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Accounting Profession: African Perspective Review of steps into the future

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Abstract

The advancement of technology has resulted in significant changes in the way accountants conduct their business. The purpose of this paper was to explore the various perspectives of the effects of technology on the future outlook of the accounting profession. The perspectives explored include the relationship between the accounting profession and the world revolution, the nature of accounting and its relationship with technology, the future of accounting, and changes in accounting education. This paper employed a literature review methodology. This research found that a number of studies indicated that there has to be a shift in the way accounting professionals do their business. Apparently, the transformation has begun to take shape, gradually but surely. This study also observed that this shift in the accounting profession will have an effect on accounting education. The paper concludes that there are certain aspects of the accounting profession that are likely to be transformed by technological advancement; however, the foundations of the accounting profession remain intact.

Key Words: Future of accounting, Technology, Accounting Education, AI, COVID-19

Introduction

Accounting is one of the professions likely to be adversely affected by technological advancement, especially in Africa (Ukpong et al., 2019). This paper seeks to explore the truth (or lack of it) about the future of the accounting profession in the wake of advanced technology. Africa is just beginning to see the increased penetration of artificial intelligence (AI) in its financial sector. Some of the countries are excited while others are skeptical about the whole idea.

The world's development of industries, commonly referred to as "industrialization," has changed over the years. Industrialization has unfolded in stages. The first phase of the industrial revolution involved the use of water and steam power to mechanize production. The second phase included the use of electric power to mass produce. The third stage of industrialization employed electronics and information technology to automate production (Schwab, 2015). We are currently experiencing the fourth generation of revolution, which is being considered disruptive (Slyozko & Zahorodnya, 2016). The Fourth Industrial Revolution is a buildup on the Third Phase, and it is being referred to as the Digital Revolution. This recent revolution has been taking place since the middle of the 20th century. It is marked by a blend of technologies that are disorganizing the boundaries between the physical, digital, and biological domains (Schwab, 2015).

The Fourth Industrial Revolution is fast approaching, and it is anticipated that it will make numerous jobs redundant, one of them being accounting. The accounting profession will still be required, but there will be a near-complete transformation in how it is conducted. Accounting is important in managing social and economic relations because it provides critical information about the business and its finances (Slyozko & Zahorodnya, 2016). The quest for knowledge about the future of accounting as a profession and its role in society is very important as the world is fast moving toward artificial intelligence.

The COVID-19 crisis has disrupted operations in a way that was not envisioned. It has increased the complexity surrounding organizations' accountability and governance. The researchers

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foresee the introduction of new conceptual frameworks for analysis and the development of new tools in the areas of accounting theory and practice occasioned by COVID-19 (Rinaldi et al., 2020). These kinds of disruptions are bound to occur at one point or another; therefore, the accounting professionals need to be well prepared in case of any eventuality.

Methodology

The methodology employed by this paper is literature review. This study examined the literature on the history and potential future of the accounting profession. With an emphasis on the African setting, the literature from various regions of the world was dated from 2015 to 2022. For the purpose of writing this article, 21 research papers were reviewed. Most of these papers were obtained from google scholar.

Findings and Discussion

Nature of Accounting Profession

Accounting is commonly referred to as the language of business. The language people speak is often a reflection of the way they think; this may be true when it comes to accounting. When thinking changes, the language is also bound to change. Traditional accounting is primarily based on the historical cost convention, which focuses on the past performance and, to a lesser extent, the present state of the business. The future tense is conspicuously missing in this language. Traditional accounting is a language of the past and present tense, with no future tense, whereas modern business is concerned with the future (Hales, 2018). The accounting profession is expected to face momentous changes in the next thirty years. The envisioned change in the accounting profession will ride on three major platforms: digital, smart, and intelligent technology; internationalization of reporting standards, including new forms of regulation; and the major challenges for the profession (Islam, 2017).

Responsibilities such as bookkeeping and process-driven auditing, which are routine in nature, are subject to a greater level of automation. This, therefore, will create room for the expansion of other non-routine aspects such as tax and business. The accounting profession is one of the beneficiaries of technological innovation; accountants must therefore get ready for the upcoming evolution (Galarza, 2017). Every innovation has both a positive and negative side effect.

The fields of accounting and auditing have more often recognized prudence in decision-making as a major attribute of professionalism because individuals such as managers, auditors, financial analysts, accountants, and standard-setters make fundamental judgments and decisions. Practically speaking, accountants or managers choose accounting methods and make judgments that best suit their objectives, especially when producing accounting information (Mala & Chand, 2015). Accountants in the organization worry about the precision of the accounting policies and estimates applied, while auditors are interested in the accuracy of the accounting information provided.

Accounting and Technology

Technology is changing the face of the accounting profession. A few years ago, accounting was being done on a ledger book or an ordinary hard book with a T-shaped line neatly drawn using a ruler. The calculations were done manually or using an electronic calculator. As time went by, programmers came up with accounting software that helped automate a huge chunk of accounting tasks. This helped improve the accuracy of financial reports. Due to advances in technology, many firms are restructuring to remove administrative jobs and are now using AI for accounts payable and receivable (Hutchinson, 2019). The next generation of accountants must comprehend how business works, not just the accounting department's operations.

Vetter (2018) suggests four strategies that accounting professionals may employ so as to keep pace with modern technology. The first one is embracing cloud computing, since most of the future's information will be stored in the cloud. The second strategy is to understand automation, mainly because artificial intelligence may be taking over most of the routine tasks that were being undertaken by accountants. A number of firms have already automated their accounting systems and are even slowly progressing towards artificial intelligence. The third strategy is to start considering cryptocurrency. Blockchain technologies, and by extension, cryptocurrency, are current innovations that professionals can easily wish away. They may advance in such a

manner that they will play a significant role in the financial markets. The final strategy is continuous learning and communication. With technology advancing exponentially, accounting professionals cannot afford complacency in terms of information and learning. East African nations like Kenya and Tanzania are currently unable to use cryptocurrencies as legal tender due to security issues, risks, and challenges with online identities, as well as their high volatility, limited liquidity, and dependence on changing technology (Kamau, 2022). Blockchain technology, in general, and digital currencies, in particular, continue to be the direction of the finance sector, despite adoption lags.

The introduction of robots does not necessarily imply the replacement of accounting and related jobs; while they may change the way accounting jobs are done and interactions with clients, the profession will not fade (Hutchinson, 2019). A robot is a machine that is programmed to carry out specific tasks with speed and meticulousness. Hutchinson (2019) offers hope to the accounting profession by suggesting that despite the advent of robotics in the profession, human accountants will still be required. However, future accountants will be required to utilize their interpersonal and analytical skills to complement the constant changes in automation technology. Computers can never replace the human brain, and as such, the accounting basics are almost irreplaceable. Computer systems work on the principle of "garbage in, garbage out," and as such, accountants will still need mathematical and basic accounting expertise to solve problems that AI might misinterpret. Robots will be more like friends than masters or competitors. Accountants who strive to understand technology will rise to the top. As technology automates several basic accounting tasks, it is necessary that the next generation of accountants attain advising and consulting skills, since clients' needs may revolve around forecasting and evaluation of financial decisions in ways a computer cannot.

The pre- and post-automation qualities of accountants will be bookkeeper versus financial advisor; bean counter (income and expenditure controller) versus financial data analyst; financial statement preparer versus strong communicator; comptroller versus business coach. The new accounting specializations will include: financial strategy, financial data analysis, tax, Presentation skills, soft skills, and business coaching (Galarza, 2017). The technological revolution will definitely change the landscape of the accounting profession.

Future Face of Accounting

As the world moves towards cloud computing, there could be a paradigm shift towards modern or nontraditional means of employment with freelance practitioners and contractors, significantly reshaping how businesses are run and creating new and currently unfamiliar opportunities for accountants (Open Colleges Pty Ltd, 2020). Accountants of the future will be required to possess strong communication skills, superior IT skills, and strategic vision, and they will be devoted to constant professional development in order to be successful. Globalization is the future of accounting, since more businesses will need real-time information. Mobile marketing and online tools, including the cloud, will go a long way toward increasing their client base worldwide.

Blockchain technology has lately been involved in a variety of extra-financial activities and is attracting a great deal of interest in a number of sectors. This technology has implications for accounting, control, and auditing practices (Desplebin et al., 2018). "Blockchain" and Bitcoin are just one example of its application. The financial and banking sectors are fairly active in the use and development of blockchain technology. The use of technology is beginning to be extended to other fields of application than that of banking and finance. Wells Fargo and the Bank of the Commonwealth have announced that they have used technology for the first time to manage the delivery of goods (cotton bales) between China and the United States. Its use is made possible by its decentralization and digitalization characteristics (Desplebin et al., 2018).

The vast majority of businesses now employ computerized accounting systems, which has helped alleviate some internal control issues that arose from the application of manual accounting methods. For instance, a computerized accounting system will send invoices more accurately than clerks using manual processes, which reduces errors. Business organizations are getting more and more competitive in the market

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as a result of the implementation of computerized accounting systems (Kanyanga, 2022). Information technology can easily transform the face of accounting in the future. However, the methods of gathering, recording, summarizing, organizing, and describing accounting information will remain unchanged. The future role of accounting as a tool by which governments create and institute rules to moderate the economy will also remain unchanged. Rapid development in technologies (both technical equipment and information) will demand market participants enter their data in the accounting system, consequently eliminating the shadow economy (Slyozko & Zahorodnya, 2016). This implies that technology will play a great role in minimizing the problems of information asymmetry.

Artificial intelligence, abbreviated as AI and also referred to as "machine intelligence," may be described as any mechanical device that possesses "the human ability to think, learn, solve problems, and take decisions." Artificial intelligence was first defined in 1956 by John McCarthy at the Dartmouth College summer AI Conference. However, AI has been around for several centuries, with the first case being the Greek myths of Hephaestus and Pygmalion, which framed the idea of intelligent robots and artificial beings (Rane & Lahane, 2020). It is generally perceived that artificial intelligence (AI) will enhance performance across various professions. Respondents from public accounting and industry are more likely to be the ones using modern AI systems (Whitman & Sobczak, 2018). Research cautions that future entrepreneurs conducting business or accounting activities should not be ignorant of several additional elements, such as human factors and emotions, communication strategy, security issues, business structure, budget requirements, and other issues that may affect their decisions in a digitally transformed world (Asonitou & Kavoura, 2019). AI is not everything; there is a need for human knowledge and reasoning to complement the AI.

Currently, most organizations have systems that assist in maintaining proper records that allow timely information to be collected and analyzed for the purpose of decision-making. The systems are commonly referred to as automation of processes, computerized accounting systems, software for electronic data exchange (EDI), enterprise resource planning (ERP), and management information systems (MIS) (Rane & Lahane, 2020). Artificial intelligence can help businesses maintain a categorized record of their expenditures and facilitate an easy audit of the reports and processes for various nonconformities and any possible fraud. The strict and permanent nature of audit trails in artificial intelligence systems inhibits the likelihood of individuals engaging in any wrongdoing (Rane & Lahane, 2020). Artificial intelligence is therefore a key tool in transforming data entry and analysis and automating financial reporting processes.

Change in accounting education

There is a need to review the current curriculum to widen it to include courses that emphasize computer understanding. There is also a need for accounting practitioners and educators to read from the same page in matters pertaining to the incorporation of AI in accounting education (Whitman & Sobczak, 2018). The need to move towards more all-inclusive, system-design structures of accountability puts pressure on accounting education to adopt more modernistic models of education to prepare accounting graduates for a rapidly changing professional environment (McGuigan & Kern, 2016). The theory should be a reflection of the practice; hence, education should be a reflection of the industry, which is often not the case.

A basic learning goal in introductory financial accounting modules or lessons is to exemplify the linkages that exist amongst the primary financial statements as well as carry out basic financial statement analysis. Using computer techniques such as spreadsheets helps learners understand the role of technology in the profession. There are benefits that accrue by employing linked course designs, one of them being to bridge perception gaps in accounting graduates' spreadsheet skills (Lafond et al., 2016). Linked course designs allow for the inclusion of practical technological aspects as part of accounting education. These course designs are highly recommended for future accounting education. This is so as the Kenyan education system moves towards competence-based tendencies.

Future accountants will be required to exhibit high levels of creativity. Creative accountants

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will offer their services beyond official accounting duties, which include data analysis, systems control, financial planning, and regulating a company's internal activity. Complete computerization of accounting means that the tasks carried out by modern accounting personnel will be replaced by various computer algorithms, operated with the latest modern technical equipment. As a result, current accountants will be replaced by accounting advisors and creative accountants. This may most likely force a transformation in accounting education. In such cases, accountant-programming may become a more marketable profession, with an accountant with computer programming skills being more desirable (Slyozko & Zahorodnya, 2016). On the other hand, the computer experts may be required to have accounting knowledge for them to be more effective in their operations.

Future accountants will gradually require education in digital technology, globalization, and evolving regulations. Accounting professionals will need the necessary skills to provide more comprehensive corporate reporting, which culminates in less about the numbers and more about the narrative or commentary of the organization (Islam, 2017). The key aspects that can be included in accounting education are: cloud computing elements, handling of big data, outsourcing of accounting services (consultancy), taxation precepts, contemporary corporate reporting, integrated reporting regulation, and so on.

The media may portray an image that all data-driven jobs may be executed by robots instead of human beings, but that may not be the case since there will always be a need for a human touch. Future accountants should hone their skills in business coaching as well as number interpretation and the delicate taxation issues that they are traditionally hired to handle (Galarza, 2017). Accounting education should focus more on financial data analysis and interpretation and less on record keeping and account preparation. Accounting education should place a greater emphasis on strategic issues rather than routine operational issues.

This paper involved an analysis of the literature on the direction that the accounting profession is taking. The summary of the literature reviewed shows that, indeed, the change began in the early 1980s and is gradually taking shape. The review of literature also points to the likely future of the accounting profession. The changing landscape of accounting professions is as described in Figure 1. The figure can also be used to illustrate how the accounting profession has changed in response to technological innovation.

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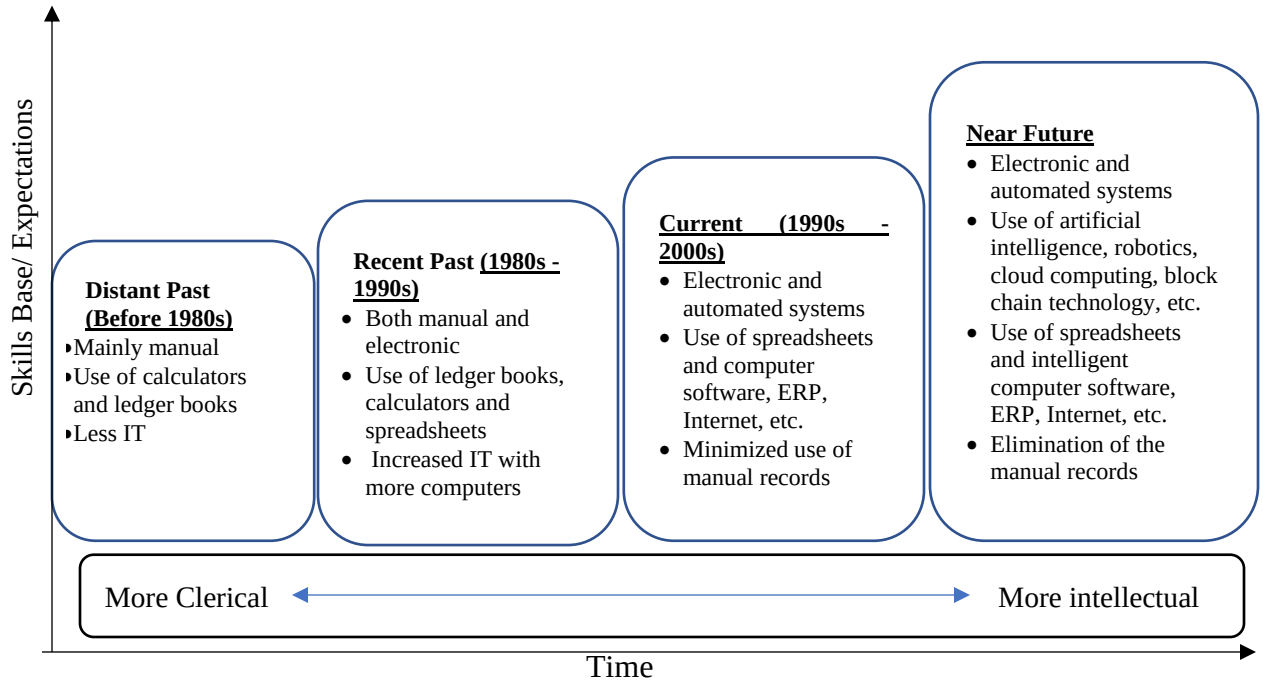

Figure 1. Change in Skills set for the accountants in different era

Figure 1 gives a summary of the advancement of the accounting profession at different stages in Africa. It depicts that the accounting profession moved from manual systems to automated systems, and during each stage of evolution, different sets of skills are required. It also points out that the future accountant will require more intellectual skills since the responsibilities will be more analytical than clerical.

Conclusion

In Kenya, weak corporate governance is associated with many of the failures in financial reporting that resulted in the collapse of major corporations like Uchumi, Nakumatt, and so on. This fact poses a challenge to both current and future accountants in Kenya. In their 2018 joint research, ICPAK and ACCA identified a number of change drivers for the future accountant. The leading change driver in the short term is the "potential strengthening and increased complexity of regulation and corporate governance." The leading medium-term driver is the "development of intelligent automated accounting systems.". Finally, the long-term change driver involves changing societal expectations and the evolving scope and nature of what is considered accounting and the role of the accountant. The advent of digital currencies and means of exchange such as cryptocurrencies, such as MPESA, Airtel PESA, Paypal, and Kopokopo, among others, has revolutionized the face of accounting in Kenya and other African countries (Kamau, 2019). This implies that there is a need for the accounting profession in Kenya to strategize so that they are not left behind by the global and local technological changes.

It is predicted that there is a likelihood that the accounting profession may become extinct with the advancement of technology in Africa. This is a quite extreme prediction. Even though technology such as artificial intelligence, robotics, and the like can take over a number of tasks being undertaken by accountants, it is apparent that there are tasks that can only be performed by the human brain. The basic accounting principles and roles are likely to remain intact even with the advent of technological development. The disruption by technology is real; however, it can only affect the landscape and future outlook of the accounting profession, not replace it. There may be other

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disruptions, such as COVID-19, that have an effect on the operations of the accounting profession. The accountants of the future will be required to possess a different skill set than what today's accountants have. This therefore creates a demand for change in accounting education in the near future.

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