



# IT Adoption Strategies and their Application to e-filing Self-Assessment Tax Returns: The Case of the UK

**Ann Hansford, Andrew Lymer and Catherine Pilkington\***

## ***Abstract***

This article considers Information Technology (IT) adoption strategies as applied to the particular circumstances of e-filing UK Self Assessment (SA) Tax returns<sup>1</sup>

## **INTRODUCTION**

As a result of the growth of Internet availability in the UK to significant levels,<sup>2</sup> the UK Government has set clear adoption and delivery targets for electronic services by Government departments and agencies. In 1998, the future facility to e-file was included in the modernising government agenda.<sup>3</sup> In 1999, Gordon Brown (Chancellor

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\*Dr Ann Hansford PGCE CTA (Fellow), Senior Lecturer in Taxation, Bristol Business School, Bristol UK; Andrew Lymer BSc, MPhil, MIRS, FAIA, Senior Lecturer in Taxation and Accounting, Birmingham Business School, University of Birmingham, UK; Catherine Pilkington BA ACA, Senior Lecturer in Taxation and Financial Accounting, Lancashire Business School, UCLAN, UK.

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<sup>2</sup> 55% (12.9 million) UK households are online as at July 2005 according UK National Statistics Omnibus Survey, October 2005 – see <http://www.statistics.gov.uk/cci/nugget.asp?id=8>.

<sup>3</sup> <http://www.cabinetoffice.gov.uk/moderngov/>.

of the Exchequer) confirmed that it would be possible to e-file tax returns and it was part of the Government's commitment to the use of e-services.<sup>4</sup>



demystify the new process and aid understanding of why a new way is better than current practices.<sup>19</sup>

In addition to current experiences of well known systems (technology mediated or manual), the expected impact of a change in IT usage/dependency impacts on the success, or otherwise, of a change to a more IT based system of operation. The study by Karahanna et al (1999)<sup>20</sup> showed that pre-adoption attitude is based on perceptions of usefulness, ease-of-use, result demonstrability, visibility and trial-ability. Conversely, post-adoption attitude to the new IT is primarily based on beliefs of usefulness and direct perceptions of the enhancements offered by the new tools provided.<sup>21</sup>

These perspectives<sup>22</sup> on exploring influencing factors to IT adoption were utilised in an Australian study seeking to explore the factors that have enabled the diffusion, adoption and operationalisation of electronic lodgement within the tax system of that country.<sup>23</sup> This study used an eight factor framework to analyse diffusion and adoption based on IT adoption strategies, such as that outlined in Karahanna et al., and wider social interaction and innovation theories (e.g. Rogers' Diffusion of Innovation Theory).<sup>24</sup> These factors were: circulation of ideas, national context, tax policy

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<sup>19</sup> An effective feature of the recent HMRC approach has in fact been to make extensive use of industry representation groups in system development and implementation as these results would propose.

<sup>20</sup> Karahanna, E, Straub, D and Chervany, N (1999) 'Information technology adoption across time – A cross-sectional comparison of pre-adoption and post-adoption beliefs'. *MIS Quarterly*, Vol 23, No. 2, pp.183-213. This study, in turn, extends and validates Roger's Innovation Diffusion Theory (Rogers, E 1995, *Diffusion of Innovations*, Free Press, New York – originally published in 1962) that was first applied to IT adoption exploration in Moore, G. & Benbassat, I, (1991) 'Development of an Instrument to measure the perceptions of adoption an information technology innovation', *Information Systems Research*, Vol. 1 , No. 3, pp. 192-222 and further developed in Moore, G. & Benbassat, I. (1996) 'Integrating diffusion of innovations and theory of reasoned action models to predict utilization of information technology by end-users', in *Diffusion and Adoption of Information Technology*, Kautz, K and Pries-Hege, J. (eds), Chapman and Hall, London, pp. 132-146.

<sup>21</sup> Definitions of these characteristics from Moore and Benbassat, 1991 (ibid) p 195, are as follows:

- Perceptions of usefulness : 'the degree to which a person believes that using a particular system would enhance his or her job performance' (Definition taken from Davis, F. (1989)

context, technological context, path of entry, effectiveness of champions, roles of key constituents and internal and external networks of support. Despite the perspective of this Australian study being more focused on the tax authorities' processes than on the tax advisers' response, this study produced results supporting similar adoption factors to those explored in this paper providing further justification for their use in this study.

The use of this prior IT adoption literature, it is proposed, could suggest alternative

In addition to the issues of how IT adoption occurs in practice, a secondary issue in understanding patterns of e-filing adoption is the question of Internet access amongst tax advisers – given this is critical to ease of adoption of the e-filing solution explored here. Information on diffusion of general Internet access levels in the UK would suggest HMRC has timed their roll-out of e-filing innovation well. By the time this system was initially brought into operation (August 2001) 65% of all UK financial services/insurance businesses were considered to have access to, and be regular users of Internet based business solutions.<sup>28</sup> This was second only to the computing industry for levels of Internet connectivity. For financial and insurance industry businesses with 10 or more employees, this level of accessibility rose to 91% of all businesses – the highest of any industry classification in the survey, and even higher than the computing industry.

This retrospective national survey<sup>29</sup> would, however, have offered some concerns about the initial successful adoption of e-filing had HMRC known some of the other details this report later provides for us to use with hindsight. For example, despite very high Internet accessibility levels, as indicated, the level of integration of this access with wider business processes is significantly less common. Again focusing on the financial and insurance sector, only 6% ofhr more e

The study also found the converse could apply, with some respondents commenting that ‘nothing would prompt them [their tax adviser] to e-file’.<sup>33</sup> The influence of tax advisers can therefore be negative as well as positive.

In a recent Australian study exploring e-filing adoption<sup>34</sup> the two factors of ‘path of entry’ and effectiveness of champions located in government officials were crucial in encouraging adoption and implementation of innovation. Issues of ‘policy context’ was also a factor considered to affect the adoption levels (e.g. the fact that personal taxation is a federal tax not state tax meant the federal government had more control and influence over the policy development). Early adopters were also seen to be important in acting as influencers over subsequent adopters.

E-filing of tax returns forms only part of an individual’s interaction with government departments and this study concluded that broader experiences of e-contact with government enhanced the chances of successful adoption of IT.

A Malaysian study into changing to an Electronic Filing system<sup>35</sup> concluded that the level of discomfort with emerging technologies must not be ignored when devising the e-filing system. A good e-filing system, they claimed, needs to be user-friendly, easy



AOLS work will relate to information management rather than just the e-filing element.<sup>39</sup>

## **RESEARCH METHODS**

In reviewing the IT adoption strategies literature the main areas for further investigation therefore are: IT Decisions; pre-adoption / post-adoption issues; ease of use; perceived usefulness, result demonstrability, trial-ability and visibility. These factors should be reviewed in the context not just of tax advisers but also from the perspective of tax authorities and software providers working in the e-filing solutions domain to understand the breadth of adoption factors influencing the tax adviser's choices.

A companion study to this paper<sup>40</sup> detailed a quantitative exploration undertaken with a large number of tax preparers in the UK. While such studies provide good data to describe collective opinions and facts about a population, they are not easily used for in-depth review of issues. The decision was therefore made by the research team to develop the initial perspectives on the quantitative study (Widdows, 2004) and to build on these

3. IT users/e-filing adopters – those who utilise IT in their collection and review systems and who had already adopted e-filing for at least some clients at the time of the interview. (2 interviews – small firm and medium sized firm)

**Delivery of service issues**

HMRC are aware that some software companies have made a considerable contribution to the IT-adoption process through active involvement at all stages of development of the e-filing solution options. This has resulted in increased overall IT adoption rates through the incentive to extend their market share and thereby encouraging slower IT companies to change their tax software products to maintain their client base. For HMRC this approach is more cost effective than taking the lead on these developments within the wide-ranging taxpayer population.<sup>41</sup>

Delegating some of the adoption support work to software companies also means that tax advisers will find that their tax preparation software is better integrated into other accounts preparation software products, to provide a 'joined-up' accounts and tax package. This approach is favoured by all parties as it begins to create the kind of administrative savings that e-filing should be able deliver.<sup>42</sup>

There is a tension therefore between what is best for tax advisers and what,

### **IT Decisions issues**

The tax adviser interviewees covered a range of practices – large / small, IT adopters / non-adopters - and so a range of opinions were reported in the analysis. Those we have classed in the 'IT-adopter/e-filing' type explained and justified their approach to e-filing SA tax returns as simply good business sense. There were several comments about e-filing SA returns as being the way forward, and that in their opinion it "must be the future". One interviewee added a caveat to this however, related to having the correct software and being able to e-file as wide a range of clients and client situations as possible.

HMRC reported that they are aware of these added requirements and expectations, but are concerned in particular about the disproportionate additional costs associated with rarer client situations in developing their system.<sup>44</sup>

The software providers are constantly refining and developing their third party products to enhance the benefits of e-filing, which they considered to be: an instant receipt to confirm filing date, repayments being dealt with within days, knowing that the information is in the HMRC system correctly, no postage costs, in-built 'sanity' checks and validation ensuring the return is unlikely to be rejected by IR.

The non-e-filing tax adviser interviewees did not reject e-filing as a matter of principle. Initial scepticism of the benefits of e-filing SA tax returns had been overcome with familiarity of use (some have been using it now for 3 years and have shared this information across their professional networks), an improved service from HMRC and added functionality of the HMRC e-filing system.

Larger accounting firms, who typically use their own, internally developed, back office management systems, have not been effectively targeted by this roll-out strategy. This is supported by our interviewees where there was no evidence of effective conversion occurring in their firms. It would appear that further work by HMRC is clearly needed if this segment is to be converted to e-filing voluntarily over time. The larger accounting firms typically handle the more complex cases and therefore appear to be being left until a later phase of e-filing development for targeting and direct conversion support.

### **Review of Adoption Factors**

Having reviewed the important issues related to the general process of service delivery and the choice of technology to be used, we next review the specific issues indicated by the IT adoption literature as potentially of relevance to understanding the process and extent of IT adoption in this domain. In this section we explore the extent to which these factors appeared present in our interviewee responses in this particular IT adoption decision and use process.

#### *Pre-adoption / post-adoption issues*

The non-IT adopter tax adviser interviewee in our group was clear in the reasons for their firm not adopting as, in their assessment, e-filing was 'not good enough to change from the current system used' – i.e. e-filing alone was not going to encourage

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<sup>44</sup> The aim to cover 80% of taxpayers was cited as a target for the HMRC provided online submission system leaving rarer/more complex cases for internally developed systems or 3<sup>rd</sup> party provider systems.

them to use more IT in the review process, nor did having an e-filing solution at the end of a manual process justify the change in procedures in and of itself.

In looking in more depth at the reasons behind this general comment it is clear that the type of client was a key factor for this interviewee. They reported that e-filing does not fit with their internal review processes, particularly for the 'complex' end of the client spectrum. There was a perception that if e-filing enables the firm to 'skill down' something may be missed in the review process. Advisers fitting into this group

if insufficient time and effort are spent on integrating systems activities. This may be coded as an *ease-of-use*

client statement is available<sup>47</sup> and no archive of prior year tax returns is kept in the system.

There were concerns expressed by more than one interviewee about the repeated initiatives coming from the tax authority - 'usually headed up by a different team of HMRC personnel' which would ... "then grind to a halt, or are parked, for whatever reason. The HMRC IT system has been 20, even 30 years in development and bits are added on all the time". Overall, however, the interviewees appreciated recent developments related to e-filing, and an example provided in one case related to partnerships where linking the partnership return to the individual partners' returns is particularly useful.

The time-saving aspects of e-filing were commented on by each of our three interviewee groups – HMRC, software providers and tax advisers.

#### *Perceived usefulness issues*

The views expressed on the costs of using e-filing were mixed. The software developer interviewees were promoting a figure of £25 - £100 saving per return compared to non-e-filing solutions, but this required estimates of several potentially wide variables. Comments from our interviewee tax advisers, however, suggested that they expected e-filing to, at best, be a cost neutral exercise, with the costs saved on performing manual calculation and the accompanying administration, being countered by the additional management time spent in reviewing and controlling work flow.

those who have used them, they were not necessarily accessible to all tax advisers and for access to HMRC staff.<sup>49</sup>

#### *Visibility issues*

The desirability of the visibility of being e-filing adopters within or between organisations, and with clients, had only limited importance for our interviewees. Our interviewees were more concerned about whether there is enthusiasm more generally for IT development within their firm, and the personnel to move along the changes required to utilise e-filing solutions and did not generally report concerns about how they are viewed by competitors, or, to a less degree, their clients.

#### *Developments for e-filing*

The final section of our results evaluation addresses issues related to the future of e-filing. We asked our interviewees an open-ended question related to what developments they would like to see occurring related to e-filing.

A range of responses were revealed by this question, however, one that occurred in more than one interview was that e-filing could follow the UK's PAYE and become mandatory. This is, however, unlikely in the foreseeable future, according to HMRC interviewees in our study. Despite this promise, it is worth perhaps noting that legislation brought into force in FA2002 (section 135 – mandatory e-filing) for ePAYE was so presented as to also allow for mandatory e-filing in other areas.<sup>50</sup>

A possible adoption incentive that was again discussed by more than one of our interviewees was a change in the enquiry window to encourage early e-filing.

recommendation of the Carter report<sup>52</sup>, to take effect from 2008, is that income tax self assessment returns should be filed by 30 September on paper or by 30 November online rather than 31 January. Lord Carter subsequently announced that he is to modify this advice however, to instead recommend that the date for SA e-filing should



interviews could provide a wider range of adoption factors to be reported, however, as discussed in the research method section above, it is not clear that key factors have been missed from the study with the level of interviews currently undertaken and supporting confirmatory exploration of the results has indicated.

## CONCLUSIONS

There are tangible benefits to both HMRC and software providers in encouraging tax advisers to change to e-filing for SA tax returns. The focus of this paper has been to consider the reasons why some tax advisers had adopted e-filing, why some are still reluctant to e-file, and the main aspects of the e-filing system as it currently is operating that may need to change in order to persuade the non-adopters to adopt e-filing.

The IT adoption literature has been used as a framework to assess the tax advisers' decisions as to whether or not to e-file their clients' SA tax returns. The findings from the study have clearly identified the two ends of an adopter distribution curve.

At one end of the tax adviser spectrum there are those who are unlikely to adopt e-filing, whatever the incentives, unless required to. These tax advisers are typically practices which have no, or very limited, IT elements to their client management and review processes and therefore fall outside the factors that normally could be said to influence IT adoption decisions. The results of the study as presented above appear to support this from the limited sample used.

At the other end of the IT adopter spectrum there are a similarly small number of tax advisers who consider e-filing to be a core extension of their wider IT framework for their organisation and so they will adopt e-filing, almost irrespective of the costs involved or efforts required to convert. Again, the IT adoption factors provide limited insight into this category of early adopters. The focus of this paper has therefore been on those tax advisers within these two extremes, for whom changes in IT adoption strategies can influence their e-filing decision.

The study demonstrated that the key factors that impact on the decision to e-file for such a diverse group as UK tax advisers are very wide and varied. They include; a conducive working environment with IT being a main delivery vehicle for other office functions, a workforce with an IT motivation – often visible in a firm in the form of an IT champion (overt or covert), and the level and success of experience of working with ELS as an influencing factor on perceptions of usefulness.

Tax advisers interviewed as part of this study were clear about areas that could influence their decisions to e-file SA tax returns. Getting over the apprehensiveness of the reluctant e-filing adopters required good software products that fitted in with other office functions, and overcoming any reluctance to trust the HMRC's IT capabilities and operational efficiencies e.g. attachments and utilising white space effectively. Payments to act as an incentive to e-file, perhaps similar to the 2005 system for PAYE, were considered to be a very effective encouragement and one that tax advisers would welcome. It would go some way to compensate for the added training and equipment costs required to adopt e-filing and address the reluctance of some clients who feel unhappy about adding costs solely for the benefit of HMRC. However, the alternative of offering a revised (shortened) enquiry window was also considered to be potentially of significant impact, even if used without the cash

inducement. Security and privacy were of significant concern to tax advisers but visibility was of little importance.

Overall, for the vast majority of tax advisers, the assessment of the current developments of e-filing SA tax returns was positive. This study has illustrated that e-filing was expected to develop and expand to all but the most reluctant tax adviser practices within the next few years. Payments to encourage e-filing and measures to ensure confidence in HMRC IT systems were the overriding requirements to support widespread adoption of e-filing SA tax returns.