

# eJournal of Tax Research

Volume 4, Number 1 August 2006

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# 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>. It reports the findings from a study that involved three interested groups in the UK; tax advisers, tax authorities and software providers. IT adoption issues, as applied to a wide range of business situations, are considered in detail in order to set the study into context.

The current study, which builds on the findings of a previous UK quantitative study, involved ten in-depth interviews with representatives from the three interested groups – tax advisers, tax authorities and software providers - in order to consider broader aspects of e-filing SA tax returns. The interviews identified that IT adoption is usually a ‘top-down’ decision. The availability of suitable and developing IT tax software is important for tax advisers; as is the perception of the user-friendliness of the HM Revenue and Customs (HMRC) IT system. Pre-adoption concerns for tax advisers mainly centred on how e-filing would fit in with their current practice and the benefits, or otherwise of introducing IT. Post-adoption discussion centred on the wider benefits of IT adoption and the ease of use of the e-filing systems.

Tax advisers in the study were clear about areas that could influence their decisions to e-file SA tax returns. Getting over the apprehensiveness of the reluctant IT adopters required good software products that fitted in with other office functions, overcoming any reluctance to trust HMRC IT capabilities and operational efficiencies. Security and privacy were of significant concern to tax advisers but visibility was of little importance.

Overall, there was a positive assessment of e-filing SA tax returns. The study showed that e-filing was expected to expand to all but the most reluctant tax adviser practices within the next five years.

## **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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<sup>1</sup> We are grateful to an anonymous referee for helpful comments and suggestions for improvement of an earlier version of this article and for the input of the ATTA conference attendees in Melbourne (Faculty of Law) in January 2006.

<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> The Internet based on-line facility for Self Assessment (SA) returns – referred to as e-filing in this article – was introduced on 31 July 2000 and tax advisers have been able to file on-line on behalf of clients since August 2001.<sup>5</sup>

Prior to e-filing, the Electronic Lodgement Service (ELS) (introduced in 1997) enabled tax advisers<sup>6</sup> to file SA returns electronically on behalf of clients. HM Revenue and Customs (HMRC) had committed to support ELS until April 2006 but their stated intention was to withdraw ELS once there is confidence in the new Internet based services. This occurred in April 2006 as planned.<sup>7</sup>

The current study extends the previous work<sup>8</sup> by considering the views of tax advisers, the tax authorities and tax software providers of e-filing SA packages within the UK.

The performance target now requires a take-up rate for SA returns of 25% filed electronically by the filing date for 2005/06, i.e. 2.2m of 8.8m returns by 31 January 2007.<sup>9</sup> The take-up of on-line filing of SA returns was initially very slow and fell well short of the original targets. However, this trend has been reversed and for 2003/04 tax year the returns e-filed by 31 January 2005<sup>10</sup> numbered 1.6m.<sup>11</sup> Nearly 2 million returns were filed online by 31 January 2006 which represented a 38% increase on 2005<sup>12</sup> suggesting that by 2005/06 the revised 25% target will be easily met, if the doubling of submissions in each of the previous two tax years continues to be achieved – as seems reasonable to presume will be the case.<sup>13</sup>

This paper therefore explores the nature of, and processes leading to, adoption of e-filing as a solution decision made by tax advisers in the UK. It's time frame of study is from launch of the e-filing solution option (August 2001) up to and including the 2005/6 tax year in the UK. This study, which builds on the findings of a previous UK

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<sup>4</sup> Ibid.

<sup>5</sup> The actual timing of availability varying depending on whether the tax advisers' tax return software supported Filing By Internet (FBI – referred to in this paper as e-filing throughout) – i.e. from the start or subsequently.

<sup>6</sup> In this paper the terms tax advisers, tax agents and tax preparers are used interchangeably to refer to any third party who is engaged in aiding the taxpayer to prepare and file their SA tax return.

<sup>7</sup> This period was initially announced to be in 2004 (Inland Revenue (2002) Review of Future of Electronic Lodgement Services) but this has been revised twice. However did finally cease in April 2006 – see <http://www.taxation.co.uk/Articles/2005/10/06/50285/Farewell,+ELS.htm>

<sup>8</sup> Lymer A, Hansford A, & Pilkington C (2005) 'Filing by Internet in the UK: The barriers to adoption of filing Self Assessment tax returns by Internet', *British Tax Review*. Vol 5 pp 544-556.

<sup>9</sup> Inland Revenue – Spring Department Report 2004 – Government's Expenditure Plans 2004 – 2006 p 22 (<http://www.inlandrevenue.gov.uk/about/dept-report04.pdf>).

<sup>10</sup> This is the last filing date for the UK's 2003/4 tax year returns (i.e. for the tax year ended 5 April, 2004).

<sup>11</sup> Hansards, 20 Dec 2005, Column 2806/7W - <http://www.parliament.the-stationery-office.co.uk/pa/cm200506/cmhansrd/cm051220/text/51220w42.htm>

<sup>12</sup> see <http://www.hmrc.gov.uk/workingtogether/update-on-sa.htm>.

<sup>13</sup> Lymer et al (2005) – see footnote 8 above – reported annual numbers of returns e-filed as 38,981 (by 31/1/01), 75,449 (by 31/1/02), 335,639 (by 31/1/03) and 708,345 (by 31/1/04).

quantitative study,<sup>14</sup> and involves ten in-depth interviews with representatives from the three interested groups – tax advisers, tax authorities and software providers - in order to consider broader aspects of e-filing SA tax returns.

The following section reviews the IT adoption strategy literature to explore the principles of adoption of IT solutions gleaned from other domains that are potentially applicable to assisting our understanding of e-filing developments. The UK situation is then compared, briefly, with international experiences of e-filing individual tax returns that have been reported in the literature. The research methods used for the study are discussed and then the results are considered in detail within an IT adoption framework developed from the prior IT adoption literature. Conclusions from the study then form the final section of the article that seeks to draw principles from this study potentially applicable in other domains.

### IT ADOPTION STRATEGIES

This section reviews areas of the IT adoption literature potentially relevant to e-filing SA tax returns.

Before attempting to analyse changes in use of filing technologies, the initial starting point for taxpayers and their advisers needs to be considered and factored into their decision to change to e-filing. A recent study<sup>15</sup> addressed the introduction of a website into the existing office practices in order to examine what factors may affect the adoption of a potentially valuable Internet tool. The existing electronic environment in place that was familiar, already well established and working well, impacted heavily on the IT adoption success of the newer technology solution. It is therefore reasonable to assume heavy IT users amongst the tax adviser community (including those who are existing ELS users) may have a different approach to e-filing adoption than those who are not in this category.

Important factors in successful adoption of IT in this patient education helpline context included giving job/task specific examples and cases to illustrate how the tool would be used in specific circumstances and tied to specific job functions and levels of prior IT competence and use.<sup>16</sup> Additionally, individually tailored motivations were offered to encourage wider use of the IT solutions being proposed. While such personalising of the adoption encouragement offered in e-filing's case by HMRC may be harder to achieve than in this specific business's context, given their need to appeal to a wider audience with less direct control over the move into the new technology, the evidence from this case suggests that further support of specific functions common to many businesses may help at least establish a foothold in more businesses from which individual support of new 'champions' may then be fruitful.<sup>17</sup> The patient helpline case paper<sup>18</sup> also makes the point that 'opening the black box' can be a critical element to successful IT adoption in well-established and already successful systems to

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<sup>14</sup> See footnote 8 above.

<sup>15</sup> Shelton, B, Turns, J and Wagner, T. (2002) 'Technology adoption as process: a case of integrating an information-intensive website into a patient education helpline.' *Behaviour and Information Technology*, Vol.21, No. 3 pp 209-222.

<sup>16</sup> Ibid.

<sup>17</sup> HMRC illustrate this approach in outline in the establishment of their industry groups with software partners and, most recently, the banking community.

<sup>18</sup> See footnote 15.

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) 'Perceived usefulness, perceived ease of use, and user acceptance of information technology', *MIS Quarterly*, Vol. 13, Iss.3, pp. 319-339.)
- Ease-of-use : 'the degree to which an innovation is perceived as being difficult to use'
- Result demonstrability : 'the tangibility of the results of using the innovation including their observability and communicability'
- Visibility : 'the degree to which one can see others using the system in the organisation' – or, by extension, related organisations, client practices and so on.
- Trial-ability : the extent to which exploration and evaluation of results is possible before committing to adoption.

<sup>22</sup> See footnote 21.

<sup>23</sup> Turner, L & Apelt, C. (2004) 'Globalisation innovation and information sharing in tax systems: The Australian experience of the diffusion and adoption of electronic lodgement'. *eJournal of Tax Research*, Vol. 2, No. 2, pp.241-269.

<sup>24</sup> Specifically Turner and Apelt (2004 - ibid) use Turner's prior extension of Roger's work from an unpublished PhD thesis where an eight factor conceptual framework was developed

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 strategies for the HMRC as to how they present e-filing to those advisers yet to be convinced of its value to them now this technology has been released. It also emphasises the different starting points for possible adopters and the need to target particular groups accordingly in aiding their particular conversion paths to seeking effective e-filing solutions. It would suggest, for example, that a focused campaign addressing the extra usefulness offered to advisers would be of greater impact in widening adoption of e-filing by tax advisers than a focus on ease-of-use. Similarly, focusing resources on the 'uncommitted' tax adviser rather than the IT-literate user would also reap dividends for IT adoption levels.

Others have called for more focused research on the contextual factors affecting IT adoption success – including the characteristics of the technology, their interaction with the task characteristics, the impact of multiple implementation stages in a process of innovation and so on.<sup>25</sup> These are pertinent issues to this particular case of IT innovation where not only the technology characteristics are changing (manual systems through a proprietary ELS to web-based e-filing) but also the fact that this innovation is being seen by tax advisers as part of an ongoing process of change they can choose to adopt, or not and instead just wait for the next phase to come along later enabling them to 'leapfrog' this (albeit perceived) effectively voluntary, intermediate, stage.<sup>26</sup>

The potential problems associated with IT innovation adoption success are therefore well documented in the wider IT literature.<sup>27</sup>

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that also 'integrated analytical insights from the sociology of translation to enable the analysis and explanation of the diffusion process for policy innovations' (ibid, p243).

<sup>25</sup> See, for example, Kwon, T and Zmud, R. (1987) 'Unifying the fragmented models of information systems implementation.' In *Critical Issues in Information Systems Research*, R. Boland and R. Hirschheim (eds) John Wiley & Sons Ltd, Chichester: UK, pp.227-251.

<sup>26</sup> At the present time neither ELS use nor e-filing by tax advisers is required by HMRC for any clients see the 'Developments in e-filing' section later for further discussion of the implications of this position so far adopted by HMRC in respect of e-filing development.

<sup>27</sup> Other recent papers discussing aspects of IT adoption that provide insight into issues of FBI use amongst UK tax advisers include: Allen, J. (2000) . 'Information systems as technological innovation'. *Information Technology & People*. Vol. 13, (3); p. 210-228; Craighead, C and Laforge, R. (2003) 'Taxonomy of information technology adoption patterns in manufacturing firms'.. *International Journal of Production Research*. Vol. 41(11). pp.2431-2449; McAfee, A. (2002) 'The impact of enterprise information technology adoption on operational performance: An empirical investigation'. *Production and Operations Management*, Vol. 11 (1), Spring 2002. pp. 33-53; Robey, D, and Zmud, R (1992) 'Research on the Organization of End-User Computing: Theoretical Perspectives from Organization Science'. *Information Technology & People*. Vol. 6 (1); pg. 11- 28; Rogers, E. (1995) 'Diffusion of Innovation' (4<sup>th</sup> Edition) NY: The Free Press; and Ziamou, P and Ratneshwar, S. (2002) 'Promoting consumer adoption of high-technology products: is more information always better?' *Journal of Consumer Psychology*, Vol. 12 Iss. 4 pp.341-351.

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% of all sized businesses in the sector indicated successful integration of the Internet into their production or service operation.<sup>30</sup>

#### **e-FILING SA RETURNS; EXPERIENCES IN OTHER COUNTRIES**

The results of studies in USA, Australia and Malaysia provide useful benchmarks against which to contextualise the UK adoption developments.

In a US study<sup>31</sup> the range of enthusiasm for e-filing was explored. The results of this study suggested that social influences play a key role in IT adoption and for some IT is considered to be a social irritant.<sup>32</sup> An important finding from this US study was that decisions to file tax returns on-line are independent of the decisions to conduct other transactions with the government on-line.

The largest group of respondents choosing to e-file were those ‘driven’ by their tax adviser who were able to offer an efficient on-line filing solution and were therefore more likely to use e-filing for all of their clients, whenever possible. This highlighted the importance of encouraging adoption amongst tax advisers by tax authorities and the benefits of focusing development and change strategies that will appeal to tax advisers as well as taxpayers.

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<sup>28</sup> National Office of Statistics (2002) Use of Information and Communication Technologies (ICT) by UK businesses in 2001; sectoral and regional analyses – see [http://www.statistics.gov.uk/downloads/theme\\_economy/TBreport.pdf](http://www.statistics.gov.uk/downloads/theme_economy/TBreport.pdf).

<sup>29</sup> Ibid.

<sup>30</sup> Ibid Table 5.

<sup>31</sup> Thomas D, Manly T & Ritsema C (2004) ‘Attitudes towards E-Filing in Middle America’ Paper presented at the American Accounting Association Annual Meeting, San Francisco, August 2005.

<sup>32</sup> Redmond WH (2003) ‘Innovation, Diffusion and Institutional Change’, *Journal of Economic Issues*, Vol 37, pp 461-474.

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 to gain access to and easy to use in the context of tax compliance. It also highlights the need for tax authorities to be aware of the intended users’ technological readiness to make changes in order to adopt IT systems. These factors therefore feature highly in this study’s exploration of adoption factors in the UK situation.

#### **e -FILING AND SA DEVELOPMENTS IN THE UK**

The above studies re-affirm the conclusions of a widely quoted early study<sup>36</sup> that tax advisers have an important role to play in achieving compliant taxpayer behaviour. Another joint UK study<sup>37</sup> undertaken by Inland Revenue (now part of HMRC) and the Chartered Institute of Taxation (CIOT)<sup>38</sup> again highlighted that greater co-operation between tax authorities and tax advisers can make a substantial difference to the development of better tax policy and practice.

In the UK, from April 2005, e-filing SA tax returns have been moved into the wider Agent’s Online Services (AOLS) system. Given a recognition of the important role of the tax advisers in achieving the UK Government’s electronic services target, the HMRC’s focus has now changed from primarily e-filing alone to the range of e-services that they can offer to tax advisers to help manage client relationships. E-filing of SA tax returns is just one of these services and there is an expectation that 90% of

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<sup>33</sup> See Thomas, Manly and Ritsema (2004) (footnote 31) , page 13.

<sup>34</sup> Turner L & Apelt C (2004) ‘Globalisation, innovation and information sharing in tax systems: The Australian experience of diffusion and adoption of electronic lodgement’ in *eJournal of Tax Research*, Vol. 2, No. 2, pp.241-269.

<sup>35</sup> Lai M-L, Obid S & Meera A (2004) ‘Towards an Electronic Filing System: A Malaysian survey’ *eJournal of Tax Research* Vol. 2, No.1, pp.100 – 112.

<sup>36</sup> Sandford, C. and Wallschutzky I (1994) ‘Self-Assessment of Income Tax: Lessons from Australia’ *British Tax Review* pp213 - 220 .

<sup>37</sup> Hansford A and Jefferies B (2000) *Income Tax Self Assessment Enquiries* London Chartered Institute of Taxation.

<sup>38</sup> Golding R and Hansford A (2001) ‘Improving Self Assessment through Working Together on Collaborative Research’, *British Tax Review* Vol. 6 pp 401 – 406.



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 the quantitative study had revealed with an additional qualitative review.

Ten interviews were undertaken, six with tax advisers who had indicated their willingness to be involved in these interviews following completion of the questionnaire survey, two interviews with key HMRC staff involved in the operation of e-filing in the UK and two interviews with software providers. All interviews undertaken were of a semi-structured nature. A framework of questions was prepared for each group, drawing on the relevant literature and this can be made available by contacting the authors. All interviews were conducted during the first half of 2005 (with the exception of the second software provider who was interviewed at the start of October 2005). The results that follow provide a synthesis of notes taken at each interview by the interview team.

## RESULTS

In this section, the results related to e-filing adoption decisions are presented. For the purpose of analysing the results the tax advisers have been classified into three types to illustrate the possible different approaches to e-filing adoption decisions that may be found amongst UK tax agents:

1. non-IT users – those who have little or no IT use in their collection, review and submission systems for client SA tax returns (1 interview – small firm)
2. IT users but non-e-filing adopters – those who utilise IT in their collection and review systems but as yet do not use e-filing. (3 interviews – 2 medium sized firms, one large firm)

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<sup>39</sup> As at January 2006 17,927 agents had registered to e-file on behalf of their clients via the AOLS scheme and had submitted between them over 600,000 tax returns for the 2004/5 tax year – source: <http://www.hmrc.gov.uk/workingtogether/sa-filing-for-agents.htm> - posted 13th January, 2006 (accessed 19/01/06).

<sup>40</sup> Lymer A, Hansford, A & Pilkington C (2005) 'Filing By Internet in the UK: The barriers to adoption of filing Self Assessment tax returns by internet', *British Tax Review*, Vol. 5 pp.544-556.

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, realistically, can be provided by HMRC within the budget available.<sup>43</sup> HMRC took the decision to work with tax software providers as the primary route to support the tax adviser community. In response, the HMRC portal was therefore primarily designed for non-represented taxpayers. However, this system is less appropriate for tax advisers who would benefit from a system that could be integrated into their 'back office' systems and hence will typically opt for third party software provision.

Two interviewees were in offices where there had been a senior decision not to adopt e-filing as yet and so were classified into an 'IT user/non-e-filing adopter' group by default for the purposes of this study. In both cases of non-adopters interviewed for this study, their firms' decisions not to adopt e-filing at this stage was based on an assessment of their client group and confidence in their current review/filing systems. These tax advisers typically collect (and manipulate internally in their review processes) increasing amounts of information electronically, however, this is not extended to the final stage of the process – i.e. the e-filing itself of tax returns. From a practical day-to-day running of the office, they claim that e-filing holds no perceived benefit for them. Their view is that they had a good, well understood and well operated system (ELS or paper-based submissions) and saw no reason to change at this time

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<sup>41</sup> HMRC have directly involved 3<sup>rd</sup> party vendors on both software provision and banking services support related to e-filing services e.g. in 2003 they advertised for IT partners in 'Government Opportunities' and in Dec 2005 in 'The Banker' to seek partners to aid improvements in banking integration related to e-filing support - Hansards 20 Dec 2005, Column 2807W - <http://www.parliament.the-stationery-office.co.uk/pa/cm200506/cmhansrd/cm051220/text/51220w42.htm>.

<sup>42</sup> The extent to which these potential savings are being in fact actually realised by taxpayers is yet to be determined and could be determined by a follow up study with taxpayers.

<sup>43</sup> No separable budget figure is available for this aspect of e-filing development or support under the wider e-government programme.

**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 therefore are demonstrating a lack of *perception of usefulness*, *ease-of-use* and *result demonstrability* as pre-adoption attitudes, as proposed by Karahanna et al (1999) as likely key factors to be found in this group of agents. Also, no evidence of *visibility* and *trial-ability* factors affecting their decisions was present.

As was expected, contrary views to the non-IT adopter interviewee were expressed by the e-filing/IT adopters and the non-e-filing/IT adopter interviewees. These latter interviewees reported that, even with complex cases, e-filing was considered to be “the way ahead for personal tax returns” and overall they are very happy with e-filing processes as currently on offer to them.<sup>45</sup> The use of legacy software that cannot easily be adjusted for new business practices, however, or continued use of older versions of software pre-e-filing adaptations, may explain the failure to use e-filing amongst non-e-filing/IT adopters interviewed. This suggests that, while *perception of usefulness* and *result demonstrability* seemed strong, they were not pre-adoption factors of adequate influence in the case of the non-adopter group to affect their change to adopter status; rather evidence exists that *ease-of-use* and *trial-ability* were the key factors influencing this decision to not adopt e-filing. No evidence for *visibility* as an influencing factor was found for this group.

**TABLE 1 – PRE/POST ADOPTION ATTITUDE FACTORS FOR E-FILING<sup>46</sup>**

Factors influencing adoption	Pre-adoption (non-e-filers)		Post adoption (e-filers)
	Non-IT users	IT users	IT users
Perceptions of usefulness	X	X	
Ease-of-use	X?	√	
Result demonstrability	X	X	
Visibility	-	-	
Trial-ability	-	√	
Beliefs of usefulness			√
Perceptions of enhancements			√?

A further impacting factor on the adopt/non-adopt position expressed by interviewees related to the merger/de-merger of tax adviser firms in which they have been involved with. Interviewees suggested that this activity can also complicate matters, particularly

<sup>45</sup> These interviewees are primarily users of either third party management/filing providers or internally developed software.

<sup>46</sup> Grey boxes represent adoption factors that the wider adoption literature has illustrated are of little or no significance in pre/ or post adoption situations (i.e. were not tested for in our interviews as the literature argues they are not significant).

if insufficient time and effort are spent on integrating systems activities. This may be coded as an *ease-of-use* factor in the classification used in this research and may exist amongst both non-IT adopters and IT adopters.

When asked to identify any areas of change to benefit e-filing, the committed e-filing/IT-adopters elaborated at length on the benefits they perceived to have gained to their firms, and for their clients, from their decision to move to e-filing. This suggests strong evidence for the IT adoption factor of *beliefs of usefulness*. These interviewees also however, highlighted the problem of not being able to e-file all the pages that may be associated with a client's submission and that e-filing is not available for some taxpayers (e.g. non-domiciled clients and non-resident landlords) suggesting some concerns over *perceptions of enhancements* in their entirety.

Overall, the e-filing/IT adopters considered e-filing to be far better than any manual system, and on the whole, approaching acceptable comparison levels with ELS. However, even within these organisations they admitted to some initial resistance from some members of staff, however, once adoption had occurred, going back was not an option, "...to suggest going back to the manual system, I would have had a riot on my hands". This also suggests that *benefits of usefulness* will have influenced post-adoption perceptions of e-filing.

In reflecting on initial concerns and their current experience of e-filing a typical comment offered by the e-filing/IT adopters was "It [e-filing] must be the way forward - I don't want to have to bother with covering letters etc. and the sooner a complete on-line service is available, the better". Some noted their initial reluctance to change from ELS, but now were convinced of the benefits of e-filing which they considered to be the way ahead. The reduction in paperwork and the speed of tax repayments were particularly appreciated. These factors can again be considered to be *benefits of usefulness* or *perceptions of enhancements* factors.

Overall therefore, evidence seems to have been found in our small sample for IT adopters' factors argued to be important in the IT adoption literature. However, the relevant factors from the literature are much less strongly supported in our sample in the case of non-IT users. Further exploration of the generalisability of these results however, will require further research to confirm.

#### *Ease of use issues*

Given the above results, this section focuses on the experiences of the e-filing/IT adopter interviewees in using the current HMRC e-filing system. Changes and developments in the HMRC website and software provision have been met enthusiastically by tax advisers who have adopted e-filing. The HMRC website was an important factor in the assessment of the *ease of use* of the new system for those using this system to e-file on behalf of their clients. One interviewee referred to a particular Saturday and having to deal with a large number of returns when she could "knock them off very quickly" as the HMRC system was functioning well and was **not overstretched**. Developments in the HMRC website rated as positive have been particularly noticed during 2005.

Some of our tax adviser interviewees had corporate clients and so were able to compare the corporate tax (CT) online filing system to e-filing SA personal tax returns. It was noted that there is additional functionality on the CT system, such as they can view real time statements on CT clients, but for SA e-filing only the last

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. Time issues were a big concern for the smaller firm interviewees where manager level staff (and above) have a greater 'hands-on' role than in larger firms.

There continue to be mixed messages from the tax professional bodies, as the collective representatives of the tax adviser community, over the perceived usefulness of e-filing. Some have taken the view that there is a need to disclose everything, including sending in the accounts, in order to counter an HMRC 'discovery' assessment.<sup>48</sup> This contrasts with the HMRC view who want Standard Accounting Information (SAI) only provided, together with notes for additional items only if relevant. The SAI is a selection from full accounts information typically produced by businesses that HMRC maintain covers the requirements on the tax adviser for full disclosure. Some within the tax adviser community are not convinced that such disclosures are not too general and therefore e-filing adoption strategies are affected by this wider information exchange issue.

The HMRC helpline was considered to be "excellent and as a sophisticated user the problem I presented was complicated – and the helpline was spot-on". Other areas that were commented on in interviews were the 'Working Together' opportunities whereby HMRC and tax advisers were able to discuss issues that arose from their attempts to move to an e-filing solution. While such initiatives were reported as being useful to

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<sup>47</sup> In the UK HMRC provide SA taxpayers with half yearly statements of account shortly before the payment deadlines for half yearly payments in the UK tax cycle (i.e. before 31 January and 31 July each year).

<sup>48</sup> Where HMRC can use the fact data is missing from a client's submission to request a wide range of potentially relevant material they would perhaps otherwise not request seeing.

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. Currently this is 12 months from the final SA filing date (31<sup>st</sup> January), but changing this fixed 12 month window could mean that for a return e-filed in August, the enquiry window would end the following year in August – i.e. 5 months earlier than at present. This would ensure certainty occurred earlier and would 'reward' early e-filers. Discussion with HMRC interviewees demonstrated an enthusiasm for this proposal, but it was pointed out that such a proposal would need legislation changes. A recommendation of the recent Lord Carter report into e-services of HMRC, however, was to do exactly this and to remove this perceived barrier to filing income tax self assessment returns and company tax returns by linking the enquiry window to the date the return is filed.<sup>51</sup>

Changes in the filing deadline would also be particularly welcomed according to more than one of our interviewees due to the significant impact on their work practices of the current, single, 31<sup>st</sup> January SA filing deadline which "...effectively removes 2 months from the working year". Using an incentive to e-file that also encouraged earlier submission would therefore have a double benefit both to HMRC and to the tax adviser as, by encouraging early filing, the adviser's (and HMRC's, of course) workload would be spread more evenly throughout the year. A further

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<sup>49</sup> See <http://www.hmrc.gov.uk/workingtogether/index.htm>.

<sup>50</sup> FA 2002 s135 reads, 'The Commissioners of the Inland Revenue may make regulations requiring the use of electronic communications for the delivery by specified persons of specified information required or authorised to be delivered by or under legislation relating to a tax matter' – i.e. much more vaguely applied than just for mandating PAYE submission would have required alone.

<sup>51</sup> Lord Carter of Coles (2006) 'Review of HMRC Online Services' see <http://www.hmrc.gov.uk/budget2006/carter-review.pdf>.

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 remain as 31 January for online returns and the date for paper returns to be brought forward to 31 October.<sup>53</sup>

The current level of development of e-filing in the UK was considered by the interviewees to be ahead of other EU countries; with only US and Australia more advanced (as they have longer experience of e-filing). Our interviewees were complimentary about the speed of take up of e-filing by taxpayers. Although they were given an “impossible target” for e-filing SA tax returns HMRC is considered to be “one of the best Government departments at internet issues, particularly considering the complexity of the UK tax system”.

The Carter Report<sup>54</sup> also included the recommendation that from 2007/08, computer generated paper ‘substitute returns’ for income tax self assessment should no longer be accepted. This implies the third party software providers will be required to provide an e-filing solution as the only submissable output by default from their systems by that stage.

#### LIMITATIONS AND NEED FOR ENHANCEMENTS TO IT ADOPTION STRATEGY MODELS

This paper attempts to use the results of various prior IT adoption research to explore the factors that are influencing adoption of the new SA e-filing systems in the UK amongst tax preparers. Some limited comparability was found however, only one model (built on the Diffusion of Innovations Theory) has been explored. Recently Ventatesh et al (2003)<sup>55</sup> attempted to integrate eight technology adoption and use acceptance models into what they have called a *unified theory of acceptance and use of technology* (UTAUT). This model distilled the previously proposed IT adoption and use factors (as discussed in this paper from authors such as Karahanna et al, (1999)<sup>56</sup>) into four core ‘determinants’ for technology acceptance. This theory may provide a richer content for exploration of IT adoption and use factors than previous models and is currently the subject of a number of pieces of research exploring the contributions this theory offers to the various models already well tested in the field.<sup>57</sup> The research presented in this paper is being extended to review the extra insight provided by UTAUT as part of the next round of updating and enhancement of this work.

A further limitation of the work provided here is the limited number of interviews undertaken, and therefore interviewees’ perspective analysed. It is possible that further

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<sup>52</sup> Ibid.

<sup>53</sup> Speech given by Lord Carter of Coles at the ICAEW Tax Faculty Wyman Symposium 10 July 2006.

<sup>54</sup> see footnote 55.

<sup>55</sup> Venkatesh, V., Morris, M. Davies G. and Davis F. (2003), ‘User acceptance of Information technology: Toward a Unified View’, *MIS Quarterly*, Vol. 27, No. 3, pp. 425-478, September.

<sup>56</sup> See footnote 19.

<sup>57</sup> For example, see Ray, A, Culnan, M and Foxman, E (2006) ‘Understanding Home Computer User Security Behavior’, Paper presented at the American Accounting Association Information Systems Annual Meeting, Phoenix, Arizona, January.



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.