

## An exploratory study of digitalisation in the UK accountancy practices initiated by Making Tax Digital and Cloud Accounting

Dr Muhammad Tahir Rafique

University of Nottingham UK

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### Abstract

Digitalisation is expected to bring major changes to all businesses and cloud accounting is an emerging technological trend. This grounded theory study explores the impact of the Making Tax Digital initiative and the emergence of cloud-based accountancy software on the digitalisation of small accountancy practices in the UK. Based on the findings, three hypotheses have emerged. First, the Making Tax Digital initiative will have a partial impact on the digitalisation of accountancy practices. Second, clients not accountants control the pace of digitalisation. Third, the adoption of digitalisation is influenced by an accountants' mindset.

**Keywords:** Digitalisation; Making Tax Digital; Cloud Accounting; Grounded Theory; Virtual Accounting.

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### I. Introduction

Digitalisation in Accounting: Study of the status quo in German companies, by KPMG (2017) asserts that keywords such as "digitalisation", "big data" and "data analytics" are omnipresent in the financial sector – regardless of company size and industry. The KPMG report claims that digitalisation will bring major changes to all companies, however real-time reporting, cloud computing, or complex big data analyses do not yet play a large role for most companies. Save for some conceptual papers: Dimitriu & Matei (2015), (Khanom, 2017); and isolated empirical studies: Mizuno & Odake (2016), Lu (2017), and Khayer et al. (2020), cloud accounting remains largely unexplored territory and Making Tax Digital is a relatively new concept specific to the UK tax system.

Cloud accounting is the adoption of cloud computing by the accounting profession to be competitive, dynamic, and proactive according to Dimitriu & Matei (2015). Cloud accounting is also referred to as an *online accounting, web accounting, or virtual accounting system* (Đorđević et al., 2018). Cloud computing is an internet-based service which offers shared configurable resources to cloud consumers on demand (Devi & Shanmugalakshmi, 2020). Cloud accounting is widely acknowledged within the accounting profession and its recognised supervisory bodies (ACCA and ICAEW). Both of their websites offer plentiful resources for the remodelling and digitalisation of small accountancy practices. However, the degree to which cloud accounting is utilised in small accountancy practices is not clear.

Currently, one of the biggest technological trends is the emergence of cloud technology (Khanom, 2017). These are cloud-based solutions with a range of add-ons that integrate with the core product, complemented by access through broadband and mobile networks, which have removed the 'brown paper bag' and replaced it with the smartphone and the tablet (James, 2019). In the 2015 budget, the Making Tax Digital (MTD) programme was announced as part of the UK government's ambition for Her Majesty's Revenue and Customs (HMRC) to become one of the most digitally advanced tax authorities in the world. The MTD requires businesses to submit quarterly tax returns via digital platforms, so software developers launched MTD compliant cloud packages. Even though the implementation of the MTD is significantly behind schedule, the initiative is a major catalyst for digitalisation in the UK (James, 2019). The MTD has been delayed for a variety of reasons, including General Elections, Brexit, and COVID-19. The Value Added Tax element was digitalised in 2019, whereas Income and Corporation Taxes have been further delayed until 2021. However, various software packages are available in the market, for example: IRIS, KashFlow, QuickBooks, Sage, Taxfiler, and Xero are all cloud based and MTD compliant.

Lu (2017) argues that cloud accounting has a significant impact on existing accounting theory and practice. Cloud-based systems are rapidly emerging (Rajput et al., 2020) and cloud computing is no longer simply a buzzword (Brandas et al., 2015) yet the available literature on cloud accounting is scarce. Substantial research on this topic has not been published according to Khanom (2017) because of the novelty of the concept (Dimitriu & Matei, 2015).

The purpose of this study is to explore the perspective and experiences of accountants working in small English accountancy practices regarding the impact of cloud accounting on their clients. This study also attempts to fill the gap that exists in empirical research about the link between MTD and cloud accounting.

The next section reviews the literature and related work. Section three describes the research methodology. The research results and discussion are presented in section four. Section five concludes the paper with current and future work.

## **II. Literature Review**

The fundamental difference between traditional and cloud accounting is the processing and storage of data. Traditional accounting software is generally purchased as a product and installed on each user's computer (Dimitriu & Matei, 2015) whereas cloud accounting is an online service, in which the software and data are located on a remote server and accessed through an internet based cloud application (Đorđević et al., 2018). A cloud-based accounting system offers a shared platform where both client and accounting firms can access the data (Asatiani et al., 2019). A cloud service is an information processing platform (Mizuno & Odake, 2016) which has completely revolutionised the business environment (Garg et al., 2020) as it makes data and software immediately accessible from multiple locations, provided a device is capable of an internet connection (Dimitriu & Matei, 2015; Khanom, 2017).

From a conceptual perspective, cloud accounting provides a series of features which can add a different dimension to accountancy practices. The rapidly advancing digital revolution is yielding unprecedented opportunities for firms to improve their performance, for example, through operational efficiency, better customer service, market development, and innovation (Vu et al., 2020). Accountants need to be able to offer insights regarding client affairs in real time and cloud accounting provides this through financial dashboards (Dimitriu & Matei, 2015). With a network connection, it is possible to access files and software from any device at any time. This in theory, lends any manager with a laptop or smart device (tablet/smartphone) the capacity to access business information systems quickly, therefore contributing to an improvement in collaborative decision making (Strauss et al, 2015).

The flexibility and potential affordability of a cloud-based service makes it specifically attractive to small and medium-sized enterprises (SMEs) that have limited resources (Asatiani et al., 2019). It minimises repetitive administrative processes and frees qualified individuals to share their expertise and knowledge with the marketplace (Dimitriu & Matei, 2015). Since the accounting software and data are located on a remote server, software installation and maintenance on individual computers are not necessary, while data "retrieval" by a large number of users is simultaneously possible at any moment from a large number of devices (Đorđević et al., 2018).

Cloud resources are typically centralised and shared, proving the service to be cost-effective (Strauss et al., 2015). Using cloud technologies has a positive impact by significantly reducing acquisition costs (Lu, 2017), and the maintenance of the hardware and software infrastructure of the company (Brandas et al., 2015). By adopting an online accounting solution, there is no hardware (hard drives, servers or external memory) to maintain and as software is provided over the internet, users are always able to access the most up to date version (Dimitriu & Matei, 2015).

The adoption and implementation of cloud accounting by practitioners is varied according to the available literature. Mizuno & Odake (2016) note rapid growth of cloud accounting in Japan. Khayer et al. (2020), in their empirical study assert that firms are rushing to adopt cloud computing in their processes and operations. Conversely, Tarmidi et al. (2014), in their exploratory study of 329 Malaysian accountants, found that only 30% of the respondents claimed to be familiar with cloud accounting and the adoption of such cloud-based systems was limited to the use of basic applications such as google and dropbox. In their international study employing panel data from 45 countries, Vu et al. (2020) found that most firms which had adopted cloud computing were only using it for email hosting and file storage. Dimitriu & Matei (2015) and Đorđević et al. (2018) in their conceptual papers find the accounting profession to be naturally cautious and sceptical about the adoption of cloud accounting.

Data security, loss of control, and internet speed are identified as main factors affecting the widespread implementation of cloud accounting. Achieving information security within the cloud is not a trivial exercise. When the systems involved are accounting software systems, this becomes much more challenging due to the systems architecture in use, the challenges of proper configuration, and the multiplicity of attacks that can be made against such systems. (Neovius & Duncan, 2017). Users cannot solve the automatic system failure by themselves, requiring the cloud provider to solve this problem. This causes a great deal of trouble for users who need rapid access to data (Lu, 2017). Once the data is lost or damaged by the cloud storage service provider, it is hard for data owners to recuperate economic losses (Wang et al., 2020).

Once the data is outsourced, the lack of control or more precisely lack of ownership of data can endanger its integrity (Garg et al., 2020). The service provider has access to sensitive and confidential data [general ledger, payroll database, and financial database] (Brandas et al., 2015) which generates a feeling within accountants and clients, of a loss of control and a dependency on the provider who is responsible for the maintenance and management of applications etc. (Đorđević et al., 2018). A cloud service, just like any other web service, must deal with both software and hardware failures that may damage client's crucial data. (Garg et al., 2020). Another aspect that causes concern for business owners is the risk of losing internet connection. In this scenario, the business' continuity or performance is dependent on a reliable network and the speed of the data transfer (Dimitriu & Matei, 2015).

Making Tax Digital was initially announced in the 2015 Autumn Statement by the then chancellor George Osborne to digitalise all taxation by 2020, but the initiative was put on hold as the government focus shifted to the 2016 European Union referendum. In 2017, a staggered roll out of the MTD was decided following stakeholder feedback about the change of pace (HMRC, 2020). Gradual introduction of the MTD started with the VAT returns. All VAT registered businesses with taxable turnover above the £85,000 VAT registration threshold were required to submit their quarterly VAT returns in a digital format using MTD compliant software. At the Spring Statement 2019 the government provided a further update that MTD would not be extended to other businesses or taxes in 2020, giving businesses greater certainty and helping them plan (HMRC, 2020). The government also reaffirmed HMRC's commitment to taking a light touch approach to penalties in the first year of the MTD for VAT service.

BEIS (2019) identified the following five structural and attitudinal factors in the SME context that can either drive or impede the adoption of technology: innovation mindset; age and stage; business focus; people; and, processes and capabilities. Two factors directly relevant to this study are explained here. The report noted that businesses with an 'innovation mindset' are more proactive and tend to view problems in efficiency and productivity as a challenge, being more open to new technologies and practices. Existing technological capabilities shape the potential to incorporate new systems and more 'risk averse' businesses will stick to the existing processes.

### **III. Research Methodology**

This section describes the methods used in developing the research, the tools used to gather and analyse the data. A grounded theoretical methodology is used for this research. Corbin & Straus (2008) describe that one of the most important reasons for choosing this methodology is the desire of the researcher to step beyond the unknown and to enter into the world of participants, to see the world from their perspectives and in doing so make discoveries that will contribute to the development of empirical knowledge (p. 16). This methodology is determined by the research aim, which is to explore the implementation of cloud accounting by small accountancy practitioners and their perception of the impact Making Tax Digital has on the accounting profession. This methodology allowed me to explore and make sense of the inner experiences and presumptions of the participants in their 'natural settings' (Charmaz, 2003: p. 251), leading to a deeper understanding of the phenomenon. The contribution to knowledge and practice is grounded in the experiences of the participants. Grounded theory is detailed, rigorous and systematic (Jones & Alony, 2011), and it is about concepts and not accurate descriptions (Glaser, 2012). Since concepts are grounded in data (Strauss & Corbin, 1998), this research approach is deemed appropriate as it stresses the importance of allowing theoretical ideas to emerge from data (Bryman, 2016) and offers a methodological framework to develop 'emergent' theories that are predominately suitable for exploratory studies like this one where theoretical concepts remain undeveloped.

Following the prescribed methods of Glaserian Grounded Theory (Glaser 1978, 2003) empirical data was collected from practicing accountants. Initial inquiries were directed towards the use of Cloud Accounting in general. However, the research became more and more focused towards the impact of related technological developments, focusing on Making Tax Digital. According to Glaser & Holton (2004), a grounded theory researcher listens to participants venting issues rather than instigating discussion about a subject that holds little interest.

Grounded theory research 'involves using multiple stages of data collection' (Creswell, 2014) and Glaser comments that 'all in data' means "...exactly what is going on in the research scene is the data, whatever the source" (Glaser, 2001, p.145). Purposive sampling was initially used which developed into theoretical sampling as concepts and categories started emerging from data. As a growing understanding of the data, concepts, and their properties emerged theoretical sampling was used to determine areas that required further detailed exploration. The first two interviews were 90 minutes each, both yielding rich information. Subsequent interviews became gradually shorter as the study progressed. The interviews were either recorded or transcribed based on the participant's preference. Theoretical saturation, where no new codes emerged, was unsurprisingly reached after 8 interviews as this exploratory study focused on a narrow topic. Constant comparative analysis was simultaneously carried out during data collection and analysis, which required the comparison of incidents

to incidents within the data, to establish an underlying uniformity and its varying conditions, whilst producing codes and categories. In line with classic grounded theory, data was analysed using the open, selective and theoretical coding framework (Glaser, 1992).

The goal in grounded theory is to reach at least the third level of conceptual analysis; the first level is data collection; the second is the generation of categories, and the third level is to discover the core category that organises the other categories, from where a higher level, called formal theory, can be accessed (Glaser, 2002). Grounded Theory can turn out to be a risky methodology if after commencing data collection and analysis, the researcher does not uncover substantial or significant theory (Glaser, 1978). Because of the exploratory nature and narrow focus, this study is not aimed at uncovering substantial theory, but in developing a theoretical account. Glaser (1978, 1994) argues that grounded theory is, quite simply the generation of emergent conceptual categories and their properties integrated into hypotheses resulting in multivariate theory. Hypotheses developed in this paper will be tested in the next research phase to generate a theory on cloud accounting for small accountancy practitioners.

#### **IV. Results and Discussion**

This section presents the results obtained from the research and data analysis, with discussions of the major findings and a presentation of the categories emerged. All participants agreed that digitalisation and automation of routines are re-shaping accountancy practices. Old style desktop versions of accountancy packages will be replaced with cloud-based applications within the coming years. Storing data in the cloud is not seen as alarming and the lack of visibility into cloud operations does not seem to faze accountants and their clients as they rely on the stringent procedures adopted by the service providers. On the issue of saving data in cloud, one participant gave this pertinent answer: *"...some of the clients don't care, some of them don't want to know, some of them you have to educate, it goes beyond them, some of them don't even know what the cloud is, they think it is something that cause the rain"*.

Conversely, one firm decided not to use cloud accounting specifically for data safety reasons. The participant explained; *"...we had concerns about the security of our clients' data held by us. Now we have control over our server and if there is a problem, we can ask IT guys to have a look. When it is on cloud, what we do? We didn't want that"*. The fear associated with lack of control is consistent with the observations of Lu's (2017) and Neovius & Duncan (2017).

The participants are generally satisfied with the internet speed and IT facilities available to them except three, who are operating from: the rural countryside, outskirts of a city, and a major city centre. These participants claim that a lack of investment in IT infrastructure is a barrier to the digitalisation of accountancy practices. Speed of data transfer and reliability of the network influences the business performance according to Dimitriu & Matei (2015) and the immediate 'on-demand' access provided by the cloud (Đorđević et al., 2018) is futile without the requisite IT infrastructure in place. Furthermore, client specific factors should not be overlooked.

*"Majority of our clients are farmers, in their 60's, they don't want new technology, they just bring their records to us"*.

*"Our clients have old way of working...they rely on our book-keeping service"*.

*"My clients are not using any software that is cloud connected, because some of the clients may have 150 or 200 invoices, they wouldn't be scanning everything. They find it time efficient and easy way of dropping the books in, rather than scanning and uploading"*.

Some clients have already invested in this desktop-based accountancy software and inhouse servers. This setup does have value in use but contains virtually no resale value and the money invested in the current setup will have to be expensed through profit and loss, resulting in a lower profit while at the same time upfront investment in cloud technology will be viewed as an additional burden on clients.

Dimitriu & Matei (2015) assert that the accounting profession should evolve in line with these transformational cloud accounting solutions, yet accountants are not accepting this reality because of traditional scepticism. The findings of this study suggest that the pace of digitalisation is not merely hindered by scepticism but there are fundamental economic and human factors that cannot be disregarded. The revolutionary effect of digitalisation has brought the accounting profession to a crossroads and three major hypotheses have emerged:

##### ***H.1: Making Tax Digital will have a partial impact on the digitalisation in accountancy practices***

The idea of MTD was floated in 2015 with the ambitious plan of a fully digitalised tax system by 2020. The European Union referendum in 2016 and UK general elections in 2017 put MTD on the back burner. In 2017, the government reiterated its aim to digitalise the tax system but at a slower pace in response to the 'feedback from stakeholders' (HMRC, 2020 p.4). In the first instance, VAT submissions were prioritised and start date of April 2019 was set. However, at that stage, HMRC did not have the IT infrastructure to test the MTD service and MTD compatible software. In April 2018, HMRC launched a live pilot of the MTD VAT

service but the feedback highlighted design flaws. HMRC redesigned certain elements and published a step-by-step guide (HMRC, 2020). A report by HMRC accepts the unplanned downtime due to technical issues since the MTD VAT service went live in 2019. A 'Soft landing period' meant very limited repercussions for non-compliance was introduced for the first twelve months and a HMRC (2020) report confirms that no business was penalised in the soft-landing period. However, with the COVID-19 impact on businesses, the soft-landing period is now being extended until April 2021. A combination of the factors listed above has significantly delayed the MTD project. The participants claimed that it was the 'usual incompetence' 'they [HMRC] always mess up'.

*They [HMRC] originally planned to bring in self-assessment from 1<sup>st</sup> April [2020], then Brexit came in and they were nowhere near ready, they still aren't ready for the self-assessment. They are saying in 2020, I don't think it is going to be 2020.*

As one the participant predicted, the MTD of personal tax is deferred until April 2021. The trajectory of the MTD progress casts doubts over the politicians' ability to think through large scale plans like the digitalisation of taxation and the government departments' competence and capacity to implement such plans.

HMRC website lists 444 different software that are recognised as compatible for the MTD submissions, broadly divided into two categories: (1) Record keeping software and (2) Bridging software. Record keeping software updates and stores clients' records digitally and works directly with HMRC systems allowing the client to file a VAT return. On the other hand, bridging software works with non-compatible software like spreadsheets or other desktop bookkeeping packages and allows the client or their accountant to send the VAT returns digitally in the HMRC required format. So, the businesses or their accountants do not need record keeping software and the installation of cloud software is not necessary.

*So, some of them [clients] do their own VAT, so what they will do is they will send me the final file and then I will submit it for them as an agent [via bridging software].*

Some businesses do not seem to be in a hurry to replace their existing desktop-based accountancy software with MTD compliant cloud versions if their accountant has the facility to make a submission via bridging software. Some businesses will maintain the current situation for now and will duly adapt (Dimitriu & Matei (2015) at their own pace. Hence, it is hypothesised that MTD will only have a partial impact on the digitalisation in accountancy practices.

## ***H.2: Clients, not accountants control the pace of digitalisation in accountancy practices.***

Two strands indicate that clients influence the digitalisation in accountancy practices. Primarily, where clients are using cloud accounting, the accountants must ensure compatibility with the clients' cloud software. According to one participant, staff training and offering compatibility for clients' chosen software is not that difficult.

*"...in my personal view, all cloud software has similar technology, it is just the front interface that is different for each company".*

One participant had never used cloud accounting before, but had to start using it when clients had the software installed; *'...one or two clients started going on Xero, they provided us access to Xero so we could log on and take the information that we needed from there'.*

Another participant said the following:

*'We have got several clients who are using different modules [cloud software] and they want to stick with that particular piece of software....all we have to do is connect the cloud correctly to their data management system and just pull the relevant information'.*

The second strand shows that some clients are hindering digitalisation in accountancy practices. A BEIS (2019) report identified that orientation towards profits or other values shapes openness towards integrating new procedures. In some cases, clients feel comfortable going to the accountants' office to discuss their business plans in face to face meetings. Statements like: *'For some clients, it is not about fees, it is about relationships'; 'Our clients are more like friends, they like to come and see us for advice from time to time'; 'They [the clients] value us not only as a professional but at the same time as a close friend'* indicate that certain social values take priority over profit. Digitalisation will hamper physical interactions and could result in impacting the exceptionally cherished relationships. In some cases, these relationships involve the accountants attending social and family events organised by their clients, including weddings, Bar mitzvahs and funerals. The participants state:

*'Clients do invite and sometimes you have to go'.*

*'...it is all about relationship building, about gaining the trust of the client, once they trust us, we are there year after year'.*

*'...when they [the clients] come to drop the books off, they might have chat for fifteen to twenty minutes as well, discuss their financial situation, may be accounts or VAT or discuss their other business issues'.*

As cloud accounting is bound to minimise the need for face to face interactions, therefore the frequency of scheduled meetings with clients will reduce. There is a chance that those clients who take solace from meeting their accountants might try to slow down the digitalisation process. At the same time, where accountants have invested in building life-long relationships with their clients could defer digitalisation to keep their clients onboard.

**H.3: Adoption of digitalisation is affected by the accountants' mindset.**

Some participants were tenacious users of cloud technology whereas others described themselves as 'in transit phase'. Those with the 'innovation mindset' (BEIS, 2019) have a proactive approach to new technology, as can be seen from the following quotes: 'I do believe in technology', 'I always like to be ahead of the curb for IT'

*'About 15 years ago, our firm looked into the idea.... we thought it is quite a modern thing and would give us a head start...but at that time, technology was not advanced, internet speed was slow'*

The firm abandoned the idea at that time, but remained interested in the technological advancement and digitalisation. When cloud software was relaunched, they were the first one to adopt. '[... there are] several companies in the market so you have choice, initial issues are resolved and further developments made, the internet speed has gone up and the storage is phenomenal'.

All participants agreed that cloud accounting is 'in the developing phase'. The software does not offer full desktop functionality in comparison to the non-cloud ones. Account production, payroll, and taxation software are rated differently by the participants (in terms of user friendliness and additional features) and in some cases, the practice is using more than one software from different providers.

*'I use Sage for account production with the book-keeping package.... for VAT, Sage doesn't provide the connection for what I need, so I have got another package called Taxfiler'*

On the other hand, the accountancy practices in transit phase, seem to be more 'risk averse' (BEIS, 2019), they rely on the existing technological capabilities for bookkeeping, payroll, account production, and VAT calculations, but use a bridging software to comply with HMRC VAT submission requirements. The focus seems to be on the factors that impede the adoption of cloud accounting, i.e. waiting for a holistic package, staff training, lack of availability of fibre optic broadband, and cost:

*'...we still have no fibre optic broadband'*

*'.... the cost of replacing the server is 8 to 10 grands and for a small business like ours, it is a lot of money'*

Whereas the accountancy practices that do use cloud accounting, seem to have a different mindset.

*'.....we give our clients a good discount, more discount if they use KashFlow as we are [kashflow] partners and KashFlow connects to [our] main accounts production package. All we need to know is if the client is entering the data correctly. After few checks we can prepare the account easily and quickly... because it saves us time, we can pass on the discount to the clients.'*

Those who are using cloud based solutions seem to focus on the positive aspects and benefits it brings to the client and the accountant, whereas those who are in the transit phase are waiting for the complete package, prices to drop, and IT infrastructure to improve.

## V. Conclusion

Digitalisation in accountancy practices is inevitable. It is already happening to varying degrees. The pace is determined by the factors exclusive to the practice, including: their clientele, nature of relationship, future-plans, geographic location, IT infrastructure, and personality traits of the decision makers.

Making Tax Digital is a government initiative with political connotations. Persistent delays in the implementation of a fully digitalised taxation system are giving a rather mixed signal to the accountants and their clients about the resolve and capacity of HMRC. At the same time, the cloud software developers, even though they have made their software MTD compliant, face a need to continually evolve such areas as the functionality, user friendliness, flexibility to interact with other systems, and cost of individual packages. One provider might have a fantastic account production software but with poor payroll or book-keeping functions. The adaptability and compatibility of the cloud accounting software is an important factor in the digitalisation in accountancy practices.

Finally, the limited nature and small scale of the study must be recognised, as its initial scope lies in an exploration of the impacts of cloud accounting on small accountancy practitioners. We insist on the fact that the research hypotheses need to be validated in subsequent research.

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