THE DEVELOPMENT OF ELECTRONIC GOVERNMENT IN TWENTY LATIN AMERICAN COUNTRIES: DIGITAL AGENDAS AND WEBSITES OF THE FEDERAL EXECUTIVE BRANCHES

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Abstract: This research aims to conduct a comparative study on electronic government (e-government) in twenty Latin American countries: Argentina, Bolivia, Brazil, Costa Rica, Colombia, Chile, El Salvador, Ecuador, Guatemala, Honduras, Mexico, Nicaragua, Panama, Peru, Trinidad and Tobago, Venezuela, Paraguay, Uruguay, the Dominican Republic, and Cuba. For such, we sought to: i. Describe and analyze the digital agendas, decrees, and other documents referring to e-government development in the analyzed countries; ii. Perform a content analysis of the websites of the federal executive branches of the countries with the purpose of building a series of variables related to e-government; iii. Build an e-government index of the countries. The results point out that few Latin American countries are at advanced e-government implementation stages, with Uruguay standing out in the region, followed by Brazil, Colombia, and Mexico.

Keywords: Electronic government; Latin America; Analysis of the federal executive branch websites; Digital agendas of electronic government; Comparative analysis.

1 Introduction

The impact of the Internet on politics is very vast, not only from the viewpoint of the citizens who participate in various spheres of interaction in societies but also from the perspective of governments, especially regarding their activities and services offered to the population (NICOLAS, 2015). Electronic government (e-government) may be summarized by the search for "public ends through digital means" (NASER; CONCHA, 2011). Specifically, it may be defined as the intensive use by government institutions of Information and Communications Technologies (ICTs), both in the relationships that the State maintains with the citizens, users, and the private sector, and in the internal relationships at various levels of the public sector (FINQUELIEVICH, 2005; CHUNG, 2009; MARGETTS, 2009; TWIZEYIMANA; ANDERSSON, 2019; MENSAH et al., 2020). Among the main benefits and positive impacts of e-government, public service efficiency, government transparency, and more democratic public processes stand out (NASER; CONCHA, 2011; SEIFERT; CHUNG, 2009; SNELLEN, 2007; KRISHNAN; TEO; LIM, 2013).

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The literature points to three broad e-government dimensions: provision of services to citizens, expansion of democratic processes; dynamization of public policy elaboration processes (SANCHEZ, 2003; SNELLEN, 2007; BINDU; SANKAR; KUMAR, 2019). The e-government maturity or development level refers to the degree of complexity the proposal acquires throughout the implementation process (NASER; CONCHA, 2011). One of the indicators to measure this process is the United Nations (UN) E-Government Development Index (EGDI), which measures the degree of advancement of the initiatives in the international context.

The adoption of systematic public policies directed at e-government development by Latin American countries may be inserted into the broader landmark of administrative reform processes of the public administration. As ICTs occupied more space in societies, i.e., as the Internet and the various tools were created and improved, governments incorporated their functionalities into the exercise of their administrative activities seeking to offer services focused on efficiency and efficacy. Such premises regard managerial processes aimed at public administration that converted into criteria applied to public management. To some extent, e-government was expected to bring broad benefits to public administration. As stated by Criado and Gil (2013, p. 8): "E-government launches the bases to generate benefits within public administrations derived from the use of ICTs in the different dimensions of public action".

Within the Latin American literature scope, it is possible to observe a deficit of studies on e-government from compared and empirically oriented perspectives. In this sense, the question raised in the study by Criado and Gil-García (2013, p. 38) merits prominence: how to produce research approaches on e-government that are current, renewable, and reusable for comparing cases by country? Hence, this research aims to conduct a comparative study on electronic government (e-government) in twenty Latin American countries: Argentina, Bolivia, Brazil, Costa Rica, Colombia, Chile, El Salvador, Ecuador, Guatemala, Honduras, Mexico, Nicaragua, Panama, Peru, Trinidad and Tobago, Venezuela, Paraguay, Uruguay, the Dominican Republic, and Cuba. The question that guides the research concerns the following: to what extent have Latin American countries advanced in e-government development? For such, this study had the purposes to: i. Describe and analyze the digital agendas and other documents referring to e-government development in the analyzed countries; ii. Perform a content analysis of the websites of the federal executive branches of the countries with the purpose of building a series of variables related to the following dimensions: navigability, government information, especially information on COVID-19, electronic services, accountability, and participation; iii. Build an e-government index of the Latin American countries. The results point out that few Latin American countries have more consolidated e-government agendas, with Uruguay standing out in the region, followed by Brazil, Colombia, and Mexico.

After this brief introduction, this paper is divided into four sections, the first of which

seeks to develop the concept of e-government, its dimensions, and the ways to measure its development. The next part presents the methodological procedures employed. The study results are presented in the fourth part, and, lastly, the final considerations of the research are discussed.

2 E-government: the evolution of the concept and ways to measure its development in Latin America

The e-government phenomenon encompasses the modernization of public management and the State-citizenship relationship (CHAHIN et al., 2004; CARTER; BELANGER, 2005; MCLOUGHLIN; WILSON, 2013). Specifically, it may be defined as "[...] the use by the government of digital technologies internally and externally to interact with citizens, companies, other governments, and organizations of all kinds" (MARGETTS, 2009, p. 114).

The literature points to three e-government dimensions: provision of services to citizens, expansion of democratic processes, and dynamization of public policy elaboration processes (CRIADO et al., 2002; SANCHEZ, 2003; GUPTA et al., 2016). The first dimension refers to the role of governments in the offering of public services and the performance of transactions with the private sector. The offering of public services through the Internet may present a wide range of experiences. The quality of the services offered may be measured by the language, ease of use, conditions for obtaining (or accessing) the resource, trust in and utility of the service, and results found, among other elements (ARAUJO et al., 2018; MENSAH et al., 2020).

Latin American governments have been investing in adopting digital agendas that prioritize advancement goals in the online offering of public services. An example is the adoption of single government portals with emphasis on the offering of public services, such as the Argentine and Brazilian federal government portals. Also, the offering of services through applications has been increasingly adopted by governments. Thus, the offering of services through both digital platforms and mobile phones is considered (CUNHA; MIRANDA, 2013).

From 2020, due to the COVID-19 pandemic, the countries in the region leveraged the offering of public services through digital platforms and mobile devices, largely also pressured by the need to offer digital services due to the implemented social distancing measures and actions[4].

However, it is worth noting that the development and adoption of these advancements find limitations related to the infrastructure of the access networks and the Internet connectivity in the countries of the region: "In 2019, 66.7% of the inhabitants of the region had an Internet

[4] According to Faria (2020), "From February to April, the services portal of the Brazilian Federal Government recorded a 240% increase in the number of users. In Chile, transactions through the Internet and at the kiosks of the 'Chile Atende' program increased by 320% and 500%, respectively, after 86% of the in-person service points had to be closed".

connection. The remaining third has limited or no access to digital technologies due to the economic and social conditions, particularly age and location" (NU.CEPAL, 2020, p. 2).

The second e-government dimension is directed at expanding democratic processes through the adoption of digital mechanisms that provide accountability. In the political science field, the term refers to the ability of a person or institution to render accounts of their activities, i.e., the actions of the representatives are punishable or rewardable by citizens at the time of voting (MARQUES, 2015). Insofar as there is consensus about certain democratic values such as equality, representation, and human dignity, accountability becomes a fundamental value to measure the quality of democracies (CAMPOS, 1990).

The rendering of accounts or accountability materializes through digital means insofar as there is effective public transparency. Government transparency and access to public information emerge with binding force in most Latin American countries in the context of the constitutional and administrative reforms in the 1980s and 1990s, after the establishment of democratic regimes. These principles were gradually incorporated into public agendas with the purpose of enabling the accountability of both the political elites and government activity as a whole.

The digital mechanisms that enable accountability, access to information, and transparency refer to a wide range of experiences. It should be noted that most Latin American countries regulated laws on access to information from 2000 on (AGUIAR LOPES, 2009). These laws detail the type of information to be disclosed, the request for information, the access, and the format of information availability, which is currently primarily through the Internet. For example, Paraguayan Law No. 5282/14 compels all public institutions to disclose information on their functions through institutional websites.

It is worth noting that another public transparency mechanism made available through the Internet is the budget, personnel, and government infrastructure information portals used by the countries in the region. Regarding budgetary transparency specifically, according to a report in the "Panorama of Public Administrations in Latin America and the Caribbean" (CEPAL, 2020), Brazil is the country that enables the most criteria about the federal budget, even making data available in open format. Open government data may be defined as information made available on the Internet for access, reuse, and distribution, either by the public sector itself or by society (UN, 2018). The discussions about the format of the data to be made available by governments have received *insights* from international organizations. In 2007 specifically, eight open government data principles were established in the landmark of a meeting among researchers, leaders of various governments, activists, and professionals connected to the ICTs. Ultimately, the goal is to make available data that is useful, i.e., that may be analyzed, compared, and processed. In a study of open data platforms in Argentina, Brazil, and Paraguay, Nicolas and Catachura (2020) pointed out that the Brazilian open data portal presents more

detailed information and more appropriate navigation conditions, followed by those of Argentina and Paraguay, presenting similar resources.

The last e-government dimension is directed at the use of ICTs with the purpose of increasing the institutional capacity of governments in implementing public policies. The implementation aims to put into practice the design of a public policy through instruments that seek to solve or mitigate a public problem. Hence, people, infrastructure, and specific funds are allocated, and specific rules are designed (HOWLETT et al., 2013). On the other hand, a fundamental attribute of public organizations is state capacity. This capacity of States is related to the aptitudes that government organizations have to achieve their internal and external goals, be it bureaucracy, organizational resources, or legal competencies, among other components (BERTRANOU, 2015).

The use of ICTs covers a wide range of experiences and formats in regards to implementing public policies. On the one hand, relative to public management, interoperability brought significant improvements to intergovernmental relationships through the exchange of data and information (CRIADO; GIL, 2013). The adoption of Free Software (FS) by several Latin American countries such as Brazil, Peru, Uruguay, Bolivia, Venezuela, Ecuador, and Argentina has contributed to leveraging interoperability, to some extent due to the characteristics of FS, which present open source codes, allowing adaptations to the purposes of the public organizations.

Another interesting example of the use of ICTs to improve internal public management refers to the digitalization of documents produced by the governments. The benefits aim at eliminating errors and information redundancy, reducing physical storage space, and even contributing to lowering costs and time spent, thus favoring the environment (GIL-GARCÍA, 2012). This practice is disseminated in several Latin American countries, as is the case of the Peruvian government, which developed in 2020 a "Digital Platform for Document Management" with the purpose of guaranteeing transparency, preserving the environment, and accelerating the digital transformation.

Through the inspection, monitoring, and design of public policies, social control was made evident in the countries of the region from the constitutional reforms after dictatorial regimes at the end of the 1980s and 1990s. Such a control may be materialized through the Internet via e-participation, which refers to the use of ICTs by the civil sphere with the purpose of influencing decision-making processes. The digital participatory budgets have been one of the most interesting e-participation experiences. Such was the case of the experiences in Belo Horizonte, Brazil (COLEMAN; SAMPAIO, 2016; BARROS; SAMPAIO, 2016). Another example refers to e-participation through public consultations about varying subjects. In 2009, the Brazilian government initiated one of the most prominent experiences in this regard: the public consultation about the Civil Rights Framework for the Internet (MCI, from the

Portuguese Marco Civil da Internet). The debate took place online in two phases and resulted in a project signed by President Dilma and referred to the Legislative Branch in August 2011. Approved and sanctioned only in 2014, the MCI is currently responsible for establishing "principles, guarantees, rights, a and duties for Internet use in Brazil". The consultation about the MCI is considered one of the most successful in Brazil due to its collaborative format (ALMEIDA, 2015; LEI; LEMOS, 2015; BRAGATTO et al., 2016).

Finally, it is worth stressing that the e-government development level concerns the complexity that the process gradually acquires throughout the implementation process by the governments (NASER; CONCHA, 2011). The process must follow organizational changes, internal process redesigns, regulations, training, and human capital, among others (CONCHA et al., 2012). Several factors affect the implementation process; relative to Latin American countries specifically, Gascó (2012) pointed out that e-government initiatives in the countries of the region find limitations related to little-developed telecommunications infrastructure, insufficient human capital, and also specific institutional conditions of public administrations that depend on State reforms and public administration modernization. One of the indicators used to measure this process is the United Nations (UN) E-Government Development Index (EGDI), which measures the degree of advancement of the initiatives in the international context since 2001. The research incorporates three dimensions: the adequation of the telecommunication infrastructure, the human resources skills to promote and use the ICTs, and the availability of online services and content. The 2020 UN report highlighted the advancements in four countries in the region: Argentina, Brazil, Chile, and Costa Rica, which became part of the group of countries with high e-government development: "[...] In all of these countries, the progress made reflects sustained efforts to create and implement comprehensive national e-government strategies, the evolution of supportive legal frameworks, and high levels of cooperation with regional and international actors in relevant digital fields" (UN, 2020, p. 47).

3 Methodological Procedures

The methodological strategies adopted in this work stemmed from the need to develop instruments that enabled a comparative analysis of e-government in the chosen countries. Thus, the methodology was composed of three basic moments. The first moment refers to the bibliographic search and literature review. The second moment consisted of empirical research.

For such, firstly, the national digital or e-government agendas were researched. The purpose was to verify the planning of the management of policies regarding e-government. Each of the countries has a variety of regulations about the theme; however, the definition of short and long-term goals presents, to some extent, aspects that may contribute to understanding the e-government development level that is planned to be achieved. Therefore, the institutional

documents that inform the goals, projects, and priority subjects to be implemented in the matter of e-government by the respective countries were included in this classification. The institutional documents or laws and decrees in effect up to 2021 were listed. To systematize the data, a data spreadsheet with the following variables was built: document name; document type (Law or Provisional Presidential Decree - PPD; plan or guideline issued by a government agency); process start and end dates; implementation process goals.

Secondly, the federal executive branch websites and the e-services portals, transparency portals, health ministry websites, portals created about COVID-19, open data portals, and participation portals were analyzed with the purpose of investigating e-government development. The nature of the research was a qualitative and quantitative approach. Qualitative research involves an interpretative view of the world; hence, the phenomena are studied so as to understand and interpret the meanings that people give them (DENZIN; LINCOLN, 2010; FLICK, 2009). The qualitative technique of content analysis was used to study the institutional websites. This technique aims to analyze communications seeking, through systematic procedures, the description and interpretation of the messages through the creation of indicators with the purpose of inferring the conditions of emission of such messages (ALONSO et al., 2012; BARDIN, 2016). The content analysis procedure (BARDIN, 2016) consisted of collating the content available on the websites analyzed by the researchers responsible for the survey. The purpose was to find similarities and differences among the texts and contents made available on the websites. For such, the recommendations on content analysis reliability pointed out by Sampaio and Lycarião (2018, 2021) were applied. Firstly, a codebook was devised with the listed variables. Next, such variables were discussed by the researchers. Soon, they were applied for six countries. After this analysis, the researchers verified the analysis results with the purpose of making adjustments to the listed variables; hence, the analysis was performed again for all countries.

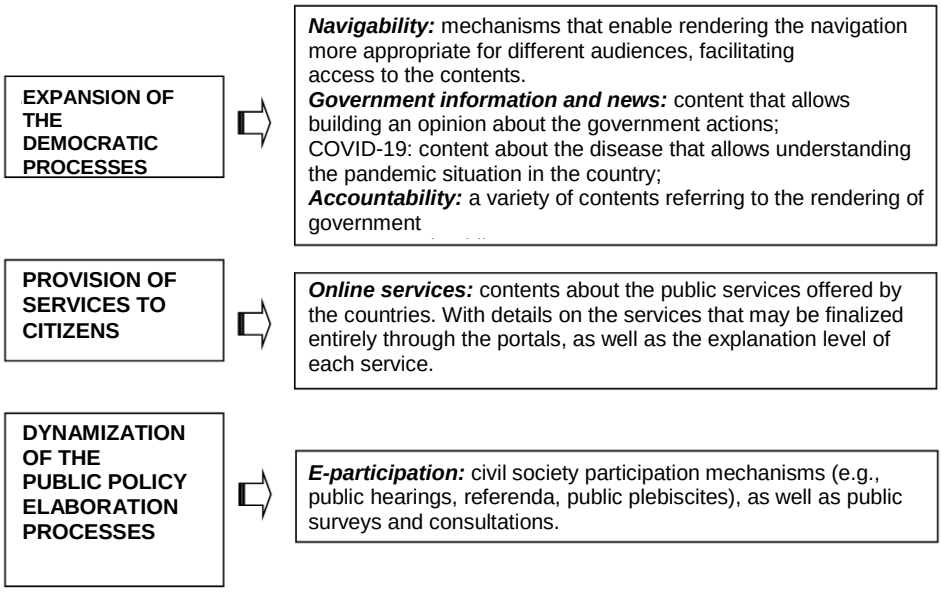
It is worth clarifying the procedure for building the employed dimensions and variables of analysis. Firstly, the e-government dimensions that would be relevant for analysis on the websites were observed, pondering the available resources and time. Also, the effort was made to relate the theoretical e-government dimensions listed to institutional website analysis studies (BRAGA, 2007; BRAGATTO, 2007; TORRES; NICOLAS, 2017). For such, from the 3 (three) dimensions presented in the description of the concept, 6 (six) analytical dimensions were built, accounting for 57 variables in total. The analysis categories in most of the variables were the following: 0, not having the item to be assessed; 1, having the item, yet it is incomplete, missing data, not updated; 2, the item is on the website and complete.

The quantitative techniques involved the use of descriptive and inferential statistics. For such, the *Pearson* coefficient of correlation (r) was estimated, and a simple linear regression was carried out to estimate the coefficient of determination (r2). Moreover, the distribution of

the used and estimated data was analyzed, with their normality being determined. For empirical validation, we sought to verify to what extent those countries with better rankings or results for the Human Development Index (HDI) and EGDI obtained similar positions or results for the e-government index estimated in this study. Evidently, there is correspondence, especially with the EGDI since it is the "same object of analysis"; however, some important differences among countries were detected. The explanation for this is that the present index incorporates some specific dimensions not analyzed by the EGDI that depict particularities in the digital government public policy instrumentalization dimensions and reflect directly on the functional aspect of the tools. In this sense, the index estimated here manages to apprehend the availability of information and how the content is organized and operationalized for citizens, thus showing empirical evidence of the status quo of how end-users receive the services in the region. Moreover, the present index incorporates a dimension related to the COVID-19 pandemic, an element not considered in the UN EGDI estimations. However, one may say that the indices are complementary and not rivals, given they are not mutually exclusive.

Next, the relationship between the theoretical e-government dimensions and the analytical dimensions is presented (FIG. 1).

Figure 1 – Relationship between theoretical e-government dimensions and analytical dimensions



Source: Authors (2021).

The list of variables analyzed in each dimension may be found in Annex 1.

4 Digital e-government agendas

As informed, institutional documents informing about e-government implementation processes were researched. The information collected and the description of the documents are presented next (FIG. 2).

Figure 2 – Digital agendas: countries, document name and type, start and end dates of the implementation

COUNTRY	DOCUMENT NAME	DOCUMENT TYPE	START	END	YEARS
Argentina	Digital Agenda for Argentina – Decree 966/2018	Law/PPD	2018	No date	No period
Bolivia	E-Government Implementation Plan	Plan	2017	2025	8 years
Brazil	Decree No. 10332/2020	Law/PPD	2020	2022	2 years
Costa Rica	Digital transformation strategy for Costa Rica for the Bicentennial	Plan	2018	2020	2 years
Colombia	Digital Government Manual: digital government implementation	Plan	2018	No date	No period
Chile	Digital Agenda Imagine Chile 2013-2020	Plan	2013	2020	7 years
El Salvador	National Digital Agenda, 2020-2030	Plan	2020	2030	10 years
Ecuador	Digital Agenda for Ecuador 2021-2022	Plan	2021	2022	1 year
Honduras	Digital Agenda for Honduras 2014-2018	Plan	2014	2018	4 years
Mexico	The National Digital Strategy and the National Development Plan	Plan	2013	2018	5 years
Panama	2020 Digital Government Governance Landmark	Plan	2020	No date	No period
Peru	Digital Agenda for the Bicentennial	Plan	2020	2021	1 year
Trinidad and Tobago	National ICT Plan for Trinidad and Tobago ICT Project 2018-2022	Plan	2018	No date	No period
Venezuela	National E-Government Plan 2014-2019	Plan	2014	2019	5 years
Paraguay	Decree No. 2145 Digital Strategic Committee for the conception and implementation of the National Plan for Information and Communications Technologies (ICT)	Law/PPD	2019	No date	No period
Uruguay	Digital Agenda 2016-2020	Plan	2016	2020	4 years
Dominican Republic	Digital Agenda 2016-2020 and Digital Agenda 2030	Plan	2016	2020	4 years
Cuba	Decree-Law No. 6/2020 and Decree No. 9/2020 about the Government Information System	Law/PPD	2017	No date	No period

Source: Authors (2021).

For two of the twenty countries, it was not possible to locate a regulation or document

about such a process: Guatemala and Nicaragua. Most of the countries have plans or guidelines that materialize in institutional documents (fifteen countries); hence, a minority has used regulations with the purpose of conveying their agendas (three countries). This data reveals that the decision-making about the definition of short and long-term goals, targets, and indicators relative to e-government is likely a public policy instrument that, indeed, is already backed by the regulations in the countries, even because most of the agendas mention legal frameworks on e-government.

Regarding the start and end dates, one may notice a group of countries with agendas initiated in 2013 and 2014 (Chile, Honduras, Mexico, and Venezuela) that were already finalized in 2018 and 2020. On the other hand, most are agendas that started in 2016, 2017, 2018, and 2019 (Uruguay, the Dominican Republic, Bolivia, Cuba, Argentina, Costa Rica, Paraguay, and Trinidad and Tobago) that are still in effect, except for those of Uruguay and the Dominican Republic (2020). And, lastly, a smaller group of countries with more recent digital agendas initiated in 2020 and 2021 (Brazil, El Salvador, Peru, Panama, and Ecuador). It should be highlighted that three countries have long-term agendas (Chile, Bolivia, and El Salvador), with most agendas having two-year to five-year periods. It should be noted that the countries that have agendas concretized in regulations do not have end years.

Next, the list of goals enumerated in the documents (FIG. 3) presents a wide variety of subjects that regard the theoretical dimensions discussed. Concerning the expansion of democratic processes, only two countries manifest the development of actions that seek access to information and data from public entities and the emphasis on open governments (Bolivia, Mexico, and Brazil). One may notice that most countries are focusing on the offering of digital public services, either implementing platforms, expanding the services offered, or, as in the case of Chile, enhancing the quality and coverage throughout the country. Regarding e-participation specifically, one may notice that it has not been a priority since there are only two mentions of this subject. Social participation and control are mentioned by Bolivia, and the enhancement of the exercise of participative socialist democracy is highlighted by Venezuela.

On the other hand, there is a series of cross-sectional goals that contribute in broad terms with the three theoretical dimensions listed and that most countries mention; it refers to the investment in infrastructure, digital literacy, and broadband implementation, as well as the fostering of the digital inclusion of society. Lastly, it is worth stressing the prominence of the promotion of legal frameworks in the case of Argentina and the implementation of the Law on Data Protection in Brazil.

Figure 3 – Digital agendas: goals per country

COUNTRY	GOALS
Argentina	Promote legal frameworks; development of infrastructure and connectivity; digital literacy; digitalized education and economy; cybersecurity
Bolivia	E-government development in the public and private sectors; facilitate access to public entity information and data; generate digital mechanisms for interaction; social participation and control
Brazil	Offer of digital public services; open data; promote interoperability and public policies based on data; implement the General Law on Data Protection; optimize the ICT infrastructure; make digital identification available to citizens
Costa Rica	Incorporate Industry 4.0 technologies; establish an intelligent digital government; offer inclusive, comprehensive, and secure digital services; improve the competitiveness of the economy and the human capital structure
Colombia	Improvement of the provision of digital services (trust and quality); strengthening of the ICT management capacities; decision-making based on the use of evidence; capacitate citizens through the consolidation of an Open State; promote the development of smart cities to solve social problems through the use of ICTs
Chile	Deliver advanced digital services with quality and coverage throughout the country; provide for a dynamic and competitive market; development of high-speed Internet networks; digital literacy programs; evolution of the regulatory framework for a transforming telecommunications market; broadband deployment in sectors with insufficient connectivity
El Salvador	Digital identity; digital governance; implement an electronic wallet (e-wallet) that integrates personal documents and the main State services in a single mobile application
Ecuador	Universalize access to an inclusive digital society; strengthen the capacity to perform transparent and efficient digital administrative processes; guarantee public services against the current emergency (COVID-19); promote the development of telecommunications
Honduras	Internet for all; digital literacy; National Broadband Development Plan; Digital access to companies, Telework
Mexico	Expansion of the optical fiber network and of a shared mobile services network; broadband Internet access through the Connected Mexico Program (satellite development); incentives for social security, inclusion, and digital skills with gender equity.
Panama	Digital identity; modernization and digitalization of the branches (judicial, legislative); signal digital business registration; digital literacy; e-medicine; expansion of the access to ICTs
Peru	Develop government digital platforms; implement a national digital services platform; expand the connectivity in the country regions; expand the presence of government platforms; digitalize public services
Trinidad and Tobago	Develop a digital government policy; creation of digital production capacities by the public sector to improve the experiences of citizens, businesspeople, and other spheres of society
Venezuela	Use of free software; simplification of procedures, increase in efficiency, and reduction in corruption; and, on the other hand, improve the exercise of the participative socialist democracy
Paraguay	Digital government; digital economy; institutional connectivity and strengthening; access, appropriation, and use of ICTs by all levels and sectors of the State and society
Uruguay	Digital inclusion; e-health; cybersecurity; smart cities
Dominican Republic	Development of the ICT infrastructure; increase Internet access; debureaucratization through digital services; greater competitiveness of the economy through ICTs
Cuba	Implement digital public services; digitalization of public records; planning of the use of ICTs for each economy sector

Source: Authors (2021).

The data from the analysis of the federal executive branch websites are presented next segmented by theoretical dimension for better visualization of the results.

5 Analysis of institutional websites

The first dimension of e-government is the "expansion of democratic processes".

Hence, the first analytical dimension refers to "navigability" (TAB. 1). As observed, the countries with the best rankings were Colombia, Uruguay, the Dominican Republic, Paraguay, Argentina, and Trinidad and Tobago. The websites for Colombia and Uruguay present a high navigability standard, missing only the variables of pages in other languages and statistics. The country with the lowest score was El Salvador, presenting only the home page link.

Table 1 – Navigability

COUNTRY	SEARCH MECHANISMS	HELP MECHANISMS	SITEMAP	PAGE IN ANOTHER	HOME PAGE	ACCESSIBILITY	NAVIGATION STATISTICS	WEBSITE INFORMATION	TOTAL
Ideal	**2**	**2**	**2**	**2**	**2**	**2**	**2**	**2**	**16**
Colombia	2	2	2	0	2	2	0	2	**12**
Uruguay	2	2	2	0	2	1	0	2	**11**
Dominican Republic	2	1	2	0	2	2	1	1	**11**
Paraguay	2	0	2	2	2	0	2	0	**10**
Argentina	2	2	0	0	2	1	0	2	**9**
Trinidad and Tobago	2	2	1	0	2	1	0	1	**9**
Brazil	2	0	2	0	1	2	0	1	**8**
Chile	2	0	0	2	2	2	0	0	**8**
Honduras	2	0	0	2	2	0	2	0	**8**
Mexico	2	0	2	0	2	2	0	0	**8**
Ecuador	2	2	0	0	2	0	0	0	**6**
Costa Rica	2	0	1	0	1	0	0	1	**5**
Guatemala	2	0	0	0	2	0	0	1	**5**
Nicaragua	2	1	0	0	2	0	0	0	**5**
Peru	2	0	0	0	2	0	0	1	**5**
Panama	0	1	0	0	2	0	0	1	**4**
Cuba	2	0	0	2	0	0	0	0	**4**
Bolivia	1	0	0	0	1	0	1	0	**3**
Venezuela	0	0	0	0	2	0	0	1	**3**
El Salvador	0	0	0	0	2	0	0	0	**2**

Source: Authors (2021)

Also, in the first theoretical e-government dimension of the "expansion of democratic processes", the analytical dimension of "government information and news" was analyzed (TAB. 2).

Table 2 – Government information and news

COUNTRY	POLITICAL SYSTEM	STATE MAP INFORMATION	CONTACTS OF THE POSITION OCCUPANTS	ECONOMY	EDUCATION	CULTURE	SOCIAL SECURITY	TOURISM	INFRASTRUCTURE	ENVIRONMENT	FOREIGN RELATIONS	TOTAL
Ideal	2	2	2	2	2	2	2	2	2	2	2	22
Ecuador	0	2	2	2	2	2	2	2	2	2	2	20
Brazil	0	2	2	2	2	1	1	2	2	2	2	18
Guatemala	0	0	2	2	2	2	2	2	2	2	2	18
Mexico	0	2	0	2	2	2	2	2	2	2	2	18
Uruguay	1	2	2	2	2	2	1	2	1	2	1	18
Colombia	0	2	0	2	2	1	1	0	1	1	1	11
Dominican Republic	2	1	0	1	1	1	1	1	1	1	1	11
Costa Rica	1	1	1	1	2	0	1	0	2	1	0	10
Chile	0	0	0	0	2	2	2	0	0	2	2	10
Peru	0	2	0	1	1	1	1	1	1	1	1	10
Trinidad and Tobago	2	1	1	1	1	1	0	1	1	1	0	10
Cuba	2	1	1	1	1	0	0	0	0	1	1	8
Venezuela	0	1	0	1	1	0	1	1	0	0	2	7
Argentina	2	2	2	0	0	0	0	0	0	0	0	6
Honduras	0	0	0	1	1	1	0	1	1	0	0	5
Panama	0	1	0	1	1	0	0	1	0	0	0	4
Paraguay	0	2	2	0	0	0	0	0	0	0	0	4
Bolivia	0	2	1	0	0	0	0	0	0	0	0	3
Nicaragua	0	2	0	0	0	0	0	0	0	0	0	2
El Salvador	0	0	0	0	0	0	0	0	0	0	0	0

Source: Authors (2021).

The countries that present more specific content on the public policy areas and details about the political system of the country were Ecuador, Brazil, Guatemala, Mexico, and Uruguay. Ecuador is the most complete, given that it presents information and details on sectoral public policies. El Salvador is the country that does not present any information about the areas; this occurs because such information is on the specific websites of the ministries. This also occurs in the cases of Nicaragua and Bolivia.

Also, the "COVID-19" analytical dimension of this research is in the first theoretical e-government dimension of the "expansion of democratic processes" (TAB. 3).

Table 3 – COVID-19

COUNTRY	COVID-19	INFORMATION ON CARE	GOVERNMENT MEASURES	EPIDEMIOLOGICAL DATA	DISAGGREGATED EPIDEMIOLOGICAL DATA	BED OCCUPATION RATE DATA	VACCINATION DATA	COVID-19 BUDGET DATA	APPLICATION	TOTAL
Ideal	2	2	2	2	2	2	2	2	2	18
Uruguay	2	2	2	2	2	2	2	2	2	18
Brazil	2	2	2	2	2	2	2	2	1	17
Colombia	2	2	2	2	2	1	2	1	2	16
Argentina	0	2	2	2	2	2	2	0	2	14
Chile	2	2	2	2	2	2	2	0	0	14
Peru	1	1	2	2	2	2	2	2	0	14
Mexico	2	1	2	2	2	2	2	0	0	13
Paraguay	0	1	1	2	2	2	2	2	1	13
Guatemala	0	2	2	2	2	2	2	0	0	12
Ecuador	2	2	2	1	1	0	2	0	0	10
Trinidad and Tobago	2	2	1	2	0	1	1	1	0	10
Costa Rica	2	2	2	1	1	0	0	1	0	9
El Salvador	2	2	1	2	2	0	0	0	0	9
Honduras	2	1	2	2	2	0	0	0	0	9
Panama	0	1	1	1	1	0	1	1	1	7
Venezuela	1	2	1	2	1	0	0	0	0	7
Dominican Republic	0	1	0	2	1	1	1	1	0	7
Cuba	1	1	1	2	1	0	0	0	0	6
Bolivia	0	2	0	2	1	0	0	0	0	5
Nicaragua	0	0	0	1	0	0	0	0	0	1

Source: Authors (2021).

As observed, the countries that presented more researched items were Uruguay, Brazil, and Colombia[5]. Both Uruguay and Brazil presented complete and timely data on COVID-19. However, few countries developed specific applications about the disease. Most of the countries present information on simple epidemiological data such as numbers of cases and deaths and incidence rates of the disease. Similarly, another relevant piece of information found in most countries was about vaccination, specifically data on approved, distributed, and administered vaccines.

The analytical dimension of "Accountability" was analyzed in the fifth theoretical dimension (TAB. 4). Brazil is the only country that fully meets the following six variables: having an open data website; having an open data catalog; adhering to the open data requirements; having a transparency portal; having a link to the ombudsman's office; having a link to the information service electronic system. Brazil is followed by Mexico, which only fails to have an Ombudsman's Office. Finally, Cuba, Venezuela, and El Salvador do not present most variables. In the case of Nicaragua, it does not present any of the variables in this dimension related to *accountability*, so it still has much to improve in this dimension.

Table 4 – Accountability

COUNTRY	OPEN DATA WEBSITE	OPEN DATA CATALOG	ADHERENCE TO THE OPEN DATA REQUIREMENTS	TRANSPARENCY PORTAL	ELECTRONIC SYSTEM FOR THE	OMBUDSMAN SERVICE	TOTAL
Ideal	**2**	**2**	**2**	**2**	**2**	**2**	**12**
Brazil	2	2	2	2	2	2	**12**
Mexico	2	2	2	2	2	0	**10**
Argentina	2	2	2	0	2	0	**8**
Colombia	2	1	2	1	1	1	**8**
Chile	2	2	2	2	0	0	**8**
Ecuador	2	2	2	0	2	0	**8**
Uruguay	2	2	2	1	0	1	**8**
Panama	2	2	2	0	0	1	**7**
Dominican Republic	2	1	2	1	0	1	**7**
Bolivia	2	2	2	0	0	0	**6**
Guatemala	2	2	2	0	0	0	**6**
Honduras	2	0	2	2	0	0	**6**
Peru	2	0	2	2	0	0	**6**
Trinidad and Tobago	2	1	2	0	0	1	**6**
Paraguay	2	0	2	2	0	0	**6**
Costa Rica	1	0	1	2	0	0	**4**
El Salvador	0	0	0	2	0	0	**2**
Venezuela	1	0	0	0	0	0	**1**
Cuba	0	0	0	0	0	1	**1**
Nicaragua	0	0	0	0	0	0	**0**

Source: Authors (2021).

The second theoretical e-government dimension is the "provision of services to citizens". Hence, the analytical dimension refers to "online services" (TAB. 5). It was verified that Brazil, Colombia, and Uruguay were the countries that developed mechanisms for citizens

[5] It should be clarified that, at this point, the websites of the ministries of health were also used for the research, as well as the platforms created about COVID-19.

to access online services. Brazil presents detailed information on the type of services and complete information on the waiting time, necessary documents, and online service cost. It even presents simple statistics on the total number of procedures carried out, total costs, user list, and documents generated in total.

Table 5 – Online services

COUNTRY	ACCESS TO RECORDS WITHOUT REGISTRATION	USER ACCOUNT REGISTRATION	USER MANUAL	IMMEDIATE DELIVERY OF INFORMATION: INSTANT ONLINE SERVICE	BUREAUCRATIC DELIVERY: START OF PROCEDURES AND SERVICES VIA THE INTERNET	BUREAUCRATIC DELIVERY: COMPLETE OPERATION OF SERVICES VIA THE INTERNET	SERVICE INDICATORS	SERVICE ASSESSMENT	SERVICE EXPLANATION LEVEL	APPLICATIONS
Ideal	**2**	**2**	**2**	**2**	**2**	**2**	**2**	**2**	**2**	**2**
Brazil	2	2	2	0	2	2	2	2	2	2
Colombia	2	2	1	2	2	2	1	1	2	2
Uruguay	2	2	2	1	2	2	1	1	2	2
Ecuador	0	2	2	2	2	2	1	0	2	1
Argentina	0	2	2	0	2	2	2	0	2	0
Chile	2	2	0	2	2	1	0	0	2	0
Paraguay	2	2	0	0	2	1	0	2	1	1
Trinidad and Tobago	2	2	1	1	1	0	0	0	1	1
Honduras	2	2	0	0	2	1	0	0	1	0
Mexico	2	2	0	0	2	1	0	0	1	0
Panama	1	2	0	0	2	1	0	0	1	1
Dominican Republic	2	0	1	1	1	1	0	0	1	0
Costa Rica	2	0	0	0	2	1	0	0	1	0
Nicaragua	1	2	0	0	1	0	0	0	1	0
Peru	2	0	0	0	1	0	0	0	1	0
Venezuela	1	0	0	0	1	1	0	0	0	1
Cuba	1	0	0	0	1	0	0	0	1	0
Bolivia	0	0	0	0	0	0	0	0	2	0
El Salvador	0	0	0	0	0	0	0	0	0	0
Guatemala	0	0	0	0	0	0	0	0	0	0

Source: Authors (2021).

Relative to the "e-participation" dimension, the countries presented the worst performance (TAB. 6)[6]. This may basically be explained by the lack of e-participation mechanisms such as online public consultations and participatory forums, in addition to the little promotion of such mechanisms on government portals. A common trait that all States in the sample present is the presence in social networks; except for Guatemala, Argentina, and Nicaragua, all country governments interact at least via Facebook or Twitter. The Mexican case is the most prominent, with a wide variety of consultations and participation mechanisms carried out together with think tanks and public innovation laboratories such as LabCDMX, also boosted by open government agendas and partnerships with the OGP. In the Brazilian case particularly, a country that once promoted electronic participation mechanisms with emphasis, it was made evident that there is no interface with the participation website on the federal government website.

[6] Besides the federal executive branch websites, alternative websites that have only participation as their purpose were researched; however, only Brazil and Argentina have websites with this function: https://www.gov.br/participamaisbrasil/sobre; https://consultapublica.argentina.gob.ar/

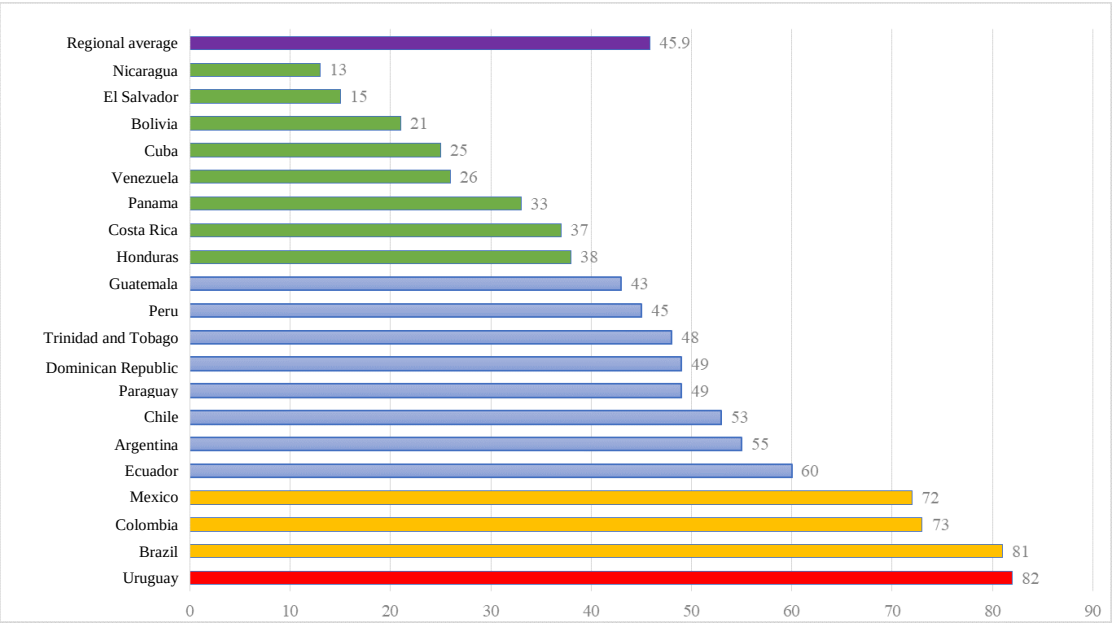
Table 6 – E-participation

COUNTRY	INFORMATION ON CIVIL SOCIETY PARTICIPATION MECHANISMS	PUBLIC CONSULTATIONS	SURVEYS	PARTICIPATORY FORUMS	ELECTRONIC PETITIONS	GOOD PRACTICES BANK	SOCIAL NETWORKS	TOTAL
Ideal	**2**	**2**	**2**	**2**	**2**	**2**	**2**	**14**
Mexico	**2**	**2**	**2**	**2**	**2**	**2**	2	**14**
Uruguay	**2**	**1**	**0**	**2**	**1**	**2**	1	**9**
Colombia	**2**	**1**	**2**	**1**	**0**	**0**	2	**8**
Brazil	**2**	**2**	**2**	**0**	**0**	**0**	2	**8**
Argentina	**2**	**2**	**0**	**2**	**0**	**0**	0	**6**
Peru	**1**	**0**	**0**	**1**	**1**	**0**	2	**5**
Dominican Republic	**1**	**1**	**1**	**0**	**0**	**0**	2	**5**
Venezuela	**1**	**1**	**0**	**0**	**0**	**0**	2	**4**
Paraguay	**0**	**0**	**2**	**0**	**0**	**0**	2	**4**
Costa Rica	**0**	**0**	**1**	**0**	**0**	**0**	2	**3**
Panama	**0**	**1**	**0**	**0**	**0**	**0**	2	**3**
Trinidad and Tobago	**0**	**0**	**0**	**0**	**0**	**1**	2	**3**
Bolivia	**0**	**0**	**0**	**0**	**0**	**0**	2	**2**
Chile	**0**	**0**	**0**	**0**	**0**	**0**	2	**2**
El Salvador	**0**	**0**	**0**	**0**	**0**	**0**	2	**2**
Ecuador	**0**	**0**	**0**	**0**	**0**	**0**	2	**2**
Guatemala	**2**	**0**	**0**	**0**	**0**	**0**	0	**2**
Honduras	**0**	**0**	**0**	**0**	**0**	**0**	2	**2**
Cuba	**0**	**0**	**0**	**0**	**0**	**0**	2	**2**
Nicaragua	**0**	**0**	**0**	**0**	**0**	**0**	0	**0**

Source: Authors (2021).

Lastly, the countries were classified according to a general e-government index as Great (102-82), Good (81-61), Regular (60-41), and Bad (40 or less). Only Uruguay is at the "Great" level. Brazil, Colombia, and Mexico are at the "Good" level. Ecuador, Argentina, Chile, Paraguay, the Dominican Republic, Trinidad and Tobago, Peru, and Guatemala are at the "Regular" level. Honduras, Costa Rica, Panama, Venezuela, Cuba, Bolivia, El Salvador, and Nicaragua are at the "Bad" level (CHART 1). Also, it is worth stressing that the average of the countries was 45.9, considered a low classification.

Chart 1 – E-government index estimated in the research



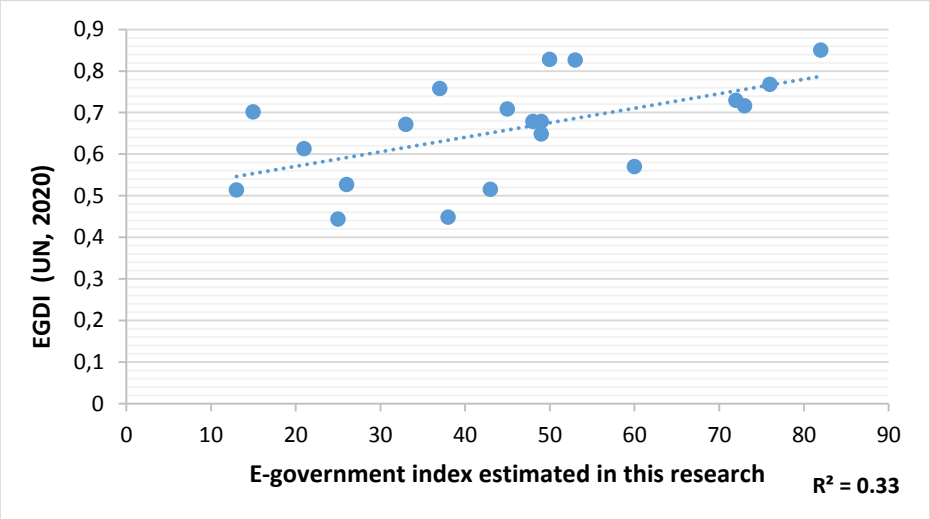
Source: Authors (2021).

Lastly, the analysis of the Pearson coefficient of correlation and the simple linear regression follows.

Chart 2 presents the estimation of the simple linear regression of the EGDI for 2020 published by the UN and the website-based e-government index estimated in this research. The estimation of the Pearson coefficient of correlation (r = 0.57) shows a moderate positive relationship between both variables, while the estimated coefficient of determination (r2) was 0.33. In other words, one may say that the index of this research is compatible in good measure with the UN estimation, and approximately one-third of the cases of e-government initiatives is explained similarly by the model.

The divergences between the indices may be explained by the COVID-19 pandemic, a period when several countries expedited their digital agendas. Moreover, other factors not observed in this study but considered in the UN EGDI, such as the ICT infrastructure and other human capital conditioners, may explain the result. An example of this is the case of Panama and Costa Rica, countries that had significant advancements in their technological structures and human capital indices. It is clear that the estimations presented in this research are not of a causal nature and may be limited to some extent by the sample size employed.

Chart 2 –Linear correlation between the EGDI and the e-government index estimated in this research



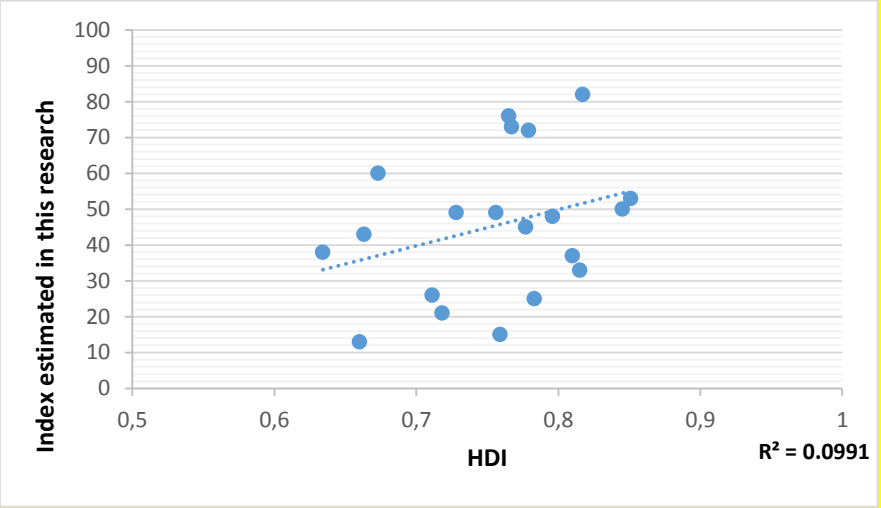
Source: Authors (2021) with data from UN (2020).

Chart 3 presents the estimation of the simple linear regression of the estimated website-based e-government index and the HDI published by the UN in 2019. The estimation of the Pearson coefficient of correlation (r = 0.314) shows a weak positive relationship between both variables, while the estimated coefficient of determination (r2) was 0.0991. This means that there is not sufficient evidence to relate the HDI levels of the analyzed countries to their estimated e-government levels. In addition, the coefficient of determination suggests little

explanatory power of the independent variable over the regressed one.

In good measure, this may be a Latin American particularity since the literature generally points to a positive correlation between the HDI and the e-government level. One may infer from the evidence that this relationship is not necessarily true, and this may be observed empirically in the case of countries such as Cuba, Nicaragua, Panama, and Costa Rica, the HDIs of which are moderate-high yet with far less-developed e-governments.

Chart 3 – Linear correlation between the e-government index estimated in this research and the HDI



Source: Authors (2021) with data from UN (2020).

6 Final considerations

We aimed to conduct a comparative study on e-government in twenty Latin American countries. For such, the digital agendas of the countries were analyzed, as well as three dimensions that constitute e-government: expansion of democratic processes, provision of services to citizens, and dynamization of public policy elaboration processes. Through the qualitative technique of content analysis, a series of variables were investigated in each of these dimensions.

It is worth bringing up two limitations that stem from the methodological proposal undertaken in the study. The first refers to the choice to analyze more than one case – e-government in twenty Latin American countries –, which tends to limit the deepening of relevant aspects concerning the relationship between guidelines and rules issued by governments and the e-government implementation processes. In broad terms, the guidelines establish competencies, functionalities, obligations, infrastructure, and investments to be allocated by the governments. Examples of these regulations are those referring to open government, digital governance, and ICT infrastructure, among other relevant subjects. However, the analysis of the digital short and long-term implementation agendas was chosen as

a path to mitigate this deficiency.

It was noticed that the countries with better-ranked e-government indices present more robust digital agendas and goals that aim to consolidate processes that were already initiated; for this reason, they seek the expansion of the ICT infrastructure and digital services and the modernization of the States. Such is the case of Uruguay, which reflects in the researched document a national e-government strategy with a high degree of maturity reflected in the rich diversification of its components; to some extent, the country advances in the construction of the so-called "digital welfare state" (PEDERSEN; WILKINSON, 2018). The policies designed in the last agenda present a different form of facing the gap, focusing on the social dimensions that exist beyond the simple access to ICTs. An example of multidimensional policy implemented is the "Ibirapitá" Plan, intended to promote digital inclusion (with the delivery of devices and digital technical capacitation) of retirees and senior citizens in a situation of economic vulnerability.

The international evidence shows that countries with high e-government maturity degrees present the best e-participation indicators and, consequently, e-democracy (KRISHNAN; TEO; LIM, 2013; FREEMAN; QUIRKE, 2013). In this sense, it is important to underscore that, in the Uruguayan case, clear incorporation of e-participation items in the 2016-2020 Agenda and Digital Government Plan is noticed. This process was denominated by Landinelli and Rivoir (2018) as the equation of the "ICT + open government" combination, characterized by online public consultation mechanisms, more considerable data openness and availability, citizen demand observatories, and participatory budgets. Lastly, one may highlight as a democratic innovation the creation of a 2020 "Digital Citizenship" agenda, a policy with broad participation of society and international cooperation with the United Nations Educational, Scientific, and Cultural Organization (UNESCO). Among the lines of action, digital inclusion, democratic culture, and cultural capital stand out.

The second concerns the fact that analyses stemming from the study of institutional websites present an e-government measurement perspective that brings relevant data, as presented throughout the analysis of results; however, data regarding the reception and assessment of the services, mechanisms, and initiatives would have to come from studies focused on the demand, i.e., the citizens.

Finally, it was verified that only a few Latin American countries have a more consolidated e-government development: standing out in the region, only Uruguay, which consolidated in 2017 its inclusion in the D7, the group of most digitalized countries in the world. Consequently, problems from initial stages, as is the case of the so-called "digital gap", entered the "decline" phase according to the typology by Secchi (2014). Followed by Brazil, Colombia, and Mexico. Although it ranked second according to the index, Brazil presents a value quite close to that of Uruguay (81 points). The country has been implementing public

policies on e-government for over two decades. One of the digital agenda items, the optimization of the ICT infrastructure, is being debated; in September 2021, the Brazilian National Telecommunications Agency (Anatel) approved an advertisement for bids of the 5G auction, which seeks to develop faster, more cost-effective, and safer mobile Internet in the country. Despite these advances in the country, it should be stressed that, according to the Regional Center for Studies on the Development of the Information Society (Cetic.br), connected to the Brazilian Internet Steering Committee (CGI.br), although Internet access has increased and more users have sought to access public services, in 2020, the access inequalities were still perpetuated, as the upper classes, those with higher levels of education, and the younger citizens present the most access. Ultimately, the main access barrier refers to the high price of the connection (fixed).

And, lastly, it is highlighted that the vast majority of the analyzed countries are at a low e-government level. As mentioned, several factors affect the implementation process, the ICT development level, the availability of human and financial resources, and the infrastructure. In addition, it should be highlighted that other dimensions influence any public policy implementation process precisely related to state capacities, such as the allocation of servants with refined technical knowledge and management ability. Lastly, another relevant aspect regards the interruption of projects and programs by governments, resulting from changes in the occupants of executive positions. Hence, as a future research agenda, it could be interesting to inquire about these aspects in Latin American Countries.

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ANNEX 1

ELECTRONIC GOVERNMENT DIMENSIONS	
EXPANSION OF DEMOCRATIC PROCESSES	
1. NAVIGABILITY	
Search mechanisms	Special link that allows searching for information
Help mechanism	Chat with government mail available to assist users with consultations, a "virtual assistant"
Sitemap	An index or ordered list of the government portal structure
Page in another language	A translation tool, e.g., English, Portuguese, an aboriginal tongue, or other languages that allow translating the government portal
Visible link back to the main page	Type of logo composed of letters or an image; the user may navigate but, if they wish to go back to the start, they just need to click on the image and go back to the portal home page
Accessibility	The accessibility allows for better visualization of the texts, images, etc. , e.g., increasing the font size, decreasing the print, high contrast
Navigation statistics	Indicator that compiles the number of users who accessed the portal in search for data
Website information	Information about the platforms, technologies, and information updates
2. GOVERNMENT INFORMATION AND NEWS	
Political system characteristics	Information that describes the political system and its operation, at least generically
State map information	"Organogram" of the State, at least at the Federal/Executive level
Contacts of the position occupants	Contact information for senior officials: email address, phone number, address, etc.
Information and news: economy	Information present with updated economic indicators
Information and news: education	Information present related to the educational scope
Information and news: culture	Information present related to the cultural scope
Information and news: social security	Information present related to the social security sphere
Information and news: tourism	Information present related to the tourism scope

Information and news: infrastructure	Information present related to infrastructure development
Information and news: environment	Information present related to the environmental scope
Information and news: foreign relations	Information present related to the Foreign Policy
Government news	Information present directly related to the government
3. COVID-19	
COVID-19 WEBSITE	Website/portal that makes available information on COVID-19.
Information on Prevention and Care	Information on COVID-19 prevention and care measures
Government measures	Actions undertaken by the Executive Branch in the fight against COVID-19
Epidemiological data	Data on cases, deaths, incidence rates
Disaggregated epidemiological data per state/province	Disaggregated data per state/province on cases, deaths, incidence rates
Bed occupation rate data	Data on the occupation of infirmary and Intensive Care Unit beds
Vaccination data	Data on vaccines approved, distributed, and administered
Data on the budget applied in the fight against COVID-19	Budget applied in the fight against COVID-19, disaggregated by investment type
COVID-19 application	Application developed for monitoring, fighting against, and providing transparency on COVID-19
4. ACCOUNTABILITY	
Open data website	Website/link that makes available public data from government areas in a systematized (database) and open format
Link to the open data website	Website/link (although not a website or platform)
Open data catalog	List of databases
Adherence to the open data requirements	Five health databases were analyzed, and adherence to the eight open data principles was verified: [2] High: eight (8) criteria; [1] Average: four (4); [0] Low: three (3) or fewer criteria. Open data principles: 1. The data must be complete: public data must not be subject to privacy or other limitations. They must also be stored electronically. 2. The data must be primary: Availability of the primary source, without processing and added forms. 3. The data must be timely; to preserve their value. 4. The data must be accessible: the availability must be the broadest possible for users and various ends. 5. The data must be processable: They must be reasonably structured to allow their automation by various tools. 6. Indiscriminate access: Availability to any user, without the need to register. 7. The data format must not be proprietary: The data must be available in a format no one has exclusive control over. 8. The data must be free of licenses; They must not be

	subject to copyright, patents, or secret regulations. Reasonable privacy, security, without restrictions, may be applied by the government or other entities (NASER; CONCHA, 2011, p. 14).
TRANSPARENCY PORTAL	Website/link that makes available information on the use of public money (tickets, salaries, biddings, budget, and public expenditure and revenue, among others)
Information Service Electronic System	Website/link that allows requests for public information
Ombudsman service	Website/link that allows manifestations, suggestions, compliments, requests, complaints, and reports
PROVISION OF SERVICES TO CITIZENS	
5. ONLINE SERVICES	
Access without registration	Access to the system through official documents (Identity Document, Social Security No., Fiscal key, etc.)
User account registration	It is necessary to register a personal account with a username and access key to access the system
User manual	Guidelines about the procedures and use of the platform/website for user knowledge
Immediate delivery of information: instant online service	Online chat or assistance service with reduced functionalities (fast information on procedures)
Bureaucratic delivery of information: start of procedures and services via the Internet	Option to carry out procedures at any time, from any device with Internet access, without needing to travel to the public agency at first. However, to finalize the procedure, it will be necessary to travel to the responsible agency.
Bureaucratic delivery of information: complete operation of services via the Internet	Option to carry out procedures at any time, from any device with Internet access, without needing to travel to the public agency at first. Online finalization of the procedures
Service indicators	List of statistical data on the number of procedures available remotely, procedures initiated and finalized, No. of users, documents generated, revenue raised with the procedures
Service assessment	Possibility of the user issuing an opinion/feedback about the service/procedures carried out.
Service explanation level	Explanatory level/degree of information of each service: [0] low level: explanation about the type of service, need for a request to receive more knowledge/information; [1] middle level: explanation about the type of service, who may use it, and steps to carry it out; [2] high level: detailed information on the type of service, steps for carrying it out, obtainment time, and space for questions and doubts

Service applications	Public service applications
What application?	Insert the application if it has been developed
DYNAMIZATION OF PUBLIC POLICY ELABORATION PROCESSES	
6. PARTICIPATION	
Information on civil society participation mechanisms	Information related to social participation instances
Public consultations	Links and references to public consultation mechanisms
Surveys	Public opinion surveying and gathering mechanisms
Participatory forums	Mechanisms to debate and publicize proposals by citizens or government initiatives
Electronic petitions	Mechanisms that allow claiming a government action
Good practices bank (submission of suggestions)	Submission of suggestions and government actions
Social networks	Does it have social networks?
What social networks	List of the government social networks

Source: Authors (2021).