The impact of technology on the public accounting profession

By Ricardo Ruiz Bentancourt

IC Member | Represents Latin America

To ask oneself what impact technology has on the public accountant’s work is redundant. And the reason for this is that the development of technology has been inherent to human progress and it has affected practically all aspects of life; the accounting profession not having escaped this influence. However, if this question were to have been asked merely thirty years ago, the answer would not have been so obvious. In my opinion, the change that has had the greatest impact on this profession is, without doubt, the electronic worksheet. “Visicalc, the first worksheet would take some 20 hours of work per week for an accountant and has now been reduced to 15 minutes, allowing accountants to be more creative”\(^1\).

When I first used this worksheet back in 1986, I immediately sensed the effect that it would have in my work. In particular, I had that same sensation when another important moment for my practice came about which was the wide-spread use of personal computers - the PCs. At that time, a computer was assigned to me at my job and with it, I was able to perform a series of analyses that complemented the reports issued at that time by an AS 400 from IBM. I even became an expert in Lotus 123 and was given the opportunity to give courses on this program.

But this was not only a change at a personal level. Agnes Ann Pepe pointed out that “towards the ending of the twentieth century, the accounting profession began to take on a whole new look. Computers and accounting software has changed the industry completely. With programs such as Microsoft Excel, the accountant is enabled electronic worksheets. With the use of these technologies, the CPA can make statistic analyses, financial forecasts and calculations with great efficiency. Accounting technology has allowed the accountant to move from a desk, covered with papers making calculations that took hours to be completed, to more dynamic ways of performing and, it has allowed the accountant to find new challenges and much more to offer than in the past”\(^2\).

---

\(^1\) Accounting-degree.org [http://www.accounting-degree.org/technology/](http://www.accounting-degree.org/technology/)

All these combined factors and technologies generated different and innovative dynamics for the activity of the public accountant, improving and facilitating the interaction and the exchange of information with the client, reducing the amount of papers and in doing so, the archives and the size of offices decreased.

The use of the internet and electronic mail facilitated even more the access to information, allowing the transmission of information by email and thus reducing, the number of visits in person to the client’s offices. At the same time, external memories reduced the size of the equipment and the space required for information storage. In addition to this, auditing software programs were developed that made the auditor’s work more efficient and reduced the use of paper.

These technological advances have contributed to the reduction and transformation of accounting departments. The accounting departments disappear from the organizations in the same proportion in which the organizations acquire integrated information systems, reducing the time invested in transcribing data and placing before company management, updated information of their operations. Nowadays, “book-keeping” can be done from outside the company, thus increasing the possibility for more accountants to work under their own initiatives. Many accountants even work from their own homes. Simultaneously, corporations have reduced the accounting work per se, transferring this task to more economical and efficient places. Such changes undergone at the corporations have converted the accountant in a financial specialist, increasing his/her capacity to analyze and interpret data, thus improving the quality of the financial information reported in the entities’ financial statements.

**What is the latest?**

Now then, what has been occurring and what is the latest in regard to accounting? Osmond Vitez from ehow.com comments that “accounting softwares are evolving from data loading report generating programs to applications where such loading is not necessary; instead of using employees to load information on financial transactions to the general ledger, the current accounting systems can import information electronically. Proprietors and managers can define internal procedures within these accounting programs to process the information according to
specific rules and instruction guides. This allows the accountants to invest more time in analyzing information than in loading information.”

Cloud computing is based on software, platform and infrastructure through the internet. Users do not need to invest in servers, nor in licenses nor in updating, maintenance, renovation or in the processing of resources; all this is the responsibility of the cloud administrator who shall only bill the purchaser what is used, in effect, in the period accorded.

All this progress in information technology and its impact in the accounting are forcing the accountant to acquire new tools related to information systems and technology. This is such that, in many countries, information technology is a part of the curriculum and it is even included in doctorates and post grades in said area. In other words, nowadays, not only is accounting know-how, how to apply standards and principles and to interpret fiscal matters required, but also an accountant must have solid know-how relating to information technology and must be capable to combine these with all the set of the know-how before mentioned. The aspects that are causing impact mostly refer to Enterprise Resources Planning ERP, Supply Chain Management (SCM) Systems, legal requirements related to information technology (IT Governance), Sarbanes Oxley Law, Forensic Auditing, among other.

In regard to the financial auditing practice, we can observe that auditing software programs have been focused on risk assessment (based on IASs). Here the rule has been and is, that the more integrated an entity is in regard to its managerial information systems, the more the applications the auditing software programs must have. If an approach of controls is adopted, there would be more need of auditing software and the more automated and integrated the entity’s information systems are, the more IT software programs and auditing shall be required. Under this scenario, there is less substantive auditing focus, which is based on the review of physical documents that shall start disappearing as the actual bookkeeping and accounting method applications require less paper.

No less important is the effect that the social networks are having on the marketing and sales of the services of an accountant. “What? You’re not using Twitter or Facebook? And you’re not blogging? Well, if it’s any consolation, 90 per cent of your competitors are not either. But that means that 10% are, and they are getting a competitive edge over those who don’t” .Steve

3 What are the characteristics of a computerized system accounting environment? By Osmond Vitez. Ehow.com
McIntyre-Smith (www.stevemcintyresmith.com) points out. This comment highlights the importance that the social networks and other applications have, such as the equipment used (smartphones, tablets, laptops, notebooks, among other) in the marketing of this accounting profession.

**What changes will occur in the next 10 years?**

In regard to the accounting practice, it can expect the following:

- More access and readiness in regard to information for the client.

- Definite change in the accountant role as a compiler of information and analyst, business and process advisor. Support given to the client in making decisions regarding book entries, tax matters and business processes.

- Total elimination of paper.

- Reduction, transformation or total elimination of book-keeping.

- Elimination of the physical office.

- Increase in electronic accounting for tax purposes (SAT, Mexico; Medios Magnéticos, Colombia).

“The greatest change shall be that the CPA will be able to receive information from the clients through the cloud. In a similar manner, the CPA can deliver reports and financial information through the cloud. This shall allow more time for advising and advising the client in developing strategies”\(^4\).

In relation with the auditing practice, the expectations are that the research and development of sophisticated systems for making the auditing task will be an easier one in the future. But, seemingly a lot is still missing to totally automate the auditing task. And why is this?

- Changes in the time term and frequency of the audit.

---

\(^4\) The Evolution of an Accounting Practice: The Impact of Technology by Giancarlo Attolini, Chair, IFAC SMP Committee and Paul Thompson, Director, Global Accountancy Profession Support | September 24, 2014
• Increased education in technology and analysis methods.

• Adoption of an approach of analysis for the total population instead of samples and evaluation of the concepts of materiality and independence.

The auditors need to have substantial technical capacity of analysis, which is not yet included in the program of studies at the majority of the universities.5

An increase is foreseen in the capacity to perform audits in a more efficient and effective manner; for example, being able to carry out several audits at the same time. The more sophisticated financial products are released, the more virtually impossible it will become to perform an audit without technology. Accounting in the cloud will allow performing an audit regardless of the location of same.6 The increase in ERPs shall allow access to entire data bases for auditing purposes. This shall help to modify the approach of the auditors towards a more analytical one instead of an approach of narrow mechanical procedures.7

**How will this affect the profession? What tools shall be managed?**

It will be necessary that the accountant increase his/her understanding of the new accounting software programs and other business and finance applications, if he/she wants to be effective in his/her audit work and at the same time, protect himself/herself from responsibilities.

On-going professional development, education and research shall be a component required for auditors. Auditors shall have to develop the understanding of and the practical skills required to use technology as leverage. For example, integrating information originating from the integrated enterprise resource planning (ERP), with virtual access to smartphones, communicating through social medias, and web pages, adapted and accessible to clients shall be fundamental for the professional practice.8

“If we ignore technology, it will become our enemy. We need to change our way of thinking, not only in regard to that concerning book-keeping but also our attitude towards it as professionals. If

---


6 The Evolution of an Accounting Practice: The Impact of Technology by Giancarlo Attolini, Chair, IFAC SMP Committee and Paul Thompson, Director, Global Accountancy Profession Support, September 24, 2014

8 The Evolution of an Accounting Practice: The Impact of Technology by Giancarlo Attolini, Chair, IFAC SMP Committee and Paul Thompson, Director, Global Accountancy Profession Support, September 24, 2014
we are able to manage this, the potential profits we can have with technology shall be huge. We are seated on a bundle of data, waiting for it to be transformed. The question is whether technology shall be a threat for us as book-keepers (it shall be); the question is how long it will take us to realize the true value of putting forward this industry (Wood, Michael, 2015)9.

However, not only must the accountant have the knowledge of the new technologies; there are other two aspects that are important when facing this challenge and that is, proficiency in the English language (Latin America, certain parts of Europe, the Middle East and Asia), and developing an attitude of an entrepreneur.

Due to the fact that practically all these technologies and technical literature are published in this language, English continues to be the language for business. Thus, it is necessary if not urgent, that we achieve technical command of this language. Assuming the attitude of an entrepreneur is very important. This does not mean that we must resign from our job in order to immediately take on new challenges, but rather that we should assume new professional challenges with the approach of an entrepreneur, making of our job and professional development an entrepreneurial experience and handling such development as an entrepreneur would. If we are already independent, we must keep in mind the elements of an entrepreneurial approach10.

**Conclusion**

Technology has had influence on the work of a public accountant, it still does and it will continue to do so. Due to this influence, the accountant has evolved from a simple compiler of entries and postings to a specialist capable of offering professional services that go beyond the simple preparation and analysis of financial statements. The accountant has become a more complete and efficient professional; the accountant’s capacity to understand technology and to leverage what we do to further develop our practice shall allow us to continue providing more worth and wealth to our clients and related parties.

---
