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Emphasizing the rising importance of digital technologies for delivery of accounting services

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Abstract

Research Question: How is the accounting profession engaging with digitalization for delivery of services? How is digital transformation of accounting firms impacted by the Covid-19 outbreak?

Motivation: Nowadays information and communication technologies are vital for companies to carry out their business operations. In a dynamic business environment, the speed of information production, the accuracy, immediate access to information, instant communication and electronic data transfer are crucial. In times of crisis, characterized by uncertainty, social and economic imbalances, managers need the financial and non-financial information much faster, more frequent and with a higher level of detail in order to make prompt decisions and ensure the business continuity.

Idea: I investigate the rising importance of digital technologies for delivery of accounting services using the theory of change as theoretical framework in the context of Covid-19 pandemic as a strong pressure that forced the companies to accelerate their digitalization process.

Data and tools: My methodological approach involves a qualitative analysis of data collected from semi-structured interviews with 21 professionals working within accounting firms.

Findings: Following the theory of change, the results indicated that Covid-19 pandemic put high pressure on people to change their perceptions and behaviour and they adapted quite well and fast to the new reality characterized by social distancing. Digital technologies played a key role in helping organizations to carry on their activities and overcome the people's resistance to the changes related to work, mobility and social interactions. According to the conceptual model, digitalization process within the companies was accelerated and digital transformation was achieved by engaging technologies, employees and clients. Some companies embraced outsourcing due to the loss of staff and the need to save money. Several accounting firms implemented telework and they exchanged documents and reports with their clients in cloud. The use of digital technologies enabled many accounting firms to gain new clients located in other cities. Moreover, some accounting firms adopted robotic process automation and even hired remote professionals from other cities because of labour shortage.

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Contribution: This research complements the literature related to digitalization in accounting and outsourcing of accounting services due to Covid-19 outbreak. Digital technologies have opened new avenues for outsourcing of accounting services and helped some companies to overcome their shortage of professionals.

Practical implications: This study has implications for accounting firms, employees and clients since the use of digital technologies removed the physical location constraints and brought remote collaboration opportunities.

Keywords: cloud accounting; robotic process automation; online meeting applications; accounting outsourcing; remote services; telework

JEL codes: M41; M55; O33

1. Introduction

In our modern business world, change is the necessary condition that companies have to meet in order to evolve and within organizations the success of change depends on the people and technologies involved. Accounting plays a key role within the business since it provides the financial and non-financial information that is used to assess the past actions and prepare for future decisions (Hall, 2010).

Accounting information can be delivered by internal and external accountants and most small and medium-sized enterprises tend to outsource their accounting services (Barrar *et al.*, 2002). The outsourcing decision of accounting services is mainly driven by the reasons such as cost reduction, access to expertise, focus on core business and flexibility (Zandi *et al.*, 2019). In times of uncertainty the companies manifest an increased demand for guidance and advice from internal and external accountants in order to meet their goals (Robson & Bennett, 2000). External accountants represent the main source of information and advice for small and medium-sized enterprises (Dyer & Ross, 2007).

In case of small and medium-sized enterprises, external accountants besides providing regular accounting activities they also play the role of business advisors (Gooderham *et al.*, 2004). Larger companies compared to smaller companies use to outsource a smaller number of accounting activities, namely only those that require a high level of expertise (Everaert *et al.*, 2007). Digitalization in accounting can ensure near real-time information and allow making more timely interventions in the plans, business operations (Knudsen, 2020) and automation can decrease the processing time of documents and deliver information faster (Cooper *et al.*, 2019).

In the context of Covid-19 outbreak, due to physical distancing and mobility restrictions, the companies were forced to accept new ways of interaction, working and trading (Ernst & Young, 2021). In times of crisis, characterized by uncertainty, social and economic imbalances all stakeholders needed financial and non-financial

information more often and at a higher level of detail in order to assess the existing situation, explore alternative business scenarios and minimize the risks (Velayutham *et al.*, 2021). Updated information and consultations with the experts are needed in order to make fast and good decisions and ensure the business continuity.

During Covid-19 pandemic the role of accounting to reveal the accurate and entire truth was more emphasized since managers relied on the figures provided by accountants in their decision-making process (Leoni *et al.*, 2021). In these dark times, accountants provided ongoing support to their clients and reinforced the call of accounting to do good to society (Ahrens and Ferry, 2021). Covid-19 pandemic came with a lot of challenges. People usually resist to major changes, but in times of crisis they adapt quite fast and well to changes (Lewin, 1947). During lockdown many employees experienced depression and anxiety and some of them engaged in a workaholic behaviour as a coping mechanism for their depression and anxiety and ignored the risk of acquiring the burnout syndrome and put their health at risk (Rinaldi, 2022).

In times of financial crisis companies tend to use earnings management techniques (De Luca & Palone, 2019), but external accountants can restrict their clients to use these practices and encourage them to comply with tax regulations (Höglund & Sundvik, 2016). Due to remote work and digital delivery of services during Covid-19 pandemic the use of cloud applications increased significantly in sharing data and information between parties (Carungu *et al.*, 2021). Most companies in order to survive and ensure the business continuity engaged in organizational transformation applying measures such as retaining the key employees, implementing digital solutions and outsourcing some business support functions (Robles, 2020).

After reviewing the relevant scientific literature on themes such as digital technologies and the impact of Covid-19 on social and economic level and having my preliminary interviews I found that research area related to the impact of Covid-19 pandemic on the use of digital technologies for delivery of accounting services is underexplored and considering that gap existing in the literature I decided to conduct this research in order to expand the body of knowledge.

The aim of this study is to investigate the rising importance of digital technologies for delivery of accounting services by having in view the changes that occurred in the provision of accounting services due to Covid-19 outbreak and I presented a comprehensive picture consisting in three dimensions: technologies, employees and clients. My methodological approach involved the use of the theory of change as theoretical framework, accounting services market under Covid-19 pandemic as research context and semi-structured interviews as research method and I engaged 21 professionals working within accounting firms.

Considering the aspects mentioned before, in this paper I sought to answer the following two research questions:

RQ1. How is the accounting profession engaging with digitalization for delivery of services?

RQ2. How is the digital transformation of accounting firms impacted by the Covid-19 outbreak?

Having in view the theoretical framework consisting in the theory of change, my findings showed that Covid-19 pandemic put high pressure on people to change their perceptions and behaviour. The adoption of new regulations and rules related to work, mobility and social interactions made people to overcome their resistance to change since they adapted quite well and fast to the new reality characterized by social distancing. Under many pressures and restrictions caused by Covid-19 outbreak, digitalization process within the society was accelerated because people had to accept digital technologies for social interactions, working, shopping, selling and making payments in a much higher extent than they used to do before.

Considering the conceptual model of change, digital transformation within the companies was achieved by engaging repeatedly technologies, employees and clients. In order to achieve business resilience some companies were determined to resort to outsourcing of accounting services due to the loss of staff and the need to save money. Delivery of remote services and online meetings has become very widespread. Several accounting firms adopted telework and most clients submitted documents in cloud and they had online access to reports. Digital technologies like cloud computing, robotic process automation and online meeting applications brought new opportunities for outsourcing of accounting services. The use of digital technologies removed the physical location constraints and made the companies more open to embrace remote collaboration. As a consequence of that many accounting firms gain new clients located in other cities. Some accounting firms implemented robotic process automation and even hired remote professionals from other cities to cope with the shortage of professionals. Moreover, due to remote or hybrid work smaller accounting firms concluded new lease agreements for smaller office spaces and reduced the costs.

The reminder of this paper is structured in four sections. The first section presents the review of scientific literature and the theoretical framework. The second part introduces the research context and methodology used to achieve the purpose of this research and answer the research questions. In the third section the focus is on the results of this study and discussions on the findings considering also the prior research. The final part is dedicated to the main conclusions, limitations of this study, implications, recommendations and directions for future research.

2. Literature review and theoretical framework

2.1 Literature review

Accounting information represents a major part of the information set that managers use to gain knowledge about the company and the market performance in order to assess the past actions and prepare for future decisions (Hall, 2010).

Having in view the main options for the provision of accounting services Barrar *et al.* (2002) argued that accounting function can be carried out by own employees, staff of shared services centres or external accountants. When it comes to the outsourcing reasons, the companies which are engaged in outsourcing agreements, emphasized that they made those decisions because of the need to reduce the costs, have access to external experts, focus on core competences, improve the business processes and gain flexibility in case their activity grows or shrinks (Zandi *et al.* 2019).

Almost in all papers, both in older and recent studies the researchers have approached the outsourcing of accounting services by making the distinction between outsourcing motivations and decisions related to small and large entities and regarding local and international companies (Barrar *et al.*, 2002; Bennett and Robson, 2005; Cahyaningtyas *et al.*, 2020; Dyer and Ross, 2007; Everaert *et al.* 2007; Gooderham *et al.*, 2004; Höglund & Sundvik, 2016; Juntunen *et al.*, 2021; Marriott & Marriott, 2000; Munjal *et al.*, 2019; Rezazade *et al.* , 2023; Zandi *et al.*, 2019).

As regards the outsourcing reasons in case of smaller and larger companies, Everaert *et al.* (2007) mentioned that the access to external expertise is an outsourcing motivation which is more specific to large companies, since compared to small and medium-sized enterprises, big corporations tend to outsource a smaller number of activities and especially those requiring high specialized knowledge and skills. In other paper with reference to the business size of the clients being interested in external accounting services, the same researchers Everaert *et al.* (2010) found that small companies usually resort to full outsourcing, whereas most medium-sized and large companies choose selective or partial outsourcing considering the cost and the information need frequency in carrying out daily business transactions.

In respect to the role of accounting function, Dyer and Ross (2007) found that external accountants represent the main source of information and advice for small and medium-sized enterprises and these companies are more likely to seek external advice to fill their internal expertise gaps and ensure the growth of the business.

Furthermore, Gooderham *et al.* (2004) argued that in many countries external accountants play also the role of business advisors for small and medium-sized enterprises in addition to providing them the regular accounting services such as recording and reporting.

Many years ago, Robson and Bennett (2000) emphasized the idea that companies being in the startup, growth and restructuring phases, due to the high level of uncertainty, manifest an increased demand for guidance and advice from internal and external accountants in order to meet their goals.

A study conducted by Marriott and Marriott (2000) showed that small companies that are managed by the owners tend to use the services provided by external accountants mainly to fulfil their statutory obligations and only in few cases these experts are asked by the owners to guide them in managing the business. In addition to that some researchers like Bennett and Robson (2005) indicated a positive relationship between service quality, trust, client satisfaction and client intention to use again and again the services rendered by external accountants.

Some recent studies have shown that outsourcing of accounting services can lead to an increase in the financial performance achieved by the clients of accounting firms in case of those companies that receive on a regular basis advisory services related to their business plans, partners and transactions (Cahyaningtyas *et al.* 2020; Munjal *et al.* 2019; Rezazade *et al.* 2023).

As regards the satisfaction degree manifested among the clients, there are authors like Juntunen *et al.* (2021) who emphasized that for successful outsourcing arrangements it is important for accounting firms not to assume, but to make sure about the client's needs through constant communication and after that to consider the client's category then to deliver high quality service aiming to improve the client's satisfaction. Moreover, these researchers mentioned that accounting firms not being able to identify their discontent clients on short term will miss the possibility to deliver them additional services and on long term will lose those unsatisfied clients.

From time-to-time companies face crises that can disrupt them from achieving their goals and according to Kothari and Lester (2012) those financial, personnel, organizational, technological and natural crises can threaten the stability and the development of the company and its success by affecting the conduct of the business operations. On the role of accounting and auditing, Venter *et al.* (2018) mentioned that these two play an important role in the economic development of the countries since they promote financial reporting integrity and tax compliance which are followed by more capital inflows in the economy brought by investors and the state.

Considering the behaviour manifested by the companies in time of financial crisis, some authors like De Luca and Palone (2019) observed that large companies tend to resort more to earnings management practices that increase the profitability in order to show investors, lenders and other business partners a good performance, while small and medium-sized enterprises have the propensity to use more earnings management practices that decrease the profitability in order to reduce the corporate income tax since for these companies taxation is an important component of the business strategy. Furthermore, in their study Ball and Shivakumar (2005) stated that private enterprises compared to public companies are more likely to engage in earnings management practices since in case of private corporations there is less external monitoring, the market pressure to report high profits is missing and, in most cases, their financial statements are not available for the large public. On the same subject of earnings management, empirical evidence showed that outsourcing of accounting services led to an increase in the tax reporting quality since accounting firms can restrict their clients from using tax earnings management techniques and provide them the necessary support to comply with the tax regulations (Höglund and Sundvik, 2016).

Regarding the information request from clients in times of crisis, Velayutham *et al.* (2021) indicated that all stakeholders need to receive financial and non-financial information more often than usual and at a higher level of detail in order to assess the existing situation, explore alternative business scenarios and minimize the risks. They also emphasized that companies were more open to seek external advisors and ask their support in order not to navigate through these dark times just on their own. Research conducted by Johnstone-Louis *et al.* (2020) revealed that in times of crisis, companies having the main focus on financial profit are enticed to cut the staff costs and by doing that they fail to recognize, protect and value their employees since without the support of their staff, these companies are not able to achieve the business resilience and recovery.

According to Rinaldi (2022), Covid-19 pandemic started as a global health issue and caused a major social and economic crisis due to large number of sick and dead people, lockdowns, layoffs, poverty accentuation, depressed people, business interruptions, disruption of supply chains and business shutdowns. In his opinion, during Covid-19 pandemic, the importance of information and communication technology increased exponentially since the companies had to implement digital solutions in order to keep their business running and complying with the safety requirements imposed by the authorities.

With regard to digitalization, Knudsen (2020) claimed that the speed of delivering accurate and complete accounting information is crucial in order to make timely decisions since the business environment is dynamic and competitive. In his opinion digitalization fits very well to accounting since it deals with large volumes of data

and the implementation of digital solutions within the company can ensure more real-time information. Bringing into attention the subject of task automation, Kokina and Blanchette (2019) found that large companies use robotic process automation (RPA) tools also known as software bots for repetitive and rule-based tasks in order to increase the speed of transactions, produce more accurate information in a shorter period of time and comply better with the business rules and regulations. Additionally, Cooper *et al.* (2019) indicated that large accounting firms have already implemented RPA solutions in order to increase work efficiency and effectiveness. The results of their study showed that implementation of RPA did not reduce the headcount but decreased a lot the processing time consumed before by employees to carry out repetitive and mundane tasks and that change made the employees feel more satisfied regarding their new roles and tasks and increased the employees' retention.

On the same subject of digitalization there are recent papers approaching the use of cloud technology for delivery of accounting services and the authors focused on the benefits and risks associated with cloud technology and how cloud computing could influence the outsourcing decision made by companies in respect to accounting services (Asatiani *et al.*, 2019; Yau-Yeung *et al.*, 2020; Ma *et al.*, 2021). These researchers reported their findings mostly from the perspective of small and medium-sized entities indicating that the benefits of cloud technology are related to real-time collaboration and remote access whereas the risks regard data security and the companies using cloud applications to carry out daily business transactions are less reluctant to the option of transferring some accounting activities to an external provider through outsourcing.

As regards the impact of humanitarian disaster on the working approach of accountants, Carungu *et al.* (2021) observed that in times of Covid-19 pandemic, accountants adapted quite fast and well to the new working conditions such as remote delivery of services and virtual meetings with the clients and colleagues. They outlined the importance of cloud and remote connection applications in sharing data and information between parties. According to Leoni *et al.* (2021) the role of accounting to reveal the accurate and entire truth is emphasized even more in times of crisis since accountants as key actors have the responsibility to show the figures just as they are, hinder the waste of resources, mitigate the risks of opportunistic behaviours and facilitate the business resilience and recovery.

In their paper on accounting and accountability in times of crisis, Ahrens and Ferry (2021) mentioned that in many countries, governments provided financial support for companies struggling with the negative effects of Covid-19 pandemic, aiming to avoid the occurrence of the bankruptcy in chain within the economy. In their opinion accountants were supportive since these companies were asked to submit application forms online accompanied by financial reports and business plans. After the application approval the companies received financial resources from governments

in form of grants or loans in order to make investments, keep the business running and provide work to the employees.

During Covid-19 pandemic the importance of accounting function increased a lot since the managers asked the accountants to give them more advice and provide them the necessary support in monitoring and controlling the business activity in order to ensure the business continuity under those difficult economic and social conditions (Leoni *et al.*, 2021). Having the focus on the impact of Covid-19 pandemic on people's life, Rinaldi (2022) mentioned that Covid-19 outbreak affected people on a deep personal level and most individuals experienced frustration and anxiety because of the sudden shift of working practices, mobility or travel restrictions, physical distancing measures and new forms of social interactions. He argued that some people engaged in a workaholic behaviour in order to cope with the frustration and anxiety caused by these constraints related to personal freedom and they ignored the risk of acquiring the burnout syndrome.

Under Covid-19 pandemic most companies in order to survive and ensure their business continuity engaged to a large extent in organizational transformation which involved the measures like retaining the key employees, implementing digital solutions and outsourcing business support functions such as accounting, payroll and IT services to reduce the costs and rely on experts to use the best practices (Robles, 2020).

2.2 Theoretical framework

Considering that Covid-19 pandemic caused major changes within the business environment, on social, economic and technology level and challenged the economies all over the world, I chose to use the theory of change developed by Lewin in 1947 as theoretical framework.

This theory is suitable to explain mostly all type of forced or voluntary changes that happen in teams, organizations and society. The theory of change was used in prior research in accounting and management, for example Adams and Whelan (2009) used this theory for studying the future changes in corporate sustainability reporting due to the pressure coming from stakeholders and Bakari *et al.* (2017) for investigating the planned organizational change and the role of employees' perceptions and behaviour. The theory of change has in view the change of perceptions, attitudes and behaviours as a result of the interaction between two forces identified as resistance to change and adaptation to change. Lewin (1947) believed that companies need to change and adapt on a regular basis considering the evolving business environment, if they want to be successful. Since the companies are made up of people working together, the implementation of the change within the company is possible by changing the perceptions, attitudes and behaviours of the employees.

According to Lewin (1947), people usually resist to major changes, but in time of crisis they adapt quite fast and well to changes. As regards the change, there are driving forces and resisting forces and the change only occurs when there is a strong motivation or pressure to embrace the change. In case the change is required by a law or a regulation since the organization has the obligation to comply with that law or regulation, the managers have to find the ways to reduce the resisting forces and then implement the change (Adams and Whelan, 2009).

The management model of change proposed by Lewin (1947) consists in three steps: unfreeze, change also called transition and refreeze showed in Figure 1. He defined these three steps by making analogy with an ice block where unfreeze involves melting the ice block with the purpose to obtain a new shaped ice, change means pouring the water into a new mould and refreeze involves freezing that new mould with the water inside in order to get the desired shaped ice.

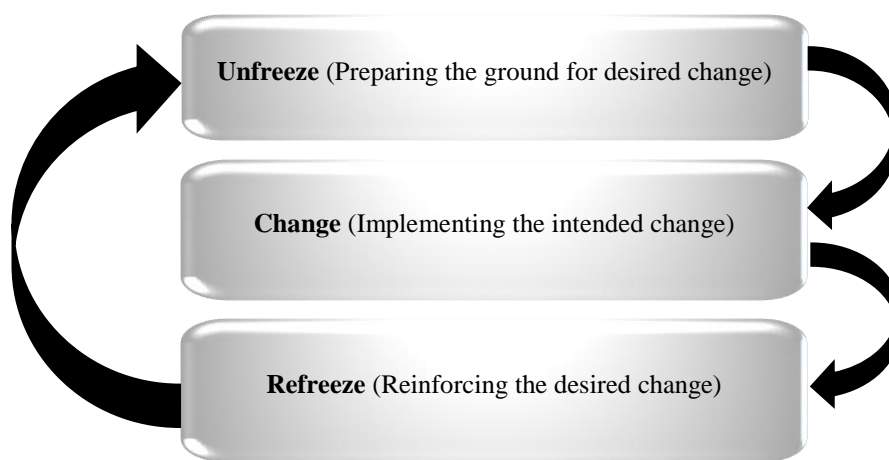


Figure 1. The steps of the change process

Source: Own creation based on Lewin's theory of change

If I apply these three steps (unfreeze, change and refreeze) to the context of Covid-19 pandemic, I observed that Covid-19 outbreak was a strong trigger for the change and the use of digital technologies in a greater extent than before. The adoption of new regulations and rules related to work, mobility and social interactions represented the unfreeze step. The people incorporated in their behaviour the requirements stipulated within the new regulations and rules and that was an indication of change phase. The repetition of the new learned behaviour regarding work, mobility and social interactions consolidated the change.

During Covid-19 pandemic the authorities imposed more restrictions and each of them had in a lower or greater extent implications on how companies ran their

business considering the main pillars that are represented by technologies, employees and clients. Furthermore, I developed the conceptual model of change in Figure 2 that has in view technologies, employees and clients due to the strong relationship between these three determinants of the change process.

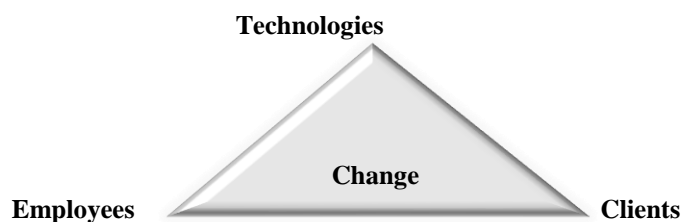


Figure 2. The conceptual model of change

Source: Own creation

3. Research context and methods

3.1 Research context

The aim of this study is to investigate the rising importance of digital technologies for delivery of accounting services by having in view the changes that occurred in the provision of accounting services due to Covid-19 outbreak and to present a comprehensive picture involving three dimensions: technologies, employees and clients. In doing so, I used the theory of change as theoretical framework, accounting services market under Covid-19 pandemic as research context and semi-structured interviews as research method.

In Romania, based on statistical data available on the website of National Trade Register Office on December 31, 2020, the number of all active companies was 1.04 million and 22.1 % of them were entities with foreign participations. According to European Commission (2021), small and medium-sized enterprises represent 99% of all non-financial companies running businesses within European Union. Small and medium-sized enterprises are the foundation of all economies in the world because of their economic input and they represent the main clients of accounting firms (IFAC, 2019).

In Romania, the accounting services market is represented by individuals and firms being members of CECCAR, the body that regulates the accounting profession. The number of active members identified as expert accountants on December 31, 2020 was 18,851 (Accountancy Europe, 2021). Considering the information on the website Top firms, in Romania at the end of the year 2020 there were active 11,159 firms with the main business activity consisting in accounting, audit and tax

consulting services and they had a turnover of 872 million euro. Having in view the location of these firms 29.4% of them ran their business in Bucharest.

As regards the establishment and organization of the business, I identified independent local accounting firms, local accounting firms affiliated to international networks and international accounting firms. Taking into consideration accounting firms with an annual turnover higher than 0.25 million euro I observed that there were 155 firms and they had an aggregate market share of 35%. I presented an overview of accounting, audit and tax consulting services market from Romania in Table 1 considering information such number of firms, turnover range, turnover, average turnover and market share.

Table 1. Overview of accounting, audit and tax consulting services market from Romania

No of firms	Turnover range	Turnover (mil. EUR)	Average turnover (mil. EUR)	Market share
9	> 10 mil. EUR	179	19.9	21%
3	> 5 mil. EUR and ≤ 10 mil. EUR	17	5.7	2%
8	> 2.5 mil. EUR and ≤ 5 mil. EUR	26	3.3	3%
18	> 1 mil. EUR and ≤ 2.5 mil. EUR	30	1.7	3%
38	> 0.5 mil. EUR and ≤ 1 mil. EUR	28	0.7	3%
79	> 0.25 mil. EUR and ≤ 0.5 mil. EUR	28	0.4	3%
11,004	< 0.25 mil. EUR	564	0.1	65%
11,159		872	X	100%

Source: Own processed information using data for the year 2020 from Top firms website

In Romania, after several consultations among the health experts, the authorities declared on March 16, 2020 the state of emergency establishing the lockdown measure until May 15, 2020 and the companies with non-essential businesses had to interrupt their physical activities during that two-month period.

Digitalization like never before had the great potential to revolutionize accounting. Accounting firms had to find new ways to keep running their activity and provide ongoing support to their clients. The adoption of digital solutions like cloud, remote connection and chat applications within the accounting firms ensured the proper functioning for remote work, transfer of documents, digital services and communication with the clients (KPMG, 2020).

According to a study conducted by Ernst & Young (2021), in the context of Covid-19 outbreak the digital transformation of the companies was accelerated due to physical distancing and mobility restrictions imposed by authorities to limit the spread of the virus. Under these circumstances companies were forced to accept new

ways of interaction, working and trading. In the same study is mentioned that digital transformation is vital for business development and companies that postpone or hesitate to engage seriously in that will be left behind and lose.

Having in view the aspects mentioned before, in this paper I sought to answer the following two research questions:

RQ1. How is the accounting profession engaging with digitalization for delivery of services?

RQ2. How is the digital transformation of accounting firms impacted by the Covid-19 outbreak?

3.1 Research methods

Subsequent to the review of relevant scientific literature on themes such as digital technologies and the impact of Covid-19 pandemic on social and economic level, I organized in the beginning of December 2021 preliminary interviews with three experts working within the accounting profession for more than 20 years to get further information about the dynamics caused by Covid-19 pandemic in the use of digital technologies within accounting services industry from Romania. After I had the discussions with them, I found that research area related to the impact of Covid-19 pandemic on the use of digital technologies for delivery of accounting services is underexplored. Having in view that gap existing in the literature I decided to expand the body of knowledge by conducting this research.

I employed a qualitative approach since in the study I intended to find the answers to the questions such as “how”, “what” and “why” referring to the use of digital technologies for delivery of accounting services in times of Covid-19 pandemic (Bryman and Bell, 2015). By adopting a qualitative approach, my intention was to extract the meaning of the studied phenomenon and not the frequency. The most common method applied for data collection in qualitative research is represented by interviews and they are used by researchers to find out in detail the story behind the numbers and trends (Rowley, 2012). According to Tucker (2020), the interview is a data collection technique that involves the interaction between the researcher and the subjects through questions and answers with the purpose to reach a deep understanding of the context in which events and actions occurred with the help of the subjects that possess a significant field experience.

I organized interviews with experts working within accounting firms to have the whole and clear picture regarding the use of digital technologies for delivery of accounting services in times of Covid-19 pandemic. In doing so, considering the financial data available on the website Top Firms, in the second half of December 2021, I created a list of 155 accounting firms that achieved in 2020 a turnover higher than a quarter million euro and an aggregate market share of 35%. In the beginning

I selected two samples of accounting firms having in view their turnover achieved in 2020. The first sample consisted in 38 accounting firms with an aggregate market share of 29% and each of them achieved in 2020 a turnover higher than 1 million euro. The second sample consisted in 38 accounting firms with an aggregate market share of 3% and each of them had in 2020 a turnover between half million euro and 1 million euro. Later I chose also to use the third sample that consisted in 79 accounting firms with an aggregate market share of 3% and each of them had in 2020 a turnover between a quarter million euro and half million euro.

I organized three separate phases of interviews for each sample. In the first phase of the interviews my focus was on accounting firms with a turnover higher than 1 million euro. The interviews took place between January 2022 and March 2022 and 12 subjects participated out of 38 targeted experts. In the second phase of the interviews, I had in view accounting firms with a turnover between half million euro and 1 million euro. The interviews took place between April 2022 and May 2022 and 5 subjects participated out of 38 targeted experts. The third phase of the interviews occurred 5 months later than the second phase and involved accounting firms with a turnover between a quarter million euro and half million euro. The interviews took place between October 2022 and November 2022 and 4 subjects participated out of 79 targeted experts.

In selecting the interview subjects, I followed the recommendation made by Tucker (2020) namely I chose participants with a rich experience and knowledge consisting in partners and managers working within accounting firms. I visited the websites of accounting firms and LinkedIn platform in order to get in contact with partners and managers in charge with accounting services, I sent them e-mails with the kind request to participate in an interview as part of an academic research project and I emphasized that their involvement will definitely add value to my study since they possess a high level of expertise. Within the same e-mails the targeted experts were notified about the protocol of keeping the anonymity of participants and confidentiality of information.

Considering all the three separate phases of discussions, the interviews were conducted in Romanian, the native language of the participants and they were semi-structured and consisted in open questions. The questions were the same in all the three separate phases of the interviews and followed topics related to: (1) the role of accountants in times of crisis, (2) changes caused by Covid-19 outbreak, (3) the importance of digital technologies, (4) employees' turnover and retention, (5) recruiting and training the employees, (6) working practices, (7) the options regarding the provision of the services, (8) clients' needs and satisfaction, (9) communication and interaction with the clients, (10) delivery of supporting documents and reports and (11) information need frequency.

Overall, I had 21 participants in interviews out of 155 targeted experts. All participants work within accounting firms that are located in Bucharest. As regards the turnover, 12 participants work within accounting firms that had a turnover higher than 1 million euro, 5 participants work within accounting firms that had a turnover between half million euro and 1 million euro and 4 participants work within accounting firms that had a turnover between a quarter million euro and half million euro. Considering the gender of experts 71% were women then as regards the experience of participants the average value is around 17 years while the minimum is 10 years and the maximum is 24 years. From 21 experts participating in interviews, 8 of them work within international accounting firms and 13 of them work within local accounting firms out of which 9 of these local accounting firms are affiliated to international networks. The average interview duration was around 56 minutes, the shortest lasted 40 minutes and the longest 65 minutes. Because the participants did not feel comfortable with recording them, I asked their permission to take hand notes during the interviews in order to include in my study the answers they gave me and I received their consent. At the end of the interviews, I clarified any unclear aspect with the help of experts and the notes were complemented right away if needed. I provided more details about the experts who took part in the interviews in the Appendix A.

According to Rowley (2012), most qualitative studies involving interviews as research method engage a limited number of participants usually between 10 and 30 persons since interviews generate a large amount of data and they consume a lot of time. Dai *et al.* (2019) mentioned that in case of data collection using interviews as research method it is necessary to ensure data saturation which means that in the analysis process there is enough amount of data in order to ensure the reliability of the study. Empirical evidence indicated that data saturation is often reached within the first ten interviews in case of homogeneous population whereas in case of heterogeneous population data saturation is mostly achieved after carrying out more interviews usually twelve or fifteen interviews (Saunders *et al.*, 2018).

In my study I took into account this requirement of having enough data and the similarity of the answers received from participants became more and more obvious after the 14th interview and by that I recognized that I reached data saturation.

I conducted also the interviews with other three experts even though I observed data saturation since the meetings were already scheduled and I wanted to show interest related to information they intended to share with me. These three experts provided me quite the same answers as I received before. Since I wanted also to include in my study also smaller accounting firms, five months later I conducted another four interviews with participants working within accounting firms that had a turnover between a quarter million euro and half million euro in order to find out how much Covid-19 pandemic influenced the implementation and the use of digital

technologies in their case as well. After having conducted those four interviews I did not receive new insights and because of that I concluded that I have enough and reliable data and I stopped to organize further interviews.

After a large portion of my interviews, it became more and more obvious that digital technologies such as cloud computing and online meeting applications played a critical role in the context of physical distancing and mobility restrictions due to Covid-19 pandemic and they enabled the people and companies to carry out their activities remotely. Moreover, the interview participants emphasized how dependent the people and companies are today on digital technologies.

The interview notes were read multiple times and coded manually having in view the topics based on which I built the interview questions. As regards the information received from participants that did not fit into a predefined category, I created subsequently a new code for each theme. In other words, I followed an abductive approach in analysing and coding the data collected from interviews which allowed me to be flexible in moving back and forth between the theoretical framework and empirical data and that helped me not to overlook novel and valuable aspects of data that could be ignored in case of using only a deductive approach (Lukka, 2014). I presented in Table 2 an example of data interpretation having in view a hand note taken during an interview session with a manager working within the local accounting firm Q which is affiliated to an international network.

Table 2. An example of data interpretation based on an interview quote

Interview quote	Interpretation	Theory/Themes
<i>In the beginning it was not easy for us and our clients to move from physical work to digital one, but we embraced the changes quite well and fast to ensure the continuity of our activity. In the context of Covid-19, the working and mobility restrictions imposed by authorities through legislation had to be followed in order to keep our employees and clients safe. In the same time, we had the support that we needed from our international network. At this moment I believe that the acceleration of digitalization process within the companies was the only good aspect of Covid-19 pandemic. (I5)</i>	Embracing change was not easy but it was necessary to ensure the continuity of the business and keep the employees and clients safe. International network provided the support to the affiliated member to adopt delivery of remote services. The expert believed that due to all restrictions imposed by authorities in the context of Covid-19 outbreak, digitalization process within companies was accelerated.	<ul style="list-style-type: none"> - Theory of change - Covid-19 as a trigger for the change - Changes related to work and travel were imposed by the law - Driving forces for change were stronger than resisting forces - International network acted as a supporter for implementation of digital work

Source: Own creation

Furthermore, in order to increase the reliability of the research I applied data triangulation. I triangulated data collected by me from the interviews with the experts working within accounting firms located in Bucharest with data from an article published by CECCAR Business Review in December 2020 consisting in a study conducted by David and Cernuşca (2020) related to the impact of Covid-19 pandemic on companies from Arad County and it involved a survey on 150 accounting professionals.

4. Results and discussions

I constructed the narratives predominately on theory-driven themes meaning that I organized the findings around the chosen theory and the main themes (Hoque *et al.*, 2013). In this section, the findings and discussions are formulated considering the themes of the research questions which are strongly connected to the theoretical framework consisted in the theory of change and the conceptual model of change involving technologies, employees and clients. The major themes of the research questions were the use of digital technologies before the outbreak of Covid-19 and the changes in the use of digital technologies caused by Covid-19 pandemic.

Following the theoretical framework consisting in the theory of change and the conceptual model of change involving technologies, employees and clients, Covid-19 pandemic put high pressure on people to adapt to the new reality where digital technologies had a pivotal role in helping them to carry on their activities and overcome their resistance to change. Empirical evidence showed that under many pressures and restrictions caused by Covid-19 outbreak, digitalization process within the society was accelerated since people had to accept digital technologies for social interactions, working, shopping, selling and making payments in a higher extent than they used to do before. Accounting firms implemented digital technologies with the help of employees and clients and they had to accept the new collaboration possibilities in order to keep their businesses running. Considering the theory of change and according to the answers provided by the interview participants, I found that under these times of crisis, people (employees and clients) adapted quite well and fast to the new circumstances such as remote work and delivery of digital services. Moreover, the use of cloud applications and virtual meeting platforms changed the perception of clients, employees and managers regarding the need for a fixed physical location to provide accounting services.

In the next paragraphs I presented the findings and discussions following the chronological sequence of events, since for a better understanding of the changes that occurred in the provision of accounting services due to Covid-19 outbreak, it is important to compare the image before and after.

4.1 The use of digital technologies before the outbreak of Covid-19

According to the information provided by the experts within accounting firms, before the outbreak of Covid-19, the adoption of digital solutions and implementation of RPA tools reached low and medium levels. In a business context without Covid-19 pandemic the accounting firms did not experience a strong external pressure to change significantly the way they conduct their activity regarding the use of digital technologies, collaboration with the clients and the working practices for their employees.

4.1.1 Engagement with digital technologies

The focus of large accounting firms was on larger medium-sized and large companies as clients and because of that within large accounting firms the implementation of digitalization and automation occurred in a greater extent than within small accounting firms.

The partner working at the local accounting firm O which is affiliated to an international network mentioned:

Considering that we are not a large accounting firm we did not implemented sophisticated automation tools. We focused more on solutions that allowed us to import files for purchases, sales and payments. (I15)

Larger medium-sized and large companies need accounting information more frequent to perform day to day business operations compared to small and smaller medium-sized enterprises and this is the reason why the speed of information production is so important to them.

The partner from the international accounting firm A argued:

Two years before the outbreak of Covid-19 we adopted for our clients with a high volume of documents some RPA tools in order to increase the speed of recording the transactions. Because of that we saved time and we could focus more on reporting and feel no more the same time pressure within the month closing as we did before. (I1)

In prior research Cooper *et al.* (2019) indicated that the implementation of RPA solutions reduced a lot the processing time of documents and that measure brought an increase in work efficiency and effectiveness.

In case of international clients belonging to a group of companies the digitalization and automation were implemented in a greater extent many years ago in order to ensure the traceability of transactions and the accuracy of information. Moreover,

these clients needed to complete the accounting entries and report the figures to the parent companies much earlier than local clients.

The partner from the international accounting firm E told me:

In case of our large international clients, we provided services at their premises and we used their information systems since that option ensured the immediate availability of information. Most of our international clients adopted also digital solutions and RPA tools even before the outbreak of Covid-19 in order to improve their business workflows. (I5)

Small companies had the tendency not to invest too much in technology if they were not operating in information and communication technology industry or in case, they do not have specific requests from suppliers or clients.

The partner working at the local accounting firm N which is affiliated to an international network mentioned:

Even though it seems hard to believe before the outbreak of Covid-19 we had some clients being small companies that used to issue manual invoices involving paper, pen and hand writing. (I14)

Usually small and smaller medium-sized companies represent the main clients of the small accounting firms as regards the provision of full accounting services package. Interestingly, I identified that all small accounting firms worked also with few larger medium-sized companies that used ERP systems and in some cases in order to prepare faster and easier the tax returns and financial reports, the small accounting firms transferred data from the client's ERP system regarding purchases, sales invoices, payments and collections into their accounting software using import interfaces. In his study regarding digitalization on accounting, Knudsen (2020) found that manual exchange of data between information systems using export and import tools was more specific to the early stage of digitalization and it helped the companies to avoid repetitive work, save time and costs.

4.1.2 Prior collaboration with employees and clients

Having in view the employee turnover, before the outbreak of Covid-19, the estimates made by interviewees indicated an average attrition rate between 8% and 15%. Compared to large accounting firms, small accounting firms faced more difficulties in recruiting the right employees. As regards the working practices, the option to work from home was possible just for few days a month and only in hot seasons characterized by high workloads. In most cases, both small and large accounting firms used to provide the services to clients from their office.

All interviewees agreed that keeping regularly in touch with the clients by asking them about the business plans, providing them advice and making courtesy visits

from time to time were meant to build a strong business relationship based on communication and trust.

The partner from the international accounting firm G stated that:

We used to meet our clients in person and have discussions with them over a cup of tea or coffee in order to understand better their needs and find out their satisfaction level. (I7)

Most small clients used the services provided by accounting firms consisting in recording and reporting activities only to comply with the legal requirements. In their opinion having an external accountant means someone who works for the benefit of the state being busy with the tax statements and payment orders.

Sometimes the owners of the small companies perceive the external accountants as if they were their own employees rather than business partners. The manager from the local accounting firm J said:

In the past from time-to-time small clients used to tell us that we are expensive employees and they only keep accounting because of the law since they are not very interested in accounting reports. They used to see accounting as cost and if the law gave them the possibility not to keep accounting, they would choose that option right away. (I10)

In their study Marriott and Marriott (2000) emphasized a similar idea namely that small companies use the external accountants mainly to fulfil their statutory obligations and their interest to use accounting information in managing the business is low.

The supporting documents were delivered to accounting firms by most clients in paper format. For some clients, large accounting firms used to provide the services at the clients' premises allowing employees to go there on a regular basis or relocating a team of professionals according to the clients' needs.

Larger medium-sized and large companies usually rely more on their own employees for data entry tasks and ask the support of accounting firms mainly for entries related to period closing, review of accounts, reporting, tax compliance and advisory services.

The partner working at the local accounting firm P which is affiliated to an international network mentioned:

For our large clients we are primarily involved in activities that require more knowledge, experience and skills. These activities consist in period-end entries, reviewing of accounts, statutory and group reporting, preparing the tax returns and providing advice. (I16)

In prior research Everaert *et al.* (2007) found that larger companies compared to smaller companies tend to outsource fewer accounting activities and namely only those that require a high level of expertise.

4.2 The changes caused by Covid-19 pandemic in the use of digital technologies

During the Covid-19 pandemic within the accounting firms the adoption of digital solutions and implementation of RPA tools reached medium and high levels. The accounting firms had to find rapid solutions to keep their activity running and ensure digital delivery of services. Digital transformation within the companies was achieved by engaging repeatedly technologies, employees and clients. The use of cloud applications and virtual meeting platforms changed the perception of clients, employees and managers regarding the need for a fixed physical location to provide accounting services.

4.2.1 Changes regarding digital technologies

For international accounting firms and local accounting firms affiliated to international networks the digitalization process was implemented easier and faster. The international networks provided their affiliated members both technical support and training. These international networks use to keep up with the latest technologies, test them on a regular basis, provide ongoing support and make sure that their members deliver high service quality. The manager from the local accounting firm Q which is affiliated to an international network mentioned:

In the beginning it was not easy for us and our clients to move from physical work to digital one, but we embraced the changes quite well and fast to ensure the continuity of our activity. In the context of Covid-19, the working and mobility restrictions imposed by authorities through legislation had to be followed in order to keep our employees and clients safe. In the same time, we had the support that we needed from our international network. At this moment I believe that the acceleration of digitalization process within the companies was the only good aspect of Covid-19 pandemic. (I17)

To my best knowledge in the existing literature up to this moment my findings related to the role of international networks in offering the support to their affiliated local accounting firms and what type of help they provide have not been yet reported.

Considering the physical distancing measures, the physical meetings were replaced by video calls and phone calls. During Covid-19 pandemic people understood better the importance of technology for work and keeping in touch with others. The partner from the international accounting firm K outlined:

Covid-19 pandemic forced us to find the right ways to keep in touch with our employees and clients. We have to admit that in the beginning online meetings, video calls, phone calls and chats were exhausting and consumed a lot of time and sometimes we had to do overtime in order to keep up with the workload but we made it. (I11)

As regards data and information sharing between accounting firms and their clients, all interviewees claimed that accounting firms adopted cloud solutions and clients were asked to use them for submitting the supporting documents. Moreover, some accounting firms began to use OCR technology in order to extract data from documents such as scanned copies of paper invoices, bank statements and invoices in PDF format in order to decrease the processing time of documents and mitigate the human errors related to data entry. Since cloud technology provides near real-time collaboration functionalities, clients could access online their standard reports anywhere and anytime.

The partner working at the local accounting firm C which is affiliated to an international network mentioned:

We were pleased that we could implement cloud solutions to receive the scanned copies or photos of documents from our clients. We created user accounts for our clients on one hand to enable them to submit documents in cloud and on the other hand to allow them to access online the standard reports whenever they need. Because of that way of receiving documents from our clients we moved further and we adopted OCR solutions to extract data from scanned copies or photos of documents and then to transfer it into our accounting information system for processing purposes. (I3)

In their study, Carungu *et al.* (2021) also observed that cloud and remote connection applications were very useful in sharing data and information between parties during Covid-19 pandemic. In addition to prior research, this study emphasized that due to many pressures to embrace the change in the context of Covid-19 outbreak, the exchange of electronic documents between parties prevailed and that brought the opportunity for the adoption of OCR technology like never before.

In respect to the role and necessity of RPA technology in helping the companies to mitigate the issue related to the lack of professionals interested in working, the partner from the international accounting firm H mentioned:

Even though there are concerns among employees about the potential replacement of human accountants with software robots, the complete replacement is not possible and the accounting firms intend to use these software robots only to complement their human workforce considering that accounting firms have to face high employee turnover rates among entry level employees and there is a lack of professionals interested in working on labour market. (I8)

This point of view was shared by other experts during the interviews namely the adoption of robotic process automatic (RPA) tools could help the companies to overcome in the near future the common issues such as employee turnover and the lack of professionals on labour market since for data entry tasks the companies will need fewer employees.

As far as I know, this finding of ours regarding the possibility of accounting firms to overcome the negative conditions such as employee turnover and shortage of professional on labour market by the use of RPA technology has not been yet reported.

4.2.2 Changes regarding employees

As regards the working practices most accounting firms implemented remote and hybrid work for their employees based on the preferences of the employees and the client's need for contact for those contracts stipulating that the client's office is the location of the service provision. Some employees especially those having children chose to work more from the accounting firm's office since they mentioned that at home, they experienced work distractions and that affected their work productivity.

The interviewees told me that during lockdown more employees became workaholic since they had very few entertainment options and through work, they found an escape from their frustration and anger.

The manager from the international accounting firm M mentioned that:

I used to ask my colleagues in the evening to shut down their laptops because some of them seemed to work non-stop and I worried for their mental and physical health. (I13)

With regard to the work efficiency all interviewees agreed that during lockdown there was an increase in the employee productivity but afterwards the labour efficiency dropped a little and then it normalized.

The partner from the local accounting firm I which is affiliated to an international network stated:

We asked some of our employees who did not work overtime as they did before the outbreak of Covid-19 to tell us the reasons for the increase in their work efficiency. They responded that doing remote work for them meant to have fewer interruptions and being more focused. (I9)

There were employees who complained about some clients who called them several times a week and even at late hours with all kind of requests and because of that they felt a lot of stress. In order to make sure about the mental health of the employees and their well-being during Covid-19 pandemic, most of accounting firms assessed

many times the stress, anxiety and depression level of their staff. Furthermore, some accounting firms provided to their employees some online training sessions for personal development to keep them motivated. Also, in a prior research Rinaldi (2022) mentioned that many employees experienced depression and anxiety and some of them engaged in a workaholic behaviour as a coping mechanism for their depression and anxiety ignoring the risk of acquiring the burnout syndrome and put their health at risk.

As regards the employee turnover, in the first six months of Covid-19 pandemic the average attrition rates were very low namely between 4% and 7% but afterwards many employees started to leave for a better job and the average attrition rates reached up to 12% and 17% meaning a higher rate than before the outbreak of Covid-19.

Some accounting firms in their quest to replace the leaving employees, considering the shortage on the labour market, recruited remote professionals even from the other cities. In the same time, in case of recruiting employees from other cities, the experts saw the possibility of finding new clients in those cities. Depending on the client's need for contact, the employees could even go to the client's office and provide the accounting services there. The recruiting process was performed completely online, the candidates were interviewed using virtual meeting platforms such as Zoom and Teams and they had to pass some accounting, analytical thinking and personality tests. The selected candidates signed the labour contracts digitally and then they were allowed to start the remote work. The training sessions of the new employees were done remotely or in hybrid mode.

The partner from the local accounting firm N which is affiliated to an international network stated:

Because of the shortage of professionals on the labour market, during Covid-19 pandemic we became more flexible in recruiting employees from other cities to do remote work for us. We also realized that we have the opportunity to target clients from those cities where our employees live. (I14)

According to my knowledge in the existing literature up to this moment my finding related to the new practice of some accounting firms to recruit and hire remote professionals from other cities where they do not have offices has not been yet reported.

During lockdown and in the following months after lockdown especially smaller accounting firms meaning those having an annual turnover lower than 1 million euro gained new clients even from other cities and lost some old clients since they had to close their business. Due to Covid-19 pandemic, the new clients were charged with lower fees. Most of smaller accounting firms renounced to have a large area for their offices and they concluded new lease agreements for smaller office spaces because

of remote or hybrid work and by that change they succeed to reduce the costs. Some of these accounting firms in their quest to lower their rent expenses even chose to relocate their offices to other areas in the city.

The partner from the local accounting firm T said:

In the first months after Covid-19 outbreak we experienced a decrease in our revenues because we lost some clients that were forced to shut down their activity and for other clients operating at a low capacity, we reduced the fees to help them. Since we adopted remote and hybrid work for our employees, we decided to relocate our office to another area of the city and have smaller office spaces in order to save money. (I20)

To my best knowledge in the existing literature up to this moment this finding regarding the decision of smaller accounting firms to move into new smaller office spaces due to implementation of remote and hybrid work in the context Covid-19 outbreak has not been yet reported.

4.2.3 Changes regarding clients

The importance of accountants as advisors increased significantly since in these times of crisis the clients needed a lot of advice to know what they should do better to make their business stronger. Most of small clients changed their perception regarding the role of accounting during the Covid-19 pandemic, since they found that accounting is not only used to comply with the legal requirements but also to provide advice in managing the business.

The manager from the local accounting firm J mentioned:

During Covid-19 pandemic the businesses of our small clients were the most affected and they were more open to receive advice from our side and apply our suggestions in order to save their businesses. They seemed to appreciate our support and some of them even said that accountants are like doctors and it is always good to have one around you. (I10)

In some cases, external accountants provided their clients the suggestions how they could reinvent their businesses. These professionals investigated several months in a row what measures were taken by other companies in the country or abroad in their quest to avoid business shutdowns. Considering the recommendations made by these experts, some clients that used to manufacture face lotions for men reoriented their activity and started to manufacture alcohol-based hand sanitizers and other clients that owned tailor workshops began to produce face masks.

The partner from the local accounting firm B said:

Because of our expertise and creativity, we were able to help our clients to reinvent their businesses and they were grateful to us. For example, we suggested some of our clients operating restaurants to enter into partnerships with delivery companies enabling them to deliver food to customers at their home and keep running their activity. (I2)

In a prior research Leoni *et al.* (2021) also emphasized that in times of crisis accountants have a key role in helping companies to achieve business resilience and recovery.

There were many companies that lost their internal accountants because they failed to pay their employees the entire salary for two, three or even four months in a row, since they experienced a significant decrease in their turnover caused by lock-down measures. In the end these companies were forced to seek external accountants and they decided to outsource the accounting services due to lack of staff and for cost reduction reasons. Accounting firms represented trusted business partners for their clients during Covid-19 pandemic and gave them more advice and support than ever before. Clients that struggled with the negative effects of Covid-19 pandemic were susceptible to receive the financial support from the government. In order to access the grants or the loans provided by the government, the clients had to register online first, get the user account, then fill the application form online and submit it along with financial reports and business plans. The accounting firms provided support to their clients to prepare all these requested documents. Furthermore, Ahrens and Ferry (2021) in their study related to accounting practices in times of crisis found that accountants provided ongoing support to their clients and reinforced the call of accounting to do good to society.

Having in view the opinions shared by experts working within accounting firms, the crisis caused by Covid-19 pandemic primarily affected the performance of small and medium-sized enterprises and as regards the inclination to use earnings management, some of these companies manifested a high interest in showing a poor performance to pay a lower income tax and delay salary increases whereas others wanted to report a better performance to their suppliers and banks. My finding validates only partially the opinion formulated by De Luca and Palone (2019) claiming that in times of financial crisis small and medium-sized enterprises manifest the tendency to decrease their profitability in order to pay lower taxes.

In order to provide more help to their clients fighting with the negative effects of Covid-19 pandemic, accounting firms with the clients' consent modified some clauses in the contracts regarding the payment term and the fee charging system in case of flat fee billed clients. The new payment term was longer than before and depending on the client's choice the new fee charging system consisted in hourly rates or the number of transactions.

The partner from the local accounting firm F which is affiliated to an international network stated:

We helped our vulnerable clients in many ways and we wanted them to know that we are by their side. We assisted them to fill the application forms and prepare the business plans in order to receive the financial support from the government. Furthermore, for those vulnerable clients we extended the payment term and we moved from a flat fee invoicing to an hourly or transaction fee system. (I6)

In their research on the impact of Covid-19 pandemic on companies, David and Cernuşca (2020) found also that during lockdown and in the following months after lockdown most accounting firms reduced the flat fees and even extended the payment term of invoices for their clients facing financial difficulties.

The interviewees told me that during Covid-19 pandemic larger clients used to ask for preliminary reports more frequent than before (for example weekly, instead of every other week or monthly) in order to monitor closely their business performance. In the same time clients having loans were asked to send the banks their trial balance on a monthly basis and not on a quarterly basis like before. Since this time banks were very interested in the loan repayment capacity of the companies, they asked as well to receive the schedule of receivables and payables along with the trial balance. Moreover, National Bank of Romania and National Institute of Statistics in order to prepare forecasts, they requested medium-sized and large companies to answer some questionnaires regarding the existing business situation and their estimates in respect to Covid-19 pandemic. Velayutham *et al.* (2021) observed also that in times of crisis stakeholders request information more often and at a higher level of detail in order to assess the existing situation, explore alternative business scenarios and minimize the risks.

4.2.4 A final thought on digital technologies, employees and clients

During Covid-19 pandemic, digitalization process within the organizations was accelerated like never before and digital transformation of the companies opened new avenues for the exchange of electronic data between parties, outsourcing of accounting services and new options to cope with the shortage of accounting professionals on the local labour market such as the use of RPA technology and the possibility to hire remote workers from other cities.

After all discussions, the experts working within accounting firms agreed that Covid-19 outbreak was in the same time a challenge and an opportunity for accounting firms and their clients to evolve together. They mentioned that under these times of crisis employees and clients adapted quite well and fast to the new conditions such as remote work and digital services. The interviewees believed that in the post-

Covid-19 era, organizations, their employees and other business partners will continue to maintain in a higher or a lower degree the flexibility gained during the Covid-19 pandemic related to digital work and remote collaboration, since there are multiple benefits for all parties involved in the business operations.

In the end my opinion is that only data entry, repetitive and rule-based tasks are suitable for automation based on the conversations that I had with the experts working within accounting firms. I understood that digitalization in accounting is meant to ensure the access to near real-time data, instant communication between business partners and to help the companies to overcome the shortage of professionals on the labour market. My understanding is that RPA technology aims to replace the work performed by human accountants only for mundane, tedious and time-consuming tasks.

I believe that digitalization has redesigned the role of accountants allowing them to move away from bookkeeping tasks. As digitalization threatens mostly bookkeeping jobs, my point of view is that accountants who acquire digital skills will never be without a job. My thought is that accounting profession is still relevant for our society and nowadays professionals are engaged more in reviewing, reporting, compliance, advisory and forensic services.

5. Conclusions

The aim of this study was to investigate the rising importance of digital technologies for delivery of accounting services by having in view the changes that occurred in the provision of accounting services due to Covid-19 outbreak by exploring three dimensions such as technologies, employees and clients. In doing so, I employed a qualitative approach using the theory of change as theoretical framework, accounting services market under Covid-19 pandemic as research context and semi-structured interviews as research method. The qualitative research involving interviews as research method means to explore feelings, motivations, perceptions, behaviours and experiences of participants.

Having in view the theoretical framework and the conceptual model, change mainly occurs under a strong motivation or pressure (Adams & Whelan, 2009; Bakari *et al.* 2017; Lewin, 1947) and regards individuals and technologies. The natural inclination of people is to resist the change but in times of crisis such as Covid-19 pandemic, they adapt quite fast and well to the new circumstances related to work, mobility and social interactions. For companies the implementation of change means to replace and update the existing technologies, create new perceptions, attitudes and behaviours among the employees and engage the clients.

My findings showed that under many pressures and restrictions caused by Covid-19 outbreak, digitalization process within the society was accelerated because people had to accept and use primarily digital technologies for socialising, working, buying, selling and making payments. Some organizations in order to achieve business resilience due to the loss of staff and the need to save money, chose outsourcing as an alternative to insourcing of accounting services. Empirical evidence reconfirmed what other authors also observed in other countries, namely that delivery of remote services and online meetings has become very widespread during Covid-19 pandemic (Carungu *et al.*, 2021; Ernst & Young, 2021; Rinaldi, 2022). Several accounting firms adopted telework and they exchanged documents and reports with clients in cloud. Digital technologies like cloud computing, robotic process automation and online meeting applications brought new opportunities for outsourcing of accounting services. The use of digital technologies removed the physical location constraints and made the companies more open to embrace remote collaboration. Because of that many accounting firms gain new clients located in other cities. Some accounting firms implemented robotic process automation and even hired remote professionals from other cities to cope with the shortage of professionals. In addition to that, smaller accounting firms, due to remote or hybrid work, renounced to have large areas for their offices and they concluded new lease agreements for smaller office spaces and by that measure they reduced the costs.

The main contribution of my study was to show how important are digital technologies for delivery of accounting services. The outbreak of Covid-19 reinforced the critical role of digital technologies by outlining how much people and companies depend on cloud computing, robotic process automation and online meeting applications. Moreover, in a context characterized by physical distancing and mobility restrictions only digitalization can help people and companies to carry out their activities remotely. I presented the impact of Covid-19 pandemic on delivery of accounting services with focus on the use of digital technologies and I provided a comprehensive picture on the major changes experienced by accounting firms and their clients.

Compared to prior studies on cloud technology (Asatiani *et al.*, 2019; Yau-Yeung *et al.*, 2020; Ma *et al.*, 2021), robotic process automation (Cooper *et al.* 2019; Kokina & Blanchette 2019; Knudsen, 2020) and accounting outsourcing (Cahyaningtyas *et al.*, 2020; Everaert *et al.* 2010; Juntunen *et al.* 2021; Munjal *et al.*, 2019; Rezazade *et al.*, 2023; Zandi *et al.*, 2019), I contributed to the literature with findings that have not been yet reported and they regard (1) the role of international networks in providing support to their local affiliated accounting firms in times of crisis, (2) the role of robotic process automation (RPA) technology in helping the companies to overcome the negative conditions such as employee turnover and shortage of professionals, (3) the implementation of digital technologies that enabled accounting firms to collaborate with new employees and new clients located in other cities and (4) the possibility of compensating the loss of internal accountants with the option

to outsource the accounting services. All the papers mentioned before studied cloud technology, robotic process automation and accounting outsourcing in a normal or ordinary context but I investigated primarily the use of digital technologies during Covid-19 pandemic and I also focussed on the changes that occurred.

I identified two potential limitations of the current research. The first limitation could relate to the small number of experts participating in the interviews but these experts have significant experience since they came in contact with hundreds and even thousands of international and local clients. According to Rowley (2012) most qualitative studies involving interviews have a limited number of participants usually between 10 and 30. My sample consisted in 21 experts participating in interviews. Furthermore, data saturation was ensured and tested by the similarity of answers. Saunders *et al.* (2018) indicated that data saturation occurs in homogeneous population usually within the first ten interviews but in heterogeneous population data saturation is mostly reached after conducting twelve or fifteen interviews. It is also important to mention that accounting firms provide near identical services, have a similar internal organization and they act quite the same on the market. In addition to that I applied also data triangulation since I compared my findings with the results of a study conducted by David and Cernuşca (2020) that investigated the impact of Covid-19 pandemic on companies.

The second limitation could relate to the research context consisting in accounting services market under Covid-19 pandemic from Romania because the interviewees work within accounting firms operating in Romania. Considering the interviewees from 21 participants 8 of them work within international accounting firms and 13 of them work within local accounting firms out of which 9 of these local accounting firms are affiliated to international networks. It is known that Covid-19 pandemic was a global issue that affected all the economies around the world causing not only business interruptions and shutdowns but also changes in conducting the business operations, since companies were forced to accelerate the digitalization process in order to keep their activity running. Having in view the affirmations made before I consider that these two potential limitations do not alter the relevance and importance of my research.

My research has implications for accounting firms, employees and clients. The results of the study are primarily useful for accounting firms because digitalization has brought new opportunities to find new employees and clients all over the country without opening new offices. In the same time employees can choose between on-site, hybrid and remote jobs, clients can choose to collaborate with accounting firms practicing lower fee even though they are located in other cities since the physical distance constraints fade away.

I recommend small and medium-sized accounting firms to engage more in digital transformation of their business, develop strong relationships with their employees

and clients and join international networks if they want to grow, have success and gain more visibility on the market.

Even though my attention in this research was directed towards the increasing importance of digital technologies for delivery of accounting services outlined by the outbreak of Covid-19 pandemic, yet I realized there were more aspects that I could have approached in my paper but being outside the purpose of the current study I proposed them as directions for future research. The first direction for future research is a study on the role of international networks in providing support to their local affiliated accounting firms and how these international networks can help their local affiliated accounting firms to accelerate their digital transformation and expand their business. The second direction for future research is a study on the expectations of accounting firms and their employees and clients related to delivery of accounting services in the post-Covid-19 era with focus on artificial intelligence considering how much digitalization redesigned the work, trading and communication and still continues to reshape the business environment.

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Appendix

Firm's code	Type of accounting firm	Turnover (mil. EUR)	Interviewee's code	Interviewee's position and gender	Interviewee's experience	Interview date	Duration
A	international	> 1 mil. EUR	I1	partner (F)	24	Jan. 18, 2022	65
B	local independent	> 1 mil. EUR	I2	partner (M)	18	Jan. 20, 2022	65
C	local affiliated	> 1 mil. EUR	I3	partner (M)	17	Feb. 2, 2022	60
D	local affiliated	> 1 mil. EUR	I4	partner (F)	15	Feb. 7, 2022	65
E	international	> 1 mil. EUR	I5	partner (M)	19	Feb. 11, 2022	55
F	international	> 1 mil. EUR	I6	partner (F)	15	Mar. 3, 2022	55
G	international	> 1 mil. EUR	I7	partner (M)	15	Mar. 7, 2022	55
H	international	> 1 mil. EUR	I8	partner (F)	19	Mar. 11, 2022	55
I	local affiliated	> 1 mil. EUR	I9	partner (F)	16	Mar. 15, 2022	60
J	local independent	> 1 mil. EUR	I10	manager (F)	14	Mar. 18, 2022	60
K	international	> 1 mil. EUR	I11	partner (F)	21	Mar. 22, 2022	55
L	international	> 1 mil. EUR	I12	manager (F)	23	Mar. 29, 2022	60
M	international	> 0.5 mil. EUR and \leq 1 mil. EUR	I13	manager (M)	10	Apr. 5, 2022	55
N	local affiliated	> 0.5 mil. EUR and \leq 1 mil. EUR	I14	partner (M)	21	Apr. 14, 2022	65
O	local affiliated	> 0.5 mil. EUR and \leq 1 mil. EUR	I15	partner (F)	16	May 4, 2022	45
P	local affiliated	> 0.5 mil. EUR and \leq 1 mil. EUR	I16	manager (F)	18	May 10, 2022	45
Q	local affiliated	> 0.5 mil. EUR and \leq 1 mil. EUR	I17	manager (F)	14	May 13, 2022	50
R	local affiliated	< 0.5 mil. EUR	I18	manager (F)	14	Oct. 19, 2022	55
S	local independent	< 0.5 mil. EUR	I19	partner (F)	13	Oct. 24, 2022	50
T	local independent	< 0.5 mil. EUR	I20	partner (F)	22	Oct. 28, 2022	60
U	local affiliated	< 0.5 mil. EUR	I21	partner (F)	17	Nov. 4, 2022	40

Source: information processed based on data collected from the interviews with the experts