



Tax Management Supported by Mechanisms of Technological Innovation: Mobile Office Case



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Abstract

Mobile applications are currently widely used instruments that facilitate access and navigation in other software, in this sense, more and more institutions of various kinds incorporate this type of innovative technological mechanisms with various purposes, among which tax management from parish governments. as that of the Chirijos community requires, in this context the purpose of this work was based on the design of an application that facilitates citizen user access to platforms such as the Internal Revenue Service both to check their assets and to pay them. A methodology based on the quantitative research approach was applied, of a descriptive type through tools such as click charts, pixlr and canva; obtaining the schematic process flow that details the step by step of the application, as well as the screenshots when accessing the application from the mobile and from the website of the parish government. In conclusion, the design of this practical and useful tool for the inhabitants from anywhere and at any time is emphasized, whose execution responsibility falls strictly on the autonomous decentralized parish government of Chirijos.

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1 Introduction

The first tax economic studies have their origin in the United States of America and are attributed to a state official named Stanley Surrey, deputy secretary of the treasury, who merit credit for including for the first time in 1968 a chapter on tax expenditures in the budget of his country. The second study was carried out in Germany in 1967 with the report on tax subsidies and preferences (first Subventionsbericht) as a starting point in Germany. In Latin America, one of the first countries to assume this task was Brazil, which in 1989 published its first report on tax expenditures, but it was not until the 21st century that this practice began to become generalized and perfected in the rest of the nations (Prado, 2018). In South American governments such as Peru, culture and tax awareness are very important factors so that citizens do not commit tax crimes; and therefore understand that taxes are resources that the state collects as administrator, but in reality those resources belong to the population, therefore the state, through the cantonal municipal governments, must return them to the citizenry through services public such as hospitals, educational units, universities, drinking water (Amasifuen, 2016).

In Ecuador, in accordance with the Ecuadorian internal tax regime law, not only large companies that move large sums of money, keep accounts and are required to declare taxes, but all those people who carry out some type of economic activity *Asamblea Nacional* (2018), but many do not, because they do not have the knowledge needed to carry them out, and must be helped by people specialized in these issues (Gordillo, 2012). According to the above, the state requires the financial resources collected from citizens to serve as a promoter of social equality and promote economic activity, financing expenses, investment and thus be able to carry out public works and provide services that requires the population; therefore, to the extent that civil society is aware of the tax culture for its own well-being, and that the administration in turn puts tax education into practice, the results are reflected in the collection, therefore in the improvement of the services it provides to the city and that promote the comprehensive development of its inhabitants (Herrera, 2018).

However, as a result of the COVID-19 pandemic, tax collection decreased considerably, for which the collection mechanisms, amounts and dates had to be changed, at least with momentary implications, since taxes played an important role during the crisis. socioeconomic to help maintain access to basic goods and services to the most vulnerable population, as a contingency measure, taking into account that the least favored social groups were the hardest hit by the pandemic, requiring direct government intervention through aid and ways to alleviate the negative effects (Prada et al., 2021). As a consequence of the social isolation derived from the mobility restrictions to stop the pandemic, it has been compensated by the massive use of the digital medium, the local population already used technological means before the health crisis, in fact, the society that justifies the need to generalize the call for the use of "paperless administration", in which the electronic relationship becomes the usual form of relationship between citizens and public administrations at all levels, from the central government to a parish government. Since technology represents many advantages, but also drawbacks, especially when it becomes the only communication mechanism between citizens and the tax administration. This variable probably goes unnoticed by a large part of the citizenry, precisely because technology, from that privileged position, is always presented with the label of taxpayer assistance and support instruments. Tax practice, however, is beginning to accumulate experiences in which it is noted that the electronic medium can become an obstacle to the exercise of rights and the fulfillment of obligations by citizens (Navarro, 2021).

Another important consequence that the digital phenomenon has brought to taxes is the relationship with the gradual digitization of tax obligations, considering that for several years countries have introduced modifications to their legislation to incorporate technology to comply with tax obligations, making it possible or requiring, in many cases, that the declaration and payment of taxes be made online, that taxpayers issue tax documentation by technological means or that the procedures be carried out online. These measures provide a powerful input to the supervisory bodies, who have a large amount of information in electronic form, which in turn allows them to develop digital tools to process and analyze this data massively, and thus comply more

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effectively. their audit work, but at the same time they represent challenges, because the administration must be able to develop the necessary systems for their implementation, and the taxpayers, for their part, must be able to understand and use them (Ossandón, 2020). In recent years, software development has evolved in such a way that it has become one of the most mature processes worldwide, today this process is based on concepts such as agile methodologies, process-based methodologies, continuous improvement, design patterns, good practices, quality standards, among others, which have undoubtedly helped organizations not only meet the objectives and/or goals set, but also help them become more competent and effective in the market. where they develop (Cieza, 2016). In such exposed context, the decentralized autonomous government of the Chirijos rural parish of the Portoviejo GAD Chirijos canton, has been working for its socio-economic development that has promoted a recent growth in family economies, which would also contribute to a certain increase in collection. of municipal and government taxes, which requires the incorporation of innovative mechanisms that help its inhabitants-taxpayers to meet their tax obligations, for which the objective of this research focused on designing a tax management mechanism for the GAD Chirijos, based on the establishment of a mobile office or virtual window of tax services by the GAD of the Chirijos parish of the Portoviejo canton (Grundy et al., 2016; Imran et al., 2020).

2 Materials and Methods

The research was carried out in the rural parish of Chirijos, belonging to the canton of Portoviejo, capital of the province of Manabí in Ecuador, at the geographic coordinates of south latitude $1^{\circ}03'16.5''$ and west longitude $80^{\circ}27'16''$. Figure 1 the location is observed.



Figure 1. Location of the Chirijos parish
Source: TFrom GAD Chirijos (2015)

The Click charts, Pixlr and Canva programs were used as materials for the preparation of the flowchart and design of the tax management system (SIGECH) for the management of taxes, rates and others; the Microsoft Office Excel spreadsheet and the internet tool, the quantitative approach was applied, non-experimental design of a descriptive type, through the literature review on the object of study and the use of a computer tool to design the mobile tax office for the parish GAD of Chirijos. This tax office or virtual window is a mobile application or App called SIGECH, whose meaning is Chirijos tax management system. For this purpose, the flow of the sequence to follow when accessing the App was outlined. The second step included the development of the process flowchart of the tax service to follow, when the application is executed. A third

step was the schematization of the process when accessing the system from the website of the parish GAD (Graham et al., 2012; Baranzini et al., 2000).

3 Results and Discussions

The mobile tax office of the GAD Chirijos facilitates the taxpayer to access and carry out and comply with their tax obligations from wherever they are, only by accessing the App when they receive the alert on their cell phone. The characteristics that this virtual window offers to the user - citizen - taxpayer are summarized in figure 2.

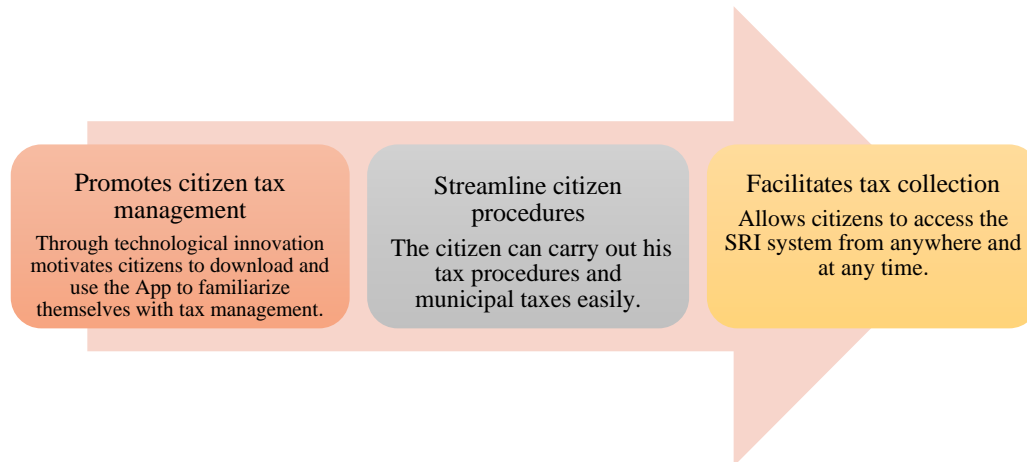


Figure 2. Characteristics of the mobile tax office

These characteristics imply the promotion of tax management in the inhabitants of the Chirijos parish, who currently develop various economic activities, predominantly rural and mountain tourist services, typical food, guided tours, handicrafts; the streamlining of tax procedures in the SRI and in the municipal GAD from the mobile phone without the need to go to public offices; and tax collection from anywhere the taxpaying citizen is, and at any time of the day, with the application active 24 hours a day, 365 days a year, facilitating the inhabitants of Chirijos who carry out economic activities, the people of the elderly and with disabilities easily access and manage their taxes from the App on the mobile or from the page of the parish GAD. Figure 3 shows the application downloaded from the cell phone, which is accessed by clicking (Guston & Sarewitz, 2002; Roure & Keeley, 1990).



Figure 3. App icon on the cell phone

As can be seen in the figure, the application can be accessed from the mobile phone from the App icon that has the GAD Chirijos logo and the name SIGECH, so you can also access the mobile office from the institutional web page of the parish GAD, as shown in figure 4.

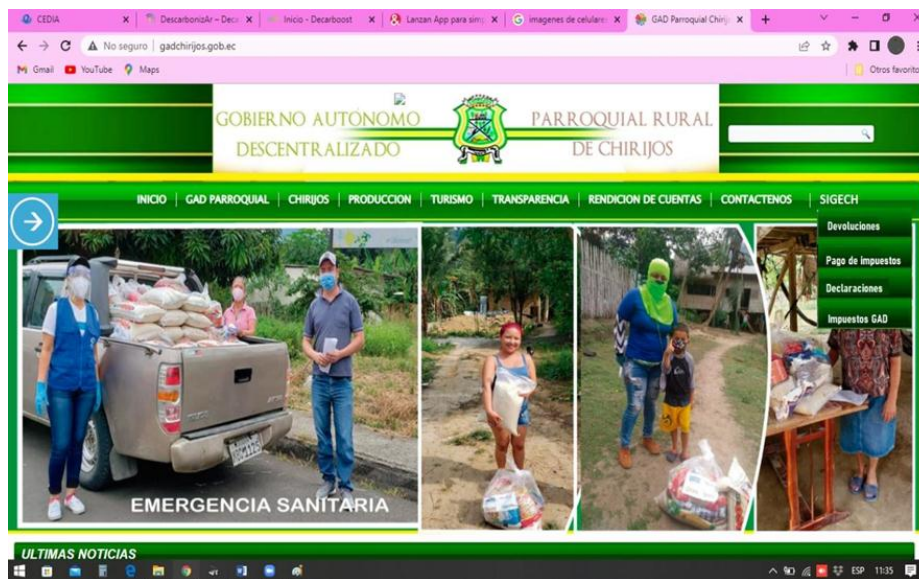


Figure 4. Access to the SIGECH mobile office app from the Chirijos GAD web page

Clicking on the SIGECH icon from the web page of the GAD Chirijos, you can also access the mobile office, from which a window is displayed that shows a menu with 4 options to choose from according to the need of the taxpayer-citizen user, which includes returns, tax payments, declarations and GAD taxes (Jeyaseeli & Shanthi, 2022; Begum & Nirmala, 2022). In the same way, on the cell phone, from SIGECH the user receives the alert by text message so that the first days of the month they can access the service, they will also receive it to remember the payment of other taxes to the parish entity. Figure 5 details the menu.



Figure 5. Drop-down menu of the App from the cell phone

In the SIGECH icon that corresponds to the tax management system for the GAD Chirijos, you can choose between four options: refunds, payment of taxes, declarations and GAD taxes. The first option, refunds, facilitates access to value added tax (VAT) refunds for seniors and people with disabilities; the second links the user to pay their taxes such as VAT, ICE, income tax, the third to make the declarations of these taxes and the fourth alternative, directs the payment of municipal taxes such as urban and rural properties, patents, among others. In the first three options, the user is directed to the page of the internal revenue service, as can be seen in Figure 6, within which he must enter his identity card or RUC and the access code (Eost & Flyte, 1998; Yuan et al., 2010).



Figure 6. Addressing the SRI

When choosing the fourth GAD tax payment option, be it urban, rural, patent and other taxes, the App directs the user to the page of the municipal GAD of the Portoviejo canton to consult the value and perform the respective payment chosen, typing only the ID number, as can be seen in Figure 7.

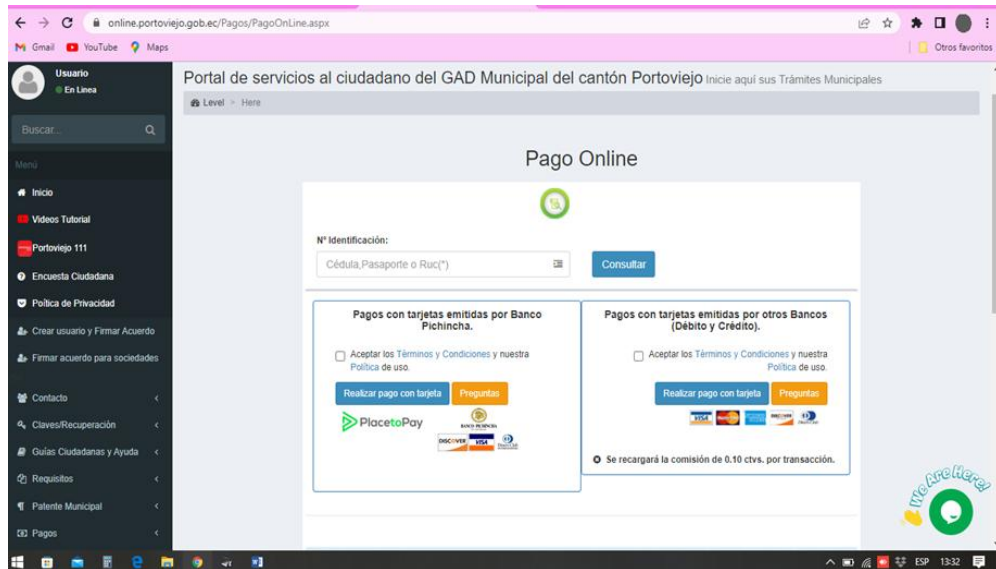


Figure 7. Addressing the GAD be seen in figure 8.

Once SIGECH is accessed, the process flowchart, which details the step by step at the moment the user enters can be seen in Figure 8.

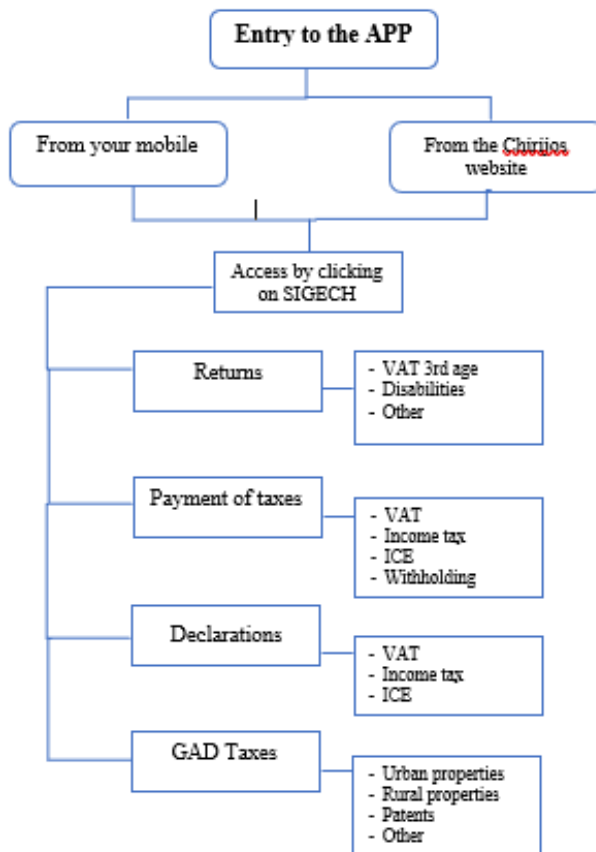


Figura 8. Process flowchart

The designed application or App called SIGECH works as a motivator so that the user can explore the field of taxation in a simple way, just as he did with another commercial App, through which he can link with the SRI and the GAD Portoviejo to access to consult the payment of their taxes, both for taxes and for contributions. In this context, Ríos (2013) in his study determine the influence of new technologies in tax management, which has been increasing, even considering a cybernetic tax administration. Likewise, Armas & Colmenares (2017), in their study establish that, in terms of information and communication technologies implemented by the tax administrations of South American countries, they are at the forefront of the most developed countries, aimed at providing high quality services. Quality, facilitating tax compliance, optimizing the control and collection capacity in order to reduce tax evasion and fraud. Jarrín et al. (2017) concludes in his study that Ecuador and Peru have a tendency to apply technological and innovative tools on the website, which have come to have significant advances in collection through tax management that what they want is to make two successful, modern institutions with a high degree of technology and innovation, generating a good service, facilitating compliance with tax obligations. However, Macías et al. (2019), the changes promoted by the incorporation of technological innovation into the processes must be gradual so that the impact is as expected, a positive contribution to the processes that the institution or business organization is developing. The present work agrees with those exposed, regarding the need to incorporate mechanisms of technological innovation to the processes, although, although it is true that technology advances rapidly and innovation goes hand in hand to promote substantial changes in institutional processes, a fundamental factor is required for these to be implemented and constitute the added value that is sought. In addition to this, it is necessary to train those involved to reach the next phase that involves the citizen tax culture (Ahmed & Hasegawa, 2012; Mangkuto et al., 2014).

4 Conclusion

Through the bases of tax management, support mechanisms such as technological innovation could be used, in this case the Tax Management System - SIGECH, as a key instrument to provide accounting-tax services of the mobile tax office in the parish Chirijos of the Portoviejo canton. In the design phase of the SIGECH, it had the institutional support of the decentralized autonomous parish government of Chirijos (GAD Chirijos). The present work only contributed with the design of the application, the programming and execution of SIGECH corresponds to the GAD of Chirijos that would implement it based on its budget planning.

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