

# Chapter 11

## Methodological Aspects of the Evaluation of Individual E–Banking Services for Selected Banks in Poland

Witold Chmielarz  
University of Warsaw, Poland

### ABSTRACT

*The main purpose of this chapter is the comparison of differences between results of three methods used for quality evaluation of individual e-banking services. The comparison has been conducted for selected sixteen banks in Poland. The author uses three types of research: traditional expert scoring method, AHP (Analytic Hierarchy Process) method and conversion method. After a general introduction, a detailed report of the results arising from this research is presented and analyzed. Finally, the author draws general conclusions from the analysis. He also discusses the future research regarding this topic.*

### INTRODUCTION

The literature concerning problems of websites' evaluation in e-banking is very extensive. Its brief overview shows that websites are analysed from point of view of:

- usability (site map, addresses directory),
  - functionality: (global search, navigation, content relevancy),
  - visualisation (colours, background, graphics, letters)
- reliability and accessibility (Dinitz et al, 2005, Balachandher et al Balachandher et al: (2003), Saraswat and Katta (2008), Mateos et al (2001), Chiemekie et al (2006), Miranda et al (2006), Achour and Bensedrine (2005), Migdadi (2008).)

The frameworks of the majority of **evaluation methods** (of e-banking) are generally based on e-commerce website evaluation model (Whiteley (2000), Evans and King (1999), Selz and Schubert (1997)). These methods are mainly traditional. They are deriving from management information systems evaluation, supported by sets of criteria and scor-

DOI: 10.4018/978-1-60566-890-1.ch011

ing points with determined scale. It seems that previous scientific approaches have focused on technical and functional factors. Most of them additionally contain plenty of subjective factors, such as: text clearness, attractiveness of colours, pictures or photos, high presentation quality, etc.). Obtaining desired results can often be better achieved using a few, matching criteria for sample evaluation (such as in Web Assessment Index method, which focuses on four categories: speed, accessibility, navigability and content analysis, see Miranda (2006)). The selection of evaluation criteria still requires more theoretical approach, justification, verification and discussion about its scope. On the other hand we have some problems not only with establishing the set of criteria, but also determination of relations between them. There are also problems with setting preferences from the point of view of a final user (customer) or expert who is evaluating this phenomenon. This chapter deals with these issues and it will be useful for researchers and practitioners who look for solutions to these problems.

Its main objective is establishing a reasonable methodology of measuring customer satisfaction with e-services. In this case the author concentrated on individual e-banking sector in selected banks operating in Poland for verifying this problem. The chapter constitutes a continuation and, simultaneously, a development of previous studies dealing with the comparison and evaluation of IT systems implemented in organizations which form the basis of electronic economy. The considerations presented below are a consequence of a second series of analyses – in relation to the one performed in 2007 (as a part of e-commerce research - Chmielarz, 2007) - concerning the evaluation of e-banking, where the author tried to eliminate previously occurring methodological inconvenience and problems connected with obtaining rational expert evaluation. In a sense it is also an extension of the author's study into the transformation of IT banking systems applications, performed since 1999 (Chmielarz, 2005).

The second series of experiments connected with electronic business systems started with presenting applications of traditional methods – a scoring method, with its different variations (with experts' preference scale), and concluded with constructing the author's own method (conversion) which combines the advantages of scoring and relative evaluation methods (Chmielarz, 2008). The applied methods allowed for indicating – the best at a time – banking services for an individual client.

The third series, which includes also this paper, was initiated by the studies which are meant to facilitate the methodologies of websites' evaluation. Therefore, initially, they were applied to a limited number of banks offering services for an individual client, as only internet banks have been considered. The present stage of this series consists in widening the selection to a larger number of banks.

It is difficult to estimate the number of the Internet users using internet banking. Clients having access through internet channel are counted several times for ever increasing number of products e.g. savings accounts and credit cards – possibly a few within one bank. It is worth mentioning that also banks are interested in the most favourable image which reflects their market share in internet banking. It is the reason why the statistics of some banks should be treated more as a potential possibility of all clients using an offered range of services within products available via the Internet. Nevertheless, on the basis of data obtained from Związek Banków Polskich (Polish Banks Association), making a simple forecast with the consideration of the latest preference trends, we can estimate that in Poland the number of personal accounts operated via the Internet will reach over 12m in the end of 2008, and in 2009 it will exceed 13m. (Ref: Figure 1). Even if we assume that the number of active users is about 2m smaller (Macierzyński, 2007), still, we can conclude that in Poland over 45% of personal accounts owners use the internet channel.

14 more pages are available in the full version of this document, which may be purchased using the "Add to Cart" button on the publisher's webpage:

[www.igi-global.com/chapter/methodological-aspects-evaluation-individual-banking/38423](http://www.igi-global.com/chapter/methodological-aspects-evaluation-individual-banking/38423)

## Related Content

---

### Rational Decision Making, Dual Processes, and Framing: Current Thoughts and Perspectives

Todd McElroy (2008). *Encyclopedia of Decision Making and Decision Support Technologies* (pp. 757-765).

[www.irma-international.org/chapter/rational-decision-making-dual-processes/11318](http://www.irma-international.org/chapter/rational-decision-making-dual-processes/11318)

### Uncertain Hamacher Aggregation Operators and Their Application to Multiple Attribute Decision Making

Guiwu Wei (2018). *International Journal of Decision Support System Technology* (pp. 40-64).

[www.irma-international.org/article/uncertain-hamacher-aggregation-operators-and-their-application-to-multiple-attribute-decision-making/199032](http://www.irma-international.org/article/uncertain-hamacher-aggregation-operators-and-their-application-to-multiple-attribute-decision-making/199032)

### Exploration of Soft Computing Approaches in Itemset Mining

Jyothi Pillai and O. P. Vyas (2014). *Emerging Methods in Predictive Analytics: Risk Management and Decision-Making* (pp. 270-296).

[www.irma-international.org/chapter/exploration-of-soft-computing-approaches-in-itemset-mining/107910](http://www.irma-international.org/chapter/exploration-of-soft-computing-approaches-in-itemset-mining/107910)

### ThinkTeam: GDSS Methodology and Technology as a Collaborative Learning Task

Hanan Yaniv (2008). *Encyclopedia of Decision Making and Decision Support Technologies* (pp. 872-881).

[www.irma-international.org/chapter/thinkteam-gdss-methodology-technology-collaborative/11331](http://www.irma-international.org/chapter/thinkteam-gdss-methodology-technology-collaborative/11331)

### How Do Groups Matter?: Competitive Responses, Environmental Dynamism and Firm Performance

Bau-Jung Chang and Yu-Pin Chen (2014). *International Journal of Strategic Decision Sciences* (pp. 47-64).

[www.irma-international.org/article/how-do-groups-matter/116461](http://www.irma-international.org/article/how-do-groups-matter/116461)