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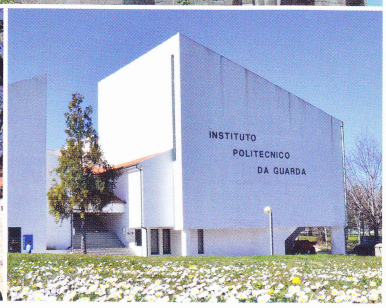

Contabilidad, Gestión y Agenda 2030

Contabilidade, Gestão e a Agenda 2030

Accounting, Management and the 2030 Agenda

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The accountant in the digital era and the COVID-19

Introduction

The digital era is rapidly changing the accountants' profession, forcing them to adapt their work and to develop a new set of skills. The current health and economic crisis, caused by COVID 19, has accelerated the process of changes and suddenly pushed accountants into a digital paradigm.

The digital era in accounting, also, raises questions in the context of accounting teaching. In this scope, higher education institutions are feeling the pressure to adapt their degrees, in order to provide the new professionals with the necessary technological skills.

Another relevant issue is the key role of the accountants in society during global crisis, as the COVID-19 pandemic, because they have the skills to stand-up as relevant agents of business support and recover.

Thus, in this article we address these issues through a literature review.

The Digital Era and Accounting and the COVID-19

In business activities, "The Internet and related information technologies such as cloud services, blockchain, data analytics, and artificial intelligence, combined with web-based business models, such as platforms, are rapidly transforming the digital economy and industry" (Moll & Yigitbasioglu, 2019:1). Furthermore, in a globalized world, the information and communication technologies (ICT) are changing the way businesses create and capture value, how and where we work, and how we interact and communicate (Cascio & Montealegre, 2016).

That business transformation is the basis of a phenomenon known as Industry 4.0: the technological and digital enterprise revolution. Moreover, it begins to emerge references to a broader phenomenon, recently, called as Society 5.0 (Fukuda, 2019), which is based in the cooperation between man and the machine: human intelligence working in harmony with cognitive computing (European Economic and Social Committee, 2018).

The digital era and its constant pace of innovation in ICT and new working processes, are, also, strongly affecting the accounting profession (e.g.: Bhimani & Willcocks, 2014; Boylan *et al.*, 2018, Moll & Yigitbasioglu, 2019).

These changes, in accountants work, have several reasons: the markets' demand, the dematerialization of accounting and tax obligations, as well as the growing application of technology to professional activity in order to increase productivity, effectiveness and efficiency at work, as well as timeliness and reliability of the information produced. For example, the developments in digitization, software and processing power and big data use, create significant changes and new possibilities for enterprises and their finance function (Bhimani & Willcocks, 2014). However, it can be, also, a problem, because the continuous development of new technologies for accounting purposes can reduce the accountants' work (Boylan *et al.*, 2018).

In this environment, the use of new technologies by accountants became an actual and relevant field of research. The apprehension that accountants feel about these changes, especially because they are afraid that their work will be replaced by new technologies and artificial intelligence, has also been, in recent years, the target of several research works.

Susskind and Susskind (2015) and Frey and Osborne (2017) examined how jobs are susceptible to computerization and they identified the accounting profession as one of the most affected by information technologies. In addition, the Institute of Management Accountants (IMA) concluded that most accountants are concerned about the possibility of being replaced by emerging technologies (Krumwiede, 2017).

Boylan *et al.* (2018) conclude that companies can reduce accounting service costs by using software, but that there is an increased risk of errors using staff with less understanding of accounting concepts and procedures. They also conclude that the use of software for taxes purposes cannot fully replace the advice made by professionals.

Grabski *et al.* (2009) cited by Appelbaum *et al.* (2017) identifies the management accountant as a key factor for a successful Enterprise Resource Planning implementation if they become involved in value-adding tasks, rather than routine data recording and information reporting tasks. Moreover, Moll and Yigitbasioglu (2019) conclude that, despite the automation of processes, the accountants' set of skills put them in a good position to contribute to the evaluation, implementation, and maintenance of those technologies.

Additionally, Sheedy (2017), in a paper about the north-american accountants (CPA), argued that "The work that will be automated is not a CPA's responsibility. That work was simply something that needed to be done for CPAs to start their job."

The digital era in accounting, also known, as Accounting 4.0, can be, for the future of this profession, either a threat or an opportunity, depending on accountants' ability to deal with this challenge, as well as, on their set of skills. This is particularly relevant for those professionals who work with small and medium-sized enterprises (SMEs), because SMEs' advice on economic and financial issues, in many cases, occurs exclusively through the accountants' service. Thus, in accountancy practices for small and medium-sized companies (SMPs), accountants should focus on the value that they can offer to their clients. In this environment, they should carefully consider diversification of services and making the transition to advisory, a transition for which technology will be a crucial tool (Thompson, 2017).

According to the Secretary-General of UNCTAD (United Nations Conference on Trade and Development) "we live at a time of technological change that is unprecedented in its pace, scope and depth of impact" (United Nations, 2018). Thus, the Industry 4.0 is an irreversible process and the paradigm shift in the work of accountants, with the transition to Accounting 4.0 (and, in the very near future, to Accounting 5.0) is inevitable and even indispensable for the survival of the profession. Although, in recent years, the professionals have been postponing this transition process.

However, in March 2020, due to the world pandemic, the business world changed. In the peak of the pandemic of COVID-19, with business activity almost stopped, companies, more than ever, needed technical support and advice from their accountants to survive to the economic catastrophe that was starting. As stated by Borrego (2020: 1) during the economic crisis caused by COVID-19 "…. accountants have done a remarkable job of trenching, being guided by two main objectives: to minimize the economic damage and to save as many jobs as possible", nevertheless, to do so, accountants were forced to reinvent their way of working, taking advantage of new technologies to assist companies.

Thus, the global pandemic, on one hand, has increased the need for accountants' transition to Accounting 4.0, on the other hand, it led to an increase in digital technologies use by accountants, accelerating this transition process.

In this paradigm shift, it is very important that accountants overcome their fear for change, as well as the fear of being replaced by new technologies. Thereby, there is an unquestionable need to train the accountants, endowing them with new skills, to face the new reality.

Challenges to Higher Education Institutions

The accounting transition to the digital era, also, raises questions about the new skills needed to develop the profession.

This new reality is a challenge for the accounting teaching and an opportunity for a teaching paradigm shift. Teachers, standard setters, and professional regulatory entities should adjust their curricula, standards, and frameworks to accommodate the challenges of emerging technologies, as Big Data analytics and others (Richins *et al.,* 2017).

Ghani and Muhammad (2019) studied employers' expectations of accounting Graduates in the context of Industry 4.0 and they find that companies are concern with accountants technological competences and that academia should strategizing new curricula, including these skills and innovating the teaching-learning approaches in order to respond to new market needs. Thus, it is crucial that higher education institutions start to address these issues in their accounting degrees, because it is a gap still to fulfil (Moll & Yigitbasioglu, 2019; Turel & Kapoor, 2016).

Accounting teaching seems to face a challenge to restructure degrees' curricula and teaching methods, being the teaching of technology a major concern (Apostolou *et al.,* 2016, Stanciu *et al.,* 2020). Accounting degrees need to change to meet the new hard skills, in order to correspond to the new vision of accountants; however, accountants should also develop soft skills, essentially the organizational and social ones (Dolce *et al.,* 2020; Papageorgiou & Callaghan, 2020).

The COVID-19 pandemic is changing radically the education system, that will favour, on the one hand, the teaching of new technologies, on the other, the inclusion of new teaching methodologies in the courses curricula, more focused on problem solving, for instance PBL (Problem-based-learning) methodologies. It is important to note that global crisis, such the one we are living, due to COVID-19, increase the need to rethink the accounting-learning process.

Finally, we believe that will be interesting to understand the role of accountants during the pandemic of COVID-19, in the peak of the epidemic by helping companies to survive, as well as in relaunching the economy after the containment phase. In this scope, Asonitou and Hassall (2019) already highlighted the role of the accountant during the period of financial crisis. <

References

Apostolou B, Dorminey JW, Hassell JM, Rebele JE (2016). "Accounting education literature review 2015". *Journal of Accounting Education,* 35, 20-55.

Appelbaum D, Kogan A, Vasarhelyi M, Yan Z (2017). "Impact of business analytics and enterprise systems on managerial accounting". *International Journal of Accounting Information Systems,* 25, 29-44.

Asonitou S, Hassall T (2019). "Which skills and competences to develop in accountants in a country in crisis?" *The International Journal of Management Education,* 17(3), 100308.

Bhimani A, Willcocks L (2014). "Digitisation, big data, and the transformation of accounting information". *Accounting and Business Research,* 44, 469-490.

Borrego AC (2020) *O papel dos contabilistas na economia em "tempo de guerra,* i-online. Aavailable at: https://ionline.sapo.pt/artigo/693065/o-papel-dos-contabilistas-na-economia-em-tempo-de-guerra-?seccao=Opini%C3%A3o (Accessed 30th april 2020).

Boylan D, Philipp J, Latini M. (2018). "Progressing technology and the obsolescence of accountants". *International Journal of Business, Accounting and Finance,* 12(1).

Cascio WF, Montealegre R (2016) "How Technology Is Changing Work and Organizations". *Annual Review of Organizational Psychology 2016,* 3, 349-75.

Dolce V, Emanuel F, Cisi M, Ghislieri C (2019). "The soft skills of accounting graduates: perceptions versus expectations". *Accounting Education,* 29(1), 57-76.

European Economic and Social Committee (2018). *Society 5.0 - Co-creating the future,* available at: https://www.eesc.europa.eu/en/news-media/presentations/society-50-co-creating-future (Accessed 15th april 2020).

Frey CB, Osborne MA (2017). "The future of employment: How susceptible are jobs to computerisation?" *Technological Forecasting and Social Change,* 114, 254-280.

Fukuda K (2019). "Science, technology and innovation ecosystem transformation toward society 5.0". *International Journal of Production Economics,* 220, 107460.

Ghani EK, Muhammad K (2019). "Industry 4.0: Employers' Expectations of Accounting Graduates and Its Implications on Teaching and Learning Practices". *International Journal of Education and Practice,* 7(1), 19-29.

Krumwiede K (2017). *How to keep your job. Strategic Finance, September 21, 2017,* available at https://sfmagazine.com/technotes/september-2017-how-to-keep-your-job/ (Accessed 17th april 2020).

Moll J, Yigitbasioglu O (2019). "The role of internet related technologies in shaping the work of accountants: New directions for accounting research". *The British Accounting Review,* 51(6), 100833.

Papageorgiou E, Callaghan CW (2020). "Accountancy learning skills and student performance in accounting education: evidence from the South African context". *Accounting Education,* 29(2), 205-228.

Richins G, Stapleton A, Stratopoulos TC, Wong C (2017). "Big Data analytics: Opportunity or threat for the accounting profession?" *Journal of Information Systems,* 31(3), 63-79.

Sheedy C (2017). "What CPAs need to do to survive the automation revolution". *Journal of Accountancy,* June.

Stanciu V, Pugna IB, Gheorghea M (2020). "New coordinates of accounting academic education. A Romanian insight". *Accounting and Management Information Systems,* 19(1), 158-178.

Susskind RE, Susskind D (2015). *The future of the professions: How technology will transform the work of human experts.* USA: Oxford University Press.

Thompson P (2017). *Digital Technologies' Implications for SMPs.* European Federation of Accountants and Auditors for SMEs (EFAA) publications, available at https://www.efaa.com/cms/upload/efaa_files/pdf/Publications/Articles/20170714_EFAA_Digital_Technologies_Implications_for_SMPs.pdf (Accessed 18th april 2020).

Turel O, Kapoor B (2016). "A business analytics maturity perspective on the gap between business schools and presumed industry needs". *Communications of the Association for Information Systems,* 39(1), 96-109.

United Nations (2018). *The Technology and Innovation Report 2018: Harnessing Frontier Technologies for Sustainable Development.* United Nation Conference on Trade and Development, available at https://unctad.org/en/PublicationsLibrary/tir2018_en.pdf. (Accessed 20th april 2020).