

COMPUTER ASSISTED AUDIT TOOLS AND TECHNIQUES: NEW DETERMINANTS ON INDIVIDUAL ACCEPTANCE

Isabel Pedrosa, ADETTI-IUL e Institute of Accounting and Administration
Polytechnic Institute of Coimbra, Coimbra, Portugal, ipedrosa@iscac.pt
Carlos J. Costa, ADETTI-IUL e ISCTE-IUL—University Institute of Lisbon,
Lisbon, Portugal, carlos.costa@iscte.pt



Abstract

Research studies have been recently developed on how Internal Auditors accept new technologies and factors that influence auditors' decisions. Our main aims are to study the level of usage of Computer Assisted Audit Tools and Techniques (CAATs) among Portuguese Statutory Auditors (or Portuguese Chartered Accountants) and relevant factors in technology acceptance for auditing purposes. This research aims to gain understanding on

- tasks performed by Statutory Auditors
- defining new factors that can influence individual decision on program/tools use.

Data was collected using semi-structured interviews with audit experts and an online questionnaire.

Our research revealed that **procedures for data manipulation and extraction and tools to manage electronic working papers** are the most popular and have the most frequent use.

Contributions: 1) an empirical understanding of how the Portuguese Statutory Auditors are using information technology. 2) new determinants that can be used in future work on CAATs individual acceptance.

Background

This research focus is on the range of **acceptance, motivations, benefits and difficulties of CAATs' use among statutory auditors.**

Literature review demonstrated that CAATs' use:

- has different profiles on internal and external auditors, however, in both groups, CAATs' acceptance is low, depending on the companies and on their dimension (Braun and Davis, 2003), (Debrecey et al, 2005), (Janvrin et al, 2008a), (Janvrin et al, 2008b)
- is beyond firms intervention and IT strategies, therefore it is dependent on the individual characteristics of the auditor (Debrecey et al, 2005) (Debrecey and Gray, 2011)
- depends on the range of influence motivation, best practices of implementation, performance measurement criteria and challenges thus, overcoming usual barriers to successful CAATs' implementation (Mahzan and Limer, 2008)
- has low acceptance in complex tools and special background need (Curtis and Payne, 2008) (Kim, et al, 2009)
- Is lower on tools to do data mining regression and data mining classification and is higher on tools that allow database queries, ratio analysis, sampling, digital analysis (Benford's Law) (Kim, et al, 2009).

Research Question

- What are the most relevant factors on Information Technology use (especially CAATs) by statutory auditors?

CAATs, Computer Assisted Audit Tools and Techniques: all the tools and techniques that can be used during or to support audit tasks and procedures.

References:

- Curtis, M. B. & Payne, E. A., 2008. An examination of contextual factors and individual characteristics affecting technology implementation decisions in auditing. *International Journal of Accounting Information Systems*, Volume 9.2, pp. 104-121
- Debrecey, R., S. Lee, Neo, W. & Toh, J., 2005. Employing generalized audit software in the financial services sector: Challenges and opportunities. *Managerial Auditing Journal*, Volume 20 (6), pp. 605-619
- Debrecey, R. S. & Gray, G. L., 2011. Data Mining of Electronic Mail and Auditing: A Research Agenda. *Journal of Information Systems*, Volume 25, no. 2, pp. 195-226
- Janvrin, D., Bierstaker, J. & Lowe, D. J., 2008. An Examination of Audit Information Technology Use and Perceived. *Accounting Horizon*, Volume 22, pp. 1-2
- Janvrin, D. J., 2008. Detecting spreadsheet errors: An education case. *Issues in Accounting Education*, Volume 23, no. 3, pp. 435-454
- Janvrin, D. J. L. & Bierstaker, J., 2008. Auditor Acceptance of Computer-Assisted Audit Techniques. [Online] Available at: URL: <http://aaahq.org/meetings/AUD2009/AuditorAcceptance.pdf> [Acedido em 15 09 2010]
- Kim, H.-J., Mannino, M. & Nieschwietz, R. J., 2009. Information technology acceptance in the internal audit profession: Impact of technology features and complexity. *International Journal of Accounting Information Systems*, Volume 10, p. 214-228
- Mahzan, N. & Lymer, A., 2008. Adoption of computer Assisted Audit Tools and Techniques (CAATs) by internal Auditors: Current Issues in the UK. BAA Annual Conference, April
- Payne, E. & Curtis, M., 2008. Can the Unified Theory of Acceptance and Use of Technology Help Us Understand the Adoption of Computer-Aided Audit Techniques by Auditors?. Working Paper, University of Louisville, Louisville
- Venkatesh, V., Morris, M. G., Davis, G. B. & Davis, F. D., 2003. User acceptance of information technology: Toward a unified view. *MIS Quarterly*, Volume 27, pp. 425-478.

Objectives

- What are the tasks that statutory auditors are doing with CAATs?
- What are the factors mentioned by statutory auditors as relevant on Information Technology use (especially CAATs)?

Methodological Approach

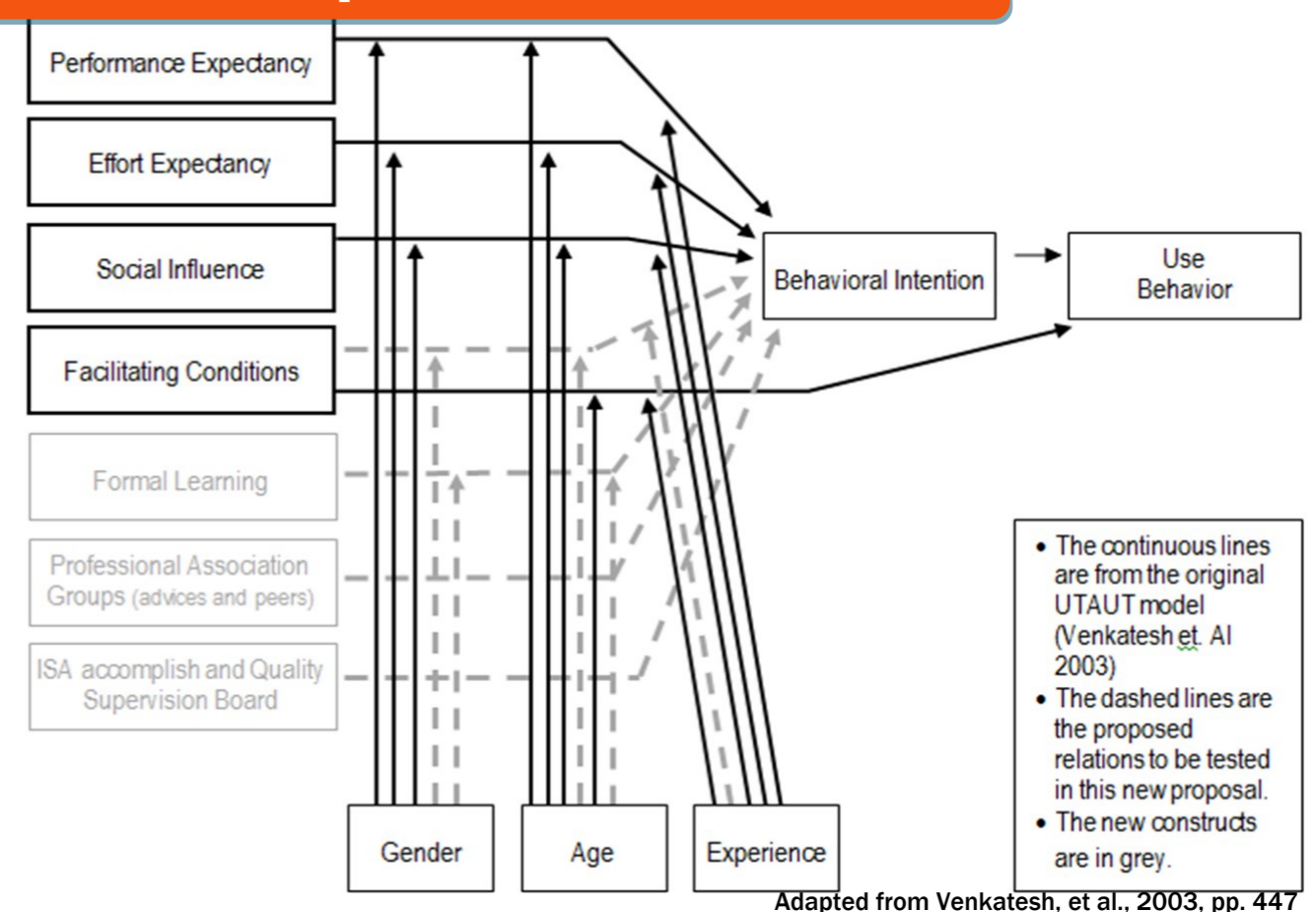
Literature review on:

- Computer Assisted Audit Tools and Techniques
- Technology Acceptance Models

Empirical work using qualitative (semi-structured interviews) and quantitative methods (online questionnaires).

Model proposal and model validation.

Proposed Model



Results

The 6 interviews with audit experts clarified Statutory Auditors' tasks and CAATs' use. Online questionnaire, with 110 respondents (SA population = 887), stated Statutory Auditors' profile on motivations and obstacles to CAATs' use and new determinants on the individual acceptance model.

Factors influencing the intention to use CAATs:

- Job/task performance
- Value for money
- Effort Expectancy
- Social Influence:
 - SAs Group and Supervision Influence
 - People Influence
 - Internal Firm Influence
- Facilitating Conditions
- Formal courses/Training

Conclusions

CAATs' acceptance among Statutory Auditors is positively influenced by:

- the accomplishment of ISA statements and the supervision from the National Audit Oversight Board
- Group: other Statutory Auditors and the Portuguese Institute of Statutory Auditors recommendations
- Training
- Elementary Tasks

Value for money has no influence on CAATs' acceptance.