E-Government Practices in South American Countries: Echoing a Global Trend or Really Improving Governance? The Experiences of Colombia, Chile, and Brazil

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E-government understood as the use of information and communication technologies (ICT) by public agencies to elicit transparency and accessibility has appeared as a fast-spreading policy choice in governments across the world (Foley and Alfonso 2009; Meijer and Thaens 2009) that are looking for instruments to reinforce open government actions.[1] Developing countries have not been apart from this trend and have started to adopt different technology-based actions attempting to increase transparency and public access to government information and public data (Nawafleh et al. 2012). This process has taken place certainly in response to global technological changes and spillovers, but also in response to a sort of isomorphism trends. Yet, since these practices originated in developed countries (McDermott 2010), their implementation still faces important challenges in countries with weaker institutional frameworks and governance structures (Janssen 2012; Meijer and Thaens 2009).

Thus, considering that this policy transfer is taking place rapidly, it is necessary to explore the process through which e-government has become so important in the public agenda of countries such as those in Latin America. Like many others,

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[1] We adopt the OECD definition of open government, cited by Gavelin et al. (2009, p. 8), as "the transparency of government actions, the accessibility to government services and information and the responsiveness of government to new ideas, demands, and needs."

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this is a policy choice that is conducted, oftentimes, without significant evidence of its potential effects, as well as in response to idealistic views or symbolic imagery about its benefits. In fact, considering that the countries in this region have shown an unimpressive performance in the matter of citizen participation and government disclosure (Scartascini et al. 2010), it makes sense to make a review of the process of adoption and adaptation of e-government policies in Latin America. In order to do so, we focus on three South American countries with different economies, populations, and institutions which have recently undertook a particular set of open government practices with the common goal of augmenting transparency, citizen participation, and eventually, government legitimacy.

The main research questions of this work are: What is the focus and the strategy in the main e-government practices that central governments have adopted in these three countries? What are the differences, similarities, and particularities of each country's approach? Is it possible to claim that there has been an isomorphism process from the experiences of developed countries models? Finally, how does the degree of evolution in practices in each country relate to the e-government maturity model presented by Layne and Lee (2001)?

To answer those questions, in the first section we present a literature review of the elements that have characterized the adoption of technology-based open-government policies in developing countries. Then, in the second section, we offer a brief description of the methodology we followed to collect data regarding policies in the three analyzed countries. In the third section, we explore policies at the national level and in the fourth section we explore in more detail the adoption of such policies in two particular cases of public organizations in each country. We finish by providing some comparative elements for discussion in the final section.

1   Literature Review

E-government practices, as the use of ICT in government, have been said to increase transparency and accountability (Bass and Multon 2010; Janssen et al. 2012; Chun et al. 2010), encourage citizen participation and collaboration (Harrison et al. 2012; Robinson et al. 2010), improve effectiveness and efficiency (Feller et al. 2011; Foley and Alfonso 2009; Welch and Pandey 2006), and advance the relationship between governments and the population (Janssen et al. 2012), among other effects. Other authors have aimed to explore the factors that explain their adoption (Meijer and Thaens 2009), as well as their impact (Harrison et al. 2012), which has not necessarily always been found positive (Coglianese 2009; Feller et al. 2011).

However, there is even less evidence as to how this process is occurring in developing countries or whether the claimed positive effects identified in other cases are also taking place here. Thus, it appears relevant to analyze the traits of this process in developing countries, according to the global emulation of policies that has propelled the adoption of those practices worldwide. This is a process that might

be taking place either without an evidence-based decision process, or without an analysis of their adaptability and impact (Janssen et al. 2012; Nawafleh et al. 2012). Latin American countries are not the exception to this trend of policy learning/ isomorphism and have started rapidly in recent years to implement practices to increase transparency through new technologies (Criado 2012).

This process of widespread adoption of such practices has become a matter of analysis in the empirical literature showing, so far, mixed results. A group of authors has illustrated the manifold benefits that arise from improving citizen access to government procedures and official data through technologies and other open access actions. Scholars from different countries have concluded that it brings greater legitimacy and recognition for the actions of governments (Macadar et al. 2012), has a strong potential to change the nature of government itself (Feller et al. 2011) and increases inclusion (Peres and Suarez 2012). It seems that e-government policies help to serve purposes beyond the traditional goals of increase organizational effectiveness or citizen access to the government. In this way, such practices can be desirable for developing countries that usually require creative responses to wicked problems and face stringent trade-offs between what should be done and what can be really enforced or implemented.

On the other hand, another bunch of authors has cautioned about the effects of excessive openness on government actions (Coglianese 2009), and the limitations that the actual implementation can bring in terms of institutional capacity (Rose 2005), human competencies, and skills (Krumova 2012; Prieto et al. 2012) or simply the resistance to the adoption of a whole new strategy of adoption of online civil services by public officials (Savoldelli et al. 2012). Yet, most of these studies are not necessarily empirical. An assessment of the actual effects of e-government practices is still pending. This shows that most countries embark in these processes of policy adoption without being completely aware of the potential negative effects or limitations that they will face down the road.

In spite of the absence of abundant literature regarding this topic in the region, some studies have focused on the adoption of such practices in Latin American countries, showing different results. Tapia and Maldonado (2009) explored the policy approach of the Venezuelan government remarking that it has been mainly state centered, as opposed to other comparable countries where the private sector has had a more visible participation. Prieto et al. (2012) analyze the Colombian case, describing the path of its development and portraying some of the limitations it has shown so far. One interesting element of this article is that they describe how they undertook an ample benchmark process in which they reviewed the policies of several countries in order to identify best practices, which might illustrate a classic case of policy transfer. Gomez et al. (2012) analyzed the adoption of online services by the Mexican government. In their review they argued that international visibility was an important factor for this country to undertake some open government practices. Macadar et al. (2012) developed a case study at the subnational level in Brazil, showing how the process of regional adoption follows the national one and how collaboration plays a primary goal on ensuring appropriate implementation.

In conclusion, the literature review indicates that further literature illustrating the empirical effects of the adoption of e-government tactics through the use of technologies and digital tools is still missing. Like Criado (2012) illustrated, it is evident that a rapid process of policy transfer is taking place in this policy domain. It appears that governments all around the world are more exposed to highly visible international rankings and comparisons, and thus feel more urged or are pushed to make hasty adoptions of policies by copying other countries' processes. In this way, analyzing the similarities of three countries in a similar geographic region, but with particular cultural traits and development processes, can illustrate whether there exist elements that evidence similar adoption paths in governments in neighboring areas.

2   Method

In this work, we focused our analysis on actual e-government strategies intended to enhance transparency and citizen participation in central-government processes through new technologies in South America. We aim to explore actions at the national level in order to understand what kind of strategies are followed in such countries in order to increase citizen access through ICTs. In order to do so, we accessed the official websites of national agencies or open-government programs in Colombia, Brazil, and Chile. We rely on official documents and Internet descriptions in order to gather information about the practices of those national administrations. Such revision and the review of some normative information regarding open government allowed us to describe the actual policies that each government is currently pursuing.

In the second section, we aimed to identify similar key organizations (mission, size, activities) in the national governments of Colombia, Brazil, and Chile that have designed policies oriented towards increasing transparency and broader access to public information, as well as citizen participation in government activities and processes through new technologies. To do so, we have chosen two different public organizations in each country. In order to ensure that we have a pair of agencies suitable for cross-country comparison, we aimed to identify two cases that are characterized by strong citizen interaction and high levels of visibility due to their role. Thus, in accordance with such criteria, we decided to focus on one entity involved with tax revenue, and a second one related to private sector regulation.

We recognize that such an approach can produce some limitations in terms of the kind of conclusions that we achieve through the review of practices; however, we think that the cross-country comparison will allow us to understand better particular patterns and trends that have been followed by similar nations with different traits. The fact that this is a recent trend among the governments of developing countries can help us to detect particular events that might have enhanced or hindered such processes in less-developed countries. Identifying such elements is useful to improve the design and implementation of such policies as well as the policy learning across countries.

3 Open-Government Policies, Citizen Involvement and New Technologies at the National/Federal Level

In this section we aim to answer the questions: What is the focus and the strategy in the main open-government practices that central governments have adopted in these three countries? Is there a national agency or department in charge of open-government activities? In general we see that this bunch of South American countries have initiated already comprehensive policies to increase citizen access and disclosure through technology. We will review the experiences, at the national/federal level, of Colombia, Brazil, and Chile before moving to two case studies that we have chosen in order to analyze the adoption of such policies at the organizational level.

Colombia's National Policy

The last two governments of Colombia have pursued a more direct strategy toward expanding the use of ICT to increase citizen participation and accountability. It has been very active at the *de jure* level; it has already regulated in manifold ways the use of digital tools for mass information. Recently, it has become more active in following a strategy to increase the utilization of such technologies at different levels. In this regard, one might identify two main stages in the implementation of e-government policy. In a first stage, the initial actions included the issue of two laws and two policy documents by the early 2000s. One of those policy documents, the CONPES 3072/2000, established the fundamentals of a "Connectivity Agenda," through which the government started a path to expand the use of ICT in government procedures. Then, as Prieto et al. (2012) show, the government issued the Presidential Directive No. 02, which set the ground for a succeeding wave of actions that have defined a more concrete strategy during the last years. Those two documents appear more specific in the government actions towards increasing transparency and accessibility through e-government.

Another policy document in 2010 (Documento CONPES 3650/201) structured more clearly an online government plan, highlighting the characteristics of the two portals that now constitute the main e-government platform: www.gobiernoenlinea. gov.co and www.contratos.gov.co. More recently, the Decree 2693 of 2012 established the broad outlines of the government online strategy, defining as head of the strategy the recently reformed Ministry of ICT. Since then, it is evident that this ministry has encouraged other public organizations to introduce open-government actions.

In this way, this ministry designed the "Gobierno En Linea" program, which, according to its website, is aimed to promote citizen participation, transparency, cooperation of state agencies, and increase the country's competitiveness. The strategy was also to be implemented by all public organizations at the national level, but it also started as a new program with in-house capacity. It has a staff of 60 employees divided into five different units, each of them in charge of a different

side of the open government strategy. The program showed an important increase in its budget allocation in 2012, showing the government support for the adoption of such strategies.

Furthermore, this approach has already shown some advancement towards increasing the use of technologies for citizen interaction. One clear benefit is that the gobiernoenlinea.gov.co portal unified, for the first time in the country, the access to information procedures and services from several agencies. As a result, now users can access a single platform to perform a wide array of procedures, including services for citizens (e.g., permits and licenses, ID, public utilities), for businesses (exports and imports permits, enterprise register), and public servants (reference letters, public employment, contracting, and public procurement etc.) among others. Another interesting project is the educational website vive.gobiernoenlinea.gov.co which emphasizes a series of procedures that can help Colombians to save time in public paperwork through educational strategies.

On the other hand, in terms of open data policies, the government developed the portal www.datos.gov.co with the purpose of gathering in one single place all the data and statistical information published by Colombian public agencies. Similarly, it has developed a complementary portal www.aplicaciones.gov.co which concentrates 64 third-party applications that are useful for use of public information. Although both portals are in beta (not definitive) version they have already become a source of greater government disclosure.

Finally, there is one interesting case of a website intended to increase the participation in government. The website www.urnadecristal.gov.co is the portal for the state to increase and enhance accountability through allowing citizens to complain, have a say about government policies and/or make suggestions regarding particular services. In the website, citizens can easily publish comments and interact with the organizations and their public officials. It also allows contact between citizens through different social networks and encourages their participation in government procedures. Although so far there are no measures of how effective is such strategy in generating more effective participation, it seems evident that Colombian nationals now have more ample tools to participate or at least be heard by government organizations thanks to the greater use of information technologies and digital tools.

How is this strategy working at the organizational level of Colombia's central government? The analysis of the websites of 16 ministries and other six main agencies at the central level of Colombia's government reveals that still there is a lot of heterogeneity in the adoption of e-government strategies. Although some of these agencies show their information in a friendly and accessible manner to users, most of them have evident deficiencies that still hinder citizens' access and transparency. It is very frequent to notice in those pages outdated information, inactive links, and/or old-fashioned platforms and services. Similarly, it is noticeable that most pages do not portray clearly the platforms for user participation, something that could hamper access and user participation on the site.

Likewise, there is no uniformity regarding the official names and labels of similar public services in different organizations. This makes it evident that a more comprehensive approach is still needed. Just to mention one of the flaws, in most

organizations' pages some links were disabled, outdated, or connected to other web-sites whose content is damaged or outdated. Nonetheless, one remarkable fact is that almost all the websites of those central level organizations have direct links with the portal gobiernoenlinea.gov.co.

Brazil's National Policy

E-government in Brazil is a federal government program. The executive committee of e-government (created by Decreto de 18 de Outubro de 2000) regulates actions towards making government more open to citizens through ICT. The whole process started in the 2000s with the creation of a so-called Interministerial Working Group aiming to examine and to propose policies, and guidelines to allow new forms of electronic interaction with the citizen. Nowadays, the executive committee is under the supervision of the ministry of planning and has several participants from other ministries. According to the executive committee website (http://www.governoeletronico.gov.br/o-gov.br/principios), the main aims of the committee are: to promote citizenship and digital inclusion, to encourage the use of free software, to employ knowledge management as a means to articulate e-government and public policies, to optimize resources, and to integrate actions with other levels of government (regional and local). The Brazilian e-government structure has the executive committee, which is a technical committee in charge of conducting and controlling open-government projects, along with the Secretariat of Logistic and Information Technology.

As of this moment, the Brazilian government has several projects for improving citizens' access and transparency:

- Accessibility: The citizens have access to software and documents that help them to build websites in order to interact with government web portals
- Broadband/Info via: A program intended to expand high-speed Internet coverage in order to facilitate the access to government websites and services.
- Open data: Publication of easy-to-use government procedures aiming to make them more available and understandable to the citizens. This aims to improve transparency, participation, and the possibility of generating knowledge through collaborative scientific investigations.
- Electronic purchases system: A series of systems developed for fulfilling and monitoring electronic purchases. It includes a suppliers' database and information about bidding, procurement, and information about goods, services, transportation tickets, and allowances.
- Interinstitutional agreements: In order to improve transparency and social control of the resources transferred to states and municipalities, the Brazilian government created the federal government inter-institutional portal.
- Domain management: The executive committee regulates the creation of ".gov" domains in order to keep it safe of fraud and bad use
- Government to government: It is an attempt to make the whole network of government systems interconnected and functional

- Digital inclusion: It is an ambitious public policy aiming to take digital inclusion to every citizen in the country. It encompasses initiatives such as broadband to schools, computer to everyone (aiming to reduce the price of laptops), and so on.
- Free software: It is a strategy for generating knowledge and intelligence in this domain in order to reduce costs by expanding the competition among software producers.

This indicates that the Brazilian government has started the whole process of adoption of advanced open-government practices through technology, although most of them apparently are still developing and increasing access to citizens.

Chile's National Policy

Chile is a highly centralized state. This trait can also be found in the manner in which the general e-government agenda has unfolded. Starting in 2008, the Chilean government enacted the Law 20.285, and since then a group of regulations has been put in place to implement the ability of citizens to access public information.[2] Public agencies have to abide by these regulations, making access to public data easier for all citizens. Similar to Brazil's and Colombia's, in the Chilean approach to e-government initiatives are linked to two main concepts: open access to public information and ICT to increase public participation in government activities. In the first domain, the milestone is the enactment of the Freedom of Access to Public Information Law (20.285) in 2008. This law opened public agencies to public scrutiny, allowing citizens to access information regarding topics such as salaries and contractors. It also defined fines for public managers who were unwilling to provide information considered as public. The FOI (freedom of access) law made a significant change in defining standards for public officials in terms of what has to be available on line, and how citizens could acquire public data. The 20.285 law was conceived under the idea of "active transparency." The government has to make information available regardless of the intention by citizens to require it.

The second legal initiative aligned with open government initiatives is the associations and participation in public management law (20.500) in 2010. This initiative is aimed at creating the conditions for public participation in public management and "fostering a culture of co-responsibility, promoting and providing orientation in the involvement of citizens in improving efficiency and effectiveness of public policies" (www.gobiernoabierto.cl). In 2011, the Chilean government became part of the open-government partnership (OGP). Since then, it has been working on several projects to meet the OGP standards in five areas: improving public services, increasing public integrity, improving the efficiency of public expenditure, creating

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[2] Several regulations have been in place by the Ministry of Finance, the Transparency Council, among others, to improve the system in terms of standards, procedures and applicability. The web site http://www.gobiernotransparente.cl/asistente/documentos.php provides a list of these regulations.

safer communities, and increasing the institutional responsibility.[3] In 2013, the Chilean government issued a report presenting improvements for each aforementioned area. Most of the information regarding this participation is available on the website http://www.gobiernoabierto.cl/, where citizens can have the chance to access public data, share ideas to improve public agencies, and make queries, among other tools.

In spite of these legal and governmental initiatives, the real impact among citizens is still limited. For instance, the Transparency Council created by the Law 20.285, presented a study where only 12 % of the sample knows that a specific institution exists to allow freedom of access to public data.[4] In normative terms, citizens are interested in these issues, but the real and potential impact in terms of accountability is still limited. So far, Chile appears to be in a similar stage than the Brazilian counterpart, most programs are still in a preliminary phase.

4   Country Cases of Electronic Government Practices at the Agency Level

In order to explore the organizational adoption of such national guidelines we decided to analyze the cases of two specific organizations in each of the three countries. To do so, we have chosen two different public organizations in each country. Thus, in order to ensure that we have a duo of agencies suitable for cross-country comparison, we aimed to identify two cases that are characterized by strong citizen interaction and high levels of visibility due to their role. Thus, according to such criteria, we decided to focus on one entity involved with tax revenue, and a second one related to private sector regulation.

Accordingly, the first case that we have chosen for comparison is the tax collection agency of each country. We selected such agencies as good cases for analysis considering the frequent and strong interactions they perform with citizens. By analyzing their e-government strategies, we aimed to identify how such organizations have improved control, collection, and transparency by making easier the participation of citizens and taxpayers into their processes through digital tools. On the other hand, we have chosen the aviation regulation authorities/agencies, which are now in the spotlight for their role in passenger safety and the performance of airline companies and are subject to strong demands of disclosure and transparency by the private actors they regulate. Thus, in the following section we explore the Colombian, Brazilian, and Chilean cases of e-government adoption at the tax revenue and the civil authority agencies.

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[3] http://www.opengovpartnership.org/countries/chile.

[4] http://www.consejotransparencia.cl/chile-es-mejor-pais-de-lo-que-los-chilenos-creen/consejo/2013-03-14/113208.html.

Colombian Cases

Tax and Customs Office (DIAN)

The website of the Tax and Customs Office of Colombia (DIAN—Spanish acronym) allows 35 procedures and services regarding to taxes, 40 procedures related to customs clearance, three for users abroad, and five regarding exchange controls. In terms of information systems for the user, the citizen can access five different microsites to make direct queries regarding tax issues. Each of these links is properly designed and guides the user through specific steps to achieve the desired result. However, despite the importance of these "microsites," these are not in a visible location on the main page of the entity, which makes access to these services is very challenging.

With respect to direct citizen services, there are 36 different procedures that can be queried and placed online (classified by the type of procedure: tax, customs, and exchange control). They may also perform procedures regarding imports and exports. Similarly, the users can download forms and obtain information regarding sales and auctions. The website also provides access to the main taxes software, the MUISCA system, which provides a user platform for citizens to make comments and get timely response by the body. The website of this organization states that users can consult the DIAN through ten different channels including telephone, electronic mail, chat, and virtual forums.

It can be generally argued that this organization has a developing platform to increase citizen participation and transparency. The portal hosts on its homepage the most important services and consultation that can be reached by citizens. The DIAN has strong involvement in social networks. Accessed on 27 March2013, the social network accounts show that the DIAN has 7,529 followers on Facebook, 17,372 followers on Twitter (2,911 tweets), and 65,090 video views on its YouTube channel. Finally, we note that most links are updated (with some exceptions), it is possible to view basic information in English (mission, vision, etc.) and there is information that guides the user in terms of accessories and browsers required for proper operation of the site.

Civil Aviation Authority of Colombia (Aerocivil)

The website of the Civil Aviation Authority of Colombia shows complete information about airlines and passenger procedures that can be downloaded in PDF files, Word, Excel, etc. Similarly, within the online information services, there are information about airfares, itineraries, airport information, special permits, and information related to passengers, pilots, and airlines. The website also portrays information for suppliers, entities state officials, and airmen, but the links appear to be disabled (accessed March 2013). With respect to aviation authority, it is remarkable that it provides information regarding the licensing process of aeronautical personnel, key

statistics, and everything related to the surveillance, control, and investigation of accidentally.

As for the information relevant to pilots, the Aeronautica Civil's website offers information regarding air navigation services (i.e., committee incident investigation and prevention, meteorology, navigation plan open, and other procedures). It is remarkable that the wide supply of aeronautical information services through its website: aeronautical information circulars, checklists, and one application showing all the airports in Colombia (on a map, with basic airport data) and information on the status of volcanic activity.

In relation to public participation, it is possible to surf the directory of all officials in the agency (airports and dependencies), FAQs (classified in 19 groups and a total of 123 questions), the duties and rights of the passenger, and a web portal for children, which has basic information on aviation, and the main functions of the entity. The Aerocivil has still a low presence in social networks; its Facebook account has 1,459 likes, while its Twitter has 1,089 followers and 328 tweets as of March 2013, and has 62 subscribers to YouTube. It also offers access to other systems of participation (chat and forum).

Brazilian Cases

The Secretariat of Federal Revenue

According to the Secretaria da Receita Federal (Secretariat of Federal Revenue—SRF) website, it is responsible for the administration of the whole set of taxes that are under the federal government jurisdiction. These taxes include social security contributions, taxes on foreign trade operations, and a significant share of the country's social contributions. The organization is structured as in Fig. 1 and it has a central office in Brasilia and several decentralized units scattered throughout the country.

In terms of e-government in this tax organization, the Secretariat provides access to the general people through several channels, namely E-CAC Portal, personal attendance, attendance by partnership, phone, and the Internet. Citizens to the services provided have created all of these channels in order to improve access.

According to data available at the SRF website, the website was accessed seven million times by people trying to do an assorted set of activities regarding tax, payments, information, and so on.[5] Figure 2 shows how people accessed SRF. The huge majority of the access was done through E-CAC, which is a service in which citizens are able to solve several problems regarding to their fiscal situation, such as download registrations of payments done, to obtain a certificate of debt discharge, and several other related services. According to the figures, from all the different channels, citizens search access to the information mainly through the E-CAC portal (apart from other internet channels).

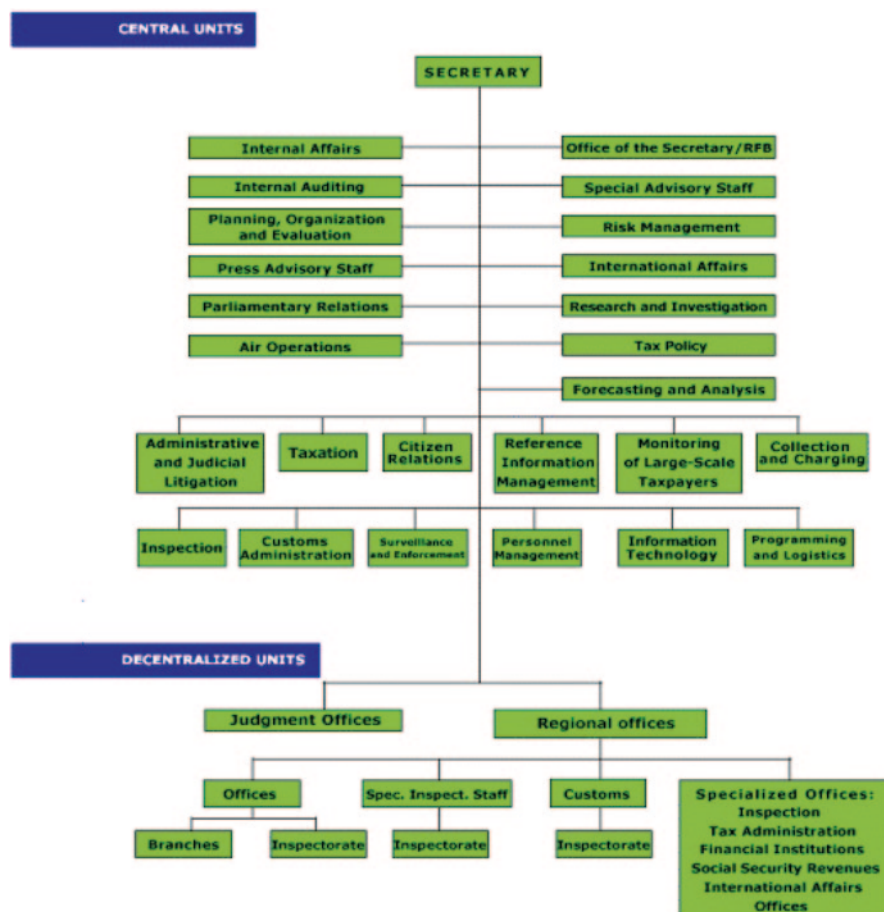[5] Specific data regarding unique accesses, requests or page views are not available.

Fig. 1 Administrative structure of the secretariat of federal revenue. (Source: http://www.receita.fazenda.gov.br/principal/Ingles/Estrutura/Introducing.htm)

Figure 2 indicates the sort of services citizens' access through E-CAC. Around one million people do access, as they need to know their fiscal situation, e.g., whether there is any debt associated with their CPF (physical personal registration). This information is required if the person wants to open a bank account, contract loans and mortgage, or even achieve a professional position. Around half a million people access the system to download a copy of the annual declaration of revenue as a whole or parts of it. It works as an official document to attend requirements of proof about personal wealth. A little less than half million people access the system as they need a receipt for some payment made to the SRF. Other people access the system because they need information about how to fill up the annual declaration of revenue, and figure out their pension fiscal situation.

According to information provided by SRF officers, the secretariat is improving e-government in order to speed up the process of attending people and for improv-
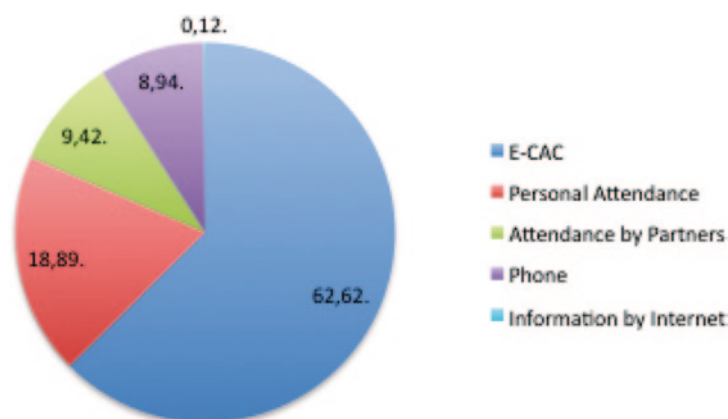
Fig. 2 Access for 2012 Brazilian federal revenue. (Source: Secretariat of Federal Revenue website (www.receita.fazenda.gov.br))

ing the security of information provided. Nowadays, the process of submitting the annual declaration of revenue, which must be done by the last day of April, is done through the Internet and no paper is produced in the process. It is also a process over which citizens have total control over the time and place they are willing to do it. About 10 years ago, some people needed to hire an accountant to help them filling up the information required. Now, the system provides information about all the data needed and it has a mechanism that advises whether information is wrong or missing.

Besides, the most popular service the SRF has, which involves around 26 million annual declarations, the Secretariat also has services to facilitate the connection with companies and with the government, whose service is to transfer money that is deducted from payrolls monthly. In order to improve quality and security of such services, the SRF has also created several systems, which are available online, which seems to be the case of importation taxes and conditions, payment of tax and debts, certification of payments, and declarations as well. As a matter of fact in 2012, the access to the E-CAC regarding "fiscal situations" reached a number of 965,551, while "last declaration records" was 537,119 and "receipt of payment" 412,560. At the end of the list, 363,329 hits were related to "messages" and 3,249,329 to "pension situation."

National Agency of Civil Aviation (ANAC)

ANAC is a regulatory agency in charge of regulating and supervising the activities carried out by aerial transportation companies. The regulatory activities performed by ANAC are both technical and economical. Technical regulation refers to the operational and security aspects of the industry and involves putting to practice norms and rules for ensuring that the companies are working according to severe norms

of security in the whole service delivery chain. Economic regulation refers to the monitoring of the market in order to ensure efficiency and economy, trying to avoid practices that would make some sort of prejudice to the service users.

For ensuring open government, ANAC publishes reports and everybody can have access to them at the agency website labeled as transparency (www.anac.gov. br). On this website, one can access information about the agency, which varies from activities related to the agency employees to public hearings in which anyone has a say on the definition of rules and regulation that will shape the functioning of the service delivery process. Below, some of those channels of communication are presented.

- Personal and services bulletin: Published since 2006, this report publishes information regarding human resource management in all aspects, such as training, allowances, promotion, and tenders for contracting personnel.
- Regulatory performance reports: Published since 2008 (some of them in English), these reports aim to provide transparency to the activities performed by the agency, which includes technical and economic regulation activities, relationship with users, and figures of performance.
- Minutes of directorate meetings: Published since 2006, these reports aim to publish the subjects dealt with in every single meeting involving the directorates.
- Public Hearings: Carried out since 2007, public hearing is a means by which the agency has to provide opportunities to society to opine on regulations to be set down and on the quality of the services provided, for instance, the increase in the number of flights, and airports renovations. The public hearing works starts with the publication of a summons in a large circulation newspaper and through the media. Those interested are then informed how the participation is going to happen and a form is made available to them place suggestions, which are analyzed afterwards and a response is provided to every person that contributed.

Electronic government process in ANAC happens to the extent that the society is instigated to collaborate making suggestions on how services are to be delivered and on the construction of regulatory mechanisms. The agency also adopts a very transparent approach in the extent that a great deal of its meetings and activities are made public through reports published at its website.

Chilean Cases

Internal Revenue Service (Servicio de Impuestos Internos)

After presenting the general framework of e-government in Chile, two elements will be presented to address how two public agencies implement e-government. This effort is intended to show that general regulations have created an important level of homogeneity in this area of the Chilean public sector. Figure 3 is a screenshot of the information provided by the "Servicio de Impuestos Internos" (SII) fol-

Fig. 3 Chile: Internal revenue service

lowing the standards and criteria set up by the Transparency Council and other entities involved in implementing active transparency in the Chilean public sector.

This information is complemented by the SII in its web site, with information regarding taxes, but most important, a remarkable system to access almost all services required by this institution such as income taxes, property taxes, and so on. According to the Law 20.500, public agencies have to clarify mechanism to ease citizen participation. In the case of the SII, four actions are in place: the annual public hearing, advisory council, channel of participation, and a system to administer information complaints.[6] As it was already mentioned, public participation initiatives are limited to advisory or information channels, where citizen can only get information and little influence can exert in terms of the decision-making process.

General Directorate of Civil Aviation[7]

Figure 4 provides the same screenshot of the website the agency is obligated to keep to abide by the notion of active transparency. A few elements can be pointed out as different with those present in Fig. 4, showing that the Chilean government has taken concrete steps to make information homogeneous within the public service.

In terms of citizens' participation, the only mechanism that the agency declares in its web site is an annual public hearing. It is only an activity to provide information in terms of the actions carried out in a given year by the DGAC, without any other reference to public participation. However, in an internal regulation enacted in 2013, four citizen participation mechanisms are formalized: citizen consultation,

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[6] http://www.sii.gob.cl/transparencia/participacion_ciud.html

[7] http://www.dgac.gob.cl/transparencia/

Fig. 4 Chile: General Directorate of Civil Aviation

civil society council, access to relevant information, and public hearings. So far, only information regarding the last mechanism is provided in the website.

5   Comparative Insights and Elements for Discussion

From the analysis, we can conclude that, thanks to starting e-government programs, the three South American countries have been (at least according to the issued policies) engaged into making government more transparent and easy o work with, as they have been making available new channels through which information can flow to the general public. We also observe that the amount of services has increased and people have access to greater sources of public data. The extant data does not allow us to offer a more clear account of the level and the kind of interactions generated through the different channels. Those actions are consistent with the initial paths of governments in other countries that started allowing access to some public information and timidly providing some web-based services. In general terms, apparently there is still no evidence of local adaptations or in-house developments that diverge from the previous practices of developed countries.

At the national level, most policies seem to be at a primary stage in the three analyzed countries. It is evident that all of them have already e-government programs designed, which are now in primary phases of implementation. Each of them has also now fresh organizations, with certain administrative capacity, which are in charge of ambitious agendas inside the national administrations. In general terms, it is remarkable how these three South American countries have adopted this topic as an important item of the public policy agenda. E-government appears to be an important priority during the recent governments of these developing countries.

Table 1 Cross-country case analysis

Agency	Mechanism	Brazil	Chile	Colombia
Tax collection agency	Public hearing			
	Making queries	✓	✓	✓
	Self-service	✓	✓	✓
	Consultation	✓	✓	✓
	Little influence on decision making	✓		
Civil aviation Authority	Public hearing	✓	✓	
	Communication channels	✓	✓	
	Transparency	✓	✓	✓
	Basic procedures			✓

By means of the Layne and Lee model (2001) we might be able to identify some differences at both the national and the agency level (Table 1). Whereas all countries appear to be already in the second stage of Layne and Lee maturity model, it seems that Chile and Brazil are moving at a faster pace towards a stage of vertical integration (meaning local systems linked to higher-level systems). In the Colombian case the national agenda is developing new spaces to generate such integration but most of the tools are still far from allowing high levels of interaction and self-service by the user. At the agency level, the two agencies in both the Chilean and Brazilian cases appear to be more interactive and have evolved faster towards greater complexity than their Colombian counterparts.

Yet, it seems that according to our definition these countries seem to be following the initial stages that more advanced countries have followed before (creating presence, then transaction, vertical and horizontal integration), and in this way some form of isomorphism might be identified. According to the practices that we have reviewed, apparently there is some form of isomorphism among these three countries, something that authors like Criado (2012) have already remarked about the Latin American process. Even so, such a process is expectable since internationally most countries have appeared to follow the actions of pioneer countries creating convergence (Criado 2012, p. 78). However, open government is a concept that goes beyond the mere adoption of technologies for increasing citizen access and transparency, and this is something that is not still completely evident in these South American countries.

Although at the national level apparently there are not significant differences among Colombia, Brazil, and Chile, some particular traits emerge at the organizational level. According to the cases, Brazil and Chile appear to be moving more rapidly towards more complex ways of interaction and integration. Whereas Colombia seemingly still needs to take some actions towards greater citizen access and effective disclosure across government at all organizational and territorial levels. Nonetheless, it is evident that in all cases the steps taken in the last years are positive. It is observable that in the three countries some of the initiatives have had the intention of making people's lives easier by also attempting to reduce red tape and undesired procedures. For instance, by offering new channels and tools for paying

taxes and accessing information and other several procedures that now can be done from home with the help of a personal computer.

These initiatives seem to be aligned with the idea of results oriented government, a trend that has been very strong in the region during the last decades and thus might help to enforce the adoption of e-government. Accordingly, these countries have adopted strategies to streamline procedures and paperwork in government actions. However, the question remains about the real impact of these actions on government effectiveness. Do these actions really encourage disclosure and citizen participation? Or are they a new component of the politicians' electoral strategies? Although those questions go beyond the scope of this exploratory work, it is evident that the Latin American governments are emulating the actions followed years before by developed countries and still need to move forward towards a more indigenous use of technologies to enhance actual citizen participation.

This is an enormous challenge in the midst of populations strongly divided by the level of access to new technology. The actions of the governments in these Latin American countries are merely beginning this process. That might be good news since they still have the opportunity to go beyond and design their own strategies to ensure the empowerment of citizens' access in highly unequal societies. According to our review of both national policies and the cases reviewed in this work, it is apparent still that few opportunities are provided to the population in these countries to actually engage in public policy formulation and decision making. True, it is positive that these countries are following an international trend, but they still need to advance to set their own paths to ensure greater openness. At the end of the day, e-government is most a matter of people and citizens connected, people being heard and allowed to participate and collaborate in the actual policy process.

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