commerce, *International Journal of Bank Marketing*, Vol. 19 No. 6, pp. 222-231

International Data Corporation (2005). Available <http://www.epaynews.com/statistics/bankstats.html#15>

Jacoby, J., Troutman, T., Kuss, A. and Mazursky, D. (1986), Experience and expertise in complex decision making, *Advances in Consumer Research*, Vol. 13, pp. 469-472

Jun, M. and Cai, S. (2001), The key determinants of IB service quality: a content analysis, *International Journal of Bank Marketing*, Vol. 19 No. 7, pp. 276-291

Kuusela, H., Spence, M. T. and Kanto, A. J. (1998), Expertise effects on prechoice decision processes and final outcomes – A protocol analysis, *European Journal of Marketing*, Vol. 32 No. 5/6, pp. 559-576

Lazonder, A.W. and Biemans, H.J.A. (2000), Differences between Novice and Experienced Users in Searching Information on the World Wide Web, *Journal of the American Society for Information Science*, Vol. 51 No. 6, pp. 576-582

Lee, J. (2002), A key to marketing financial services: the right mix of products, services, channels and customers, *Journal of Services Marketing*, Vol. 16 No. 3, pp.238-258

Leigh, T.W. and McCraw, P.F. (1989), Mapping the procedural knowledge of industrial sales personnel, *Journal of Marketing*, Vol. 53 No. 1, pp. 16-34

Liao, Z and Cheung, M.T. (2002), Internet-based e-banking and consumer attitudes: an empirical study, *Information & Management*, Vol. 39 No 4, pp. 283-295

Li, F. (2001), The Internet and the deconstruction of the integrated banking model, *British Journal of Management*, Vol. 12 No 4, pp. 307-322

Long, M. and McMellon, C. (2004), Exploring the determinants of retail service quality on the Internet, *Journal of Services Marketing*, Vol. 18 No. 1, pp. 78-90

Mandel, N. and Johnson, E. J. (2002), When Web Pages Influence Choice: Effects of Visual Primes on Experts and Novices, *Journal on Consumer Research*, Vol. 29 No. 2, pp. 235-245

Martinez-López, F.J., Luna, P. and Martínez, F.J. (2005), Online shopping, the standard learning hierarchy, and consumers' internet expertise - An American-Spanish comparison, *Internet Research*, Vol. 15 No. 3, pp. 312-334

Mathwick, C., Malhotra, N. and Rigdon, E. (2002), The effect of dynamite retail experiences on experiential perceptions of value: an Internet and catalog comparison, *Journal of Retailing*, Vol. 78, pp. 51-60

Mattila, M., Karjaluoto, H. and Pentto, T. (2003), Internet banking adoption amongst mature customers: early majority or laggards?, *Journal of Services Marketing*; Volume 17 No. 5, pp. 514-528

Minhas, R.S. and Jacobs, E.M. (1996), Benefit segmentation by factor analysis: an improved method of targeting customers for financial services, *International Journal of Bank Marketing*, Vol. 14 No. 3, pp. 3-14

Mols, N.P. (1999), The Internet and the bank's strategic distribution channel decisions, *International Journal of Bank Marketing*, Vol. 17 No.6, pp. 295-300

Novak, T.P., Hoffman, D.L. and Yung, Y-F. (2000), Measuring the customer experience in online environments: a structural modelling approach, *Marketing Science*, Vol. 19 No. 1, pp. 22-42

Nunnally, J.C. (1967), *Psychometric Methods*, McGraw-Hill, New York, NY

Philippe, A. and Ngobo, P-V. (1999), Assessment of Consumer Knowledge and Its Consequences: A Multi-Component Approach, *Advances in Consumer Research*, Vol. 26, pp. 569-575

Polatoglu, V.N. and Ekin, S. (2001), An empirical investigation of the Turkish consumers' acceptance of Internet banking services, *The International Journal of Bank Marketing*; Vol. 19 No. 4, pp.156-165

Raman, N.V. (1997), A qualitative investigation of Web-browsing behaviour, *Advances in Consumer Research*, Vol. 24, pp. 511-516

Ramsay, J. and Smith, M. (1999), Managing customer channel usage in the Australian banking sector, *Managerial Auditing Journal*, Vol. 14 No. 7, pp. 329-338

Rotchanakitumnuai, S. and Speece, M. (2003), Barriers to Internet banking adoption: a qualitative study among corporate customers in Thailand, *International Journal of Bank Marketing*, Vol. 21 No. 6/7, pp. 312-323

Sathye, M. (1999), Adoption of Internet banking by Australian consumers: an empirical investigation, *International Journal of Bank Marketing*, Vol. 17 No. 6/7, pp. 324-335

Solomon, M.R. (1983), The role of products as social stimuli: A symbolic interactionism perspective, *Journal of Consumer Research*, Vol. 10, pp. 325-375

Steenkamp, J.-B.E.M. and Baumgartner, H. (1992), The Role of Optimum Stimulation Level in Exploratory Consumer Behavior; *Journal of Consumer Research*, Vol. 19 No. 3, pp. 434-48

Thornton, J. and White, L. (2001), Customer orientations and usage of financial distribution channels, *Journal of Services Marketing*; Vol. 15 No. 3; pp.168-184

Thornton, J. and White, L. (2000), Financial Distribution Channels: Technology versus Tradition, *Journal of Professional Services Marketing*, Vol. 21 No 2, pp. 59-74

Ülegin, B. (1998), Using hierarchical information integration to examine customer preferences in banking, *International Journal of Bank Marketing*, Vol. 16 No. 5, pp. 202-210

Waite, K. and Harrison, T. (2004), Online banking information: what we want and what we get, *Qualitative Market Research: An International Journal*, Vol. 7 No. 1, pp. 57-79

Ward, M. R. and Lee, M. J.(2000), Internet Shopping, Consumer Search and Product Branding, *Journal of Product and Brand Management*, Vol. 9 No. 1, pp. 6-20

Yang, Z., Peterson, R.T. and Cai, S. (2003), Services quality dimensions of Internet retailing: an exploratory analysis, *Journal of Services Marketing*, Vol. 17 No. 7, pp. 685-700

Zhu, F.X., Wymer, W. and Chen, I. (2002), T-based services and service quality in consumer banking, *International Journal of Service Industry Management*, Vol.13 No. 1, pp. 69-90

TABLES

Table I. Dimensions of internet banking

Dimensions	Statements on principal component	Mean	Variable loading	Eigen-values	% of variance	Cronbach's alpha
CONVENIENCE	I get all the information I need for taking care of my banking transactions more conveniently from internet bank than from bank office.	3.48	0,439	0,881	17,626	0,643
	By using IB I get better service than from bank office.	2.76	0,412			
	By using IB I have more time for my family/friends/hobbies.	4.01	0,363			
	I would take care of all my loan issues in IB if it only were possible.	3.26	0,340			
	When I want more information or advice from bank personnel I prefer e-mail or message services in IB to visiting or calling bank office.	2.43	0,521			
SECURITY	By using IB I keep my privacy so that other people won't know about my bank transactions.	3.94	0,539	0,905	30,165	0,558
	IBS are safe, my bank information won't fall into the wrong hands.	3.80	0,658			
	I am not afraid that in IB mistakes occur more easily than at bank office.	3.61	0,426			
STATUS	By using IB I give a modern impression of myself to other people.	3.23	0,715	1,022	51,123	0,602
	By using IB I stand out of ordinary people who use traditional bank services.	2.39	0,715			
AUXILIARY FEATURES	It would be nice to have different voice effects in the IB, for example signalling that the bill is successfully paid.	2.82	0,608	1,028	34,266	0,643
	It would be fun to have a virtual figure in the IB from whom I could ask help when problems occur.	2.76	0,622			
	It would be useful to have a search agent in the IB who would search information for me about topics I have chosen.	3.20	0,521			
PERSONAL FINANCES	It would be fun if I could calculate useful and funny things in the IB, e.g. when I would be a millionaire with certain monthly savings.	2.54	0,672	1,350	45,004	0,754
	It would be fun if I could make illustrative charts and figures of my account transactions.	2.56	0,689			
	It would be useful to follow how my personal economy develops, e.g. the ratio between my incomes and expenses within certain time period.	3.47	0,651			
INVESTMENT	It would be useful to practice making investments by taking an investment course in IB.	3.21	0,509	0,970	32,328	0,617
	I could pay for getting detailed information about investments, e.g. real-time stock exchange rates and tips about stock issues and purchase recommendations.	2.14	0,583			
	I could give more information about myself if I got in return services focused just for me, e.g. investment tips suitable for my portfolio.	2.67	0,609			
EXPLORATION	It would be useful to exchange opinions with other people in discussion groups about topics related to banking issues in IB.	2.22	0,499	1,115	37,154	0,670
	Sometimes it is fun just to browse around and see what can be found on bank's website.	2.64	0,635			
	I would like to read versatile daily news on bank's website.	2.36	0,680			

Table II. Contrasting the consumer groups

Dimensions	means			Contrasts					
				Nov vs. others		Mod vs. others		Exp vs. others	
	Nov	Mod	Exp	t	Sig.	t	Sig.	t	Sig.
CONVENIENCE	-0,088	0,029	0,033	-0,896	0,371	0,484	0,629	0,493	0,623
SECURITY	-0,156	0,046	0,064	-1,592	0,112	0,789	0,431	0,940	0,348
STATUS	0,211	-0,144	0,025	2,133	0,034	-2,318	0,021	-0,106	0,915
AUXILIARY FEATURES	0,290	0,029	-0,291	3,239	0,001	-0,260	0,795	-3,614	0,000
PERSONAL FINANCES	0,272	-0,140	-0,026	2,702	0,007	-2,286	0,023	-0,729	0,467
INVESTMENT	0,117	-0,129	0,091	1,029	0,304	-2,013	0,045	0,766	0,444
EXPLORATION	0,026	-0,052	0,053	0,193	0,847	-0,791	0,430	0,521	0,603

Table III. Demographics of novice, moderate and expert users

		Level of Expertise			χ^2
		Novices %	Moderates %	Experts %	
GENDER	Female	58,4	53,4	40,0	6,35*
	Male	41,6	46,6	60,0	
AGE	under 25 years	44,2	15,0	10,0	37,07**
	25-34 years	20,8	37,6	34,4	
	35-44 years	22,1	22,6	31,1	
	over 44 years	13,0	24,8	24,4	
EDUCATION	comprehensive school	20,8	11,3	11,1	11,57
	secondary school	40,3	37,6	31,1	
	college/polytechnics	28,6	31,6	44,4	
	university	10,4	19,5	13,6	
ANNUAL INCOME	under 20 000 €	35,1	25,6	12,2	20,02**
	20 000-33 500 €	23,4	28,6	26,7	
	33 501-47 000 €	31,2	27,1	28,9	
	over 47 000 €	10,4	18,8	32,2	
TOTAL TIME OF INTERNET USAGE	under 1 year	33,8	14,5	4,8	31,26**
	2-3 years	33,8	43,6	27,0	
	over 3 years	32,3	41,9	68,3	
INTERNET USAGE FREQUENCY	every day	28,6	45,9	70,0	46,14**
	4-6 times per week	9,1	9,8	12,2	
	1-3 times per week	37,7	36,8	14,4	
	3 times in a month or more seldom	24,7	7,5	3,3	
* n=300 except in ANNUAL INCOME n=281 due 19 respondents did not give an answer.					
p ≤ ,005 **					