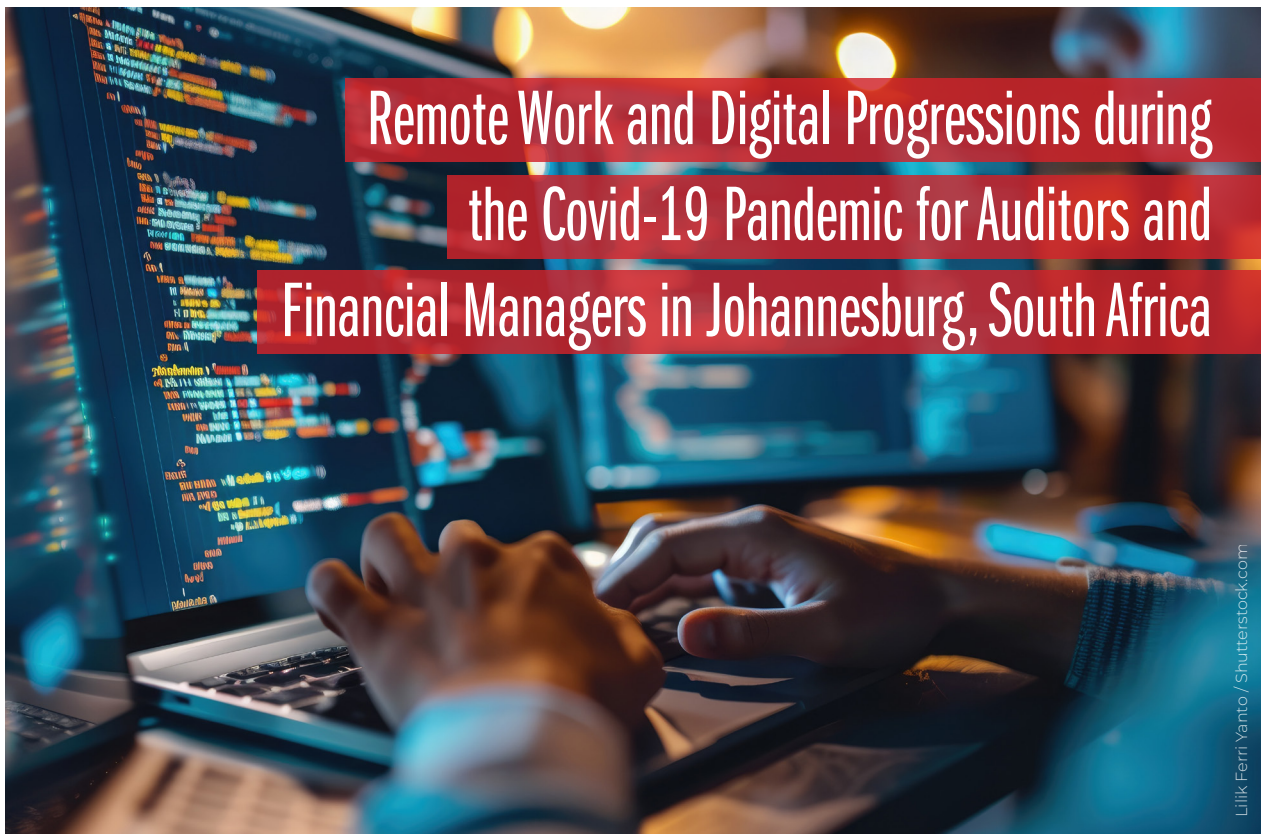


Remote Work and Digital Progressions during the Covid-19 Pandemic for Auditors and Financial Managers in Johannesburg, South Africa



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By Irene Marindi

Abstract

The emergence of the Fourth Industrial Revolution (4IR) marks a significant transformation, introducing technological and digital advancements that are reshaping how work is conducted, largely through virtual platforms (Abe 2020: xviii). This shift is altering both the nature of work and traditional workplace concepts. While research acknowledges developments across various employment sectors, the increasing reliance on virtual arrangements has yielded mixed outcomes. This paper argues that the 4IR, coupled with the Covid-19 pandemic, has blurred the boundaries between physical and virtual work environments, often rendering physical workplaces less relevant. This transformation holds the potential to significantly impact worker engagement and well-being. Using a qualitative research approach, 26 interviews were conducted with auditors and financial managers in Johannesburg-based firms. The exploratory findings revealed that the Covid-19 pandemic accelerated the adoption of digital accounting practices for auditors and financial managers working remotely. Moreover, working from home was a double-edged sword for the participants in this study, as they compared their experiences during and before the pandemic. The findings demonstrate that digital processing dictates how work is conducted in the accounting and financial sectors.

Introduction

The nature of current and future employment practices is undergoing a transformation, and it is uncertain whether traditional work models will persist or collapse in the future (Okoye 2019;

Balkaran 2016). According to the World Economic Forum (WEF) (2018, p. 90), personal interactions between customers and employees may become limited as digital platforms increasingly dominate working hours. Technological and digital

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advancements that are changing how human beings manage their work have been observed worldwide. The growth of virtual platforms from the third industrial revolution to the Fourth Industrial Revolution (4IR) has opened new ways of conducting work that can limit face-to-face interactions (Mohajan 2020; Agarwal and Agarwal 2017; Schwab and Samans 2016). The benefits of the 4IR in the workplace are largely focused on its ability to enhance the work environment and provide employees with new and/or additional skills (de Ruyter et al. 2019, p. 38). Moreover, 4IR may improve productivity, as it allows for better understanding of new products and market conditions, saving time and money, supporting more informed decision-making, and can improve employee health and energy levels. Additionally, global connectivity may expand (Corfe 2018, p. 14-20). Importantly, the concept of a fixed workplace is shifting within the context of 4IR, as the physical location of work becomes less relevant due to the increasing reliance on virtual work environments (Prisecaru 2016, p. 59).

In the digital age, vast quantities of data and products can be generated within minutes and applied across numerous industries, irrespective of location. To fully benefit from this revolution, all sectors must collaborate to ensure that access to skills, knowledge, and technologies is democratised and utilised to address challenges. The extent to which the 4IR will influence human practices depends largely on how we utilise,

depend on, and adapt to new technologies (Schwab and Davis 2018, pp. vii-viii). Various observations have been made regarding the use of digital and technological advancements in the workplace. Some scholars are optimistic about the contributions of the 4IR in the work context, highlighting the benefits of new innovations and the skills they will bring to workers across different industries (Asghar et al. 2020; de Ruyter et al. 2019; Corfe 2018; Ohene-Afoakwa and Nyanhongo 2017; Schwab and Davis 2018; Schwab and Samans 2016). However, others have pointed out certain drawbacks (Routley 2020; Mzekandaba 2019; Corfe 2018; Prisecaru 2016). Common critiques regarding the potential impact of the 4IR on employment include concerns about job losses and reduced job satisfaction as technology increasingly dominates the workplace (Mzekandaba 2019; Corfe 2018; Prisecaru 2016). With many businesses recently embracing the 4IR, there has been a decline in human labour involvement across various areas of work. In numerous fields, new machinery and technology now perform tasks in ways that either mirror or surpass human capabilities (Schwab and Samans 2016).

The changing nature of work in the accounting and financial sector

This technological growth in the employment sector has led to a reduction in manual tasks, transformed traditional work practices, increased reliance on digital tools, promoted remote work, and redefined the roles and responsibilities of accountants. Global shifts in manufacturing are continually evolving the skills and responsibilities required in the accounting and financial sectors (Ghasabeh et al. 2015). Business environments, shaped by urbanisation, societal demands, globalisation, and technological advancements, constantly change. These factors create a diverse range of roles for accountants, who now support businesses and individuals with financial advice, budget oversight, financial inspections, tax preparation, and more (Saxunova 2017). However, South Africa's financial sector faces unique structural challenges due to globalisation, political and economic shifts, market instability, and evolving global standards, all of which impact regulatory frameworks and raise concerns about the future of accounting professions (Deloitte 2017; CFO South Africa 2017). The adoption of

advanced technologies and software that can organise, calculate, and guide financial decisions continues to grow, and many tasks traditionally performed by accountants and auditors are now automatable. This trend raises questions about the profession's future (SAICA 2018; Susskind and Susskind 2015). Robotic Process Automation (RPA), for instance, has transformed the field by automating expert-level tasks, including data entry from multiple sources, receivables and payables, account reconciliation, regulatory implementation, financial reporting, planning, budgeting, and hypothesis testing (Onyshchenko et al. 2022; Arthur 2020; SAICA 2018). RPA's ability to alert auditors to irregularities and patterns enhances efficiency, reduces fraud, and minimises human error. While RPA poses a potential threat to the profession, a balance between human expertise and technology is essential since automated programs, though intelligent, can produce faulty algorithms if not carefully monitored by experts (Onyshchenko et al. 2022; SAICA 2018).

Additionally, Blockchain and Enterprise Resource Planning (ERP) systems are significantly impacting the accounting and financial sectors in the 4IR. Blockchain offers secure online storage through distributed ledgers, reducing fraudulent activities with enhanced security, especially valuable in banking (Onyshchenko et al. 2022). ERP systems improve workflow and information-sharing, providing accurate inventory management and creating centralized databases. The integration of the Internet of Things (IoT) into ERP systems is also instrumental in developing "smart factories" that capture manufacturing data. However, quantifying intellectual capital and intangible assets, such as multimedia content, remains challenging (Onyshchenko et al. 2022; Arthur 2020; SAICA 2018). In summary, big data, cloud computing, AI (Artificial Intelligence), blockchain, RPA, ERP systems, and IoT are reshaping skills, work environments, and the overall landscape of the accounting and financial sectors in the 4IR (Onyshchenko et al. 2022; Arthur 2020; Naqvi 2020; SAICA 2018; Susskind and Susskind 2015). The potential impact of the "essential eight technologies" in the accounting profession—including AI, augmented reality, blockchain, drones, IoT, robotics, virtual reality, and 3D printing—has garnered significant attention. These technologies offer promising

opportunities to enhance ethical standards in the financial sector, particularly in areas of traceability and transferability. Working alongside these technologies could help accountants develop new skills, sustaining the profession while increasing accuracy in financial tasks (SAICA 2018, pp.52-54).

Furthermore, the use of technologies in the workplace allows for work flexibility as evidenced during the COVID-19 pandemic when remote work became standard practice globally. This marked a fundamental change in human interaction; it can be argued that the 4IR has inadvertently been propelled by the Covid-19 pandemic, as many businesses observed changes in the workplace. This questions the extent to which the technological revolution will shape work organisation in the future (Mhlanga and Moloi 2020, p. 2). Remote work demonstrated the power of technology however, it poses questions on employee's wellbeing as the ability to adjust varies from person-to-person (Appel-Meulenbroek et al. 2019). Factors such as household and family structure also influence adaptability to remote work which impact employee's career path, focus, productivity, and team cohesiveness (Routley 2020, p.1). The findings below illustrate how 4IR coupled with remote work contributed to the work organisation of auditors and financial manager in Johannesburg, South Africa.

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Findings: Organisation of work during Covid-19 for auditors and financial managers in Johannesburg-based firms

The qualitative research methodology was employed to examine the narratives of 23 auditors and three financial managers working in firms around Johannesburg, South Africa. The methods and tools that were used to capture the narratives of the participants materialised through in-depth and semi-structured interviews. All interviews were conducted online in the year 2021 due to the Covid-19 restrictions where face-to-face contact with the participants was hindered. Moreover, the names of the participants presented in the findings below are anonymised through the use of pseudonyms.

Remote working for auditors and financial managers during the pandemic

Although working from home is not new for many auditors and financial managers who have clients in other regions. Most of the participants that were interviewed were working from the office before the Covid-19 pandemic. A number of the participants noted some changes brought about by the pandemic and thus this had been argued as a condition that hastened the 4IR. Josh expressed how quickly the firm that he worked for found solutions to the management of work during the pandemic. He felt that working from home was the direction that the firm wanted to take before Covid-19. He put forward that adaption to technology happened quickly which made it seem like the firm was ready however, he also conveyed the possibility that his employer *“had time to learn from other countries.”* During this period, most of the auditors and financial managers that were interviewed communicated the over-reliance on Microsoft teams and cloud storage thus, most of the participants indicated that before the Covid-19 pandemic they had to work through a mixture of physical documentation and online data. However, working from home increased their dependence on electronic records hence, Carol underlined that remote working would be the new normal even after the pandemic. She noted that her superiors were working with the Information Technology (IT) department to transform some of their roles. Sam and Josh revealed that during the time they were working from home they learned about new

features and shortcuts through Microsoft excel that supported their work. Mike praised online auditing and stipulated that more work was done virtually for the period of the pandemic because progress could be monitored easier.

Furthermore, some of the participants acknowledge the benefits of technology and how it enabled them to stay employed during the pandemic. Tom stated that *“it [technology] has ensured that we can still provide a service and retain our jobs, audits can be done from a distance.”* Didi also detailed that working remotely had shown her that there was no need to go to the client's office as often as she did before the pandemic because she could perform all her responsibilities through a digital device. Like other participants, Nicky voiced that *“the work has not changed, it is the location that has changed.”* These narratives demonstrate the ability to work anywhere through technology (Corfe 2018; Prisecaru 2016) and the rise of the 4IR revolution as well as its impact on the workplace. Arguably, working from home could have been more challenging during the previous revolutions for many sectors. According to Prince most of the administrative work has lessened due to new software. Peter accounted for the increased reliance on technology hence, he praised the use of technology and proclaimed that it limited *“back-and-forth communication that can cause delays.”* Thembi who enjoyed working from home said, *“commuting and physical meetings are replaced by working via teams in the comfort of our homes”* Correspondently, working from home through technology improved productivity this was noted by Schwab and Samans (2016) alongside the ability to reduce traveling and increase the well-being of employees. Mary, Paris, and Zack applauded how online data was protected, stored, and shared between colleagues as well as clients during the pandemic. Moreover, these participants also explained how online data was stored and shared securely with limited access and restrictions. Sutherland (2019) noted the security measures that companies need to put in place against hackers to successfully work virtually. The firms that these participants work for appeared to be wary of the risks of storing information online and had placed measures to restrict any misuse of data. Peter voiced that *“we are also being introduced to systems that can verify transactions and reveal if*

the documents have been amended, I think this will be helpful to avoid fraud.” Thembi said, *“we do digital audits now and use more data analytics to analysis data because of covid that pushed us into remote working without a choice.”* She also mentioned that storing data online would minimise fraud because most documents could be traced quicker. The findings also suggested that the pandemic provided the participants with new skills and opportunities for learning.

A paperless workplace and a decline in physical engagement

There was a decline in paper documents and physical interaction during the pandemic, this was proclaimed by Jane who also indicated that the data processing method changed, resulting in a decline in paper-based work. Sharon expressed that technology had taken over most aspects of her work. She said, *“before it was a mixture of technology and physical documents now everything is digital; I don’t know when last I dealt with physical documents.”* She further explained that the firm that she worked for had data analytical tools that aided her in concluding audits faster than before. Moreover, she communicated that face-to-face meetings were a thing of the past because she relied on Microsoft teams as a result of the pandemic. Developments in digital accounting practices were also communicated by Mia who specified that the clients that she worked for had adapted to data storage and capturing systems and this made working from home even easier. Likewise, Cathy stated that digital accounting software and financial functions were guiding how she worked. She uttered *“Covid promoted the use of new automated functions. The manual way is defiantly decreasing, in a few years to come most functions will be automated. Our data analytics have been upgraded, and now predictions and diagnostics can conclude quicker. This makes life easier and adds to the accuracy and adds value to decision making and overall reporting.”* The use of technology in the workplace can offer critical analysis tools and support employees’ ability to conduct their duties. Currently, accountants have to accommodate different technological advancements as a result of the 4IR, such as the introduction of Robotic Process Automation (RPA) and AI (Akhter and Sultana 2018, p.143). These developments have been put in place to raise levels

of efficiency for individuals who do repetitive work and jobs that require a high level of accuracy, such as accounting (Ohene-Afoakwa and Nyanhongo 2017, p. 5). Rights Capital Inc., a software company in the US, has, however, argued that the work for employees in the financial services sector will be less stressful in future, with easy-to-use financial software tools that provide quick and efficient results being at the disposal of such workers (WEF 2018, p.117).

Like Cathy, Pearl communicated the reliance on technology during the pandemic and how systems were upgraded. She uttered, *“more tools that help us capture, calculate and generate reports this has made life easier... most gets analysed or grouped for us then we interpret and advice.”* Sharon spoke of intelligence in technology and how data analytics, cloud, remote access software, and AI have improved her level of efficiency. Likewise, Beth said, *“there are Computer Audit Assistant Technologies (CAATs) that we use that allows us to test multiple accounts simultaneously, it allows us to be data-driven, analyse data and respond appropriately. We also call them data analytics tools that help us group and test appropriate data so that we can easily conclude an audit they also help us find anomalies quicker.”* Daniel pointed out various systems that made working from home a success during the pandemic. He uttered, *“Advanced Power BI (Business Intelligence) in order to analyse big data has helped a lot. Software automation on accounting packages to avoid repetitive actions... advanced excel courses, Power BI, and financial modelling courses to cut the time taken in analysing big data and find more efficient manner of building dashboards.”*

The participants highlighted that manual work was declining due to updated accounting software. Carol stated that most of the manual transactions have been automated through scanning and reporting tools in accounting software. She communicated that she did not manually produce statements anymore because all entries have been computerised therefore reports can be created in a few minutes. She further voiced that *“we now incorporate tools designed by the firm to extract data to provide more precise analytics which used to be manually performed by individuals and was time-consuming. Through software, data is more organised and can be grouped more efficiently.”*

Likewise, Mary expressed that she did not prepare financial statements manually using Microsoft excel but relied on accounting packages that generated reports at a click of a button. Moreover, she communicated that *“asset management is major one where you would record manually, they detail including where its located. So, with the asset tagging chip, it's easy to get the list of assets available, numbers, and location.”* This was also communicated by Prince who explained that physical inventory assessments can be completed virtually through asset location numbers he further explained that during the pandemic every part of his work was done online unlike before Covid-19 when he had face-to-face engagements.

Adaption to digital processes

The majority of the participants that were interviewed for this study specified that they had access to facilitates and information on new and/or upgraded digital techniques. Most of them indicated that the firm they worked for provided them with training, workshops, and learning material on new and/or upgraded systems. Mary pointed out that *“with sophisticated systems packages sometimes it's a struggle to adapt to new technology however, training before implementation helps a lot. In my workplace, it's communication before implementation, then creating a demo training for staff to have an understanding of the reasons for changes so they have an appreciation of the new technology.”* Most of the participants did not struggle with adjusting to new digital advancements at work during the pandemic because they were required to take part in web-based learning offered by their employers. Didi said, *“we have e-learnings at work which are aimed to assist us in staying up to date with the digital world.”* In Thembisi's words *“I know quite a lot about the software that we use. The e-learnings are helpful for all of us because we also do online tests to test our knowledge.”* Carol stated that she had to complete online practicals with multiple attempts on how to use new software.

In the spirit of the 4IR and the working arrangement brought about by the Covid-19 pandemic, the participants seem to be aware of the manner in which the workplace is transforming and saw the need to educate themselves on work-related technologies. Some of the participants voiced that

they did their research intending to grasp new and/or upgraded advancements. Cathy indicated that in addition to the training that she received at work she enrolled in business intelligence and information systems courses. This expanded her knowledge of digital literacy and helped her cope with updates in software at work. Furthermore, she communicated that she did her research on technology-related topics. Susan considered registering for a short course in IT because she believed that her work duties were changing. She proclaimed that *“we are going to experience more software's in the near future because of the 4IR the world is depending on new software more and more to do business.”* In the interim, she proclaimed that she educated herself on technology-related topics through the internet and web-based learnings offered at work. Nicky specified the importance of practicing and learning about new digital software's she stated that she attempted to learn new formulas on her own. Josh and Peter are amongst those who indicated that they do their research on new and/or updated software. Although, Daniel did not witness many innovations in his sector he indicated that he still read about innovations in the private sphere because he did not want to be left behind. He voiced *“I'd need to have constant practice to keep up. The private sector embraces the 4IR more than the public we are larking behind. I still read a lot about private sector innovations as I am in the public sector and try to keep up to not fall behind. I practice in my spare time and sometimes try to introduce those new digital vibes during my tasks. But because I work in the public sector where technology is feared I try not to be too tech savvy I just do things the manual way.”* In light of this, Paris said, *“I plan to learn more about digital innovation through training as well as hearing about others' experiences. I want to speak to others in different firms to hear how they are coping.”* Keith uttered the following *“I seek help from my colleagues and my managers or I go back to the online learnings to refresh my mind.”* Comparably, Beth expressed that she surrounded herself with individuals with different capabilities so that when she is stuck, she can call someone to assist with the *“technological glitches.”*

A few of the auditors and financial managers stated that they align themselves with experts in the IT department with the aim to learn more about

the digital processes they were confronted with. In addition to the online learning material, Jane communicated that she also had access to the IT department and could ask them for assistance if she needed it. Most of the participants shared that their IT department at work was always available to aid them with any technical difficulties that they had. She shared that the IT staff could access her laptop from home and had user guides for employees who needed technical support. Prince, Sharon, and Thembi also sought help from the IT department at work on improved auditing technologies. Michelle who was married to an IT technician indicated that her husband has educated her on various shortcuts in excel which have been valuable to her work. She further said, *“I learned from him so he is beneficial but he does not understand all accounting-related formulas if I have a problem with those, I have to ask for help from the IT department at work who have access to my laptop.”* Michelle also indicated that she also relies on knowledge from other colleagues, Google, and YouTube. Divergent to the narratives above Mia conveyed that she was tech savvy and her work experience granted her knowledge on digitisation. She further expressed *“I am part of the generation that grew up with technology.”* The findings illustrate how adjustments can be possible in this new era through training, education, and research. Thua, Adapting to new and/or updated technologies is a task set out for employers and employees.

Discussion and conclusion

The industrial revolutions throughout the years have recognised changes and developments in the workplace. In the first and the second industrial revolution, human labour worked hand in hand with different machinery (Mohajan 2020; Agarwal and Agarwal 2017; Schwab and Samans 2016). The third and fourth industrial revolution demonstrates a great involvement of technological and digital advancements in the workplace (Sako 2020; Mzekandaba 2019; Corfe 2018; Prisecaru 2016). With many businesses embracing the 4IR, recently, there has been a decline in the involvement of human labour in various aspects of work. In many fields, new machinery and technology conduct work in a similar and/or progressive fashion to humans. Today, we are still witnessing technological and digital advancements that are changing how human beings conduct their work. The growth of virtual platforms from the third industrial revolution to date has opened new ways of doing things (Mohajan 2020; Agarwal and Agarwal 2017; Schwab and Samans 2016). Like observed during the Covid-19 pandemic whereby digital practices were introduced to auditors and financial managers working from home. The growth in digital accounting processes was mentioned by the participants who also noted the decline in paper-based documents. Most of the participants communicated that the use of technology increased accuracy and productivity. The technology offered the participants some new skills and retained their jobs during the novel Covid-19. The participants interviewed for this study acknowledged that they need technology to successfully conduct their work. In other words, regardless of the efforts and challenges that come with understanding new and or updated software all of the participants agreed that it would be difficult work without technology. The narratives illustrate how the pandemic in this context accelerated the 4IR by adapting to digital accounting practices. This paper adds value to the literature on digitisation of the workplace in the African continent as well as labour scholars throughout the world. It is vital to investigate the changing nature of work so that we can prepare for what is yet to come and also acknowledge the differences within the various contexts of the world.

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