Building institutional trust through e-government trustworthiness cues

Matthew L. Smith

Information Systems and Innovation Group, Department of Management, London School of Economics and Political Science, London, UK and International Development Research Centre, Ottawa, Canada

Abstract

Purpose – Most theory and empirical research on the impact of e-government on citizens’ trust in government remains at the macro-level and misses out on the complexities of the interaction between e-services and citizens’ trust in government. The purpose of this paper is to provide a deeper understanding of this complexity.

Design/methodology/approach – The research strategy is a comparative case study of two e-services in Chile: a tax administration and an e-procurement system. Data were collected from a variety of users (citizens and business owners) and public sector employees in the Araucania Region in Chile.

Findings – Within e-services, the most easily perceived and influential trustworthiness cues are those outcomes that directly impact the citizen. These cues shape citizens’ resultant interpretations of and trust in the public sector agency. Furthermore, the direction of this influence is mediated by individuals’ particular circumstances and value positions. Key to understanding the process of building and destroying trust is the identification of the value conflicts that can emerge from e-service implementations and how they align with citizens’ values.

Research limitations/implications – The research conclusions are potentially an artefact of the financial nature of the e-service transactions and the cultural uniqueness of Chileans.

Originality/value – The paper presents an original integrated conception of trust and institutional trust as well as a comparative analysis of citizens’ perceptions and interpretations of “successful” e-services.

Keywords Trust, Government, Public sector organizations, Chile, Communication technologies

Paper type Research paper

Introduction

Over the last 30 years, survey studies have shown a worrisome steady trend of declining trust in institutions of democratic governance (Nye et al., 1997). This form of trust is considered critical for social and economic progress for a variety of reasons. Without trust, citizens may withdraw voluntary compliance of governmental demands and regulations, or even actively resist governmental policy (Levi, 1998, p. 88; Nye and Zelikow, 1997, p. 277) making the government incapable of performing the tasks required of it (Nye and Zelikow, 1997, p. 276). Trust helps reduce complexity and gain efficiencies in public sector administration (Raab, 1998), including allowing governments to benefit from the voluntary compliance of citizens (Tyler, 1998, p. 290) rather than through more resource costly mechanisms of coercion and control. Indeed, in research on tax compliance, several factors (other than coercion) were found to be
crucial to tax compliance, including feelings of obligation, trust in government and trust that others would pay their share of taxes (Scholz, 1998; Murphy, 2004). This decline in trust in democratic government institutions is of particular concern in Latin America where many countries are in the process of democratic consolidation (Latinobarómetro, 2005; UNDP, 2004) and a lack of trust can undermine legitimacy (Easton, 1975; Hetherington, 1998).

It is in this environment of declining trust that governments across Latin America are broadening and deepening the scope of e-government applications. In theory, the implementation of e-government applications brings the potential for many positive changes (efficiency, effectiveness, transparency and increased connectedness) that provide a multitude of pathways to build citizens’ trust in democratic institutions of government (Bellamy and Taylor, 1998; West, 2005). Could e-government be an exogenous factor that helps overcome the trust deficit?

Currently, the impact of e-government applications on building citizens’ trust in government is empirically and theoretically unclear (West, 2005; Kearns, 2004; Avgerou et al., 2006). Many studies that explore the link between e-government and trust are almost entirely macro-level survey works (Parent et al., 2004; West, 2004, 2005; Tolbert and Mossberger, 2006; Moon, 2003) with a few exceptions (Avgerou et al., 2009). This approach is common in the political science research looking at the links between governance and perceptions of trust in government (Braithwaite and Levi, 1998; Warren, 1999a; Norris, 1999; Levi and Stoker, 2000; Espinal et al., 2006; Chanley et al., 2000; Cook et al., 2005; Hardin, 1998, 1999; Levi, 1998; Mishler and Rose, 2001, 2005; Nye et al., 1997; Sztompka, 1999). While important, these studies gloss over many of the underlying dynamics at play. The interaction of politics, governmental institutions, information and communication technologies (ICTs) and citizens defy simple single-theory explanations (Weare, 2002, p. 662), and understanding trust in government is no different (Chanley et al., 2000, p. 240). Indeed, it is a dubious proposition that the complexity of trust can be adequately captured by survey work (Gambetta and Hamill, 2005), and there is a need for more micro-level studies of trust to better understand the complexities of the phenomenon (Levi and Stoker, 2000).

This research is an in-depth micro-level exploration of citizens’ experiences with two e-government services in Chile: the tax administration and e-procurement systems. As highly successfully services, these two cases provide a unique opportunity to explore how, for whom, and in what circumstances changes in government, attributable to e-government applications, translate into increases or decreases in trust. Furthermore, there are benefits to studying successful implementations as they both arguably have not received enough attention in the ICT for development literature and can provide important and different insights than studies of failures (Krishna and Walsham, 2005).

In the following section, the paper develops the concepts of institutional trust and trustworthiness cues that provide the theoretical foundation for the research. The paper then turns to the research methodology and description of the two cases, the Chilean e-tax administration system and e-procurement systems. Following the cases, the paper presents the comparative analysis that focuses on explaining the variation in the citizens’ perceptions and interpretations of the two e-government systems. The comparative analysis highlights, among other things, the tensions that emerge from the competing values of e-government implementations and how they help shape
citizens’ interpretations of e-government interactions. Finally, the paper concludes with some reflections and implications of the research.

**Institutional trust**

The history of the trust concept is long and varied (O’Hara, 2004) with no consensus definition emerging (Barber, 1983; Grabner-Kräuter et al., 2006; Tschanne-Moran and Hoy, 2000; Jones, 2002). Often, these definitions are seen as competing. For example, trust has been conceptualized as both a social-structural and an individual social-psychological phenomena (Barber, 1983). To research trust, however, the researcher must take a position within this diversity of conceptualisations (Table I).

Rather than selecting amongst different conceptions of trust, this research opts to benefit from the diversity through integrating, where possible, the different conceptualizations. This is accomplished by reinterpreting existing theories of trust as descriptions of causal processes that need not be competing nor mutually exclusive, but also potentially co-existing and interacting (George and Bennett, 2005; Smith, 2006, 2010). For example, trust can be influenced both by one’s social-structural position and their particular psychological state. In this way, the many trust theories can be understood as explaining different causal phenomena that exist in our highly complex social world:

Trust is [...] a judgement, however tacit or habitual, to accept vulnerability to the potential ill will of others by granting them discretionary power over some good (Warren, 1999a, p. 311).

 [...] the belief concerning the action that is to be expected from others. The belief refers to probabilities that (certain categories of) other will do certain things or refrain from doing certain things, which in either case affects the well-being of the holder of the belief, as well as possibly the well-being of others or a relevant collectivity (Offe, 1999, p. 47).

 [...] confidence in the reliability of a person or system, regarding a given set of outcomes or events, where that confidence expresses a faith in the probity or love of another, or in the correctness of abstract principles (technical knowledge) (Giddens, 1990, p. 34).

 [...] a bet on the future contingent action of others (Sztompka, 1999, p. 25).

 [...] socially learned and socially confirmed expectations that people have of each other, of the organizations and institutions in which they live, and of the natural and moral social orders that set the fundamental understandings for their lives (Barber, 1983, p. 165).

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<thead>
<tr>
<th>Aspects of trust</th>
<th>Description</th>
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<tbody>
<tr>
<td>Social relationship</td>
<td>Trust is a particular type of social relationship between two social actors (individuals, groups and institutions)</td>
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<td>Trustworthiness and trust</td>
<td>Two sides of the social relationship</td>
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<tr>
<td>Domain of trust</td>
<td>A trusts B to do C</td>
</tr>
<tr>
<td>Expectations and values</td>
<td>A has expectations that B will fulfil their requisite obligations and these expectations are an expression of A’s values</td>
</tr>
<tr>
<td>Motivation and competence</td>
<td>For A to trust B, B must be seen as having the motivation and competence to do obligation C</td>
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<tr>
<td>Self-interest and normative motivations</td>
<td>There are two basic types of motivations to encourage trustworthy behaviour: self-interest or normative values</td>
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Table I. Core components of trust
[...] a particular level of the **subjective probability** with which an agent assess that another agent or group of agents will perform a particular action, both **before** he can **monitor** such action (or independently of his capacity ever to be able to monitor it) and in a context in which it affects his own action (Gambetta, 1988, p. 217).

[...] to **act** in such a way as to give another agent **power** over us (Dumouchel, 2005, p. 425).

[...] the **subjective assessment** of one party that another party will perform a particular transaction according to his or her confident **expectations**, in an environment characterized by **uncertainty** (Ba and Pavlou, 2002, p. 245).

[...] the sense of correct **expectations** about the **actions** of other people that have a bearing on one's own choice of action when that action must be chosen before one can **monitor** the actions of those others (Dasgupta, 1988, p. 51).

Central to this process of theoretical integration is the extraction of the core aspects of trust; i.e. what must necessarily exist of the phenomenon to be called trust. This focus on core aspects helps to avoid diluting the concept, as it serves to be more precise about exactly to what part of the social world the concept of trust refers. The following are the core aspects of trust extracted from existing definitions (summarised in Table I):

- Trust is a particular type of social relationship with two purposive actors (Coleman, 1994, p. 96; Harré, 1999; Reed, 2001; Sztompka, 1999), such as between individuals, between individuals and systems (such as institutions) (Barber, 1983, p. 18).

- In a given trust relationship, there are four extremes of possibilities: trust may be given but misplaced; trust may be well placed; trust may be correctly withheld; and trust may be incorrectly withheld. These possibilities point to the difference between the subjective element of trust given by the truster, and relative trustworthiness of the trusted. This distinction, often conflated (Hardin, 1993, p. 512, 1996, 2002; Solomon and Flores, 2001, p. 56), has emerged as critical in research on organizational trust (Mayer et al., 1995) and trust in the state (Hardin, 1993, 1996; Levi, 1998; Levi and Stoker, 2000).

- Truster A has expectations that B will fulfil their requisite obligations (Luhmann, 1979) within a limited domain (Hardin, 2002, p. 9; Harré, 1999). These expectations provide the link between the activities of the trusted (B) and the subjective interpretation of trust by the truster (A) (Barber, 1983). Finally, a person’s values shape their expectations and consequently what they view as trustworthy (Braithwaite, 1998).

- For trusted B to be trustworthy, B must have both the motivation and the competence to do C (Hardin, 1999, p. 28; Kee and Knox, 1970).

- There are two commonly recognized notions of trust in the literature: rational self-interest (Hardin, 1991, 2002; Cook et al., 2005) and normative, moral and emotional accounts of trust (Lewis and Weigert, 1985; Blackburn, 1998). While they are often cast as competing conceptions, they are better understood as two types of motivation mechanisms; it is possible to be motivated by something that is both in my interest (rational self-interest) and the right thing to do (normative). Note that it is also possible that one motivation crowds-out the other, in which case they can be seen as competing causal mechanisms.

Finally, power is an element of all relationships, and thus trust must always be considered within asymmetries of power (Warren, 1999b, p. 324; Farrell, 2004). The motivation for the
powerful social actor in a relationship to act in a trustworthy manner is compromised as they can extract benefits without fear of reciprocation (Cook et al., 2005, p. 42). This asymmetry also has trust impairing psychological impacts on the truster. For example, subordinates are more concerned with, and spend much more cognitive effort on, the issue of trust and “trust violations ‘loom larger’ than confirmations of trustworthiness” (Tschannen-Moran and Hoy, 2000, p. 573). Subordinates also tend to interpret the actions of the person in power in a negative light (Cook et al., 2005, p. 43).

Institutional trust is a specific type of trust relationship where it is the institution that is trustworthy and the citizen that is the truster (Smith, 2010). The standard definition of institutional trust is a one where the truster places trust in the rules, roles and norms of an institution independent of the people occupying those roles (Table II). These definitions highlight a key component of institutional trust: it is generally considered trust based on impersonal institutional mechanisms rather than on people.

Offe (1999) offers an alternative conception where institutional trust is based on the “ethos” or “values” of the institution rather than just the particular rules, roles and norms. This holds in some empirical findings where it has been found that people with value orientations in line with the values of the institution found the institutions more trustworthy (Devos et al., 2002; Braithwaite, 1998). Braithwaite also shows how this happens: value systems shape expectations that make different trustworthiness cues salient. Thus, like the dichotomy between self-interest and normative motivations, there can be more than one reason why people might trust in an institution (including rules, roles, norms and ethos or values). Of course, a complicating factor is that democratic bureaucracies represent a variety of values (Kallinikos, 2004) and e-government

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<th>Author</th>
<th>Definition of institutional trust</th>
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<td>Zucker (1986)</td>
<td>Institutional trust emerges when “formal mechanisms are used to provide trust that does not rest on personal characteristics or on past history of exchange” (Zucker, 1986, p. 61)</td>
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<td>Warren (1999b, 2004)</td>
<td>Trust in democratic institutions is trust placed in the institutional norms and the effectiveness of accountability mechanisms. This requires three conditions: (1) institutions are defined by norms that both the truster and trusted know and the trusted is expected to follow; (2) the truster can effectively monitor (or know that others are monitoring) the trustee and (3) the institution has effective accountability mechanisms if the trustee diverges from the norms</td>
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<td>O’Hara (2004)</td>
<td>Trust in institutions comes from a specific and generally inflexible framework of codes of practice and rules (e.g. impartiality) and the credible threat of sanctions, and the institutions that impose sanctions must have sufficient power and authority</td>
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<tr>
<td>Cook et al. (2005)</td>
<td>Trust in institutions is trust in the “quality of the institutional arrangements within which they operate”</td>
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<tr>
<td>Offe (1999)</td>
<td>“It is this implied normative meaning of institutions and the moral plausibility I assume it will have for others which allows me to trust those that are involved in the same institution – although they are strangers and not personally known to me” (p. 70 emphasis in original)</td>
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<tr>
<td>Giddens (1990)</td>
<td>Trust in modern institutions is trust in the correctness of the abstract systems, emphasising competence (reliability and credentials) rather than motivation (pp. 33-4, 83-7)</td>
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Table II. Definitions of institutional trust
implementations can alter the balance of these values (Cordella, 2007; Smith et al., 2010). As we will see, the role of the different, and sometimes competing, values that are expressed through the e-services studied here play an instrumental role in shaping citizens’ e-government experiences and consequently their trust judgements.

Trustworthiness cues
Placing trust, be it in an institution or an individual, is an act that is based on the interpretation of information that provides the reason to trust in the other’s competence and motivations (Warren, 2004). One theory of epistemology of trust is that when people make trust judgments, they look for trustworthiness cues (signs) that manifest trustworthy properties (Gambetta and Hamill, 2005; Sztompka, 1999; Bacharach and Gambetta, 2001). Zucker (1986) calls these modes of trust production. She outlines three types of trust that emerge from different types of information: information based on processes, characteristics or institutions. These cues are the “various clues – reasons, predilections, and rules – which make people grant or withdraw trust, and choose specific type[s] of trust” (Sztompka, 1999, p. 69). Of course, a variety of trustworthiness cues can be perceived and interpreted simultaneously interacting with each other.

As one can never fully know the motives and competence of the trustee, trustworthiness cues imperfectly reflect trustworthy qualities (Offe, 1999, p. 48). The quality of information is dependent upon a variety of factors including visibility and clarity of criteria (comprehensibility) (Sztompka, 1999, pp. 82-3), salience and memorability (Kumlin, 2004, p. 13). As information is less clear, less visible and less memorable, we would expect it to be less effective as a trustworthiness cue.

The credibility of trustworthiness cues is also important, by definition; trustworthiness cues must themselves be trustworthy for them to have an impact. One factor that determines the credibility of a cue is the source, be it communicated directly (through personal experience and interaction) or indirectly (mediated through a secondary source, such as friends, relatives, experts, politicians and the media) (Nye and Zelikow, 1997, p. 255; Kumlin, 2004). For example, in one study, it was found that people evaluated the work of government officials more highly if they have direct contact rather than if they find out information second-hand (Bok, 1997, p. 56). Another factor is that the easier it is to fake a cue, the less credible it is (Gambetta and Hamill, 2005).

Methodology
This research subscribes to the ontological and the epistemological commitments of critical realism (Bhaskar, 1978, 1998). In particular, this approach is predicated on the notion of causality as a generative mechanism that allows for the generation that arguably subsumes positivism and interpretivism (Mingers, 2004a; Smith, 2006). These underlying assumptions were highly influential in the shaping of the nature of the research from the formation of the research question to hypothesis generation and subsequent research methodology (for more on this influence, see Smith, 2010).

This study begins with a simple assumption and research question. The assumption is that there is a causal link between e-government services and citizens’ trust in government institutions. The research question explores that link by asking:

**RQ.** How, for whom and in what circumstances do e-services impact on citizens’ trust perceptions of government?
To tackle the RQ, a comparative case study research strategy was chosen (Yin, 2003; Gerring, 2007). Two cases of e-government services in Chile were selected: an e-tax administration and a public sector e-procurement system. The two e-service cases were selected for both pragmatic and theoretical reasons. Pragmatically, each e-service was already studied as a part of a 2004 study that provided insight into the institutional trustworthiness side of the trust equation (Avgerou et al., 2005). Theoretically, these two e-services, as relative successes with pervasive uptake and impact on Chilean society, provide a unique research opportunity as they embody improvements of government transparency, service delivery and performance that theoretically should build trust.

Data collection
The focus of data collection was on citizens’ perceptions and interpretations of their interactions with these two e-services. While data were collected on the institutional and user sides, this paper focuses on data that were collected that comments on:

- The qualitative changes to service delivery at the point of interaction with the citizen.
- The usage (quantity and nature) of the e-services by citizens.
- The experiences, perceptions and interpretations of the e-services by the citizens in terms of trust (competence and motivation).

(for an analysis of the data collected on the institutional side, see Smith, 2010).

To collect data on these issues, this research took a multi-method approach (Mingers and Brocklesby, 1997; Mingers, 2003) employing four main data collection methods: semi-structured interviews, focus groups, surveys and relevant document collection. These methods were chosen, in particular the semi-structured interviews and focus groups, as appropriate for gathering the qualitative data that will provide insight into the users’ experiences, perceptions and interpretations. Note that the use of a multi-method design that includes both qualitative and quantitative methods is seen as unproblematic within the critical realist paradigm, provided that the data speak to the object of study (Mingers, 2004b).

The starting point of data collection was a study conducted in 2004 (Avgerou et al., 2005), which focused almost entirely on the internal implications of the e-services. In 2005 and 2006, data were collected with a focus on the users of the services, including most of the relevant stakeholder groups directly involved in either the delivery of the service or as a user of the service (Table III). In this phase of research, a total of 54 semi-structured interviews and focus groups were conducted with 113 subjects. Data collection took place almost primarily in the ninth region of Chile in the small towns near and around Temuco.

The interview questions focused on how the e-services are perceived and interpreted in terms of the competence, interests and values of the institution. The questions also probed a series of 24 (13 for the tax system and 11 for ChileCompra) concrete hypotheses established before the field work began. These are hypotheses of the theorised causal mechanisms connecting the citizens’ interactions with e-services and resultant trust judgments (Table IV), that were created by integrating trust theory with specific knowledge the two cases (for more on how the hypothesis were constructed, see Smith, 2010). Finally, space was also given during the interviews to explore novel
and emergent explanations (why questions) with a special consideration of contextual factors that influence these interpretations (in what circumstances and for whom).

There were also seven surveys to assess the impacts of the services (both internal to the public sector and external towards the citizen users) conducted on all the major stakeholder groups as well as a survey targeting the wider society. As they are not representative surveys, this information is used as background supporting information, but is not central to the discussion. Furthermore, many government documents and reports were included in the data set, along with independent research and newspapers articles.

Data analysis
Data analysis was performed in two stages: within and across cases. Both stages analyse the interviews looking for the perception and interpretation of trustworthiness cues, linking them to trust perceptions. The within case analysis focuses on variations of perceptions and interpretations between individuals, whereas the cross-case analysis seeks to explain variations due to differences in the particular e-service cases.

Cases
E-tax administration system
The e-tax administration system is run by the Chilean Tax Authority (Servicios de Impuestos Internos, SII). The SII is a politically autonomous, professional and powerful institution in Chile, with low-levels of episodic rather than systemic low levels of corruption (Sánchez, 2005, p. 234).

The e-tax administration system has three interconnected components: an intra-SII network, SII and other public entities and the SII and taxpayers (the virtual office). As of 2007, citizens can perform a variety of tasks online at the virtual office: obtain a password, check third-party information with respect to collected tax return information, check tax status, submit annual and monthly tax returns, make tax payments and retrieve legally valid e-invoices for both products and e-receipts for independent services rendered.

When citizens file their taxes online, they are presented with a virtual income tax return proposal that has been pre-filled with the taxpayer data pre-collected by the SII. This form completes taxes for a wide range of taxpayers, but does not complete the
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<th>ChileCompra</th>
<th>Online tax-administration system</th>
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**Trust hypotheses: competence**
Overall, the improved efficiency/effectiveness of CC will tend to build trust.

The e-catalogue brings larger efficiency and effectiveness benefits and thus will tend to build trust.
The performance indicators are not linked to any accountability mechanisms and thus will have no impact on trust.

The existence of the online tax proposal and improved tax turn-around times will tend to build trust.
The improved in-office service and wait times will tend to build trust.
The positive performance data presented on the web page will tend to build trust if it exceeds citizens’ expectations.
The lack of apparent accountability mechanisms linked to the performance data implies no effect on trust.

**Trust hypothesis: aligned values**
While complete impartiality is impossible, the use of ChileCompra and the regulatory framework work to increase impartiality of the procurement process and will tend to build trust.

The decrease in unnecessary street-level discretion when dealing with citizens (through online interactions as well as in more structured and controlled face-to-face interaction) will tend to improve trust.

E-services that create distributive justice (e.g. provide a service for the poor) and the distributive justice value is held by the citizen tend to increase trust.

The implementation of the e-service (benefits small percentage of the population) combined with contextual influences such as: (1) the Chilean tax policy (net neutral), (2) IT policy (progressive digital agenda promoting access for all, small business growth), (3) Chilean social development policy (progressive) and (4) SII initiatives (e.g. providing local help at telescentres) reflect conflicting values with respect to distributive justice. The trust outcome is unclear.

**Trust hypotheses: interests**
Increased access to relevant procurement information, the increased business opportunities, and those who perceive a reduction of transaction costs will tend to increase trust.

The high level of usefulness and ease of the use will tend to build trust.

The public procurement information provided through the ChileCompra portal and the marginal changes to the feedback mechanisms suggest that it will tend to have a marginal impact on trust.

The increased user benefits in terms of time and cost savings for those who use the e-service will tend to build trust.

The high ease of use (completed tax proposal) and the usefulness of the e-service (a necessary obligation for taxpayers) indicates that the SII takes the citizen’s interests into account and will tend to build trust.

The e-services have not introduced any significant changes in terms of the opportunities for participation in decisions or policy of the SII. However, the possibilities of online feedback and the SII’s use of that information suggest that the SII takes taxpayers’ interests into account and therefore will tend to build trust.

While the web site presents the rules and regulations of tax processes as well as increases the transparency of the activities of the SII vis-à-vis the citizen, the lack of effective accountability mechanisms will tend to have no impact on trust.

Table IV.
Trust hypotheses based on perceptions of competence, aligned values and aligned interests.
process entirely for those who own a business. The SII tries to make it clear that the completed form is a proposal and that it is the responsibility of the taxpayer to review the data and confirm their veracity before accepting it.

The system has resulted in dramatic changes in the performance of the SII, reducing the time to process taxes from 25 days to less than 12 hours. Uptake has also been almost complete; in 2006, 97 per cent of the taxpayers filed electronically, the equivalent of 2,068,001 received e-documents up from 1,132,933 filed in 2002. Indicative of this success, since 1998, the SII has received a wide range of awards for their evolving system (Panzardi et al., 2002).[1]

**ChileCompra**

The public sector e-procurement system, ChileCompra (Chile Buys), is an online portal for public sector purchasing currently used by most of the federal and municipal institutions in Chile. Purchasing by the public sector is done through two markets: an e-market and ChileCompra Express. The e-market is an online system that allows for public, private and direct procurement processes, permitting the virtual processing of many stages of the procurement process including publishing a tender, receiving bids from suppliers, the selection of bids, purchase orders, etc. (Figure 1). ChileCompra Express is a virtual store where public sector entities can purchase goods and services, and is the first stop for public sector purchasing. The public sector entity that manages ChileCompra, the DCCP (Public Purchasing and Contracting Directorate), negotiates prices with suppliers to populate the catalogue.

The platform also includes a security component including encryption and electronic bid capabilities to help ensure the integrity and confidentiality of both the system and bids (Avgerou et al., 2005). Finally, the platform publishes a wide range of information such as “procurement plans, invitations to bid, contract awards, database of past transactions, corresponding search and statistical functions, and a standard product/service catalog” (The World Bank, 2004, p. 3).

While the implementation of the system did not start well (DCCP, 2002; Hussmann, 2004), a series of institutional and policy changes (Hussmann, 2004; The World Bank, 2004) and enhancements helped it take off (IADB, 2004; Avgerou et al., 2005). Since the end of 2004, ChileCompra has continued consolidating and augmenting its gains (Table V). Perhaps, as a mark of ChileCompra’s coming of age, from 2004 to 2006 it was

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<td>The moderate decrease in opportunities for the public sector purchasing officer to engage in corrupt purchasing practices will tend to moderately increase trust. The shift in power relationships due to ChileCompra is unclear. No trust effects are expected.</td>
<td>The moderately decreased opportunities for SII employee corruption through the computerisation of many tax processes will tend to have a moderate impact on building trust. The increased power of the SII vis-à-vis the citizens in terms of the collection of information will tend to decrease trust. This increased power is potentially offset by the improved services and taxpayer orientation of the SII.</td>
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ranked as the best-transactional site in Chile by the Centre of Digital Economy Studies, beating out the second place SII web site.

**Comparative analysis**

This analysis is predicated on the variation in the perceptions and interpretations of citizens to the e-services, from highly positive to tepid to negative. The focus of this analysis is on explaining this variation, and makes no claims as to the general magnitude or prevalence of these mechanisms in particular populations. Given the primacy of perception before interpretation, the analysis begins with a discussion of which trustworthiness cues were perceived or not and moves to how these cues were interpreted in terms of citizens’ trust perceptions.

**Salient and non-salient trustworthiness cues**

The most salient trustworthiness cues of the citizens interviewed were: user benefit, efficiency and effectiveness gains, institutional mission and distributed justice and
reduced corruption (impartiality and the removal of street-level discretion). These salient cues, along with indicative quotes, can be found in Tables VI-IX.

Equally important for thinking about building trust are the cues that citizens did not perceive (non-salient). Across both services, two cues that are hypothesised in the trust literature to be important for trust formation (Tolbert and Mossberger, 2006; Moon, 2003; Welch and Hinnant, 2003; Welch et al., 2004; Brewer et al., 2006; Cook et al., 2005; Holzer et al., 2004) were not perceived as important in both of these cases: voice (responsiveness and participation) and transparency. The absence of voice is not surprising given the nature of these transactions that did not provide much space for

### User benefits

**SII**

“[the interaction has changed my perception of the government], for the fact that I have an easier time not having to go to Temuco, in this way it is easier. Before whatever document I needed, I had to go to Temuco. If I want to know how an account is, if I want to declare something, the information is there […] they give me the information that I need”

“The trust I have […] now I can do a transaction without leaving. This helps me to put my time in other things. […] In terms of trust, that I will go, do my stuff, and it works. And I know that they will always be there, present, if I need more information”

“[the SII is trustworthy] until now, yes. I knew – before I had to go to the bank, to stand in line – now all on the internet – you have all your information of what you have done, in terms of taxes, you have it there, you look, you can do everything on internet – you don’t even need to have an accountant. Before it was an accountant, you had to pay him so that he paid your taxes because one didn’t have time to stand in line – and the accountants would go filled with money from all their clients. Now it is much easier. A service I have used a lot and I realised that it works well”

**ChileCompra**

“I have seen – in Traiguen – I think that practically 99.9% disagree with ChileCompra. […] The problems are that to win the proposal, you have to be the best, the cheapest. But suddenly the person [public sector organisation] needs something, and if it is cheaper from Temuco, Temuco wins” (Telecenter operator)

“Yes, it [the procurement process] is better ordered. But, the benefits for the small businessman are not there. That is my personal experience. Perhaps – for some it has worked, for me no”

**Note:** The people quoted here and in the following tables are either individual users or small business owners that are from the ninth region in Chile and of a medium to low socio-economic level (unless otherwise indicated)

### Efficiency/effectiveness

**SII**

“Before the system was unmanageable inefficient, there was no efficiency. I realised that the SII is […] more efficient. For example, in the Temuco office, they have a norm – people that arrive will be attended in a time limit. And they accomplish that”

**ChileCompra**

“[…] at the end of the day the clients are the same – there are good clients, and bad clients. Because one will pay when it matters and the others – they don’t. In the end it is a lot like it worked before. […] It is more impersonal, but all the same, those that paid in little time, continue to pay in little time, and those who were bad, they are the same. […]”

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**Table VI.**

Quotes indicative of the commonly perceived trustworthiness cues

<table>
<thead>
<tr>
<th>Building institutional trust</th>
</tr>
</thead>
<tbody>
<tr>
<td>233</td>
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</table>

**Table VII.**

Quotes indicative of the commonly perceived trustworthiness cues
**Institutional mission and distributive justice**

<table>
<thead>
<tr>
<th>Institution</th>
<th>Quote</th>
</tr>
</thead>
<tbody>
<tr>
<td>SII</td>
<td>“At the end of the day it [citizens’ concerns] should matter to them [the SII], but as the sign says, the Servicios de Impuestos Internos – they are there to collect taxes, there is no reason for them to watch over the well-being of the citizenry because that is not their role. Their role is, as it says, the SII is to collect money from the population” “[The SII] protect the state and the big business, not the little workers. In this way it is bad. [...] For me – it really benefits the SII that the taxpayers do their taxes well [...]” “They let me come in – they show me the system – speed, efficiency. But the moment that I enter, they close the door behind me. I can’t leave, and I look around and say – heck!” “This is part of – being a citizen; it is a part of growing with the country, a part of everything. In the end, we all finance the country. The people who work. Thus, it is logical that they tax you. Perhaps not to the degree we are paying [...] But you see that the whole country is growing in all aspects, infrastructure [...] there are still needs, of course, but [...]”</td>
</tr>
<tr>
<td>ChileCompra</td>
<td>“It is a free and open forum – because any Chilean can bid on a purchase order. Those that don’t, don’t because they don’t have the information. [...] We considered it a good policy of the government so that those businesses who don’t have as much weight in terms of infrastructure and things could be able to make a mark in a very objective way without being discriminated, you can compete – we compete with big businesses of publicity and we win, too” “[...] even though there is a diversity of suppliers today, it is not easy that the public sector generates – such strength that some suppliers will benefit always – they get better scores because they are getting stronger. And a few actors remain. It is happening with the banks. It is something natural. It is happening with the supermarkets”</td>
</tr>
</tbody>
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**Table VIII.**
Quotes indicative of the commonly perceived trustworthiness cues

**Table IX.**
Quotes indicative of the commonly perceived trustworthiness cues

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**Reduced corruption, impartiality and removing of street-level discretion**

<table>
<thead>
<tr>
<th>Institution</th>
<th>Quote</th>
</tr>
</thead>
<tbody>
<tr>
<td>SII</td>
<td>“I thought, today, after I had it all ready, why should I go? Because I will probably have some obstacle to getting my invoices stamped after all that – because it is what you are accustomed to. And that surprised me today. Thus, I went, waited a long time – for the same functionary that was eating breakfast the other day when I went – today I had to wait 20 minutes for her to write a letter to a friend. Like that, you are there and you have a big smile, very lovingly [...] and what do you say? ‘No, it’s ok, take your time, don’t worry.’ [...] It is absurd, but you can be sure that if you say, ‘excuse me, just one second, I took a number, here is my number and you should help me and you are writing a card! This is a public service.’ If I say that [...] then she won’t stamp my invoices”</td>
</tr>
<tr>
<td>ChileCompra</td>
<td>“There still exists a space in which people can do a little trickery to be able to benefit a friend or something. But it is not that easy to do it. For example, [...] once [...] I remember, they told us, look you have to do work X and we want you guys to win because your quality is better, you are on time, etc.. We make the bid, and after they said – you know what, we can’t give you the work because we have to disclose – remember what variables there are – and so it wasn’t that easy to just give us the offer, because they have to justify it”</td>
</tr>
</tbody>
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“I would say that with CC there is almost zero corruption – because there is no way. If we bid, and I complete these requirements [...] if the higher price is yours, they aren’t going to be able to give it to you. Before it wasn’t that way. [...] of 100 proposals, they are probably 10 they can manipulate”
citizen interaction, so it would be difficult for it to be a trustworthiness cue. However, this absence of avenues for expressing voice was also not salient as a negative trustworthiness cue. One potential explanation is that it is a cultural feature of the Chilean society, which has very high respect and deference for public sector institutions and little history of complaining. The fact that transparency did not register as important is especially interesting given that an explicit goal of ChileCompra is to enhance transparency. This raises the question that was one focus of the cross-case comparative analysis: why were some cues more salient than others?

When looking across the salient cues, a pattern emerges: people perceive trustworthiness cues that come from experiences or information that are highly relevant to their lives or business. Relying on these direct and relevant experiences can also be understood as a trust heuristic. A trust heuristic is a cognitive and information economizing trick that allow individuals to make trust judgments in light of imperfect and incomplete knowledge (Hardin, 1993). For example, we would expect citizens to focus on salient low-cost pieces of information (Bianco, 1998, p. 246), such as cues stemming from personal and highly relevant experiences. This finding also matches with other studies that show that citizens use direct personal interaction with government officials and agencies as a source of political information (Soss, 1999; Bok, 1997; Kumlin, 2004).

The significance of relevant experiences or information is indicated by the importance given to direct user benefits. For example, achievements of transparency, efficiency and effectiveness were commonly interpreted through the lens of received payments, tax returns completed in a timely manner, the ability to find out how to do a more complex tax process, and how to better price a future bid. Consider the following quotes from two ChileCompra suppliers:

It has made the purchases more transparent. I believe this was the starting point that has been completed; they have to buy through the system. Now the system doesn’t assure that they will buy at the lowest price, because the lowest prices aren’t always of the best quality. What is happening now with CC? There are evaluations of the providers, and they publish this. We want them to publish this, because this is another parameter of evaluation, not just price.

The system is so transparent that you can see at what price, when they reject your bid, you can go and see why they rejected you. Generally the variable is price. You are more expensive and the cheapest bid won.

The first small business owner is happy with the transparency because it enables them to compete with businesses that have lower prices, through offering better quality. The second uses the transparency to learn and adjust their bids in the future. In other words, transparency was important in so far as it was beneficial to the particular supplier.

In contrast, online information that is not relevant to achieving a goal (e.g. performance indicators, information about rules and regulations unrelated to an individual’s tax proposal and information about public sector sales) is either not noticed or plays at best an indirect role in determining people’s perceptions.

**Interpretation of the cues**

The comparative analysis revealed that there is a dynamic tendency that shape people’s interpretations that can explain some of the variation in responses to the e-services. The dynamic is described here using the metaphor of a balance (or a scale) to express the
idea that a user’s trust judgment can tip one way or another, depending upon what side you place the most weight of information. The two sides of the balance are the conflicting values that provide logical and plausible explanations for users’ interactions with the e-service.

Any e-government implementation represents a conflict of interests and values on some level as it alters who gets what and when (Brewer et al., 2006), ultimately embedding political values (Introna and Nissenbaum, 2000; Winner, 1986). There are at least four identifiable tensions that emerge from competing values represented by the two e-services:

(1) *Transparency (fair and impartial) versus necessity of local discretion (partiality).* Where there is necessary local discretion, for example, in professional bureaucracies, transparency is at best *ex post* and limited. Complete transparency is difficult as it requires a description of a subjective decision-making process involving difficult-to-quantify activities such as professional skills, intuition and trust stemming from past experience. There are also situations where time constraints restrict the possibility of real-time transparency. For example, sometimes medicine needs to be purchased immediately and thus some transparency is sacrificed to meet these ends. Such situations run an increased risk of being seen as partial or corrupt.

(2) *Competition and efficiency versus equality (social and economic justice).* Two stated goals of ChileCompra are:

- to promote social and economic justice by providing opportunities for small and micro enterprises to sell to the public sector; and
- to create efficiencies in the public sector through increased competition, and from a macro-perspective, positive strides have been made in both these directions. However, from the perspective of the supplier, these goals can conflict (Hussmann, 2004, p. 34). For a supplier, increased competition means lowered profit margins if they make sales. For those small and micro businesses that are able to sell to the public sector, ChileCompra increases their opportunities. However, for those that cannot sell to the public sector given the increased competition or other difficulties, it is not viewed as a benefit for small or micro enterprises. This tension is also found in the use of the e-catalogue to obtain higher efficiencies; it is more efficient for the DCCP to negotiate with large suppliers over small businesses that may not have the resources to make large-scale deals with the government at reduced prices.

(3) *Self versus communal interest (greater good and fairness).* From a citizen’s perspective, increased tax compliance through enhanced technical capacities can be seen as positive (it is an obligation to pay taxes and it can result in a social good) and negative (now I have to pay taxes!). An important component of a citizen’s view of the communal interest appears to be their perception of fairness that extends beyond the technical side of tax administration. For example, the perception of the e-tax system was altered by the taxpayers’ understanding of the fairness of the existing tax regime (is it progressive or regressive?), the perceived fairness of fines or penalties as a result of not fully meeting tax obligations, and how taxes are spent by government (do they receive adequate services for their taxes?).
(4) *Power versus improved services.* The fundamental tension here is that while the SII has increasingly improved its services (potentially improving trust) it has increased its power *vis-à-vis* the citizens making trust more precarious. This is an example of a common trade-off between efficiency and accountability. If an agency prioritises efficiency (to get better services) it sometimes must reduce control mechanisms (accountability) of key processes and therefore increases its own discretionary power over those processes (Pegnato, 1997).

What makes these points of tension so important is that each of the competing value systems gives rise to the possible set of available explanations users employ to understand the e-services. In other words, e-services can be concurrently trustworthy and not trustworthy, depending upon the interest or value perspective taken by the user. For example, depending upon your perspective, personal value system, and available information, it is possible to interpret ChileCompra as:

- beneficial for the state in that it brings transparency and increases efficiency;
- not really increasing or changing the transparency of public procurement;
- good for small businesses who have increased opportunities; and
- biased against small businesses due to increased competition and lowered prices.

Likewise, the SII can be seen as:

- providing a great user benefit;
- a compassionless institution focused on maximising their tax revenues at the expense of the taxpayer;
- a benefit to society as it provides funds for government services; and
- an expanding instrument of power that perpetuates a fundamentally unequal society.

A question still remains: what influences citizens to choose one of the competing interpretations over another? The analysis suggests the following answer: personal experience, and in particular, user benefits (or costs) are highly salient and forceful trustworthiness cues that weigh heavily in citizens’ judgments about the activities of the public sector. Even more significant is the fact that the experiences of user benefits (and costs) appear to highly colour the resultant interpretation of other trustworthiness cues.

Examples of this interactive dynamic between user benefits and other trustworthiness cues were myriad. For example, one cue that was visible, memorable, easily understandable, and hard to fake was the efficiency gains made by ChileCompra through competition, and thereby lowering the price/quality ratio (i.e. more competitive prices for the supplier). While this could be seen in a positive light (good for the state), if the supplier would take a broader perspective, it is generally interpreted as a challenge to their bottom line. In the worst-case scenario, it is seen antagonistically as a tactic of big businesses driving out opportunities for small businesses to compete. The key, however, is that this later interpretation is made by those who were not able to sell to the public sector. This dynamic has not gone unnoticed by some members of the public sector. For example, as DCCP managers described:

> When a provider is the one that benefits from these actions, they are all for it, but when it is someone else’s turn to win an offer, “the system is corrupt!”
the subject of transparency is relative […] what’s been the riskiest thing is that people can do things that […] they can imagine things […] that’s why you have to try to do everything as objectively as possible.

Another example is how power asymmetries between the SII and citizens became a salient cue for small business owners. Their experiences of losing the ability to issue invoices as a punishment for late taxes brought this power asymmetry into stark relief. This contrasts with the many citizens who would freely enjoy the benefits of a much improved tax service, without consideration of “Big Brother” implications. Those who were subject to punitive damages were much more likely to focus on the power and unaligned motives of the SII and citizens than were those who had not had similar experiences. However, it must be said that SII’s past history had bestowed it with a bad reputation. This reputation, based on its overwhelming power over the citizen, supersedes the positive user benefits in some cases:

You don’t have the right to fight. It is like a dictator – you will never win against it [the SII]. […] Nobody messes with the SII. As a web page, it is great. As a service, it is good but very […] You have to be careful.

It [the SII] does not have a good reputation. Because the user is a condemned person when they make a mistake – they forgot something or whatever, the accountant – something – if you have a problem, you are condemned in advance […] The taxpayer is afraid of the SII. It is an institution of fear. Because you know you will lose. They are going to charge you no matter what.

It is now possible to be clearer about how citizens direct experiences colour interpretations: they provide evidence for one competing explanation over another. For example, the application of a harsh fine is evidence for increased power and callousness rather than increased benevolence as represented by an easy-to-use e-service (it also negates to some extent the user benefits). In fact, one might interpret the new easy to use e-tax service as an extension of the state’s desire to collect more money from citizens rather than an effort to make taxpayers’ lives easier, as several interviewees did. Conversely, if you have only had easy experiences with the SII and the e-service and your return checks have been received in the mail on time, then this is evidence that they are capable and upright. Or, if your small business is able to increase its sales to the public sector then this is evidence for the increased opportunities for small and micro enterprises.

The final step in this dynamic is that these competing explanations are expressions of judgments of the value system, the underlying motivation, of the activities of a public sector entity. You can see the tax agency as fundamentally benevolent or malevolent. For example, ChileCompra either increases small business opportunities or favours large businesses, it is either transparent or nothing has changed. The evidence for adopting an interpretation in line with these competing values is the information gleaned from user experience. This evidence is then incorporated into a set of beliefs that align with that value and provides a coherent explanation for that behaviour. This explanation, then, is the user’s interpretation of the interaction and the consequent “knowledge” that they have gained to incorporate into their trust judgement.

Importantly, not all value tensions are equal with respect to their importance for e-services and building institutional trust. The data here suggest that those value tensions that are more directly linked to direct outcomes will be more important to the
trust dynamic. This gives a clue to when these different value tensions will become relevant. For example, the two value tensions that emerge with ChileCompra (equality versus competition, discretion versus transparency) are directly visible to suppliers through day-to-day interaction. Almost every transaction is an important data point that provides support for one explanation or another. On the other hand, both sides of the e-tax value tensions are not subject to the same amount of data points. For example, the power versus improved services dynamic only becomes an issue if there have been costs associated that bring attention to the power asymmetry. The self versus communal interest tension is predictably subjected to a lot of experiences that weigh in the self-interest value side, but precious few, if any, on the communal benefits side (especially considering the indirect nature of the benefits of taxes).

Limitations of the analysis
There are two important caveats to these findings. First, Chile is unique in the region as a country where corruption is low and not endemic to the system (Angell, 2005; Morris, 2004, 2006; Pollack and Matear, 1997). Consequently, issues of transparency and reduction of corruption might not enter into people’s day-to-day consciousness as readily as it does elsewhere in the region. Second, the two types of e-services offered are specific types of financial interactions with the government, where you might expect self-interest to weigh heavily in the equation. It is quite plausible that different motivations emerge as primary when interacting with a public health care, an educational services, or a e-voting system where different values might play a more salient role than self-interest (narrowly defined).

Conclusions and reflections
Hardin (1999, p. 30, 2000, p. 34) argues that while it is possible to trust people, it is impossible to trust institutions; people lack the knowledge of institutional structures and roles to truly call it trust, making it epistemically impossible. Therefore, it is better defined as confidence in government. Whether we call this institutional confidence or trust is a question of drawing an arbitrary line between where confidence ends and where trust begins. Ultimately, whether or not the trustworthiness cues contain enough information to make a well-placed judgement is academic. What is important is that there are clearly changes in peoples’ perceptions of government institutions through their interaction, whether it is in terms of the competence or motivations of the institution, and thereby of their overall trust (or confidence) in that institution. These perception changes are significant for their resultant manifestations in citizen behaviour such as compliance or support for redistributive programs (Cook et al., 2005, see Chapter 8).

However, this research does support Hardin’s (1999, pp. 30, 39) argument that institutional trust (or confidence) is built inductively through experiences and reputation. Where this research adds to Hardin is through focusing on the types of experiences. A central finding of this research is that when citizens interact with e-services, direct user outcomes tend to be powerful trustworthiness cues that can be highly influential in shaping citizens’ resultant interpretations of the behaviour of the public sector agency. Furthermore, the direction of the influence is mediated by individuals’ particular circumstance and value positions. It must be reiterated to avoid the risk of misinterpretation that this simplistic dynamic represents a tendency.
are, most certainly, a variety of other sources that will influence this dynamic, such as one’s trusting disposition and including previous experiences with the e-service and institution (McKnight et al., 2002a, b; Warkentin et al., 2002; Pavlou and Gefen, 2004).

A recent study provides some support for the argument made here. Averou et al. (2009) looked at the perceptions of trust in an e-voting system in Brazil and ultimately concluded that the crucial factor was that the institutions that oversaw the elections were highly trusted, and that was the source of trust in the system. However, in the reporting of their interviews of actual voters, voters mentioned two things foremost: the problem-free nature of e-voting (fast and uncrowded) and the speed of the election counting, both highly salient and personally relevant cues. Disentangling causality in pathways of trust formation is very difficult, but one explanation that is consistent with this study is that these new positive experiences are reinforcing past reputation and value judgements of the election institutions in Brazil. One would imagine that if the e-voting system had caused delays that this might have threatened this positive reputation, making the e-voting system a risky venture to undertake in terms of trust.

The findings of this research provide support for a focus on placing citizens’ at the centre of e-government. Services that provide efficiencies or direct benefits for the citizen, rather than the government, are the changes that will be most noticed by citizens. The integration of public institutions’ information systems to ease information flow will not be noticed because the public sector has managed this complex feat and increased internal efficiencies, but rather because it ultimately reduces the costs incurred by the citizen in terms of time, money and patience to take multiple trips to complete a single transaction. The tax service was seen as more competent because the tax returns arrived in the mail after a week and the wait times in lines were shorter, the manifestation of internal efficiencies, but not the efficiencies themselves. The research also suggests that while creating improved services, it is important not to do so in ways that dramatically increase the power asymmetry between the government and the citizen. If we are truly interested in building trust, we need to seek forms of service delivery that benefit citizens while, at a minimum, do not exacerbate the power imbalance or at best shift it towards the citizen.

Finally, while transparency is an admirable goal and central to democratic accountability arrangements, when associated with a government service it will most likely not have the sort of trust engendering implications, we might expect unless linked with tangible benefit. Transparency perhaps best shapes perceptions through indirect sources (e.g. civil society and the media) rather than something we would expect individual citizens to pick up on a day-to-day basis.

In conclusion, we would expect that regardless of the type and objectives of an e-government service, variations in salient trustworthiness cues, perceptions and interpretations will continue. Understanding this has important research implications, if we wish to understand the role of ICTs in altering the trust relationship between citizens and the government. In particular, it highlights the importance for more micro-level research that explores citizens’ interactions with and perceptions of different types of e-services.

Note
1. Some of the national and international accolades were: 2000 Sun Award for the Great Project of the Year, presented by SUN Microsystems, with reference towards the income tax
operation in 2000; 2001 Award for the Best Public Initiative of the Year for e-invoicing; 2002 United Nations Public Service Award, in the category Innovations in Public Service, for the online tax proposal; 2004 the Wharton-Infosys Business Transformation Award, presented to Commission Juan Toro, in the category of Technology Change Agent.

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**About the author**

Matthew L. Smith is a Program Officer at the International Development Research Centre in Ottawa, Canada. His work and research interests lie in the intersecting domains of openness, innovation, ICTs, and human development. He has published in a variety of outlets including *Communications for the Association of Information Systems*, *Information and Organization*, the *Journal of Human Development and Capabilities*, *Information Technology for International Development*, and has a forthcoming publication in the *Journal of Information Technology*. Matthew L. Smith received a PhD in Information Systems from the London School of Economics and Political Science in 2007. Matthew L. Smith can be contacted at: msmith@idrc.ca

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