



INFLUENCE OF NEW INFORMATION AND COMMUNICATION TECHNOLOGIES ON ACCOUNTING

Víctor Ángel Ancajima Miñán ¹

E-mail: vancajimam@uladech.edu.pe

ORCID: <https://orcid.org/0000-0002-3122-4512>

José Elías Plasencia Latour ¹

E-mail: jplasencial@uladech.edu.pe

ORCID: <https://orcid.org/0000-0002-5656-5276>

Wilberto Fernando Rubio Cabrera ¹

E-mail: wrubioc@uladech.edu.pe

ORCID: <https://orcid.org/0000-0002-3426-2768>

Milagro Baldemar Quiroz Calderón ¹

E-mail: mquirozc@uladech.edu.pe

ORCID: <https://orcid.org/0000-0002-2286-4606>

Julio Javier Montaña Barbuda ¹

E-mail: jmontanob@uladech.edu.pe

ORCID: <https://orcid.org/0000-0002-1620-5946>

¹ Universidad Católica Los Ángeles de Chimbote. Perú

ABSTRACT

Information and Communication Technologies (ICTs) today have brought constant transformations to daily life and the economic development of companies is greatly influenced by them. Software updates, to a greater extent for the execution of accounting processes, have strengthened the control of organizations and companies and with it, multiple advantages, for which accounting operations personnel need to be prepared. An assessment of the influence of Information and Communication Technologies in the accounting of MSMEs is made, through the study of a selection of them in the town of Chimbote. The results show how it has always favored the development of companies and decision-making, with fast and reliable information. It was possible to verify the multiple benefits that new technologies have brought to MSMEs.

Keywords: technologies, accounting, information, development, influence.

INTRODUCTION.

The popular and solidarity economy is imposed as a new economic system that leaves aside the corporate interests of capitalism and focuses on the human being and his needs, through this research article that aims to analyze the constitution of this type of popular and solidarity economy organizations in a post-covid era, and its effects within the Ecuadorian State in which information and communication technologies (ICT) have gained special importance (Gaspar Santos, Rivera Segura, Zambrano Olvera, & Triviño Vera, 2023). Today's society is experiencing a great change linked to ICT caused by the sustained increase in computing capacities, general storage, content generation and speed in the exchange of the same (Muñoz Fernández, Díaz García, & Gallego Riestra, 2020). ICT has generated a gradual transformation in the way organizations manage their resources.

ICT offers additional value by improving processes and operations, enabling entities to be competitive, stay ahead of the curve and provide services focused on their corporate mission. In the organizational environment, globalization, technological advances, the Internet, social networks, changes in human behavior and the demand for new public services, among other factors, have required a change of mentality and a new conception of the predominant model, as well as a standardization of business administration. This has been carried out under an improved scheme of organization and operation. Since the 1980s, various administrative methods have been implemented with the aim of promoting more efficient, effective and less costly management, taking advantage of the potential of ICT.

The variable information technologies according to the author (Cobo Romani, 2009) It has the following dimensions: instrumental and strategic. In the same way, the administrative management variable has the following dimensions: quality of service and organizational level, as indicated by Aranda, I. (2013). Méndez, Oneeglio, and Pando (2014) state

that it is not enough that the State has recognized the implementation of the use of ICTs as a support instrument that allows to achieve an effective and professional work, but that it is imperative the emergence of norms that guide the procedure of the way to carry out the acquisition of these ICTs that allow the achievement of this achievement.

At present, the information society identifies a fourth industrial revolution, whose technological paradigm is the Internet (Castells, 2003). This revolution forces us to define a new paradigm that governs the management of the public sector (intelligent governance) and appropriately uses new disruptive technologies to build an intelligent administration (4.0), with an ethical, innovative and digital perspective that has a global and future postmodern vision that allows the flow of constant activity in virtual spaces in contexts of greater complexity (Ramió, 2021).

"The beginning of accounting practices dates back to very ancient times, when man is forced to keep records and controls of his properties because his memory was not enough to keep the required information" (Chávez, 2015). Artificial intelligence has become one of the best decision support tools (Boucher, 2020). Technology is indispensable in everyday life, as well as in working life, an example of this is accounting, which is very exhausting, but with technological advances it has been of great help to accountants, using tools which have simplified that work that was previously so laborious (Barragán Martínez, X., 2022).

ICTs have evolved the way of doing things, since they have been developed in different areas, in which with the help of this type of tools the way of doing things has been facilitated, this leads to companies having to adapt to these new technological tools, as described by Parrales (2017). Information and communication technologies encompass all the computing resources that form the basis of an organization's information systems. These resources include products and services such as desktops, laptops, mobile devices, wired or wireless internal networks, business productivity software such as word processors and spreadsheets, business applications, data storage, and network security, among others. Many of these resources are widely used by accounting systems in any organization or company.

Information and communication technology refers to a number of technological developments related to the acquisition, storage, handling, presentation and transmission of data. These advances are based on the use of electronic processing and broadcast networks, and are applied in activities such as calculation, processing, control, production and communication of information.

The growing need for technological strategies for the management and control of business operations has driven the development of software and programs designed for the accounting record and administration of financial resources. These technological solutions have been adopted by both large companies and entrepreneurs, which in turn has led to the regulation of tax provisions related to the use of electronic accounting. As of 2014, the Federal Tax Code (CFF) legally established the obligation to register accounting information in electronic format, defining the parameters and technological criteria for its realization.

For a long time, accountants have played the role of external consultants in the design of financial systems. In the past, this design focused on manual records management systems. However, at present, accountants seek to continue providing similar services, but now in the context of Information and Communication Technologies. Therefore, the accounting profession has had to adapt to acquire knowledge in the field of ICT.

ICT has had a significant impact on the development of accountant functions, bringing numerous benefits to their work. Thanks to the use of these technologies, accountants have managed to optimize various processes, such as the management and provision of information in real time, which has been very useful in their work. As mentioned by Flórez (2012). ICTs open borders and it is there where there is a proliferation of companies increasing competition, although for many access to the market is limited by their thinking; reduced to not participating in the Web world. Knowledge of ICT and the use of programs are of vital importance, specifically when they refer to financial information management.

Over the years, there has been a notable increase in the adoption of information technologies, this is because their use has become more frequent, as they provide tools that facilitate tasks in various areas. The massive use of information and communication technologies as a means to generate, store, transfer and process information has increased in recent years, becoming an indispensable element in most organizations.

With the help of ICTs, organizations have achieved great benefits, such as optimizing their resources and improving their operations, better understanding the needs of customers to offer them a better service, reaching a greater number of customers and new markets, and improving communication between their employees and with their customers and suppliers, thus increasing its efficiency (Espinal, 2019).

Information and communication technologies have transformed the way we work and manage resources. ICT is a key element in making work more productive: streamlining communications, supporting teamwork, managing stocks, performing financial analysis, and promoting products in the market (Pita, 2018).

For Guatame & Lagos (2020), the Public Accountant must develop his innovative capacity to offer better services, taking into account that the product of his work is a fundamental element for the company in turn to modernize its products, services and can contribute to market efficiency.

ICT generates a considerable impact on the productivity and efficiency of companies, since they have allowed the automation of numerous tasks. This automation has made it easier to get certain jobs done, which translates into greater efficiency in business operations. Escarraga (2019), mentions in his article, the evolution of the counter he has had with technology that: At present you can see how technology with the passing of days has taken great importance in everyday life because it has ranged from the academic field to the work, generating changes in the work and as public accounting professionals has also caught in this great phenomenon, Since the counter of yesteryear at the time of executing several processes was laborious because when performing an analysis or accounts was mechanical, at the moment of making accounts or analysis of great magnitude was something long and tedious, with this the processes were days and led to errors but with the arrival of technology these processes gradually with time were optimizing these methods

Innovation is a constant process that transforms the environment on a daily basis, and technology plays a fundamental role in introducing new inventions, methods and techniques. In the accounting field, most specialized computer systems share similar characteristics in their operation, such as the generation of journal policies, income and expenses, as well as the preparation of information for submission to the SAT portal, among other functions.

Accounting plays a fundamental role in controlling and organizing the various activities of a company, in order to obtain a clear and useful view of its current situation. This allows to carry out the established objectives and fulfill the desired purposes in an agile and timely manner. The accounting information system becomes an important tool to achieve effective communication both internally and externally in companies. Through this communication, better organization and decision-making is achieved, which contributes to continuous improvement and competitiveness in the market.

In today's era, most commercial transactions are conducted electronically, dispensing with the need for paper documentation. This allows organizations to present financial information in real time and online. Given the wide use of Information and Communication Technologies, companies focus on having trained personnel to handle and adapt to these new technologies, with the aim of making the most of all the tools they offer.

The knowledge of the level of competence in Information and Communication Technologies by an accounting professional becomes fundamental for the management of information and knowledge within an organization. In today's business environment, accountants are required to be able to take full advantage of the benefits of ICT in order to gain competitive advantages. The use of ICT allows the accountant to be aware of the demands of society, the market and the company, among other aspects. Therefore, it is important not only to acquire knowledge about ICT, but also to keep constantly updated, since the foundations that technological systems provide to the accountant are of great importance.

ICT provides support tools for labor execution, through software such as Excel, Access and accounting packages, which simplify and accelerate work, and are of great relevance to the accounting system of companies. The quality of accounting information is of important interest to various agents (Garza Sánchez, Cortez Alejandro, Méndez Sáenz, & Rodríguez García, 2017) and within the company, it is an indispensable part for its economic development.

This is how numerous investigations support the idea that ICT influences the productivity, growth and development of business organizations. In this regard, Ferraro, C. A., & Stumpo, G. (2010) states that information and communication technologies (ICT) can play an important role in improving the competitiveness and productivity of companies. In this way, the use of ICT is intertwined with accounting operations, allowing to process, generate and transform accounting data that are fundamental for the financial management of the organization.

Some of the digitized accounting programs that have been available in the market for companies, according to Durán (2015) are: "Saint Enterprise Accounting (2012), Galac (2012), Premiun Soft Accounting 7.x Extended MySQL, Adapta- Pro ERP (V.4.1), Microtech Accountant (2012), Profit Plus 2K8, among others." Each of these programmes has been designed to be more adapted to the particular requirements of companies and changes in the business environment. Along the same lines, Urquía and Pérez (n.d.) indicate that: "XML (Extensible Business Reporting Language) is the standard language used on the Internet for the exchange of information and for electronic data traffic between companies."

The economic development of companies in whatever their structure is largely based on the control they have of their accounting and the information it provides to be able to make decisions systematically. ICTs are currently an essential reinforcement to the achievement of faster, updated and truthful data, so the work aims to analyze the influence of new information and communication technologies in accounting, for which it is intended:

- ✓ Analyze the use of ICTs within accounting processes
- ✓ Assess the influence of ICTs on the accounting system of companies.

MATERIALS AND METHODS.

The type of study is quantitative, prospective, correlational, cross-sectional and descriptive design and the research methods applied were hypothetical deductive. The sample is made up of workers from 25 companies (MSEs: micro and small enterprises) of Chimbote, who constitute the total population, from them a sample of 113 workers was selected between managers, administrative and workers. Two questionnaires were used as tools to collect information: a) Level of impact or use of ICTs and b) Degree to which ICTs benefit or limit the efficiency of administrative management; both with questions for each variable, using the Likert scale.

It was possible to collect information on the perception of personnel with respect to the variable information technologies and in turn to its dimensions: instrumental and strategic. Also the administrative management variable with its dimensions: quality of service and organizational level. The validity of the instruments was carried out by the judgment of five experts in the field of administrative management. The instruments were evaluated and reliability was determined with Cronbach's alpha coefficient, The criterion of George and Mallery (2003, p. 231) with the following standards for evaluating Cronbach's alpha coefficients >0.9 high reliability and >0.8 low reliability, being the value of 0.87 comprising strong reliability. Data were tabulated and presented in tables and graphs according to variables and dimensions.

RESULTS.

At present, it is undeniable the relevance of Information and Communication Technologies in the management of companies, regardless of their size. These tools offer numerous advantages for the processing of accounting data, which are fundamental for the financial control of the business. In this regard, Altamirano, C and Bustos, E. (2005) state that:

Organizations are constantly looking for new and better means that allow them to obtain advantages over their competitors, as well as optimize their administrative processes in order to achieve not only survive, but be definitely more efficient, underpinning their management towards organizational success.

In the application of the instruments it was evidenced that most of the respondents have knowledge of the existence of several softwares that facilitate the accounting process of companies such as MSMEs (Figure 1), which facilitates the adjustment of the accounting system to the functions and needs of the company, so that the application used responds efficiently to the analysis required by the management of the same in its management. business.

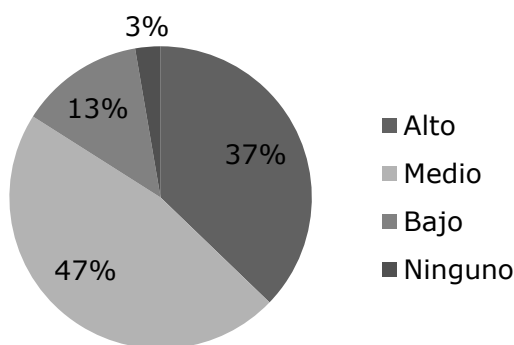


Figure 1. Knowledge about the existing software for the accounting system. Source: Authors.

In contrast to them, the criteria on the possibilities and advantages that software can offer and its application to the accounting system that exists in the company (Figure 2), is much greater, considering to a large extent the agility for the processing of information and its use for decision making during the production process, that allows adjustments to be made in order to comply with the plans proposed by the MSME.

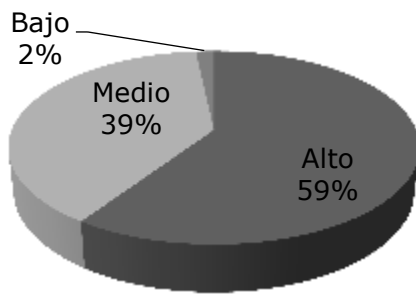


Figure 2. Criteria on general benefits. Source: Authors.

The mastery shown by the selected personnel on the potentialities possessed by the software used in MSMEs is not high (Figure 3), so there is the possibility of increasing the benefits of its use in the management of information achieved a greater preparation of the personnel in this regard. The operations carried out are essentially limited to the analysis of the production process and its behavior at each stage.

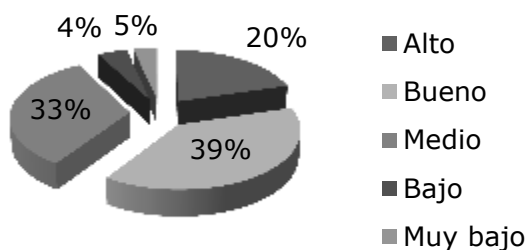


Figure 3. Knowledge of the potential of the software used. Source: Authors.

With respect to the use of the requested information, they consider that it is generally very useful, its processing allows maintaining constant information and control over the businesses, the productive activity object of the MSME, its behavior and with it, decision-making in various aspects that contribute to improve performance, seek new horizons, be more competitive and guarantee the welfare of workers (Figure 4).

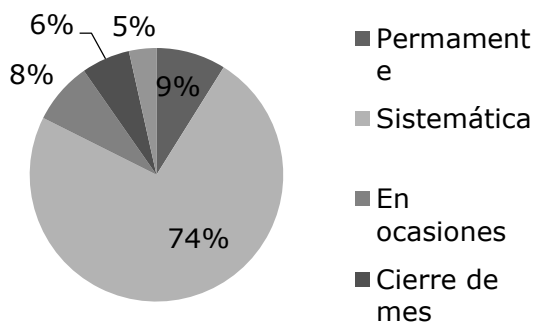


Figure 4. Use of information for decision making. Source: Authors.

In the analysis of the accounting recorded in the last five years by the MSMEs under study, it was possible to show a similar behavior in most of them in the fulfillment of the plans that had been proposed (Figure 5).

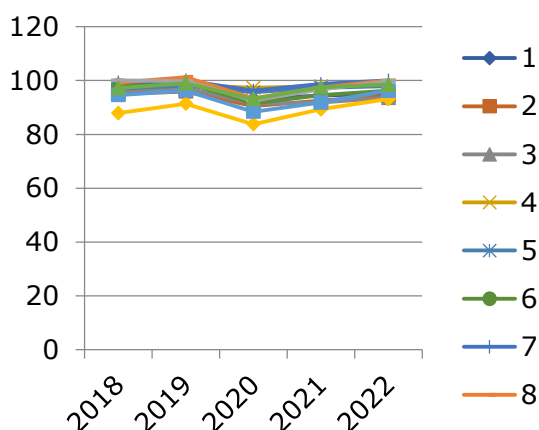


Figure 5. Productive results in the last five years. Source: Authors.

It can be observed that the statistics of the registered accounting allow to evidence an advance in the productive levels of the companies, from the most developed to those with the lowest results, taking the sample of some of the companies under study, but of similar behavior to the rest. The decrease that can be seen is due to the effects caused to the economy worldwide and trade from the Covid-19 pandemic, which in recent years MSMEs have been recovering, although not with the results of previous years yet.

MSME managers considered that the application of ICT in their accounting controls allowed them to systematically analyze economic behavior in production and the market. All this to, adjusting a set of measures to each situation that would lead to the increase in productivity and its recovery within the effects caused by the pandemic, which influenced the acquisition of raw materials, as well as the development of products and their marketing and distribution.

Indeed, ICT allows to expand the possibilities of the company for a more efficient management of the organization through technological tools, without having to leave the company, through the use of digital accounting programs where the user or client can access from anywhere in the world through the Internet network. In this regard, today there are a wide variety of accounting programs or software on the market that the company can have to carry out its financial operations, adapting them to their particular needs.

DISCUSSION.

The results obtained showed that, like large companies, MSMEs have included in their accounting systems the use of ICT and the necessary means to achieve systematic control, which provides them with the required and updated information, for decision-making based on the increase in production and services.

Most workers of MSMEs are aware of the existence of software and technologies that facilitate the work of accounting control, they know they are implemented in their companies, although these are not always the most advanced that exist at the moment, but they do facilitate updated information and decision making. These companies promote the acquisition of technology, even if it is the minimum necessary to guarantee accounting work and improve the work of accounting workers in the development of this process.

It can be seen that, in general, although the workers in charge of accounting operations in the MSMEs under study, perform well the different operations in the software installed for accounting control in the company, it is necessary to develop actions of preparation to a significant number of them, in order to achieve greater use of the potentialities that these software provide. The information that can be obtained with operations that are not yet potentially exploited, can favor decisions to increase production and services.

In relation to SMEs Garengo et al. (2007: p.667) indicate that: "the advantages of optimal use of ICT in SMEs are:

- A better adaptation to a changing environment, allowing to manage relationships at a distance and present a high degree of competitiveness. That is, the dynamic nature of companies is enhanced, which, although small, must incorporate the use of ICT.
- The improvement of internal manufacturing processes since these would be more automated, with greater flow of information between the different levels of employees.
- The possibility of new networked business. As there are more intercommunications, there are more possibilities for diversification of traditional businesses.

- The improvement of administrative management at the accounting and financial level. With the use of ICT, it is possible to know the risk of some operations or predict the future benefit with sophisticated statistical computer applications.
- The improvement of the company's external relations, mainly with foreign clients who are accessed through the company's website.
- The increase and improvement of the relationship with their traditional customers through computer applications such as data mining where companies can get to know and interrelate data about their customers, previously unknown, which opens the doors to optimize their offer of products or services in the market.
- The use of ICT that facilitates mobility is highly valued in companies that have a number of professionals who perform most of the working day outside the company's headquarters.
- The possibility of using the network as a new sales channel, thus expanding the business.

In this context, the integration of ICT in the accounting procedures of companies, through the implementation of specialized accounting software, has become a determining factor for business growth and development. This is because the processes are carried out quickly, efficiently and with higher quality. Consequently, the use of ICT tools and their positive impacts on increasing the productivity of business organizations have been corroborated by OECD reports.

CONCLUSIONS.

Information and communication technologies have revolutionized the accounting systems of companies today, there are various softwares that have been developed worldwide and the options they provide, so MSMEs are not exempt from their use and exploitation.

The applications of programs for the registration of accounting operations in companies and organizations at any scale and size increasingly try to be more efficient and provide faster and more feasible results for decision-making in the face of the results obtained in the productions and services provided by MSMEs.

It is important for MSMEs that accounting workers have systematic training and improvement actions for the maximum use of all the operations that the software used can provide, so that they are able to provide fast, quality information at all times and that serves as a potential basis for decision-making in the different economic-productive situations and services, allowing a greater development of the activities and with it of the company.

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