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The challenges of institutionalising open government data: A historical perspective of Chile's OGD initiative and digital government institutions

Felipe González-Zapata & Richard Heeks

Introduction

Open government data (OGD) has been globally endorsed given its promise of reshaping existing institutions. By opening up public records, governments can be more accountable, civil society can get involved in collaborative public policy-making or service delivery, and new business opportunities can be created (Davies et al. 2013). From this viewpoint, OGD is perceived as a one-directional influence: OGD's influence on existing institutions can help unlock these benefits.

However, opening up public records implies intervening in political spaces, thus OGD policies are rooted in a certain institutional arrangement (Davies & Bawa 2012); that is, a set of formal and informal institutions that are socially constructed (Scott 2013) frame OGD initiatives and determine to what extent they may be institutionalised. These trajectories may influence how OGD is adopted by governments and civil societies, and reflect that OGD institutionalisation is a socio-political (rather than purely technical) phenomenon. Currently, cross-sectoral OGD policies are led by central agencies which need to be sufficiently empowered, well-connected and resourced in order to push those agendas forward. Without that institutional backing, OGD initiatives are at risk of becoming one-off projects rather than long-term transformative policies.

Current research on OGD focuses more on the impact and capacity-building aspects of OGD agendas rather than their institutional origin. By acknowledging this research gap, this chapter analyses how OGD – as an initiative embedded into a certain institutional arrangement – can be explained by existing political institutions and decisions, specifically those currently leading and implementing

OGD initiatives. In order to study this influence, path dependence analysis is undertaken. Past decisions and their institutionalisation create political routes (Pierson 2000): trajectories with lock-in effects that are self-reinforced by feedback which is produced by existing institutions. This effect makes it more difficult to switch to a different trajectory, thus creating a path dependence in a particular institutional context. Among the several institutional trajectories exerting an influence on OGD (such as transparency, participation and data governance, among others), the focus of this chapter is the influence of preceding digital government institutions on OGD, taking Chile as a case study. In particular, our research consists of analysing how path dependencies that originated in the development of digital government institutions may determine Chile's current OGD policy outcomes. Led by the Modernisation and Digital Government Unit of the central government, OGD in Chile sits within a weak institutional environment. This digital government unit is preceded by a long institutional trajectory of public sector modernisation and e-government institutions, which may help explain why OGD has not fully taken off in the country to date.

With an overall purpose of analysing the influence of the digital government agenda on OGD by conducting path dependence analysis, the chapter is organised as follows: the following section provides a theoretical background on institutions and OGD, and on path dependence theory. Thereafter, the research methodology is defined, followed by the findings of this research, a discussion of the findings and concluding reflections.

Research background

Digital government institutions

Incorporation of digital technologies in the public sector has a long trajectory. ICT use in the public sector has been linked to efforts to modernise public service delivery and to manage efficiently large collections of data produced by public agents (Heeks 2006b). With the rise of new public management (NPM), those interventions gave birth to e-government policies to reduce bureaucracy and expand public service delivery (Heeks 2006b, Homburg 2004, Dunleavy 2006). However, ICTs have also been used in other areas, from basic public service delivery to more democratic areas of civil life. Digital technologies have been applied to incorporate civil society into participatory and collaborative public policies (Smith et al. 2011, Lathrop & Ruma 2010), thus widening its original use in the public sector – e-government – to a digital government paradigm: ICTs as enablers of different dimensions in state–society interaction.

Increasing cross-sectoral adoption of digital government practices requires formalisation of those practices within institutions to enable long-term intervention, facilitate coordination and provide resources (Heeks 2006b, Fountain 2001). An institutional framework for digital government can be

understood as a set of regulatory (laws or decrees governing digital technologies in the public sector), normative (specific ICT-related practices in public agencies) and cultural-cognitive (rationales/discourses awarded to ICTs) institutions to frame the development and operation of ICT initiatives in the public sector (Peters 2011). Institutional frameworks for digital government reflect on providing long-term resources, capabilities and political support/legitimacy to carry out cross-sectoral projects, and help reduce the influence of sectoral/individual rationales on the role of digital technologies in the public sphere (Heeks 2006b).

Different models of digital government institutional frameworks have been established to date (OECD 2016, Barros 2015), including: a) ministries for digital government, with high political legitimacy/authority and empowerment but less independent from dominant political ideologies; b) units or projects for digital government within a ministry, often highly dependent on the ministry's leadership and thus distant from top political support; and c) agencies for digital government, politically independent with higher levels of political stability but lower capacities to enact regulatory and normative digital-related institutions.

Selecting an appropriate model may determine the success of a digital government policy. Experts suggest that an independent agency or a ministry is more politically skilled and resourced to carry out long-term digital projects (OECD 2016, Barros et al. 2015). These institutional arrangements are more likely to obtain political legitimacy and support, to develop independent, long-term budgets, and to coordinate cross-sectoral strategies for digital development. By contrast, lower-level digital units are more focused on short-term initiatives and often lack political visibility and resources to carry out complex initiatives.

OGD and digital government institutions

The relationship between OGD and digital government can be theorised based on OGD's three foundational streams: open government, open data and government data. These three streams have a varying perspective on digital technologies but all see those technologies as fundamental: open government considers ICT as an enabler for transparency, participation and collaboration; open data represents technical standards and technological means to disclose datasets; and government data incorporates digital technologies to manage and use data created by public agents (Gonzalez-Zapata & Heeks 2015). Hence, OGD is a technological intervention of an intrinsic technological nature.

This aforementioned technological character of OGD has led, in some cases, to interventions being driven by digital government institutions (but also influenced by transparency and data governance-related institutions). Much of the advocacy and research on OGD claims that data disclosure opens up new opportunities to 'technologise' or 'digitise' the public sector by adopting 'open data by default' or 'open data by design' policies. These approaches often

modify existing institutions by introducing: regulatory frameworks for data disclosure and management; technological platforms and standards or adoption of alternative practices to produce and manage public data; or new rationales for the role of public data in the relationship between state–society and data-intensive public policy (Gonzalez-Zapata & Heeks 2016). Thus, in all these new institutional forms there is a technological component that assumes an influence of OGD on existing digital government institutions. The influence of OGD on other institutions – such as those related to transparency and/or data governance – is also seen as important.

Other studies have made significant contribution to understanding OGD from an institutional theory perspective. Van Schalkwyk et al. (2016) study OGD under a series of variables that reflect its embeddedness in existing institutional arrangements and Styrin et al. (2017) analyse the institutional environment where OGD initiatives are implemented and acknowledge the role of these ecosystems in shaping current OGD outcomes. However, these and other studies on OGD do not pay significant attention to how these institutions have been constructed over time, nor the wider influence of digital government historical politics and political institutions on OGD.

Since OGD is embedded in existing ICT-related institutions, they may also play a significant role in determining how OGD policies are designed, implemented and operated. Hence, OGD and digital government institutions should be observed under a bi-directional relationship. Since OGD is rooted in a particular digital government institutional framework, certain institutional features may be inherited by OGD initiatives, thus constraining the disruptive character of OGD by following an existing institutional trajectory. Studying OGD under a historical institutional perspective facilitates understanding how these institutions have created paths over time that increase the likelihood that OGD will follow the same route and with similar outcomes. Consequently, our focus in this chapter is to attend to the reciprocal effect of historical digital government institutions on OGD.

Historical institutionalism and path dependency

Analysing the influence of digital government on the development of OGD involves paying attention to institutions. Institutions are universally accepted as ‘rules of the game’; ways to regulate social life by enforcing formal/informal rules and to sanction violations according to social, rational and historical patterns (Scott 2013, Pierson 2004). Institutions are identified as stable but changing entities across time, with resilience being a key feature. They move and are moved by new social structures, thus adapting to new institutional environments. OGD initiatives can also be studied under institutional theory: they are framed by a series of legal and administrative rules to regulate data disclosure (regulatory institutions); diverse administrative practices and procedures to carry out data

disclosure (normative institutions); and rationales and discourses to legitimise these initiatives (cognitive-cultural institutions) (Mahoney 2000, 2001).

Scholars have paid attention to understanding political phenomena by studying the historical formation of political institutions for a long time. By reviewing how institutions were formed in the past and how they have regulated social life through rules, practices and discourses, we can better understand how a policy is carried out or why it produces a specific impact. These concepts are foundational for historical institutionalism (HI), one of the three theoretical approaches of new institutionalism to study political and social formations through formal and informal institutions (Lowndes & Roberts 2013).

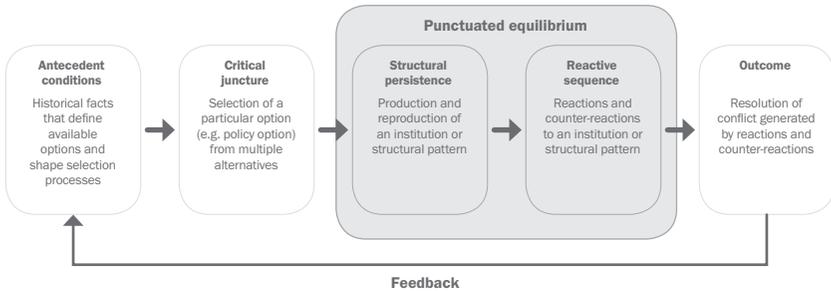
In particular, one of the ways to conduct HI research is through path dependence analysis (see Figure 1), which focuses on bringing past events and their formation sequences to light in order to understand those specific paths that are leading to observed outcomes over time. Path dependency is based on the premise introduced by Pierson (2000: 20) where ‘what happened at an earlier point of time will affect the possible outcomes of a sequence of events occurring at a later point in time’. Path dependency reflects a lock-in effect: decisions taken in the past follow a particular route in determining where and how subsequent events occur, which makes switching to other alternative routes difficult and expensive. This lock-in effect is also reinforced by the feedback that existing institutions produce as an input in these trajectories (Thelen 1999). Hence, path dependency looks at historical events and patterns that produce lock-in events; in particular critical junctures that open up policy windows to create new or modify existing institutional trajectories, and help explain how future institutions are created and sustained across time.

Path dependency helps understand how change occurs in institutions: what events have the ability to have an influence in existing institutions in order to switch institutional trajectories (Mahoney 2000). Often these events are led by agents who promote and create new meanings that open up windows for disruption in institutional trajectories (Mahoney & Thelen 2010). Overall, path dependency analysis comprises of five steps:

1. Antecedent conditions: historical events which determine available policy options and shape selection processes;
2. Critical junctures: choice of a particular policy option among other alternatives;
3. Punctuated equilibrium: process of institutional stability disrupted by new critical events. It comprises two levels:
 - a. Structural persistence: institutional production and reproduction of the selected policy;
 - b. Reactive sequences: disruptive event(s) that may change lock-in of the selected option;
4. Outcomes: extent to which an institution is adopted as a consequence of path dependence.

In our research, path dependence analysis is used as a key methodological approach since it supports a critical understanding of the historical progression of digital government policies in Chile, helping explain current OGD implementation. Path dependence analysis for OGD thus requires studying key historical events in digital government in the country and how they affect further political institutions and policies such as OGD.

Figure 1: Path dependence theory



Methodology

This qualitative research investigates the historical influence of digital government policies and institutions on the development of OGD initiatives. In particular, we take the case study of Chile, its OGD initiative and its digital government trajectory. The recent political trajectory of Chile presents a rich development of new institutions after 17 years of dictatorship in order to boost the social, political and economic development of the country.

Currently, Chile follows a presidential governance system and a bicameral congressional legislature, with a stable democracy over the past 25 years. During these years, modernisation of the state through adoption of ICTs has been a significant element of digital policies across governments, by digitalising public service delivery or providing digital infrastructure.

Among these initiatives, Chile has been implementing an OGD strategy since 2011. To date, the OGD website datos.gob.cl comprises 2000 datasets from central government and an increasing number of local councils. These elements make Chile an interesting OGD case study. This chapter also covers Chilean digital government institutions from 1990 onwards, coinciding with Chile’s return to democracy, for two reasons: first, covering the dictatorial period from 1973 to 1989 would significantly increase the amount of data to be analysed; and second, because the presence of ICTs in the Chilean public sector only began in earnest from the 1990s.

This chapter uses primary and secondary data sources. Fifty anonymous interviews with key actors involved in digital government and OGD were carried out in Chile during 2015. Interviewees were selected from five groups through the purposive sampling technique (Bryman 2008): politicians, public officials, public sector practitioners, civil society advocates and data users, and academics. While interviews represent the analytical core of this chapter, nine reports and official guidelines were used as secondary data sources to triangulate this evidence base, incorporating official views/discourses present in official documents. By transcribing all data as textual sources, these were analysed through template analysis (King 2012); by defining an initial template (list of codes derived from path dependence theory), textual sources were iteratively coded using NVivo10 to identify mis/match to the initial codes. A second and more refined template was then created with new codes developed during the first iteration, and applied again to the text until relevant findings were discovered.

Findings

Given that this chapter studies the impact of digital government institutions on OGD, we first conduct a path dependence analysis before analysing the impact of path dependence on OGD in Chile.

Path dependency of digital government institutions

This subsection follows a chronological structure according to the sequence of path dependence analysis. Three periods are identified: antecedent of digital government (1990–1994); critical junctures for digital government (1995–1999); and punctuated equilibrium (2000–2011). Finally, institutional outcomes are analysed.

Antecedent conditions for digital government (1990–1994)

With Chile back in democracy, the centre-left ruling coalition ‘Concertacion’ – led by President Patricio Aylwin – concentrated efforts on creating the conditions for stable and peaceful transition to a democratic system. Indeed, scholars agree that the key programmatic effort of Concertacion was to generate conditions for long-term governability (Boeninger 1997; Garreton 1995). Aylwin’s government visualised that the Chilean state had to be modernised to enter into the global market, and awarded an operational role to digital technologies in those policies. Digital technologies thus became part of Concertacion’s vision but were not much implemented over this period given the priority for social and political reforms. Other areas experienced a strong penetration of ICTs, such as the educational programme ‘Enlaces’ in 1992.

However, in 1994 Chile observed one of the most severe corruption cases in the country: Codelco, the world’s largest copper producer and Chile’s main

public firm, was involved in a US\$200m corruption case, and triggered a set of major political and administrative reforms (Araya & Barria 2008). In an attempt to safeguard Chile's incipient political stability and an increasing interest in subscribing to international trade agreements with key economic powers, Concertacion developed a major modernisation policy. This modernisation agenda – and the introduction of ICTs in public sector management – would only be designed and implemented during the second Concertacion administration led by President Eduardo Frei (1995–1999).

Critical junctures for digital government (1995–1999)

The risk of compromising Chile's incipient democracy and trust from both civil society and international investors triggered major political efforts to implement modernisation reforms. Added to Codelco's case, interest in trading with key global economies required improvement of Chilean institutions. Frei quickly organised a cross-sectoral committee for modernisation and reform of the public sector (Frei 1994), which suggested a series of key policies: improvements in civil service recruitment systems, a new procurement agenda, an incentive-based public policy programme, and reform in public service delivery based on ICTs, among others. This plan led to the creation of a second committee for e-government policies, coordinated by the Ministry of Economy, which developed a report with 61 initiatives to incorporate ICTs into Chilean public administration (Comisión Presidencial TIC 1999): an e-procurement system, one-stop shops for both citizens and firms, incorporation of electronic signatures and electronic documents, interoperability and digitalisation of public services, and a governmental intranet, among others. 'The agenda had a clear emphasis on promoting ICTs for bureaucratic and economic purposes' notes a former public official who worked on digital government.

However, this initial political impetus did not materialise into a formal, long-term institutional framework to sustain those initiatives. The agenda faced severe coordination and leadership issues: the government avoided the creation of a long-term unit or agency and relied on a cross-sectoral committee, fearing that sectoral ministries would not fully adopt the agenda. Initiatives suggested by the committee were mostly pushed forward by a few empowered agents, but they lacked formal top political support to be implemented. Instead, interviewees observed that the political elite valued the powerful symbolism of the e-government agenda to transmit an image of modernity and efficiency concordant with major political programmatic priorities: 'Chile made use of ICTs to promote itself as a modern and efficient country, but there were mostly cosmetic changes rather than transformative interventions' highlights a public administration academic. Government also underestimated the institutional complexity of e-government: there was a clear absence of resources and regulatory-normative institutions to continue those initiatives over time (Ramírez-Alujas 2004). As a consequence, at the end of this period, the government intranet was the only project fully

implemented, while political support focused on developing wider ICT-related public infrastructure, such as an expansion in internet connectivity.

This period is considered to be a critical juncture since it opened up a policy window for the development of a digital government trajectory; it also determined the foundational rationales and institutional framework for future digital government initiatives. The committee's report would become the navigational chart for future governments, but with no further institutional backing (in the form of regulations and aligned objectives/practices) to institutionalise it. The lack of formal institutions may be explained by dominant views awarded by the political elite to ICTs and e-government initiatives: ICTs were perceived as enabling tools to modernise the public sector with a powerful symbolism of modernity and efficiency, but were not associated with making major transformative reforms in Chilean bureaucracy: 'The challenge for Chile was to combine economic growth with an efficient public sector. We saw in ICTs an opportunity to foster both aspects' claims a former digital government public official. As a consequence, ICTs were promoted as innovative practices but, in reality, they represented mostly cosmetic changes to traditionally-embedded practices. Nonetheless, the outcome of this committee represented a transition in the country: although weakly, ICTs were introduced in Chilean public administration and became part of the common discourse around modernisation and economic growth, thus opening up a policy window for future interventions.

Punctuated equilibrium period (2000–2011)

Punctuated equilibrium is divided into two subsections: structural persistence (2000–2006) and reactive sequence (2007–2011).

Structural persistence (2000–2006)

In 2000, Ricardo Lagos took office as President of Chile. Urged by recurrent corruption cases and a political vision that ICTs may help address their negative impact, President Lagos gave the green light to continuing the implementation of the e-government agenda set in the previous term but realised that it required major political coordination. Hence, Lagos created a specialised programme at the Ministry-level Secretariat for the Presidency (SEGPRES), which assumed the coordination of all e-government initiatives through the Reform and Modernisation of the State Programme (PRYME) (2005). Moving e-government coordination to SEGPRES provided higher levels of empowerment and political legitimacy to those initiatives: SEGPRES is known as a key political ministry, close to the presidency and with sufficient legitimacy to carry out cross-sectoral initiatives. President Lagos promulgated special decrees for e-government, though these encouraged rather than legally framed those initiatives in Chile. According to a former digital government practitioner, 'This period is known as the golden age of e-government initiatives in Chile because there was significant political support.' Several initiatives materialised: an e-procurement system,

electronic tax systems, internal communication, and institutional websites, among others. These initiatives were consistent with the discourse of modernisation and reduction in the level of corruption present during this period, and thus were backed by sufficient political coordination, resources, and a clear mandate from the presidency (Lagos 2001).

Despite this positive momentum, there was no political will to institutionalise e-government in the form of a long-term agenda or formal agency within the government. PRYME was only a project-based programme for a specified period of time (SEGPRES 2007: 3), and much of the impetus for e-government came from the president himself rather than being fully backed by other cross-sectoral ministries or the political elite. Indeed, interviewees highlight that there was significant effort to obtain maximum local and international political reward from those successful initiatives, but significantly less disposition to run them in the long-term (see case of ChileCompra in Kleine 2013: 173). Hence, despite the presence of some political support, e-government-related institutions were not fully promoted, and efforts were concentrated on obtaining immediate outcomes. Interviewees also noted that, regardless of limited progression, this institutional framework was sufficient to operate key initiatives in digital government, while the government continued to gain an international reputation for the implementation of its e-government agenda.

The structural persistence period shows the progression of e-government initiatives in Chile, and how they were backed with political support and economic resources by President Lagos to consolidate a medium-term agenda during his presidency. Albeit valued by the government, e-government initiatives lacked an appropriate formal institutional framework. Despite political support, it was not sufficient to establish PRYME as a formal agency within the government; an issue that made this trajectory vulnerable to changing rationales around e-government and digital technologies.

Reactive sequence (2007–2011)

In 2006, President Michelle Bachelet took office. During the first year of her presidency, PRYME remained at SEGPRES and continued to implement a few pending projects from the past term, such as interoperability policies. However, at the end of 2006, Bachelet decided to cancel PRYME, and transferred all e-government initiatives to a new digital development unit at the Ministry of Economy (Secretaría de Desarrollo Digital 2010). Indeed, Bachelet perceived ICTs as enablers of economic growth, and partially disregarded the previous bureaucratic rationale (one of the key pending policies from PRYME was the recommendation to institutionalise the project in the form of a unit or agency, which did not occur during Lagos' term (SEGPRES 2007)): 'It seems that Bachelet underestimated the complexity of ICTs interventions. The movement to the Ministry of Economy was a clear mistake' notes an e-government academic.

With lower political legitimacy at the Ministry of Economy, e-government

initiatives faced major political constraints during Bachelet's presidency, which affected other agencies' engagement. Interviewees agree that in the absence of the coordination legitimacy that SEGPRES had in the past, initiatives became much more complex to implement and required major political support and resources. Since these were not present during this period, e-government initiatives were reduced to a few sectoral projects.

Additionally, by awarding an economic meaning to the e-government agenda, Bachelet's government did not provide sufficient institutional resources to further expand and legitimise those initiatives. Notwithstanding this weak political foundation, the government developed a digital strategy for 2007 to 2012 (Comité de Ministros Desarrollo Digital 2007), which did correlate with a major emphasis on positive results from international e-government rankings (Heeks 2006a; United Nations 2008, 2010). However, the digital strategy was questioned by some stakeholders since it did not incorporate views from external agents such as civil society organisations or academia: 'Chile observes a systematic lack of active participation in the development of digital agendas. Besides, it seems that each government needs to reinvent the wheel. There is an evident lack of continuity in our digital strategies' (e-government academic). Critiques also focused on a lack of assessment of previous e-government efforts (such as PRYME) to plan future interventions. Interviewees highlight that e-government during this government exemplifies the nature of e-government initiatives in Chile: in the absence of formal regulatory and normative institutions, initiatives became more vulnerable to changing cultural-cognitive rationales, an issue that also revealed significant differences among sectoral ministries in ICT capacities, resources and infrastructure. Paradoxically, Chile continued to be regarded by the regional community as a leading country in digital government, thanks to key initiatives in public contracting, electronic invoicing and electronic tax declaration, among others.

In 2010, President Sebastián Piñera (centre-right) took office. Initially, e-government policies remained at the Ministry of Economy, but Piñera anticipated the complex political scenario that resulted from trying to lead those cross-sectoral initiatives from an isolated ministry. Thus, Piñera moved e-government back to SEGPRES and created the Modernisation and Digital Government Unit (MDGU). Piñera saw in MDGU an opportunity to deepen his rationale of bringing efficient practices from the private sector to public administration; one of the key reasons according to interviewees that further political and economic support was provided to the unit. MDGU also introduced an expansion from e-government practices to digital government by developing a four-year strategy based on three rationales: an efficient, citizen-centric and open government (UMGD 2011). Similar to other periods, this plan was not agreed upon with other stakeholders and did not assess previous e-government strategies. Coinciding with the global open government movement, MDGU assumed a leading role in the development of the Open

Government Partnership's (OGP) action plan by direct mandate of Piñera, who saw OGP as an opportunity to expand his regional leadership (OGP 2013): 'The President saw a good opportunity to become the Latin American Obama by supporting OGP. Added to the emphasis on efficiency, digital government was a good opportunity to promote himself in those areas' notes a former MDGU official. Chile's first action plan, similar to other countries, was concentrated on the digitisation of public services rather than participatory or collaborative initiatives, and thus helped to expand the initial rationale of efficiency through ICTs (Piñera 2012a). OGP gave major political visibility and legitimacy to MDGU (Gobierno de Chile 2012).

However, MDGU faced institutional constraints similar to those of the past. Although politically empowered, the unit did not receive any further formal institutional backing, remaining solely a project. This barrier caused MDGU's programmatic priorities to be based on maximising political reward for making visible its agenda and facilitating budget renewal, thus focusing on quick-wins rather than long-term strategies: 'Given MDGU is a project, it needs to become politically visible to gather politicians' attention. Our budget needs to be justified every year according to the results of our initiatives. There is an emphasis on short-term results' (MDGU practitioner). Besides, the weak institutional framework meant that the unit had to 'supplicate' to public agencies to convince them to engage in those initiatives, thus often reproducing existing ICTs' asymmetries: already-active agencies engaged with new initiatives, while less-resourced agencies were reluctant to participate.

Overall, the reactive sequence period shows how institutions responded to changes experienced during structural persistence. The transition to President Bachelet represents a change in the trajectory as digital government initiatives received lower levels of political support, institutional resources and funding. In this institutional framework, initiatives thus relied on sectoral efforts to overcome the lack of central political leadership. In addition, in the absence of a strong institutional framework, initiatives became vulnerable to changes in dominant political rationales and priorities, such as changes in leading agencies (for example, SEGPRES versus Ministry of Economy).

Institutional outcomes

Studying the institutional trajectory from 1990 to 2011 shows that the institutionalisation of digital government initiatives in the form of long-term, sustainable, formal and informal institutions is limited. In the absence of these institutions, digital government initiatives did not spread as initially expected but achieved a sufficient operational level to maintain the presence of ICT-related policies. Three institutional paths can be observed from this historical review:

- *Institutional path of de-institutionalisation and politicisation of ICTs:* The trajectory of digital government shows that ICT-related initiatives in the public sector have often not been backed with a strong institutional framework – in the form of regulation, long-term resources and political support – thus making them vulnerable to politicisation. Much of the disruptions seen in digital government trajectory come from direct presidential support and are subservient to other programmatic priorities such as reduction of corruption, entry into global institutions, or to project an image of modernity and efficiency. Indeed, as the evidence indicates, this institutional trajectory has significantly been shaped by the meanings different presidents have awarded to digital government across the years – from modernisation tools to enablers of economic growth. Presidents, as agents challenging existing institutional structures, had a major impact on conditioning digital government progression according to the meanings they awarded to this agenda. The influential role of presidents in defining digital government’s agendas helps understand why digital government has followed an irregular trajectory during the period of study. Also, ICTs have also been commoditised by emphasising their technicality rather than their social nature, often being (incorrectly) perceived as an easy way to solve complex problems and as a source of political reward.
- *Institutional path of demonstrating modernity and efficiency through ICTs:* Since the introduction of digital technologies has been historically linked to modernisation efforts, initiatives have been systematically linked to an increase in the efficiency of Chilean public agencies – ICTs with bureaucratic purposes. While reduction of bureaucracy had a significant impact on Chileans’ quality of life, there was no use of ICTs for democratic purposes, such as participatory and collaborative initiatives. Efforts in this area came from transparency and accountability initiatives, which did not emerge as part of any national digital government strategy.
- *Institutional path of emphasis on quick-win initiatives rather than long-term policies:* Evidence suggests a degree of short-termism by developing successive digital working plans/agendas, rather than developing and agreeing on a long-term strategy for digital government in Chile. Every government developed a brand-new strategy, but without properly assessing past experience to increase institutional learning. Thus, efforts were concentrated on developing quick-win initiatives, often reaching a sufficient operational level but lacking higher levels of appropriation and coordination with sectoral agencies.

One key question to answer is why these paths have occurred, and how they were reinforced over time. Evidence suggests that Chilean government was a ‘victim of its own success’. As the country’s digital government policies were successful and well-known to the local and international communities (United Nations 2003; 2010; 2012; Barros 2016), different administrations did not anticipate the need to improve domestic institutions in digital government. The existing format was sufficient to implement and operate these initiatives and to boost the country’s political dividends. Hence, the reputation and success of a series of policies in digital government during this period acted as institutional feedback to reinforce these paths across years. Based on this historical analysis of digital government institutions, in the following subsection we reflect on the particular way these have influenced the development of OGD in Chile.

Influence of digital government institutions on OGD

Historical overview of OGD in Chile

OGD started in Chile in 2011. With the creation of MDGU, several public technologists were recruited, including those leading ICT-enabled transparency in previous presidential terms. These technologists saw in OGD an opportunity to deepen those transparency-related policies. However, OGD also received direct political support since Piñera saw an opportunity to increase his regional leadership in policies with significant global and local attention: ‘the President gave direct support because it was important to become the first country in the region to have a national OGD website’ notes a former MDGU official.

The initial publication approach was to deploy a functional platform as soon as possible. Anticipating the complex scenario to coordinate a cross-sectoral initiative from a unit with no further political legitimacy, MDGU extracted several existing datasets from sectoral agencies’ websites without any further consultation. Once published, MDGU communicated their participation by letter to those agencies. The launch of the platform was also timed to coincide with Chile’s first OGP action plan. Although already functional, MDGU included OGD publication in this plan to give more political visibility to the initiative. Interviewees at MDGU state that this quick approach helped Chile to become the first country in the region to have an OGD website, rhetoric that was often present in several interviews with OGD practitioners. In 2012 Chile had a functional OGD website – datos.gob.cl – with around 1000 datasets from several public agencies.

The initial take-off of OGD in Chile was reinforced by a presidential directive for open government and OGD. Piñera enacted a similar directive to that of Obama in 2009, which provided significant initial political backing to the initiative (Piñera 2012b). However, interviewees questioned the extent of the directive as it encouraged rather than regulated data disclosure in the country. The directive requests public agencies to release up to five datasets of social value,

but it does not incorporate any further means of control. It does not provide any further operational structure within public agencies; OGD practitioners within sectoral agencies may be transparency or civil society participation officials, CIOs, etc. OGD life-cycles were not included, allowing public agencies to see OGD as a one-off initiative. The directive offers a minimum level of institutionalisation (unless the decree is formally derogated, OGD continues to be implemented) but it is insufficient to make it sustainable: ‘the directive was made relatively soft so we did not have to compromise public agencies in tasks they were not able to fulfil’ (former MDGU practitioner). Interviewees highlighted that this weak decree is the result of a dominant rationale to become the first regional country to have such a presidential backing for open government and OGD. A more complex directive would have required a long negotiation period with other public agencies and further political legitimacy that MDGU did not have. Indeed, interviewees stated that the dominant rhetoric to make Chile the first regional country to have such a presidential backing for open government and OGD sped up data disclosure but, at the same time, constrained its institutional framework.

During this term, MDGU did not set any policy to foster data publishing and reuse, and relied solely on the presidential directive and a technical guidance note (UMGD 2013). Besides, the directive did not incorporate any further policy to make effective use of those datasets, hence OGD became a disclosure-only initiative. The reality after its implementation was that agencies published under a minimum-effort scheme. Datasets were of poor quality and were rarely updated. Given the limited institutional framework provided to OGD, the challenge then became to re-engage with those agencies and create stable data disclosure practices. MDGU relied on its limited political legitimacy to try to ‘evangelise’ those agencies which did not continue to publish data. The rationale to convince them was that OGD would reduce bureaucratic externalities of active and passive transparency processes by giving priority to disclose most requested information in OGD formats (Gonzalez-Zapata & Heeks 2016). However, those datasets were not necessarily the ones with more social value or which helped unlock accountability and economic growth. In this process, MDGU found significant resistance from public agencies to open up their data, and it was not politically backed and resourced to develop more binding strategies. At the end of 2013 there were 1100 datasets, just 100 more than in 2011 and with insufficient quality levels.

In 2014, Michelle Bachelet took office again after four years. Contrary to past terms, MDGU remained at SEGPRES and their policies continued as during Piñera’s term, but the agency lacked the political legitimacy conferred to it in the preceding government. Similar to the previous term, MDGU did not develop any working plan or strategy for OGD in Chile and relied solely on past practices and the presidential directive. However, the change of government unveiled the weakness of the institutional framework for OGD. For instance, most sectoral

data publishers were sacked for political reasons, thus data publication cycles were broken. Given that data publishing occurred on an informal basis (datasets and update cycles were at the discretion of each sectoral agency) there was an absence of dataset updates during 2014: ‘the change of government exposes how weak the initiative was: we lost all the connection and advances made during the first two years’ (MDGU official). Besides, MDGU did not have any formal way to exert control over those sectoral agencies, using again an ‘evangelisation’ strategy based solely on their political legitimacy and good connection with sectoral data champions. In this process, MDGU organised OGD introductory sessions and training to leading sectoral data publishers; a strategy that was not followed in the previous term.

As a result of this historical trajectory, Chile presents a weak OGD initiative. The initiative has been focused mostly on data disclosure, while policies to foster reuse and data-intensive policy-making have not been incorporated to date. Evidence from data reuse comes from MDGU itself by developing three applications for public service delivery.

Chronologically, OGD shows two momentums. During Piñera’s term, the initiative achieved regional and global renown by quickly deploying an OGD platform with a high number of datasets. However, the lack of long-term policies and appropriation by public agencies meant that the initiative lost political momentum once Bachelet took office. This analysis is consistent with international OGD assessments such as the Open Data Barometer. In its 2016 edition, the Barometer showed that Chile, after leading OGD in Latin America, had one of the most dramatic drops in the ranking (from 15th to 30th), explained by lower scores in readiness and data availability (World Wide Web Foundation 2016).

Path dependency of digital government institutions on OGD

As a result of this historical trajectory, OGD has not been institutionalised in Chile to date. Evidence suggests a significant influence from digital government institutions on the ideological and operational ways in which OGD has been developed to date. While other institutional paths may be influencing OGD (indeed, transparency and data governance trajectories also have a significant and complementary role in OGD’s development) this analysis and historical review provides interesting reflections regarding the role of the digital government trajectory in the OGD institutionalisation process in Chile.

Considering the aforementioned three institutional paths emerging from digital government institutions, path dependency can be observed in OGD:

- *Institutional path of de-institutionalisation and politicisation of ICTs:* Consistent with the trajectory of digital government, OGD shows a weak institutional framework as well as an emphasis on the political benefits that the initiative may bring to the government. MDGU has developed a limited institutional

framework for OGD, mainly given its limited empowerment and limited political legitimacy within the public sector. Indeed, the directive framing OGD does not include regulatory institutions that empower MDGU to operate OGD, and encourages rather than frames its implementation. Similar to the paths observed in digital government institutions, the meanings and emphasis awarded by different presidents in each of their terms are critical in implementing OGD. While President Piñera provided political support to implement OGD as he anticipated that Chile may assume a leadership position at regional and global levels, President Bachelet partially relegated the digital government agenda and, consequently, OGD policies. Presidents have influenced OGD's institutional trajectory by providing or limiting political support and legitimacy for its adoption and appropriateness. Interviewees emphasised this politicisation to justify the quick take-off of OGD in Chile and its limited progression over time. However, this support did not empower MDGU to deepen OGD practices or to create a more robust, systemic initiative.

- *Institutional path of demonstrating modernity and efficiency through ICTs:* The politicisation of OGD may be explained by dominant rationales in MDGU to promote ICTs in the public sector. Much of the political backing from President Piñera came from introducing 'a new way of governance' based on modernity, efficiency and managerial practices from his past entrepreneurial experience, but also to distance himself from mainstream governance practices that produced much of Chilean dissatisfaction with politics. Hence, his government provided major political support for the digitisation of public services (the main outcome from MDGU in his term) as well as OGD to deepen a discourse of efficiency and ICT-based policies. This rationale was also used to encourage public agencies to engage with OGD by reducing transparency-related externalities, such as significant workloads of passive and active transparency.
- *Institutional path of emphasising quick-win initiatives rather than long-term policies:* Similar to the digital government trajectory, OGD shows a predominance of short-term initiatives to speed up its take-off instead of policies which clearly state responsibilities, roles, funding and, most importantly, long-term objectives regarding how and why public datasets should be opened up. Initial efforts were concentrated on having a functional platform with as many datasets as possible in a short time, but there was a lack of further policies to make effective use of them, or to deepen dominant rationales further than reducing bureaucracy, such as an expansion of democracy, economic growth or innovation, among others. This weak framework was reinforced by an official directive which did not incorporate any of these elements and forced public agencies to release a minimum

number of datasets as soon as possible. As a consequence, there was a limited adoption by most public agencies.

Similar to the digital government trajectory, evidence suggests that the Chilean government did not deepen its OGD policy framework given that the adopted model was sufficient for the purposes the agency outlined. Chile gained quick international reward for being the first regional country to implement an OGD initiative, as well as for having a dedicated directive with top political backing. The political benefits obtained were sufficient to sustain this operational model for OGD, acting as positive feedback that reinforced the paths outlined above. The approach undertaken by MDGU was sufficient to have a basic, operative OGD initiative, while deepening the existing institutional framework was disregarded (Gonzalez-Zapata 2016). However, during the period of OGD implementation, evidence suggests that Chile's digital government reputation was fading; the country observed how other regional countries continuously obtained positive assessments given their comprehensive approach to implementing digital government policies, as has been the case for Uruguay and Colombia (Barros 2016, United Nations 2014). Outside the period of study, the current digital government status in Chile has led the government to request a study from the OECD in order to provide a new institutional framework (OECD 2016). However, no political advances been observed in this direction to date.

Conclusion

Several institutions and institutional trajectories can influence OGD, such as those relating to transparency, data governance, digital government, and civil society participation, among others. These institutions can both facilitate and constrain OGD, thus affecting its institutionalisation process. This chapter solely addresses the influence of past decisions in digital government institutions on OGD implementation in Chile. Path dependency is observed in the rationales and regulatory institutions in digital government that determine how OGD is promoted and implemented, thus constraining its institutionalisation process in Chile to date.

Three influences of the trajectory of digital government on OGD are observed through this analysis – deinstitutionalisation and politicisation of digital initiatives, demonstrating modernity and efficiency through ICTs, and emphasis on quick-win initiatives rather than long-term policies. One key outcome shown by this research is that the institutional nature of OGD is embedded in existing, long-term institutional politics. Much of the advocacy and discourse supporting OGD speaks of the transformative power that data disclosure produces. Indeed, evidence suggests that OGD can help unlock disruptive, positive outcomes in some circumstances. However, one has to consider that OGD initiatives

themselves carry, and likely reproduce, the very institutional features they attempt to transform. While existing digital government institutional trajectories may act positively in cases where digital government initiatives are part of a robust, cross-sectoral policy framework, they may be also acting as a constraint to develop impactful and transformative OGD initiatives where those institutions are limited and vulnerable to political ideologies. The case of Chile shows how a long trajectory of short-termism and politicisation of ICT-based initiatives can be reflected in OGD and, as a consequence, has a major role in its limited institutionalisation. This case highlights the influential role that presidents have in shaping the digital government trajectory and in OGD progression. Although we do not attempt to conduct a detailed study on institutional entrepreneurs, findings do reveal that OGD's trajectory is also shaped by the meanings and leadership awarded by the top executive political level, introducing change in that trajectory by either providing or restricting political backing to this initiative.

Results of this research show the relevance of taking existing dominant institutions into account to develop successful OGD initiatives, as well as the key role that top political agents play in the way OGD is developed. Certainly, existing institutions may condition how initiatives are planned and implemented, but OGD is not necessarily condemned to fully replicate those institutional trajectories. Indeed, the challenge to institutionalise OGD is to develop long-term policies that clearly state objectives, resources and responsibilities and, at the same time, evaluate dominant institutions and determine what the best approach is to overcome any constraining environmental conditions. Given that OGD faces institutional constraints which may reduce its transformative power, it should be understood under an institutional change perspective: how OGD initiatives may help gradually change the institutions they belong to, and the role that key actors play in such a dynamic. Path dependency observes that institutions recurrently face change and stability across time, and adapt themselves to those new environmental conditions. Future research may look at studying OGD from a perspective of gradual institutional change, as well as understanding the interaction of dominant institutional logics from OGD-related institutions. Additionally, further insights may be obtained from studying the role of other institutional entrepreneurs in introducing change at tactical or operational levels. Institutional theory is thus shown to be a suitable lens to understand the politics of OGD and to help develop more realistic and appropriate OGD interventions.

Acknowledgements

This research is part of Felipe González-Zapata's doctoral studies at the Centre for Development Informatics, University of Manchester, UK. The research is funded by the National Commission for Scientific and Technological Research (CONICYT) of the Government of Chile – Becas Chile.

About the authors

FELIPE GONZALEZ-ZAPATA holds a PhD in Development Policy and Management from the Centre for Development Informatics, University of Manchester, UK. He has a background in computer science and information systems. He has been a researcher and consultant on OGD since 2012. His doctoral research examined the relationships between politics, power and OGD in Chile. E-mail: felipegonza@gmail.com

RICHARD HEEKS is Chair in Development Informatics at the Global Development Institute, University of Manchester, UK; and Director of the Centre for Development Informatics. He has published several books on government, ICT and development, including *Reinventing Government in the Information Age* (1999), *Implementing and Managing eGovernment* (2006), and *Information and Communication Technology for Development* (2017). His research interests are data-intensive development, e-resilience and e-sustainability, digital development, and the digital economy in developing countries.

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