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Auditors' perceptions on work adaptability in remote audit: a COVID-19 perspective

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ABSTRACT

In the context of COVID-19, adoption of teleworking challenges companies' culture and social interaction to foster a creative and innovative workplace. The article aims to identify the auditors' perception of different factors that influence work adaptability in remote audit activity. The research method is based on multivariate data analysis that consist of correspondence analysis, exploratory factor analysis, confirmatory factor analysis and generalised linear ordinal regression. On one hand, findings emphasise that auditors' perception on the work efficiency of auditors in remote audits is significantly influenced by the digitalization degree of audit activities. On the other hand, the research outlines the main threats and opportunities of remote auditing in the context of the current pandemic restrictions. Where auditors perceive the benefits of remote audit, they appreciate positively the degree of adaptability and work efficiency as regards teleworking. Opportunities perceived lead to enhanced audit activity outcome if audit companies embrace emergent technologies in the new digital workplace. Nevertheless, as transition to remote audit determines increased auditors' liability and audit risks, auditors are more cautious and sometimes reluctant about future scenarios of remote audit, if innovative emerging audit technologies and integrated GRCs are not used or are not properly implemented. Whatever the future holds for the new digital audit workplace, it is obvious that auditors working from home face specific challenges, because what they earn in efficiency, they lose in benefits that are harder to quantify, such as innovative thinking and creativity.

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1. Introduction

Human activity has always evolved. Change is the key that defines us as a species, and significant developments have been recorded in history by all crossroads that acted as a real turning point on the graph of our evolution.

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Aspects generated by the new Coronavirus (COVID-19) pandemic, practically represent a critical point in which, apparently, humanity stopped for a moment from its evolution, but this 'halt' was accompanied by analyses and new questions (regarding not only health protection, but also the global and the socio-professional framework). Naturally, we adapted, and this transformation determined us to identify the tools we have, which were not used previously due to conservatism that also characterises human species. Nowadays, the use of remote connections and virtual common work environment by a team - all have become normal. The question is: *Are they threats to human nature or, on the contrary, are they opportunities that we will integrate into our social and professional life from now on?*

Today, it can be said, that nearly one year after its emergence, the spread of Coronavirus has reshaped the planet in ways that were unimaginable for many people. COVID-19 has havocked the financial system, posing a lot of new issues for market participants and policymakers alike (Hasnaoui et al., 2021; Mirza, Hasnaoui, et al., 2020; Rizvi et al., 2020a, 2020b; Yarovaya et al., 2020a, 2020b). Financial markets have almost all crashed, while economies are sinking and bleeding while trying to preserve jobs, prosperity and citizens' well-being.

The pandemic introduced modern company practises (McKinsey, 2020a), necessitating a shift in how businesses work (Mirza, Naqvi, et al., 2020; Mirza, Rahat, et al., 2020; Mirza et al., 2022; PriceWaterhouseCoopers, 2020a), as well as the role of companies in creating stable, secure, rewarding and profitable careers (Catalyst, 2020; McKinsey, 2020b, 2020c). In this context, businesses faced unprecedented obstacles, being pushed to establish new working environments (Farcane et al., 2021) to protect employees in unforeseeable situations (Gartner, 2020a, 2020b; KPMG., 2020a, 2020b, 2020c). Thus, this caused comprehensive reconsideration of challenges and opportunities as regards companies' adaptability to how workplaces have been reshaped during COVID-19 and how these will evolve afterwards (World Economic Forum, 2020a), as the work environment would eventually move from on-site to face-to-face, remote or a combination of these (World Economic Forum, 2020b). As a result, remote working has become a critical component of business continuity (Gartner, 2020a), allowing companies to experiment with new ways of doing business (Farcane et al., 2021) in remote or hybrid circumstances (World Health Organization, 2020a, 2020b).

Ergo, COVID-19 has had harmful effects on individuals (Bolisani et al., 2020), and on the society (Duan & Zhu, 2020), making people worry, panic and fear, thus, leading to anxiety and depression (Ahorsu et al., 2020).

In this framework, the Romanian economic system has been affected by extraordinary measures, with most companies working remotely via online means, such as online accounting platforms and Information and Communication Technology tools (Cokins et al., 2020), without physical attendance at the office.

Hence, during the lockdown period, *teleworking* was a necessary practice for many Romanian businesses and employees. During this period, communities were exposed to a large-scale forced experiment in which industries, companies and employees continued to work while being physically separated if they complied with the required legal, technical and digital security criteria. This had a big effect on companies of all

kinds, irrespective if they have used teleworking before or not (Organisation for Economic Co-operation and Development, 2020a).

Hence, work from home has become the standard, with significant implications for workplace culture and norms, employee behaviour, work efficiency, competitiveness, governance and corporate policies and dynamics, as well as work adaptability and flexibility (Kelliher & Anderson, 2010). In this context, teleworking has been critical in carrying out operations during the crisis, although its impacts on productivity are still unknown. In this sense, remote work may have lowered work efficiency for those working from home due to the unusual circumstances under which it was implemented. Although the significant benefits of teleworking under normal circumstances were previously recognized (Bloom et al., 2007), recent research emphasises that COVID-19 may create a productivity disaster for companies worldwide (Gorlick, 2020), due to employees' low work efficiency (Mirza, Hasnaoui, et al., 2020; Morikawa, 2020). In contrast, others consider that they have rather experienced short-term productivity increase because of remote work (Ozimek, 2020), arguing that productivity loss during the crisis is far from being certain (Mikušová & Horváthová, 2019).

In the long run, work productivity – in general, and work efficiency – in particular, may increase if the crisis catalyses adaptability and flexibility, respectively, a broader and smarter adoption of effective teleworking practises, improving employees' well-being and efficiency, while reducing the company's costs (Organisation for Economic Co-operation and Development, 2020b). This can hasten the transition to a 'new normal', which would have taken longer if the crisis had not occurred, given the uncertainties and costs associated with the required organisational and managerial changes, as well as other roadblocks such as cultural resistance or legal restrictions (Mikušová & Horváthová, 2019). This idea is backed up by newly emerged evidence, showing that managers are planning to rely more on remote work in the future (Ozimek, 2020). However, increased distance between employees may have a potentially negative impact on work efficiency on long-term (Weisner & Sutton, 2015), such as impaired communication leading to lower creativity (Alderman, 2019) or the blending of work-life balance (Giurge & Bohns, 2020).

As COVID-19 brought unprecedented challenges to global economy, this context provides new insights, requiring specific approaches to ensure further high-quality details on auditors' adaptability to the changes shaped by the pandemic (Albitar et al., 2021; International Federation of Accountants, 2020; PriceWaterhouseCoopers, 2020b). In the context of teleworking and remote auditing, the new digital workplace concept would never be the same as it was before COVID-19 (Farcane & Deliu, 2020; Fischer, 2020) and reinvention, technology and protection are key elements in the transformation phase (Ancillo *et al.*, 2021; Gartner, 2020c; Tiron-Tudor & Deliu, 2021).

Under the new operating model, the audit profession needs to determine which functions, roles and activities need face-to-face interaction and to what degree, and which do not (PriceWaterhouseCoopers, 2020b; Farcane et al., 2021). In addition, auditors are confronted with unparalleled practical difficulties in a variety of fields, as many of their clients may go bankrupt or begin to manipulate their earnings because of this extraordinary situation.

Thus, in this sensitive socio-economic context, while it is argued that a financial crisis has not yet occurred, it is believed that the COVID-19 pandemic will be the most difficult challenge for auditors and their clients since the global financial crisis of 2007–2008. Moreover, it is assumed that the COVID-19 social distancing would have a substantial effect on audit procedures, going concern assessments, audit staff salaries, audit fees, effort, efficiency and quality (Financial Reporting Council, 2020; International Auditing and Assurance Standards Board, 2020a, 2020b, 2020c).

Furthermore, given that most communications during the COVID-19 pandemic are via email, auditors will aim to focus more on analytical procedures and empirical processes that help them gain a comprehensive understanding of a company's financial status, thus minimising expensive and time-consuming detailed checks (KPMG, 2020b).

Businesses have been forced to work remotely and adopt digital technology due to the Coronavirus pandemic, whether they were willing or not. Although the audit process was already adapting due to the occurrence of emerging digital technologies (Arnaboldi et al., 2017; Farcane & Deliu, 2020; Moll & Yigitbasioglu, 2019), the transition to a *remote*, 'virtual' audit has been dramatically accelerated by COVID-19 (Gartner, 2020c; KPMG., 2020a, 2020b; Tiron-Tudor et al., 2021).

Many aspects regarding the adaptability of the daily work of employees had to be rapidly modified during the early stages of the pandemic. Automation of manual processes, introduction of new cybersecurity solutions, creation of a new type of worker in terms of location and schedule, ensuring safety on the client side (virtual and physical), were some of the changes (Deloitte, 2020a; Ernst & Young, 2020; KPMG, 2020a, 2020b, 2020c; PriceWaterhouseCoopers, 2020a, 2020b). These shifts are the result of how audit companies have adopted new or updated existing digital workplace configurations (tools and technology) to meet immediate needs (Gartner, 2020c). The phrase 'anywhere, any platform, any time' is no longer a dream, but rather a requirement. Thus, to perform a remote audit, companies had to have in place the needed technology and services (i.e., videoconferencing technology licences, employee training, confidentiality and security protocols, etc.).

The winds were already shifting prior to COVID-19. Some Romanian professional accountants and auditors have been experimenting with Artificial Intelligence and Big Data (Farcane & Deliu, 2020; Tiron-Tudor et al., 2021) to conduct higher-quality, more efficient and targeted audits. Big Four companies were early adopters, incorporating digital innovation into their audits (Tiron-Tudor & Deliu, 2021). For more than a decade, Data Analytics and advanced technologies have allowed risk management and rule-based anomaly detection (PriceWaterhouseCoopers, 2020b). Artificial Intelligence has recently been added to some of their audits (Issa et al., 2016; Kokina & Davenport, 2017). Thus, Big Four companies have already reported the use of Augmented Artificial Intelligence in areas such as large-scale Data Analytics, fraud detection and test of transactions (Deloitte, 2020b; KPMG, 2020b; PriceWaterhouseCoopers, 2020b; Ernst & Young, 2021).

The Romanian context is of particular interest due to the gap as compared to the other EU Member States as regards the lower digitalization level, despite the ultrafast broadband access, in the context of the new opportunities that arose from the emerging market's new status.

Moreover, in 2020 Romania was promoted from a ‘border market’ to an ‘emerging secondary market’ (FTSE Russell, 2020), and this status represented new investment opportunities, higher visibility, increased employee motivation and retention for Romanian companies. In this context, the Romanian auditors became more sensitive to the new opportunities, by approaching the standards imposed by the emerging market. In addition, auditors’ liability increased, as attention to their work became a source of information for many investors and other stakeholders.

Hence, our research highlights possible effects of the degree of digitalisation, respectively, of the psycho-social factors induced by the pandemic, on work adaptability and flexibility. Henceforth, it highlights the challenges and consequences perceived by Romanian auditors as regards the degree of fulfilling audit standards and professional requirements, because of teleworking in the current pandemic context. Henceforward, our article aims to identify threats and opportunities as regards adaptability in teleworking and observe whether and how they have affected financial audit engagements in Romania.

The study is structured as follows: Section 2 offers a literature review on the concept of teleworking, respectively, on the idea whether auditors’ work adaptability is influenced by the degree of digitalisation, and on perceptions regarding the main threats and opportunities of remote auditing in the context of the restrictions imposed by the current pandemic. Furthermore, the research methodology includes a quantitative analysis using as main data collection tool the survey conducted among financial auditor members of the Chamber of Financial Auditors of Romania (Section 3) and the results of the auditors’ perception on different factors that influence adaptability to remote audit activity (Section 4). The last two sections discuss the main findings and suggest means for future research (Section 5), as well as set the conclusions of this research (Section 6).

2. Literature review and hypothesis

In the context of COVID-19, many businesses around the world asked their workers to *work from home*, and the new circumstances had a major effect on organisational work arrangements.

Especially within the boundaries of the current pandemic, with the aid of remote Information and Communication Technologies (Cokins et al., 2020; Wojcak et al., 2016), as well as other emerging technologies (Arnaboldi et al., 2017; Farcane & Deliu, 2020; Moll & Yigitbasioglu, 2019; Tiron-Tudor et al., 2021; Tiron-Tudor & Deliu, 2021), organisations deal with a variety of working hours and locations, so that employees achieve the employers’ goals when performing their tasks and activities at locations other than the employers’ premises (Farcane et al., 2021).

2.1. Perspectives and challenges on transitioning to remote work

On the background of a sensitive socio-economic context created by COVID-19, a flexible working arrangement is created – *teleworking* – in which a company’s top

priority is to remain adaptable in terms of place and time. These circumstances define the job arrangement in which the employee, the teleworker, works 'from a distance'.

Remote work is defined by a variety of other words, including 'e-working' or 'teleworking' (most widely used in the United Kingdom), 'home-office' or 'work-from-home' (widespread in United States) and 'telecommuting' (North American origin). All these terms refer to any work that is done remote, respectively, the ability to work from home and interact with coworkers through remote technology. Moreover, the concept of 'agile working' was also added to the terminology (Gillies, 2011) to describe an organisation's ability to adapt to evolving business demands and change working practises accordingly. As a rather new type of working arrangement, this practice, also known as 'smart working' (Bolisani et al., 2020), provides workers with flexibility in terms of performance, location and time.

It is important to highlight Sullivan's (2003) viewpoint, who says that the quest for a widely agreed concept of *teleworking* has triggered a lot of discussions and debates. Since technology has progressed to the point that a significant amount of work can be done at any time or from any location, terminology may be less relevant than actual working practises.

Through the European Foundation for the Improvement of Living and Working Conditions, the European Commission has defined *teleworking* by considering it 'a form of organising and/or performing work, using information technology, in the context of an employment contract/relationship, where work that could be performed at the employer's premises is carried out away from those premises on a regular basis' (European Foundation for the Improvement of Living and Working Conditions (Eurofound), 2002, 2021). Thus, the concept of teleworking refers to the use of technology, as well as remote locations, contractual agreements between employer and employee and flexible working hours (Eurofound, 2002, 2021).

Grant et al. (2013, 2018) conducted interviews with experienced e-workers, and the word 'remote e-worker' was used in the context of these interviews to identify employees who work away from the company's premises, at any time or from any place, by using technology. Nilles' (1975) early work inspired this definition. He invented the concept of *e-working*, then known as *telecommuting*, defining it as any type of information technology used to replace work-related travel: 'moving work to the workers instead of moving workers to the work'. Additionally, he makes a distinction, indicating that e-working highlights the 'location independent aspect directly', whereas *teleworking* emphasizes more on the 'travel substitution aspect' (Nilles, 1975).

Teleworking implies a series of advantages and disadvantages, respectively, opportunities and threats. Some of the benefits are decreased commuting periods, and healthier work-life balance (Baruch, 2000; Grant et al., 2013). On the one hand, the benefits of remote e-working are often linked to improved productivity and efficiency, higher motivation (Organisation for Economic Co-operation and Development, 2020b), flexible work approaches, reduction in work-life tensions (Baruch, 2000) and improved job satisfaction (Grant et al., 2018). On the other hand, e-working has been related to poor mental health and well-being (Barber & Santuzzi, 2015; Mann & Holdsworth, 2003), occupational distress (Grant et al., 2013) and workplace pressure (Barber & Santuzzi, 2015) and stress (Hartig et al., 2007; Konradt et al., 2003), as well

as communication overload (Mann & Holdsworth, 2003), all of which can contribute to overworking, which can impact job efficiency. In this framework, in a study of remote employees, Kelliher and Anderson (2010) discovered that while job commitment and satisfaction were high, work efficiency and intensity, respectively, job performance, can be improved by using versatile and remote working methods. Although remote working may help with organisational engagement and increased willingness to put in more effort at work (Grant et al., 2018), the more negative aspects might make it unsustainable on long-term, and therefore, it requires more research, especially in terms of audit workplaces.

2.2. Work adaptability through reshaping the daily work of auditors in the context of COVID-19

Facing the pandemic restrictions, as well as digitalization challenges, auditors need to change their work adaptability and reshape their daily work activities, to cope with changes in the occupational environment.

As regards work adaptability in the context of teleworking and COVID-19, the daily work of auditors must be viewed from two points of view. First, as regards digitalisation and the use and implementation of emerging technologies, it is expected for them to make a change in terms of their daily tasks and responsibilities. Second, it is anticipated that the current sensitive socio-economic context would generate a series of psycho-social features (Duan & Zhu, 2020) that would significantly impact auditors' adaptability in terms of daily activities, as presented in Figure 1.

We consider that auditors' work adaptability will be significantly influenced by the specific challenges generated by the new COVID-19 context, and the first hypothesis that will be tested is:

Hypothesis 1 (H1). The specific challenges of the new context created by the COVID-19 pandemic generate significant effects on auditors' perception regarding adaptability to the daily tasks and responsibilities of remote audit.

As aforementioned, since we assume that adaptability will be significantly influenced not only by the degree of digitalisation but also by personal and psycho-social factors, this hypothesis will be divided into two subhypotheses that will be stated at the end of each of the next two subsections.

i. Digitalisation and use of emerging technologies – enabling a difference in auditors' daily tasks and responsibilities

All audit companies are strongly urged to use emerging technologies and digital programs and applications, such as Artificial Intelligence (Kokina & Davenport, 2017; Moll & Yigitbasioglu, 2019; Tiron-Tudor & Deliu, 2021), Blockchain technology (Farcane & Deliu, 2020; Tiron-Tudor et al., 2021), Big Data and Data Analytics (Arnaboldi et al., 2017), as well as network security (Persico & Sidhu, 2017), due to the implementation of work-from-home strategies (Albitar et al., 2021; Deloitte, 2020a).

Drones and Workflow Management Systems (Appelbaum & Nehmer, 2017; McKinsey, 2020a), as well as Cloud Computing, the Internet of Things (IoT) and

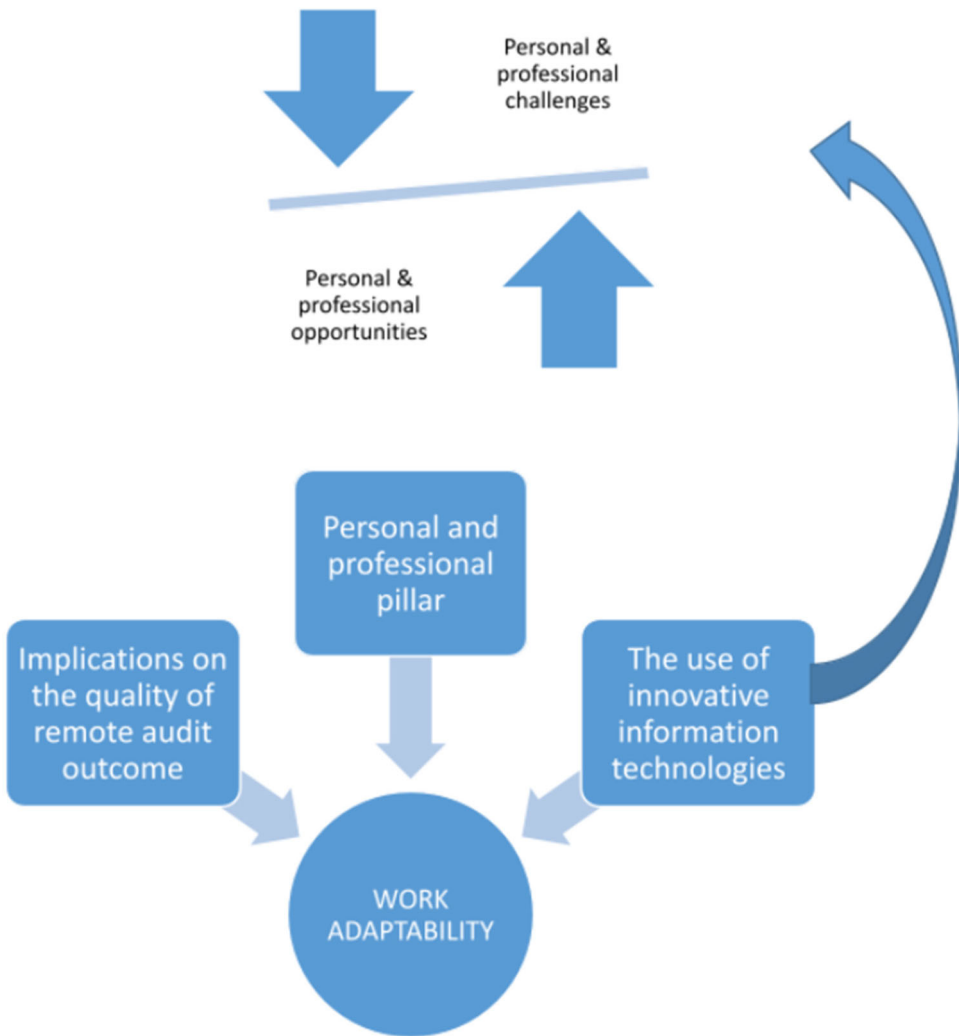


Figure 1. Auditors' work adaptability in COVID-19 pandemic context. Source: authors' projection.

other technologies can coexist and supplement Robotic Process Automation and Artificial Intelligence in audit work. In addition, Machine Learning, a branch of Artificial Intelligence, uses statistical techniques to train machines based a defined set of data, thus eliminating exogenous assumptions and reducing potential biases (Alderman, 2019), allowing auditors to enable more accurate judgments and precise decision making.

Thus, automation will allow removing the more time-consuming tasks (Issa et al., 2016; International Federation of Accountants, 2020), as well as repetitive, mundane, routine and redundant activities from their schedules (PriceWaterhouseCoopers, 2020b), also allowing them to be more creative and innovative (Alderman, 2019; Kokina & Davenport, 2017). In addition, it will allow them to be more adaptable to working from home, resulting in improved efficiency, as well as in more flexible contacts between auditors within an engagement team, and between auditors and

their clients, in the long run (Kelliher & Anderson, 2010).

We observe that in the context of digitalization and implementation of emerging technologies, most debates on the transition to remote working have focused on consequences, such as elements of organisational conduct that are likely to change instantly because of the shift to operating exclusively across these digital technologies. Secondly, the effects of remote working refer to the fact that teleworking generates a lot of *digital exhaust* that is used to transform employees into data representations, which are then used by Artificial Intelligence to predict and shape employees' behaviour (Leonardi, 2021). This must be understood, debated and addressed right now, so that scientists can have the answers we need to thoughtfully construct and manage organisations of the future.

On the background of COVID-19, the size and length of remote working has already generated so much digital exhaust that audit companies must continue to create models based on this one-of-a-kind timeframe. Hence, digital footprints created during COVID-19 are very likely to become the framework for many potential organisational audit processes, strategies and ideologies.

As seen above, we believe that adaptability will be significantly influenced by the degree of digitalization. Hence, one of the subhypotheses will be:

Hypothesis 1.1. (H1.1). Based on auditors' perception, the degree of digitalisation of audit companies has a significant influence on their adaptability to the daily tasks and responsibilities of remote audit in the context of COVID-19.

i. *Personal and psycho-social factors – impacting the auditors' daily tasks and responsibilities*

When it comes to job behaviour and adaptability, social and psychological influences are extremely important (Duan & Zhu, 2020; Mann & Holdsworth, 2003). *Mindfulness*, as a tool for emotional balance in pandemic situations, (World Health Organization, 2020a, 2020b) is of particular concern to emphasise the importance of employees' remote working contact with the organisation.

As teleworking became more common, new issues emerged and teleworkers had to deal with them.

First, most of the writers consider that the most significant issues are *social alienation* (Gajendran & Harrison, 2007; Golden et al., 2008) and *social isolation* (Pyoria, 2011). The American Psychological Association has also expressed concerns about the problem, which corresponds to latest research in this area. In this framework, several options are currently available, including videoconferences, teleconferences, e-mails and various business chat channels. However, all these ignore seemingly insignificant signals associated with face-to-face interaction and communication (i.e., a tap on the shoulder, a handshake or a personal appraisal). Teleworkers, miss *face-to-face contact* above all (Wojcak et al., 2016).

Second, as the current pandemic continues to unfold, the potential for *work-life conflicts* may be greater than ever (Wojcak et al., 2016). Indeed, in addition to managing increased tensions that may result from switching to remote working (especially

for those who are not used to such working environments), there are also increased concerns about health and safety of family and friends. Therefore, these new requirements have further *blurred the role of work and family*, making it more difficult than ever to maintain a proper work-family balance (Giurge & Bohns, 2020; Grant et al., 2013). The risk is significant. The distinction between work and non-work is becoming increasingly hazy in unexpected ways, and many auditors who are working remotely for the first time are likely to *struggle to maintain a healthy work-life balance*.

From this angle, *maintaining boundaries* is important for satisfaction and adaptability at work. In addition, we should expect gender differences in psychological detachment (Catalyst, 2020), because prudence and cognitive stimulation are higher for women (Duan & Zhu, 2020). Thus, in this unprecedented scenario, another longer-term risk arises, the *employee burnout* (Giurge & Bohns, 2020; Sardeshmukh et al., 2012).

Despite all these disadvantages, organisations also discovered a connection between the intensity of remote working and other *advantages*, including *reduced stress* of working under time pressure (Hartig et al., 2007; Konradt et al., 2003) and improved ability to *adapt working arrangements to suit personal circumstances* (Giurge & Bohns, 2020). Hence, when teleworking practises are appropriate, employees perceive teleworking as creating a better balance between their private and professional lives (Baruch, 2000; Grant et al., 2013), they experience less stress (Konradt et al., 2003; Mann & Holdsworth, 2003) and have greater program flexibility and autonomy in their work (Golden et al., 2008). Finally, teleworkers' job satisfaction is significantly higher, and, consequently, their work adaptability as well.

Therefore, since we assume that work adaptability will be significantly influenced by personal and psychosocial factors as well, the second subhypothesis tested will be:

Hypothesis 1.2. (H1.2). Based on auditors' perception, personal and psycho-social factors have a significant influence on their adaptability to the daily tasks and responsibilities of remote audit in the context of COVID-19.

2.3. Work adaptability versus complying with audit standards and professional requirements in the context of COVID-19

The COVID-19 pandemic will influence many audit aspects, especially those that require sound reasoning and professional judgment. For example, determining materiality implies the use of professional judgment. In some cases, the previously chosen benchmark for determining materiality may need to be modified due to substantial changes in circumstances. Materiality should be determined by using metrics that are relevant to financial statement users (e.g., revenue, pre-tax income), which may vary from previous metrics that were used pre-COVID-19.

In the context of teleworking, a significant drawback that auditors may face is the *lack of information flow*. A worker in home-office does not have all information on operations, and, as a result, he or she may not perceive the information accurately or fully (Wojcak et al., 2016), therefore, the auditor may not have adequate opportunity to test his understanding.

Another critical issue is the *lack of awareness of the company's culture*, i.e., the common values, beliefs and norms that have a significant influence on the behaviour of employees. This is built over time and is focused on mutual knowledge of effective solutions to the community's issues, so it is passed down to new members as legitimate. The organisation itself is the culture that creates, evolves and responds to unpredictability (Wojcak et al., 2016). Teleworkers, who are not part of the changes and do not observe activities alongside their peers, begin to lose touch with the organisational reality. All informal conversations, knowledge exchange and interactions result in the development of unwritten rules and common values that affect the workers' actions and behaviour.

In this sense, *socialisation in audit* is strongly correlated with the culture of the working environment. Audit socialisation is the product of both formal and informal pressure put by other practitioners on the members of the auditing community (Phornlaphatrachakorn & Na Kalasindhu, 2020) in the form of role model and mentoring, as well as cultural expectations from within the profession (Siegel et al., 1997). It depicts auditors' struggle to identify the requirements and methods of their work, to regulate procedures, and to create legitimacy for their professional autonomy. It has the power to affect auditors' performance in acting and dealing with professional standards, roles, tasks and functions. It explains auditors' performance in rapidly changing cultures, circumstances and situations, because it is important to drive and decide. Therefore, audit socialisation is linked to high professional engagement, increased work performance, lower turnover intentions, higher job satisfaction and professional success (Phornlaphatrachakorn & Na Kalasindhu, 2020).

Remote audits are a 'catchall', covering a broad variety of practices, some of which are poorly defined in public records or guides. It is assumed that audit companies will use the pandemic as a driver to move to *sustainable augmented audits* (Auld & Renckens, 2021), which will become the future global audit procedure, allowing auditors to carry out the onsite inspection from a control panel commanding remote 'eyes' and recording a complete video of the audit, following strict inspection procedures. Blockchain technology will also be used to ensure integrity of the audit report (Tiron-Tudor et al., 2021). Hence, this addresses the potential for remote auditing to promote the use of more advanced technology (i.e., Artificial Intelligence and satellite monitoring) in certification services (Appelbaum & Nehmer, 2017), and it is a lesson learned from the crisis (Mikušová & Horváthová, 2019). Remote Auditing Long-Term Consequences were also studied in the literature review. During the pandemic, the transition to remote auditing raised some long-term concerns. For example, Fischer (2020) had recognized even in the early stages of the crisis that the experience with remote auditing might either intensify existing issues or drive even more far-reaching and long-lasting reform in auditing.

Due to generational preferences, budget constraints and health mandates, audit fieldwork is moving from client sites to remote environments, as seen with the COVID-19 pandemic. Without calculated precautions, this could have a *negative effect on professional scepticism* (Sorensen & Ortegren, 2021). The researchers' experiment, which is based on the Social Presence Theory (SPT), uses Big 4 senior auditors to investigate how an auditor's professional scepticism is affected by the perceived

level of social presence (high vs. low) and how increasing one's sense of responsibility will increase auditor scepticism in a remote audit environment. On one hand, auditors who have a stronger sense of social presence for their clients tend to be more sceptical. On the other hand, increased transparency can raise scepticism, and increased accountability in a low social involvement setting can offset lower feelings of professional scepticism. This discovery provides an important and efficient method for assisting auditors in maintaining their scepticism in remote audit environments.

Employees who work from home often feel obligated to be productive, but this may cause them to *focus on tasks that are more urgent rather than more important* – a trend that research indicates to be detrimental on the long run, even though it boosts productivity on short-term. Employees, especially those juggling with family and work responsibilities, should pay attention to prioritising important work.

During the COVID-19 pandemic, social distancing and remote-working became the 'new normal', which appears to have *increased working hours and auditors' efforts*, while clients are likely to start requesting *lower audit fees*, as a result (Chen et al., 2019). In this situation, auditors can scale back their efforts to reduce engagement loss; hence, auditors may be *under pressure from clients to reduce audit fees* because of the crisis. This anticipated drop in audit fees appears to have a significant impact on audit quality (Shahzad et al., 2018).

Given the significance of auditing in ensuring the credibility of financial statements, which improves investors' decision making and credibility of financial markets (Shahzad et al., 2018), the Financial Reporting Council released a detailed notice on the effects of the COVID-19 outbreak on audit quality (Financial Reporting Council, 2020), to serve as a guide on issues that should be taken into account when considering the effect of social distancing measures on audit quality (i.e., revision of risk assessment, collection of sufficient and appropriate audit evidence, considering alternative procedures where travel is restricted, evaluation of the going concern, adequacy of management's disclosures about the effects of COVID-19 on the business, reassessment of key audit matters, as a result of the rapidly changing circumstances).

The most common explanation for issuing uncertain audit reports during the COVID-19 pandemic was the concerns about the company's long-term viability. These uncertainties result from a lack of liquidities and a downturn in the company economic growth, as well as from the current economic crisis caused by COVID-19 in most sectors (KPMG, 2020b). The IAASB has issued a couple of Staff Audit Practice Alerts (International Auditing and Assurance Standards Board, 2020a, 2020b, 2020c) to highlight problems and difficulties for auditors in the current environment, including the periods that must be considered by the auditor and the effect of the results on the auditor's report. As a result of all these factors, many businesses are facing increased business risks. Consequently, we should anticipate a major effect on the completion of the *going concern evaluation* because of this pandemic (International Auditing and Assurance Standards Board, 2020a), which appears to be linked to audit quality (International Auditing and Assurance Standards Board, 2020b; Shahzad et al., 2018). Furthermore, when there is more uncertainty, subjectivity in techniques, assumptions and data selection increases. Accounting estimates may be vulnerable to management bias when there is a high degree of subjectivity (Burca

et al., 2021). Considering the numerous and important uncertainties, auditors are finding it more difficult to audit management's assessment of going concern. If circumstances are discovered that raise serious doubts about the company's ability to continue as a going concern, auditors will almost certainly need to conduct additional processes and consider the effect of their findings on the auditor's report. The current environmental uncertainty, as well as the changing nature of the effects of the COVID-19 pandemic, have added to the sophistication and difficulty of *auditing accounting estimates* (International Auditing and Assurance Standards Board, 2020c). In considering management's decisions in relation to accounting estimates, professional scepticism will be critical (Sorensen & Ortegren, 2021). Because there is uncertainty about the economic effects of the pandemic, including how long it will last, the degree of uncertainty may increase. The selection and application of the method or data used may be influenced by the changing conditions and uncertainty and obtaining reliable data may be more difficult. It's worth noting that the IAASB Staff Alert on Going Concern is stating that 'while the impact of the COVID-19 pandemic may amplify events or conditions giving rise to modifications to the auditor's report or opinion, it does not in itself mean a modification is inevitable – this will depend on the facts and circumstances of each entity'.

Therefore, we, believe that compliance with audit standards and professional requirements specific to audit engagements will be significantly influenced by the specific challenges generated by the new COVID-19 context, and the second hypothesis that will be tested is:

Hypothesis 2 (H2). The specific challenges of the new context created by the COVID-19 pandemic generate significant negative effects on the degree of compliance with audit standards and professional requirements specific to audit engagements.

3. Methodology

3.1. Data collection

Our study aimed to identify the auditors' perception on different factors that influence adaptability in remote audit activity. The quantitative analysis was based on data collected through a survey conducted among financial auditors, members of the Chamber of Financial Auditors of Romania (hereafter, CFAR), the competent professional body that regulates and monitors the development of the auditing profession in Romania. The reason lies in the fact that regulation of the audit profession in Romania is relatively recent, indicating a greater sensitivity to problems arising in carrying out the activity.

The information needed to conduct our research was included in a questionnaire consisting of 40 questions, mostly closed, evaluated on a Likert scale from 1 to 5, distributed online to financial auditors from Romania with the support of CFAR, between January and March 2021. We have chosen this period between the interim and the final report that auditors must submit, to capture their perception on the factors that influence adaptability in remote audit in the most intense period of their activity.

Out of the 182 questionnaires, most respondents are female (65.93%). More than 94% of respondents are auditors working individually (43.41%) or in local companies

(51.1%), whereas only 5.49% of the auditors are working in multinational corporations. Respondents are mainly auditors with over fifteen years of experience (52.75%), involved in more than ten audit missions per year.

3.2. Measuring instruments

Our study is focused on identifying to what extent the psycho-social factors, the operational considerations and the degree of digitalization influence auditors' work adaptability, based on auditors' perceptions under the current COVID-19 crisis.

For this purpose, the methods used in the study describe a two-step data analysis approach. As a first step, we designed a set of concepts that describe auditors' perception on the different factors aforementioned that are expected to influence auditors' adaptability and the effectiveness of remote audit activities. These concepts are determined by running exploratory factor analysis. Overall, KMO and Bartlett's Test will be used as a final control key to ensure items are correlated, but not fully, as otherwise this could lead to problems of multicollinearity or worse, singularity concerning estimated results (Lee et al., 2019).

The dimension of each concept was decided by excluding items with cross-loadings under the threshold of 0.40, as for those items, the factors identified through the exploratory factor analysis do not explain a significant part of their variation along the studied sample (Hair et al., 2014). Further, to get more robust concept, we have also excluded the items under the threshold of 0.50, which makes sure that the concepts are defined by items for which their variation is significantly explained by the cumulated effect of the extracted factors (Pituch & Stevens, 2016). Hence, we ensure better convergent validity for our concepts, offering a robust association between items incorporated in the same extracted factor. Otherwise, the number of extracted factors would increase without a significant positive effect on the overall proportion of variance of the items explained.

In the second round of the exploratory factor analysis, we exclude items that share similar cross-loadings on different factors, which makes it difficult to relate those items to one of the respective factors (Hair et al., 2014). By excluding those items, we increase validity of our concepts and provide high correlation between items within the same factor, but not with other factors.

The scale obtained, and the factor analysis will be confirmed by using the same method of factor loadings estimation, respectively, the maximum likelihood estimation method, and results are not affected by biases in use of different extraction methods. As our concepts are expected to be correlated, we will consider the Promax method of factor extraction (Hair et al., 2014).

As a final step for our scale validation, we will test the validity and reliability of the identified concepts. In this respect, we check for each factor the internal consistency, by using the Cronbach's Alpha method, which should be higher than 0.70 (Hair et al., 2014; Shanti, 2019). However, as DeVellis (2016) noted, this method has some caveats, and therefore, we will perform additional statistical checks. For this purpose, we check reliability, which should be greater than the average variance extracted, while the average variance extracted should be greater than 0.50 (Garson, 2016).

Further analysis will be performed to check for the content, convergent and discriminant validity of our scale, and to show that the concepts to be considered on the econometric paper model are not correlated and describe a robust measure of auditors' perception on the four drivers analysed in this article.

In our study, concepts are derived from the debate concerning advantages and disadvantages of remote audit, in terms of the effects on auditors' adaptability to the current context of the COVID-19 pandemic. On the one hand, we look for the benefits of remote audit, mainly related to increased productivity (Organisation for Economic Co-operation and Development, 2020b), decreased work-life tensions (Baruch, 2000; Giurge & Bohns, 2020) or higher flexibility on planning and performing audit activities with lower pressure (Hartig et al., 2007; Konradt et al., 2003). Therefore, we have designed a concept ('*opportunities*') containing a series of questions addressing the way auditors perceive transition to remote audit in terms of productivity, audit costs reduction, improved information sharing via emerging technologies or increased flexibility from the perspective of time allocated per audit engagement and improvements on audit planning activities.

However, remote audit work is associated in literature with poor mental health and well-being (Barber & Santuzzi, 2015; Mann & Holdsworth, 2003), as well as communication overload, all of which can contribute to overworking, which can impact job effectiveness and efficiency. Therefore, we have designed a concept ('*challenges*') starting from items in the questionnaire addressing the way how auditors perceive transition to remote audit work in terms of distraction points, tasks prioritisation, limitations on personal development, social interaction, balance between work and life or mental health state.

A common element between the two concepts is the item addressing auditors' perception on how remote audit work affects their work-life balance, as, in our opinion, this factor, together with digitalization, are of central importance in our discussion.

The lack of information workflow that auditors have faced once transitioning to remote audit, has increased auditors' scepticism, as they may not perceive the information accurately or fully (Sorensen & Ortegren, 2021; Wojcak et al., 2016), with effect on their ability to identify significant misstatements and, eventually, on auditors' liability. Another critical issue is the lack of a formal framework for performing remote audit activities, such as policies, procedures, work instructions or just some guidelines addressing the need of audit efforts recalibration (KPMG, 2020b) or other hot points raised during the COVID 19 pandemic (Financial Reporting Council, 2020; International Auditing and Assurance Standards Board, 2020a, 2020b, 2020c), such as assessment of the going concern, risk assessment and reassessment of key audit matters under pandemic constraints or the redesign of analytical procedures and testing activities to overcome potential issues of the accounting estimates. Therefore, we have designed a concept ('*audit*') describing auditors' perception on how the transition to remote audit determines changes on audit risks, the degree of compliance with minimum requirements of international audit standards, the effectiveness of testing activities and analytical procedures, the quality of communication with the audit client or the way audit companies have implemented a robust change management framework properly addressing the potential deficiencies in audit processes during the crisis, or the radical changes on how companies work.

The lack of information workflow that most of the auditors have faced when transitioning to remote audit work, is expected to be at least partially solved by implementing innovative audit technologies and integrated software solutions. Transition to *sustainable augmented audits* (Auld & Renckens, 2021), the use of blockchain technology (Tiron-Tudor et al., 2021) or more advanced data analysis methods and techniques in certification services (Appelbaum & Nehmer, 2017) are confirmed as opportune during the pandemic (Mikušová & Horváthová, 2019). Therefore, we have designed an additional concept (*'digitalization'*) that relates both to the concept of challenges (disadvantages) and the concept of opportunities (advantages), respectively, to the digitalization concept, which comprises reduced data concerning auditors' perception on the opportunity to implement emerging technologies, such as accounting, blockchain, robotic process automation, digital signature or ERP and GRC solutions integrating modules for processing big volumes of data, using artificial intelligence, machine learning and big data methods and techniques.

Considering how digitalization is described in recent literature, we incorporated in our econometric analysis the concept of digitalization as a moderating variable for both challenges and operations, being expected to determine a positive moderating effect on auditors' perception concerning their work efficiency in remote audit.

Concept scores determined by running exploratory factor analysis are considered as covariates on the estimation of a generalised linear econometric model. We proceed to estimate a GLM ordinal regression analysis, as the dependent variable is an ordinal measure capturing auditors' perception on efficiency of remote audit activities, considering the same Likert scale used for the other items.

The ordinal logistic regression model is part of generalised linear models that reflects the assumption of normal distribution for the dependent variables. Our dependent variable adaptability is an ordinal variable reflecting auditors' opinion on adaptability of remote audit on a Likert scale. Therefore, as there is a natural order among the response categories, the model that is expected to provide consistent estimates is a generalised linear model that uses the logit cumulative function to associate each response category with a baseline category selected prior to performing the estimation procedure (Agresti, 2015; Garson, 2016).

For this purpose, they are considered points that define c ordinal categories with associated probabilities π_1, \dots, π_c , with $\sum_{j=1}^c \pi_j = 1$. Each of the response categories is compared against the baseline category c , leading to $c - 1$ cumulative logit model, known as the proportional odds models. The cumulative logit model represents the logit of cumulative probabilities for the j th category, defined as $P(y_i \leq j) = \pi_{i1} + \dots + \pi_{ij}$, $j = 1, \dots, c - 1$, which is represented by the relationship below:

$$\begin{aligned} P(y_i \leq j) &= \text{loglog} \frac{P(y_i \leq j)}{1 - P(y_i \leq j)} = \text{loglog} \frac{\pi_{i1} + \dots + \pi_{ij}}{\pi_{i,j+1} + \dots + \pi_{ic}} = x_i \cdot \beta_j \\ &= \beta_{0j} + \sum_{k=1}^{c-1} \beta_{jk} \cdot x_{ik} \end{aligned}$$

A cumulative economic logit model, considering all $c - 1$ cumulative logits, can be described by the equation $[P(y_i \leq j)] = \alpha_j + x_i \cdot \beta$, where β is the regression coefficient vector for the explanatory variables, while for each logit model, we have its own

intercept α_j which increases together with the j th response category. For interpretation purpose, it is an extremely useful relationship, defining the probability $\pi_{ij} =$

$$\frac{e^{x_i \cdot \beta_j}}{1 + \sum_{k=1}^{c-1} e^{x_i \cdot \beta_k}},$$

while the change on odds determined by a change on the explanatory variable is given by the relationship $\frac{\partial \pi_{ij}}{\partial x_{ik}} = P(y_i \leq j | x_i = u) - P(y_i \leq j | x_i = v) =$

$$\text{loglog} \frac{P(y_i \leq j | x_i = u) / P(y_i > j | x_i = u)}{(y_i \leq j | x_i = v) / P(y_i > j | x_i = v)} = (u - v) \cdot \beta, \text{ where } x_i = (x_{i1}, \dots, x_{ip}) \text{ is the explanatory variable vector (determined based on the extracted factors obtained from the exploratory factor analysis) for subject } i \text{ or the sample. This way, we note that an increase of } u - v \text{ in the value of the explanatory variable determines an increase in the cumulative odds ratio of } e^{(u-v) \cdot \beta}, \text{ which means that the response } \leq j \text{ at } x_i = u \text{ are } e^{(u-v) \cdot \beta} \text{ times the odds at } x_i = v. \text{ Also, we observe that a 1-unit increase in } x_{ik} \text{ determines an increase in odds } y_i \leq j \text{ multiplied with } e^{\beta_k}.$$

For significance of the model, we review the Omnibus test results, to check if the specified model is better than an intercept model, by checking if the p value is close to 0. For comparison purposes, we also checked Akaike's Information Criterion (AIC) and searched for the model with the smaller values that indicate lower residuals of the model. Statistical significance of regression coefficients is reviewed based on results obtained on Wald chi-square test.

Interaction effects were also considered, especially to highlight the effect of auditors' profile on their perception on auditors' adaptability to remote audit, in relation with the factors determined by the exploratory analysis, which were used as covariates. Auditors' characteristics considered on the mixed effects model are the size of the audit company, the volume of work or the auditors' experience, based on evidence already confirmed in the Romanian environment that highlight some statistically significant differences in auditors' perception on auditors' adaptability and flexibility (Farcane et al., 2021).

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4. Results

4.1. Analysis of respondents' opinion

Auditors' perception on how transition to remote audit has affected their work efficiency, in terms of adaptability to the new conditions, such as time or space constraints, limitations determined by logistics and IT software solutions and emerging technologies, suggest a position in favour of remote audit. Based on Figure 2, we notice that out of 182 questionnaires returned, 46.7% of the auditors consider that their work efficiency improved with the transition to remote audit, whereas only a small portion, of 14.84% said that their work efficiency has decreased. However, a significant part of auditors considered that the transition to remote audit has determined no significant changes on their work efficiency (38.46%). Further, looking at how they adapt to the new working conditions, the results shown in Figure 2 suggest that auditors' workload increased significantly (56.04%), thus, affecting their planning

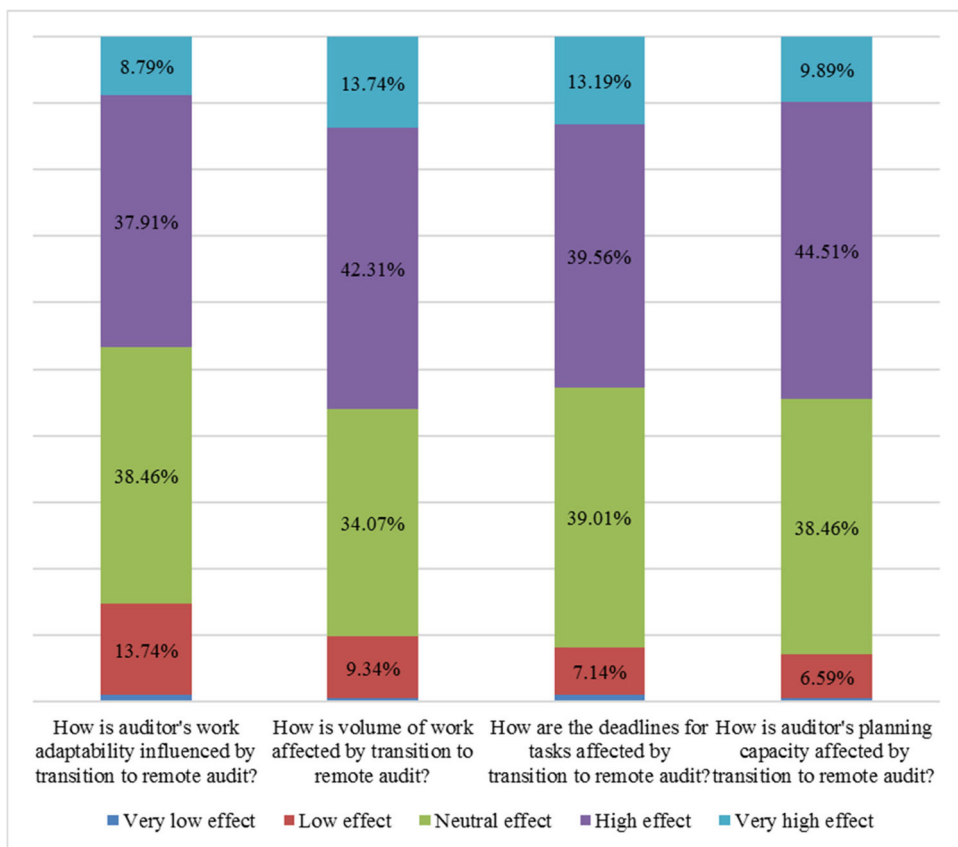


Figure 2. Distribution of auditors' perception on work adaptability/efficiency. Source: authors' projection with SPSS.

activities (54.4%) because of shorter deadlines (52.75%). Instead, in the case of all items analysed, here, we observe a high percentage of neutral opinions.

The questionnaire is mainly designed to capture auditors' perception on advantages and disadvantages related to the transition to remote audit. From this perspective, we notice in Figure 3 that the most important disadvantages are related to the difficulty of setting a balance between work and personal life, assimilation of knowledge on the new emerging technologies of audit software solutions, which are essential when working remotely (rated as '4 -> high'), or the low level of socialisation (rated as '5 -> very high'). However, auditors appreciate that transition to remote audit has not impacted them from a psychological standpoint (rated as '1 -> very low'), or in terms of having a proper place for performing their daily tasks (rated as '2-> low'). Therefore, it seems that auditors are pragmatic, and they are looking for proactive solutions instead of struggling with the difficulties of working remotely. This pragmatism is also observed when analysing auditors' perception on the advantages of transitioning to remote audit, as they realise that the disadvantage of social distancing can be compensated by advantages, such as flexible program (rated as '4 -> high'), or time saved from spending in traffic (travel item rated as '5 -> very high').

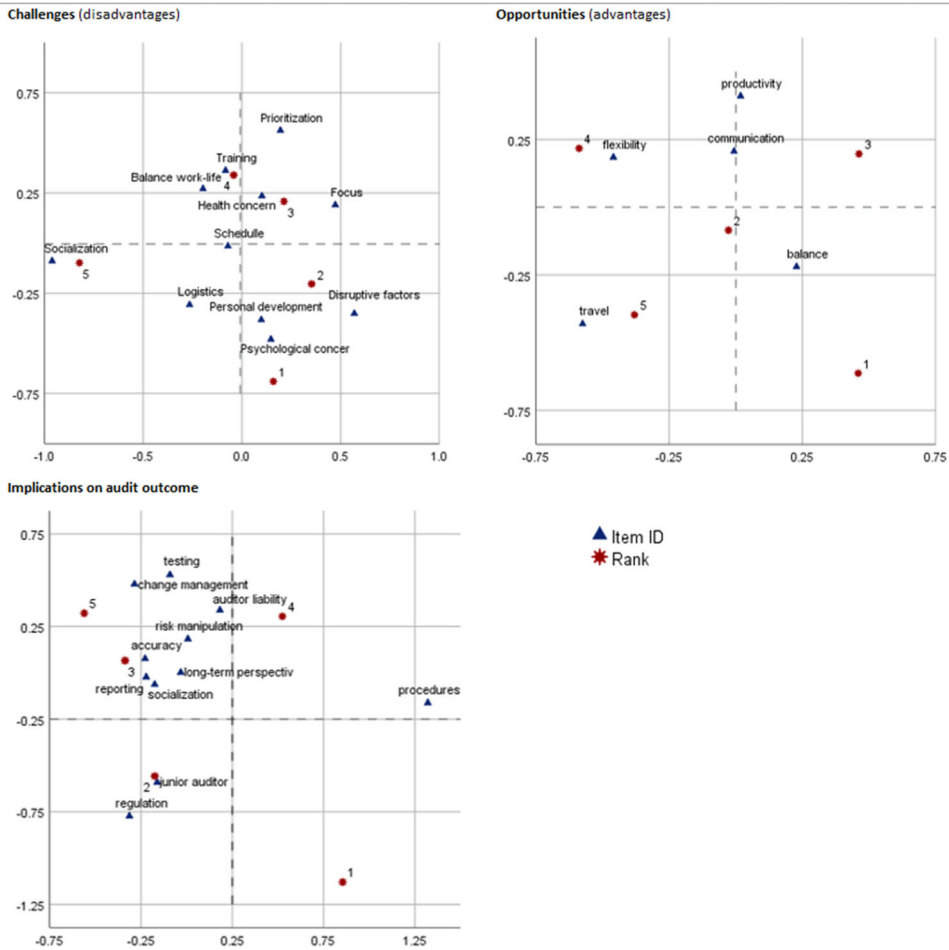


Figure 3. Correspondence analysis on auditors' perception concerning main advantages and disadvantages related to transition to remote audit. Source: authors' projection with SPSS.

Transition to remote audit seems to have no significant effect on audit quality (rated as '3 -> neutral'), on the communication channels between the audit client and auditors (rated as '3 -> neutral'), or on the communication channels between auditors (rated as '3 -> neutral'). Moreover, we notice that respondents consider that compliance with auditing standards are less likely to be affected (rated as '2 -> low'). Additionally, we observe that knowledge transfer to junior auditors is not affected, as they are familiar with the new audit technologies and software solutions (rated as '2 -> low'), and sometimes even better than more experienced auditors.

Instead, auditors consider that the transition to remote audit significantly affects their liability, as they are not entirely confident of evidence received online, leading to even increased testing requirements (KPMG, 2020b). However, they consider that they can perform their activity properly, and they emphasise how important it is to change management framework in each audit company (rated between '4 -> high' and '5 -> very high'), or how important it is to redesign the testing activities to align them to the new context of remote audit (rated between '4 -> high' and '5 -> very

Table 1. Correlation matrix, lowest and highest cross-factors values.

		No. items	Inter-item correlations	Cronbach's alpha	Digitalization	Challenges	Opportunities	Audit activity
Challenges	min	12	0.529	0.930	-0.163	-	-0.125	-0.225
	max				0.128		0.222	0.371
Opportunities	min	6	0.501	0.857	-0.101	-0.125	-	-0.208
	max				-0.101	0.222		0.346
Audit	min	1	0.218	0.747	-0.145	-0.225	-0.208	-
	max				-0.145	0.371	0.346	
Digitalization	min	11	0.203	0.741	-	-0.163	-0.101	-0.145
	max					0.128	0.204	0.301

Source: SPSS output summarized by authors.

high'). Otherwise, in the absence of more comprehensive interviews that could bring more clarification on the identified exceptions, the testing activities would probably be affected negatively, with an impact on the quality of the audit output. However, as expected, analytical procedures are not affected, because they are based on financial statements, and financial ratios are less conditioned by sufficient understanding of the specific audit processes. These results highlight the importance of guidance provided by professional organisations and international standard-setters on how to address conceptual and operational issues along the complete process flows of an audit engagement, to adjust the company's internal policies and procedures on exceptions and exemptions for ensuring auditors' adaptability to the new context.

4.2. Correlation analysis

The aim of the designed scale measurement is to integrate as much information as possible from the total of 40 items included in the survey. The survey looks at four main pillars: (1) personal and professional challenges addressed by auditors in terms of remote audit work under the COVID-19 conditions; (2) personal and professional opportunities provided by the COVID-19 pandemic in terms of working conditions related to remote audit; (3) implications of the COVID-19 pandemic in terms of restrictions on the quality of remote audit outcome; and (4) the use of innovative information technologies during the remote audit activities.

For this purpose, first, we reviewed Spearman's rho correlation matrix, to check if multicollinearity or singularity issues can affect our estimates. As there are numerous items analysed, we have summarised in Table 1 the minimum and maximum correlation between each of the initial groups based on the survey structure. Overall, we observe good correlation between the items describing challenges addressed by auditors in terms of remote audit and opportunities they can get during the COVID-19 pandemic, by having inter-item correlations higher than 0.50. On the other side, we observe lower correlation among items covering the effects of the COVID-19 pandemic on remote audit outcome and items addressing the use of different innovative information technologies customised for audit purpose, with inter-item correlations closer to 0.20. However, items clustered on the four initial groups have good internal consistency, as Cronbach's Alpha exceeds the level of 0.70, meaning that the items within those groups are highly correlated. Those results translate later into our analysis as favourable premises for good reliability of our concepts.

Table 2. Correlation matrix, lowest and highest cross-factors values.

Group of items	Kolmogorov–Smirnov ^a				VIF	
	min	Sig.	max	Sig.	min	max
Digitalization	0.352	0.000	0.525	0.000	1.295	2.640
Challenges	0.164	0.000	0.210	0.000	2.461	4.534
Opportunities	0.191	0.000	0.251	0.000	1.854	3.599
Audit	0.194	0.000	0.308	0.000	1.516	3.002

aLilliefors Significance Correction.

Source: SPSS output summarized by authors.

Table 3. Evaluation of exploratory factor analysis output.

Round of EFA	KMO test	Bartlett's test of sphericity			Goodness-of-fit test			Total variance explained (%)
		Approx. chi-square	df	Sig.	Chi-square	df	Sig.	
I. delete items with low factor loadings and low factor communalities	0.786	3550	780	0	514.5	395	0	67.90
II. delete items with cross-loading	0.840	2814.9	406	0	485.7	271	0	60.81
III. final version of scale measurement	0.818	2279.8	300	0	323.3	185	0	63.37

Source: SPSS output summarized by authors.

In terms of correlation between items belonging to different groups, we observe from [Table 1](#) that the highest positive correlation was 0.371, while the highest negative correlation was only -0.225 , which represent low levels of correlation (Lee et al., 2019). Those results draw-up positive premises for the convergent and discriminant validity of our concepts.

In [Table 2](#), we provide the minimum and maximum value of the Kolmogorov–Smirnov test and the multicollinearity test performed for all items included in our survey. All statistics obtained by running the Kolmogorov–Smirnov test are close to 0, with a significance level $\text{Sig.} = 0$ for all items analysed. Also, by running the collinearity diagnostics for all items included in our survey, we obtained values per each group of items that indicate that our estimates are not affected by multicollinearity and singularity issues (Lee et al., 2019).

4.3. Scale measurement of reliability and validity

The next step in our analysis consists of extracting factors based on data collection, by considering the criteria described in previous sections. In [Table 3](#), we summarise the main statistics for each of the three rounds of the performed exploratory factor analysis (EFA) to show model significance. The results show that by eliminating some items we get an improved set of concepts.

In the first round of the exploratory factor analysis, we eliminated 3 items because of their low loading factor, which was less than the threshold of 0.40. Further, we have eliminated another 8 items with a loading factor below the threshold of 0.50. The second round of the exploratory factor analysis has led to the exclusion of

another 2 items, as their variance has been explained by two factors with similar loadings, being difficult to associate the items to one of the resulting factors.

This way we have reached our final scale of measurement that consists of 26 items of the total of 40 items included in the structure of our survey. In [Table 4](#), we provide information on loadings for each of the identified factors.

The first factor, called Digitalization, reflects the concept that describes the extent to which audit companies' IT systems consider new and innovative information technologies and tools customised for audit purposes (machine learning, internet of things, big data, blockchain, cloud accounting). In our analysis, especially in the light of the INDUSTRY 4.0 era, a high level of automatization of manufacturing and service support processes, as well as good information security (Domil et al., 2022) are of essence. After all, the implementation of the Industry 4.0 concept on manufacturing and support services implies the management of big data, with direct implications on audit procedures that have to adjust to the increasing volume of information. This factor is used as an independent variable on econometric models related to the validation of research hypothesis H1.1.

The second factor sums up all negative effects generated by the COVID-19 pandemic, by integrating auditors' personal and professional aspects into one measure. Based on loadings, it seems that auditors' approach towards mitigating the negative effects of COVID-19 restrictions is one of the planning activities. The biggest challenge that auditors seem to face is the difficulty to find solutions that ensure a proper balance between time spent at work and time spent with families (Baruch, 2000). This factor is used as an independent variable on econometric models related to the validation of research hypothesis H1.2, with focus on the negative effects perceived by auditors when performing remote audits under the COVID-19 restrictions.

The third factor includes part of the effects that auditors perceive as being positive in relation to their adaptability and flexibility in remote audits. This factor is used as an independent variable on econometric models related to the validation of research hypothesis H1.2, with focus on the positive effects perceived by auditors when performing remote audits under the COVID-19 restrictions.

The last factor describes a concept that is more related to audit risks, the implications on auditors' liability and how auditors can mitigate these risks by identifying material misstatements and fraud transactions, thus, providing a reasonable assurance to stakeholders. The concept shows more the negative side of auditors' perception on items. According to the results obtained from the exploratory analysis, the highest variation between auditors' responses refer rather to compliance concerns and how the used audit framework supports them in identifying material errors or fraudulent transactions when performing remote audit procedures. This factor is used as an independent variable on econometric models related to the validation of research hypothesis H2.

A Confirmatory Factor Analysis (CFA) has been performed to validate our set of concepts. In [Table 4](#), we show the design and estimates related to the structural equations model. At a first glance, we observe that our scale of measurement is valid from a discriminant point of view, as there are no significant correlations between our concepts, the highest being observed between the first and the third concept, showing

Table 4. COVID-19 implications on remote audit scale measurement.

Item	Variable	Factor loading	R ²
Digitalization - construct related to digitalization of remote audit activity under COVID-19 pandemic circumstances			
Use of Blockchain technology	Digital_4	0.805	0.662
Use of Cloud Accounting tools	Digital_5	0.541	0.297
Use of Robotic Process Automation tools	Digital_6	0.721	0.526
Use of Machine Learning technologies, Internet of Things tools	Digital_7	0.566	0.325
Use of Big Data technologies and tools	Digital_10	0.650	0.442
Challenges - construct related to negative effect of COVID-19 pandemic circumstances on remote audit activity			
Focus on activities	Challenge_1	0.806	0.630
Prioritization of work, social, family tasks	Challenge_2	0.870	0.843
Impairing the balance between work and extra-professional life	Challenge_3	0.797	0.615
Limiting professional development	Challenge_4	0.663	0.564
Extra-professional disruptors (lack of energy, lack of internet, family interactions)	Challenge_5	0.741	0.546
Existence of technical equipment (printer, scanner, etc.)	Challenge_6	0.752	0.527
Fear and concerns related to state of health	Challenge_9	0.694	0.660
The obligation to follow tutorials, webinars and the extra time allocated to them	Challenge_10	0.667	0.583
Lack of peer interaction at work	Challenge_11	0.543	0.522
The appearance of emotional states of anxiety, anguish, depression, other	Challenge_12	0.600	0.580
Opportunities - construct related to positive effect of COVID-19 pandemic circumstance on remote audit activity			
Increasing labor productivity	Opportunity_1	0.745	0.546
Reducing the time, fatigue and costs associated with actually going to work	Opportunity_2	0.773	0.593
Ensuring a balance between work and non-professional life	Opportunity_3	0.829	0.709
Work inclusion for people with disabilities	Opportunity_4	0.516	0.289
Flexibility regarding the simultaneous fulfillment of work tasks, respectively, of family / social activities	Opportunity_5	0.761	0.604
The extent to which remote audit has been a vector for sharing information and professional knowledge and more	Opportunity_6	0.642	0.448

(continued)

Table 4. Continued.

Item	Variable	Factor loading	R ²
Audit - construct related to implications of COVID-19 pandemic circumstances on quality of remote audit outcome			
Risks related to the authenticity of audit evidence in telework activities	<i>Operational_1</i>	0.624	0.434
The extent to which compliance with ISA standards has been affected in the context of telework	<i>Operational_5</i>	0.590	0.339
How the new context may affect the extension of the auditor's liability	<i>Operational_7</i>	0.861	0.699
The extent to which the ability to detect significant misstatements in audit engagements may be affected	<i>Operational_8</i>	0.830	0.681

Source: SPSS output summarized by authors.

Table 5. Evaluation of CFA model fit.

Statistics	Ideal threshold	EFA-based model	Item-based model with only one factor
CFI	>0.95	0.933	0.898
RMSEA	<0.06	0.055	0.069
SRMR	<0.07	0.059	0.074
Chi-square <i>p</i> value	<i>p</i> < .01	.000	.000
df	-	262	246
Chi-square		403.1	459.9
Cmin/df		1.539	1.87

Source: AMOS output based on data EFA set of constructs.

that the way how auditors plan their tasks is important for the outcome of the remote audit activities.

In Table 5, we show the main statistics reviewed to analyse the adequacy of the CFA model. For the only statistical parametric test performed, the Chi-square test, the $p < .01$ value confirms that our model is statistically significant. However, as our sample is not small, the relevance of this test might be biased (Hair et al., 2014).

By looking at the nonparametric tests performed, we observe that SRMS is below the recommended threshold. Even in the case of CFI and RMSEA tests, the values are close to the recommended thresholds. However, the CFI exceeds the traditional threshold level of 0.90, while the RMSEA does not exceed the acceptable threshold level of 0.10 (Hair et al., 2014), which means that our model is moderately adequate.

Additionally, in Table 5, we show that our set of concepts is statistically significant as it is made up on an item-based model with only one concept with a less significant CFA when looking at any of the nonparametric tests performed.

To check on the concepts' reliability and discriminant values, we determined several specific measures, as recommended in literature (Hair et al., 2014; Shanti, 2019). In Table 6, we show that our concepts are internally consistent, as all measures exceed a specific ideal threshold. Moreover, in Table 6, we observe that the maximum shared variance (MSV) between concepts is lower than the extracted average variance,

Table 6. Evaluation of scale measurement reliability.

Factor	Cronbach's alpha	Composite reliability	Average variance extracted (AVE)	Maximum shared variance (MSV)
Ideal threshold	>0.70	>0.70	>0.50	<AVE
Digitalization	0.775	0.777	0.542	0.012
Challenges	0.916	0.916	0.523	0.179
Opportunities	0.857	0.861	0.513	0.012
Audit	0.815	0.816	0.532	0.179

Source: AMOS output and authors calculation.

which also confirms the discriminant validity of our set of concepts, meaning that the identified concepts are properly delimited one from another. Nonetheless, as the average variance extracted (AVE) exceeds the level of 0.50, we can conclude that our concepts are also convergent.

4.4. Econometric analysis

The results of the estimated generalised linear model have been summarised in Table 7. In model 1, the results show a significant positive influence of factor opportunities on auditors' perception on adaptability and flexibility in remote audit (Coef. = 1.079, $p < .01$). The higher the auditors' perception on the advantages of remote audit in times of pandemic, the higher the perception on expected auditors' adaptability. The estimate of 2.941 shows that auditor's rate with the highest score the adaptability and audit process effectiveness. This increases 2.941 times as compared to the actual situation, once their perception on the positive benefits generated by the COVID-19 pandemic increases with one unit. The same influence is shown over all models, irrespective whether, we control them for fixed factors or for interaction effects. Therefore, if auditors realise the benefits of remote audit, especially under the circumstances of the current COVID-19 pandemic restrictions, it is expected that for the future, audit companies will look for cost reductions and feasibility to implement remote audit at least partly, depending on audit engagement complexity and costs incurred. Based on those results, we can validate hypothesis H1.2.

On the other hand, we observe that the negative effects related to personal and professional aspects do not have a statistically significant influence on auditors' perception on adaptability to remote audit. Negative effects refer more to psycho-sociological concerns (Ahorsu et al., 2020; Duan & Zhu, 2020; Gajendran & Harrison, 2007; Grant et al., 2013). However, effects determined by stress and social distancing can be overcome by using audit technologies and data analytics, which reduce work overload and increase job satisfaction, with direct implications on auditors' adaptability and productivity (Organisation for Economic Co-operation and Development, 2020b). Moreover, a better process and data collection standardisation (use of templates) and big data processing by using advanced machine learning techniques integrated in ERP and GRC software solutions, also lead to better adaptability, if automation is implemented for repetitive tasks as much as possible. Nonetheless, the implementation of more recent emerging technologies has provided additional tools for auditors that can remediate psycho-social concerns by ensuring a better planning of audit activities

Table 7. Evaluation of CFA model statistical significance.

	Model 1		Model 2		Model 3		Model 4		Model 5	
	B	Exp (B)	B	Exp (B)	B	Exp (B)	B	Exp (B)	B	Exp (B)
EFA factors										
Challenges	1.079*	2.941	-0.267	0.765	-0.280	0.756	-1.518	0.219	-1.518	0.219
Opportunities			1.114*	3.046	1.175*	3.238	1.554*	4.729	1.554*	4.729
Audit			-0.252	0.688	-0.231	0.794	3.431	30.897	3.431	30.897
Digitalization			0.178	1.195	0.304***	1.356	2.012	7.477	2.012	7.477
<i>Interaction effect</i>										
Challenges × Digitalization					0.158	1.171				
Audit × Digitalization					-0.412***	0.662				
Control variables										
Number of missions = 4										
<i>Interaction effect</i>										
Mission (=5) × Digitalization										
Experience (=1) × Audit										
Experience (=2) × Audit										
Experience (=3) × Audit										
Ownership (=1) × Audit										
Ownership (=2) × Audit										
Model validation										
Akaike' Information Criteria		425.33		463.91		422.1		422.1		427.49
Omnibus test		44.62		6.04		53.86		57.85		115.23
Likelihood ratio chi-square										
Sig.		0.000		0.014		0.000		0.000		0.000

*Significant with 1% significance level.

**Significant with 5% significance level.

***Significant with 10% significance level.

Note: we have considered following coding of fixed factors: I. Experience = 1 refers to auditors with less than 5 years of experience, Experience = 2 refers to auditors with experience between 5 and 15 years; II. Ownership = 1 refers to auditors practicing as individuals in the liberal profession of audit, Ownership = 2 refers to firms of audit with local capital, Ownership = 3 refers to multinational firms of auditor; III. Mission = 5 refers to auditors having planned more than 50 audit missions.

Source: SPSS output based on data EFA set of constructs.

Conversely, in model 2, we observe that negative effects generated by COVID-19 on the audit activity led to a decrease in efficiency of remote audits (Coef. = -0.375 , $p < .05$). The results show that an increase with one unit of the negative effects led to a decrease with $1 - 0.688 \approx 0.318 = 31.8\%$ of the odds that auditors will rate efficiency of remote audit to the highest rating allowed by our model. After all, efficiency of remote audit performed in restrictive conditions still concerns the quality of the audit output, including compliance with ISA requirements or proper detection of material misstatements or fraud transactions. If the COVID-19 pandemic restrictions do not allow auditors to perform audit procedures and verifications according to the audit program and in compliance with ISA requirements, auditors must find alternative solutions to overcome these situations, most of the time being translated into an increase on testing requirements, with impact on audit costs due to higher auditors' liability (Financial Reporting Council, 2020; International Auditing and Assurance Standards Board, 2020c; KPMG, 2020b). Therefore, such an increase in audit testing requirements led to lower adaptability to the new COVID-19 pandemic context, which asks for more cost reduction with implicit impact on audit companies' competitiveness, rather than an increase in time and money allocated per audit engagement.

In model 4, we observe that digitalization becomes statistically significant, thus determining an increase in the odds that auditors will perceive a high efficiency of remote audits, with approximately 35.5% (Coef. = 0.304 , $p < .1$). Compared with model 3 that has considered all concepts included in the model, this change in the significance of digitalization is highly conditioned by the statistically significant effect of interaction between digitalization and audit (Coef. = -0.412 , $p < .1$). Conversely, this interaction has an opposite effect on the margin of digitalization in terms of cumulative probability. These results suggest that auditors understand the added value of implementing innovative audit technologies and software solutions, but only if the quality of the remote audit outcome is not affected. Therefore, a decrease in the quality of the audit outcome makes auditors to avoid the scenario of remote audit (Coef. = -0.412 , $p < .1$), because they perceive higher risks and increasing liability for the future, which exceed the improvements generated through digitalization and audit process automation. The implementation of such software solutions does not automatically translate into improved governance, risk management and internal control processes or monitoring. We notice a similar situation in the case of using audit software solutions as an essential element to obtain benefits from their implementation, as input data is hardly affected by companies' information management systems, the degree of effectiveness of internal processes and the experience and expertise of the company's specialists. Despite the benefits of adaptability to remote audit, we cannot compromise on the minimum quality requirements prescribed by ISAs just for the sake of digitalization, no matter the side effect on financial statements accuracy, the risk of audit and auditor's reputation and liability. Those results lead us to the conclusion that H1.1 can only partially be validated, as digitalization is statistically significant only when we look for interaction effects with auditors' workload, experience and company size.

4.5. Robustness analysis

We have controlled our results for analysing robustness, by including in the model some fixed factors related to the number of audit missions that auditors have planned, their experience in the field of financial audit services, their social status and if they have a dedicated place at home for job related activities. As the model contained 52 estimates, in Table 7, we have provided information on those who are statistically significant in relation to control variables.

As a first note on model 5, we underline again the role of digitalization of audit activities, as this factor has the highest marginal effect on the dependent variable (Coef. = -7.811 , $p < .05$). As highlighted previously, implementation of audit technologies and software solutions can be a real solution for auditors to reduce audit costs and improve auditors' adaptability to remote audits. The results show that especially in the case of audit companies with high workload, digitalization can play an essential role. The effect is negative especially because new innovative technologies and instruments are not widely implemented. From the total sample analysed, we found that only 22.31% of the respondents confirmed that they use at least one of those technologies. The reason is either cost-based or auditors are not yet familiar with those solutions, but our results underline the need of a systemic approach that consists of involving professional associations for promoting these solutions and supporting companies with the implementation. This approach should find support especially within audit companies that have financial resources to finance such implementation costs, as our results show a significant negative effect of digitalization only in cases of companies with more than 50 planned audit missions. Therefore, digitalization has become of central importance in audit companies' efforts to find solutions for reducing audit costs in the long-term and keep their competitiveness, as in the short-term it is expected that digitalization initiatives will generate significantly high one-time costs. Data analytics solutions are just part of a wider range of solutions, which can reduce auditors' efforts along the complete process of auditing. Consequently, auditors' adaptability will improve significantly, if implementation of emerging technologies and integrated GRC and ERP software solutions is flawless.

It seems that auditors' experience represents a significant factor in terms of preference for remote audit in times of pandemic crisis, especially in case of auditors with an experience of less than 25 years. The results show that auditors with lower experience in audit prefer remote audits, as they rate efficiency of such audits 13.94 times higher as compared to the traditional audit solution. These results are visible in practice, as younger auditors are more familiar with the technologies that facilitate remote audits, like communication technologies, audit automated technologies or more advanced technologies, like advanced statistical tools. Hence, the negative interaction effect between audit and experience shows that auditors with lower experience are keener on using innovative solutions that, if used properly, generate a higher degree of assurance on the quality of financial statements, as audit procedures are performed against higher volume of auditable information. Although, an open point will be the effectiveness of process and the existence of a mature system of policies, procedures and tools aimed to ensure an efficient system of information management

(Organisation for Economic Co-operation and Development, 2020b; Auld & Renckens, 2021).

Conversely, the size of the audit company has a negative influence on preference for remote work under the COVID-19 pandemic restrictions, as compared to the preference for the classical approach of audit activities. These results are reported in case of auditors working individually and in case of local audit companies that are more cautious on the option of remote audit. We expect for this reluctance to come exactly from the lack of a consolidated and mature audit framework based on which those companies and auditors plan and perform their audit activities. If the current processes within an audit firm are neither effective or not flexible enough to adjust to remote audit minimum requirements, auditors face a serious issue, as audit risks and auditors' liability increase. Consequently, these auditors choose the safe side and avoid risk of future litigation costs, which can reach a considerable amount of money.

These results lead us to the conclusion that hypothesis H2 can also be validated.

Based on the Omnibus test, we can confirm that the models are statistically significant as the p value of each estimated model is below the threshold of .01, except for model 2, which is statistically significant only by considering the threshold of .05. Within those models, it seems that all our estimated concepts are accurate, with slightly lower residual value ($AIC = 422.1$).

Overall, we conclude that the analysis on alternative solutions for remote audit in times of pandemic needs to be performed by looking at the interactions between various drivers that influence the efficiency of remote audits.

5. Discussions

Adapting to the 'new normal' is a challenge for financial auditors, who must rethink their procedures to be able to perform audits in this new remote manner (Financial Reporting Council, 2020; International Auditing and Assurance Standards Board, 2020c; KPMG, 2020b). Our research reveals that remote work has become a critical component of business continuity for financial auditor (Gartner, 2020a; International Federation of Accountants, 2020; PriceWaterhouseCoopers, 2020b).

Romania ranks the last place amongst EU Member States in the 2021 edition of the Digital Economy and Society Index (DESI) (European Commission, 2021), with the same performance as before the pandemic years, and connectivity and digitalization are far behind (Domil et al., 2022), considering that almost one fifth of the Romanians have never used the internet, and less than a third have at least basic digital skills.

The most important challenges faced by professionals in this field are related to workforce, workload, digitalization, cybersecurity and process automation. Literature (Barbu et al., 2021; Rândașu, 2019) brings different arguments for this statement: employees are overwhelmed by workload during this period, many of them do not have the necessary skills to handle all tasks, the lack of programs dedicated to the development of employees' knowledge and skills – all these have a negative influence on employees and organisational performance.

In this context, our study on the adaptability of Romanian auditors also shows that this alternative way of working can continue even after the COVID-19 pandemic (Albitar et al., 2021; Fischer, 2020; McKinsey, 2020b; World Economic Forum, 2020a, 2020b), but only if they perceive factual results of a personal and professional nature. This idea is also depicted in other studies, revealing that managers are planning to rely more on remote working in the future (Ozimek, 2020). Remote audit is perceived by the respondents to our study as meeting the set costs and deadlines and honouring their commitments, given the context generated by the COVID-19 pandemic. In addition, the results of our study highlight that decreased travel time and fatigue increases productivity in remote audits.

The partial validation of the first research hypothesis of our study confirms that digitalization and innovative information technologies are key factors in remote audits (Issa et al., 2016; Tiron-Tudor & Deliu, 2021), by implementing innovative Machine Learning and Big Data Analytics-based solutions, customised for audit purposes (Arnaboldi et al., 2017), such as the implementation of IT solutions necessary for automatic data processing, based on predefined templates that eliminate repetitive tasks through data coding processes. Our results also confirm that in this context in which digitalization plays an important role in carrying out the activity, employees training is a necessity. The results highlight that the younger auditors are much more familiar with emerging technologies than older ones who, in turn, have more experience in their work. But training is necessary for junior auditors too, so that they understand the implications of performing audit tests remotely. Restrictions imposed by the pandemic context have limited face-to-face meetings and teamwork, thus, affecting knowledge transfer from experienced auditors to early-career auditors.

Moreover, the new tools, instruments and platforms must be designed to allow performance of complex procedures in real-time, to provide a reasonable level of audit insurance, and analytical and substantive procedures must be developed to identify possible data manipulation. We believe that, in addition to the implementation of emerging technologies, prevention of audit data manipulation is largely determined by organisational culture. Thus, a strong organisational culture, in favour of ethics and business conduct norms, may be the prerequisite for performing a quality remote audit.

Social distancing and limited face-to-face interactions were a challenge for audit teams in fulfilling their engagements, aspects that clearly reflect the need for implementing new emerging technologies in this area, like shown by Farcane and Deliu (2020) and Tiron-Tudor et al. (2021). We can say that in the context generated by the COVID-19 pandemic, transformations within the profession were inevitable. Thus, the pandemic context has accelerated digitalization, although efforts in this direction have been made by CFAR through e-learning courses and database management applications for audit reporting.

However, digitalization is not an easy, inexpensive and affordable process. This aspect, of particular importance determines a competitive advantage for big audit companies which, due to available resources, have a higher potential for implementing emerging technologies and digital programs and applications, such as Artificial Intelligence (Issa et al., 2016; Kokina & Davenport, 2017; Moll & Yigitbasioglu, 2019),

Blockchain technology (Farcane & Deliu, 2020; Tiron-Tudor et al., 2021), Big Data and Data Analytics (Arnaboldi et al., 2017) and network security (Persico & Sidhu, 2017). Conversely, for small audit companies, the costs for aligning with the new digital requirements imposed by the COVID-19 restrictions are significant, which is why a partnership becomes a valid solution in this pandemic context.

If we consider the balance between professional and personal life when tasks are performed from home, our research results show that ensuring a balance is a real challenge in this pandemic context (Baruch, 2000), although most respondents confirmed that they have a separate room dedicated to teleworking activities. Our results are in line with the ones obtained by Giurge and Bohns (2020), who stated that currently it is more difficult than ever to maintain a proper work-life balance. A solution in this respect can be the more efficient task planning by setting smart objectives that limit the audit activities in time to ensure the optimal level of work-life balance.

The COVID-19 context also highlighted the need for a conceptual and formal approach at the level of the company's chain management to limit disruptions, such as policies, procedures and instructions that directly address the way organisations act in pandemic situations.

In our research, we aimed to identify and assess the means for achieving adaptability in the current sensitive socio-economic context, and our findings revealed that digitalization, innovation, adaptability and flexibility are the main factors that help auditors to overcome difficult times like the ones generated by the new coronavirus pandemic.

The study also highlights the role of the audit framework used by auditors when performing remote audit activities. The study confirms that auditors are reluctant to perform remote audit activities if they do not have a reasonable assurance on the quality of audit evidence and the risk that material errors or fraudulent transactions are not detected (Financial Reporting Council, 2020; International Auditing and Assurance Standards Board, 2020c). Pre-requisites for improving auditors' attitude towards the remote audit solution are the use of a mature audit framework (International Auditing and Assurance Standards Board, 2020a, 2020b; KPMG., 2020a) and the implementation of automated audit procedures as much as possible (Appelbaum & Nehmer, 2017).

Our research contributes to the literature by providing a study conducted on a professional category that had to adapt, overcome and improvise in uncertain times, respectively, to cope with change to ensure remote audit efficiency and quality in the new context generated by the COVID-19 pandemic.

6. Conclusions

In a nutshell, teleworking is a precautionary measure for COVID-19, and therefore, the need to create efficient online synchronous and asynchronous, yet flexible methods of working within audit teams, respectively, adopting new technologies, is vital as a reaction to adaptability. Digitalization can make the difference between auditors and our study showed a higher tendency of young auditors towards new technologies.

Moreover, in the twenty-first century, audit needs to adapt continuously to new knowledge and changes in regulatory frameworks, but also implement a large set of skills, especially because we are talking about a sensitive socio-economic context impacted by the COVID-19 pandemic, respectively, all the challenging changes resulting from the current pandemic.

Our article revealed that most of the Romanian auditors found an improvement in the efficiency of their daily tasks in terms of remote audit. In terms of auditors' perceptions on the advantages and disadvantages of transitioning to teleworking, they express some difficulties in work-life balance, although a significant part of auditors believes that by adapting to remote audit, work efficiency and quality of the audit engagements remains the same. In addition to these benefits of working remotely, although there is a disadvantage in terms of social life, this is compensated through program flexibility or time saved for travel.

Auditors perceive that transition to remote audit does not affect their professional activity per se, while psychological aspects are also assumed. Even if they were not provided with convenient conditions for audit engagements, they showed pragmatism and ambition in seeking proactive solutions, also ignoring the difficulties implied by remote working. The perceived disadvantages of remote audit did not influence the auditors' view on adaptability.

Perception of auditors' liability related to remote audit engagements seems to play an important role in how auditors assess their adaptability; this could be influenced by the fact that transition to remote audit determines significant changes on the risk of material misstatement and accuracy of audit evidence. Thus, according to the auditors, the specific challenges of the new context created by the COVID-19 pandemic generates significant negative effects on the degree of compliance with audit standards and professional requirements specific to audit engagements.

The limits of our study consist in the small sample of auditors within the CFAR professional body in Romania; however, our research contributes to literature by illustrating the reality faced by Romanian audit practitioners in recent period affected by the transformations caused by the global health crisis. Although the professionals included in the sample do not cover a wide geographical area, their perceptions can be considered and can be extrapolated to a broader level, as it is an assessment of challenges and opportunities, respectively, the impact of similar activities and other regulatory systems in terms of compliance with ISA. Another limit is related to the fact that it is reflecting only the perception of Romanian auditors without reference to factual evidence of audit engagement efficiency. However, future research could obtain more fact-based results.

The question that arises as regards professional bodies concerns the degree of support provided by auditors' policies and practices in times of macroeconomic fluctuations, crises and other unusual issues. Only by building strong audit mechanisms can we strengthen in the public opinion the idea of adaptability of the audit profession, not only from the perspective of the Covid-19 crisis but also as a style of normal work.

The model that we have developed for the adaptability of audit work can be a benchmark for future research that will be able to identify and detail the

opportunities and challenges posed by digitalization in relation to audit work and the level of auditors in other geographical areas.

Digital transition could be needed in these unusual times, where physical separation and remote working have become the standard. Still, the future is not just about remote audit; it is about leveraging technologies to improve fundamental procedures to accomplish three goals: a more efficient audit, a higher-quality audit and better business insights for audit clients. Audit companies must use the right tools and processes to transform their employee experiences now more than ever. Hence, as the number of people working remotely grows, and in some cases becomes the new normal, they should adapt and rethink their talent strategies to save money and reduce risk.

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