

DEPARTMENT OF MANAGEMENT  
LONDON SCHOOL OF ECONOMICS AND POLITICAL SCIENCE



CONFIANZA A LA CHILENA:  
A COMPARATIVE STUDY OF HOW E-SERVICES  
INFLUENCE PUBLIC SECTOR INSTITUTIONAL  
TRUSTWORTHINESS AND TRUST

Submitted in Fulfilment of the Full Requirements for the  
Degree of Doctor of Philosophy, September 2007

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## DECLARATION

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## ACKNOWLEDGEMENTS

It is a real pleasure to thank all of those who have helped and supported me over the last few years, making this thesis possible.

From my first encounter with my supervisor, Dr. Madon, I knew that I was dealing with someone special. How little I knew! My appreciation for her patience and wisdom has grown every day that I have had the pleasure to work with her.

There are many in the (now) information systems and innovations group at the LSE to whom I also have a debt of gratitude. It was uncanny how every time I entered into a discussion with someone I always came out of it a bit wiser, and my work was invariably improved. In particular I would like to thank my de facto second supervisor Dr. Kallinikos who was a mentor, adviser, and friend. Also, I would be remiss if I did not mention my appreciation for Dr. Avgerou and Dr. Cordella who were both generous with time, advice, and with whom I had the sincere pleasure of working. Special thanks go to Aaron Martin for his editing skills and generosity. And, of course, my gratitude and affection go out to all of those fellow PhD students who made my time at the LSE so wonderful, you know who you are.

This research was made possible with the cooperation and help of a variety of individuals and institutions in Chile. In particular, I owe many thanks to the Instituto de Informática Educativa at the Universidad de la Frontera in Temuco for providing me with such incredible access to resources and research sites. It is no exaggeration to say that they quite literally made this research possible. I would also like to extend my gratitude to all those individuals in the SII and the DCCP who opened up their doors to me, not just once, but a few times. In particular, I must extend my gratitude to Matthias Klingenberg at the DCCP who was extremely helpful and very patient with all my requests for information.

Lastly, but most importantly, I would like to thank my family, new and old. To my amazing and loving wife, Carolina, who supported me mentally and at times financially, what can I say? She knows how much I love and appreciate her. To my new family, the love and prayers helped make the last year light work. And finally, it is with an emotional and happy heart that I thank my parents who are unwavering in their support and love. And to my father – how many theses does a man have to read and comment on? I don't know what more a son could ask for. It is to my parents that I dedicate this thesis.

## ABSTRACT

New information and communication technologies bring the enticing potential to improve the efficiency, effectiveness, and transparency of government administration and services. One theorised outcome of e-government that has received little empirical attention is its ability to build citizens' trust in government. This thesis contributes to this knowledge through a comparative study of the impacts of two Chilean e-services on citizens' trust in the institutions of democratic government. This research traces the causal processes from the influence of the e-services on the trustworthiness of public sector institutions to how, for whom, and in what circumstances the e-services directly affect citizens' trust in those institutions.

The research approach draws from social realist assumptions and, in particular, the ontology offered by critical realism. This approach allows for the development of a novel e-government and institutional trust framework that integrates a wide range of trust theories from political science, sociology, psychology, and information systems. Extending the framework, the thesis proposes fifteen middle-range causal hypotheses that link e-services to institutional trustworthiness and citizens' trust in those institutions. These hypotheses are then empirically grounded in case-specific hypotheses which are subsequently tested and refined through both a within-case analysis and cross-case comparison.

Within limits, this study provides insight into the potentials and limits of e-government to improve the trustworthiness of the public sector. Furthermore, by adopting a street-level epistemological perspective of citizens' interpretations and explanations of e-service interactions, the thesis contributes to the micro-level understanding of the interactions of e-services and citizens' trust in public sector institutions. A central finding is the importance of self-interested concerns and direct user benefits in shaping perceptions and interpretations of the citizen-e-service interaction. The findings also provide empirical insight into the theoretical and practical importance of discerning between theories of how to build trustworthy institutions and trust in those institutions.

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## ACRONYMS

AI	Artificial intelligence
CC	ChileCompra
CGR	Contraloría General de la Republica
DAE	Dirección de Aprovisionamiento del Estado
DCCP	Dirección de Compras y Contratación
IADB	Inter-American Development Bank
IIE	Instituto de Informática Educativa
IS	Information systems
ICT	Information and communication technologies
PMG	Programa de Mejoramiento de Gestión
PSPS	Public sector purchasing system
SII	Servicios de Impuestos Internos
VAT	Value-added tax (in Spanish, IVA)
WB	World Bank

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# 1 INTRODUCTION: TRUST AND E-GOVERNMENT

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Trust has been a concern for philosophers since the ancient Greeks and undoubtedly beyond (O'Hara 2004). The trust of everyday vernacular is something that almost everyone has experience with, yet is a social intangible that, like describing a feeling, often confounds articulation. It is essential to our lives as social creatures, but is most powerful when it remains in the background. Only when trust is compromised do we see how it weaves its way into our social milieu of interactions, expectations, and relationships.

Trust is hypothesised to have almost mythical importance as shown by its various roles in contemporary social theory. Without some level of basic trust in the stability of the natural and social worlds people would be racked with existential insecurity and would not be able to get out of bed in the morning (Giddens 1990). Trust is a key element of social relationships and even love (Solomon and Flores 2001). It facilitates social coordination by providing reassurance when acting in times of ignorance of others' behaviour (Gambetta 1988a, Offe 1999, p. 43). Trust also provides an alternative to coercive methods of control for shaping social behaviour (Coleman 1994, Reed 2001). It is considered a public good that "makes possible production and exchange" (Dasgupta 1988, p. 64).<sup>1</sup> Social capital, of which trust is a central component, is theorised to play a role in the development of good democratic institutions (Putnam 1993). In short, trust is thought to have an important causal, and often stabilizing, influence within the web of our social relations.

As the world has rocketed towards modernity, the relevance of trust in society has arguably undergone a transformation. The contemporary world is characterised by an increased interconnectedness, speeding up, and deepening impact of a variety of inter-

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<sup>1</sup> For example, taking a macro perspective, Fukuyama (1995) argues that different rates of economic growth of countries can be attributed in part to whether they are low or high-trust societies.

regional flows (Appadurai 2002, McGrew 2000).<sup>2</sup> This increased inter-linkage and interdependency brings increased risks (Giddens 1990) extending the vulnerabilities of individuals while increased complexities reduce chances for individuals to monitor vulnerabilities (Warren 1999c, p. 3). The benefits of a more complex, differentiated, and diverse society can only be generated when balanced by trust:

“Where there is trust there are increased possibilities for experience and action, there is an increase in the complexity of the social system and also in the number of possibilities which can be reconciled with its structure, because trust constitutes a more effective form of complexity reduction” (Luhmann 1979, p. 8).

Trusting anonymous others and institutions provides the assurances that enable coordination of actions over large domains of space and time (Giddens 1990).<sup>3</sup> Given this role of trust, it is no wonder that trust has become a major area of research in the 21<sup>st</sup> century (O'Hara 2004, p. 23).

Many of the processes of modernisation are not abating as witnessed by the contemporary spread of e-government. Given the centrality of information technologies to public sector bureaucracies, it is no surprise that the emergence of new ICT and the Internet has provide the impulse for a global diffusion of e-government applications (Heeks 2005). If Giddens is right, as governments introduce new ICT into government (e-government), trust will only gain in importance.<sup>4</sup>

While the introduction of e-government systems may increase the need for trust, their impact on building this trust is, at present, both empirically and theoretically unclear

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<sup>2</sup> Processes of globalisation and technology are interacting as mutually reinforcing drivers of change (Hanseth and Braa 2000, p. 39), fundamentally transforming work and life, at least in the western context (Walsham 2000).

<sup>3</sup> “Trust in abstract systems is the condition of time-space distancing and of the large areas of security in day-to-day life which modern institutions offer as compared to the traditional world. The routines which are integrated with abstract systems are central to ontological security in conditions of modernity” (Giddens 1990, p. 113).

<sup>4</sup> Several recent theorists have argued that this situation actually makes trust less important, “trust is no longer the central pillar of social order, and it may not be very important in most of our cooperative exchanges” (Cook *et al.* 2005, p. 1). This position turns Giddens’ relationship of trust and modernity on its head. Giddens argued that with the breakdown of tradition brought along by modernity has made trust a central part of one’s dealing with the abstract systems in modern society (Giddens 1990). Instead, Cook *et al.* argue that the “long-term change from small communities to mass urban complexes, mere coordination and state regulation have become far more important, we argue, while the *actual role of trusting relations has declined relatively*” (Cook *et al.* 2005, p. 1). This issue will be taken up in detail in chapter 3.

(Avgerou *et al.* 2006, Kearns 2004, West 2005). The introduction of ICT into government and leveraging the interconnectivity of the Internet provide new potential avenues for altering,<sup>5</sup> perhaps revolutionising democratic forms of governance. These changes are, however, double-edged. For example, Castells (2001) argues that at the turn of the century, the Internet and new ICT are working to “deepen the crisis of political legitimacy” by promoting the “politics of scandal” rather than to foster knowledge and participation of citizens. Indeed, competing dynamics are most likely at work in any democracy; pulling, pushing, and shaping the resultant institutional social, economic, legal, and political framework.

These issues lie at the heart of this thesis. In particular, how do the changes brought about by e-government influence the citizen-government relationship and in particular, citizens’ trust in government? This chapter provides a brief introduction and overview of this thesis. Section 1.1 begins with a discussion of the underlying issues that contextualise and justify research on trust and e-government. This discussion motivates the research by arguing that there is a significant causal relationship between trust, democracy, development, and e-government (1.1.1). Furthermore, the limitations of the theoretical and empirical knowledge of the relationship between e-government and trust are highlighted, demonstrating a clear gap in our knowledge that will be this research’s niche (1.1.2). Then section 1.2 dives into the research on trust performed in this thesis. The goal of this section is to provide sufficient detail about the research approach, conceptual framework, and research methods to give a working understanding of the thesis. If the reader is interested in more details regarding the research methodology, data analysis techniques, and research performed, these are available in Appendix I. Finally, section 1.3 concludes by laying out the structure of the thesis.

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<sup>5</sup> For example, the shift of citizen-government interaction from citizen to civil servants to faceless e-services mark a potentially significant qualitative change to a central institutional access point that is significant in the negotiation of the citizen-government relationship (Giddens 1990).



## 1.1 ON TRUST AND E-GOVERNMENT

Trust has become a major area of research and theory in contemporary political science given the emergence and spread of democracy. It is especially topical given the myriad of states that have transitioned from authoritarian to democratic regimes. The citizen-government relationship is fundamentally altered in the movement from authoritarian to democratic modes of governance. A democratic form of government places government at the same level as the rest of society— as the saying goes; it is a “government of the people and for the people”. Thus, the government is no longer above and beyond society, but instead is on the same plane to be judged with the same criteria that we use for other people and other organisations. This change has precipitated the concepts of trust and distrust to enter into the world of modern political theory (Ankersmit and te Velde 2006). Furthermore, any theory of representation that envisions a legitimate government must contain some account of trust (Williams 1998, p. 33). The relative importance of trust (and distrust) to democracy depends upon the definition of trust and democracy (Barber 1983, p. 93, Warren 1999b). However, it is possible to identify several ways that trust is intrinsic to democracy; for example, if people have trust in the democratic processes of decision making then deliberation rather than coercion becomes possible as a way to make policy (Warren 1999b).<sup>6</sup>

Not surprisingly, the interlinked concepts of trust and democracy have gained in importance for those concerned with governance in the development context. Since the fall of the Berlin wall, there has been a new wave of democratisation in the world.<sup>7</sup> Arguably, without some basis of citizen trust in the new regime, a successful transition from authoritarian to democratic forms of governance will be threatened (Offe 1999, p. 43). Trust in a regime helps supply stability that is so crucial during this transition and democratic consolidation process (Norris 1999a, p. 27) as the loss of trust is thought to

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<sup>6</sup> Cole (1973) identified three ways through which trust enhanced democracy: “(1) trust increases the mutual communication essential for a democratic regime; (2) trust makes possible organizations through which citizens can promote their goals; (3) conflicts are more threatening, and thus democracy is imperilled, among people who distrust one another” (p. 809).

<sup>7</sup> This is especially significant in Latin America, when between 1958 and 1975 there was a “reverse wave of democracy” when several democracies fell to military coups; Peru (1962), Brazil and Bolivia (1964), Argentina (1966), Chile and Uruguay (1973) (Norris 1999a, p. 4).

imply a loss of support for a regime (Easton 1975, Hetherington 1998) and ultimately can undermine regime legitimacy (Hetherington 1998, p. 792). Without a requisite level of legitimacy and trust, citizens may withdraw voluntary compliance of governmental demands and regulations, or even actively resist governmental policy (Levi 1998, p. 88, Nye Jr. and Zelikow 1997, p. 277), rendering the government incapable of performing the tasks required of it (Nye Jr. and Zelikow 1997, p. 276).

Low levels of citizen trust and compliance can form a vicious cycle: low legitimacy results in reduced compliance and decreasing government performance that further erodes trust (Nye Jr. and Zelikow 1997, p. 277). Without broad public support for proactive solutions, problems may be left to linger, further exacerbating the issue, and maintaining discontent (Hetherington 1998, p. 804). If hard decisions must be made, low levels of trust mean that decisions are perceived as unfair, resulting in bitter politics and lower levels of compliance with the law (Mansbridge 1997, p. 152). In no-win situations, if there is minimal trust in those who make decisions, the losers are unlikely to view the decisions as fair and this results in bitter politics (Lawrence 1997). This dynamic relationship between trust, support, politics, and governmental performance implies that if trust is lost, it can be difficult to recover, without some exogenous intervention or change (Hetherington 1998, p. 791).

Conversely, citizens' trust in government brings many benefits. For example, trust helps to reduce complexity and gain efficiencies in public sector administration (Raab 1998). Trust also allows governments to benefit from the voluntary compliance of citizens (Tyler 1998, p. 290) as it counters the more resource costly mechanisms of coercion and control. For example, in research on tax compliance, several factors (other than coercion) were found to be crucial to tax compliance, including feelings of tax duty (obligation), trust in government, and trust that others would pay their share of taxes (Murphy 2004, Scholz 1998). Furthermore, lack of trust may not only imply non-compliance but it will also require the increased building of "non-productive" regulations and bureaucracy to counter that lack of trust (Levi 1998). Given the long-term nature of the citizen-government relationship, forfeited trust may potentially entail larger losses than more

short term relationships (Hardin 1993, p. 507). Gambetta summarises the situation as follows,

“... societies which rely heavily on the use of force are likely to be less efficient, more costly, and more unpleasant than those where trust is maintained by other means. In the former, resources tend to be diverted away from economic undertakings and spent in coercion, surveillance, and information gathering, and less incentive is found to engage in cooperative activities” (Gambetta 1988a, p. 221).

Trust also has important implications for the possibilities of social and economic development. Higher levels of trust mean warmer feelings for elected officials and political institutions and improve the policy mood, providing greater support for government spending and activity (Chanley *et al.* 2000). Citizens’ trust in the process increases the ability of politicians to implement long-term policies that might be unpopular or not in their direct interests (Hetherington 1998, p. 803, Mishler and Rose 2005, p. 1052). High levels of trust have also been found to be linked to higher spending for egalitarian policies (redistribution, education) (Uslaner 2002).<sup>8</sup> Crucially, for development, trust helps provide stability, a key component for sustaining consistent economic growth with its numerous beneficial developmental impacts.<sup>9</sup>

Finally, citizens’ trust in the government, when warranted, can arguably be seen as not just a means to an end, but an end in and of itself. Trust in government increases a citizen’s capability to achieve well-being. Sen writes of trust in terms of “Transparency guarantees” that act as an instrumental freedom to “prevent corruption, financial irresponsibility and underhand dealings” (Sen 1999, pp. 39-40). Furthermore, trust in government can be seen to free up time and resources for the citizen, enabling them to engage in other productive activities,

“Behaviourally, the more trusting an individual is the lower the personal investment she will make in learning about the trustworthiness of the trusted and

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<sup>8</sup> There is an important question about the causal connection here, does trust bring about good institutions, or do good institutions build trust?

<sup>9</sup> “...in a global economy, political stability attracts capital; education provides crucial skills; basic research in science and technology enhances competitiveness and living standards, and protection of intellectual property rights become more important. Provision of such public goods depends on effective government” (Nye Jr. 1997, pp. 4-5).

in monitoring and enforcing his compliance in a cooperative venture” (Levi 1998, p. 78).

The alternative to trust, a “consistent and strategically energetic distrust,” will bring about many negative consequences such as suffocating political energy and creativity (Dunn 1988).<sup>10</sup>

#### 1.1.1 THE DECLINE OF TRUST AND THE PROMISE OF E-GOVERNMENT

In the last thirty years, a series of survey studies have indicated that there has been a steady decline of trust in institutions of democratic governance (Nye Jr. *et al.* 1997). Trust in democratic government institutions is also low in Latin America (Latinobarómetro 2005, UNDP 2004a) where it is especially a concern in countries such as Chile, Brazil, and Argentina that have recently transitioned from authoritarian to democratic modes of governance.

Enter e-government. From the very beginning of the Internet, people quickly began to theorise its potential for social and political transformation (Atkinson and Ulevich 2000, Kakabadse *et al.* 2003).<sup>11</sup> The technocratic logic of e-government brings the possibilities of many positive changes (e.g., see Table 1). Most significantly, as we will see in Chapter 4, there are many pathways through which e-government applications might build citizens’ trust in democratic institutions of government. E-government might even have the potential to bring about a transformative shift in the nature of governance and the citizen-government relationship – with significant implications for restoring trust in

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<sup>10</sup> Furthermore, living in a society where one believes that people can be trusted in general also positively affects one’s happiness (Layard 2005, pp. 64, 69), and in this sense constitutes a development aim in and of itself.

<sup>11</sup> West summarises the zeitgeist as follows,

“Writers quickly seized on these features to argue that the Internet would usher in a new era that would transform government performance and democracy itself. Citizens would communicate quickly and easily with public officials. Economies of scale would allow technology to improve service delivery in the public sector. Bureaucrats would become more responsive to the concerns of the citizenry. Public trust would be restored because government would operate in an effective, efficient, and responsive manner. Direct democracy and citizen participation in elections would be facilitated because the cost of information acquisition and political communications would drop to near zero” (West 2005, p. 165).

government (Bellamy and Taylor 1998, West 2005). Could e-government be the exogenous factor needed to turn around the trust deficit?

<i>Good governance goals</i>	<i>How e-government can help</i>
Increasing transparency	<ul style="list-style-type: none"> <li>• Dissemination of government rules and procedures; citizen's charters; government performance data to wider audience</li> <li>• Disclosure of public assets, government budget; procurement information</li> <li>• Making decisions of civil servants available to public</li> </ul>
Reducing administrative corruption	<ul style="list-style-type: none"> <li>• Putting procedures online for easy transactions monitoring</li> <li>• Reducing the gatekeeper role of civil servants through automated procedures that limit discretionary powers</li> <li>• Eliminating the need for intermediaries</li> </ul>
Improving service delivery	<ul style="list-style-type: none"> <li>• Less time in completing transactions</li> <li>• Reduction of costs associated with travel for citizens to interact with government</li> <li>• Improving government's ability to deliver service to larger segment of population</li> </ul>
Improving civil service performance	<ul style="list-style-type: none"> <li>• Increasing ability of managers to monitor task completion rates of civil servants</li> <li>• Improved efficiency by automating tedious work</li> <li>• Increased speed and efficiency of inter- and intra-agency workflow and data exchange</li> <li>• Eliminating redundancy of staff</li> </ul>
Empowerment	<ul style="list-style-type: none"> <li>• Providing communities with limited or no access to government with a new channel to receive government services and information</li> <li>• Reducing the brokerage power of intermediaries</li> </ul>
Improving government finances	<ul style="list-style-type: none"> <li>• Reducing cost of transactions for government processes</li> <li>• Increasing revenue by improving audit functions to bet track defaulters and plug leakages by reducing corruption</li> <li>• Providing better control of expenditure.</li> </ul>

**Table 1 Overview of potential outcomes, adapted from “How can E-government Impact Good Governance?” Source: (Bhatnagar 2004, pp. 37-38).**

So far, the reality of e-government has yet to match the hype. E-government is still in the beginning phases around the world, at most providing information and service delivery applications but not truly revolutionizing the citizen-government relationship (West

2005). One reason for this is that there have been more failures than successes in the implementation of e-government. Heeks (2002, 2003) calculates that developing countries have had a success rate of only fifteen percent.<sup>12</sup> Comparatively, however, this is not drastically worse than the failure rate in industrialised countries which has been estimated at around sixty-percent (United Nations Department of Economic and Social Affairs 2003). Such failures can bring significant negative implications, including the potential loss of credibility and trust of citizens in the government (Heeks 2003, Heeks 2005).

Failures are to be expected as innovators experiment with new technologies. However, the high level of failure has not diminished the global demand and spread of e-government implementations. And with the few successes, the world is just now beginning to experience the potential for significant changes to government administration and services. Empirically, evidence is emerging that e-government can indeed change people's perceptions of government (West 2004, West 2005). Now is the time to begin to assess and understand how these new changes are altering citizens' trust in government. By understanding these initial changes it may be possible to better understand the longer-term positive trends that may be emerging as a result of e-government applications.

### 1.1.2 THE CURRENT STATE OF RESEARCH

Theoretically and empirically, a good deal of work has been done to try to discern the links between governance and perceptions of trust in government (e.g. Braithwaite and Levi 1998, Chanley *et al.* 2000, Cook *et al.* 2005, Espinal *et al.* 2006, Hardin 1991, Hardin 1998, Hardin 1999, Joseph S. Nye *et al.* 1997, Levi 1998, Levi and Stoker 2000, Mishler and Rose 2001, Mishler and Rose 2005, Norris 1999b, Sztompka 1999, Warren 1999d). For the most part, research has consisted of macro-level analyses of surveys that try to tease out correlation and causality between political, economic, and social factors and changes in trust in government. While the research has not developed any conclusive findings, it is clear that trust in government and its decline "is a complex phenomenon

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<sup>12</sup> Heeks classified thirty-five percent as total failures and fifty percent as partial failures.

with multiple potential causes” (Chanley *et al.* 2000, p. 240). In an overview of the current state of research on governance and trust, one conclusion made by the authors was the clear need for more micro-level studies of trust to supplement the macro studies to better understand the complexities of the phenomenon (Levi and Stoker 2000).

There is considerably less research on and understanding of the connections between e-government and citizen trust in government. In fact, while progress has been made on understanding the impacts of e-government on the internal functioning of government, there is very little knowledge about the wider social, economic, and political implications attributable to e-government projects (Avgerou *et al.* 2006, p. 2, Weare 2002). Like the political science research, the few studies that do try to link e-government to trust in government are also almost entirely macro-level surveys work (e.g., Moon 2003, Parent *et al.* 2004, Tolbert and Mossberger 2006, West 2004, West 2005). It is questionable, however, how well these surveys provide an understanding of the underlying dynamics at play. The interaction of politics, governmental institutions, ICT, and citizens defy simple single-theory explanations (Weare 2002, p. 662). Indeed, it is a dubious proposition that the conceptual complexity of trust can be adequately captured by survey work (Gambetta and Hamill 2005).<sup>13</sup>

Two recent studies on trust have heavily influenced and motivated this thesis. These studies represent a break from the use of cross-case surveys by applying a more intensive case study approach to better understand the dynamics of trust. The first is a recent study by Gambetta & Hamill (2005) on how taxi-drivers make trust-judgments of potential fares in Belfast and New York. While this study is not related to either politics or e-government, it provides an instructive example of the advantages of case study approaches to studying trust. The second is an empirical study conducted by Avgerou *et*

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<sup>13</sup> It is not entirely clear a priori that the high causal complexity involved in trust rules out survey (cross-case) designs (Gerring 2007). A better justification for employing a case study to study trust involves other considerations, as will be discussed shortly.

al (2005)<sup>14</sup> for the Inter-American Development Bank (IADB) that provides the empirical starting point for the research in this thesis. The goal of that study was the development of a methodology to assess the potential for e-service applications to impact on citizens' trust. The focus of the IADB study was almost entirely on the institutional component of trust; that is, how e-government applications are implicated in the development of trustworthy institutions of government.

Overall, the current state of empirical research and understanding of the social impacts of e-government matches neither e-government's pervasiveness nor the theoretically inspired discourse that propels it. A strong argument can be made that the state of theory is not yet ready for large-N cross-case studies with clearly identifiable dependent and independent variables.<sup>15</sup> At this stage, it is crucial supplement the relatively nascent set of theories that link e-government changes to citizens' trust in government. This study attempts to do just that.

## 1.2 THE RESEARCH

This study begins with a relatively 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: *how, for whom, and in what circumstances do e-services impact on citizens' trust in government?* Another way of framing the question is: *what are the causal mechanisms that connect e-services to changes in citizens' trust perceptions of government?*

### 1.2.1 CONCEPTUAL FRAMEWORK

As a starting point, this thesis develops a systematic approach to thinking about e-government and trust. While the current state of theory is not well developed, there are a wide variety of disciplines that have a lot to say about the types of causal mechanisms

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<sup>14</sup> Disclosure: I was one of the authors of this study, and it forms part of the data and theory that play a part in this thesis. This study was later extended (without my participation) to study Brazil's electronic voting system (Avgerou *et al.* 2007).

<sup>15</sup> That said, these studies do providing some insight into the relationship between citizens, the activities of government, and trust – constituting a theoretical starting point.



that might connect e-services to citizens' perceptions, including theory from political science, sociology, psychology, information systems, and public administration. The research here exploits the current state of knowledge as a theoretical starting point and a means to generate an initial set of research orienting theories. For an overview of the objective of the research, areas of discipline, and theory used in this thesis, see Table 2.

Social object	Description of research area	Sources of theories
<b>Trust</b>	<ul style="list-style-type: none"> <li>• What is trust? What does it consist of? What are the outcomes of trust? How is trust built/destroyed?</li> <li>• How do people interpret trustworthy cues, which cues do they pay attention to? How/why do people turn particular interpretations into trust judgements?</li> </ul>	<p><b>Sociology</b> Hardin, Sztompka, Seligman, Luhmann, Giddens, Gambetta</p> <p><b>Social-psychology, psychology</b> Hardin, Braithwaite, Gambetta</p>
<b>Trust in the state, institutional trust</b>	<ul style="list-style-type: none"> <li>• What constitutes a trustworthy public sector?</li> <li>• What types of experiences are important for a trustworthy state?</li> </ul>	<p><b>Political science</b> M. Levi, Harding, Cook, Warren, Norris, Zucker</p>
<b>E-government (ICT in public administration, bureaucracy)</b>	<ul style="list-style-type: none"> <li>• Changes in public sector agency administration and services due to introduction of ICT</li> </ul>	<p><b>Information systems, organizational theory, public administration</b> J. Fountain, J. Kallinikos, Dunleavy, Heeks, Weber, Bhatnagar</p>
<b>E-services and building trust in the state</b>	<ul style="list-style-type: none"> <li>• How do e-services influence institutional trust? What factors influence the perception and use of e-services?</li> </ul>	<p>Empirical work: Moon, West, Tolbert &amp; Mossberger, Avgerou et al.</p>

**Table 2 Social objects, research areas, and major theorists employed in the development of the conceptual framework for thinking about the relationship between e-government and trust.**

The ability to draw from such a wide range of sources is made possible in part by the conceptualisation of trust in this thesis. Incorporation of a variety of theories is enabled by seeing each of the three standard accounts of trust as contributing important theoretical and empirical knowledge about causal mechanisms operating in a particular area of social reality. While there may be some overlap between the perspectives, the

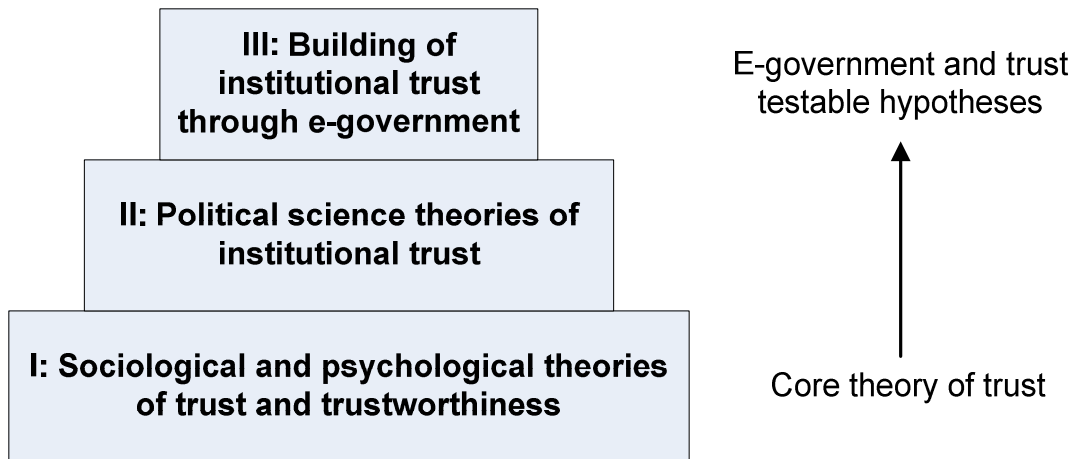
essential focus is different and therefore each of the three perspectives can be integrated coherently as contributing parts to a larger whole.<sup>16</sup>

Building up the conceptual framework for e-government and trust requires three levels of theory integration where each level provides the structure upon which the subsequent level is constructed (see Figure 1). The first level draws from sociological, social-psychological, and psychological theories of trust to establish the working definition of trust. Three analytical distinctions are made when conceptualising trust that are central organising features for this study:

- **Trust and trustworthiness** - Trust is split into two concepts that are seen as both independent and interrelated: trustworthiness and trust. Consequently, they are analysed as both independent from each other (e.g. can we consider the tax-agency worthy of trust? Do citizens trust the tax-agency?) and related to each other (e.g. what does a citizen perceive as trustworthy when making trust judgements?)
- **Trustworthiness cues** - If trust and trustworthiness are distinct, yet interrelated, there must be something that connects them. This connection is conceptualised here as the communication from the trusted (the public agency) to the truster (the citizen) of indicators of trustworthiness, or trustworthiness cues.
- **Motivation and competence** - Analytically, trust can be divided into two dimensions of motivation and competence (Kee and Knox 1970). Most research conflates these two dimensions that are independent and thus are best assessed separately (Hardin 2000, p. 36).

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<sup>16</sup> The underlying assumptions that make this possible are spelled out in chapter 2.



**Figure 1** Levels of theory. The starting point for building theory is the general understandings of trust from sociology and psychology. This is followed by theories of institutional trust, generally drawn from political science. The final layer includes theories of building institutional trust through e-government, a very specific instantiation of institutional trust. The final stage of theory requires a detailed understanding of the interaction of ICT in the public sector (e-government). This is a movement from a core theory of trust to a specific instance of trust.

Building upon the trust foundation, the second level integrates political science theories of trust in government, and specifically, institutional trust. This level provides the framework of how this research will approach the question of what it means to trust in government, and if such trust is even possible. The third level is broken up into two parts. The first part provides a theoretical understanding of the dynamics of ICT in the public sector providing insight into the types of changes that can be expected with the introduction of e-government. The second part of level three then integrates all of the theory and draws from empirical work to form the final sets of testable hypotheses that connect e-government to institutional trust.

There are two important things to note about the conceptual framework developed and applied in this thesis. First, the analytical distinction between trust and trustworthiness allows for the tracing of the complete causal chain, from implementation of e-government to citizens' trust in government. This can be broken down into three distinct but inter-related short-range processes: 1) the implementation of ICT towards the goal of building trustworthy institutions of governance, 2) the interaction of citizens with the e-services and the communication of cues of trustworthy institutions, and 3) the process of

perception and interpretation of these cues that change citizens' trust in institutions of democratic governance.<sup>17</sup>

Second, the movement up the pyramid, from the nadir of trust to the zenith of e-government and trust, can be seen as a progression from more abstract towards more concrete theory. The starting point is trust, which is theorised in its most abstract sense, attempting to abstract out the necessary rather than contingent components. The final stage is the development of e-government and trust theory that can be thought of as specific instances of trust theories. This means that the independent and dependent variables (e-service and citizen trust respectively) are disaggregated into a variety of component parts. For example, within the analytical distinction of competence and motivation, there are many dimensions (e.g. increased efficiency or aligned interests) that represent potential causal pathways from the e-service to trust. These theories are then extended once more based upon the particularities of the case under study to form case specific hypotheses that are now close enough to reality to be empirically tested and refined.<sup>18</sup>

The conceptual framework design provides some benefits. First, it has a tight link between different levels of theory. This means that refinements to the case specific hypotheses can be used to comment on the more abstract theory. For example, if it is found that increased efficiency does not lead to trust for a particular reason, it may provide an important modification to the higher level theory relating competence to trust

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<sup>17</sup> This focus on short-term processes can be justified on two fronts. First, except for instances of radical change, long-term trends are often the product of multiple short-term social changes. This is especially true when it comes to the consolidation of new democracies. Political views do not often change overnight. For example, it took over twenty years from the end of the Second World War for a majority of West Germans to reject the claim that Hitler was one of Germany's greatest statesmen and take pride in their new political institutions (Inglehart 1999, pp. 104-105). Trust in government, as discussed above, is a crucial indicator of political support and is thus considered integral on the path to consolidating democratic values and democracies themselves. Second, the aim of this research is to extract generalisable knowledge which will hopefully contribute to a larger project of systematic knowledge accumulation to enable informed application of new e-government projects.

<sup>18</sup> A word about words – theory and hypothesis are not too different in terms of meaning. Here we reserve the word hypothesis for those theories that emerged from the within-case empirical analysis that predict particular outcomes. The word theory is used for the e-government and trust theory that is developed in chapters 3 & 4. These theories also predict and are tested and refined during the course of this thesis.

of which efficiency was a sub-set. It also provides a set of theories that can be tested and refined in other research situations by differentiating between more abstract theories and their case specific instantiations. This allows for the flexible deployment of these theories in a variety of contexts, while remaining tightly enough linked to provide empirical feedback on the more abstract theory. There are two other benefits that deserve mention as they in part justify the applicability of this framework to the research subject. First, the framework provides an account of how to link up macro-level and micro-level accounts of trust into the analysis, something that has been lacking in research (Levi and Stoker 2000, p. 500, Lewis and Weigert 1985, pp. 974-975). Crucial in this linkage is the focus on the “demand-side” (from the perspective of the citizen interaction with e-services) of e-government, which has also been largely absent in the literature (Reddick 2005). Second, there is also a dearth of empirical research that combines theory of ICT with theories of bureaucracy (Jain 2004).<sup>19</sup> Public administration literature has largely ignored the element of ICT for a variety of reasons (Dunleavy *et al.* 2006), and IS research often fails to incorporate disciplines such as public administration and political science (Anderson 2004). This thesis integrates theory from across these disciplines and applies this integration in the empirical work.

### 1.2.2 RESEARCH STRATEGY AND DESIGN

To tackle the research question, a comparative case study research strategy was chosen (Gerring 2007, Yin 2003). Two cases of e-government services in Chile were selected: an e-tax administration and a public sector e-procurement system. The e-tax administration system is the Chilean Tax Authority’s online portal that allows for a wide range of tax related transactions. In particular, the case focuses on the online income tax service that enables and facilitates the completion of income tax through the Internet. The public sector e-procurement system (ChileCompra) is an online portal for public sector purchasing currently used by most of the federal and municipal institutions in Chile. The portal includes online processes for most stages of the procurement process including the public tendering of a purchase order and receiving bids, as well as the publication of public sector purchasing activities.

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<sup>19</sup> Dunleavy *et al.* (2006) is a notable exception.

The two e-service cases were selected for a combination of pragmatic and theoretical reasons. Pragmatically, each e-service was already studied as a part of the 2004 IADB study that provided the launching pad for the rest of the research (see 1.1.2). Highly relevant data on the trustworthiness implications of these e-services had already been collected, as well as having established essential contacts for future research access. Theoretically, these two e-services provide a unique research opportunity as they are both quintessential success stories with pervasive uptake and impact on Chilean society. Indicative of their success is their extensive local and international recognition, having received numerous awards and their common description as the biggest e-government successes in Chile (e.g. Panzardi *et al.* 2002). This provides the opportunity to study successful ICT implementations in the development context. Studying successful implementations arguably has not received enough attention in the literature and can provide important and different insights than studies of failures (Krishna and Walsham 2005). Finally, as both cases are in the Chilean context, this allows for the potential ruling out of many exogenous variables as sources of variation.<sup>20</sup>

The two cases do not adhere to a single, elegantly constructed research strategy, but rather consist of the integration of three data rich research studies. The author was fortunate enough to participate in two research projects, both of which had the two Chilean e-services as a focus of study:

1. **IADB project** - a comparative case study of four e-services in Chile and Brazil with the goal of developing a methodology for the assessment of the impacts of e-services on trust. This study provides essential data on the impact of the e-services on institutional trustworthiness.
2. **World Bank project** – a study of the social impacts of e-services employing both interviews and surveys. This study also provides important interview and survey

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<sup>20</sup> A benefit, and a problem, for the design is that both cases happened around the same time in political and cultural environment. This means that it is possible to hold several important variables constant when performing the cross-case comparative. However, it also means it is impossible to eliminate, or to completely identify the role of, these factors as influences on the dependent variable.

data on institutional trustworthiness, as well as survey data of users' perceptions of the e-services.

These two pieces of research were then supplemented by the author gathering a new body of data with the focus on studying trust from the perspective of the e-service users. All three of these sources of data (the IADB project, the WB study, and the author's research) form the inputs to the two e-service cases.

There are a variety of reasons why a case study strategy was chosen. The central reason is the appropriateness of case studies for asking in-depth causal how, and why questions, as well as for research sites where no experimental control is possible (Yin 2003, p. 5). A case study approach also allows for the integration of data from the three different pieces of research. Furthermore, a case study can employ the simultaneously theory-driven/deductive and theory-building inductive approach (George and Bennett 2005, Gerring 2007) desired here.<sup>21</sup> The key to accomplishing this is to have an orienting conceptual framework that includes testable hypotheses and orients theory while maintaining a space for some exploration and serendipity during the research process.<sup>22</sup>

### 1.2.3 DATA COLLECTION

Studying trust is not straightforward, and there is considerable debate on the relevant dependent and independent variables and the best instruments to measure or study trust (Hardin 2002b, Kee and Knox 1970, Levi and Stoker 2000).<sup>23</sup> A common approach has been the use of surveys that ask some variation of a question that asks for people's

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<sup>21</sup> It is possible for case studies to be used for both theory-testing and inductive theory generation, although usually they come at different points in a research programme (George and Bennett 2005, Gerring 2007). This is accomplished through a structured, although not rigorous, design. Arguably the state of theory does not allow for a more rigorous design at this time, "any rigorous research design in this area would be premature and would have to make arbitrary assumptions on the nature of the formation of trust in democratic institutions of government" (Avgerou *et al.* 2006, p. 3).

<sup>22</sup> Although the original execution of the research was done without the knowledge of the "structured case design" (Carroll and Swatman 2000) the approach is highly similar, and has already been applied to e-government evaluations (Grimsley and Meehan 2007, Irani *et al.* 2005). The central idea is that research is conducted in loops where theory is brought into contact with data and then refined and then the loop begins again. Furthermore, the use of process-tracing (see Appendix I) allows for the research to follow what is happening on the ground, not just what the theories predict, and is thus helpful in the inductive generation of new theories.

<sup>23</sup> See Hardin 2002, chapter 3 for overview of some of what he sees as the conceptions and misconceptions of trust.

perceptions of their levels of trust or confidence in a particular institution.<sup>24</sup> Others argue that what many people often say about trust differs from what their actions imply (O'Neill 2002, Solomon and Flores 2001, p. 18). The upshot of this position is that trust is better studied by examining people's actions, not what they say. It is clear that there is not a consensus on the approach to study trust.

The perspective of trust adopted here allows for the incorporation of both data points (perceptions and behaviours) as potential indicators of trust. Furthermore, we would expect people's responses to correlate with their behaviour, and when they do, the evidence for trust (rather than another motivating factor) is strengthened. There is evidence that the two do sometimes correspond to each other, lending credence to both data sources:

“Researchers have dropped wallets in the street in different countries, wallets that included the name and address of the owner. They then counted the proportion of dropped wallets that were returned to the owner – the highest was in Scandinavia. These proportions were then compared with how the citizens of the country replied about trust. It turned out that the two were closely related: so when we ask about trust, we do learn something about whether people can actually be trusted” (Layard 2005, p. 69).

This research goes a step beyond those two indicators to also look at citizens' perceptions and interpretations of their interactions with e-services. This adds one more important step in the causal chain helping us to see what interactions bring about particular perceptions and interpretations, and why. Ultimately, data are collected to comment on:

- a) The implementation of the e-service and its impacts on the public sector entities,
- b) The usage (quantity, nature of) the e-services by citizens,
- c) The experiences, perceptions, and interpretations of these citizens,
- d) Citizens' resultant trust judgements and explanations of these judgements.

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<sup>24</sup> Two examples of survey questions interpreted as commenting on trust:

“I am going to name a number of organizations. For each one, could you tell me how much confidence you have in them: Is it (4) a great deal of confidence, (3= quite a lot of confidence, (2) not very much confidence, or (1) none at all? a) The parliament, b) The government in (Capital city)...” (Klingemann 1999, p. 36)

“To what extent do you trust each of these political institutions to look after your interests? Please indicate on a scale from 1, for the complete absence of trust, to 7, for great trust” (Mishler and Rose 2005, p. 1055).



To collect data on these issues, this research takes a multi-method approach<sup>25</sup> (Mingers 2003, Mingers and Brocklesby 1997) employing four main data collection methods: semi-structured interviews, focus groups, surveys, and relevant document collection.<sup>26</sup> Recall that the data are pooled from three separate pieces of research. The methods employed in the three pieces of research focused almost entirely on six different stakeholder groups: (1) Chile tax administration employees at the national and municipal level, (2) e-tax users (citizens and businesses), (3) the public sector entity that manages ChileCompra, (4) ChileCompra private users (suppliers) and (5) ChileCompra public sector users (buyers), (6) telecentre employees who have contact with citizen e-service users, and (7) other relevant government and civil society entities.

Overall, a total of 84 semi-structured interviews or focus groups were conducted with a total of 113 subjects spanning the entire set of actors.<sup>27</sup> For the World Bank study, seven surveys assessing the social and agency impacts of the services (both internal to the public sector and external towards the citizen users) were conducted on all the major stakeholder groups as well as a survey targeting the wider society. Furthermore, many government documents and reports were included in the data set, along with independent research and newspapers articles.

#### 1.2.4 DATA ANALYSIS

There is an underlying logic to the data analysis; process-tracing. The process tracing method “attempts to identify intervening causal processes—the causal chain and causal mechanism—between an independent variable (or variables) and the outcome of the dependent variable” (George and Bennett 2005, p. 206). Thus, the goal is to trace the causal pathway from the implementation of e-services and their structure (independent variable) to the citizen’s trust judgements (dependent variable).

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<sup>25</sup> Multi-method research is not found too often in IS research (Mingers 2003).

<sup>26</sup> See Appendix-I for details.

<sup>27</sup> For the World Bank study and thesis research a total of 56 semi-structured interviews or focus groups conducted with 76 subjects were conducted. For the IADB study, there were a total of 28 interviews with a total of 37 subjects.

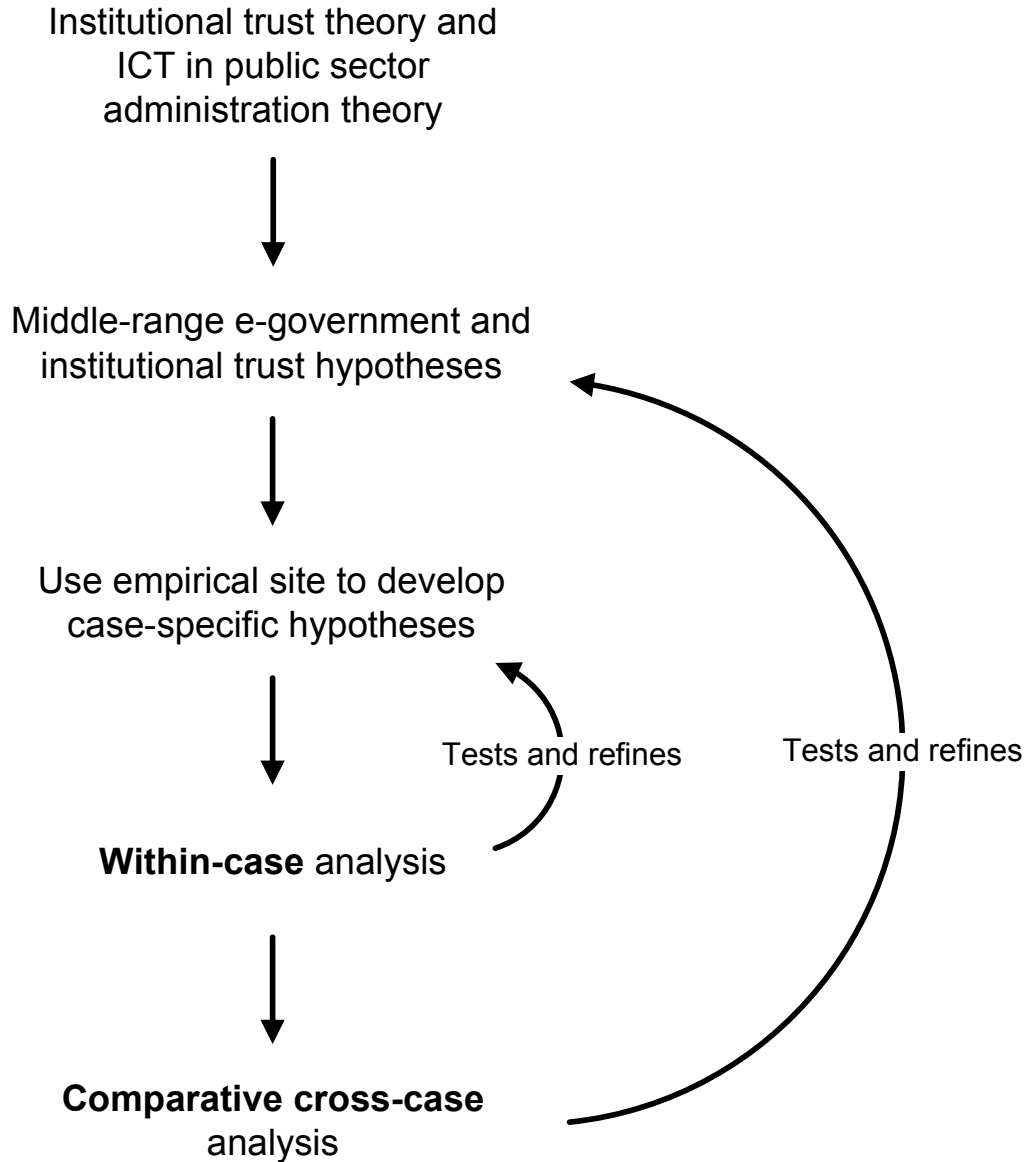
Crucially, the two cases can be considered “most-likely” cases. A most-likely case is one where “the independent variables posited by a theory are at values that strongly posit an outcome or posit an extreme outcome” (George and Bennett 2005, p. 121). The success of each of these two e-service cases makes them great tests of hypotheses that link e-services to trust in government. For example, if trust is not built with an e-service that has greatly improved the efficiency and transparency of the public sector, then either the theory is misguided, or is in need of considerable refinement. Thus, they provide the first link in the theorised causal chain,<sup>28</sup> and tracing the entire casual process will illuminate how and why (or why not) the hypothesis that link e-government to trust are realised.

There are both within-case and comparative cross-case analyses (see Figure 2 for an example of the relationship between the theory and analyses). The starting point is to analyse each case independently (within-case). For each case, the data analysis is structured around the two stages of trustworthiness and trust.<sup>29</sup> The goal of trustworthiness data analysis is to answer the question, *how does the introduction of the e-service make the public sector entity more trustworthy?* For the trustworthiness data, the main source is interviews and surveys with the public sector entities that use or manage the e-services, as well as the available government reports and other documents. One outcome of this analysis is the development of case-specific hypotheses as to the trust building potential of particular trustworthiness characteristics.

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<sup>28</sup> One way to think about this is that it provides the antecedent A for the “if A then B” format of theories. Thus it is possible to explore if, when, and in what circumstances B follows from A.

<sup>29</sup> More details of the analysis techniques can be found in Appendix I.



**Figure 2** A diagram of the relationship between theory, hypotheses, and within and comparative cross-case analyses.

For the trust analysis, the goal is to answer the question, *what are the differences in individual perceptions and interpretations of the trustworthiness of the public sector entity and why do they vary?* Essentially, this analysis puts the case-specific hypotheses to the test by seeing if and how they are perceived and interpreted by users. These data are mostly drawn from interviews and surveys with e-service users, as well as interviews with professionals who come in contact with e-service users, such as Internet access point (telecentres) managers.

After performing the within-case analyses on each e-service, the next stage of analysis is comparative cross-case. This analysis is done at the level of trustworthiness and trust, comparing variations in the independent variables to variations in the dependent variable. Here, the empirical data provides a test and refinement of the middle-range e-government and institutional trust hypotheses (as developed in Chapter 4). Table 3 provides an overview of the different elements of analysis and their orienting questions.

	<b>Trustworthiness</b> (from e-government to trustworthy institutions)	<b>Trust</b> (from citizen interaction with e-services to the perception and interpretation of trustworthiness cues)
<b>Within-case analysis</b>	How does the introduction of the e-service make the public sector entity more trustworthy?	What are the variations in individual perceptions and interpretations of the trustworthiness of the public sector entity and why do they vary?
<b>Comparative analysis</b>	Compare similarities and differences between technology and trustworthiness outcomes.  What are the commonalities and differences in the total causal pathway from e-services to trustworthiness to trust? Are there any systematic relationships or differences?	Compare similarity and differences in the cases as they relate to the dependent variable of citizens' perceptions and interpretations.

**Table 3 Stages of analysis as they relate to the analytical distinctions of trust and trustworthiness.**

### 1.3 CONCLUSION AND THESIS STRUCTURE

The contemporary global surge of e-government applications carries with it potentially significant ramifications for the institutional structures of governance. In turn these institutional structures play a significant role in shaping a country's developmental path with important consequences for their populations. This path is also shaped by the trust citizens' place in these institutions. To understand how e-government potentially impacts on development, it is fundamentally important to understand how replacing face-to-face

government services (and the generation of new types of services) with Internet based e-services alters the relationship of trust between citizens and government. This study attempts to contribute to our currently limited theoretical and empirical knowledge of this new and important contemporary social phenomenon.

The thesis has eight more chapters, and an Afterword. Chapter 2 provides a detailed description of philosophical assumptions that underpin the methodological research approach taken in this thesis. Chapters 3 and 4 develop the conceptual framework. Chapter 3 lays out an account of trust and the particular instance of trust (institutional trust) that provides the theoretical understanding of trust in government (rather than, say, interpersonal trust). Chapter 4 provides a theoretical understanding of the interaction of ICT in public sector administration and then links this back to the institutional trust theory in chapter 3 to develop a set of testable institutional trust and e-government hypotheses. Chapter 5 begins the empirical component of this thesis with an overview of the Chilean social, political, cultural, and ICT context. Chapter 6 and 7 present the two cases: the e-tax administration case, and the ChileCompra. These two chapters include the case and within-case analyses where the hypotheses are tested. Chapter 8 develops the comparative analysis and a discussion of what the findings from this thesis imply for theories of institutional trust and e-services. Chapter 9 concludes with a summary overview of the findings, a consideration of their policy implications, suggestions for future research, and some final comments on future e-service and institutional trust dynamics. Finally, the Afterword is an attempt at an honest reflection on the research, the research approach, and lessons learned during the course of the PhD.

## 2 METHODOLOGICAL UNDERPINNINGS

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“To explain a fact is to exhibit the mechanism(s) that makes the system in question tick” (Bunge 2004, p. 182).

A consistent research strategy and methodology flow logically from a series of philosophical assumptions that provide the orienting framework for the research. These assumptions provide researchers with an answer to questions such as: What is the nature of the natural and social world? How can we know it? What is the nature of causality? An explicit consideration of these questions helps a social science researcher formulate appropriate research questions, determines the relationship between theory and explanation, and facilitates the communication of any research findings, among other things. In other words, these assumptions permeate through all stages of research.

This chapter presents and justifies the underlying philosophical assumptions that provide the grounding for the research goals, strategy, and design, as elaborated in chapter 1. It does so in four sections. The starting point, section 2.1, is a description of the fundamental tenants of scientific realism, the philosophy of science that is the basis for the research conducted in this thesis. The following section 2.2, delves into ontological assumptions about the nature of the social world, causality, and technology that are central to any information systems research. These ontological assumptions are taken from critical realism which is one particular version of scientific realism (see: Hunt 2005, Niiniluoto 2002). Having established the basis for research, section 2.3 considers the implications of these assumptions for research. In particular, the role of theory is considered, as the type of theory used by a researcher fundamentally impacts the nature of explanation and outcomes of research (Gregor 2006). Theoretical arguments can only go so far, however, and some further justification for adopting this approach is required. Consequently, section 2.4 makes a pragmatic argument for the use of this research approach by showing that it brings with it considerable research advantage. Finally, section 2.5 concludes.

## 2.1 SCIENTIFIC REALISM

This research is grounded in a scientific realist philosophy of science. More specifically, the philosophy is closely aligned to critical realism (Bhaskar 1978, Bhaskar 1998b). Critical realism adds several crucial ontological assumptions that differentiate it as a philosophy of science (Zinkhan and Hirschheim 1992). These ontological assumptions will be discussed in the following section 2.2. First, however, it is helpful to better understand the fundamentals of scientific realism. Hunt (1990) identifies four tenants: classical realism, fallibilistic realism, critical realism, and inductive realism.

*Classical* realism is the belief that there must be a reality independent of our knowledge of it. This does not necessarily imply the “naïve” realism that is so maligned in the literature. According to Bhaskar (1978), reality can be analytically separated into two layers, the transitive and intransitive. This is the separation of the world of things and structures (intransitive) and our knowledge about these things (transitive). This distinction is most valuable for sustaining the assertion that our theories refer to something outside of subjective or inter-subjective realities. External reality plays a crucial role in adjudicating between competing theories.

The transitive/intransitive distinction is also helpful in demonstrating how it is possible to combine an objective world of “brute facts” that are not a matter of subjective interpretation (Searle 1995, p. 1) with the fact that knowledge is a social construction (Berger and Luckman 1967). This is a combination of classical realism with epistemological relativism (Archer *et al.* 1998, pp. x-xi). Epistemological relativism, as viewed here, expresses the assumption that there are many different beliefs or theories about the world. However, there is no contradiction in the assertion that beliefs, theories, social facts, and institutions can exist subjectively or inter-subjectively (in the minds of people) and that they are also epistemologically objective (Searle 1995). In this way, critical realism combines ontological positions of both “hard” and “soft” research. Fitzgerald & Howcroft divide information systems research into two ontological positions, the relativist (soft) position where “multiple realities ... exist as subjective constructions of the mind” and the realist (hard) position where “the external world

consists of pre-existing hard, tangible structures which exist independently of an individual's cognition" (Fitzgerald and Howcroft 1998). Critical realism gives voice to both the soft position through the acceptance of epistemological relativism and the hard position through classical realism.

Critical realism acknowledges that the process of science and its products is historically emergent, political, incomplete, and therefore fallible. This provides the basis for *fallibilistic* realism. While there are many different and potentially competing beliefs and theories, not all of these beliefs can be equally fallible. Some ideas or theories may better approximate reality than others. This simple idea is central to the possibility of science. So, while critical realism is considered "ontologically bold" (it is possible to strive for objectivity) it is also "epistemologically cautious" (knowledge is subjective and fallible) (Bhaskar 1998b, p. 176).

This position, however, still does not solve deeper philosophical problems with respect to the nature of truth. Research, natural and social, is predicated on a search for truth (Bunge 2003). However, two major questions remain unresolved: what is the nature of truth? And exactly how can we determine which theories are more true than others? Unfortunately, there is not the space here to delve deeply into these issues. In part, this is because the exact nature of truth for scientific realists remains a matter of debate (Blackburn 2005, Groff 2004, Hunt 1990, Hunt 2005, Psillos 1999, Willmott 2002, Zinkhan and Hirschheim 1992). However, rather superficially, there are a few important points regarding the position held here. First, the notion of trust that scientific realists accept is nuanced and incorporates the insights of the social construction of knowledge (cf. Blackburn 2005, Meckler and Baillie 2003, Proctor 1998, Ryan 2005). Second, this notion is a metaphysical conception of truth (Willmott 2002) where truth is "mind-independent" (Psillos 1999, p. 14); that is, a property independent of what people actually believe (Meckler and Baillie 2003). For the purposes of this thesis, I assume a correspondence theory of truth.<sup>30</sup> The correspondence theory of truth states that a degree

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<sup>30</sup> For a defence of correspondence theory, see (Willmott 2002) and for a contrarian perspective, see (Ryan 2005).



of truth (or falsity) is a function of how well it corresponds to the reality it refers to (Hunt 2005, Meckler and Baillie 2003, p. 276). This position contrasts with the relative (constructivist, or post-modern) notion of truth. Relative truth is a function of inter-subjective agreement rather than external reality, and is thus relative to a person, group, or culture (Willmott 2002, pp. 343-344). The crucial point here is that external reality works as the ultimate arbiter when striving for objective truth. Of course, researchers must remain acutely aware of the difficulties they face in achieving that goal.

The difficulty with discerning truth is a reason why scientific realism is *critical*. Theories are fallible and changeable and there should always be competing theories (Danermark *et al.* 2003, p. 117). These theories should be critically accepted and subjected to testing following an objective scientific process (Kincaid 1996, chapter 3). Bhaskar defends the possibility of a “judgemental rationality” to choose (test) between competing theories (Bhaskar and Lawson 1998). Again, we do not have the space here for a complete defence of the possibilities of an objective rationality, as that has been ably performed elsewhere (see: Kincaid 1996, Meckler and Baillie 2003). This thesis takes the position that objective science is possible through a flexible framework of objective principles where the criteria for validity and methods for testing can be adapted dependent upon the different methods used and the nature of the objects of study (Kincaid 1996).<sup>31</sup>

Finally, through the process of science and the long-term success of scientific theories, scientific realists come to accept them as true. This is the principle of *inductive* realism. Repeated success provides the “reason to believe that ‘something like’ the entities contained in the theories actually exist” (Hunt 1990, p. 10). The more that these theories have withstood rigorous testing and the accumulation of evidence, the more apt we are to accept their truth value. Of course, in the social sciences, particular social theories may be true for only a short time. The social reality that is reflected in these theories may be relatively enduring but changes in human practices can change the nature of these entities. A classic example is how the reflexivity of modern life results in the constant

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<sup>31</sup> There are of course strident objections to the usefulness and objectivity of methods in science, most notably (Feyerabend 1993).

examination and alteration of social practices in light of new information (Giddens 1990). Such more transient theories are then more difficult to establish in the same rigorous manner. However, many social objects can be understood as they do persist through time. For example, despite the wide diversity of democracies over time, it still is possible to develop an understanding of the defining features of democracy (Drydyk 2005). In fact, the diversity provides a large amount of comparative information that assists in understanding the social workings of democracy itself.

## 2.2 ONTOLOGICAL ASSUMPTIONS

While most scientific realists hold some version of all of the above assumptions, critical realism goes beyond with specific ontological commitments. Critical realism began as a study of the process of natural and social science and asked the question: “what properties do societies and people possess that make them possible objects of knowledge for us” (Bhaskar 1998b, p. 13)? These are questions about ontology. This section discusses several important ontological assumptions made in this thesis.

To avoid confusion, it is helpful to clarify the two meanings of ontology. Ontology, as defined by Merriam-Webster is,

- “1: a branch of metaphysics concerned with the nature and relations of being
- 2: a particular theory about the nature of being or the kinds of things that have existence”.<sup>32</sup>

In other words, it is 1) the study of what is, and 2) a theory about what is. Critical realism ascribes to an ontology in that it holds a set of theories about the nature of the natural and social world.

Critical realists have been criticised as being overly confident in their ontological foundations by critics who argue that more anti-foundationalist approaches are preferable (Harding 2003, Kiviven and Piironen 2004, Peter 2003). A strong critique of critical realists is that while they *say* that their ontology is fallible (and therefore open to change),

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<sup>32</sup> Source: Merriam-Webster Online Dictionary, <http://www.m-w.com/dictionary/ontology>, accessed: Nov. 31<sup>st</sup>, 2006.

they assert their metaphysical statements as if they are infallible (Cruickshank 2004, Harding 2003). However, ontological statements are also just theories. In this way, while critical realism appears foundational with its “bold” ontology, it can be better understood as anti-foundational in that it is merely one set of ontological theories among many that currently exist (Cruickshank 2004, p. 583). This is completely consistent with the critical realist position. However, where a critical realist *must* take a firm stance is the belief in the existence of an external reality independent from humans. This belief is the base upon which critical realism rests, and is not open to debate for critical realists. Indeed, as Bhaskar states, “Ontology – and realism – are *inexorable*. The crucial questions in philosophy are *not whether, but which*” (Bhaskar 1993, p. 205). Consequently, the immanent critique of Cruickshank holds, as there remains an inconsistency in the position.

The position taken here is that perhaps there may be no way to solve this inherent inconsistency. This inconsistency is a feature of all philosophies of science. Science would not be possible without the existence of an external reality. The debate, then, shifts to the nature of this reality, as Bhaskar suggests (“*not whether, but which*”) and this is where critical realism provides a promising alternative. Thus, here the ontology of critical realism is considered just one of many potential ontological theories, but it is a set of theories that: 1) work well for underpinning research and 2) provide a more consistent basis for research through the resolution of other theory-practice inconsistencies (Smith 2006).

Given that scientific theories refer to something in the world, these theories implicitly contain ontological assumptions. Consequently, any social theory (such as in information systems or information technology for development) necessarily contains a set of underlying ontological theories (that may or may not be explicitly expressed) regarding:

- a) the ontological nature of causality (natural and social),
- b) the ontological nature of structure, and
- c) the ontological nature of agency (Smith and Madon 2007).

If, as is the case in this thesis, a researcher wants to study the use of information technology for development, a fourth set of ontological theories are necessary:

- d) the ontological nature of information technology.<sup>33</sup>

The following discusses the positions taken in this thesis with respect to the above four ontological assumptions. The discussions will be at a relatively high level of abstraction, focusing on the defining features. When appropriate, the ontological specifics with respect to the two cases will be fleshed out in the rest of the thesis. This especially holds for the nature of information technology and technologies applied in government bureaucracies in general, elaborated in chapter 4.

### **Causality**

Causality and explanation are intimately related (Gregor 2006, p. 618). Recently philosophers of science have begun to substitute talk about causality for scientific explanation (Cartwright 2004). Not coincidentally, causality is an especially significant and central component of critical realism (Bhaskar 2002, Groff 2004, p. 138). Bhaskar takes the Aristotelian argument that one can only know something when you know what it causes (Bhaskar 1978). Consequently, to understand some entity in the world is also to know the “why” of the entity; that is, what it causes.

At first glance, it seems improbable that there is a notion of causality that could work both for the natural and social sciences. Indeed, humans do not appear to respond deterministically in the same way billiard balls deflect off of each other; humans are arguably self-determining creatures (Taylor 1994). For all practical purposes, we are dealing with the phenomena of non-determinate human behaviour (Fay 1994, pp. 102-102). Regardless, there are countless examples of relatively predictable human behaviour that suggest that it is not necessarily problematic to use causality in the social sciences.

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<sup>33</sup> Finally, for the field of IT for development it is necessary to conceptualise not just information technology but also human development (Sein and Harindranath 2004), or at least clarify the ontological status of possible outcomes. For example, in this research, I am interested in whether or not, how, and in what circumstances information technologies bring about a more trustworthy state as well as building citizens’ trust in the state. In order to empirically explore these outcomes, definitions of what trust and trustworthiness *are* and how they will be manifested empirically must be clearly stated.

The research in this thesis is predicated upon the critical realist account of causality as generative mechanisms. Within the philosophy of science, there are several different and competing notions of causality. Of course, it is likely the case that different types of causality may prove applicable in different situations (Cartwright 2003, Cartwright 2004). In fact, Cartwright (2003) documents several notions of causality and demonstrates their limitations. It is not the purpose of this thesis to argue that the critical realist notion is *the* one correct account. Rather, I am concerned here with the internal consistency of the research, from critical realist assumptions through to methodology. This thesis argues that the notion of generative mechanism provides just that.

The generative mechanism account states that there is a causal necessity between event A and B if and only if there is a mechanism M that when stimulated by A produces B (Bhaskar 1998b, p. 10). Seen in another way, this approach is compatible with the notion of a “clear box” explanation (Scriven 1994); the generative mechanisms represent the internal causal *processes* that, when stimulated by particular inputs generate particular outcomes (Bunge 2004).

To help understand the flexibility and logic of the generative mechanisms notion, it is helpful to consider Cartwright’s distinction between “thin causal concepts” and “thick causal concepts”. “Thin causal concepts” are formal specifications of causality (such as probabilistic theory, modularity accounts, and efficiency accounts) that while they are overly restrictive in some situations, contain important observations from particular causal situations to bear and thus are useful in different situations. However, when applied, these “thin concepts” are too general and do not provide enough information to make further inferences. Given that none of these notions holds for all situations, Cartwright concludes that there is most likely no universal notion of causality. However, she does note that all the formalised thin concepts have something in common, they “provide criteria for licensing claims of the form ‘*x* causes *y*’ (in circumstances *c*)” (Cartwright 2003, p. 14).

Cartwright argues that what is needed are many “thick causal concepts”. A thick causal concept is a higher level description of a cause that provides the necessary detail to make useful inferences possible. She notes that such thick causal concepts can be seen most commonly in “content-rich causal verbs”,

“...the pistons *compress* the air in the carburettor chamber, the sun *attracts* the planets, the loss of skill among long-term unemployed workers *discourages* firms from opening new jobs... These are genuine facts, but more concrete than those reported in claims that use only the abstract vocabulary of ‘cause’ and ‘prevent’” (Cartwright 2003, p. 12).

Cartwright has gone from metaphysical notions of causality back to the descriptive terms used in everyday research and language.

The generative mechanism notion of causality is a highly abstract notion that can provide the ontological grounding for the various, more specific, “thick causal concepts” found in the social sciences. Of course, the generative mechanisms notion may be a “thin causal concept”, subject to its own particular limitations. However, it very closely resembles the causal logic, “x causes y (in circumstances c)”. It is this abstractness that provides it with the flexibility to underlie a whole range of useful social science thick causal concepts. For these reasons, the generative mechanism notion (or a roughly equivalent notion of causality) has been argued for and successfully employed by many other social scientists (c.f. Bunge 2004, Cartwright 1989, George and Bennett 2005, Hedström and Swedberg 1998b, Higgs *et al.* 2004, Little 1998, Moren and Blom 2003, Psillos 1999, Sawyer 2004, Steel 2004).

The critical realist notion of causality is unique as it is based upon a stratified reality that is broken up into three ontological domains: the real, actual, and empirical (Bhaskar 1978, p. 13).<sup>34</sup> The *real* consists of the “realm of objects, their structures and powers” (Kazi 2003, p. 23). A structure consists of a set of relations that constitute that structure (or system) that is held together by bonds of some sort (Bunge 2004, p. 188). Emerging

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<sup>34</sup> This differentiation stems from Bhaskar’s analysis of experimental activity:

“It is a condition of the intelligibility of experimental activity that in an experiment the experimenter is a causal agent of a sequence of events but not of the causal law which the sequence of events enables him to identify. This suggests that there is a *ontological* distinction between scientific laws and patterns of events” (Bhaskar 1978: 12)

from these relations are the particular capacities to behave (causal powers) that are “nothing other than the way of acting of a thing” (Bhaskar 1998a, p. 38). Thus, the internal relations that constitute the structure of a thing give it both its qualitative properties as well as its causal powers. Consequently, an entity is not reducible into its constituent parts. Rather, it is more than the sum of its parts as it has emergent, qualitatively distinct, causal powers due to the structure of relations between these parts. The classic example is that of water:

“the combination of two hydrogen molecules with one oxygen molecule results in water whose emergent properties are new and very different than those of the parts taken separately (Sayer 2000, pp. 12-13)” (Smith 2006).

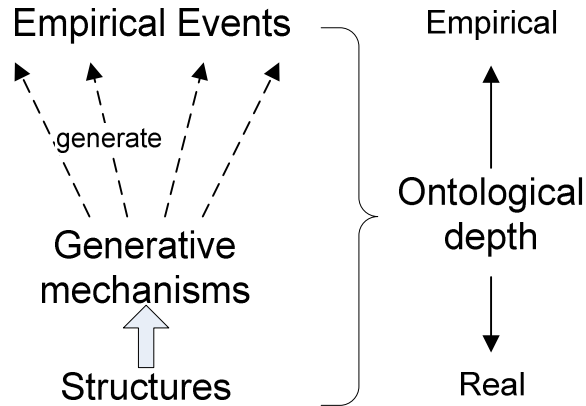
Only at the composite level does water have the causal ability to “flow” and “get wet” that does not exist in the individual hydrogen and oxygen molecules.<sup>35</sup> It is the activity of these causal powers, the generative mechanisms, that gives rise to all the states and happenings in the world (Bhaskar 1998a, p. 34).<sup>36</sup> The level of the *actual* refers to these happenings, that is “what happens if and when these powers are activated” (Kazi 2003, p. 23). Finally, the level of the *empirical* corresponds to the domain of human experience of the states and happenings in the world.

Causation exists at the level of the real, what happens in the actual, and what we see in the empirical. This distinction illustrates the ontological difference between the generative mechanisms notion of causality and the event regularity notion of causality (Sayer 2000, pp. 14-15). Event regulatory causality works at the level of the empirical as it consists of observed events. The difference is the ontological depth (Pawson and Tilley 1997) that exists between the level of the empirical and the real where structures and generative mechanisms are found (see Figure 3).

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<sup>35</sup> Note the use of thick causal concepts here, “flow” and “get wet”.

<sup>36</sup> Note that the words causal powers and generative mechanisms are often used interchangeably in critical realists texts (e.g. Danermark *et al.* 2003). There is also some confusion in that a generative mechanism is seen as a property of a structure (a causal power) as well as the generative process that brings about an outcome (event). For simplicity’s sake generative mechanism is used in both senses in this thesis, as a causal power of a structure and a process (what it does when it is activated) that generates an outcome.



**Figure 3** There is ontological depth between the level of observable (empirical) and the activities of the generative mechanisms that produce the ebb and flow of empirical events. Note that the term “Structures” here refers to the underlying structures of reality.

The word *tendency* is used to describe this notion of causality (Bhaskar 1998a, p. 34). This word helps express the non-deterministic nature of generative mechanisms. The structure of a particular thing (natural or social) does not pre-determine but rather enables what can happen (Sayer 2000, pp. 12, 15, 95). These objects exist within a context of other objects (with generative mechanisms) and therefore the extent and nature of their activation depends upon these circumstances (Bhaskar 1978, p. 173). Describing the generative mechanism approach (where causal powers are equivalent to generative mechanisms), Sayer lays out four reasons why this is not a deterministic notion of causality (Sayer 2000, p. 95):

- 1) The existence of causal powers are contingent on the presence of particular structures,
- 2) The exercise of these powers is contingent,
- 3) The outcomes of the exercise of these powers depends on their interaction with other contingent phenomena (i.e. other generative mechanisms in the domain of the actual), and
- 4) The powers themselves can be altered.

The terminology of tendencies has been used before in the information systems literature. Indeed, part of the argument made in this chapter is that notions such as tendency fit well



with the empirically non-deterministic nature of social phenomena (Smith 2006, Walsham 1995, pp. 78-79). A good example of research that is compatible with the tendency notion described here can be found in Bellamy & Taylor's (1998) approach to the interaction of ICT and government. Bellamy & Taylor take a social shaping perspective while still allowing for a non-deterministic causal role for ICT. For them, ICT are inherently "ambiguous technologies", neither necessarily good nor bad:

"[technologies] offer fundamental choices to the institutions which control the strategic direction of a society. That is, reflexive electronic technologies *simultaneously* hold within them tendencies towards Orwellian control of individuals and tendencies towards enriching the experience of employment and the meaning of citizenship. Neither tendency can be entirely suppressed, but nor does either represent an overwhelming imperative" (Bellamy and Taylor 1998, pp. 31-32).

## **Structure**

A long-standing debate in sociology has been structure versus agency. Ultimately, this debate revolves around an ontological position with respect to social objects and forces in the world and if and how they causally interact with individuals. Classically, the debate has been between individual and holistic positions (Hollis 1994).<sup>37</sup> Individualistic sociology denies any role of social entities or forces, whereas holistic accounts argue that individual behaviour and social change are the products of social forces and individuals have little or no agency (Porpora, 1989).

In contemporary sociology, two new perspectives have emerged with unique ontological positions that posit the interaction of structure and agency: structurational and relational theories (Porpora 1998). Structuration theory takes a middle way between individualism and holism (Jones *et al.* 2004). The focus is on the "duality" of agency and structure that are "dependent upon each other and recursively related", ultimately reducing both agency

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<sup>37</sup> The term holistic might be misleading for some who use the term to refer to an approach that encompasses the interaction of all the components. Here holistic is used to refer to the view that the individual finds meaning and purpose with respect to the whole of society, rather than individually.

and structure to social practices (Rose 1998).<sup>38</sup> Critical realists take a relational approach that is fundamentally different from methodologically individualist, holist, and structuralist conceptions (Archer 1995, Bunge 2004).<sup>39</sup> Critical realists hold that social structures, such as gangs, churches, and governments have an ontological existence that is both autonomous and independent from individuals. Like natural entities, social structures also emerge from relations; the relations between humans and between these human relations and nature (Bhaskar 1998b). Crucially, these relations are both necessary and relatively enduring, implying that they can be studied (Archer 1995, p. 166).

As discussed, the critical realist ontology incorporates substantial ontological furnishings. Of these, perhaps the most contentious is the belief that social entities have an ontological status, are autonomous, and causally efficacious (Archer 1995). The emergent properties imply that these structures are neither reducible to individuals, contra sociological individualism, nor reducible solely to the activities of individuals, contra the structuralist perspective (Archer 1995, Bhaskar 1998b). To avoid the critique of the reification of social structures, the ontological status is sustained through a concept of emergence. Social entities are reproduced and transformed through a dialectical process; people experience structures as an objective reality and through human activities transform or reproduce these structures which form the new social environment of these individuals (Bhaskar 1998b, p. 34). However, social entities also exist prior to human activity that reproduces those structures which logically implies that they are at least partially independent from those activities (Bhaskar 1998b, p. 25). For example, the London School of Economics existed long before my stint as a student and will undoubtedly continue in the absence of my activities that in part work to reproduce the institution. Consequently, critical realists, following Archer's morphogenetic approach (Archer 1995, Archer 1996) suggest that the analysis of social change can follow this dialectical

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<sup>38</sup> Structuration theory has been extensively employed in interpretive IS and IT for development research (e.g. Heeks 2001b, Jones *et al.* 2004, Kouroubali 2002, Orlikowski 1992, Orlikowski 2000, Walsham and Sahay 1999). This approach has a special appeal because it allows for interpretive research to incorporate technology as an "interplay between technology and human action" (Avgerou 2002, p. 56).

<sup>39</sup> See (Stones 2001) for a counterargument to the realism–structuration divide, and ways that the two sociological theories can compliment each other. This conception of structure can be traced back to Marx (Porpora 1998).

process, tracing the interaction of social structure and agency through time; something structuration theory fails to be able to do (Archer 1995).

Bhaskar further makes a transcendental argument for the ontological status of social structures. One can assume their existence through the evidence of their causal impacts (Layder 1998). In other words, emergent social structures have social properties that causally impact on the individuals that constitute them as well as on other social structures (macro-micro and even potentially macro-macro) (Bhaskar 1998b, Mayntz 2004, Sawyer 2002, Sawyer 2003). This is crucial because many social phenomena such as class structure may not be directly observed or measured, while their impacts may be detectable.<sup>40</sup>

As mentioned, the ontological position of the existence of social entities is not an uncontroversial position (Carter 2002, Hedström 2005, Kiviven and Piironen 2004, Lewis 2000, Little 1998).<sup>41</sup> At the end of the day, the actual ontological existence of

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<sup>40</sup> These arguments are reinforced by other arguments for the objective ontological status of social entities (see: Berger and Luckman 1967, Searle 1995).

<sup>41</sup> This is especially controversial for individualists or pragmatists who believe that social reality can ultimately be adequately explained by aggregating the activity of individuals (Hedström 2005, King 1999, Kiviven and Piironen 2004, Little 1998). However, even if social structure can be reduced to the existence of “other people”, it still maintains a focus on relations as well as the social constraints they place on people (King 1999). King, arguing against Archer’s ontological position on social structure outlines his individualist position stemming from interpretivism,

“The interpretive approach insists that society must be understood in terms of individuals and their interrelations alone and that any form of ontological dualism which posits a realm of objective or structural features is a mere reification which can at all times be reduced to individuals and their interactions ... The interpretive tradition fully recognises the constraint which society places upon the individual ... that social constraint stems from the relationships between individuals which necessarily limits the kinds of practices which any individual can perform” (King 1999, pp. 222-223).

The core of the issue is that it seems highly misleading if not outright impossible to accurately supply a completely non-social (strictly individualistic) account of human behaviour as human behaviour always involve social predicates (Bhaskar 1998b). To be completely clear, it is the position of this author that, following Archer’s (2000b) rebuttal of King (King 1999), if one assumes that something exists for methodological purposes, it is only consistent to assert that it exists ontologically with causal effects.

It is this causal role that makes understanding the relations of social entities fundamental to our understanding of human behaviour. Social structure has causal efficacy shaping human behaviours, indeed, arguably being necessary for humans to understand the world as a meaningful reality (Berger and Luckman 1967, p. 130) and engage in intentional human action (Bhaskar 1998b, pp. 34, 36-37). Thus it is centrally important to research to understand the nature of the generative mechanisms of social entities and how they causally impact on individuals.

social structures may be a moot point. Whether they exist or not, what *is* agreed upon is that it is methodologically very useful to maintain the concept of structure (Hedström 2005, chapter 4, Kincaid 1996, Mayntz 2004, Moren and Blom 2003, Sawyer 2002, Sawyer 2003), if only heuristically (King 1999, p. 223).<sup>42</sup>

Recall that generative mechanisms of social entities emerge from social interrelations (Archer 1998, p. 192). An individual is subject to these mechanisms by virtue of their position relative to others within these social entities, and society as a whole. Consequently, one's position in this web of relations structures the possibilities and reasoning for an individual's action through the provision of material resources and normative ideas (Archer 1995, p. 212). Bhaskar argues that the point of contact between the social structure and the individuals who reproduce or transform it – the link between structure and agency – is to be found in positioned-practices; that is “*positions* (places, functions, rules, tasks, duties, rights, etc.) occupied (filled, assumed, enacted, etc.) by individuals, and of the *practices* (activities, etc.) in which, in virtue of their occupancy of these positions (and vice versa), they engage” (Bhaskar 1998b, p. 41). Consider the following example,

“In the social world, people's roles and identities are often internally related, so that what one person or institution is or can do, depends on their relation to others; thus what it is to be a tutor cannot be explained at the level of individuals but only in terms of their relation to students, and vice versa” (Sayer 2000, p. 13).

Unlike the direct push or pull of physical causality, a more apt metaphor for this type of causality is the rules of chess or the blueprint of a house (Groff 2004, p. 110). Social structures are not voluntary actors in the same way as people (Lewis 2000). Bhaskar likens the impact of social structures to the rules of grammar – they “impose *limits* on the speech acts we can perform, but they do not *determine* our performances” (Bhaskar

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<sup>42</sup> This is clear in the King quote above where he implies the existence of relations with causal efficacy (constrain and enable), even if they can be ultimately explained by referring to other people. Thus, the issue of structure gets shifted from the ontological to the epistemological domain. Hedström (2005), whose methodological individualism rejects the ontological status of social entities explains this position,

“From an epistemological point of view, social emergence refers to social properties that cannot, in practice, be predicted by knowing everything there is to know about the pre-emergent properties of the parts” (Hedström 2005, p. 74).

1998b, p. 36). Instead, social entities have causal influence through how they structure the circumstances of the agency of individuals, shaping their choices and capacities (Bhaskar 1998b, p. 36, Little 1998, p. 202, Pawson and Tilley 1997, p. 66). They provide the objective social influences that “[condition] action patterns and [supply] agents with strategic directional guidance” (Archer 1995, p. 196). Of course, individuals who occupy particular positions can still act with free-will. People “respond” rather than “react” (Moren and Blom 2003). However, their possibilities for action are objectively constrained and enabled. A classic example is that an individual is always free to act on false beliefs. However, this is risky behaviour that will have objective consequences despite the actor’s belief system (Archer 2002, Elster 1989, p. 20). For example, I could convince myself that this PhD is already completed, but unless the university structure and rules change, I must complete several other activities as dictated by my role as a student.

### **Agency**

The voluntarism of individuals means that social change can only be brought about through the activity of individuals; “the elementary actor is the wellspring of action, no matter how complex are the structures through which action takes place” (Coleman 1994, p. 503). Any theory of action (and consequently of social change) must include individual level mechanisms that generate intentional human behaviour (Bhaskar 2002, p. 21, Kincaid 1994, p. 511, Little 1998, Sayer 2000, p. 27). In other words, causal mechanisms in the social sciences imply inner states on the part of the individuals (Kurzman 2004) as the reasons and resources on offer from the structure are “taken up, articulated and acted upon” (Archer 1995, p. 253). There are a myriad of *sui generis* properties of humans that are causally efficacious generative mechanisms including reasons, beliefs (Bhaskar 1998b, Sayer 2000, p. 27) emotionality, memory (continuity of self), desires, reflexivity, sense of self, personal identity, and intentional agency (Archer 2002, Carter and New 2004). Ultimately, these are psychological and socio-psychological mechanisms that mediate the influences of social structures, combining desires, beliefs and opportunities resulting in human behaviour (Hedström and Swedberg 1998a, p. 23).

Fundamentally, this is a naturalist argument that an individual's personhood, or agency, emerges from the individual's internal biological and cognitive structure that are constantly shaped through their interactions and relations with the world (Archer 2000a, Archer 2002). According to Archer, an individual, through positive and negative reinforcement develops a value system, i.e. their cares and concerns about three orders of reality; the natural, practical, and social. It is one's relationship with these three orders of reality that forms an individual's identity (personal and social). For example, "one can be healthy and tall (natural), a bad cook and clumsy (practical), as well as a mother, student, member of a church, and a citizen (social)" (Smith and Seward 2005). As Sen (2002) argues, we all have multiple identities. A person is constantly prioritizing and weighing these cares and concerns (values) that constitute their identities. Thus, if we wish to understand human behaviour, we must understand how structure interacts with the prioritized cares and concerns of people.

The critical realist approach to explanation is only partly naturalist, however, as there must always be a hermeneutic component (interpretive understanding) in the social sciences (Sayer 2000, p. 17). Critical realism has been criticised for being undersocialised (Klein 2004). This critique, while it may be valid to a certain extent, overlooks the fact that critical realism works at a different level of abstraction than interpretivism. Critical realism metaphysics provides the flexibility for the possibility for incorporating both causal mechanisms and meaning. Agential mechanisms like interpretations, beliefs, and reasons are both causal mechanisms (Sayer 2000, p. 27) as well as inherently meaningful (Groff 2004, p. 124). Thus to casually explain individual actions, one must understand them: "The interpretation and understanding of the meaning with which persons invest different situations and actions becomes of central significance to causal explanations of social actions" (Ekstrom 1992, p. 117). Consequently, critical realists are "obsessed" with understanding the motives, world views, meanings, knowledge, etc. that are at play in determining people's behaviour (Stones 1996, p. 65).

An individual level theory provides the point of connection between macro and micro level processes. The agential mechanisms mediate an individual's response to different

situational stimuli, for example, priming them to be more or less proactive in their relationship with structure (Archer 2000a). It is the inability to cope with the diversity of agential mechanisms that has been a major problem with many overly simplistic social models, such as the self-interested maximiser of classical economics. Subsequent to critiques, economists have slowly incorporated more behavioural complexities into their model of man (theories of individual action). It is here, perhaps, that the interpretive approach to the social sciences has its greatest contribution. Working at the individual level, one can try to identify the major agential mechanisms that interact with different structural influences, further expanding the depth and breadth of social theory.

### **Information technology**

The final causal component to any IS study is technology. It is helpful to think about technology-in-use as a set of “standing possibilities” (Kallinikos 2002).<sup>43</sup> Technologies, like other aspects of physical reality and social structure, offer reasons and resources for human action. Thus, technology is not causally deterministic over human behaviour, it merely works to constrain and enable behaviour. However, the causal mechanisms of technology extend beyond the isolated technical artefact and its technocratic logic. The manifestation of a particular tendency is dependent not only on its own internal structure but also the specifics of human interaction. Indeed, its active use and impacts can extend way beyond its originally intended purpose, subject to its material limits, of course.<sup>44</sup> It is this openness of possibilities that allows for ICT to be “ambiguous technologies” (Bellamy and Taylor 1998, p. 31) in their implementation.

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<sup>43</sup> This approach can be seen in contrast to the interpretive focus on the social shaping of technology that made it difficult to incorporate technological factors into explanations. Fortunately, it is possible to merge the insights of “interpretive flexibility” (Orlikowski 2000) or the social construction/shaping of technology (Howcroft *et al.* 2004) with the generative mechanism view of technology.

<sup>44</sup> Discussions of how a particular technology may be interpreted or used symbolically, for example, mean that its causal impact may seem to move beyond its physical materiality. Discussion of its role in discourse or as a symbol move completely into the realm of human social interaction, and in its essence, the technology is no longer causally active. However, this falls outside of the point being made here. The discussion above is limited to the actual causal impacts of technology-in-use. In fact, I would argue that the extended impacts of technology (for example, as a projection of power) are a consequence of, at least in part, its technological logic.

To understand technology, it is useful to try to identify the influential generative mechanisms inherent in a technology and to show how they work to shape an individual's situation, and therefore scope of possibilities. An example of a similar orientation to the causal powers of technology is put forth by Kallinikos (2001, 2002) whose goal is to transcend the human-technology interface to discover the core properties of technology. The idea here is that it is helpful to have a theoretical understanding of what these mechanisms are in order to theorise and test their potential impacts. Of course, these causal properties are generally technology specific. Thus, the details of the generative mechanisms of e-government systems will be detailed in chapter 4.

### **2.3 IMPLICATIONS FOR RESEARCH**

The prior sections described the major ontological commitments made for this research approach. These ontological assumptions are more than cosmetic, as they have significant implications for the activity of research itself (Pawson and Tilley 1997, chapter 1). This section focuses on three interrelated implications for research that make it different from the paradigmatic approaches to Information Systems research (positivism and interpretivism): the nature of explanation, theory development, and generalisation.

#### **2.3.1 CASUAL EXPLANATORY APPROACH**

Critical realist explanation is causal/explanatory (Fleetwood 2001), predicated on locating causal powers (generative mechanisms). This raises several important epistemological implications. The first is that it is a rejection of the search for universal covering laws as the goal of explanation (Elster 1998, Sawyer 2004). Such laws do not exist as event conjunctions are, as discussed, “‘phenomenal’ rather than governing” (Little 1998, p.193). This implies a reduced concern with empirical conjunctions of events, as they are only potentially indicative of underlying mechanisms (Sayer 2004, p. 11). While there may be no universal regularities, however, there may be partial event regularities that “*prima facie* [indicate] the occasional, but less than universal, actualization of a mechanism or tendency, over a definite region of time-space” (Bhaskar and Lawson 1998, p. 13). Thus, we should take such regularities as evidence, “and only



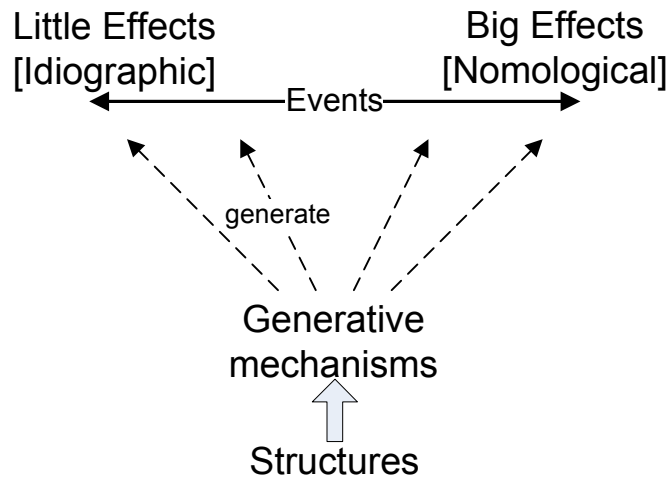
one kind of evidence at that—that certain kinds of singular causal fact have happened” (Cartwright 1989, p. 2).

Second, it is crucial to note that the social world is an open system. As discussed, this in part implies that mechanisms are non-deterministic in the generation of outcomes. Consequently, deductive prediction is not the goal of realist science (Bhaskar 1998b). This does not imply that some qualified prediction is not possible in some situations. Rather, explanation does not necessarily equate to prediction. The goal of a realist science is to *understand* and *explain* these mechanisms (Houston 2001, p. 850), and prediction may or may not follow.

Another important implication is that causal explanations are *ceteris paribus* partial causes. This implies that the identification of any particular generative mechanism is only a partial explanation (Dupre and Cartwright 1988, Kincaid 1996, p. 65). All outcomes are co-determined by a myriad of interacting generative mechanisms (Sayer 2000, p. 95). Furthermore, a generative mechanism may be active in a particular setting but the particular outcome may not reach the level of the empirical as events may be unsynchronized with the mechanisms (Higgs *et al.* 2004, p. 93) or other co-active mechanisms may inhibit or countervail their activity (Bhaskar 1998b, p. 11). Understanding the contextual mechanisms that work to inhibit or otherwise alter the quality of the outcomes of generative mechanisms is important knowledge. This is a very different methodological approach to explanation than the notion of competing covering laws that do not allow for the simultaneous operation of causal forces (Cartwright 1989, p. 139).

Finally, there are a range of different outcomes that can be described by causal explanations. At the extremes we can find both big and little effects. Thinking about different types of effects can help us to see how some situations may seem to reflect more nomological characteristics while others are more idiographic (see Figure 4). In critical realist terms, a big effect is the activity of a generative mechanism that overpowers many other mechanisms in the context. For example, Madon (1992) revealed how cultural

influences such as caste membership had a large impact on the uptake and use of computers in rural development offices in India. These cultural values worked as powerful motivations that overrode other potential individual desires or beliefs to use the computer system. Essentially, she identified these cultural values as having a big effect. Such effects may be readily identified by statistical methods. However, it should be understood that statistical methods are really about the outcomes of causes, not the actual causal mechanisms themselves (Dupre and Cartwright 1988, pp. 534). Consequently, researchers must always be wary that there can be a variety of different causal processes that could have brought about the empirical conjunctions found with the statistical methods (Dupre and Cartwright 1988, p. 535). On the other hand, a little effect is where a mechanism may be active but is not strong enough to have a broad and relatively consistent outcome. It is overpowered and/or altered by contextual mechanisms. Such a mechanism may result in a wide variety of qualitatively different outcomes. Of course, a big effect in one context may prove to be a little effect in another depending upon the nature of the context.



**Figure 4 Structures and their generative mechanisms can create either little or big effects depending upon their ability to override other active contextual mechanisms.**

### 2.3.2 MIDDLE RANGE THEORIES: HOW, FOR WHOM, AND IN WHAT CIRCUMSTANCES

Adopting the generative mechanism notion of causality propels the role of theory to the fore in explanation, although arguably theoretical formalisms are central to all social science work (Tilly 2004). A generative mechanism is both an intransitive property of an existing structure and an analytical construct (theory) used to represent this property. Importantly, we must remember that these theories represent mechanisms with ontological depth; they do not exist at the same level of real events. Thus, generative mechanisms theories are not theories about real events, but are theories about what produce them (Moren and Blom 2003, pp. 47-48). Explanation is found in the identification and theorisation of the generative mechanisms that bring about social change.

This approach to theory is more or less equivalent to Merton's (1967) notion of middle-range theories (MRT), an approach that is compatible with the generative mechanism notion of causality (Danermark *et al.* 2003, p. 125, Moren and Blom 2003, Pawson and Tilley 1997). MRT are described as follows:

“theories that lie between the minor but necessary working hypotheses that evolve in abundance during day-to-day research and the all-inclusive systematic efforts to develop a unified theory that will explain all the observed uniformities of social behaviour, social organization and social change” (Merton 1967, p. 39).

Importantly, such theories “are close enough to observed data to be incorporated in propositions that permit empirical testing” (Merton 1967, p. 39). In other words, MRT fall between universal theories and empirical data (George and Bennett 2005, p. 266).

Theorisation here is fundamentally based on an ideal-typical approach, where the goal is to identify the distinctive core properties of the causal mechanism at work. An ideal type theory 1) possesses all the relevant features or dimensions of the type and 2) exhibits extreme clarity on all the features (Bailey 1994, p. 19). The starting point of theorisation is the underlying relational structure with its emergent generative mechanism that produces a particular event or semi-regularity. For example, the following chapter theorises trust as a particular type of social relationship, with a unique set of necessary

characteristics. Trust as a generative social mechanism emerges from this social relationship and consequently enables particular behaviours that were not possible beforehand. If we want to know what trust is, we have to clearly define the nature of this relationship and its necessary characteristics, as well as the resultant tendencies. Thus, an ideal-typical theory of a generative mechanism includes its necessary structural components with its generative mechanisms that tend to produce a particular outcome. At its core, this is the separation of the necessary causally efficacious features from the nonessential ones (Shadish *et al.* 2002, p. 9).

However, to theorise a tendency (that is, a theory of particular generative mechanisms) it must include three components, as found in the formulation “*x causes y (in circumstances c)*”. The ideal-typical theory stated above is acontextual in that it states simply: mechanism *x tends to generate outcome y*. It is a mistake to think that explanations in terms of simply the causal power is as far as science can go – it should also include in what circumstances they are active (Fay 1994, p. 95). Thus, theorisation must include the structure that underlies the generative mechanisms (structure of X), the outcome that these mechanisms tend to produce (Y), and finally the elements of context that trigger or inhibit the firing of these generative mechanisms (C).<sup>45</sup> Any explanation must include all three of these elements. The end result is that we are interested in, to paraphrase Carlsson (2003) and Pawson & Tilley (1997, p. 210), *how, for whom, and in what circumstances* particular mechanisms generate particular outcomes. Consequently, causal explanation is both context sensitive (context is important) while not overwhelmed by the details of context (context is *not* everything).

### 2.3.3 GENERALIZATION

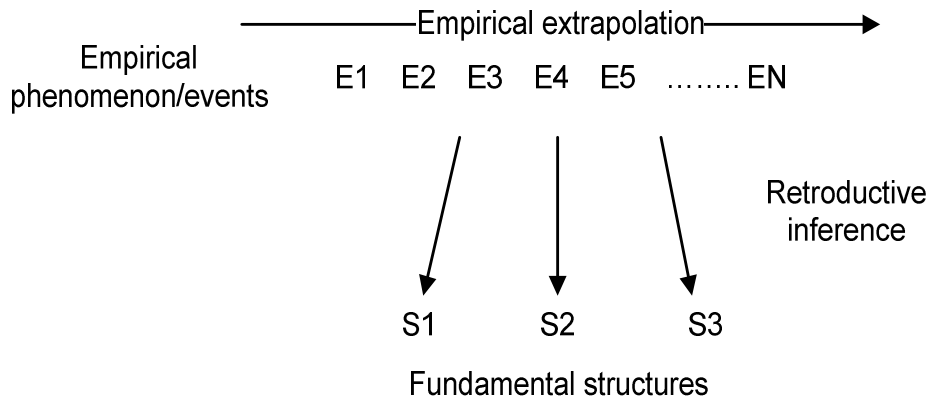
Theorisation and generalisation of structures and mechanisms require a different logic than induction and deduction. The standard thinking on generalisation is that it is ultimately an inductive venture (Lee and Baskerville 2003). Generalisation requires the uniformity of nature assumption to be invoked, and consequently is never fully justified

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<sup>45</sup> Note that this is the same as the CMO configuration (Context + Mechanism = Outcome) formulation of Pawson and Tilley (1997).

logically. However, the critical realist mode of theorising does not rely on the inductive movement from empirical events in one context to empirical events in another context. Rather, it moves *retroductively* (Archer *et al.* 1998) from an unexplained phenomenon at the empirical level of reality to the deeper level of reality (the real) to hypothesise the mechanisms that must exist to generate it (Stones 1996) (see Figure 5). Stones explains:

“Retroduction, for sociology, involves the postulation of social objects of mechanisms, with definable powers, whose existence or activation is thought to be making, or to have made, a significant causal contribution to a social phenomenon that a sociologist wants to explain” (Stones 1996, p.37).



**Figure 5 From “Two types of generalization” (adapted from Danermark *et al.*, 2003, p. 77). Retroductive inference generalization requires the abstraction of the underlying fundamental structures and their causal mechanisms that generate the empirical outcomes.**

Retroduction does not follow the same logic as induction, the logic underlying the standard notion of generalisation (Smith 2006). The external validity of generative mechanisms hypothesised through retroduction is not dependent upon the uniformity of nature, but rather on the internal validity of the abstracted ideal type theory (House 1991, p. 8). Events do not repeat themselves, but there are generative mechanisms that can be found in different settings. If the same generative mechanism is found in another context it will have the tendency to produce the same effects *by virtue of its very nature*. Therefore, the result of casual explanation that extracts the necessary causal features tell us what is generalisable to other situations (Shadish *et al.* 2002, p. 10). This, of course, is

not entirely unproblematic. It is still not possible to prove with logical certainty that a particular generalisation is warranted.

However, while the same tendency [M] may be found in more than one context, the generative mechanisms of the context [C] may be different. Consequently, generalisation results from the identification of the ideal type theory M as well as its contingent operation in different contexts (George and Bennett 2005, p. 236, Mayntz 2004, Pawson and Tilley 1997). Extending this, one goal of social sciences might be to build up a topology of mechanism [M] + context [C] = outcome [O] theories (Pawson and Tilley 1997). The more knowledge that we have of how mechanisms interact and are modulated by specific contextual mechanisms, the more informed will be our generalisations as well as policy and practice.

#### **2.4 PRAGMATIC JUSTIFICATION**

This section seeks to justify the research approach offered here through a discussion of its benefits as a research approach. I have argued elsewhere that adopting critical realist assumptions works to overcome theory-practice inconsistencies in other research paradigms (positivism and interpretivism) (Smith 2006). This section puts forth two pragmatic arguments for the benefits of adopting this approach.

The pragmatic arguments are based on the advantages that this approach offers for theory building and social science research. The first argument is that adopting the assumptions discussed above allows for the integration of research across different research paradigms through its ability to provide a re-interpretation of these theories and findings in light of new assumptions. The second argument lists a series of methodological implications that aid in theory development.

Mingers (2004) argues that critical realism “subsumes” positivism and interpretivism. If the positivist and interpretivist were to adopt critical realist assumptions, then Mingers is right. However, subsumption requires that the research from other traditions be re-interpreted in terms of critical realist assumptions. In fact, arguably the real power of

critical realism lies in this re-interpretation of the activity of science (Ron 2002, p. 140) to better explain previous research (e.g. Befani 2005, Fleetwood 2001, Pratschke 2003, Ron 2002). The end result can then be considered the natural expression of what researchers were doing all along as “*social science explanations, currently and historically, are inherently mechanistic explanations* (Bunge 2004, p. 207, Hernes 1998)” (Smith 2006, p. 203 italics in original).

The key to re-interpretation is found in the notion of generative mechanisms. If one replaces the empiricist, non-essential, notion of causality implicit in both interpretivist and positivist research with the notion of generative mechanisms, then it becomes possible to re-interpret research in terms of the search for underlying causal mechanisms.

One objection to this type of integration is that different types of research are based upon different assumptions that are fundamentally incompatible (Fitzgerald and Howcroft 1998). However, through re-interpreting the research with new ontological assumptions, these incompatibilities can be resolved. For example, if processes are instead explained with generative mechanisms, then interpretive and causal analysis are not opposed but rather interdependent (Ekstrom 1992, p. 117). Reasons and beliefs can be considered causal mechanisms that in part determine human behaviour. However, we may have to understand these beliefs to know how and why they are causal, and how they interact with other situational ideas and constraints. Indeed, studies of the process and assumptions behind interpretivist research reveal the search for deeper causal processes (Kakkuri-Knuuttila *et al.* 2006).<sup>46</sup>

There are also several methodological benefits derived from the research approach:

- **Allows for theoretical integration across social science disciplines** – Through the use of middle-range causal theory, it is possible to integrate research from across the social sciences. This is because theories can incorporate causes that are

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<sup>46</sup> This is in accord with Walsham’s (2006) suggestion that critical realist assumptions are appropriate to underpin interpretive research. Earlier, Walsham specifically referred to the notion of ‘tendencies’ (i.e. generative mechanisms) as an appropriate conceptualisation of causality for interpretivist generalisation (Walsham 1995, pp. 78-79).

micro or macro,<sup>47</sup> social or natural, as long as they refer to different parts of the social and natural world. This approach encourages bringing in relevant theoretical material from other sources (Layder 1998, p. 77).

- **Develops practical theory** - Middle-range causal theories are very good for both practitioners and policy makers (George and Bennett 2005, chapter 12, Pawson 2003, Pawson 2004, Pawson and Tilley 1997). Applicable theory that informs future action necessary involves causality (Markus and Robey 1988), ideally including causal variables that can be influenced by the decision-maker (George and Bennett 2005, p. 274).
- **Encourages theoretical reflexivity and testing** - The focus on ontology and the centrality of theory encourages a dialectical research process whereby the researcher is actively engaged in theorising based on data and other information as well as critically examining and testing these theories (Layder 1998, p. 77). This involves explicit reflexion on important underlying assumptions with the potential to improve the quality of research (Smith and Madon 2007).
- **Clarifies the object of study which improves the choice of method** - The primacy of ontology forces a researcher to have at least a preliminary conceptualisation of the object of study before engaging in research. This then allows for a more informed method selection process based upon the object of study, something that is rarely found in the literature (Sahay and Walsham 1995, p. 119, Walsham and Sahay 2006).
- **Encourages methodological reflexivity and methodological pluralism** The movement from ontology to epistemology, and not the other way around, encourages openness to whatever method is best for the research at hand. This opens up the researcher to the possibility of a wide variety of methods.

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<sup>47</sup> This type of theorising is basically identical with the type of theorising proposed by George and Bennett, typological theorising:

“An important advantage of typological theorizing is that it can move beyond earlier debates between structural and agent-centered theories by including within a single typological framework hypotheses on mechanisms leading from agents to structures and those leading from structures to agents. This allows the theorist to address questions of how different kinds of agents (individuals, organizations, or states, depending on the level of analysis) behave in and change various kinds of structures” (George and Bennett 2005, p. 245).



## 2.5 CONCLUSION

Underlying the choice of the philosophical assumptions and research approach taken in this thesis is a concern with providing a logical and consistent manner to perform social science research. A secondary goal is to develop an approach that a) is able to deal with the complexities of social science research and b) allows for the possibility of theory-testing and refinement and ultimately theory-building. One key component of this approach is tying theory and explanation to the generative mechanism notion of causality. The end result is a causal/explanatory research approach that aims to uncover the how, for whom, and in what circumstances particular mechanisms operate. Now this approach can be applied to the question of the relationship between e-governance and trust in low-income countries; that is, how, for whom, and in what circumstances e-services build trust in the state.

### **3 THEORY I & II: TRUST AND INSTITUTIONAL TRUST**

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The following two chapters present the theoretical framework for this thesis. In its totality, the theoretical framework begins with a foundation of trust theory and builds up to institutional trust and finally culminates with e-government and institutional trust. This chapter establishes the first two components of the framework: (1) the sociological and psychological understandings of trust (i.e. the core of trust theory) and (2) political science theories of institutional trust. Chapter 4 builds on this foundation to develop an integrated theory of e-government and institutional trust.

The conceptualisation of trust begins with the assumption that if one is to study trust, then it must exist as a social *thing*. The discussion in Chapter 1 established that the concept of trust warrants attention in research and policy due to its causal role in a myriad of social relationships and even as foundational for democratic governance. Implicitly, that section also argued for the ontological existence of trust. Trust as a social thing is established through the causal criteria of existence; that is, we know that trust exists through its causal impacts.

This approach is potentially problematic. There are risks, for example, of combining different causal functions under the same label, when they actually stem from fundamentally different social objects. This is an unfortunate difficulty in social science that further highlights the importance of conceptual clarity. The best theory would be one that can explain the whole causal chain, from the structure of trust, to its causal mechanisms, to the outcomes that people attribute to trust (such as cooperation). Completing this pathway provides greater confidence that a conceptualisation is accurate. The goal of these two chapters is to complete that chain as thoroughly as possible.

This chapter has two main parts with five sections overall. Part I develops a theory of trust. Within part I, the first section (3.1) explores the core of trust. Trust is revealed to be a social relationship with two components: objective trustworthiness and subjective trust.

Sections 3.2 and 3.3 consider these two components and how they are causally linked by cognitive processes based on values, expectations, and the interpretation and assimilation of trustworthiness cues. Part II extends the trust theory by delving into one type of trust; institutional trust. This part is divided into two sections, the theory of institutional trust (what it is) (3.4) and theories of how to build it (3.5).

### **3.1 PART I: THE CORE OF TRUST (AND TRUSTWORTHINESS)**

Given the wide range of functions that trust plays in many types of social relationships, it is not surprising that there is no consensus definition of trust (Barber 1983, Grabner-Kräuter *et al.* 2006, Jones 2002, Tschannen-Moran and Hoy 2000). Definitions of trust bring together a wide variety of seemingly related concepts such as faith, confidence, alienation, expectations, risk, honesty, openness, social relationships, and many more (see Table 4). Trust is defined in a variety of means and from a variety of perspectives. Often, trust is defined in contrast to another conceptualisation of trust. For example, trust has been conceptualised as primarily a social-structural versus an individual social-psychological phenomena (Barber 1983), a product of self-interest (Cook *et al.* 2005, Hardin 1991) versus moral/normative motivations (Braithwaite 1998a), ascribed versus earned (Harré 1999, p. 256), unwarranted versus warranted (Warren 1999b), predictive versus normative (Hollis 1998, p. 10), and blind versus active (Solomon and Flores 2001). It also has many social instantiations: interpersonal (Leach and Sabatier 2005), public (Moon 2003), political (Cole 1973, Kumlin 2004, Levi and Stoker 2000, Mishler and Rose 2001), democratic (Brennan 1998, Warren 2004), and institutional (Mishler and Rose 2005, Pavlou and Gefen 2004, Zucker 1986), to list a few.

### 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)

“the 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).

“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, 1988a, 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 & 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).

**Table 4 Various definitions of trust found in the literature. Common key words found in trust definitions are in bold.**

There is an inherent tension when conceptualising trust between the breadth of material on trust, the depth necessary for the empirical application of any research concept, and any attempt to contribute back to trust theory. To conceptualise trust, a researcher must

account for this wide diversity of different theoretical and empirical applications.<sup>48</sup> This diversity presents a problem. Given the wide variety of conceptions of trust, arguably it is “whistling nonsense” to claim that there is ‘one’ true meaning of the term (Hardin 1999, p. 26). Furthermore, trust in its many (causal) manifestations is most likely not one thing with one source, but takes a wide variety of forms (Levi 1998, p. 79). On the other hand, empirical research requires a specific conceptualisation. Indeed, several recent books on trust have often applied loose conceptualisations of trust (such as in the vernacular) resulting in inconsistent and or overly vague grand claims (Hardin 1999, p. 29). Finally, unless there is a connection between the applied theory and the other theories of trust, no theoretical contribution can emerge. So how can we make these necessary connections?

The philosophical and methodological developments in Chapter 2 present one possible way forward. The goal is not to come up with a grand synthesis of trust theory, an outcome which may be inconceivable (Gambetta 1988b). The ultimate goal is to logically build up concrete and (ideally) testable propositions that connect to the core component of trust. This is accomplished through the use of two levels of theory. On the foundational level, the theory of trust is an ideal-type theory of the structures and mechanisms that constitute trust.<sup>49</sup> This is the *core* of trust. It contains only the essential components and leaves aside the contingent, or unessential, aspects. The assumption here is, as Jones (2002) argues, that there is something called trust and that most theories take into account this common core. This is encouraged by the fact that at least a “minimal consensus about its meaning” has emerged (Levi and Stoker 2000, p. 476).

### 3.1.1 TRUST IS A SOCIAL RELATIONSHIP

In the literature, the starting point for any conceptualisation of trust is that trust involves at least two social actors: where social actor A places her trust in social actor B (Hardin 1993, p. 507). For example, in the context of this research, a citizen (A) places trust (or not) in a particular institution of democratic governance in Chile (B). In other words, trust

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<sup>48</sup> Among the prominent social and political theorists that must be seriously considered are Barber, Coleman, Fukuyama, Gambetta, Giddens, Hardin, Levi, Luhmann, Sztompka, and Warren.

<sup>49</sup> This means that for trust to be trust it *must have these core structures and mechanisms* to some degree.

is a type of social relationship, with two purposive actors (Coleman 1994, p. 96, Harré 1999, Reed 2001). In general, trust is considered possible between a wide variety of social actors such as between individuals, between individuals and systems (such as institutions), and even between systems (Barber 1983, p. 18).<sup>50</sup> Arguably we can speak of “gradual, expanding, concentric circles of trust ... from the most concrete interpersonal relations, toward more abstract orientation toward social objects” (Sztompka 1999, p. 42).<sup>51</sup> Regardless of this abstractness of the social object, however, the logic is the same, “We ultimately trust in human actions, and derivatively their effects, or products” (Sztompka 1999, p. 46).

Given this, when talking about trust, it is always in reference to a particular social relationship or system (Barber 1983, p. 17). This excludes the possibility to *trust* in things such as your bicycle, car, or computer to function consistently and properly. Instead, these beliefs are attributed other terms such as a “reliance upon a regularity” (Offe 1999, p. 52) or “predictive trust” (Hollis 1998, p. 10). Fundamentally, this distinction points to the human characteristics that underlie trust, such as choice, risk, emotions, and the moral dimensions of human behaviour. For example, you might be disappointed in the failure of your computer to work properly, but it would be a stretch to feel betrayed (Solomon and Flores 2001, p. 33). One of the main reasons for this is because the bicycle *cannot know it is being trusted* (Offe 1999, p. 52). This self-awareness involved in trust helps make trust what it is.

Viewing trust as a social relationship has important implications. Social relationships are embedded. This means that trust includes the interaction of the two actors within elements of structure (the structure of the relationship), and not just a social (emotional)

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<sup>50</sup> There are, of course, some theorists (most notably Russell Hardin) who contest the ability of trust to extend beyond close personal relationships. This issue will be discussed in more detail in section 3.4.2.

<sup>51</sup> Sztompka lists these objects of social trust as personal, categorical, positional, group, institutional, commercial, and systemic (Sztompka 1999, pp. 45-46).

practice (cf. Solomon and Flores 2001).<sup>52</sup> However, even though we view trust as a social relationship, the importance of the component of trust as a practice is crucial if we are to understand how trust is broken or built. Recall that the relational structure of society holds that social relationships are reproduced or transformed through the actions of individuals. Trust, like all social relationships, is always in flux; it can be initiated, sustained, broken and repaired (Tschannen-Moran and Hoy 2000).

### 3.1.2 BOUNDARIES OF TRUST: DISCRETION AND RISK

There is a component of reliability in trust, the perceived and real reliability of the trusted actor's (B) behaviour. This behaviour, however, is always with respect to a limited domain: the "boundaries of trust" (Harré 1999). Thus, we can refine the definition above slightly to trust as a social relationship where A trusts B to do C "in matters of D" (Hardin 2002b, p. 9), or "to act from a certain motivation" E (Blackburn 1998, p. 30). This is the behaviour that is expected of the trusted actor given their role in the social relationship (Harré 1999, p. 257, Seligman 1997). For example, you may not trust your newborn baby to the care of the bus driver, but you probably would trust the bus driver to get you to work safely and on time.

This discussion brings up two important elements of trust: discretion and risk. "As virtually all writers on trust agree, trust involves giving discretion to another to affect one's interests" (Hardin 1991, p. 507, Hardin 2002b). Reliance on deterministic behaviour does not require trust. For Coleman (1994), trust situations are a subclass of situations that involve risk; that is, those situations where the risk one takes depends on the discretion and performance of the other. From a rational choice perspective, this implies that trust is in some way a weighing off of the risk of potential gains and losses when deciding to trust another (Coleman 1994).

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<sup>52</sup> To reduce trust to a social practice is to perform what Archer (Archer 1995) would call a "central conflation". This is a parallel to fallacy committed by Giddens' Structuration theory that Archer argues conflates the separate but interdependent aspects of agency and structure into agency. To do so eliminates the possibility of analysing the interaction of agency and structure through time (Archer 1995). Indeed, at the end of the day, Giddens argues for methodological bracketing that just moves the agency-structure dualism from the theoretical to the methodological level, at a minimum admitting to its analytical importance (Archer 1995, p. 88). This is a methodological shift from an analysis of solely practices to include an analysis of the reasons (both structural and internal to the agent) for trust practices.

Using trust as a mechanism for dealing with the discretion of others has benefits. Trust shapes future possibilities of action, through the changing of a relationship, thus changing the situation within which action occurs. The trust relationship establishes a set of mutual rights and obligations for both sides of the relationship (Reed 2001, p. 217). A trust relationship provides B with the space for discretion, and A is free to behave as if B will complete their obligations with respect to C. Placing trust opens up whole new set of possibilities that emerge from this freedom and openness to uncertainty (Solomon and Flores 2001, p. 50), for both the truster and trustee (Coleman 1994, see chapter 5).

### 3.1.3 TRUST AND TRUSTWORTHINESS: TWO SIDES OF A TRUST RELATIONSHIP

In any one situation, there are four extremes of possibilities relating trust and trustworthiness: trust may be given but misplaced, trust may be given and well placed, trust may be correctly withheld, and trust may be incorrectly withheld. These different possibilities highlight the need to differentiate between the subjective element of *trust* given by the truster, and *objective* characteristics of *trustworthiness* held by the trustee. It has arisen as important in other theoretical and empirical research on organizational trust (Mayer *et al.* 1995) and trust in the state (Hardin 1993, Hardin 1996, Levi 1998, Levi and Stoker 2000).

This distinction is not analytically pure as is made evident by the many writers who conflate this important distinction between trust and trustworthiness (Hardin 1993, p. 512, Hardin 1996, Hardin 2002b, Solomon and Flores 2001, p. 56). The confusion arises because trust and trustworthiness are both autonomous of each other and dependent upon each other. Objective trustworthy features are only trustworthy with respect to the truster. Trustworthiness is both an objective feature of the relationship *and* simultaneously a subjective feature of that relationship; that is, trust and trustworthiness are “mutually defining” (Solomon and Flores 2001, p. 56). Consequently, trustworthiness must always be defined with respect to the social relationship *and to the subjective views of the trustee*. This has important implications for any research on trust.



### 3.1.4 EXPECTATIONS AND VALUES: LINKING TRUST AND TRUSTWORTHINESS

Connecting trust and trustworthiness is a necessarily subjective core component of trust: *expectations*. It was Luhmann (1979) and Barber (1983) who developed theory for the relation between an actor's expectations and trust. For Barber, trust and trustworthiness can only be understood in terms of the truster's expectations. Recall the definition of trust above, truster A trusts trustee B to do C. Thus, trust placed means that truster A has *expectations* that B will fulfil their requisite obligations.<sup>53</sup>

The expectations a person holds are determined not just by the situation and obligations entailed in the trust relationship, but by the *values* held by the truster. One's value system sets the range of expected and morally appropriate actions, whether or not the trusted shares those same expectations or values. In this way, the objective features of trustworthiness are determined by the subjective value system of the truster,

“...definitions of trustworthiness, with regard to both interpersonal and interinstitutional relationships, must always be seen in the context of their defining values. Shared or differing values will always be important for descriptions and analyses of situations of trustworthy competence of fiduciary responsibility” (Barber 1983, p. 66).

In this way we see that values and expectations are the central link that connects the subjective and objective components of trust and trustworthiness in a reciprocal social relationship.

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<sup>53</sup> Barber refers to three types of expectations; “the persistence and fulfilment of the natural and the moral social orders”, “expectation of technically competent role performance from those involved with us in social relationships and systems”, and “that partners in interaction will carry out their fiduciary obligations and responsibilities, that is, their duties in certain situations to place others' interests before their own” (Barber 1983, p. 9). Similarly, Zucker (1986, pp. 57-58) argues that there are two major components to trust: background expectations and constitutive expectations. Background expectations refer to the “taken for granted” attitudes in daily life that include the set of background social knowledge (shared symbols and interpretive frames) that are common to a collectivity. Constitutive expectations are those with respect to “the rules defining the context or situation”. Ultimately these expectations set expectations of “rationally effective and emotionally and morally appropriate” actions” (Barber 1983, p. 9). Sztompka (1999) provides a scale of expected conduct, from least to most demanding expectations; instrumental, moral, and fiduciary. Instrumental expectations are expectations of regularity, reasonableness, and efficiency. Moral expectations are that we expect people to be morally responsible, kind, truthful, and fair. Finally, fiduciary expectations are those based on the person's obligations to others interests.

### 3.2 TRUSTWORTHINESS

If a truster bases a trust judgement on expectations of trustworthiness, then what can be said about the components of trustworthiness? With regard to the trust A has in B to do C, for B to be trustworthy, B must have both the *motivation* and the *competence* to do C (Hardin 1999, p. 28, Kee and Knox 1970).<sup>54</sup> While these two components constitute trustworthiness, arguably it is the *motivation* behind the action that necessitates the need for trust. Dasgupta argues that “confidence stems from ability, and trust from a person’s underlying disposition or motivation” (Dasgupta 1988, p. 52: see footnote 3). Recall that trust only happens when there is discretion with respect to C. Thus,

“You trust him only because, knowing what you know of his disposition, his available options and their consequences, his ability and so forth, you expect that he will *choose* to do it” (Dasgupta 1988).

In other words, it is only in areas of discretion, where roles are open to negotiation, interpretation, and alternative actions, where trust is necessary (Seligman 1997, p. 27). Consequently, the focus in this section is on the source of motivations of trustworthiness.

These sources of trustworthy motivations can be found under different names in the literature. For example, Zucker (1986) calls them “modes of trust production” and Sztompka (1999) calls them the “foundations of trust”. This analysis starts from Williams’ (1988) analysis of cooperation that helps us to analytically consider the different types and sources of motivations that encourage cooperation (or in this case, trustworthy behaviour). First, it is possible to identify two levels of sources of motivations: macro and micro-motivations. These two sources are generally reflected in the literature by the dichotomies that emphasise social-structural or social-psychological types of trust (Leach and Sabatier 2005). Within each of these levels there are two types of motivation: egoistic and non-egoistic.<sup>55</sup> This represents another dichotomy in the trust literature, that between rational self-interest accounts (Cook *et al.* 2005, Hardin 1991,

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<sup>54</sup> These words have many synonyms in the literature, such as fiduciary and technical competence (Barber 1983).

<sup>55</sup> Not surprisingly, these four types of trustworthy mechanisms fit easily into line with the two ontological components of social reality a relational structure and agency. Note that this also parallels Sztompka’s (1999) three dimensions of trust: relational, cultural, and psychological.

Hardin 2002b) and normative, moral, and emotional accounts of trust (Blackburn 1998, Lewis and Weigert 1985).

Here we are talking about the actual social and psychological structures that combine to generate the motivational tendencies to engage in trustworthy behaviour. These motivations flow from the interaction of several mechanisms: internal psychological structures, the cultural ideas that provide the normative obligations to trust, and the structure of the relationship. Put in other terms, these structures provide the ability (physical and psychological), motivation (personal values, norms), and incentives (structure, cultural norms) to fulfil the expected obligation. Of course, these influences interact, and thus the differentiation between them is not always so clear.

It is useful to categorise these trustworthy behaviour encouraging mechanisms into four groups (see Table 5):

- **Relational structure incentive system (Macro-egoistic)** – These motivations flow from a person’s social position that shapes their structural incentive system (the fear of sanctions, the reward of benefits). External motives are social constraints (Hardin 1996, p. 31) and incentives to fulfil obligations<sup>56</sup> (Dasgupta 1988, p. 50). There are a whole series of these types of mechanisms. To give a relevant example, transparency and accountability mechanisms provide incentives for workers to conform to their accepted work practices, or face punitive penalties.<sup>57</sup>
- **Cultural (Macro non-egoistic)** - These motivations are the cultural norms and values that encourage trustworthy behaviour, for example, the value of ethical reciprocity, or of a general duty of fidelity (Levi 1998, pp. 88-89, Williams 1988, p. 10). Of course, not all cultural norms are conducive to trust. There may be

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<sup>56</sup> Taking an economic perspective Dasgupta writes, “if there is an absence of suitable punishment, that is incurred loss, for breaking agreements or contracts, individuals will not possess the appropriate *incentives* to fulfil them” (Dasgupta 1988, p. 50).

<sup>57</sup> For example, “Effective organizations create a set of monitoring, auditing, and insurance arrangements to guarantee maintenance of competence and to forestall or compensate for failures of fiduciary responsibility” (Barber 1983, p. 22).

cultures – such as in “low trust” societies – where the normative value is not to trust in others (Fukuyama 1995).

- **Self-interest (Individual egoistic)** – Clearly people have egoistic motivations. These self-interest motivations can work to align interests between the truster and trustee making the trustee more trustworthy. In fact, it is due to these egoistic motivations that trust is necessary; there must be some conflict between values, be they moral or self-interested, to even bring about the problem of trust (Dasgupta 1988, p. 53).
- **Moral obligations (Micro non-egoistic)** – The term non-egoistic expresses a value that transcends individual and rational self-interest.<sup>58</sup> These values are linked with emotional cares and concerns that are motivating (Lewis and Weigert 1985). For example, the emotional desire to be seen as trustworthy can drive behaviour (Dasgupta 1988, p. 53, Petit 1995, Tyler 1998, p. 288).

		Types of motivations	
		Egoistic	Non-Egoistic
Level of motivation	Macro	<b>Relational structure incentive system</b> - “the fear of sanctions of the sovereign”.	<b>Cultural norms and values</b> of trustworthiness such as; cooperation, honesty, fairness, and openness.
	Micro (psychological, socio-psychological)	<b>Self-interest</b> – rational calculation of self interest, emotions	<b>Moral obligation</b> Personal identity, moral/value system, friendly relations, love

**Table 5 Types of motivations and their instantiations at both macro (e.g., culture, institution, and group) and micro (individual).**

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<sup>58</sup> These are often referred to as the moral component of trust. Hardin argues that if there is a moral residue to trust, this residue most likely pertains to trustworthiness rather than trust (Hardin 1996).

These mechanisms are not mutually exclusive. For any trust relationship, any combination of these elements may be simultaneously coactive. Indeed, the co-operation of these mechanisms is often necessary<sup>59</sup> and different types of trusting relationships may be based upon different mechanisms to varying degrees. For example, interpersonal relationships may contain elements of caring about the relationship and its corresponding motivation of moral obligation as well as the cultural norm of fidelity to your friends (Solomon and Flores 2001, p. 105). Institutional trust, on the other hand, may be based more on cognitive considerations of structural incentive systems and self-interested calculations than knowledge of individual motives, emotional concerns, or the norms of fidelity (Lewis and Weigert 1985, p. 793).<sup>60</sup>

### 3.3 SUBJECTIVE TRUST

While trustworthiness can (to an extent) be considered ontologically objective (i.e. exists independent of an observer), trust as a cognitive state is ontologically subjective (Searle 1995). At some point there is some cognitive activity that decides, calculates, or somehow “forms” a subjective state that is trust. Referring to trust as a subjective state of mind separates it from its behavioural manifestations (Kee and Knox 1970). The subjective/behavioural distinction is not always clear or agreed upon in the literature. Often the two are run together, despite their need to be separated (Hardin 2002b, Möllering 2001). In contrast, Dumouchel (2005) recently argued that the cognitive component to trust does not add any explanatory benefits and instead should be replaced by a more simplistic view of trust as an action; as trusting behaviour. Gambetta (2005) and Sztompka (2005), in their responses to Dumouchel, rather forcefully took umbrage with his proposal, arguing that Dumouchel misunderstood their arguments and then both reasserted the importance of the cognitive component of trust. One point that Dumouchel makes that is certainly true is that the issue has strong methodological import. Fundamentally, Dumouchel’s proposal opts for simplicity and masks over the complexity of human cognition by replacing it with a black box, arguing that only the outcome

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<sup>59</sup> The classic expression that “Every man has his price” demonstrates clearly that “no one awards an infinite weight to his own honesty” (Dasgupta 1988, p. 54).

<sup>60</sup> Here the power of both a relational sociology and viewing theories as partial causes for integrating theories can be seen.

matters. This approach ultimately greatly restricts the application of quite a lot of knowledge and important analytical distinctions that usefully inform research (cf. Möllering 2001).

### 3.3.1 TRUST & KNOWLEDGE

Trust as a subjective judgement is, by definition, based on information. Trust falls between full knowledge and total ignorance. In situations of full knowledge trust is not necessary. Trust only comes into play under conditions of ignorance<sup>61</sup> (Gambetta 1988a, p. 33, Giddens 1990), when there is a choice that is made before one can monitor the others actions (Dasgupta 1988, p. 51). This implies that trust requires a suspension of belief, some level of faith, that bridges the gap between the unknowable and expectation (Möllering 2001).

However, some knowledge is required for there to be trust. Trust that is based on no knowledge is not trust, but rather something that is termed faith, “blind” trust (Offe 1999, p. 49, Solomon and Flores 2001), “naïve” (Ankersmit 2006), or “pathological trust” (Kee and Knox 1970). If there is no information that can work to confirm or disprove a trust relationship, then there is no way to alter or change this relationship. Trust, however, must be underpinned with some reason, some “warrant”, to trust in the other’s competence and motivations (Warren 2004).

Exactly how much knowledge is necessary (or how much is too much) to fall in the trust range is uncertain, and to my knowledge, unexplored in the literature. It does, however, enter into theorists’ assertions of what constitutes trust and what does not. An obvious and relevant case in point is Hardin’s argument that trust in institutions is not possible for epistemic reasons (Hardin 1991). According to Hardin we simply cannot know enough to trust. This debate will be discussed more thoroughly later (see: 3.4.2) as it carries potentially important conceptual and methodological implications for this study. For now,

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<sup>61</sup> In Giddens’ analysis of modernity, trust has importance when there is an absence of time and in space in social relations.

the important point to take away from this discussion is the role of knowledge for trust relationships.

### 3.3.2 TRUSTWORTHY CUES

The importance of information implies that there must be some means of communicating (purposefully or not) the information upon which the subjective trust judgement is based. In this study, this communication happens through the signalling and perception of trustworthy-cues (Sztompka 1999). The perspective taken here takes the basic ideas from Bacharach & Gambetta's (2001) and Gambetta & Hamill's (2005) work applying the basic notions of "signalling theory" from economics, biology, and game theory, to trust. Building on the notion that trust is ultimately supported by some cognition, when people make trust judgements, "*they look for signs that manifest these properties*" (Gambetta and Hamill 2005, p. 10 italics in original). In a study of taxi drivers who have to make quick judgements on the trustworthiness of potential fares, Gambetta & Hamill (2005) found that they did indeed pay attention to particular trustworthy signs. The main details of the theory are less important than the underlying insight. That is, potential trustees emit, consciously or otherwise, signs of their trustworthiness. These trustworthy cues are then picked up on and inform the truster's trust calculus. In other words, trustworthiness cues are gleaned through interaction over time.<sup>62</sup> These are the "various clues – reasons, predilections, and rules – which make people grant or withdraw trust, and choose specific

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<sup>62</sup> The idea of developing trust through interaction has also been developed in Zucker's notion of process-based trust (Zucker 1986). Through this a reputation may be built. Reputation is "simply the record of past deeds" (Sztompka 1999, p. 71). Thus, reputation is seen as developed through ongoing process of repeated interactions that builds up into a "common, and socially held, understanding of a person's standing with respect to trustworthiness" (O'Hara 2004, p. 71). A positive reputation is arguably equivalent to a type of capital, and Dasgupta argues that it is economically worthwhile to invest in the building of a reputation of honesty (Dasgupta 1988). Reputation can come either through direct contact or from secondary sources (Sztompka 1999); such as holding the appropriate credentials and expertise (O'Hara 2004, p. 72).

type[s] of trust” (Sztompka 1999, p. 69).<sup>63</sup> Of course, a variety of trustworthy cues can be coactive and reinforce each other.<sup>64</sup>

### 3.3.3 CHARACTERISTICS OF TRUSTWORTHY CUES

Focusing on trustworthy cues shifts that assessment of trustworthiness from an judgement of a person, group, or institution to the assessment of the credibility and informational quality of the trustworthy cues that they communicate. Since it is impossible to fully know the motives of the trustee (you can not “get into the head of another”), trusters always deal with second-best indicators that are necessarily imperfect reflections of objective trustworthy qualities (Offe 1999, p. 48). Furthermore, not all trustworthy cues are equal; some are more convincing than others. The quality of information is dependent upon a variety of factors including: visibility, clarity of criteria (comprehensibility) (Sztompka 1999, pp. 82-83), 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 trustworthy cue.

The credibility of trustworthy cues is also important, by definition – trustworthy cues must themselves be trustworthy for them to have an impact. The credibility of trustworthy cues varies depending upon at least two variables: the source and the possibility of mimicry. There are two types of sources through which trustworthy cues can be communicated: direct and indirect (Kumlin 2004). Direct communication comes through personal experience and interaction, such as an iterative experience of cooperation (Bateson 1988). Indirect trustworthy cues are information that is mediated

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<sup>63</sup> Some types of trust are based on the focus of the trustworthy cue. For example, in Zuckers’ (1986) *modes* of trust production she outlines three types of trust that emerge from different types of information: information based on processes, characteristics, or institutions.

<sup>64</sup> In general, we would expect that these cues communicate both the competence and motivation of the trusted. Sztompka (1999) identifies six types of trustworthy cues. At the micro-level (information about the social actor) there are *performance*, *appearance*, and *reputation*. At the macro-level (information about socio-cultural structures) are *accountability*, *pre-commitment*, and *trust-inducing situations*. There is no need to elaborate on most of these cues here as their specifics become more relevant when considering a particular type of trust relationship. For example, Zucker’s characteristic-based trust is based fundamentally on appearance, such as ethnicity, but it might be enhanced in a trust-inducing situation, where “background understandings will be held in common” (Zucker 1986, p. 61). Tyler (1998) talks about trust that is based on social bonds and shared identities. This trust can draw from a whole range of trustworthy cues including reputation, accountability (to a group), and appearance (identity).



through a secondary source, such as friends, relatives, experts, politicians, and the media. Depending upon the source and the truster's opinion of the credibility of the source, the weight of the information as a trustworthy cue will vary. Secondly, the credibility of a cue is a function of the ease to fake that cue (Gambetta and Hamill 2005). For example, effective con artists exploit easily faked trustworthy cues such as sincerity and concern for others.

### 3.3.4 A STREET-LEVEL EPISTEMOLOGY OF TRUST

Trust is often considered from the same perspective as truth, as a universal. A good example is the differing uses of prisoner's dilemmas or game theory to analyse the situations under which trust may arise. Man is deemed a rational, self-interested creature and will (*should*) act according to objective criteria. This type of exploration has a lot to show for it in developing conceptual insights into trust. However, it does not incorporate a more intuitively plausible model of man and it does not consider trust as a *cognitive* problem for an individual.

This can be seen by considering the importance of trust representations. Drawing on Adam Smith's notion of the impartial spectator, Ankersmit (2006) argues that man is a representational being. Trust, then, is a particular sort of representation of the other in the mind of the truster. Rather than a non-socially embedded actor making a judgement based upon their self-interest and some limited notion of the other, people form complex representations of other social actors, upon which they base trust. This brings into play the knowledge of the other, communication, social interaction, etc., that does not find a place in the simplistic rational trust games that trust theorists often use (Ankersmit 2006, p. 33). This has interesting implications. A trust representation itself is the criteria upon which a trust judgement is made. There are no appeals to external universals, or to the 'truth' of the objective characteristics of trustworthiness.

To understand trust, then, we need to understand to some degree the inner workings of the mind of the truster. What is needed is a perspective of trust that takes into consideration the realities of interpretation (Möllering 2001) and limitations of human

cognition and action, as well as a model of how trust is learned (Hardin 2002b). We are not interested in the objective characteristics of the trustworthy cues, but rather what cues are relevant, why, for whom, and in what circumstances. Hardin recognised this need when he developed his “street-level epistemology of trust” (Hardin 1993),

“For the understanding of trust (and other behaviors as well), we require not a philosophically general epistemology of knowledge, but a street-level epistemology. The economic theory of belief focuses on the individual believer, not on the matter of belief (e.g. the height of Mont Blanc), on the costs and benefits to the individual in coming to have various beliefs” (Hardin 1991, p. 507).

The starting point is the assumption that trust is learned, like any other generalisation (Hardin 1991). How trust is learned is not entirely clear. One perspective is that trust is a subjective continuum, and that how much trust one has is a point on that continuum (Kee and Knox 1970). Others view trust as a “threshold point, located on a probabilistic distribution of more general expectations” (Gambetta 1988a, p. 218). Coleman (1994) envisioned a trust judgement as a rational calculation based upon the potential loss or gain from trusting with respect to the probability of trustworthiness. Hardin uses a Bayesian account of knowledge to make his example of how information and experience are incorporated into a trust judgement,

“In a Bayesian account of knowledge, for example, I make a rough estimate of the truth of some claim – such as that you will be trustworthy under certain conditions – and then I correct my estimate, or ‘update,’ as I obtain new evidence on you” (Hardin 2002b, p. 113).

In general, the basic idea is that new information is entered into the calculus shifting the amount of trust (Dasgupta 1988).<sup>65</sup>

While the terminology used here sounds rational (e.g. rational calculation), this trust “calculation” contains elements beyond purely rational considerations. First, trust includes a passive element – that is, a surrendering “suspension” – that enables the not rationally calculable leap that is necessary for trust to bridge the void of not knowing (Blackburn 1998, Möllering 2001). Second, this suspension and calculation includes

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<sup>65</sup> Also, this “calculation” is most likely not something that enters ones awareness, instead trust is less of a choice and more of something that just happens (Hardin 2002b, p. 119).

more than just calculable economic incentives. Trust involves both cognitive, normative, and affective components (Lewis and Weigert 1985, Solomon and Flores 2001). Theoretically, combining cognitive, normative, and effective components is easily done when the common underlying component is found. The common denominator is *values*. Recall that at the core of one's personal identity is a set of values that shapes how the person relates to the natural, practical, and social worlds. This identity has particular concerns such as social status (pride) and respect (social reputation) (Tyler 1998). Not surprisingly, Tyler (1998) found that greater pride in work and being treated with respect increased voluntary conformity to group rules as well as feelings of obligations to comply with laws. Thus, the entire calculation must somehow balance off self-interested loss/gain calculations with the loss/gain that comes from following or eschewing one's normative system as shaped by the core of one's personal identity.

This conceptualisation provides a very rough description of the relationship between experience, information, and trust. Here it is helpful to turn to the discipline of social-psychology and psychology. One of the most agreed upon aspects is the asymmetry of trust; trust is easier to destroy than to build. This phenomenon raises some interesting questions. Why do some people continue to trust or distrust despite a preponderance of evidence to the contrary? What would make them change their mind? To give a preliminary answer to these questions, and others, I will discuss a few of the better understood individual level mechanisms that shift this dynamic: trusting disposition, trusting heuristics, cognitive inertia, the problem of induction, the coercion-trust interaction, and finally one's value system.

**Trusting disposition**            A common component in trust research is a notion of the trusting disposition. This is generally represented as a variable added onto a model of trust such as "trust propensity" or "disposition to trust" (e.g. Kim 2000, McKnight *et al.* 2002a, McKnight *et al.* 2002b, Pavlou and Gefen 2004, Warkentin *et al.* 2002).<sup>66</sup>

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<sup>66</sup> McKnight *et al.* (2002b) theorise that there are three components of a disposition to trust (faith in humanity, faith in professionals, and trusting stance) as well as a disposition to distrust (suspicion of humanity).

“Trusting disposition” refers to the simple idea that some people are in general more trusting than others, they have a greater “ability” to trust (Hardin 2002b). It is a personality trait that is thought to be learned from infancy where, for example, people who grow up in more capricious and fractured conditions have impeded development (Hardin 1993, Hardin 2002b, Sztompka 1999). Giddens (1990, 1991) likens this trusting disposition, or “basic trust” in his words, to an individual’s own sense of trustworthiness that provides a basis for self-identity (Giddens 1990: 94). In other words, a trusting disposition represents one’s own *trust in trust* (Ankersmit 2006) – that is, trust in their own subjective trust representation.<sup>67</sup>

**Trust heuristics** A central problem of trust, as indicated, is related to incorporating trustworthiness information: the lack of it, its complexity, having too much of it, having to get it, and how to process it. To effectively deal with these issues, people employ trust heuristics (Hardin 1993). These are cognitive and information economizing tricks that allow individuals to make trust judgements in light of imperfect and incomplete knowledge, as well as limited cognitive facilities (bounded rationality). For example, we might expect citizens to focus on salient low-cost pieces of information (Bianco 1998, p. 246). Furthermore, Scholz (1998) showed that people can learn a trust heuristic in one context and apply it in others, as well as adaptively applying them depending upon variations in the context. It is arguable that trust heuristics even produce behaviour that is better than rational in that it allows individuals to cooperate in a broad range of environments (Scholz 1998).

**Cognitive inertia** Once a mental representation is created, people tend to stick with these representations. There is a plethora of psychological research on individuals’ biases towards the preservation of theory, or cognitive inertia.<sup>68</sup> People in general have a strong confirmation-seeking bias, where they easily accept new confirming information, but

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<sup>67</sup> Interestingly, those who are also in general more trusting tend to also be more trustworthy, “... those who are more willing to trust other people are likely to be equally trustworthy in that they are less likely to lie, cheat, or steal” (Good 1988, p. 32). This disposition also brings with it other benefits, those who are more willing to trust are also “less likely to be unhappy or maladjusted, and are typically more liked by their friends and colleagues” (Good 1988, p. 32)!

<sup>68</sup> See (Good 1988) for an overview.

rarely seek disconfirmation, and even do their best to avoid it. Furthermore, ambiguous or incomplete data will be interpreted in line with preconceived theory, reinforcing their preconceptions. People will also generally fail to re-evaluate old procedures if they fail, brushing off new negative evidence. In this way, doubt has the insidious capacity of being self-fulfilling, regardless of the evidence. This implies of course, that those who are trusting will tend to stay trusting, and those who are distrusting will also tend to remain suspicious.

**Knowledge and the problem of induction**            The existence of cognitive inertia would seem to contradict the asymmetry of trust. Why would trust be easier to build than to destroy? One potential explanation is that trust suffers from the epistemic problem of induction. As Popper argued, it is impossible to *prove* something, while a single instance may disprove.<sup>69</sup> The same holds true for trust (Gambetta 1988a, p. 233, O'Hara 2004, p. 263).<sup>70</sup>

**Coercion, trusting, and trust**            Humans are incredibly socially adept creatures and appear to automatically adjust their own trusting responses to the extent of control mechanisms and trust placed in them. The two extremes of any situation of dependency between two actors range between fully trusting (if blind) and fully coercive.<sup>71</sup> The two ends are essentially mirror opposites and excessive reliance on one end results in reinforcing cycles. At one end, if one is extended trust, it is an effective way to build trust. This is the “cunning of trust” (Petit 1995) and is predicated on satisfying the human desire to be trustworthy and perceived as such. Thus, trusting may build trust. At the other end, coercion may “crowd out” trust. If people have instrumental reasons for performing an action, this undermines the internal normative sense (non-egoistic) of obligation to perform that action (Tyler 1998, p. 290).

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<sup>69</sup> The relevance of counter arguments to falsification are not relevant to discuss to make this argument. We are concerned with the individual epistemology of trust, and thus a single disconfirmation – for example, untrustworthy behaviour, can in many situations disprove someone’s motivations.

<sup>70</sup> Gambetta wrote “while it is never that difficult to find evidence of untrustworthy behaviour, it is virtually impossible to prove its positive mirror image” (Gambetta 1988a, p. 233).

<sup>71</sup> As discussed, each of the extremes does not qualify as trust as in the former there is no knowledge upon which to base a judgement and the later leaves no room for discretion.

**Values** According to the model of man adopted in this thesis an individual's value system forms the core of their personal and social identity. A person's values shape their expectations and in this way what they believe is trustworthy. This has been demonstrated in a few studies that link an individual's value system to trust in particular institutions. In a theoretical sense, institutions are inherently about maintaining stability and social order. Consistent with their predictions, Devos *et al.* (2002) found that people in general believed public sector institutions that stress stability, protection, and conservative values more trustworthy than those that emphasised independent thought and change. In a more nuanced study, Valerie Braithwaite (1998b) hypothesised that those with different value systems (security versus harmony)<sup>72</sup> would respond to different institutions differentially. She found, as predicted, that those with value orientations in line with the values of the institution found the institutions more trustworthy. Braithwaite also shows how this happens: value systems shape expectations that make different trustworthy cues salient.

**Power and credible commitments** Power, like trust, is a relational concept and is a component of all trust relationships (Warren 1999b, p. 324), whether it is evenly distributed or highly asymmetrical. While some have argued that horizontal relationships involve trust and vertical relationships involve power and compliance (Cook *et al.* 2005, p. 45), others argue that if power is a component of all relationships, trust within asymmetries of power must be possible (Farrell 2004). Trust and power are, in fact, intimately related. A person in power has more alternatives available in the given relationship, effectively making the relationship less attractive. The powerful party can extract benefits without fear of reciprocation (Cook *et al.* 2005, p. 42). This implies that the powerful person's trustworthiness, in terms of motivation, is compromised.

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<sup>72</sup> Braithwaite identifies two sets of competing values that are especially salient as they underlie trust norms; security and order versus harmony. The harmony value system "brings together social and personal values with goals of furthering peaceful coexistence through a social order that shares resources, communicates mutual respect, and cooperates to allow individuals to develop their potential to the full" (Braithwaite 1998b, p. 49). Security "brings together personal and social goals and modes of conduct that are considered important for protecting oneself or one's group from oppression by others" (Braithwaite 1998b, p. 49).

Power asymmetries have psychological impacts on the truster. People in general will, when possible, avoid relationships with extreme imbalances of power as they are unlikely to benefit from them (Farrell 2004). Furthermore, those in power and their subordinates apply different trustworthy cues in their trust judgements of each other (cf. Tschannen-Moran and Hoy 2000). While those in power were concerned with competence, the subordinates viewed benevolence and openness (indications of the president's motives) as more important.<sup>73</sup> Subordinates are also much 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). Furthermore, subordinates tend to interpret the actions of the person in power in a negative light (Cook *et al.* 2005, p. 43).

### 3.3.5 SUMMARY

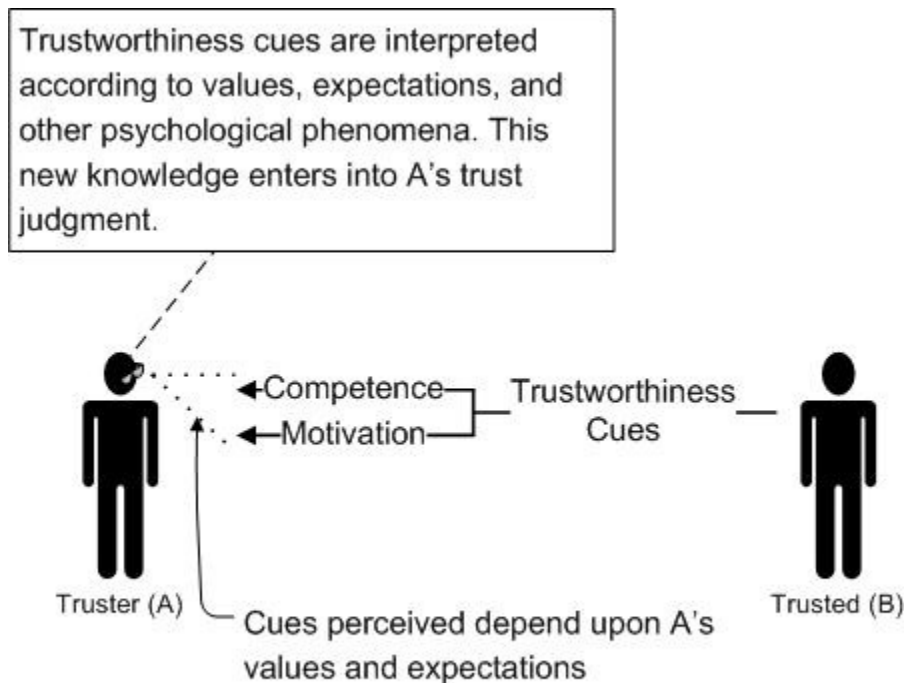
Part I of the theory development lays out an ideal type theory of trust that will serve as the foundation of the theoretical framework used in this thesis. At its core, trust is conceived of as a dynamic *social relationship* characterised by one actor placing discretion in the hands of another with respect to a particular domain of trust (A trusts B to do C). To understand the dynamic of the relationship it is essential to both understand both sides (A and B) as well as how they are connected. This was accomplished by establishing the *trustworthiness/trust* distinction and showing how they are connected in a relationship by the expectations of the truster. Trustworthiness is the objective characteristics of the trustee (B) that determine B's *competence* and *motivations* to perform according to C. Drawing together macro and micro forces, motivations were found to be caused by structural incentives, cultural norms, and individual egoistic (self-interest) and non-egoistic (moral obligations) mechanisms. Trust, on the other hand, is the subjective judgement of the truster (A) of the trustworthiness (competence and motivation) of the trustee (B) with respect to C. Trust is a judgement that falls between

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<sup>73</sup> This should not be surprising as the differentials in power mean that the president can institutionally shape the motives of individuals (making competence the important characteristic), while subordinates are subject to the discretion of the president (making his motives most salient).

full knowledge and total naivety; it always requires some lack of knowledge and therefore a cognitive suspension that enables the trust leap from the unknowable to the expected. Since it is a personal subjective calculation, to understand how this process occurs, it is essential to take a “street-level epistemology” rather than approach it from a top-down perspective. It is theorised that the information that A uses to make this judgement is received through the communication of trustworthiness cues that are signs of B’s trustworthiness. These signs are then perceived and interpreted subject to a variety of psychological dynamics such as trust heuristics, trust disposition, and cognitive inertia (see Figure 6). Central to the dynamic, and warranting specific mention, is how one’s underlying values greatly shapes trust. Personal values systems determine the balance between self-interested (egoistic) and non-egoistic concerns thus shaping expectations of others and the types of trustworthiness cues attended to. In this way the truster’s values flow through expectations to the trusted in a way that fundamentally shapes the qualitative properties of the trust relationship.





## The path from trustworthiness to trust

**Figure 6** A simple diagram of the communication of trustworthiness cues (by the trusted B) and their perception and interpretation by the truster (A).

### 3.4 PART II: INSTITUTIONAL TRUST

Theoretical and empirical work have identified two basic relationships between the state and trust (Ankersmit 2006, Cook *et al.* 2005, see chapter 8).<sup>74</sup> First the state provides the background stability against which people can cooperate and learn to trust others in society, often called social or generalized trust (Levi 1998, Offe 1999, Pavlou and Gefen 2004, Sztompka 1999). Second, the state is an institution with some autonomy and interests, and thus can also be an *object* of trust (Levi and Stoker 2000, Norris 1999b, Warren 2004). These two may be interrelated, but they are analytically and causally distinct. It does not logically follow, for example, that because the state can build trust among people that it is also something you necessarily trust (Ankersmit 2006, p. 41).

<sup>74</sup> A third relation is that interpersonal trust amongst people help to build strong democratic state institutions (Putnam 1993).

### 3.4.1 WHAT IS INSTITUTIONAL TRUST?

This thesis focuses theoretically and empirically, on the second relation; the state as an object of trust. More specifically, this thesis is concerned with trust in public sector institutions. This theoretical concern stems from the focus of this study on how citizens' trust in particular institutions in Chile is affected by citizens' use of e-services. But what does trust in institutions – institutional trust – consist of?

First we have to establish that people identify particular institutions as an independent social object. Findings from a variety of research attempting to assess citizens' "support" of a government indicate that, in fact, people make a series of discriminations with respect to the government. In particular, five aspects have been isolated: the political community, regime performance, regime principles, regime institutions, and political actors (Norris 1999b). Support for *regime institutions* is support for political institutions such as the parliament, the executive, the legal system, state bureaucracy, etc. In concurrence, after a review of the evidence, Kumlin concludes,

“Decades of both good and bad times teach citizens to distinguish between, on the one hand, the democratic system as a set of abstract principles, and on the other hand, democratic institutions and political actors as they function in practice” (Kumlin 2004, p. 74).

In general, institutional trust is defined as trust in the rules, roles, and norms of an institution independent of the people occupying those roles.<sup>75</sup> A good starting place is Zucker's (1986) definition of institutional trust, one of the most commonly referenced conceptions in the IS literature. For Zucker, 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). Warren (1999b, 2004), trying to understand trust in democratic institutions, draws on Zucker's notion of institutional trust. He views trust in democratic institutions as trust in the institutional norms and the effectiveness of accountability mechanisms. This requires three conditions: (1)

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<sup>75</sup> This is an important distinction. In many studies of confidence in public institutions, pre-1980s, there was a weakness in the conceptualization of institutions; on the one hand they were the sets of norms and roles of behaviour, and on the other hand it refers to the occupants of those roles (Barber 1983, p. 85). This ambiguity results in a discrepancy between what is referred to in the studies.

institutions are defined by norms that both the truster and trustee know and the trustee 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. O'Hara (2004) similarly argues that 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.

These definitions highlight a key component of institutional trust: it is based on impersonal institutional mechanisms rather than on people. Indeed, trust in institutions arguably does not require any direct encounter with the individuals or groups who are responsible for them (Giddens 1990, p. 83). According to this perspective, trust in institutions is trust in the "quality of the institutional arrangements within which they operate" (Cook *et al.* 2005). Institutional forms provide "forms of assurance that relieve interpersonal and culturally sanctioned forms of trust of the full burden of facilitating social and economic exchange" (Warren 1999b, p. 321). For Giddens (1990), trust in modern institutions is different than trust between individuals in that trust is bound up with faith in the abstract systems and principles of which people are largely ignorant. Consequently, the focus of trust is shifted to the correctness of the abstract systems, emphasising competence (reliability and credentials) rather than motivation (Giddens 1990, pp. 33-34, 83-87).

This does not imply, however, that there is no component of interpersonal trust in institutional trust (Warren 1999d). There is much agreement that interpersonal trust is not a model for cooperation between strangers (Hardin 2002a, Hawthorn 1988, p. 113). However, the relationship between people and institutions is arguably still a type of person-to-person relation (Harré 1999, Offe 1999). Regardless of the abstractness of the social object the logic is the same, "We ultimately trust in human actions, and derivatively their effects, or products" (Sztompka 1999, p. 46). Also, from the perspective of the truster, "our beliefs about, as well as our affective and social relations to, the personnel account for standing in a trust relation to the institution they staff"

(Harré 1999, p. 260). As Harré comments, considered abstractly, both interpersonal and institutional trust are context-bounded. In the same way that the social context, for example, through community sanctions, bounds interpersonal trust, the people enacting their institutional roles are also bound by the rules and codes of the institution.

Offe (1999) presents an alternative perspective on trusting institutions. For Offe, trust in institutions in terms of trust in rules, roles, and norms is not possible. His focus, like the discussion above is the ineluctable role of people enacting these roles and following the rules and norms. However, he takes a different tack. Offe argues that trusting an institution means trusting in the “ethos” of the institution,

“My thesis is that *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” (Offe 1999, p. 70 emphasis in original).

This position finds empirical support in the research on the link between values and trust in institutions (Braithwaite 1998b, Devos *et al.* 2002) (see 3.3.4).

#### 3.4.2 CAN WE *REALLY* TRUST IN INSTITUTIONS?

Before moving on to consider theories of how to build trust in institutions, we first must contend with a very powerful critique of institutional trust. In a recent important piece on trust, several leading scholars argue that trust is possible between people, but *not* between people and institutions. The argument draws on earlier work by Hardin (1993, 1998, 1999, 2000, 2002b) and hinges on their specific “encapsulated interests” account of trust (a rational self-interest model). This account, like the account presented here, contains an important knowledge component. Their argument is that while trusting in government institutions may be *theoretically* plausible, it is *epistemically* impossible (Hardin 2000, p. 34).

The fundamental issue is that citizens simply cannot know enough to trust. Hardin argues that very few people actually have sufficient knowledge of the institutional structures and roles to understand the incentive structure that indicates trustworthiness (Hardin 1999, p. 30). Unlike interpersonal trust, a citizen is not judging an individual, but instead attempts

to judge the collective behaviour of the institution (Hardin 1993, p. 513). This, combined with the complexity of the world of government institutions significantly increases the epistemological demands (Hardin 1999). Instead of trust, Hardin believes that citizens merely make inductive inferences from past behaviour and thus it is not trust (Hardin 1999, pp. 30, 39). Instead of talking about trust in government we should speak of confidence in government (Hardin 2000, p. 34).<sup>76</sup>

Ultimately, this differentiation comes down to ones' assumption as to where confidence ends and trust begins.<sup>77</sup> This may be splitting hairs. A major problem with Hardin's account, and that of most trust research, is an inability to find that line. When does confidence end and trust start? How much knowledge and what types are necessary? The literature does not currently provide an answer to this question.

Some have argued that there are situations in which knowledge of the institution and its reputation may be sufficient for a true trust judgement (Levi 1998). Here the concept of trust heuristics (see 3.3.4) may be central to understanding trust in institutions. Trust heuristics may provide people the cognitively efficient manner (whether it is accurate or not is another question) to reduce the complexity and epistemic demands and enable trust in institutions (Scholz 1998, p. 157). One such solution, for example, may be Offe's cognitively efficient notion of trusting in the institutional ethos.

This research does not pretend to attempt to answer this question definitively, nor is that the goal. It may be that trust, so used, is a blanket term that covers a variety of

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<sup>76</sup> Furthermore, Hardin argues that in general, we don't even *want* trust in government. This is based on the same logic that the typical citizen cannot trust unless through mistaken inference (Hardin 1999, pp. 23-24).

<sup>77</sup> Luhmann is also interested in the issue of trust in large complex institutions and functional systems. For Luhmann, trust is less an issue of knowledge, than of perception and attribution (Luhmann 1988). He argues that one does not need to trust institutions to participate in them, but merely to have *confidence*. However, trust comes into play when it presupposes a choice and some risk, as well as openness to new possibilities:

“... a social evolution which achieves increasingly complex societies may in fact generate systems which require more confidence as a prerequisite of participation and more trust as a condition of the best utilization of chances and opportunities” (Luhmann 1988).

For most of our lives we depend upon large institutions as a normal condition of daily life, and not something that we can reasonably opt out of.

significantly different cognitive states. The term trust is employed in this thesis based on the causal criterion; the massive amount of empirical and theoretical work put into trust that provides some level of confidence (trust?) that there *is something there* and it is significant in shaping the citizen-government relationship. Cook *et al.* affirm the importance of citizens' confidence in government (rather than trust) for cooperative citizen behaviour such as consenting to government's demands and regulations, complying with bureaucratic requirements, and even support for redistributive programs (Cook *et al.* 2005, see chapter 8). Therefore, whether or not it is trust or confidence may be a definitional issue. For the purposes of this thesis it suffices to call it institutional trust.<sup>78</sup>

### 3.5 THEORIES OF BUILDING INSTITUTIONAL TRUST

So, if we proceed with the assumption that trust in institutions *is* possible than how is it built? The definitions of institutional trust in 3.4.1 imply, to a limited extent, a basic outline of how institutional trust is built. Trust emerges from some knowledge and understanding of the rules, norms, formal mechanisms, and ethos of the institution, and perhaps that the truster can intelligibly monitor the behaviour of the institution. However, this is particularly vague, and leaves unclear a long chain of causal logic. Namely, how do we move from these objective components to perceptions of trust? Exactly what types of institutional structures and formal accountability mechanisms are necessary for trust?

Some argue that we do not know what will produce trust in the state (O'Hara 2004). Lately, political science scholars are realising the increasing need for gaining a good understanding of the attributes of a trustworthy government (Levi and Stoker 2000). Of course, this is an inherently difficult exercise. As discussed above, trust and trustworthiness are mutually implicated. If trustworthy characteristics are subjectively determined by the truster, then how can we state definitively what they are? It may be that developing a trustworthy state is context dependent – where in some places, such as Latin America, we may find that performance is more important than in more “developed” contexts. However, while discerning trustworthy absolutes may not be

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<sup>78</sup> This topic will receive a bit more analytical attention in section 3.5.4.

possible, we may be able to identify commonalities across people and cultures. For example, in an in-depth study of taxi drivers in New York City and in Belfast, Gambetta and Hamill (2005), abstracted out a series of trustworthiness cues that were applicable in both contexts.

In this section, we draw from a variety of theory and empirical studies to see what are the most commonly cited theories of building trust in institutions (as well as satisfaction and trust in government in general) (for example, see Table 6). This theoretical and research work generally revolves around two questions: 1) work on what makes a trustworthy state or institution, and 2) work on why trust has declined in the West.

<b>Theories of building trust/confidence in government</b>
“... avoidance of scandal, skilful handling of the economy, and alleviation of public concern about crime each may help to restore public confidence in government” (Chanley, Rudolph, & Rahn, 2000, p. 254).
“Citizens are likely to trust government only to the extent that they believe that it will act in their interests, that its procedures are fair, and that their trust of the state and of others is reciprocated” (Levi, 1998, p. 88)
“Government reliability is established, reinforced, and conveyed through institutional arrangements that reward positive and effective interactions with constituents and guarantee due process without discrimination” (Cook <i>et al.</i> 2005, p. 162)
“To reverse the trend of distrust in U.S. government that we witness, we must ... (2) establish reliable measures of government performance and believable measures of government corruption, and (3) create institutions that encourage citizens to look at problems from more than one perspective and that engage them in the weighing that hard decisions require” (Lawrence, 1997).
“trust thrives when institutions are structured so as to respond to communication. This requires (a) access to information and institutions structured so as to provide the necessary transparency, and (b) institutional means for challenging the authorities, institutions, and trusted individuals” (Warren, 1999a, p. 338).

**Table 6 Theories of a how to build trust in government.**

It is possible to distinguish between two types of theories on the determinants of institutional trust: cultural and institutional (Mishler and Rose 2001). Cultural theories extol the power of exogenous determinants such as political socialization or national culture. Institutional theories focus on endogenous determinants such as institutional performance. As this thesis focuses on the impact of e-services, we are primarily concerned with the latter, institutional theories. Given the possibility that these theories represent potentially co-active tendencies they are still considered as potentially relevant contextual factors that may come into play and/or interact with the institutional mechanisms.<sup>79</sup>

Cultural and institutional theories can also be further broken down into macro-level and micro-level determinants of institutional trust (Levi and Stoker 2000, Mishler and Rose 2001) (see Table 7). Macro-level theories focus on characteristics of institutions, and micro-level theories on individual level evaluations that shape trust responses. While Mishler & Rose initially separated the two as independent and explanatorily competing theories, they conclude that they are in fact interrelated,

“The effects of macro-political and economic performance on trust are indirect and mediated at the micro level by an individual’s value-laden perceptions” (Mishler and Rose 2001, p. 55).

This is what we would expect, given our trust theory elaborated above. The impacts of trustworthiness characteristics are necessarily mediated by personal characteristics. In this way, this study is one attempt to bridge the micro-macro divide needed in trust research (Levi and Stoker 2000, p. 500, Lewis and Weigert 1985, pp. 974-975).

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<sup>79</sup> Mishler and Rose (2001) found that institutional determinants were significant, and the theory of cultural determinants was “largely contradicted” (Mishler and Rose 2001, p. 55). The two factors (national culture, and individual socialization) are included in this study through a consideration of the culture in Chile (national culture) and in-depth interviews with citizens that attempt in part to see how individual aspects influence trust perceptions.



	<b>Cultural and/or Exogenous Theories</b>	<b>Institutional and/or Endogenous Theories</b>
<b>Macro theories</b>	National culture	Government performance
<b>Micro theories</b>	Individual socialization	Individual evaluations of performance

**Table 7 "Competing theories of the origins of trust and their explanatory emphases" from (Mishler and Rose 2001, p. 34). This thesis focuses on institutional theories, combining the macro and micro levels. Exogenous theories may shift the disposition to trust a particular institution, but in general would represent a longer term trend.**

Following the trust theory, we can analytically divide the theories of building institutional trust into two general categories: competence and motivation (interests and values). Fundamentally these theories fall into one of three types: competence (positive performance), overlapping interests, and overlapping values. At this stage, theory will remain fairly general, attempting to encompass the major types of theories on building institutional trust. More concrete hypotheses will be established when we move to the specifics of e-services and institutional trust. Within each of these categories each theory will ultimately stretch from the macro to the micro-level, following as much of the causal path from trustworthiness to trustworthiness cues to trust as possible. Following the presentation of the theories, the mediating aspect of trustworthiness cues requires a brief discussion.

### 3.5.1 COMPETENCE

Perhaps the best direct indicator of competence is performance. The logic is straightforward; if you trust an institution to perform a task C and they do, then this will tend to increase trust. In this way, a good track record of delivering on promises is the sign of a trustworthy government (Levi 1998, p. 93). Empirically, effective performance has been shown to increase the public's trust in government (Chanley *et al.* 2000, p. 254, Espinal *et al.* 2006, Mishler and Rose 1997). Conversely, ineffective government will then breed distrust (Offe 2006, p. 10). The most common reason Americans give for not

trusting the government is that the government is inefficient and wastes money (Blendon *et al.* 1997).<sup>80</sup>

To translate government performance into assessments of performance, government performance must first be *perceived* (Blendon *et al.* 1997, Nye Jr. and Zelikow 1997, Orren 1997). However, it is not a straightforward problem to communicate institutional performance. The central issue is that there are many practical problems with respect to ascertaining the actual performance of the government. Bok (1997) lists a few: (1) it is impossible to know counterfactuals, that is what would have happened had a program not existed, (2) it is difficult or impossible to quantify some elements of government performance like “national security”, and (3) the problem of aggregating records of many individual programs into a single overall estimate of performance. The difficulties are compounded considering that judgements of performance depend on a variety of potentially incommensurable scales of achievement (Sztompka 1999, p. 83). Not only is it technically difficult to create good measures of government performance, it is highly dubious if the public is even well enough informed to make good judgements on the performance of the government. Due in part to media influences but also to the human bias for negative information, people tend to view government performance as worse than it is, and to overestimate many of the costs of government (Bok 1997).

A further complexity is that an assessment of performance is always relative to an expectation (Orren 1997).<sup>81</sup> Thus, the impact of performance is always relative to the particular expectations of the performance of government. One explanation of the decline in trust in the West is the expectations gap, that is the gap between expected performance and actual performance (O'Hara 2004), or put otherwise, “Satisfaction thus seems to derive not directly from performance but from the ratio of performance to expectations” (Lawrence 1997, p. 142). Further complicating the picture is that citizens can also have conflicting views as to what it wants and expects from government (Nye Jr. 1997).

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<sup>80</sup> In the survey, eight out of every ten said that they believe that the government wastes money.

<sup>81</sup> Commonly, political trust is defined as an evaluation of the government based upon citizen's expectations (Hetherington 1998, p. 791).

While that is the case, it is possible to imagine that at times and with some institutions there will be a consensus that particular performance measures are the most significant indicators of performance. However, given the complexities of macro-level performance (e.g., even highly trained economists vary on their assessments of the economy and potential future courses of action) there is some evidence that indicates that people apply trust heuristics to economise. For example, people tend to be responsive to only a small set of macroeconomic indicators of unemployment level, budget deficit, and inflation when forming their opinion of the economic performance of the government (Kumlin 2004).

*Competence theory: Good institutional performance that can be communicated and understood and that is perceived to meet or exceed citizens' expectations of performance will tend to build trust.*

### 3.5.2 MOTIVATION

The structure of the institutional arrangement shapes the incentive structure and values of public sector employees, as well as, on an emergent level, the interests and values of the institution itself. We can break down the theories linking motivation and trust into two groups: those based on interest and those based on underlying values.

**Interests** As would be expected in any self-interest account of trust, citizens trust institutions whose interests are more in line with those of the citizens, for example, if the institution pursues policy goals that people agree with (Hetherington 1998, p. 793).<sup>82</sup> Expressions of this phenomenon are captured in surveys when people respond that “the government is run by a few big interests looking out only for themselves”, “public officials don’t care about what people think” (Orren 1997), or the government “spends on wrong things” (Blendon *et al.* 1997, p. 210). For example, citizens may trust welfare

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<sup>82</sup> Bianco (1998) found that perceptions of common interest are important factors in citizens’ trust decisions of their representative.

service providers due to the congruence of interests, whereas it may be significantly more difficult to trust legislatures due to the widely divergent interests of its members (Warren 2004, pp. 23-5).

Interest theory: *Aligned interests between an institution's policies and the interests of a citizen tend to build trust.*

Keeping institutional interests in line with citizens' interests often requires accountability mechanisms to shape the institutional incentive structure. Hirschmann (1970) talked about exit and voice as two important accountability mechanisms. Fundamentally, these two mechanisms work to balance the power relationship between the citizen and government institution. This balance deters defection from obligations, ensuring interests stay in line and providing an environment that improves the possibility of engendering trust (Barber 1983, p. 169, Kumlin 2004, p. 57, Warren 1999b).

Interest sub-theory 1: *Mechanisms that work to align (such as voice and exit) the interests of the institution and citizen tend to build trust.*

The power asymmetry that exists between state institutions and citizens makes the possibilities of trust difficult. This is because it is easy for the powerful institution to renege on an earlier promise at a low cost. A second mechanism that works to keep interests aligned is the establishment of credible commitments; that is, ways that help to guarantee that the institution will behave as it should. Institutional checks and balances, contracts, and other types of pre-commitment are forms of ensuring behaviour, lessening the discretion of the powerful institution, and making trust possible in relations of power asymmetries (Farrell 2004). Of course, this in part shifts the burden of trustworthiness from the state institution to the enforcement agency (Dasgupta 1988).

Interest sub-theory 2: *Establishing credible institutional commitments through credible*

*and effective institutional checks and balances that keep their interests in-line with citizens tends to build trust.*

**Embodied values** Recall that a value system impacts the epistemology of trust by shaping the salience of trustworthy cues, as discussed above (see 3.3.4). Also, recall that Offe (1999) argues that institutional trust is dependent upon the ‘institutional ethos’. Thus where an individual’s value system is aligned with the institutional ethos, we would expect trust would be stronger, as evidence suggests (Braithwaite 1998b, Devos *et al.* 2002). A further corroborating piece of evidence is that citizens often express a higher level of satisfaction of local than federal officials. Arguably, this is attributable to values, where the local officials are “like us” and thus enjoy some benefit of the doubt with respect to performance (Nye Jr. 1997).

Overlapping values theory: *Overlapping values between the institutional ethos and citizens’ values tend to build trust.*

The second set of values is independent of the truster; they are the values that are embodied by the institution. There are several values that are mentioned in the literature as features of trustworthy institutions and often associated with democratic institutions: *procedural fairness* (including policy transparency), *distributive justice*, and *benevolence* (including treating citizens with respect) (Kumlin 2004, Levi 1998, p. 93, Levi and Stoker 2000, Mishler and Rose 1997, Murphy 2004, Orren 1997, Sztompka 1999). Conversely, breaking from these values is thought to build distrust and potentially scepticism. For example, consider the powerful impact of scandals to destroy trust (Chanley *et al.* 2000, p. 254). Scandals represent a break from benevolence, procedural justice, and distributive justice.

We can break these down a bit. Procedural fairness is reflected in several ways including: 1) that the government ensures that other citizens also do their part, 2) universal criteria for recruitment and promotion of agents, 3) impartial institutions, and 4) involving

citizens in the policy-making process (Levi 1998). A concern for distributive justice (that is, distributional fairness) is also thought to be an inherent quality of man, much like self-interest. Kumlin (2004), in a study of people's responses to the welfare state in Sweden, found a strong correlation between trust and citizens' sense of distributed justice as a result of the state's welfare policies.<sup>83</sup> This can be seen as an expression of one's values and therefore one's response will vary depending upon this value orientation.<sup>84</sup>

Finally, benevolence speaks to a more general human quality of the citizen-bureaucrat interaction. Bureaucrats are the access-point for the abstract systems that are public sector institutions (Giddens 1990, p. 88), and thus social interactions provide a reflection of the values of the institution.<sup>85</sup> Interactions that reflect a value of respect for others as reflected in the comportment (tone of voice, choice of words, etc.) will tend to build trust, whereas hostility from street-level bureaucrats towards clients can be highly counterproductive (Levi 1998, Levi and Stoker 2000, pp. 492-493, Tyler 1998).

Democratic Values theory: *An institution that embodies and communicates values of fairness, distributive justice, and benevolence tends to build trust.*

Table 8 summarises all the theories.

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<sup>83</sup> Of course, Sweden is well known for a culture with a strong sense of social obligation. The results may be very different in another culture.

<sup>84</sup> Recall Braithwaite's (1998b) two types of values: security and harmony. Those with a stronger harmony value set will find distributive justice a more compelling builder of trust.

<sup>85</sup> It must be noted that Giddens argues that trust in expert systems or symbolic tokens rest upon "faith in the correctness of principles of which one is ignorant, not upon faith in the 'moral uprightness' (good intentions) of others. Of course, trust in persons is always to some degree relevant to faith in systems, but concerns their *proper* working rather than their operation as such" (Giddens 1990, pp. 33-34).

<b>Theory of how/when institutional trust is built</b>	
<b>Competence</b>	Good institutional performance that is communicated, understood, and perceived to meet or exceed citizens' expectations of performance tends to build trust.
<b>Motivation</b>	
Interests	<p>Aligned interests between an institution's policies and the interests of a citizen tend to build trust.</p> <p>(1) Mechanisms that work to align (such as voice and exit) the interests of the institution and citizen tend to build trust.</p> <p>(2) Establishing credible institutional commitments through credible and effective institutional checks and balances that keep the public sector's interests in-line with citizens tends to build trust.</p>
Values	<p>Overlapping values between the institution (institutional ethos) and the citizen tend to build trust.</p> <p>Institutions that embody and communicate the values of fairness, distributive justice, and benevolence tend to build trust.</p>

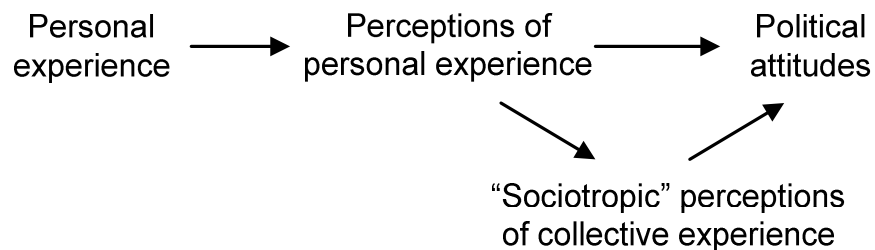
**Table 8 A summary of the general theories of building institutional trust. More concrete theories can only be generated given with respect to a particular institutional context.**

### 3.5.3 DIRECT VERSUS INDIRECT TRUSTWORTHY CUES

Implicit in these theories above is the communication, perception, and processing of trustworthy cues. It has already been established that there are two main means through which people obtain trustworthy information: direct and indirect (Nye Jr. and Zelikow 1997, p. 255). In a study of political attitudes, Kumlin (2004) refers to these as gained through direct experience or "sociotropic" perceptions of collective experience, such as reputation (see Figure 7). It is not entirely understood which of these two pathways is more important, or how they interact, although a lot of research has emphasised the sociotropic influences (Kumlin 2004). For example, it is impossible to ignore the importance of the media in shaping people's perceptions (Blendon *et al.* 1997, Orren

1997).<sup>86</sup> Certainly, the extra information afforded by collective cognition helps an individual fill in the information gap and aids in taking that extra leap required for trust (Lewis and Weigert 1985, p. 470).

The extent that people extract broader political judgements from direct experience is not entirely understood. Soss (1999), in a study of personal experiences of government services concluded that these experiences can be treated as political information. Bok found that, “people tend to evaluate the work of government officials and agencies much more highly if they have direct contact with them than if they know about them only secondhand” (Bok 1997, p. 56). As we will see in the following chapter, most e-government and trust research assumes that interaction with e-services impacts on citizens’ trust judgements. Following this line of thought and in the interest of narrowing theory, this thesis focuses on the impact of direct experience on trust judgements.



**Figure 7 "Personal experience, sociotropic perceptions, and political attitudes" from (Kumlin, 2004, p. 10). These are the two main pathways through which trustworthiness cues are received, directly or through third-party social interaction.**

#### 3.5.4 TRUST, DISTRUST, MISTRUST, AND CYNICAL CITIZENS

A final conceptual clarification is necessary to clarify the importance of trust in institutions, and in particular, trust in democratic institutions. As discussed, trust (or confidence) is important to the functioning of democracy. However, almost paradoxically, so is *distrust*. Distrust is taken here to be not the opposite of trust, but

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<sup>86</sup> Clearly media has an impact. It may be that confidence in institutions is primarily socially determined rather than individually. Blendon *et al.* (1997) found that people say they rely primarily on the media (seventy-two percent) rather than personal experience or through friends. In contrast Cook and Gronke (2001) found that the connection between the media and confidence in institutions of government are mediated through other variables. It would appear that trust in particular institutions are differentially impacted by the media (some are covered more in-depth than others) as well as the particular media source.



rather, an attitude where cognitive assumptions are tested and scrutinized (Offe 1999).<sup>87</sup> The opposite of trust is more often defined as *mistrust*. Institutional mistrust implies an actively negative attitude towards the system.<sup>88</sup> Thus, it is possible to think of trust as a range from cynical mistrust to sceptical distrust to trust. It is the movement from distrust to mistrust that is problematic for democracy.

In liberal democratic theory, democratic institutions are predicated on the *institutionalization of distrust* (Braithwaite 1998a). Institutions are necessary to deal with the political reality of competing interests. If there is no convergence of interests, the conditions for building trust (and thus obtain cooperation and peaceful resolution of conflicts of interests) between people are weak (Warren 1999b, p. 312). Democracy as an institution provides a framework for a political process that resolves conflicts of interest through discursive processes rather than through coercion or force (Warren 1999c). It is through the use of institutions that we constrain the self-interest ambitions of public sector employees to work in the interest of the citizens (Brennan 1998, Hardin 1998). Thus, it is the institutionalisation of distrust in others through mechanisms such as checks and balances that makes trust in the democratic process and institutions possible.

There is an inherent tension between the institutionalisation of distrust and building trust, however. Excessive recourse to the institutional rules and codes may actually work to undermine trust as strict enforcement of rules crowds out trust and engenders distrust in the institution (den Hollander 2006). This increase of distrust may require an even stricter application of the rules in the future, thus begetting a vicious cycle of distrust (den Hollander 2006). A powerful example of this is Peel's (1998) study of four contemporary Australian suburbs where a government predicated on distrust resulted in an environment of citizen distrust and apathy towards the government.

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<sup>87</sup> Distrust is like trust in that it has a cognitive assessment component and that "A distrusts B with respect to X" (Hardin 2004).

<sup>88</sup> As Giddens argues, "bad experiences at access points may lead either to a sort of resigned cynicism or, where this is possible, to disengagement from the system altogether" (Giddens 1990, p. 91)

However, while we might lament a citizen's distrust of a governmental institution or official, it too has an important role to play in a democracy. Trust in institutions of government is only good when it is warranted (Warren 1999b) and when distrust is rationally based on a set of realistic expectations it does not have to be destructive (Barber 1983, p. 166). Indeed, active distrust can be a normatively appropriate response in certain situations (Levi 1998). If distrusting citizens perform a crucial feedback role, providing legitimate criticism and participation in the democratic system, then some distrusting citizens are essential for democracy as a source for motivating necessary reform (Barber 1983, p. 81). Indeed, there is evidence that suggests that trusting people are not more politically active than less trusting citizens (Levi and Stoker 2000).

Distrust and mistrust becomes a concern when critical citizens become *cynical* citizens (Norris 1999a). Extended periods of distrust or mistrust can have negative consequences such as 1) non-compliance, 2) a non-productive increase of governmental regulation (Levi 1998, p. 96), or 3) disaffection, or alienation (Luhmann 1988, pp. 103-104); that is, "a falling away from democratic values" (Barber 1983, p. 80). The fundamental difference between a critical and cynical citizen is that while critical citizens may not trust in a particular political actor, or are unhappy with how current democratic regimes are implementing democracy, they still fundamentally believe in values of democracy. They are dissatisfied, but dissatisfied *democrats*. However, a significant period of discontent and distrust can lead to a resultant loss of democratic values, and thus a conversion to cynical citizens. This is problematic for democracy as support for democratic values underlie good functioning democracies (Dahl 2000). At the end of the day, to not attempt to improve the trust relationship would be to run a huge risk with something as crucially important as the health of democratic institutions of governance (Nye Jr. and Zelikow 1997).

This implies that some of the worry over a loss of trust may be overblown. If polls that show a reduction in trust "reflect wariness rather than cynicism, the result may be healthy" (Nye Jr. 1997, p. 3). It is important to note, however, that social scientists do not still fully understand this relationship between assessments of daily performance and

opinions of the regime principles (democratic values) (Nye Jr. 1997, p. 4), and the relationship has not been empirically established. Espinal et al. (2006), for example, found no evidence of any link of democratic values and institutional trust. In Latin America, lack of economic and political performance may have led to dissatisfaction with the results of democracy and the political leaders, but it has not resulted in the loss of fundamental democratic values (Lagos 2003, p. 163).<sup>89</sup>

### 3.5.5 CONCLUSION

This chapter provides the first two layers of the theoretical framework, upon which the final piece of theory (e-government and institutional trust) can be placed and integrated. Part I sets out the core elements of trust. Part II identifies one particular manifestation of trust relevant to this thesis: institutional trust. Institutional trust is conceived of as trust in the roles, rules, and norms of an institution, as well as its institutional ethos. There are four main ways that trust in institutions is theorised to be built: (1) through good institutional performance, (2) by an overlapping of interests between the citizen and institution, (3) by an overlapping of values between the citizen and institution, and (4) if a institution projects values of procedural fairness, distributional justice, and benevolence. Of course, how these are perceived and translated into trust judgements depends upon the projection of trustworthiness cues and individual characteristics of the citizen. In the case of this research, these trustworthiness cues will be communicated by e-government services. To be able to better understand this process, the following chapter builds on this theory to develop a series of testable hypotheses that link that implementation of e-government services to institutional trust.

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<sup>89</sup> This also implies that if we are interested in preserving democratic values, then political socialisation may be central to this task. "... early political socialization into trusting beliefs and behaviour is the reservoir of diffuse support on which the democratic elite can count as it strives competently and with fiduciary responsibility to lead a democratic society" (Barber 1983, p. 89). This parallels Dahl's (2000) argument that a functioning democracy requires subscription to the fundamental principles of democracy.

## 4 THEORY III & IV: E-GOVERNMENT AND INSTITUTIONAL TRUST

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“E-government proponents have suggested, however, that with the help of new technology, there is hope for turning around this cycle of cynicism. Rather than assuming the government is bloated, wasteful, and inefficient, technology can improve the public sector functioning, increase responsiveness, and deliver services in ways that are much more convenient to citizens. The whole idea behind electronic governance is that government can remedy long-standing societal perceptions about the public sector, and therefore alter fundamental citizen attitudes in the process” (West 2005, p. 129).

E-government has received a lot of attention over the last two decades as a promising means to improve, reform, reinvent, and even transform the activities and performance of the public sector. Without a doubt, the technological logic of e-government suggests many tantalizing opportunities such as increased efficiencies and transparency.<sup>90</sup> The promise moves beyond these more direct effects to include citizen empowerment and the reinvigoration of the democratic process, moving towards an e-, digital, or cyber-democracy (Brewer *et al.* 2006, p. 477, Holzer *et al.* 2004, Kakabadse *et al.* 2003, London 1994, Nye Jr. 2002). Especially relevant for this thesis is the argument that these improvements will so significantly shift the citizen-government relationship that it may provide the impetus to rebuild the currently sagging levels of trust in government (Bellamy and Taylor 1998, p. 63). In this chapter, we will explore this possibility.

The previous chapter detailed the concept of trust (part I) and institutional trust and how it may be built (part II). This chapter works to link the changes brought about by the implementation of e-government services to the theory of institutional trust and does so

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<sup>90</sup> Ndou (2004) lists seven such opportunities that e-government can bring to developing countries: (1) cost reduction and efficiency gains; (2) quality of service delivery to business and customers; (3) transparency, anticorruption, accountability; (4) increase the capacity of government; (5) network and community creation; (6) improve the quality of decision making; and (7) promote use of ICT in other sectors of the society.

in two parts (III and IV). The goal of part III is to identify the core aspects of e-government implementations to understand the logic of how they may bring about changes to public administration and services. This discussion is extended to include some important implications of how e-government is implicated in changes to the citizen-government relationship. In the final stage of theory development, part IV integrates e-government and intuitional trust theory. The trust and institutional trust theory of the previous chapter is combined with the theoretical understanding of the impacts of e-government to generate a series of middle-range hypotheses that provide the structure for the empirical investigation in this thesis.

#### 4.1 PART III: DEFINING E-GOVERNMENT

E-government has many definitions in the literature (see Table 9). In general, these definitions all view e-government as the inclusion of new ICT in public sector organisations to improve the administration and services of government.<sup>91</sup> These new technologies offer the promise for improved government performance and service delivery at a lower cost resulting from the technology enabled economies of scale (West 2005, p. 129). This definition of e-government generally carries with it a normative claim that new technologies should be employed to reform government (Bhatnagar 2004, p. 22). This diffusion can be understood as one in a line of public sector reforms transferred from the industrial world to transitional and so-called developing countries (Heeks 2005, p. 52), most prominently New Public Management (Dunleavy *et al.* 2006) and good governance (Bhatnagar 2004, Saidi and Yared 2002).

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<sup>91</sup> Bhatnagar makes a distinction between e-government and e-governance. He defines governance as “*the manner in which power is exercised in the management of a country’s economic and social resources for development*” (Bhatnagar 2004, p. 21). Following this, e-governance is:

“the process of enabling transactions between concerned groups and the government through multiple channels by linking all transaction points, decision points, enforcing/implementation points and repositories of data using information and communication technologies, to improve the efficiency, transparency, accountability and effectiveness of a government” (Bhatnagar 2004, p. 21).

### **E-government is...**

“the use of technology to enhance the access to and delivery of government services to benefit citizens, business partners and employees” (Silcock, 2001)

“information and communication technology (ICT) applied to ordering at least three kinds of processes. First, it attends to the relationship (transaction) between the administration and the citizen (customer) and the related re-engineering of the activities internal to the administration... A second level regards the way in which the boundaries between the state and the market are redrawn, by the creation of an electronic, minimal state, more transparent, agile and accountable ... A third level deals with the purpose of aid policies aimed at introducing e-government into developing countries” (Ciborra, 2005, p. 261).

“defined as the use of technology, particularly the Internet, as a means to deliver services to citizens, businesses, and other entities” (Akman, Yazici, Mishra, & Arifoglu, 2005, p. 240).

“the communication between the government and its citizens via computers and a Web-enabled presence” (Evans & Yen, 2006).

“a government that applies ICT to transform its internal and external relationships” (United Nations Department of Economic and Social Affairs, 2003, p. 2).

“the use of information and communication technologies (ICTs) to improve the activities of public sector organisations” (Heeks, 2004).

“the use of information technology in general, and the utilization of the Internet in particular, to provide citizens and organizations with more convenient access to government’s information and services” (Chang, Li, Hung, & Hwang, 2005, p. 391).

“about a process of reform in the way governments work, shares information and delivers services to external and internal clients. Specifically, e-government harnesses information technologies (such as wide area networks, the Internet and mobile computing) to transform relations with citizens, businesses and other arms of government” (Bhatnagar, 2004, p. 22)

**Table 9 Definitions of e-government in the literature. The common thread is the use of ICT in the public sector to improve the activities and services of government administration.**

The technological logic of e-government implies that e-government will influence a wide range of aspects of public administration and services. These changes to government are

in three general, but overlapping, areas: (1) e-administration, the improvement of government processes; (2) e-services and e-citizens, connecting citizens and government; and (3) e-society, interactions with civil society and the private sector (Heeks 2001a).<sup>92</sup>

Theorists have pointed out that in general the implementation of e-government occurs in stages of increasing complexity. These run from the straightforward publication of information on a web page through to two-way citizen-government transactions to the integration of services across government agencies, and ultimately to potential transformations of the democratic process (Bellamy and Taylor 1998, Brewer *et al.* 2006, Fountain 2001, Layne and Lee 2001, Moon 2002, Ronaghan 2002, Silcock 2001, Weare 2002, West 2004, West 2005). For examples, see Layne and Lee's (2001) model of the dimensions and stages of e-government development or Bhatnagar's (2004) four stage models (Figure 8).

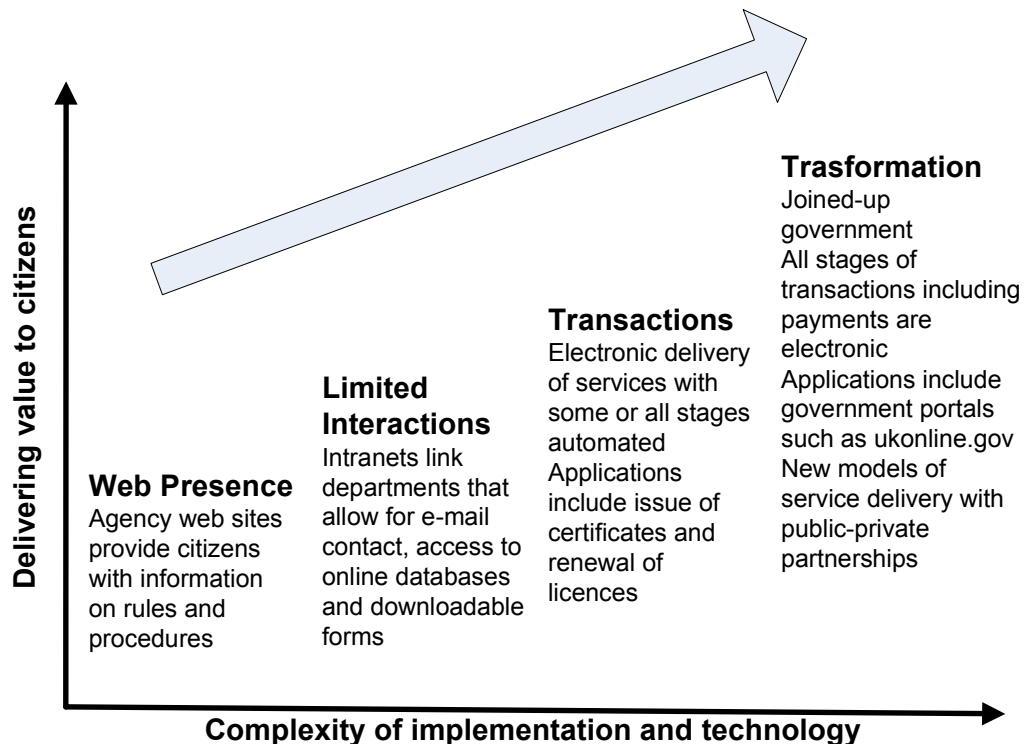


Figure 8 Bhatnagar's (2004, p. 20) four critical stages of E-government evolution.

<sup>92</sup> This is also commonly stated as G2E, G2C (government to citizens), G2B (government to business), and G2G (government to government) (Bhatnagar 2004, Ndou 2004).

## 4.2 THEORIES OF E-GOVERNMENT INITIATED CHANGE

There is a lot of potential for e-government to improve the activities of the public sector and provide citizens with added value. However, as the history of information systems implementations tell us, final outcomes are far from certain. How can we best understand these processes of change? In this section we consider the dynamic from the perspective of schools of thought concerning the overall interaction and impacts of ICT in the public sector.

Two schools of thought regarding the impact of ICT on the public sector can be identified: transformational and incremental (West 2005).<sup>93</sup> The transformational model suggests that the Internet is an impetus for public sector reform, or even reinvention. This perspective follows for the most part the instrumental logic of the technologies and how they can bring about these benefits and transformations. The incremental change perspective, on the other hand, focuses more on the political realities of implementing e-government projects in the public sector. Here, the realities of organizational decision making, a political process marked by conflict over resources, and the entrenching momentum of the status quo of organizational roles and activities constrains and shapes the e-government implementation.<sup>94</sup> In this case, new ICT are not expected to radically transform the administration or democracy. Instead government will be slow to adopt new technologies, and they will most likely perpetuate the status quo (West 2005).

It follows logically that one can expect different types of change to be associated with different types of e-government implementations. West (2005) lists three types of change

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<sup>93</sup> Transformational and incremental changes are better understood as two ends of a continuum of change, “Change discussions often focus on the end points of this comparison without looking at other types of models. There are lots of ways in which shifts can occur in the middle of the change spectrum. Or to put it differently, there are other models of change between large-scale transformation and small-scale increments” (West 2005, p. 7).

In this way, West notes, many small incremental changes can eventually add up to a large-scale more transformational change.

<sup>94</sup> For example, consider the following quote:

“... the potential benefits of the Internet, and its potential perils, will be strongly influenced by the current organizations and institutions of government, for it is within the constraints posed by these structural arrangements that government actors make decisions and information networks that connect to form the World Wide Web are designed, developed, and used” (Fountain 2002, p. 117).



and theoretically links them to the different types of e-government implementations: incremental, secular, and transformative (see Table 10). As the implementations become more complex and transactional, and therefore more potentially transformational, they involve more back-end process changes, inter-agency interoperability, as well as potentially revolutionary and citizen empowering changes to the democratic process itself.

Billboards	Partial service delivery	Portal stage with fully executable and integrated services	Interactive democracy
Key qualities include reports, publications, and databases, but no services or interactive features	This stage allows visitors to search websites and order a few limited services.  There are few privacy or security statements and no means to personalize site	Site has online services, integrated across agencies.  Substantial concern with privacy and security. Some means to obtain electronic updates	Lots of online services and interactive features.  Site features accountability-enhancing features and technologies for public feedback and deliberation
<b>Incremental change</b>			
<b>Secular change</b>			
<b>Transformative change</b>			

**Table 10 Stages of e-government implementation and types of change, from (West, 2005).**

While e-government has the *theoretical* potential to be transformative, empirical evidence suggests that governments have yet to reach the transformative stage. In a survey of e-government services around the world, West found that most have not moved beyond the billboard or partial service-delivery stages of e-government, a finding more consistent with incremental rather than transformational change (West 2004, West 2005). Consistent with West, Ronaghan<sup>95</sup> (2002), Anderson (2004), and Torres *et al.* (2006)

<sup>95</sup> Ronaghan found that out of 190 countries of the UN and found that that only a few (seventeen of 190) had achieved online transaction capacity (the beginning of the transformative stage).

have found that e-government implementations have for the most part failed to enter into the transformative stages.

Of course, administrative change can emerge from a variety of sources other than technology, and can even occur in spite of technology. For example, Madon *et al* (2004) studied the implementation of a self-assessment tax system in Bangalore. They found that the outcomes of the implementation and tax reform process was ultimately driven by the actions of a variety of players and institutions, often with divergent interests, at both local and global levels, rather than a direct consequence of a newly implemented technology.

### 4.3 THE DYNAMICS OF ICT IN THE PUBLIC SECTOR

If we are to understand the how and why of the changes brought about by e-government implementations then we need to deepen our theoretical understanding of the dynamics between ICT and the public sector. As evidenced from the section above, the outcomes of implementing ICT in any organization, including public sector bureaucracies, is subject to both the instrumental logic of technology as well as the various political, economic, and social contextual influences (Fountain 2001, Heeks 2003, Heeks 2005, Kallinikos 2006a, Relyea 2002, West 2005). In other words, the causal arrow may run in both ways, from the technology to the social system of actors, structures, and activities, as well as from the social system to the technology.<sup>96</sup> Fountain (2001) famously expressed this idea in her theory of IT enactment.<sup>97</sup>

To understand this dynamic, we have to understand the constituent components and how they interact. To that end, this section describes the core characteristics of the two major interacting components: ICT and bureaucracy. Then, it lays out the main areas of interaction and how e-government is implicated in changes to public administration and

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<sup>96</sup> “Technology is a catalyst for social, economic, and political change at the levels of the individual, group, organization, and institution. Each technological and related change evolves in its own sphere, but it does not evolve alone. Technological and social changes co-evolve” (Fountain 2003, p. 45).

<sup>97</sup> IT enactment is arguably just a repackaging of a much earlier developed socio-technical systems theory (Norris 2003). In this perspective, an information system is a social system where information technology is one aspect of that system (Land 1992).

service delivery. Finally, it ends with a brief discussion of the theoretical implications of ICT in public administrations in the development context.

#### 4.3.1 INFORMATION AND COMMUNICATION TECHNOLOGIES

ICT brings the potential for at least three basic mechanisms of change: automation, informatisation, and transformation (Heeks 2002). ICT can make government both more efficient (does more, cheaper, and faster) and effective (works better and is innovative). However, from where do these potentials emerge? What are the underlying structures of new ICT that have the causal power to generate change?

To penetrate into the change potentials of new ICT it is necessary to understand the core aspects of new ICT. New information and communication technologies represent both a continuation of and a disjunctive break from prior information technologies such as writing, telegraph, phone, television, and radio (Kallinikos 2001). There are at least three central features of new ICT that differentiate it from earlier technologies and thus embody the instrumental logic behind e-government theory: automating, informing, and communicating and networking.

##### **Automating technologies for information processes**

New ICT allow for the automated handling of information in a manner that earlier was not possible (Heeks 1999). Computer based systems can replicate manually performed action through the encoding of the process in software (Kallinikos 2001). This is enhanced by the increased information storage and retrieval capacity of new ICT that allows for the storage of all the information necessary to complete these processes. The end result is "faster communication, computation, storage and retrieval which leads to greater efficiency in any transaction" (Kumar 2003, p. 1). This process of automation requires that the information processes be defined and differentiated to a sufficient extent that they can be programmed into software and executed by computers. This requires a clear definition of the problem to be solved as well as the rules and procedures to follow to solve this problem (Kallinikos 2001, p. 38).

**Informating technologies**

The real power of new ICT goes beyond simple automation and extends to its unique capacity to *handle* and *process* information (Kallinikos 2001, pp. 33, 34). ICT have the capacity for symbol processing (Bellamy and Taylor 1998, p. 27, Fountain 2001, p. 127, Kallinikos 2001, p. 36). Symbolic processing allows for the reflective processing of information that emerges from the already encoded software processes. Zuboff (1988) identified the “informatate” power of technologies as a distinctive feature of new technologies as well as a foundation for innovation as the new information produced enables reflection on the organization itself (Bellamy and Taylor 1998, p. 27).

**Communicating and networking information**

Long distance communication is not an entirely novel feature that appears in newer ICT. However, the capacity for communicating information between actors in disparate locations has greatly increased in scope and form (Bellamy and Taylor 1998, p. 27). The development of new media technologies, such as the World Wide Web, has meant the creation of new modes of communication and interaction at a distance (Castells 2001, Kallinikos 2001, p. 66). Furthermore, the increased information transfer capabilities works to complement and reinforce the computational capacity of computers as the processing and structuring of information become central to institutional life (Kallinikos 2001).

#### 4.3.2 BUREAUCRACY

To understand the impact of ICT on public administration it is crucial to consider it with respect to bureaucracy in its historical context (Dunleavy *et al.* 2006, Fountain 2001, Fountain 2002, Jain 2004). Bureaucracy is a “central institution” in modern society that is a “distinctive and historically specific form of governing social relations” providing the “platform for constructing the social uniformities that ensure the legal and administrative accountability of formal organizations and the predictability of their operations” (Kallinikos 2006a, pp. 125-126). The invention of bureaucracy solved a central problem of organizational control, namely the problem of “how to achieve capacity in complex problem solving requiring coordination of a large number of subtasks and functions while retaining control over a disparate enterprise” (Fountain 2002, p. 126). This capacity is not

outmoded in today's modern society, although its processes and structure can be altered by ICT (Fountain 2002, p. 137, Kallinikos 2004, Kallinikos 2006a).

To understand the interaction of ICT and bureaucracy, it is first necessary to recognise that bureaucracies, even without new ICT, are socio-technical information systems (Dunleavy *et al.* 2006, pp. 10-12). Information and information technologies are central to bureaucracy in general and public administration in specific. Information is prevalent in everything that a government does. There are four major types of information: information to support internal management, information to support public administration and regulation, information to support public services, information made publicly available (Heeks 1999, p. 16). As Heeks states, "If information runs through everything that government does, then changing anything in government must mean changing information, which must mean changing information systems" (Heeks 1999, p. 17).

So what are the components of these bureaucracies? The starting point of bureaucratic theory is found in Weber's ideal-type bureaucracy.<sup>98</sup> Different authors focus on different aspects of Weber's bureaucracy, but in general these include the following: formal hierarchical structure, formal rules and procedures, roles, and official files and documents.

**Formal hierarchical structure** For many theorists, hierarchy is the essence of bureaucracy (Fountain 2001, p. 48). This includes a hierarchical structure of power and authority as well as a rationally derived division of labour (Jain 2004).

**Formal rules and procedures** The structure of the bureaucracy is supported by a formalized set of rules that rationalise and standardise behaviour of the bureaucrats.

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<sup>98</sup> An ideal-type theory of bureaucracy lays out the core components that leaves the actual manifestation of bureaucracy open to a wide variety of forms and practices (Fountain 2002, p. 47). This can be seen in the wide variety of public sector organizations that exist with a highly diverse set of operations, goals, and mandates. While they do differ in many respects, the argument is that they do contain to some degree the components to be described.

These rules are to be applied impartially by a neutral bureaucrat, a mark of professionalism in a democratic public institution (Fountain 2001, Jain 2004).

**Roles**           The functional division of labour is made into organizational roles. A central feature of bureaucracy is the separation of the social identity of the person from the role they occupy (Kallinikos 2004) making the role, not the person, the fundamental component of the bureaucracy (Kallinikos 2006a, p. 134). The standardization of behaviour comes through the explicit rules and procedures, specific training, as well as bureaucratic socialization of the norms and values of public sector bureaucracies.

**Official files and documents**       Rules and procedures are formalized and made possible through the use of files (Fountain 2001, p. 49). Beyond the role that files play as a mechanism to impersonalise the processes of administration, “systematically organized file registries” are also a key aspect of the information processing system (Dunleavy *et al.* 2006, p. 11). File registries form a collective and powerful bureaucratic memory, especially with the invention of cross-indexing systems. This storage of information along with bureaucratic socialization and the impersonal occupation of roles enable the bureaucracy to operate continuously through time (Dunleavy *et al.* 2006, p. 11).

While there are many dimensions along which bureaucracies may differ, there are two basic “types” of public sector bureaucracy that warrant a mention: machine and professional. Machine bureaucracies are the quintessential Weberian bureaucracy with a strong hierarchy and a focus on standardization of procedures and processes (Dunleavy *et al.* 2006, p. 15).

“Many of them [machine bureaucracies] focus either on the mass handling of forms, benefit claims, tax returns or other documentation submitted by citizens or enterprises; or on the delivery of labour-intensive but non-professionalized services, those of a more straightforward administrative or techno-bureaucratic kind. Machine bureaucracies tend to be the dominant organizational form for the biggest users of civilian government IT at national government level, like the

taxing agencies, social security agencies and immigration control” (Dunleavy *et al.* 2006, p. 17).

In contrast, professional bureaucracies such as schools, hospitals, and social services departments are dominated by the operating core where the professional staff has, by the very nature of their work, larger levels of discretion in their daily activities (Dunleavy *et al.* 2006).

#### 4.3.3 ICT AND BUREAUCRACY

Now that we have an idea of what the core elements of ICT and bureaucracy are, we can theorise their interaction. Recall that information technologies are at the core of bureaucratic functioning. Thus it should be no surprise that “Information technology affects production, coordination, and control – the nervous system of government” (Fountain 2002, p. 137). Here we break up the major areas of interaction into three categories: capacity, coordination, and control.

##### **Bureaucratic capacity**

In a survey of studies on the impacts of ICT on the public sector, Anderson (2004) found that about half of all reported impacts, and those with the greatest number of positive impacts, were effects of ICT on the “capabilities” of government.<sup>99</sup> The most direct improvement of bureaucratic capacity through the implementation of ICT is the extensive automation of administrative procedures (Anderson 2004). What were once paper-based clerical tasks can now be codified into software and implemented much more efficiently on computer based systems. This automation needs to be understood historically as the continuation of the use of information technology as “important means for work and administrative rationalization” (Kallinikos 2006a, p. 156). Part of this process results in

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<sup>99</sup> Anderson defines this as “effects on the manner in which the unit (individual or collective) deals with its environment, in an attempt to control the environmental effects on its behaviour and to extract value from the environment” (Anderson 2004, p. 39). She categorises the effects into the three categories: information quality, efficiency, and effectiveness. Furthermore, a full eighty-four percent of the findings with respect to capabilities were *positive*.

bureaucratic processes becoming increasingly partitioned, itemized, and codified (Kallinikos 2006a). Thus the system is self-reinforcing as the increasing rationalization leads to even greater “rationalization, standardization, and use of rule-based systems” (Fountain 2002, p. 62).

Improved efficiency through automation is certainly not guaranteed. As discussed, bureaucracies can be highly resistant to change due to a variety of institutional, political, and cultural factors. Thus, the implementation of ICT may rationalise particular procedures but then be “enacted” in suboptimal ways (Fountain 2002, p. 127). In this case, the level of change associated with the technology is limited and may even prove detrimental. Furthermore, not all tasks are amenable to automation. More professional tasks have not undergone the same level of change as the more easily automated clerical tasks (Fountain 2002). Generally, these applications involve knowledge-based or expert systems that attempt to systematize and codify the professional knowledge. Up until this point, these systems have had limited success,

“Experience with knowledge-based programs or expert systems demonstrates that rule-based systems work well as aids to clearly defined problems but tend to produce poor results outside well-bounded domains” (Fountain 2002, p. 128).

One of the central problems with developing knowledge-based or expert systems is the difficulties in capturing and codifying the tacit knowledge that accompanies many professional tasks (Kallinikos 2001). This is one reason why new ICT systems have pervaded less rapidly in professional than in machine bureaucracies (Dunleavy *et al.* 2006): the rules, regulations, and processes of machine bureaucracies are more easily codified and thereby more faithfully translated into software.

In the right contexts the implementation of ICT can extend beyond automation and supporting existing procedures to innovation and the creation of new processes (Andersen 1999). Key to the innovation of new processes is the informate capacity of new ICT where information derived from the activities of the system can be processed and used to reflect back on the activities of the organisation (Bellamy and Taylor 1998, pp. 26-27). The increasing role of codified information signifies the increasing



“cognitivization” of work (Kallinikos 1999, Kallinikos 2001). This significantly frees up clerical staff from the more mundane information processing tasks to perform more high level analytical tasks, or “knowledge work” (Fountain 2002, p. 124).<sup>100</sup> This new freedom combined with access to a new level of information creates new possibilities for worker creativity (Kallinikos 2001). Furthermore, the operation of information on information allows for the development of a whole new level of tactical and strategic analysis (Kallinikos 2001).

### **Coordination**

The powers of new ICT for communication and networking bring about a possible “disjunctive change” in the very system of coordination and control of the bureaucracy itself (Fountain 2002, p. 117). As the costs of communication decreases and the speed and richness of communication is enhanced, new opportunities for coordination and control at a distance emerge (Kallinikos 2006a, pp. 158-159). Bellamy & Taylor argue that it is in the increased communication/networks is where real transformative changes begin to happen (Bellamy and Taylor 1998, p. 86).

Coordination is enhanced through a modification of the relationship between information, distance, time, and memory (Fountain 2002). The ability to communicate information over greater distances means greater opportunities for collaborative action (Andersen 1999, Fountain 2002, p. 130) and new possibilities for the distributions of activities. There can be greater use of cross-functional groups and teams using shared databases and electronic communications (Fountain 2002, p. 121). For example, caseworkers can perform work previously spread over several positions (Fountain 2002, p. 124). Furthermore, with the increased storage and access ability afforded by new ICT (for example with knowledge management systems), organisational memory is greatly increased as well as the fluidity of activities with respect to time (Fountain 2002, p. 129).

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<sup>100</sup> It has also decreased the role traditional middle management, and created new positions in IT (Fountain 2002, p. 124).

This increased level of coordination is not limited intra-organisationally. The new elements of communication as well as these new representations of reality make it possible to establish “new organizational, regional and global architectures of control, in which access to, and capacity to act upon and manipulate information figure prominently” (Kallinikos 2006a, pp. 158-159). This also has important implications for the possibilities of expanded interoperability in which information can be intersected and recombined in a variety of new ways (Kallinikos 2006a, p. 159).

### **Control**

There are several ways that new ICT can alter the balance of control within an organization. Standard in the literature is the belief that the potential for increased employee access to information and freedom from mundane tasks would bring about employee empowerment. However, new ICT also has the ability to reinforce and strengthen top-down control (Bellamy and Taylor 1998, p. 43, Smith 2005b, Smithson *et al.* 2000). Employee behaviour is standardised and discretion is limited through the solidification of rules and standard operating procedures embedded in software processes (Dunleavy *et al.* 2006, Fountain 2002, p. 137). The advent of computerisation means that the embedded operating procedures have become more rigid and more highly rationalised than manuals or supervisors were ever able to do (Fountain 2002, p. 130) and is considered by some the “zenith of legal rational authority” (Bovens and Zouridis 2002, p. 181).<sup>101</sup>

The second means of enhancing top-down control is the improved means of employee and process monitoring (Andersen 1999). The emergence of information out of the computerised processes is implicated in more than just tactical and strategic organizational decision-making. Information essentially makes aspects of the agency’s functioning more visible through making available electronic indicators such as overall agency performance, production processes, and employee behaviour. This information

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<sup>101</sup> In Heek’s (2005) terminology, it is the “deep inscription”, or “deep design” that “often have many strong implicit elements – are obdurate and will resist attempts at improvisation during deployment, thus reducing the chances of local appropriation or accommodation” (Heeks 2005, p. 65).

can be used to provide timely, clear, and accurate feedback measurements allowing for benefits such as the bringing together of disparate units and agency divisions in line with agency goals (Fountain 2002, p. 131). Ultimately this new information relieves authority from physical monitoring allowing for enhanced control at a distance (Fountain 2002, p. 131).

Interestingly, there is another subtle shift of control away from the government employees at all levels and towards the technology itself. The current state of the ICT system in government works as an infrastructure that constrains future possibilities of bureaucratic action and public policy.<sup>102</sup> A good example of this is the prevalence and influence of legacy systems in many occidental countries in the operation of bureaucracies as well as the deployment of new e-government systems,

“the design of IT systems can have strong effects in embodying and freezing a particular set of administrative capabilities – literally ‘embodying’ since in ‘legacy’ systems a given set of procedures will be written up in millions of lines of programming or code...” (Dunleavy *et al.* 2006, p. 25).

Changing or reworking such systems is not for the faint of heart, especially when the systems themselves may be several decades old. The problem, however, is still true for newer systems today, although improved software interoperability means that it may not be as acute. Regardless, it should come as no surprise that major policy changes must now take into consideration and be timetabled around the operations and changes of government ICT systems (Dunleavy *et al.* 2006, p. 24).

#### 4.3.4 E-SERVICES

The promises of e-government go beyond the internal capacity, control, and communication advantages described above. The efficiency benefits that flow from the internal changes outlined above plus the nature of new ICT allow for the possibility of “forging new high-tech services” (Bellamy and Taylor 1998). These improved services

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<sup>102</sup> This standardisation also occurs through socialisation and training, that provide even more inertia to maintain the status quo (Dunleavy *et al.* 2006, p. 25).

are offered both at the public sector offices as well as online. For example, the increased access to information allows for improved service delivery at the point of interaction enabling a public sector bureaucrat to instantaneously access a citizen's file to answer questions or resolve a situation on the spot. Beyond the interaction within public sector offices, the codification of information and processes and the advent of the Internet allows for the placing of services online.

If we follow the technocratic logic of e-government we can identify three improvements to government-citizen interaction through the implementation of e-services: more efficient service delivery, easier access to information, and improved communication (Streib and Navarro 2006). These can bring significant benefits for the end-user (citizen and business) such as 24-7 access to information (e.g. better market information, knowledge of policy changes) and convenience (e.g. time saved with faster transactions, reduced travel time and costs). Of course, achieving these advantages assumes that there is a sufficient technological infrastructure in place and that citizens have the requisite points of access, be that in a telecentre, a kiosk, the workplace, or Internet in their home. Much of these benefits are derived from the first two stages of service provision: information provision and transactional services.

**Information provision** There are many types of information that can be offered online. Some examples are (Bhatnagar 2004):

- Info about rules and procedures governing services; public officials responsible for different tasks; citizens' charter; enhancing citizens' exposure,
- Information about decision and actions including outcome and process,
- Data about individual entities,
- Performance information; statistical employment, income, trade, performance indicators for government departments, and
- Disclosure of assets, incomes; profiles of election candidates.

Views on the type and extent of information that the public sector should provide is dependent upon your view of the role of citizens and participation in democratic processes (Eschenfelder and Miller 2007). With new ICT, information access is improved

through 24/7 online access to information through websites. For example, a public sector organization can offer access to database information (Landsbergen 2004). This access can also be facilitated by the use of search functions, FAQs, expert systems, or other knowledge management techniques (Atkinson and Ulevich 2000). In general, studies have found that ICT have brought about positive improvements to both data quality and data access (Anderson 2004).

The quantity (along with type and quality) of information is another important defining feature of information provision. As described above, as a result of the self-referential quality of new ICT, the quantity of information available in the modern world is exploding (Kallinikos 2006a, Kallinikos 2006b). While ideally the government might make information available according to users needs and the norms and values of democracy, the realities of what information is put online and how it is expressed is highly dependent on a wide variety of factors and political pressures (Eschenfelder 2004).<sup>103</sup>

The discussion has been limited here to unidirectional information provision. In theories of digital democracy, information provision is the first stage of digital citizen participation (Holzer *et al.* 2004). The information interaction can become more dynamic, including citizens' requests for information or the use of "push" technologies that serve up information automatically (e.g. newsletters, e-mail lists). Finally, there are opportunities for more advanced interactions where citizens can participate in policy deliberations through online polls, forums, or voting (Holzer *et al.* 2004, Parent *et al.* 2005).<sup>104</sup>

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<sup>103</sup> There are of course, many factors that mediate the quality and quantity of information presented by the government. In a grounded theory case study, Eschenfelder (2004) found a whole range of political and other factors that influenced the nature of information presented on the government agency's web-site including, among others; public education mission, public inquiry burden, top-down directives, review and approval process, resources, and management interest and goals.

<sup>104</sup> The potentials of this dynamic are changing rapidly with the rollout of the Web 2.0. New technologies have been enabling participation and influence over politics not previously anticipated. A perfect example is the influence of YouTube in the 2006 U.S. mid-term elections. The myriad of ways that ICT may be implicated in the shaping of democracy, while an extremely fascinating topic, goes beyond the scope of this thesis.

**Transactions** There are a whole range of types and degrees of e-service transactions that can be offered online. The two e-services studied in this thesis provide good examples of this variety. The tax online system offers a whole range of online possibilities, from accessing relevant tax information to filling out tax forms online to completing the whole transaction all the way through to making payments. The public sector e-procurement system also spans a range of possibilities for businesses looking to sell to the government, from the offering of ex-ante sales information to online bids to completing the entire transaction through the Internet.<sup>105</sup>

Of course, the benefits derived from either information provision or government transactions online are also dependent upon how a user takes advantage of these new services. Just as the bureaucracy shaped the implementation of technology, with e-services, the users play an important role. While there are many factors that shape citizens' uptake and use of technology, here the most salient factors are identified:

- The literature points out that Internet and e-service usage can be influenced by a variety of personal and social factors including education levels, e-literacy, age, gender, socio-economic status, race, and political orientation (Akman *et al.* 2005, Brewer *et al.* 2006, Carter and Bélanger 2005, Ho 2002, Hollifield and Donnermeyer 2003, Jaeger 2001, Jaeger and Thompson 2003, Layne and Lee 2001, Ndou 2004, Reddick 2005, Silcock 2001, Thomas and Streib 2003, West 2005). West found that younger and more educated citizens were the most likely to visit federal and state web sites, while education and race were the most significant predictors for visitors to local websites. In general, "Young people are far more likely than older people to access the Internet in general and e-

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<sup>105</sup> Of course, depending upon the complexity of the transaction, the service requires different degrees of back-end changes. For example, the simple offering of information about a public sector institution online may not require any back-end changes. However, to place financial transactions information online requires much more extensive back-end systems as well as overcoming interoperability issues with external financial institutions.

government in particular”, a “deviation from the typical pattern with other media usage and political participation” (West 2005, p. 126).<sup>106</sup>

- Studies employing the Technology Acceptance Model (TAM) have shown that the factors of perceived usefulness and perceived ease of use greatly impact the behavioral intention to use and consequently the actual uptake of new technology (Davis 1989, Davis *et al.* 1989), including e-services (Carter and Bélanger 2005) such as electronic tax-filing systems (Chang *et al.* 2005, Wang 2002). In the context of organizations, Davis defined perceived usefulness as “the degree to which a person believes that using a particular system would enhance his or her job performance” and perceived ease of use as “the degree to which a person believes that using a particular system would be free of effort” (Davis 1989, p. 320). These two factors have also been shown to be dependent upon one’s computer self-efficacy, or level of experience with computers (Wang 2002).
- While this study is about building trust through e-services, perceived trustworthiness of the organization has empirically been shown to be a pre-requisite to the uptake of an e-service (Carter and Bélanger 2005, Pieterse *et al.* 2007, Reddick 2005). For the most part, this research was motivated by similar findings in e-commerce extending the TAM (Dahlberg *et al.* 2003, Gefen *et al.* 2003, Pavlou and Gefen 2004).<sup>107</sup>
- Issues surrounding privacy, confidentiality, and security, along with perceived risk appear to influence the use of e-services (Brewer *et al.* 2006, Heeks 1999, Jaeger 2001, Layne and Lee 2001, Wang 2002, Warkentin *et al.* 2002). Wang (2002) in an empirical study of an e-tax system use found that perceived credibility, measured in terms of privacy and security of information, was a more powerful impact on e-service use than perceived usefulness.

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<sup>106</sup> Arguably, successful uptake and diffusion needs concerted campaigns, education, and intermediaries (Bhatnagar 2004, p. 43, Jaeger and Thompson 2003).

<sup>107</sup> For those who are interested, see (Silva 2006) for an important critique of TAM.

#### 4.3.5 ICT IN PUBLIC ADMINISTRATION IN DEVELOPING COUNTRIES

A quick note justifying the above conceptualisation is needed at this point. A case could be made that the conceptualisation of bureaucracy used above is more representative of the western context and not as relevant for the development context (e.g. Avgerou 1990, Peterson 1998). For example Berman and Tetty (2001) argue that post-colonial African bureaucracies have three characteristics that differ from the occidental context: limited technical capabilities; authoritarian decision-making processes; and the predominance of patron-client relationships. Similarly, Peterson (1998) describes the “hub-and-wheel” style of management found in African bureaucracies which is “highly personalised and has limited delegation” (Peterson 1998, pp. 29-40). Such a style contrasts with the Weberian bureaucratic ideal of a strict separation of the personal and professional roles. Such differences will, of course, have influence over the implementation and outcome of e-government systems. The argument here is that the Chilean public sector (detailed in Chapter 5) does qualify as an example of a more traditional impersonal and role based bureaucracy, and as such, this conceptualisation holds.

#### 4.4 THE CHANGING CITIZEN-GOVERNMENT RELATIONSHIP

It is through the improvement of government services where much of the perceived transformational power of new ICT lies; the cost of services will go down while quality and scope of services and citizen-government interactions increase. This then potentially acts as the catalyst for restoring the citizen-government relationship (Bellamy and Taylor 1998, p. 64). Whether or not and how the relationship is being “restored” is an empirical question that may find a different answer in different contexts. It is, however, possible to theoretically identify and elaborate on some important ways through which aspects of the citizen-government relationship are being altered.

##### 4.4.1 ACCOUNTABILITY AND TRANSPARENCY

E-government provides a new means for promoting accountability of the public sector (Meijer 2007, Wong and Welch 2004). Among other things, the Internet provides a new medium for the dissemination of information regarding public sector performance (Bhatnagar 2004) and policies and policy intentions (Gelders 2005). There are two main



types of information that can be communicated that contributes to transparency and potentially towards accountability: information on rules and activities of government, and public sector performance information (Bhatnagar 2004),<sup>108</sup> that will be referred to here as institutional and performance transparency respectively.

New technologies provide a new means to hold the public sector accountable to the public, as new channels are opened for downward communication (Weare 2002) empowering citizens to monitor the activities of government (Wong and Welch 2004, p. 276).<sup>109</sup> This can potentially work as complementary accountability mechanisms to the traditional form of horizontal accountability where an actor must answer for expected performance to another actor who has the power to judge and impose sanctions (Meijer 2007, p. 167). Such accountability in the public sector comes from formalized, institutionalized, and hierarchical forms. Accountability towards citizens is problematic, however, as it differs from more traditional forms of accountability (institutional checks and balances) in three important ways: there is “no formal information provision”, there is “no fixed format for debate”, and there are “no formal sanctions tied to stakeholder judgments” (Meijer 2007, pp. 168-169). The lack of a formalised process limits the quality of information and the availability of accountability mechanisms. Without more formal mechanisms in place, citizens can resort to mechanisms such as exit and voice (cf. Hirschmann 1970), although exit is often not a possibility when dealing with the state. The media also plays a large role using information and publicity as a sanction.<sup>110</sup>

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<sup>108</sup> Of course, the quality of the transparency is directly linked to the quality, veracity, completeness, and timeliness of the information (Gelders 2005). It also depends upon the amount and type of information processing performed.

<sup>109</sup> Wong & Welch describe this form of vertical accountability, “More information delivered in a more timely fashion to citizens is to increase transparency of government, empowering citizens to more closely monitor government performance. Enhanced interactivity of the technology is also expected to improve government accountability as it makes government more responsive to the needs and demands of individual citizens” (Wong and Welch 2004, p. 276).

<sup>110</sup> Of course, while negative publicity may result in a renewed focus on quality of service, the public organization may simply counter with its own positive publicity (Meijer 2007).

#### 4.4.2 PUBLIC SECTOR POLICY AND DISCRETION

The implementation of ICT in the public sector alters the loci of power in the public sector. New technologies shape bureaucrats' behaviour and subtly shift their roles as policy makers and implementers. Just as new technological infrastructures can constrain future policy proposals, they also shift discretion away from lower-level bureaucrats to the system implementers, with important implications for the citizen-government relationship. This process is described as the movement from street-level bureaucracies to system-level bureaucracies.

Street-level bureaucrats are defined as “public employees who interact directly with individual citizens and have substantial discretion in allocating facilities or imposing sanctions” (Bovens and Zouridis 2002, p. 175).<sup>111</sup> One role of the street-level bureaucrat is of policy creator and enactor through their individual discretion during their daily activities. This discretion (and autonomy) emerges from various circumstances intrinsic to public administration,

“complexity and the necessary ambiguity – and sometimes inconsistency – of rules to be applied; time pressure and the limited means possessed by the bureaucrat to do justice to the specific circumstances; and the impossibility of management to completely control the behaviour of their contact functionaries with respect to the clients” (Snellen 1998, p. 499).

For example, “Is the applicant employable in the labor market? Should a deductible item be considered when determining the taxable income level? Can the parents of a student be qualified as unwilling to pay, meaning that the amount to be contributed by the parents may or may not be subtracted from the student's grant” (Bovens and Zouridis 2002, p. 175)? Ultimately, the street-level bureaucrat is the link between internal processes and the external process of information about the context and needs of citizens (Snellen 1998).

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<sup>111</sup> As Bovens & Zouridis (2002) explain, the switch from street-level to system level bureaucracies only happens for those public service employees who are “involved in the routine handling of large amounts of formalized transactions. Hence, it is not about the delivery of concrete, individual services by teachers, health workers, or judges” (Bovens and Zouridis 2002, p. 184 in footnote).

The advent of e-services means that these street-level bureaucrats are being replaced with a system-level bureaucracy. System-level bureaucracies are the information systems that replace street-level bureaucrats through the automation of their duties and decision making processes (Reddick 2005, p. 39). In many cases, citizens no longer interact with a bureaucrat, but instead with a faceless computer screen, “Window clerks are being replaced by Web sites, and advanced information and expert systems are taking over the role of case managers and adjudicating officers” (Bovens and Zouridis 2002, p. 175).

As discussed, the increased use of ICT to replace and/or supplement administrative processes increasingly constrains the bureaucrats decision-making process (Snellen 1998). Ultimately, the former street-level bureaucrats are no longer involved in directly handling individual cases, but instead focus on “system development and maintenance, toward optimizing information processes, and toward creating links between systems in various organizations” (Bovens and Zouridis 2002, p. 178). Furthermore, this also often leads to a growing emphasis on quantitative decision criteria (Anderson 2004) .

This rationalisation, while it may lower discretion, does not completely remove discretion from the organization. Discretion instead is in part shifted away from the street-level bureaucrats to system analysts and software designers (Bovens and Zouridis 2002, Reddick 2005). This requires that implementation of policy issues must be considered during the policy formation processes (Snellen 1998), decreasing the traditional separation between policy and administration (Thiel and Leeuw 2002). Furthermore, overly specified algorithms may not have the flexibility to deal with special circumstances. In this way, arbitrariness emerges through the back door due to the excessive rigidity and inability to take account of contextual details (Bovens and Zouridis 2002, p. 182). Conversely, if not all details are specified in advance, the discretion falls to the system programmer who will generate their own solutions. In such situations, policy decisions made at the edges are done in an ad-hoc manner or result as an unintended consequence of the complex interaction of the software.<sup>112</sup> Finally, in the cases where

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<sup>112</sup> Furthermore, in some cases – discretionary authority is intentionally bestowed because “politicians want to appease multiple stakeholders or to facilitate executive agents’ work” (Thiel and Leeuw 2002, p. 275).

there is not a complete transition to an online service, the increased amount of information supplied to a street-level bureaucrat may actually increase their discretion and action (Anderson 2004, p. 51).

#### 4.4.3 SURVEILLANCE AND EMPOWERMENT

Along with the potential for citizen empowerment, new technologies bring possibilities of increased surveillance and the threat of a big brother society. This is because of the central importance of information in both empowerment and surveillance. There is an increasing need for information to maintain today's society: "Surveillance ... is fundamental to all the types of organisation associated with the rise of modernity, in particular the nation-state..." (Giddens 1990, p. 59). Modern life is more structured than ever before and effective social organisation is only possible if there is enough good information upon which to order society: "*Organisation and observation are conjoined twins, ones that have grown together with the development of the modern world*" (Webster 2002, p. 205). Consequently,

"... much of the capability of the surveillance society is being created as the incidental by-product of processes which are designed primarily to meet non-surveillance goals, such as reducing fraud, improving efficiency and enhancing equality" (Bellamy and Taylor 1998, p. 88).

This is especially a concern in countries such as Singapore and China, or politically unstable democracies, where tight control over information and the Internet allows them control over politically relevant information and erodes the public sphere (Anderson 2004). Ultimately, e-services come with the inherent tension between a big brother society and "soft sister' informational innovations which promise to improve both the quality and efficiency of public services" (Bellamy and Taylor 1998, p. 87).<sup>113</sup>

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<sup>113</sup> As a side comment, the outcome of this process is not yet known, and certainly not pre-determined. It may be that the fear invoking notion of the surveillance society that new technologies make possible may be countered "through making social life open, visible and accountable to everyone" (Kallinikos 2001, p. 59).

#### 4.4.4 SUMMARY

Theoretically speaking, the implementation of ICT in the public sector has great potential to enhance (and possibly transform) the citizen-government relationship. ICT is a disjunctive new technology with its ability to process and manipulate information, produce new information from information processes, and make new networks of communication and coordination possible. Given that a public sector bureaucracy is already an information processing system, the implementation of ICT brings great potential to enhance and alter its internal workings. Ultimately, these changes come through potential improvement of the bureaucratic capacity, communication, control, and the offering of online services with its many benefits to the citizen. Of course, the actual outcome of an ICT implementation is highly dependent on a series of social and organizational factors and is by no means guaranteed to bring about these benefits. Furthermore, the introduction of new ICT into government may result in changes to the citizen-government relationship in terms of introducing new possibilities of transparency and accountability, shifting the foci of policy discretion, and in the potential e-service tension between big brother surveillance and soft sister e-service benefits.

#### **4.5 PART IV: E-GOVERNMENT AND INSTITUTIONAL TRUST**

This section turns to the final theoretical task of considering how changes to the public sector administration and services outlined in part III may be implicated in altering the trustworthiness of the public sector and ultimately impacting on citizens' trust. To accomplish this, this section integrates theory from parts I, II and III. Like the previous theoretical sections, ideal-type theory is the goal. The result is a series of middle-range hypotheses that falls between the more abstract institutional trust theory (part II) and the case specific hypotheses that are generated in chapters 6 & 7. In an attempt to build on theory, and use theory relevant for the cases in this study, the focus is on extending the e-government discussion above and presenting the most common theories in the literature on e-government and trust.

Before continuing it is important to clearly differentiate between *trust in an e-government system* and *trust in government through e-government*. Trust in e-government systems

research is concerned with building trust in the technological system, generally with respect to encouraging e-service use or satisfaction with e-services. Trust in government through e-government, the focus of this thesis, is how e-government services alter the trust relationship between the citizen and the institutions of government that offer the e-service. In the trust in an e-government systems literature, security and privacy issues are of central concern (e.g. Wang 2002, Welch *et al.* 2004). Security and privacy issues are of both an indirect and potentially direct concern here. Indirectly, security and privacy influence e-service use (see section 4.3.4). More directly, security and privacy assurances may also indicate the government has the interests of the citizen in mind as well as perhaps a level of legislative competence. While these issues are important for e-service implementation and undoubtedly play a role, they take a background role here theoretically.<sup>114</sup> Consequently, security/privacy issues are viewed as contextual mechanisms that potentially modulate the activity of the more central mechanisms being researched.

Following the distinctions made in part II & III, the following theory is divided into three categories based upon the three trustworthiness components: competence, interests, and values. Depending upon the qualitative properties of the e-service it may project competence (e.g. is the web page made well? Is it an efficient service?), align interests (e.g. does it provide me any benefits?), and align values (e.g. is the service procedurally just?). In general, the theories presented are focused on the building of trust rather than its counterpart; destroying trust. It is assumed that each theory implies its opposite, for example, if aligning interests tends to build trust, then unaligned interests will tend to erode trust. Furthermore, the focus here is on direct trustworthiness cues and not on the indirect socio-tropic cues such as the media.<sup>115</sup> This part concludes with a consideration of some individual-level contextual mechanisms that modulate a citizen's interpretation of their interaction with an e-service.

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<sup>114</sup> There are two reasons for this considering the e-services studied in this thesis: (1) there are more salient direct mechanisms (transparency/accountability and effectiveness/efficiency) that can be studied and (2) it did not emerge as an issue during the course of the study as will be discussed in chapters 6 & 7.

<sup>115</sup> Also like the theory in part II, this section is concerned with *direct* mechanisms. The indirect (socio-tropic) mechanisms – i.e. communicating these cues through third-party – is important but not part of the direct impact of e-services theory. Here they potentially play a contextual role.

### **Building institutional trust through e-government theories**

“**Responsive**, through improved communication and interactions with citizens... **Accessible**, around the clock, seven days a week... **Transparent**, through the posting of information such as data, policies, laws, meeting schedules and minutes, and contact information... **Responsible**, as demonstrated by privacy and security statements and policies for handling personal information submitted online and government data that are posted online... **Efficient and effective**, through the use of latest technology to automate processes, improve service delivery, produce budget savings, and save time... **Participatory**, providing for citizen input” (Tolbert & Mossberger, 2006, pp. 357-358).

Moon (2003) argues that IT has *potential* through useful tools to help restore public trust through; enhanced **transparency**, cost **efficiency**, **effectiveness**, **policy participation**.

“... agencies may increase institutional trust when they enact internet technologies **according to democratic norms of equity, transparency, and interactivity**” (Welch et al., 2004).

“In an increasingly complex information-based society, the **provision of more information and increased transparency may** even obscure public understanding and **undermine trust through information overload**” (Cook, Hardin, & Levi, 2005, p. 57).

Increase of **transparency** has the potential to “improve citizens’ perceptions of **accountability**” (Brewer et al., 2006, p. 484).

“Digital democracy enriches the democratic process and builds public trust. ... These include increased citizen participation in policy-making processes, the ability of public agencies to respond to citizens more quickly and accurately, and cost savings related to time and paperwork” (Holzer et al., 2004, pp. 27-28).

On their results of surveying students responses to e-government web-sites, “...it is the **quotient of gain** (multiplied by its likelihood...) **and risk** which determines trust... familiarity (as) a precondition for trust or distrust does not seem to hold” (Riedl, 2004, p. 98).

**Table 11 Theories of how to build institutional trust through e-government implementations.**

#### 4.5.1 COMPETENCE

The starting point for this theory is to recall from the previous chapter how competence is theorised to build institutional trust: *Good institutional performance that is*

*communicated, understood, and perceived to meet or exceed citizens' expectations of performance tends to build trust.*

The most straightforward way that institutional performance is improved through e-government is the computerisation of internal government processes. This has several outcomes that can result in the perception of improved institutional performance. First, e-services can make the institutional service delivery more efficient and effective. Depending upon the degree of digitisation and the type of service, e-services can be faster (less processing time, automated processes), more accurate (less chances for human error, digital forms can have information checks), as well as bring about substantial cost savings (less cost per transaction).

C1 – Competence hypothesis: Effective/efficient service I: *E-services perceived to be more effective and efficient (faster, more accurate, cost savings) will tend to build trust.*

Also, the computerisation of internal processes and access to information for all bureaucrats provides a mechanism through which street-level service delivery service may improve. While this is not a more efficient “virtual” e-service, the improvement in office service is made possible through back-end computerisation.

C2 - Competence hypothesis: effective/efficient service II: *E-government services that improve the efficiency and effectiveness of service at the institution's physical office tend to build trust.*

One way that citizens have access to the actual performance of institutions is through the publication of performance indicators. Online services provide another medium for the communication of institutional performance. Furthermore, as discussed (section 4.3.1), the informate quality of new ICT allow for increased monitoring of performance internal to the bureaucracy. These indicators, or derivatives thereof (e.g. performance targets), can be made public to increase performance transparency. If the published performance



transparency information is understood and meets or exceeds expectations, it will tend to build trust. However, if expectations are not met, it will tend to decrease trust.

C3 - Competence hypothesis: performance transparency I: *Performance transparency that meets the citizen's expectations will tend to build trust.*

Performance transparency of institutional goals and mandates, and the performance data of how they meet those goals or mandates can also be linked to accountability mechanisms. It seems logical to hypothesise that if performance indicators are seen as linked to effective accountability mechanisms then this will tend to build trust.

C4 - Competence hypothesis: performance transparency II: *Performance transparency that is perceived as linked to effective accountability mechanisms will tend to build trust.*

#### 4.5.2 INTERESTS

E-services provide the opportunity for an institution to demonstrate that their interests are aligned with the citizens and this will tend to build trust. Recall the first interest theory from part II: *If the institution's policies encompass the interests of the citizen, trust will tend to be built.*

The very implementation of an e-service *is* a policy. Thus, how can an e-service be in the interest of the citizen? The simplest route is through providing user benefits. The theoretical discussion mentioned two main benefits: improved convenience (e.g. 24/7 access to services and needed information), and cost and time savings (e.g. faster transactions, no need to travel to the office). It must be said that the literature has paid little attention to this aspect of trust, although there have been mentions of it creating “good will” (West 2005, p. 125).<sup>116</sup> However, from a rational choice perspective, where

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<sup>116</sup> The full quote is, “Visitors can access publications, search databases, register complaints, and other services. These features create considerable good will among the general public” (West 2005, p. 125).

gain/loss calculations come into play in determining trust, one can see how user benefits might shift the equation (Riedl 2004).

I1 - Interest hypothesis: user benefits: *E-services that bring user benefits will tend to increase trust.*

Parent *et al.* (2005) hypothesised that e-service quality<sup>117</sup> will influence trust. More specifically, Parent *et al.* hypothesised that perceived quality of the government website indicates increased government responsiveness. This seems a bit of a stretch. A better way to conceptualise the relationship is that the quality of the website shows that the government has the interests of the citizen in mind— that is, that the government wants the e-service to be easy to use and useful for the citizen. Parent *et al.*'s survey results only marginally supported this theory.

I2 - Interest hypothesis: e-service quality: *Good e-service quality indicates that the institution considers citizens' interests and therefore tends to build trust.*

The first interest sub theory from part II is: *Mechanisms that work to align (such as voice and exit) the interests of the institution and citizen tend to build trust.*

The increased capacity for communication through e-government allows for potential new citizen-government interactions such as citizen participation (voice). Theoretically, increased interaction is a mechanism that suggests institutional openness to input and for registering citizens' interests, thus potentially aligning interests. There are two main components that e-services can supply that work to increasing citizens' possibilities for participation: information and open channels of communication to allow citizens to leverage that information. So far, the amount of e-services that include truly dynamic and participatory citizen-government interaction and communication (for example on policy

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<sup>117</sup> To measure the quality of the service, Parent *et al.* (2005) used the TAM variables of perceived ease of use and perceived usefulness of the services.

deliberations) is limited.<sup>118</sup> A more common method is to providing relatively simple online mechanisms for citizen feedback such as emails to public officials, comments, online help, etc. Theoretically, the very existence of these feedback mechanisms might make the citizen feel that the institution takes the citizen's concerns into consideration, and thus tend to build trust.

I3 - Interest hypothesis: voice: *Increased possibilities for voice through the provision of information and the e-service feedback mechanisms (e-mail, comments) will tend to build trust.*

Both of these voice mechanisms work to align interests, but are also an expression of the democratic value of involving citizens in the policy-making process (part of procedural justice). Thus we would expect these mechanisms to potentially work on two levels: the self-interest calculation (aligning of interests), and procedural justice values.

The final interest sub-theory from part II is: *Establishing credible institutional commitments through credible and effective institutional checks and balances that keep their interests in-line with citizens tends to build trust.*

E-government and e-services with their increased informatisation of internal processes provides several checks and balances that incentivise potential knaves to behave as the proverbial knights. One mechanism is one of the most discussed benefits of e-government: increased transparency and accountability (see 4.4.1). Increased institutional transparency is believed to build trust when accompanied by effective accountability mechanisms that keep the bureaucrats interests in-line with the roles and rules of the institution. The new level of visibility of internal processes and outcomes means that bureaucrats' behaviour can be subject to both types of accountability: horizontal

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<sup>118</sup> There is some theory, most commonly associated with e-democracy around the potential for citizen participation to build trust (Holzer *et al.* 2004, Moon 2003, Tolbert and Mossberger 2006). As this is not central to this thesis (it is neither common in e-government implementation or is a part of the two e-services studied) it will not be discussed here.

(independent institutions can monitor activities of institution, such as the office of the Auditor General) and stakeholder (information on the processes of the institution can be made available online).

I4 - Interest hypothesis: transparency/accountability: *Increased transparency of internal processes and service outcomes accompanied by perceived effective accountability mechanisms will tend to build trust.*

Another mechanism for constraining potential knaves is the ability of e-government to reduce bureaucratic discretion thus reducing possibilities for corruption. Corrupt behaviour is an indication of divergent interests between the bureaucrat, the institution, and the citizen. In many countries, small bribes are extracted at the point of interaction with the street-level bureaucrat in order to grease the wheels of the government machine. Without this interaction, possibilities for corruption decrease. They also decrease through the operation of other mechanisms put in place with e-government such as the standardization of rules and procedures that reduces the opportunities for arbitrary action, increased visibility of actions can improve auditing and analysis, and the opening of new service channels increasing competition (Bhatnagar 2004, p. 40). If e-services result in a decrease of perceived corruption then they will tend to increase trust.

I5 - Interest hypothesis: reduced corruption: *A perceived reduction of corruption due to the computerisation and rationalisation of government processes will tend to build trust.*

E-services potentially influence the citizen-government relationship in a manner that has not received much attention in the literature; by changing the relation of power. The greater the power asymmetry, the more difficult it is to build trust. The implementation of e-services might serve as a countervailing mechanism. If an e-service provides information and potentials for voice and interaction, this may imply a shift of power towards the citizen (citizen empowerment). On the contrary, the offering of e-services often requires and is concurrent with the increased collection of information that is then

centralised in government databases. This increased penetration and knowledge of the lives of citizens increases the power of the government vis-à-vis the citizen.

Clearly, the dynamic is complex and dependent on the type of e-service, the amount and type of information collected, and mechanisms of credible commitment to restore balance to the power asymmetry. If the balance is shifted towards coercion and control through the new found power (big brother) then this will tend to destroy trust. If, however, the government uses this information for improved services and user benefits (soft sister) then theory is inconclusive and most likely dependent upon the focus and sensitivities of the citizen; the power differential may be problematic for some, and for others the improved services may build trust. Here, the hypothesis is that improved benefits from e-services will counteract the power dynamic and this will tend to build trust.

I6 - Interest hypothesis: power (big brother): Increased power for institutions vis-à-vis the citizen through e-services will tend to destroy trust.

I7 - Interest hypothesis: power theory (soft sister): Increased power for institutions vis-à-vis the citizen through e-services that results in improved services and user benefits tends to build trust.

#### 4.5.3 VALUES

There were two general paths through which institutional values influence trust. The first is: *Overlapping values between the institution (institutional ethos) and citizen tend to build trust.* It is not altogether clear how e-government implementations would alter the institutional ethos. To fundamentally alter the institutional ethos would require fairly dramatic transformation of an institution. One possibility is when an e-government implementation is associated with a set of overarching public sector reforms. New public management (citizen as customer), or more citizen (as participant) oriented reforms embody different value orientations towards the role of government with respect to democracy and the market. Depending upon the transformational success of these

reforms, the institutional ethos might also be changed accordingly. Consequently, there is no clear hypothesis that emerges here.

V1 - Values hypothesis: institutional ethos: It is unclear how the introduction of e-government will change this ethos, and therefore it is also unclear how e-government will tend to impact on institutional trust.

The second values theory from chapter 3 is: *Institutions that embody and communicate values of procedural fairness, distributive justice, and benevolence will tend to build trust*. These will be tackled one by one.

**Procedural fairness** - There were four components of procedural fairness, and each is influenced differently by the introduction of e-services:

- (1) Citizen compliance – If the introduction of e-services increases citizen compliance then this will tend to build trust. There are two main ways this can occur: facilitating compliance through the reduction of compliance costs and increased surveillance and coercion.

V2 - Value hypothesis: procedural fairness (citizen compliance): *E-services that increase citizen compliance through increased capacities for surveillance and coercion or through a reduction of compliance costs tend to increase trust*.

- (2) Universal criteria for hiring/firing - E-services do not have a direct impact on the institutional criteria for the recruitment and promotion of agents. Much like changing the “ethos” of the institution, this is an internal policy issue that most likely is not impacted by e-government.<sup>119</sup>

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<sup>119</sup> One can imagine a specific e-service that would address this issue, such as an online hiring site with stated universal criteria, or even just posting the institutional hiring practices online. This is beyond the scope of this thesis.

- (3) Impartial institutions - Computerisation may make the biggest difference to this aspect of procedural justice. The automatising of government processes can severely constrain street-level discretion. In fully automated e-services, the potential for street-level discretion is completely eliminated by an impartial screen-level bureaucracy. In situations where unnecessary discretion was removed and is perceived as an improvement over the former service (thus it is relative to the type of service and previous service history) it will tend to build trust.

V3 - Value hypothesis: procedural fairness (impartial institution): *E-services that remove unnecessary street-level discretion and increase perceived impartiality will tend to build trust.*

As discussed in section 4.4.2, the computerisation of government processes and services does not entirely remove discretion and arbitrariness from the system. One major shift is discretion moving from the street-level bureaucrat to the software designers and implementers. Depending on the type of bureaucracy (machine or professional) there will be more or less discretion that cannot be computerised. Furthermore, highly rationalised systems may not be able to deal effectively with the cases at the edges, those that fall outside of the lines of the standard operating procedures. This is essentially the opposite of the theory of impartial institutions. Thus, we can expect that where such processes are perceived to be arbitrary and thus exclusionary in some sense (thus not achieving the impartial goal of treating citizens equally) will tend to *decrease* trust (Welch *et al.* 2004, p. 376).

- (4) Involving citizens in the policy-making process – As discussed above in the interest/voice theory, e-services opens up the potential for increased citizens' participation, including in the policy making process. Thus the theories extending from this are equivalent to theories I3 & I4 above.

**Distributive justice** - Distributive justice is another potential trust building mechanism that has not received much attention in the e-government and trust literature. One reason for this is that there is no apparent direct link between e-services, distributive justice, and trust. This is for at least three reasons. First, the value of distributive justice, and what that pertains, is not held by all citizens. Second, the distributive effect of an e-service is related to larger socio-economic distributional issues that extend beyond the scope of a singular e-service. Consequently an e-services impact on distributive justice is indirectly mediated by the socio-economic context rather than directly perceived. Finally, an e-service's impact on distributive justice is an extension of the distributive impact of previously offered government service, modulated by its new online access point. Thus, the distributive impacts are relative to the type of policy behind the service being put online.

The push for e-services, even with the best of intentions, may adversely affect distributional justice. First of all, there are a variety of reasons (mostly socio-economic) why not all e-services are made for, benefit, or are accessible to the entire population. Furthermore, some e-government theory is taking a page from the commercial sector and arguing for the increased personalisation of services as means to increase the efficiency and effectiveness of government, as well as predict and even influence behaviour (Pieterse *et al.* 2007). Consequently, there is an increasing tendency towards differentiation and personalization (Bellamy and Taylor 1998, p. 88). This can conceivably work against the value of distributional justice. Unlike the private sector, the government does not choose their customers, and thus e-government must be extended to all (Layne and Lee 2001, Silcock 2001). The advent of new electronic government services that end up discriminating through the favouring of a particular population or that is inaccessible to sectors of the population may actually work to create a digital divide, that is, a new set of have and have-nots (Heeks 1999) and potentially creating new social segregation (Kakabadse *et al.* 2003, p. 51).<sup>120</sup> The end result is two-tiered system

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<sup>120</sup> "Information-age direct democracy poses new social segregation challenges for those who are information rich and information poor on an individual and societal basis" (Kakabadse *et al.* 2003, p. 51).



of service provision that goes against the traditional bureaucratic bureaucracy of egalitarianism (Bellamy and Taylor 1998, p. 89, Cordella 2007, Kallinikos 2004).

V4 - Value hypothesis: procedural fairness (distributive justice): *E-services that are perceived to contribute to distributive justice (e.g., provide a service for the poor) and the distributive justice value is held by the citizen tend to increase trust.*

**Benevolence** - The movement from citizen and street-level bureaucrat interactions to citizens interacting with a virtual office fundamentally changes the qualitative properties of the citizen-government interaction. The bureaucrat is replaced by a faceless computer screen. Exactly how this will impact on trust is not well known, nor has it been theorised (as far as I know). Will the increased depersonalisation of government undermine public confidence (Thomas and Streib 2003, p. 99)? Can respect be communicated through an online service? Most likely this switch to depersonalised online interaction will have differential effects depending upon a series of contextual factors such as the type of service, previous experience with the service, personal abilities, and personal preferences and expectations. The lack of theoretical direction on this value does not allow for the establishment of a coherent hypothesis.

#### 4.5.4 CONTEXTUAL FACTORS

The above theories are the direct mechanisms that connect particular trustworthy attributes of e-government services to citizens' trust in the institution. There is a variety of literature that in attempting to understand the e-government-citizen trust relationship has identified a series of contextual factors that may modulate the impacts of the above mentioned mechanisms:

- Citizens form higher expectations of performance through exposure to private sector applications like e-commerce or other communications. These expectations are transferred to government (Brewer *et al.* 2006, Ho 2002, p. 411, Welch *et al.* 2004, p. 375). Welch *et al.* found that those with greater expectations are in general less satisfied with government web sites (Welch *et al.* 2004).

- Empirical evidence indicates that one's political affiliation impacts one's assessment of a government web page (Streib and Navarro 2006, West 2005). West argues that it works through a general orientation towards government, "This means that those who are confident and trusting in traditional government also tend to be positive about e-government" (West 2005, p. 123).<sup>121</sup>
- Age was found to impact perception of effectiveness of e-government (Streib and Navarro 2006). Interestingly, they found that the relationship is curvilinear, with positive appraisals increasing to age 37 and then decreasing thereafter.<sup>122</sup>
- A citizen's prior experience with the Internet impacts assessment of a government web page (Welch and Hinnant 2003). Presumably this happens through adjustments of expectations and the perceived ease of use of a web page.
- Trust may be necessary for e-service use (see 4.3.4), but it is also has been linked with satisfaction of e-service interactions. Welch et al (2004) argue that trust and satisfaction exist in a recursive relation, "trust leads to satisfaction, and vice versa" (Welch *et al.* 2004, p. 377).

#### 4.5.5 SUMMARY: E-GOVERNMENT AND INSTITUTIONAL TRUST THEORIES

E-government implementations clearly have a wide-range of potential impacts on institutional trustworthiness and trust. This final part (IV) has integrated theory from the previous three parts to provide a set of e-government and institutional trust hypotheses (see Table 12 & Table 13 for overview).

Developing these hypotheses has two important functions. First, it provides some structure to complexity. As theory becomes more concrete (compare part II to part IV) it increases in complexity. This is not surprising. Reality is complex. Establishing the hypotheses prior to the empirical research provides a set of dimensions along which the

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<sup>121</sup> Another potential explanation is if your particular party is in power, then you are more trusting of government, then it follows that party affiliation might influence e-government trustworthiness. This fits Steib & Navarro's (2006) finding that Republicans in the U.S. are more open to e-government (when Republicans were in charge), while at the same time the left-of centre party people are more trusting of government in Chile (see Chapter 5).

<sup>122</sup> There research was done in the US state of Georgia and it is entirely reasonable to expect the distribution and shape of the curve to be highly contextually (temporally and geographically) specific.

researcher can expect to see (or not) causal interactions. Second, these hypotheses fall between the abstract institutional trust building theory and the case specific concrete hypotheses that will be formulated in the following chapters. By establishing a chain of theory, from trust to institutional trust to e-government and institutional trust and finally the most concrete case specific hypotheses, there is a clear connection for feedback and revision of these theories.<sup>123</sup>

It is important to notice that the discussion has mostly been from an institutional perspective. Their ultimate impact on trust is a combination of both the objective features of the e-service and institution and the citizen's perception and interpretation thereof. The role of citizens' perceptions and interpretations has not received much more than cursory attention here. This is due in part to the absence of theoretical work on this area. In other words, little is understood of which of these hypothesised mechanisms will be effective in building trust, how, and for whom. Exactly how these objective features are perceived and interpreted by citizens is a central empirical concern of this thesis. Having established the necessary hypotheses, now we can reap the benefits and apply them in a study of two e-services in Chile.

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<sup>123</sup> Recall that these theories indicate tendencies. If an e-service brings about the theorised change (e.g. if a service really is faster and more efficient) then it will *tend* to bring about the indicated trust outcomes subject to contextual factors. Furthermore, the opposite mechanisms, while not explicitly discussed, are assumed to destroy trust. For example, e-services that result in less efficient services, poor performance, are highly opaque, are of low quality, or are subject to arbitrary discretion, to name a few, will tend to destroy trust. In reality the qualities of each e-service will fall somewhere on a scale between these two extremes.

<b>Institutional trust theory</b>	<b>Building institutional trust through E-services hypotheses</b>
<p><b>COMPETENCE</b></p> <p><b>Good institutional performance</b> that can be communicated, understood, and that is perceived to meet or exceed citizens' expectations of performance tends to build trust.</p>	<p><b>Efficiency/effectiveness</b></p> <p><b>C1</b> - E-services perceived to be more effective and efficient (faster, more accurate, cost savings) tend to build trust.</p> <p><b>C2</b> - E-government services that improve the efficiency and effectiveness of service at the institution's physical office tend to build trust.</p> <p><b>Performance transparency</b></p> <p><b>C3</b> - Performance transparency that meets the citizens' expectations tends to build trust.</p> <p><b>C4</b> - Performance transparency that is linked to effective accountability mechanisms tends to build trust.</p>
<p><b>MOTIVATION</b></p> <p><b>INTERESTS</b></p> <p>If the institution's policies encompass the interests of the citizen, trust tends to be built.</p> <p>(1) Mechanisms that work to align (such as voice and exit) the interests of the institution and citizen tend to build trust.</p> <p>(2) Establishing credible institutional commitments through credible and effective institutional checks and balances that keep the public sector's interests in line with the citizens' interests tends to build trust.</p>	<p><b>Considering users interests</b></p> <p><b>I1</b> - <u>User benefits</u>: E-services that bring user benefits tend to increase trust.</p> <p><b>I2</b> - <u>E-service quality</u>: Good e-services quality indicates that the institution considers citizens' interests and therefore tends to build trust.</p> <p><b>Voice</b></p> <p><b>I3</b> - <u>Voice</u>: Increased possibilities for voice through the provision of information and e-service feedback mechanisms (e-mail, comments) tends to build trust.</p> <p><b>Transparency and accountability</b></p> <p><b>I4</b> - <u>Institutional transparency and accountability</u>: Increased transparency made possible through the increased visibility of internal processes and service outcomes accompanied by perceived effective accountability mechanisms tend to build trust.</p> <p><b>Corruption</b></p> <p><b>I5</b> - <u>Reduced corruption</u>: A reduction of corruption due to the computerisation and rationalisation of government processes tends to build trust.</p> <p><b>Power</b></p> <p><b>I6</b> - <u>Big brother</u>: Increased power for institutions vis-à-vis the citizen through e-services will tend to destroy trust.</p> <p><b>I7</b> - <u>Soft sister</u>: Increased power for institutions vis-à-vis the citizen through e-services that results in improved services and user benefits tends to build trust.</p>

**Table 12 Trust building through the implementation of e-services hypotheses. On the left are theories created from institutional trust theory and the right are the more concrete e-service middle-range hypotheses (continued on Table 13).**

<b>Institutional trust theory</b>	<b>Building institutional trust through E-services hypotheses</b>
<p><b>MOTIVATIONS</b></p> <p><b>VALUES</b></p> <p>Overlapping values between the institution (institutional ethos) and citizen tend to build trust.</p> <p>Institutions that embody and communicate values of fairness, distributive justice, and benevolence will tend to build trust.</p>	<p><b>Overlapping values (institutional ethos)</b></p> <p><b>V1</b> - Trust outcome is unclear; it may be dependent on associated institutional reforms.</p> <p><b>Procedural justice</b></p> <p><b>V2</b> – E-services that <u>increase citizen compliance</u> through increased capacities for surveillance and coercion or through a reduction of compliance costs will tend to increase trust.</p> <p><b>V3</b> - E-services <u>that remove unnecessary street-level discretion</u> and increases perceived impartiality tend to build trust.</p> <p><b>Distributive justice</b></p> <p><b>V4</b> - E-services that <u>create distributive justice</u> (e.g., provide a service for the poor) tends to increase trust with those who hold the distributive justice value.</p>

**Table 13 (Continued from Table 12) Trust building through the implementation of e-services hypotheses. On the left are the theories created from institutional trust theory and on the right are the more concrete e-service middle-range hypotheses.**

## 5 THE CHILEAN CONTEXT

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For all the similarities in perceptions about countries in South America, Chile is politically, culturally, and geographically distinctive. Geographically it spans about 4,300 kilometres from north to south while only measuring around 240 kilometres at its widest point. Its southernmost tip is only miles away from Antarctica and in the north it contains the Atacama Desert, the world's driest desert. On the east the border is drawn by the Andes, the second highest mountain range in the world and on the west is the Pacific Ocean (see Figure 9). It has a relatively small indigenous population constituting only 4.6% of the entire Chilean population as of 2002 (Pastrana *et al.* 2004), located mostly in Santiago and the ninth administrative region that was never fully conquered during 250 years of resistance against the Spanish (Manriquez 2003). The rest of Chile has inherited the conservative Catholic traditions from the Spanish conquistadors. Geographic isolation contributed to this conservatism making it one of the most traditional on the South American continent with the Catholic Church historically maintaining strong links with the local aristocracy (Valenzuela 1995, p. 84).

Chileans have been characterized as the “Englishmen of South America” who are culturally “less imaginative, passionate, and emotional but more practical, patient, and thoughtful than Latin Americans elsewhere” (Tiano 1986, p. 77). This staid character is represented in its relatively solid, apolitical, and capable institutions of governance, with low levels of corruption. Politically, Chile has a long history of democracy stemming from the 1830s and in the last 17 years, the democratically run government has been effective in modernizing the government, maintaining respectable economic growth rates while addressing the pressing social issues such as poverty (Angell 2005b). Not all is rosy, however, as income inequality levels remain persistently among the highest in all Latin America, and support for democracy over authoritarianism is lower than would be expected given the relatively good economic performance.



Figure 9 Map of Chile (European Commission, 2001). The research was conducted in Santiago and in the region around Temuco. © European Union, 1995-2012

This brief portrait gives a glimpse into the context within which the introduction of the two e-services takes place. This chapter elaborates on this context providing background knowledge that is essential to understand the two e-service implementations in the public sector and citizens' responses to them. The following sections delve into several important historical and contemporary aspects of Chile as follows. Section 5.1 outlines the contemporary political environment, discussing the political history in Chile and the state of its democracy and governability as a nation. This is followed by section 5.2 that considers the current socio-economic context highlighting the positive social outcomes gained in recent years as well as the continued battle with inequality. Section 5.3 describes the other side of the equation, that is, what is known about Chileans' perceptions of the political and socio-economic environment, including issues of institutional and interpersonal trust and corruption. Having described the general social, political, and cultural context of Chile, section 5.4 looks more specifically at the history of and current ICT policy and e-government in Chile. To complete the Chilean context, section 5.5 provides specifics about Santiago, Temuco, and the Araucanía (the 9<sup>th</sup> political region of Chile), the locations of a majority of the empirical research used in this thesis.

### **5.1 CONTEMPORARY POLITICAL CONTEXT: CHILEAN DEMOCRACY AND GOVERNABILITY<sup>124</sup>**

Generally, deeply ingrained social inequalities represent a poor basis for a stable democracy (Diamond *et al.* 1995, p. 24), as evidenced by the historically poor record of democratisation across Latin and South America. Chile, however, is an aberration in the region with a relatively efficient and consolidated state and strong democratic traditions such as the norms of give-and-take, tolerance, and respect for fundamental liberties (Tiano 1986, Valenzuela 1995, p. 86). Historically, Chile is unique in Latin America with a “public sector with a fairly long tradition of professionalism, efficiency and independence from political interference” (Sánchez 2005, p. 233).<sup>125</sup> This includes a high

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<sup>124</sup> The following two sections on Chile draws heavily on (Angell 2005a, Angell 2005b) and the author would like to express thanks for the correspondence.

<sup>125</sup> Sanchez (2005) lists three institutions that exemplify the strong apolitical independence of institutions; the Chilean Central Bank, Controller General, and the SII, Chile's Federal Tax Bureau.



degree of legal and constitutional institutionalisation providing an incredibly stable environment with few internal conflicts (Angell 2005b, Valenzuela 1995, pp. 78-80). Exemplars of this apolitical autonomy in Chile include the controller general, the Chilean central bank, and the SII (the federal tax agency) (Angell 2005b, Moreno *et al.* 2003, Sánchez 2005) .

While this strongly institutionalised and professional state apparatus provides stability, ironically, it was a favourable environment for the military coup. On Sept. 11<sup>th</sup>, 1971, Chile's democratic traditions were put under their most serious challenge, when General Pinochet's military junta assumed control of Chile. However, the strength of the apolitical institutionalisation even worked to limit Pinochet. Even after writing a new constitution the military junta still felt constrained by the institutions of the state and was compelled to work within it providing legal justifications for their actions (Angell 2005b). The high Chilean regard for impersonal institutions of the state held legality as more important than allegiance to a person, even if that person is the commander-in-chief (Valenzuela 1995, p. 108).

Ultimately, the same legalism and constitutionalism that enabled Pinochet also opened the door to the peaceful removal of Pinochet from power and the return to democracy. The 1980 constitution created by Pinochet called for a plebiscite on Oct 5, 1988 to vote for a new eight-year term for Pinochet as president. However, even with strong crackdowns in the 1980s, Pinochet was unable to fully eliminate opposition political parties (Hudson 1995, Valenzuela 1995, p. 105). Pinochet was soundly defeated by a 12% margin with 92% of the eligible population voting (Valenzuela 1995, p. 108). This defeat was achieved through the well-coordinated action and door-to-door campaign of a broad coalition of independent, including international, groups (Diamond *et al.* 1995, p. 28, Valenzuela 1995, p. 108).

A peaceful transition to democracy following Pinochet's defeat was in no way assured. A crucial step in any democratic transition is negotiating the precarious balancing act between democratic reforms and incorporating the concerns of the powerful political and

economic elites who could potentially destabilise the process (Smith 2005c). The resultant negotiations of constitutional reform ultimately retained many of the essential elements of Pinochet's original 1980 constitution. This process ratified the constitution into law (something the military junta never achieved) giving the military a significant political victory, along with several other concessions (Hudson 1995). With constitutional reforms out of the way, an election was held on Dec. 14<sup>th</sup> 1989 with Aylwin winning decisively (Hudson 1995). Chile's long history of democracy and compromise added to the legitimacy of the restored democracy (Diamond *et al.* 1995, p. 54).

The path from the Pinochet dictatorship has been slow and incremental, but Chile has emerged a leader in Latin America in terms of democratic development. This process of re-establishing democratic institutions and traditions included a concerted and prolonged effort to overturn and remove the constitutional vestiges that gave Pinochet relatively strong sway over Chilean politics. The newly embedded military autonomy provided one of the main obstacles to the realisation of more representative democracy (Diamond *et al.* 1995, p. 47). For example, during the first eight years after returning to democratic rule in 1990, the Right held virtual veto power over legislation due to constitutional vestiges with appointed senators and an electoral system that favoured the political right (Angell 2005b). However, over the years there have been a series of piecemeal changes to the constitution through the standard legislative process. The elections in 1999 are considered the first "normal" democratic elections since voting out the Pinochet regime and signify an important step in the continued consolidation of Chilean democracy (Angell and Pollack 2000). By 2005, the legislature finally agreed to abolish some of the last holdovers of Pinochet's constitution including eliminating the system of designated senators, augmenting congressional investigatory powers, and increasing the Presidents authority over military appointments (Angell 2005b). Of course, the process is not complete, and there are still many democratic deficits, the most pressing being a need for more electoral reform (Angell 2005a). However, relatively speaking, the democratic reforms have turned Chile from a highly constrained democracy to a fully fledged electoral democracy that is leading Latin America in the field of democratic

governance.<sup>126</sup> As a testament to this fact, the political right in Chile offers a plausible governing party alternative within the democratic framework and no longer constitutes a threat to democracy (Angell 2005a).

Despite the movement towards more representative governance, structurally, Chile remains a highly centralised state. This is the end result of both its strong centralist tradition in Latin America with little regional sentiment or identification (Angell 2005a, Bland 2004, p. 115) and Pinochet's authoritarian rule that established a "rigid, vertical politico-administrative structure" with high level military commanders at the regional and provincial levels as well as appointing civilians as mayors (Bland 2004, p. 98). Indeed, the new President Michelle Bachelet stated that it is important to recognize that in Chile that there is exaggerated presidential power.<sup>127</sup>

There has been some decentralisation of power although the process has been slow and has yet to realise its potential. In 1988 the municipal reform law granted municipalities a central role in community development, where they were tasked with becoming public service providers, such as administering national poverty alleviation programs and the creation of local projects to meet local needs (Bland 2004, p. 100). In 1991, there were the first municipal elections since 1971 (Hudson 1995). Two years later, in July 2001 there was more electoral reform that provided for the direct elections for mayors beginning 2004, allowing for more political participation and potentially strengthening the legitimacy of the whole political system (Bland 2004). However, despite some devolution of power, decentralization so far is probably best understood as regional

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<sup>126</sup> In 1996 Chile was rated a "High Democracy", by 1999 Chile was rated as an electoral democracy with extensive civil liberties, in an exclusive club in the Latin Americas with only Costa Rica, Panama, and Uruguay, with Argentina and the Dominican Republic joining in 2000 (Smith 2005c). This list includes:

- Freedom of expression and belief, including an independent media,
- Rights of assembly, association, and organization,
- Impartial rule of law and protection of human rights,
- Personal autonomy and economic rights.

In 2006, Chile was ranked as the top in democratic development according to an IDD-Lat 2006 study that used the following indicators; "respect for political rights and civil liberties", "institutional quality and political efficiency", and "the exercise of power for effective governance". See: <http://www.idd-lat.org/>.

<sup>127</sup> The new president of Chile, Bachelet, stated in a speech to Mayors, "Es que en este pais, tenemos que reconocer, existe un presidencialismo exagerado" (Angell 2005a).

standardization across regional and local differences (Angell 2005a), regional governments are appointed, and municipal governments have little real power and practically no fiscal autonomy (Angell 2005b).

Since 1990, Chile has also engaged in a series of Weberian public sector reforms (Sánchez 2005, Serra 2005). These reforms include a focus on state modernization with three pillars: 1) a new organizational culture with a focus on results, 2) the adoption of a cumulative change strategy, and 3) reform efforts under control of the executive branch (Bresser-Pereira 2004, pp. 177-178). Training of public sector employees took on a new importance, with the amount of spending on training quadrupling between 1990 and 1996.<sup>128</sup> The Chilean government has implemented performance targets, and by 1997 80% of public institutions had defined targets and since 1998, bonuses had been linked to the achievement of these goals (Serra 2005). In a comparative study of developing countries, Chile was ranked as one of the most aggressive public sector reformers (Sánchez 2005, p. 246).

Learning from the earlier experience, the government came up with another three year strategic modernization plan based on the principles of probity, equality, efficiency, effectiveness, and participatory administration. Following this, in 2000 under the newly elected President Lagos, Chile established the Project for Reform and Modernization of the State that included the redesign of government procedures, modernization of the state, electronic government, and decentralization (Government of Chile 2004). In the area of government administration, the goals were to increase efficiency, citizen participation, and the transparency of state activity.<sup>129</sup>

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<sup>128</sup> See an unattributed report on State Reform from 2000-2006 at [www.modernizacion.cl/1350/articles-126486\\_recurso\\_1.pdf](http://www.modernizacion.cl/1350/articles-126486_recurso_1.pdf), pg. 17.

<sup>129</sup> Ibid, pg. 21.

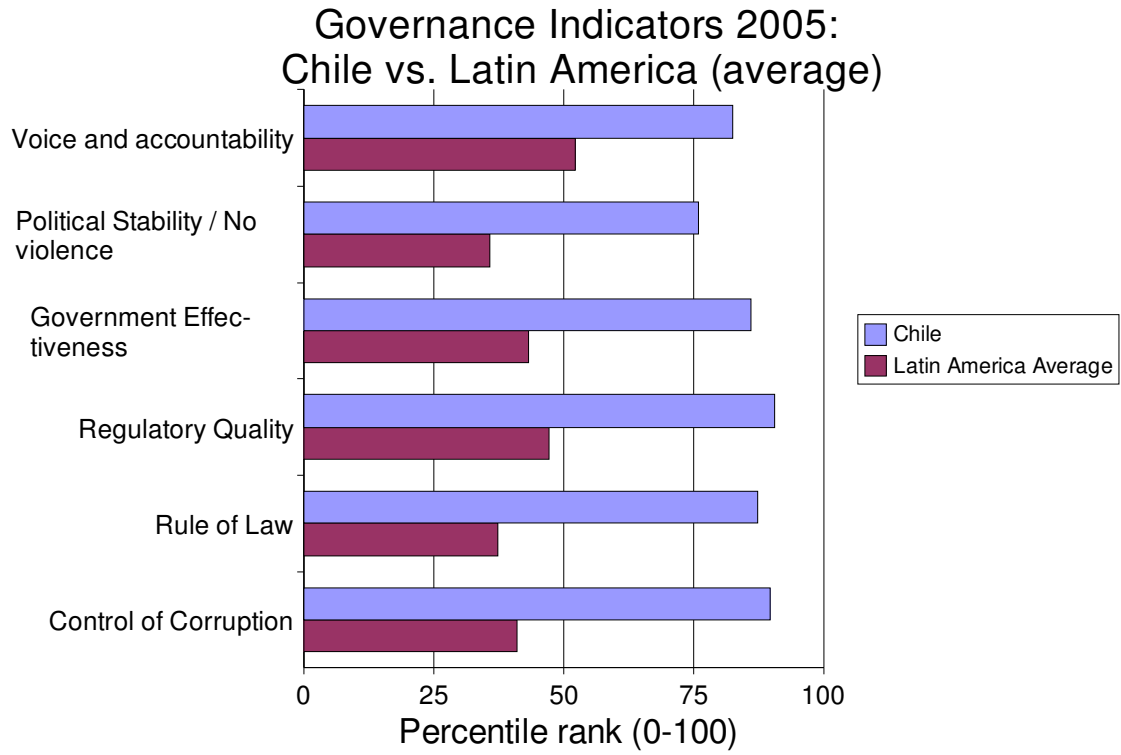
The end result of these reforms is a highly effective system of governance that scores high on many governance indicators.<sup>130</sup> According to a Kaufmann *et al.* (2006), Chile ranked among the best and clearly high above the Latin America average (see Figure 10) besting some western countries such as Italy (Angell 2005b). However, it is notable that from 1996-2005 Chile has only improved in the areas of voice and accountability, and political stability (see Table 14). These improvements are most likely due to the constitutional and democratic reforms discussed above. However, Chile has not registered improvement in terms of indicators of government effectiveness, control of corruption, and regulatory quality.<sup>131</sup> This is, on its face, a bit surprising given the myriad of state modernization and administration reforms that have occurred in Chile, not least of which is the introduction of several e-government services (these reforms are discussed later in the chapter). For sure, the lack of improvements is indicative of the already general high starting point of effectiveness governance in 1996. Where Chile did improve were in the two indicators that started below the 80 percentile mark.

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<sup>130</sup> Another indicator of the quality of governance is the World Economic Forums' international comparison of national economic competitiveness that includes measures of the quality of macroeconomic policy, health and primary education, higher education and training, market efficiency, technological readiness, and more (see:

<http://www.weforum.org/en/initiatives/gcp/Global%20Competitiveness%20Report/index.htm>). In 2004 Chile was ranked 22<sup>nd</sup>, and in 2006-2007, 27<sup>th</sup>.

<sup>131</sup> A more detailed discussion on corruption and its nature in Chile can be found in section 5.3.2.



**Figure 10** Governance indicators for Chile and the Latin American average, source: (Kaufmann *et al.* 2006)

<b>Governance Indicator</b>	<b>Year</b>	<b>Percentile Rank (0-100)</b>
Voice and Accountability	<b>2005</b>	<b>82.6</b>
	1996	75.0
Political Stability/No Violence	<b>2005</b>	<b>75.9</b>
	1996	59.9
Government Effectiveness	2005	86.1
	1996	86.2
Regulatory Quality	2005	90.6
	<b>1996</b>	<b>93.1</b>
Rule of Law	2005	87.4
	1996	87.1
Control of Corruption	2005	89.7
	1996	89.8

**Table 14 Six governance indicators for Chile, for years 1996 and 2005, Source: (Kaufmann et al., 2006).**

## **5.2 SOCIO-ECONOMIC CONTEXT**

Economically and socially, Chile's performance in the last 20 years has made it a Latin American success story, especially in terms of poverty reduction (e.g., World Bank 2001). Between 1988 and 1998, Chile's per capita GDP more than doubled, poverty fell, and social spending has been doubled, especially in the sectors of education, health, and housing (Espinal *et al.* 2006).<sup>132</sup> This growth and social spending has had dramatic results. Between 1987 and 2000, poverty fell from 45.1% of the population to 20.6% (Angell and Pollack 2000). Even with an economic recession in 1999, poverty declined to

<sup>132</sup> From 1990-2001 Chile's per capita GDP increased 56%, the most in the Latin American region (Espinal *et al.* 2006). During the period since Pinochet, social expenditures have massively increased (Angell 2005b).

18.8% by 2003 and extreme poverty also continued to fall (UNDP 2004a). By 2005, 70% of Chileans own their own homes (up from 10% in 1990), a figure that cuts across all socio-economic strata (Angell 2005b). Chile's child malnutrition rate is also the lowest in Latin America at 1.9% (the next best is Costa Rica at 6.1%) (Angell 2005a).

The classic cross-country comparative measure for the level of human development, the human development index<sup>133</sup> (HDI), ranks Chile 38<sup>th</sup> in the world in 2004 (UNDP 2006b) (see Table 15), and has improved steadily since 1975 (see Figure 11). Indicative of Chile's progress is that it has achieved the same HDI levels as other countries with much greater average GDP/capita (see Figure 12). This bodes well for the future of Chile as high levels of development in terms of the HDI appears to be a significant predictor of a stable democracy (Diamond *et al.* 1995, p. 22).

<b>Human Development Indicators 2004</b>				
<b>HDI value</b>	<b>Life expectancy at birth (years)</b>	<b>Adult literacy (% ages 15 and older)</b>	<b>Combined primary, secondary and tertiary gross enrolment ratio (%)</b>	<b>GDP per capita (PPP US\$)</b>
1. Norway (0.965)	1. Japan (82.2)	1. Georgia (100)		1. Luxembourg (69,961)
37. Poland (0.862)	26. UAE (78.3)	36. Greece (96)	46. Philippines (81.5)	55. South Africa (11,192)
<b>38. Chile (0.859)</b>	<b>27. Chile (7.81)</b>	<b>37. Chile (95.7)</b>	<b>47. Chile (81.3)</b>	<b>56. Chile (10.874)</b>
39. Bahrain (0.859)	28. Ireland (77.9)	38. Costa Rica (94.9)	48. Malta (81.3)	58. Malaysia (10,276)
177. Niger (0.311)	177. Swaziland (31.3)	128. Mali (19.0)	172. Niger (21.5)	172. Sierra Leone (561)

**Table 15 Human Development Indicators 2004. Chile ranks 38th in the world while its GDP is 56th in the world, source: (UNDP 2006b).**

<sup>133</sup> This measure takes into consideration GDP, education levels, and life expectancy.



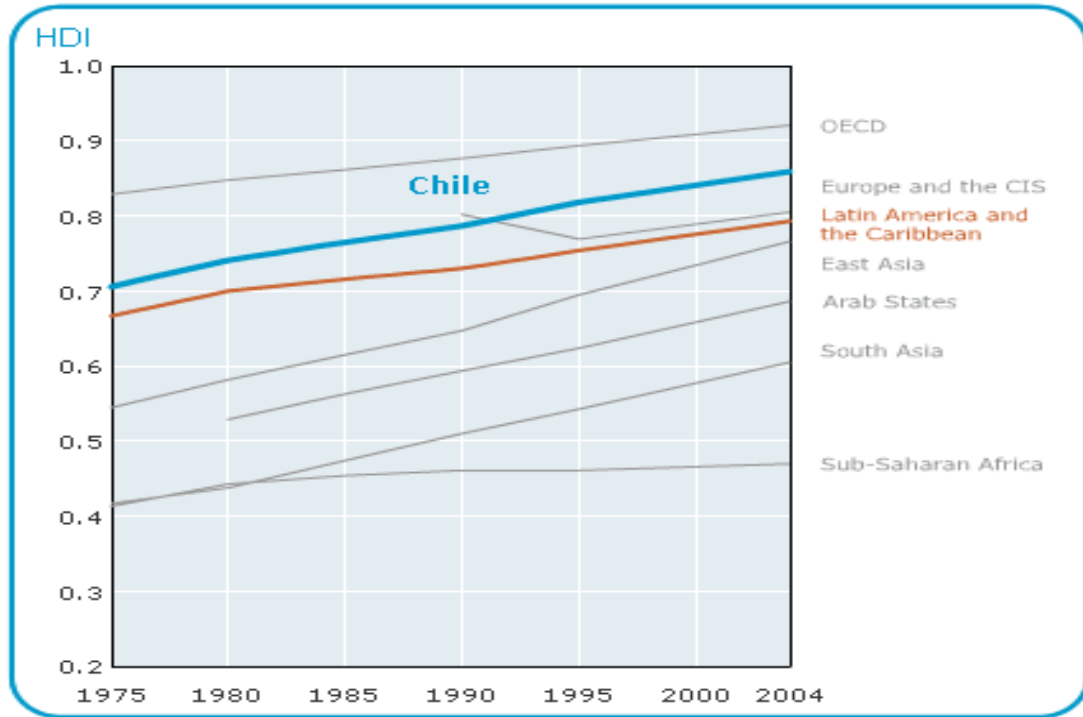


Figure 11 Human Development Index through time. Source: (UNDP 2006b).

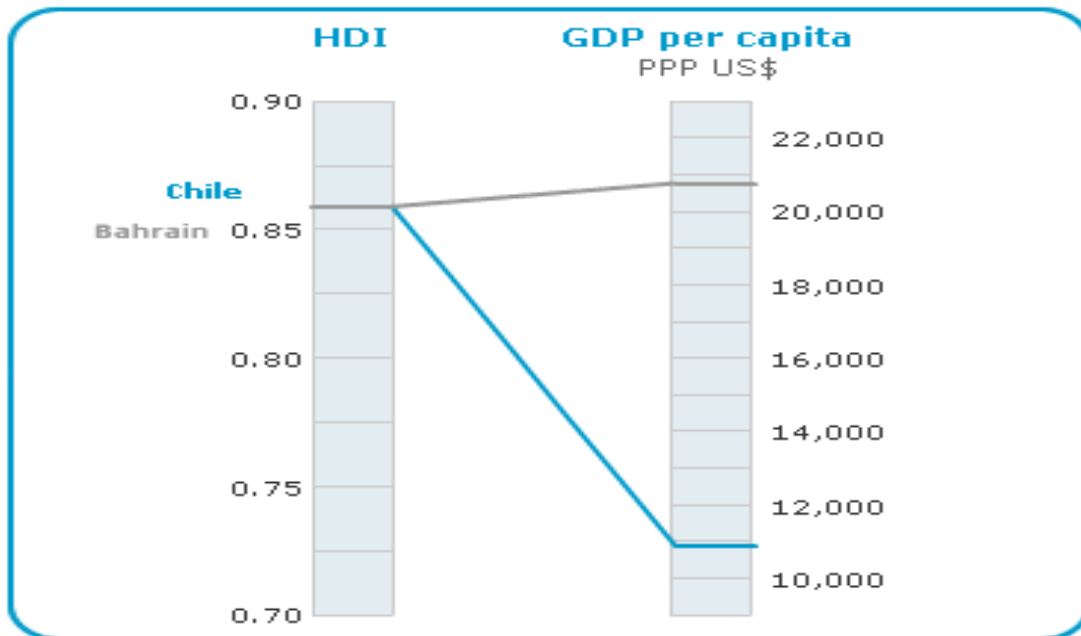


Figure 12 The figure shows that despite Chile's much lower GDP/capita than Bahrain's, Chile has achieved a comparable level of human development. Source: (UNDP 2006b).

These economic and social gains are often attributed to the legacy of Pinochet's neo-liberal policies and decent levels of economic growth. Indeed, following Pinochet, President Alwyn took over the best performing economy in the region and kept many of Pinochet's economic policies more or less in place (Hiscock and Hojman 1997, p. 354, Hudson 1995). Furthermore, it is argued that most of the poverty reduction can be contributed to this resultant economic growth (Contreras 2003, World Bank 1997).

However, such an explanation does not give the Chilean government its due. The well performing economy that President Alwyn inherited "rested on precarious foundations" of macro-economic disequilibrium and widening social disparities (Angell 2005b). In 1987, 45.1% of the population was in poverty following cuts in social expenditures (Angell 2005b). Furthermore, poverty reduction could not have occurred without the intervening social interventions that enabled people to take advantage of the new opportunities that economic growth offered (Olavarria-Gambi 2003, World Bank 2001).

Despite these gains, Chile's social and economic future still faces significant challenges.<sup>134</sup> It was recently estimated that around 20% of the population still lives at the poverty line, with some arguing that the real figure should be higher (The Santiago Times 2006). Furthermore, the next 20% will probably be the hardest to reach.<sup>135</sup> That said, among 102 "developing countries" Chile ranks second in HPI, the Human Poverty Index as developed by the UNDP (2006b).<sup>136</sup> Despite the notable economic growth and poverty reduction, income inequality actually increased (Huber and Stephens 2005), a remarkable feat considering they were already one of the most unequal in the region (see Figure 13 for the income distribution levels in 2000) (Angell 2005b, Smith 2005c). This inequality

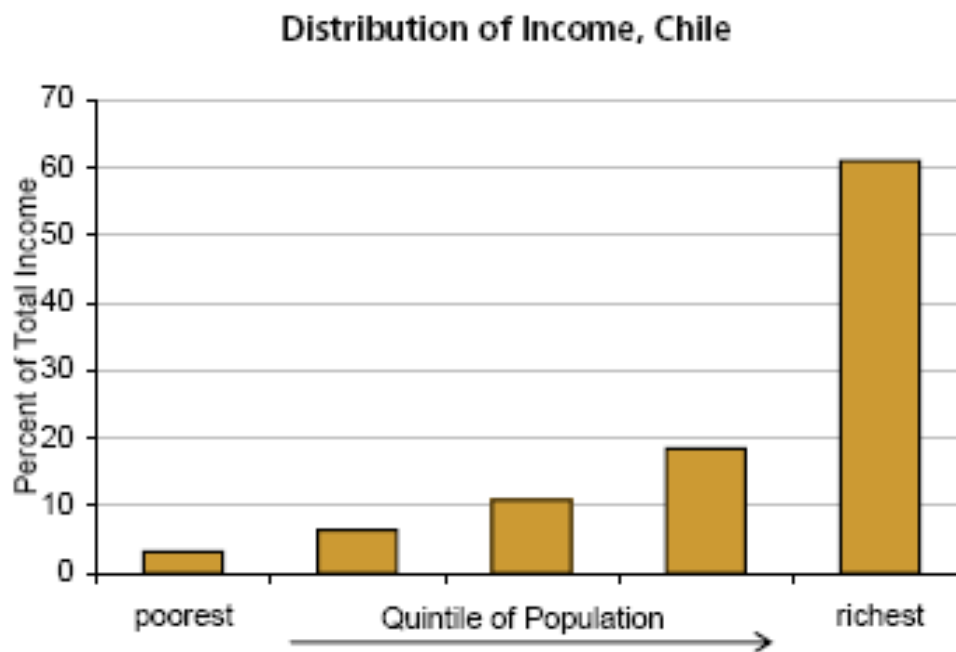
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<sup>134</sup> Angell (2005a), in a discussion of the challenges to the new ruling government in Chile, focuses on two; income inequality and strengthening participation.

<sup>135</sup> Foxley (2004) suggests that while the first stage of poverty reduction was easy, the next component will be more difficult, "The 'easy' first phase represents a combination of high growth, increased wages and minimum wage, expansion in income-support schemes for low-income families, and improved minimum pensions with an immediate impact on poverty reduction" (pp. 1-2). Those just below the poverty level may be the easiest to reach, while reaching the "hard core of the extremely poor for whom social policies are very difficult to reach" (Angell 2005a).

<sup>136</sup> The Human Poverty Index measures "severe deprivation in health" using; proportion of people not expected to survive past age 40, adult illiteracy rate, the unweighted average of people without access to improved water source, and the proportion of underweight children under five (UNDP 2006b).

can in part be attributed to the long run outcome of the extremely rigid and traditional social stratification formed during the Spanish occupation and the culture of hierarchy and authority relations that still permeates the society today (Valenzuela 1995, pp. 84). However, this does not explain the recent increases in income inequality.



**Figure 13** The distribution of income in Chile in 2000. Source: World Resources Institute.<sup>137</sup>

This persistent inequality creates an economic and social dualism within Chile that acts a barrier preventing the integration and equal access of a large portion of the population into economic and political life (Olavarría 2003).<sup>138</sup> From a low unemployment rate in the early 90s, unemployment has risen to 10% in 1998,<sup>139</sup> and has hovered around 8-10% since then, falling to around 7.8% by the end of 2006 (CIA 2007). In 2005 the government implemented an unemployment insurance system and approximately three

<sup>137</sup> See both <http://www.wri.org/> and <http://earthtrends.wri.org/>. Even more specifically the graph is found: [http://Earthtrends.wri.org/pdf\\_library/country\\_profiles/eco\\_cou\\_152.pdf](http://Earthtrends.wri.org/pdf_library/country_profiles/eco_cou_152.pdf).

<sup>138</sup> There is also a gender gap with Chile scoring a 3.46 out of 7 (placing it 48 out of 58 countries) in measures of the gender gap in economic participation, economic opportunities, political power, educational opportunities, and quality of life (Angell 2005a).

<sup>139</sup> This is arguably due to the international economic crises in Asia and Brazil (World Bank 2001). Despite the economic recovery, however, the Chilean unemployment continued to rise.

million people are enrolled (Angell 2005a). The economic concentration in Chile works to inhibit the incorporation and development of small and medium-sized businesses so crucial for employment (Angell 2005b). Between 1987 and 1994 the difference in years of schooling between the richest and the poorest has also increased (World Bank 1997). Despite increases in education spending and education reform, educational achievements are lower than would be expected (Angell 2005a).<sup>140</sup> This is especially disconcerting considering that education level is considered by the single most determining factor of income equality (Contreras 2003, World Bank 1997).

### **5.3 CITIZENS' PERCEPTIONS OF THE GOVERNMENT**

This section examines Chilean's attitudes and behaviour with respect to politics and the state, and their personal characteristics that play a role in determining this behaviour. It is increasingly understood how socio-cultural characteristics of a country play a role in shaping the development of institutions as well as institutional reform. Consequently, this section focuses on the most salient features of contemporary political culture in Chile, looking at the Chilean democratic culture and the evolving democratic values and opinions of the institutions of democratic governance. This includes a discussion of some survey work that assesses trust in different institutions of government. Following that, and motivated by Putnam's work on social capital (Putnam 1993), this section details the current level of interpersonal trust and civic participation within Chile. Finally, to better understand activities and understandings of the citizens, this section finishes with a discussion of another significant part of the political culture, corruption.

Over the last fifteen years Chile has undergone substantial political and economic transformations that have been accompanied by and have brought about profound cultural changes. Among these changes, there has been a rise of individualism and what it means to be "Chilean" has become blurred (UNDP 2002). Indeed, not much expresses the political and cultural shifts more than the 2006 election of Michelle Bachelet, the first woman ever to be elected president in Latin America. The mere fact that she is a female

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<sup>140</sup> Angell (2005a) argues that this is due probably to inequality and perhaps inefficient expenditures, but also that blame must be placed at the feet of the strong teachers union making reform difficult.

president is astounding, but in the socially conservative culture in Chile, that she is also an atheist and single mother makes it even more remarkable.

The socio-economic successes have meant that Chileans have increased expectations for the future based upon perceived improvements in the past.<sup>141</sup> In 2004, another UNDP survey (2004b) found widespread aspirations and hopes for a better life in Chile. However, the inequality divide creates a power imbalance that impacts many people's chances to take advantage of the new potential opportunities (UNDP 2004b). That said, in a 2005 Latinobarómetro study, sixty-two percent of respondents answered that they would say that Chile is progressing, the next highest is Venezuela at fifty-four and Argentina at forty-five percent (Latinobarómetro 2005).

All of these socio-economic improvements by a democratic government do not necessarily imply, however, a corresponding increase in support for democratic ideals. Interestingly, we find that in Chile, support for democracy is only around average for Latin America, despite its exceptional performance (Lagos 2001).<sup>142</sup> From 1996-2002, support for democracy measured at around the average across Latin America (see Figure 14).<sup>143</sup> The results of another survey show how this breaks down to around 50% support for democracy, and a 20% support for authoritarianism, with 20% with no preference (see Table 16). More recently, these numbers have improved. In 2005, satisfaction with democracy in Chile was at 43% (fairly or very satisfied); with 59% saying that democracy is preferable to any other type of government. Sixty-four percent believe that democracy is the only way to become developed (Latinobarómetro 2005). Furthermore, support for an authoritarian government has fallen to a mere 14% in 2002.

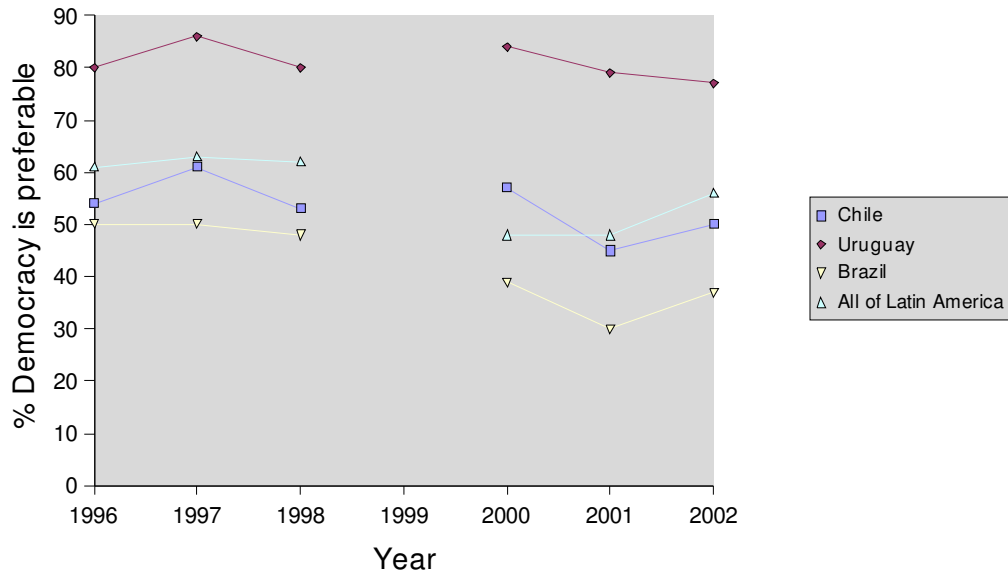
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<sup>141</sup> In a 1999 UNDP survey (2000), 48% said their lives were better than five years before, and 56% believed their lives would improve in the following five. In this study, the UNDP argues that the rise of individualism means that talk of the future and expectations is less about the success of Chile, or other collective dreams, but rather individual and familial expectations of well-being.

<sup>142</sup> There are only three Latin American countries – Costa Rica, Uruguay, and Argentina – with levels of support for democracy and institutional trust at levels comparable to the democracies of Western Europe (Lagos 2001).

<sup>143</sup> These numbers are drawn from the Latinobarómetro survey that uses the following three questions to assess support for democracy; “Democracy is preferable to any other kind of government”, “Under some circumstances, an authoritarian government can be preferable to a democratic one,” “For people like me, it does not matter whether we have a democratic or a nondemocratic regime”.

## Support for Democracy by Year by Country, 1996-2002



**Figure 14 Support for democracy in Chile, Brazil, Uruguay, and averaged across all of Latin America. Despite relatively sustained economic performance, Chile's preference for democracy remains about average for Latin Americans. Source: (Lagos, 2003).**

<i>Preferences</i>	Mexico (%)	Costa Rica (%)	<b>Chile (%)</b>
Democracy always	49	81	<b>53</b>
No Preference	26	9	<b>23</b>
Authoritarianism maybe	21	7	<b>19</b>
Do not know	3	4	<b>5</b>

Note: columns may not add up to 100 because of rounding

**Table 16 Preferences for democracy, comparing Mexico, Costa Rica, and Chile in 1998. Source: (Smith, 2005, p. 293).**

These support numbers obscure an underlying complexity of opinions and factors shaping those opinions. If we wish to understand the current dynamic between citizens' perceptions and the democratic institutions of governance we need to unpack these numbers a bit. Support for democracy is shaped by a variety of different factors such as

government performance and expectations thereof, one's political orientation, and finally ones' understanding of the term democracy.

Arguably, the largest mechanism in determining democratic support across LA was the level of satisfaction for democratic performance (Smith 2005c, pp. 303-308), a finding also supported by research in other countries (Espinal *et al.* 2006). The dip of support in 2001 can be attributed to the region-wide economic recession of that time that proved ultimately temporary for most countries (Lagos 2003). This provides a strong argument for the role economic performance as a determinant of democratic support and fact that in good economic years, like 1997, democratic satisfaction was higher (Lagos 2003). In 2002 in Chile, only nineteen percent expressed satisfaction with the economy (below the LA average of 24%), although thirty-six percent were satisfied in 2004 after return from recession (Angell 2005b).<sup>144</sup> In 2004, corresponding to its economic growth, fifty-seven percent of Chileans agreed that democracy was preferable to any other form of government, up from fifty in 2002, which is just above the LA average of fifty-three.

The link between democratic support and economic performance underscores the continued socio-economic divisions in the country. It is a commonly held view that not all Chileans benefit from the economic success of the country (UNDP 2000). In 1999, eighty-six percent of people thought there was no equality in front of the law (UNDP 2000),<sup>145</sup> and less than a majority have seen improvements in areas such as access to health care (forty-two percent), access to justice (thirty-six percent), better jobs (thirty-six percent) and better pension (twenty-eight percent) (UNDP 2002).

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<sup>144</sup> Chile was the leading country in 2004 in LA in terms of support for the way the market economy was working (Angell 2005b).

<sup>145</sup> This is up from 77% who believed there was no equality before the law in 1996.

Another dynamic at play may be that the overall improved economic position of Chileans means a general shift in the public's priorities.<sup>146</sup> Chileans welcome an active role for the state, and have become more aware of the persistent income inequalities as well as inequalities in the provision of other state services (Angell 2005b, pp. 35-36). As education and expectation levels rise, citizens become more critical and you may see increasing discontent in the support for democracy,

“Chileans are more educated, more accustomed to improvement, and it is quite natural that this leads not to contentment but to demands for more” (Angell 2005b, p. 34).

However, these demands and expectations do not seem to be met for a large portion of the population. In 2005, only thirty-seven percent of people in Chile trust that money from taxes will be well spent by the government. While this seems low, comparatively it is good in Latin America with only Uruguay and Venezuela ranking higher at forty-nine and thirty-eight percent respectively, with the next closest, El Salvador at twenty-nine percent (Latinobarómetro 2005).

Another explanatory mechanism might be an individual's political orientation. In a 2003 survey, those sympathetic to the parties on the left approved of democracy at rates of fifty-five, sixty-two, and forty-two percent, whereas those affiliated to the parties on the right were twenty-seven and twenty-one (Angell 2005b). The supporters of the Concertación (the current ruling majority coalition) believed that democracy was the best system for a country like Chile with numbers between eighty-seven and ninety-three percent, whereas those on the right, only fifty-two percent saw democracy as the best system (Angell 2005b). This correlation may only be an artefact of Chile's recent authoritarian past, as this relationship does not hold across Latin America according to an analysis of a 1998 Hewlett survey (Smith 2005c, p. 295). Consequently, the Chilean results are probably reflective of both the current political regime (you are less likely to

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<sup>146</sup> It is interesting to note that the texture of public debate is no longer as single-mindedly focused on the more existential issues of jobs etc,

“A great deal of public debate in Chile is now about ethical and moral issues – the right to abortion, to sex education in schools, to greater press and media freedom, to single sex marriages and so on” (Angell 2005a).

That said, easily the most widely discussed topic of the last presidential debates was the issues of inequality, considered a serious issues of the candidates across the political spectrum.



approve of democracy when your party is not in charge) as well as a remnant of the remaining support for the authoritarian regime (Smith 2005c, p. 304).<sup>147</sup>

Finally, and crucially, to understand the support for democracy data, it is important to understand that the results depend upon individuals' interpretation or understanding of the meaning of democracy (Smith 2005c, p. 292). Depending upon one's value system that determines what you expect from a government, Smith (2005c) found a "modest but instructive relationship" with one's preference for democracy. Those with greater desires for political freedoms have higher preference for democracy, and those with a greater desire for socioeconomic benefits and lawfulness have a greater tolerance for authoritarianism (Smith 2005c, pp. 295-296).

However, this assumes that people have an understanding of what these terms mean. It should be kept in mind that a significant percentage of the population may not actually know what democracy is and thus are not in a position to have an opinion. In the Latinobarómetro survey in 2001, 21% of respondents answered that they "don't know" or have "no opinion" (Latinobarómetro 2001). This is especially significant in the more rural areas and less educated population and was reflected in this researcher's experiences. In a non-scientific survey conducted in a slum in Temuco of 100+ inhabitants, using the same questions as in the standard Latinobarómetro studies, a large percentage did not know the difference between democracy and authoritarianism. Furthermore, they also commonly expressed that the change of government had no meaning to them as their lives did not seem to differ.

Overall, Chile does not have a strong civil society (UNDP 2004b) or a very activist society whose citizens are unlikely to demand accountability (Smith 2005c). In terms of political party participation in Chile, in 1996 it was ranked along side of Peru with the

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<sup>147</sup> I had an interesting experience meeting a Pinochet supporter. One interviewee, the president of a large business, invited the author for lunch in his presidential lunch room. Also invited was a military attaché from another Latin American country. Lunch came with a nice Chilean wine served in "President Pinochet 1971-1989" wine glasses.

lowest percentages of participation (UNDP 2000).<sup>148</sup> This general political apathy is also evident in a decline in electoral participation during the first decade of democratic governance (Olavarría, 2003). The 1998 UNDP Human Development Report concludes that this may be due to insufficient security and the highly unequal distribution of wealth. Olavarría argues that the decline may be due to the persistence of neo-liberal economic policies and the “justifiable alienation from and distrust of parties, which are seen as having abandoned their constituents’ interests – a perception that is particularly widespread among youth” (Olavarría 2003). That corresponds to the UNDP finding that the willingness to defend your rights was associated with the subjective perception of substantial personal power (UNDP 2004b), and that those of higher socio-economic levels participate in political parties that those in medium and low socio-economic status (UNDP 2000).

### 5.3.1 INSTITUTIONAL AND INTERPERSONAL TRUST

As of the mid 1990s, Chile exhibited significant levels of mistrust in the health, social security, education, and work systems (UNDP 1998). At this time, the legislative and executive branches of government were not fairing much better in the public’s eyes. Only thirty-eight percent of the people surveyed Chile thought highly of regime performance, with a decrease in the confidence in parliament in the 1990s of 25%<sup>149</sup> (Klingemann 1999, pp. 49-52) (see Table 17 to see the levels of trust in various Chilean institutions in 1990 and 1999). Low levels of confidence in institutions such as the judiciary, parliament and political parties are not unique to Chile as it is common across Latin America (Lagos, 2000).<sup>150</sup>

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<sup>148</sup> That said, the overall participation rate is still *relatively* high in 2001, when during a mid-term election, only 23.9% abstained. From 1978-2004, Chile was among the top five countries in Latin America for voter turnout for presidential elections (Diaz and Zovatto 2005). However, voting in Chile is mandatory and includes an effective sanction (Diaz and Zovatto 2005), but registration is not, so the high rate is not necessarily explained by the obligation (Angell 2005b, p. 15 footnote).

<sup>149</sup> A UNDP (2000) study found a larger decrease in trust in parliament, from sixty-three to twenty percent over the course the 90s.

<sup>150</sup> One institution that has done well recently is the executive, where around three-quarters of the population approve of President Lagos performance when he left office (Rohter 2006).

TRUST IN INSTITUTIONS in 1990 & 1999 (Percentage of a lot and some trust)		
Trust in Institutions	World Bank Study 1990 %	UNDP Survey 1999 %
Church	76	81
Parliament	63	<b>20</b>
Police	59	58
Justice tribunals	45	<b>36</b>
Armed Forces	41	52
<b>Municipalities</b>		<b>49</b>
<b>Government</b>		<b>44</b>
Private enterprises		34

**Table 17 Institutional trust in Chile, 1990 and 1999, source: (UNDP, 2000).**

Another relevant variable considering Chilean citizens' relationship with the democratic institutions of governance is social (interpersonal or generalised) trust. Arguably, "interpersonal trust lies at the heart of attitudes toward institutions, democracy, politics, and the economy" (Lagos 2001, p. 145). Low levels of interpersonal trust may impede political participation (Lagos 2001, p. 145) and consequently the development of democratic institutions (Putnam 1993).<sup>151</sup>

Interpersonal trust is not very high across Latin America, with not one single country with more than fifty percent of the people expressing trust in their fellow citizens according to a Latinobarómetro study in 2000 (Smith 2005c, p. 294). In a UNDP study in

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<sup>151</sup> Interestingly, Smith (2005c, pp. 294-295) found that interpersonal trust levels have only a very small correlation with preferences of democracy or authoritarianism, only slightly bolstering a preference for democracy, if at all.

1999, about thirty-three percent of the Chilean people said they could trust people in general, and sixty-three percent said that you could not (UNDP 2000).<sup>152</sup> Low levels of interpersonal trust have continued, with a similar 2003 poll where only thirteen percent expressed general level of trust in other people – the fourth lowest in Latin America (Angell 2005b).<sup>153</sup>

### 5.3.2 PERCEPTIONS OF CORRUPTION

One indicator of the quality of governance that has gained increasing importance since the emergence of institutional theories of good governance is corruption. Since the late nineties, corruption has emerged as an explanation for high levels of inequality, slow growth, and democratic stagnation found in Latin America (Morris 2004). Furthermore, perception of corruption is also an important determinant of satisfaction of democracy (which as above influences one's preference for democracy), with a pattern across Latin America that “the greater the perception of official corruption, the more the dissatisfaction with the political regime” (Smith 2005c, p. 307).

We have already noted that Chile performs well on measures of corruption in the governance studies. It is possible to disaggregate measures of corruption into two components: perception-based corruption and direct experience or participation in corruption (Morris 2006). Drawing on data from the Corruption Perceptions Index (CPI) from the Transparency International study in 2002 and the direct experience of corruption measures from the 2002 Latinobarómetro, Chile stands markedly apart from the rest of Latin America with low indicators for both studies (see Figure 15).<sup>154</sup> In a 2004

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<sup>152</sup> Another UNDP study states that by the mid 90s, Chile exhibited significant levels of mistrust in interpersonal relationships (UNDP 1998).

<sup>153</sup> Indicative of low levels of interpersonal trust is low the relatively low levels of participation in civic associations in Chile. In 1990, Chile was at an intermediate position compared to international levels and in 1996 was 8 of 12 Latin American countries (UNDP 2000), with the predominant type of associations in Latin America are religious and sports. Most likely, these numbers are indicative of the continued inequality in Chile. Ulsaner (2002) found that the level of economic inequality (the GINI coefficient) had the greatest impact on social trust, more so than structural variables such as level of democratization. This fits with the fact that interpersonal trust ratings are correlated with socio-economic level with those in the low socio-economic statuses considerably less trusting of others than in the high socio-economic groups.

<sup>154</sup> Chileans also believe the electoral process is clean (70%) with low level of vote buying (15%) (Latinobarómetro 2005).

Transparency International survey of subjective perceptions of the misuse of public office for personal gain, Chile ranked 20th of 145, above France and Japan (Angell 2005a)

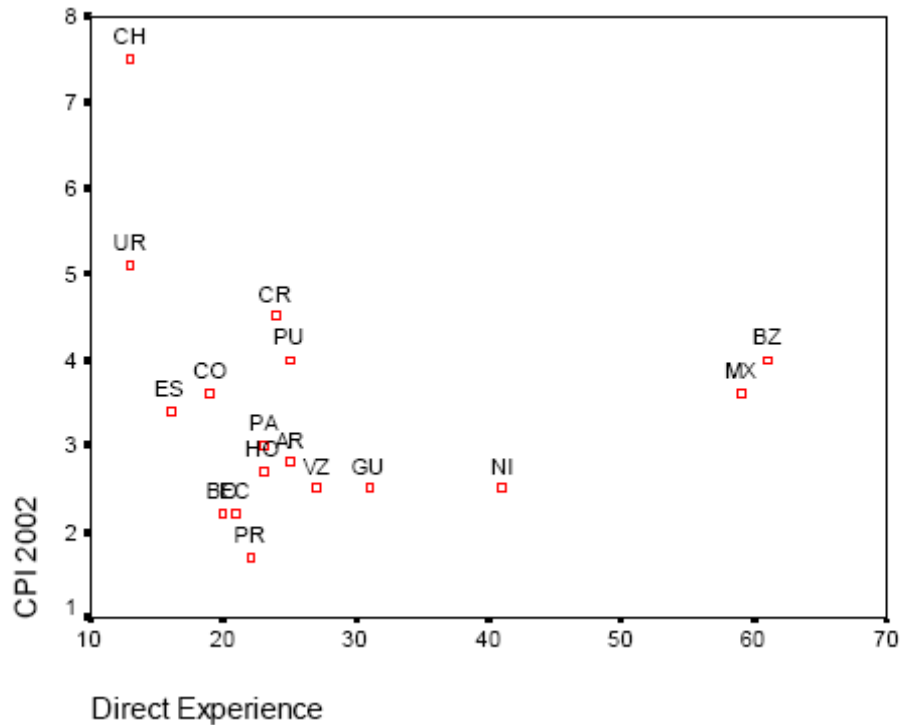


Figure 15 “Scatterplot of participation and perception of corruption in Latin America,” source: (Morris 2006). CPI2002 stands for the Corruption Perceptions Index of 2002 as implemented by Transparency International, 0 = corrupt to 10 = not corrupt. Direct experience is the Latinobarometro measure taken from the 2002 survey. Chile (CH) and Uruguay (UR) clearly stand apart from the rest of Latin America for their low perception of and participation in corruption.

Despite these excellent marks, there is some seemingly contradictory data that requires further elaboration. In a 2000 survey, a similar number (around sixty-one percent) of Chileans viewed corruption as “very serious” in their country – equivalent to the concern in Mexico,<sup>155</sup> despite Chile’s much lower levels of corruption (Morris 2004, p. 1). This result was also found in the Latinobarómetro survey in 2004 but yet when asked about the possibility of successfully bribing a judge, policeman, or civil servant the results were twenty, twenty, and nineteen percent respectively, the lowest rates in Latin America

<sup>155</sup> In the Transparency International 2004 survey, Mexico was ranked sixty-fourth of 145.

(Angell 2005a).<sup>156</sup> However, in a more recent Latinobarómetro survey (2005), people said that out of 100 public employees, forty-eight of them would be corrupt.<sup>157</sup> However, even with corruption a very serious problem, and almost half of the public servants deemed corrupt, corruption is not viewed at all as a threat to democracy as it is in other Latin American countries (only two percent of people saying it is a threat compared to forty and forty-seven percent in Mexico and Argentina respectively) (see Table 18).

<i>Obstacle</i>	Mexico (%)	Costa Rica (%)	Chile (%)
<b>Corruption</b>	<b>42</b>	<b>47</b>	<b>2</b>
Government	23	10	7
Parties	11	6	16
Poverty	8	9	19
Passivity	7	3	7
Lack of education	7	3	12
Other / don't know	4	23	18

Note: columns may not add up to 100 because of rounding

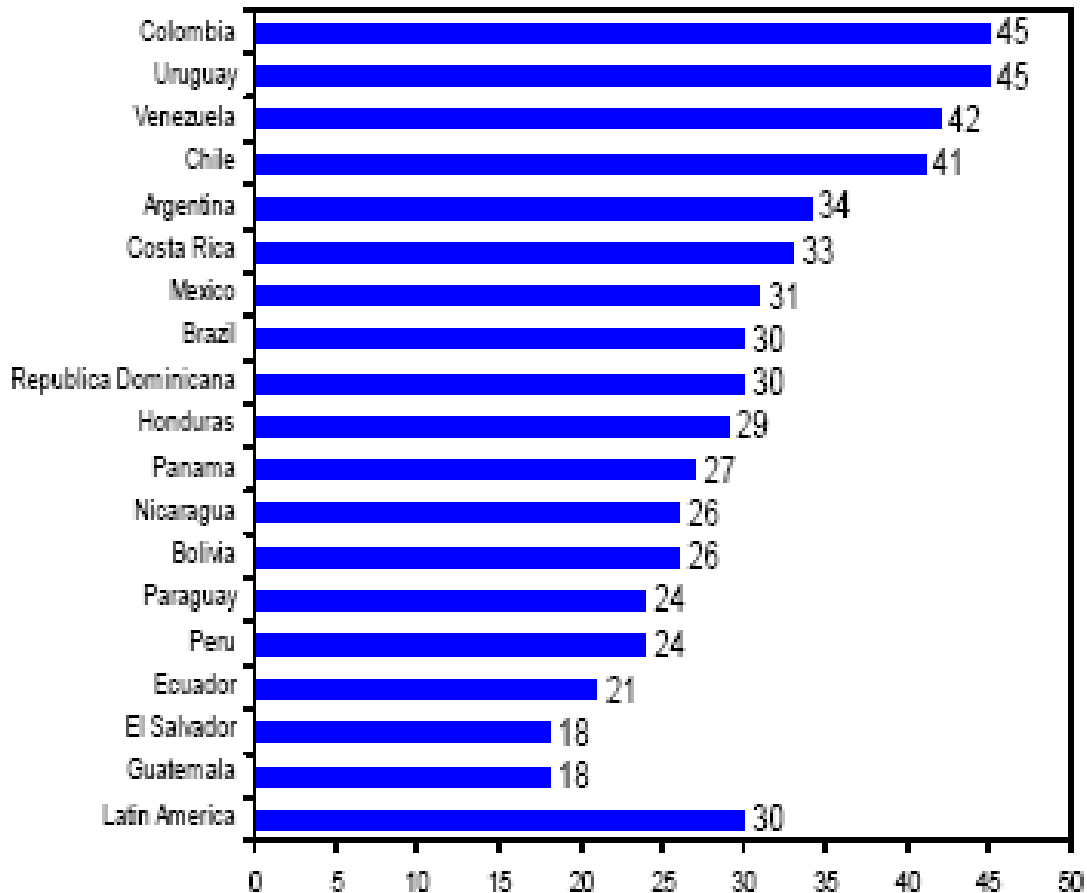
**Table 18 Perceived obstacles to democracy: Mexico, Costa Rica, and Chile in 1998, source: (Smith 2005c, p. 306).**

So how to explain this? How can it be that corruption is “very serious”, that forty-eight percent of the public sector workers may be corrupt, but also that corruption is not perceived as prevalent or a threat to democracy, or is even experienced very much? There are a few reasons, probably several of which are working concurrently as partial explanations.

<sup>156</sup> The Mexican responses were fifty-eight, sixty-five, and fifty-five percent respectively.

<sup>157</sup> It is the second lowest amount in Latin America, seven points more than Uruguay at forty-one percent and fourteen points less than Brazil at sixty-two percent.

One factor may be that since Pinochet, there has been an increased politicization of corruption in Chile with a Committee on Corruption appointed by the government in 1993 (Pollack and Matear 1997). This has been accompanied by the increased freedom of the media to comment on affairs of the state and a shift from issues of human rights and economic survival to concerns for democratic performance where issues of corruption are of public concern (Pollack and Matear 1997, pp. 380-381). In January 2003, Lagos started a Commission on Transparency and Probity with the task to reform government to fight corruption. As we will see, this provided some of the impetus behind the resurgence of ChileCompra – as the commission has resulted in many recommendations that have become law (Angell 2005b). In 2005, forty-one percent of Chileans believe that much or some progress has been made combating corruption in the last two years. This is up eleven percent from the previous year (Latinobarómetro 2005) (See Table 19). Chileans also estimated, on average, that forty-eight out of 100 civil servants were corrupt. While this may seem high, it is markedly below the Latin American average of sixty-eight percent.



**Table 19 Progress in reducing corruption. In 2005, 41% Chileans answered “much” or “some” to the question, “How much progress do you think has been made in reducing corruption in state institutions during the last two years? Do you think there has been much progress, some progress, little, of no progress at all?” Source: (Latinobarómetro 2005).**

These reforms are fighting against another aspect of the political culture in Chile. While there is high respect for institutional norms and low levels of institutional corruption, institutionally there is an underdeveloped culture of transparency (Angell 2005a). Citing the director of the Latin American Director of Transparency International, Angell describes it as follows,

“Chile exhibits neither the tradition nor the culture of access to information’.<sup>158</sup> And there is ‘secrecy on the part of the authorities who are recalcitrant to deliver information and transparency is not an incorporated value’.<sup>159</sup> Even if it is true

<sup>158</sup> Translated from ‘Chile no exhibe ni tradición ni cultura de acceso a la información’.

<sup>159</sup> Translated from: ‘un secretismo por parte de las autoridades, son reacias entregar información y la transparencia no es un valor que tengan incorporados’.



that the public sector operates in a generally honest way it is risky to depend on individual values rather than institutional checks on corruption” (Angell 2005a).

The more blatant forms of corruption, while they may occur on occasion, are not endemic to the system itself (Pollack and Matear 1997). Instead, corruption in Chile exists in its own culturally specific manner, otherwise known as “*corrupción a la Chilena*” (corruption Chilean-style). This is a low-grade corruption “characterised by the use of influence through the manipulation of kinship, friendship or shared ideological, political, professional, educational, religious or sectarian values and/or perspectives” (Pollack and Matear 1997, p. 372).<sup>160</sup> Variants on this theme were expressed to the author during subject interviews. The general idea was that Chileans are industrious in their methods for circumventing particular constraints to achieve their goals – but that this happens on a small scale rather than a large one. “Chileans steal small things, not large things,” related one taxi driver.

Understanding “*corrupción a la Chilena*” helps to explain what *prima facie* appears to be contradictory data. As discussed, despite low levels of interpersonal trust, Chile has a deepening democracy and a flourishing economy. This is understandable in the light of the strong norms and values of respect for the institutions of governance that have such a long tradition in Chile. Individual public sector workers may have corrupt tendencies, at least on a small scale, but the strong norms and values of institutional respect as well as the powerful and mostly apolitical institutions of governance keep these public servants in check. Such strong respect for the institutions of governance also explain why corruption is considered such a serious problem even though few Chileans have been a party to it – large scale corruption is simply not tolerated.

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<sup>160</sup> Pollack & Matear expressed concern in 1997 that the continuation of the neo-liberal policies and political situation in Chile might lead to the “professionalisation” of corruption, moving from “amateur” to “professional” status in terms of corruption. As of 2007 it does not appear that Pollack and Matear’s fears have yet been realized.

### 5.3.3 SUMMARY

It is in this environment, and as part of the government's institutional reforms and social packages, that e-services were introduced. The left of center government, while perhaps without much influence from the grass roots level, is considered competent and by all measures of governance has performed well, overseeing constant and strong economic growth, state modernization and reform, the incremental elimination of the non-democratic vestiges of Pinochets' constitution, and successful social programs. Chile is ranked along side other countries like Argentina, Costa Rica, and Uruguay as the best in terms of effort and outcome of their social policy regimes (Huber and Stephens 2005). The Chilean Government is not viewed antagonistically by the population. The citizenry expects social intervention on issues such as poverty, partisan politics, and lack of education which are considered more of a threat to democracy than the government itself or issues of corruption.

However, this is all happening with an electorate that is increasingly well educated and critical of these institutions, and with social policies unable to directly address the persistent and massive income inequality. This results in a perceived, as well as undoubtedly real, unequal access to social services and opportunities within Chile. Despite the long term existence of an ostensibly two-tiered system of public service delivery in Chile (Hiscock and Hojman 1997), it could be that many citizens are becoming increasingly impatient with the situation.

### 5.4 CHILEAN ICT POLICY AND E-GOVERNANCE

The process of modernization and reform with Chile has included the use of ICT to improve government administration (among other things). Understanding the process of modernization and reform and their underlying motivations are necessary to put the emergence of the e-tax administration and ChileCompra into its appropriate context. As we will see, conducting taxes online are not possible without first overcoming difficult obstacles such as inter-organizational interoperability and the sufficient diffusion of Internet access. Consequently, while we can isolate particular services for examination, their outcomes are highly dependent upon their interconnections with a host of other ICT

policies and initiatives, as well as various other public and private sector organisations, just to name a few. To aid our understanding of the implementation context, this section goes into more detail as to the type and nature of the ICT policy and context in Chile, including a brief overview of Chilean e-government efforts.

#### 5.4.1 ICT POLICY

The story of ICT policy and diffusion in Chile has been one of relatively rapid incremental change spurred by strong government direction and public-private collaboration. Immediately after the democratic transition from military dictatorship, Chile had ostensibly no policy towards technological innovation, development, or research (Díaz and Rivas 2005, p. 480). Thus in the early 1990s, early efforts to work with ICT were a disparate few pioneered by a few academics, a handful of public sector agencies, and some in the private sector (AED 2003, p. 371).

This began to change in the mid to late 1990s. In 1996 the Science and Technology Program<sup>161</sup> was instituted, creating technology funds that are the investment institutions that are the principle tool used by the government to intervene. It was also around this time that the efforts to modernize and rationalize the state began (Díaz and Rivas 2005, p. 481). In mid-1998, President Frei started a Presidential Commission on ICT and development. In late 1998, a Sub-Commission on Citizens and Equity stated,

“Chile requires conviction from the State. Chile needs a Visionary State: a conviction that today’s opportunities can decisively influence tomorrow’s economy and society. An Enabler State: identify the required factors for ICT development by civil society and economic agents. An Implementer: The State must be a model in the adoption of ICTs” (AED 2003, p. 372).

The presidential commission resulted in a six month investigation that culminated in the report, *Chile towards the information society* (CNICT 1999).<sup>162</sup> The report presented an actionable short-term plan with the goal to ensure the beginning of the development of an information infrastructure. In total, the commission developed eleven guidelines and sixty-one specific proposals that fell under the domains of universalisation of access,

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<sup>161</sup> In Spanish: Programa de Ciencia y Tecnología.

<sup>162</sup> In Spanish: Chile hacia la sociedad de la información.

development of competitive capabilities, and modernization of the state in the service of citizenry. Thus, the institution of e-government was a main component of the larger public sector reform and modernization program that included “institutional and political reform, public management modernization, decentralization, transparency, and participation” (AED 2003, p. 373). In 2000, the momentum continued as the newly elected President Lagos maintained an emphasis on the Internet and new technologies (AED 2003). In May 2001, a Presidential Instructive on e-government was released, detailing guidelines and objectives in the three areas of “Good Government”, democratic development, and service to citizens (AED 2003).

By 2003, Chile was already making great strides. A 2003 UN study ranked Chile atop Latin America and in the top 25 countries in the world in e-readiness (United Nations Department of Economic and Social Affairs 2003). By this point, Chile had many concrete results including:

- Essential new legislation including the Protection of Private Life Law 1999 and the Electronic Signature Law 2003,
- Computers in schools: around 8,000 schools with PCs and about 60% of them were connected to the Internet with 85% of the teachers trained in computer literacy,
- Expanded access included some 1,300 infocentres in 317 communities across Chile and 368 Internet wired public libraries,
- By 2001, about sixty percent of Chilean companies were wired to the Internet (Hilbert 2001),
- Reduced Internet access costs, helping Internet users grow from 625K in 1999 to 3.6 million in 2002 (Angell 2005b),
- E-government services including 239 public ministry web portals with more than 170 on-line services available.<sup>163</sup>

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<sup>163</sup> Source: Agenda Digital: Te Acerca el Futuro, Feb. 2004.

In 2003, the government decided to take stock of the progress and plan for the future. Consequently, the Digital Action Group (*Grupo de Acción Digital* - GAD) was formed. The GAD was presided over by the Governmental Coordinator of Information and Communications Technologies, and included around 160 representatives from public, private, and academic institutions. From the year long collaboration emerged the Digital Agenda,<sup>164</sup> a national strategy to continue Chile's path towards the information society. Included in the collaboration, every participant promised to work collaboratively to realise the common vision, with special concern for those who are marginalised or otherwise excluded from Chile's progress. Overall, the Digital Agenda established the 2004-2006 Plan of Action that has six major priorities including expanding access, e-literacy campaign, e-government, digital business development, facilitating the take off of the ICT industry, and modernisation the judicial system.<sup>165</sup>

An important aspect of the digital agenda is the commitment to the social development of Chile. ICT are viewed as one means of achieving other aims such as state modernization, increased productivity of businesses, improved efficiency of state administration, and the reduction of regional inequalities. As evidence, the strategy is highly influenced by the principles established in the World Summit on the Information Society<sup>166</sup> that focuses on the use of ICT as a means to reach the Millennium Development Goals.<sup>167</sup> In concrete terms, this translates to the digital agenda including objectives such as ensuring and increasing individual liberties, improving the quality of life, and creating equal opportunities. It should be mentioned that despite the digital agendas socio-economic development orientation, it does not include more policy to promote or strengthen democracy within Chile. Rather, the concern at this time was capacity building and increasing equality of access rather than promoting participation.

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<sup>164</sup> In Spanish: "*Agenda Digital*".

<sup>165</sup> The action plan had 6 priorities with 34 separate initiatives.

<sup>166</sup> For more information, see the WSIS web site <http://www.itu.int/wsis/index.html>, last accessed May 17<sup>th</sup>, 2007.

<sup>167</sup> For information, see <http://www.un.org/millenniumgoals/>.

An important piece of the ICT push and social focus is the governments push for e-literacy and expanding access. One major component of these policies is the development and coordination of a network of separate public and private infocentres. Currently there are over 1300 infocentres across Chile.<sup>168</sup> These infocentres include capacity building for both citizens as well as offering tools for micro and small business to increase productivity, online transactions, find new business opportunities, and technical support.<sup>169</sup>

Despite their best efforts, technological diffusion has not successfully reached all Chileans. A 2006 UNDP report (2006a) found that half of the citizenry of Chile feels excluded from the world of new technologies. On a positive note, however, adolescents across Chile have been effectively incorporated, with eighty-four percent of those between the ages of fourteen and seventeen years old feel integrated. Women, retired people, and people in low socio-economic levels are the most excluded.

Overall the ICT policy approach can be summed up as incremental, collaborative, socially oriented, and politically motivated and sustained. This has resulted in relatively rapid and continuous improvements that has in a relatively short period made Chile one of the most technologically adept and savvy countries in Latin America. It has also made fairly impressive strides in expanding access despite the difficulties posed by the structural social and economic inequalities.

#### 5.4.2 E-GOVERNMENT

A specific component of Chilean ICT policy over the last decade has been a concerted effort to develop e-government services. In particular, the digital agenda calls for the enabling of the state to deliver digital services to the citizen and to contribute to the

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<sup>168</sup> A map of their locations can be found at <http://www.infocentros.cl/>.

<sup>169</sup> Examples include [www.Sitioempresa.cl](http://www.Sitioempresa.cl), [www.RedSercotec.cl](http://www.RedSercotec.cl), and [www.zonaempresas.cl](http://www.zonaempresas.cl). See: <http://www.infocentros.cl/index.php?seccion=internet&subseccion=quienes>. The Programa Nacional de Infocentros Comunitarios emerged in 2001 as a result of a presidential instructive ([http://www.infocentros.gob.cl/AUSI/respaldo/Descargables/Instructivo\\_Presidencial.pdf](http://www.infocentros.gob.cl/AUSI/respaldo/Descargables/Instructivo_Presidencial.pdf)) with the goal of strengthening and facilitating access to ICT of small and micro businesses.

digital development of the country.<sup>170</sup> The push has had significant impacts. E-government transactions were basically non-existent in 1999, there were 34 in 2002, and over 300 by 2005 (Díaz and Rivas 2005, p. 503). By 2002, “98% of public agencies had portals or web sites” (AED 2003). One such portal is Portal Trámite Fácil (“easy transaction”) that by 2001 provided information for about 700 transactions, and citizens could perform thirty-two of them online. By early 2002, seventy transactions were possible online and there was information for about 1,400 different transactions.

Initial attempts at an online presence were, like e-government web pages in western countries, a presentation of the e-bureaucracy rather than taking a citizen orientation. A 2001 evaluation “concluded that the content of government web-sites are not user-oriented and that user-focus and service vis-à-vis design, navigation, functionality, and interactivity were poor” (AED 2003). This trend is especially acute in municipal web sites. A 2006 study evaluated the transparency of the municipality in terms of citizens’ accessibility and quality of municipal information that should be, by law at available (Horst 2006). Only two municipalities were found that completely complied with the law, supplying the requisite access to information. However, no municipalities publish all their information online, and only thirty percent that have a web page publish more than fifty percent of their information. Horst concludes that there are really two types of municipalities, those that are aware that they are obligated to provide information and those where the functionaries are not aware of their obligation, with some municipalities averse to actually supplying the information.<sup>171</sup>

Despite the slow progress at the municipal level, since the early 2000s, Chilean e-government state services have been increasing in sophistication, moving towards more citizen-oriented web-sites and fully transactional services in some cases. One of the primary movers and examples of e-services have been the development of the Chilean tax

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<sup>170</sup> See: [www.gobiernodechile.cl](http://www.gobiernodechile.cl).

<sup>171</sup> Interestingly, she found that the responses did not correspond to either the income per citizen in that municipality or the size of the municipality. Six of the thirty-four municipalities studied did not have a web presence, and nineteen of the twenty-eight were considered opaque (less than half of the information necessary).

agencies web portal with its impressive range of transactional services, as we will see in the following chapter. Furthermore, ChileCompra, the public sector e-procurement platform, developed into a fully transactional site only after 2002, as will be detailed in chapter 7. While the breadth of Chile's e-government applications is impressive given its relatively youthful status, these two applications in particular define the cutting edge of transactional and potentially transformative applications in Chile.

### **5.5 RESEARCH LOCATION: SANTIAGO, TEMUCO AND THE NOVENA REGION**

Up until now the discussion has been about Chile in general. However, interviews were only performed in a limited area: the capital city, also known as the Metropolitan area of Santiago, and in the 9<sup>th</sup> Region of Chile (the Novena Region) in and around Temuco, the capital of the region. Thus, it is important to provide a few more contextual details with respect to the current socio-politico-economic status of these two areas.

The predominance of Santiago de Chile shaping the governance of Chile is not entirely surprising given the demographics of Chile. Chile has an estimated population of just over 16 million people,<sup>172</sup> with eighty-six percent living in urban settings in the year 2000.<sup>173</sup> Santiago the political and economic capital is home to approximately 5.8 million people (around thirty-five percent of the population) and forty-five percent of the country's GDP (Instituto Nacional de Estadísticas 2005). Santiago is clearly the political and economic hub of the country. This is epitomized by the doctrine that "the man in Santiago knows best" (Angell 2005b).

The bulk of the citizen interviews occurred in the ninth administrative region in Chile, La Araucanía, with its capital city, Temuco, located about eight hours south by train. Administratively, this region is divided into thirty-one municipalities. Financially, the

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<sup>172</sup> As of July 2007. Source: CIA Factbook. See: <https://www.cia.gov/library/publications/the-world-factbook/geos/ci.html>.

<sup>173</sup> Source: Earth Trends Environmental Information (<http://earthtrends.wri.org/>), World Resources Institute (<http://www.wri.org/>). See: [http://earthtrends.wri.org/pdf\\_library/country\\_profiles/pop\\_cou\\_152.pdf](http://earthtrends.wri.org/pdf_library/country_profiles/pop_cou_152.pdf).



ninth region is primarily a rural economy region and is the poorest in Chile. Poverty in this region is concentrated in the rural zones where about half of the children live below the poverty line (in contrast to 1 in 3 across Chile) (Pastrana *et al.* 2004). Of the thirty-one municipalities, fifteen are considered in conditions of extreme poverty, with the highest degree in four of the municipalities visited; Nueva Imperial, Padre de las Casas, Carahue, Puerto Saavedra (Pastrana *et al.* 2004).

The ninth region has a population around 870,000, with about one-third of this population living in rural areas (Pastrana *et al.* 2004). About twenty-four percent of the regional population is Mapuche, Chilean's largest indigenous group (Pastrana *et al.* 2004). Like many indigenous populations across Latin America, they are among the poorest groups in Chile and have lower levels of schooling.<sup>174</sup> Historically, this poverty “can generally be traced to decades of neglect, overtly (and covertly) racist policies and government abuse often in terms of land policy, which has contributed to a generally degraded position for the Mapuche people in Chile” (Pastrana *et al.* 2004).

Despite the relative poorness of the region, they are just as connected as the rest of Chile due in a large part to the Internet diffusion, access, and training initiatives in the digital agenda. One local access initiatives, with government support, is a network of community networks.<sup>175</sup> This network was created in 1997 and is coordinated by the Institute of Education Informatics (IIE),<sup>176</sup> an institute in the Frontier University.<sup>177</sup> The project received initial funding capital from the local municipality, the regional and federal government, as well as the IIE (Hepp and Garrido 2003). It has also involved a large number of partnerships including many governmental entities, NGOs, and a few private sector entities.

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<sup>174</sup> “At the national level, 69.5% of indigenous people under the age of 39 have attained an average of 8.5 years of formal schooling. This reflects the high drop out rate among young Mapuche of whom 30.4% never graduate from secondary school, often leaving before the 8<sup>th</sup> grade” (Pastrana *et al.* 2004)

<sup>175</sup> This network is called the “Red de Información Comunitaria”. See: <http://www.redcomunitaria.cl> for details.

<sup>176</sup> Instituto de Informática Educativa.

<sup>177</sup> Universidad de la Frontera.

The goal of the project was to bridge two types of divides digital (lack of access to information and communication technologies) and cognitive (lack of knowledge of how to make use of information resources) (Hepp and Garrido 2003, p. 199). To achieve these goals thirty-two telecentres were set up as public sites with Internet linked computers that offer computer training and free Internet access.<sup>178</sup> These activities and training programs generally “target women, indigenous communities, the unemployed, seniors, social leaders, the handicapped and also, local micro entrepreneurs” (Hepp and Garrido 2003).

Each centre generally consists of two to eighteen computers, a printer, fax and scanner, handicapped access kit, and a wide variety of Internet connections depending upon availability (Hepp and Garrido 2003). Most often the telecentres are located in the central community centres with some of them combining space with other access technology and Internet access initiatives such as Biblioredes<sup>179</sup>. The telecentres themselves are managed by local members of the community with generally one manager and perhaps another employee. Between the launch of the first telecentre in 2000 and 2002, approximately 110,000 people used the telecentres and ~5000 were people trained in the use of ICT.<sup>180</sup>

#### 5.5.1 SUMMARY

Chile stands out in Latin America as a modern day success story. Politically, economically, and socially it is considered the exemplar of the potential of democratic reforms, economic liberalism, and expanding social net. Chile also has strong central public sector institutions that are in general professional and apolitical. These esteemed institutions provide a bulwark against the potential for corruption by providing a firm structure where economic and political transactions can take place with relative security. This is especially important considering the low interpersonal trust and small time corruption that exists.

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<sup>178</sup> Depending upon the telecentre other things may come with a small charge, for example, printing.

<sup>179</sup> A Microsoft initiative placing computers in libraries, see: <http://www.biblioredes.cl/bibliored/>.

<sup>180</sup> Source Community Information Network of the Araucanía, see: [www.redcomunitaria.cl](http://www.redcomunitaria.cl).

Despite these successes, inequality both in terms of income and access to public services remains a pressing and defining issue. Support for democracy is not as solid as in other countries despite Chile's long democratic traditions and solid performance in the last fifteen years. This is undoubtedly related to the recalcitrant inequalities as well as the increased expectations that citizens have of the performance of democratic governance.

Recently, the Chilean government has pushed forward with an ICT agenda to bring Chile into the information society. This has been a collaborative effort (with considerable political support from consecutive Chilean Presidents) which holistically approaches the diffusion of ICT throughout the Chilean society. An important component of this project has been the implementation of e-government applications. In a very short period, the Chilean government has gone from a minimal web presence to developing a broad range of online e-services that include several world-renowned transactional e-service applications. Two of those applications, the e-tax administration system and ChileCompra, are the empirical cases studied in this thesis. Now that we have covered the Chilean context of their implementation, it is time to turn to the cases themselves.

## 6 CASE I: E-INCOME TAX SERVICE

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The administration of taxes not only has import for the governance of a state but it penetrates into the economic lives of citizens and businesses constituting an important point of citizen-government interaction. It is reasonable to posit that changes to tax administration would impact citizens' perceptions of both the tax agency as well as the government at large.

This chapter presents the first of two empirical cases, the Chilean e-tax administration system and its impact on a) the trustworthiness of the Chilean tax agency (*Servicios de Impuestos Internos*, SII) and b) citizens' institutional trust in the agency. The case is split into 2 parts: a case description (6.1) and analysis (6.2 & 6.3). The case description describes both the current system and provides historical context to its implementation.<sup>181</sup> The analysis itself is broken up into two components: trustworthiness and trust. The trustworthiness analysis (6.2) considers, from an institutional perspective, the changes that have occurred that have resulted in objective changes to the trustworthiness of the SII, in terms of the theory laid out in chapters 3 & 4. A series of case-specific hypotheses are then developed that predict the trust building potential of these trustworthiness outcomes. These hypotheses are case specific manifestations of the hypotheses created at the end of chapter four. The trust analysis (6.3) focuses on how citizens' trust in the SII is impacted by the e-service from the perspective of the taxpayers. The goal is to understand what, how, and for whom changes in trustworthiness have been perceived and interpreted in a way that influences trust.<sup>182</sup>

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<sup>181</sup> Note that this is not an implementation study, so there are details of the implementation that, while interesting, may not receive mention or deeper consideration, such as employee training, overcoming employee resistance, etc. While these of course may have been important for the success of the project the concern here is with changes to the institutions trustworthiness.

<sup>182</sup> This is only the first stage of analysis that will be continued in the comparative analysis in chapter 8.

## 6.1 THE CHILEAN E-TAX ADMINISTRATION SYSTEM<sup>183</sup>

The administration of taxes is central to the operation of any state. Taxes provide the revenue source for any state that funds public spending. It is especially critical in developing countries to get your tax regime and administration right as revenue is already limited.<sup>184</sup> The administration of taxes is, of course, not possible without a corresponding bureaucracy. Historically, the development of bureaucracy was instrumental in enabling the imposition of the first income tax in England in 1799 (Levi 1998, p. 87). The quality of this bureaucracy and its ability to administrate taxes is obviously central to the efficiency and nature of tax collection.

New ICT provide a unique opportunity to enhance the efficiency and effectiveness of tax administrations around the world. Indeed, as e-government implementations go, e-tax administration systems are some of the first, most common, and most successful e-government applications (Dunleavy *et al.* 2006). This is because tax administration is the quintessential machine bureaucracy that is highly amenable to computerization of tax processes, standardization, and automatisaion (Dunleavy *et al.* 2006, Kallinikos 2001).

This section presents a description of the Chilean e-tax administration case. The first three parts (6.1.1 - 6.1.3) provide the background context within which the e-service was implemented. It begins (6.1.1) with a brief description of the current tax regime in Chile. Then section 6.1.2 describes the current status and history of the tax administration in Chile including the processes of reform leading up to the move to implement the e-service. Next, section (6.1.3) presents a brief summary of a survey conducted in 1996 of taxpayers that helps provide both context and a comparative data point for the changes that have occurred since. The following four sections (6.1.4 - 6.1.7) describe the system and trace its implementation history as well as its impacts. Section 6.1.4 brings the

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<sup>183</sup> This section draws heavily on Sanchez's (2005) PhD thesis on the political economy of tax policy in Chile and Argentina. Where there are some pieces of data without citation, it can be assumed to be drawn from Sanchez's work, in particular, chapter 6 "Tax Administration and Reform in Chile and Argentina".

<sup>184</sup> Furthermore, a fair and efficient tax system can provide benefits that extend to improving the quality of democracy and social justice,

"Fair and efficient taxation produces benefits whose importance both to government and the state are difficult to over-estimate. These virtues improve the quality of democracy, provide resources for growth, and enhance social justice" (Angell 2005b, p. 22).

discussion up to the present day with a description of the current system. Section 6.1.5 describes the implementation history. Sections 6.1.6 and 6.1.7 provide an overview of the objective (number of users, reduction of tax evasion, etc.) and subjective (a 2005 survey of the taxpayers image of the SII) outcomes of the system respectively. Finally section 6.1.8 provides a brief summary the case.

#### 6.1.1 THE SII AND THE CHILEAN TAX STRUCTURE<sup>185</sup>

This case focuses on the online income tax system implemented by the SII, the Chilean national authority responsible for tax compliance procedures, audit, and enforcement. The SII powers of enforcement entail jurisdiction over the interpretation of tax laws and the tax tribunal, the first judicial stage in tax disputes. Their mission statement is as follows,

“The SII is responsible for administering the internal tax system, facilitate and control tax compliance, promote reduction of compliance costs and increase of taxpayers-economic agents productivity, and strengthening State modernization and e-Government development in the country; with a view to enhance tax compliance and economic growth of Chile and its people”.<sup>186</sup>

The processes of the SII are interwoven with two other authorities with responsibilities with respect to the administration of taxes, the treasury, and customs. The treasury is responsible for collecting the domestic taxes and customs duties, and customs is responsible for supervising custom duties.

The SII is hierarchically structured, with the SII headquarters located in the capital city, Santiago de Chile. The SII is headed by a Commissioner appointed by and responsible to the President of Chile. Under the headquarters, there are sixteen regional offices (four of these in Santiago), one large taxpayer office, and sixty local offices. As will be described in further detail later, the SII now has a virtual presence on the Internet at [www.sii.cl](http://www.sii.cl).

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<sup>185</sup> This section draws from many resources available on the SII web page; [www.sii.cl](http://www.sii.cl).

<sup>186</sup> [www.sii.cl](http://www.sii.cl).

The Chilean tax regime consists of direct and indirect taxes. Direct taxes are those levied on the income or wealth that includes corporate income tax, tax on individuals, and tax on non-residents. Indirect taxes are broken into three categories of taxes: (1) taxes on sales and services, such as the Value Added Tax (VAT),<sup>187</sup> and specific luxury taxes; (2) specific taxes (such as the fuel tax and tax on tobacco, cigars and cigarettes); and (3) other taxes (such as inheritance and donation taxes).

The income tax and VAT are the two pillars of the Chilean tax system. Income tax accounted for approximately thirty-one percent of total revenue in 2005 (up from around twenty-three percent in 1993). Income tax consists of taxes on wages, interests, and other sources that constitute the total income received or accrued during the tax year. For wages, the amount is generally withheld on the income statement. The total amount for a tax year is calculated and declared in April of the following year. If the total amount withheld exceeds the required level of taxes then a return is issued. Otherwise the taxpayer must pay the required extra taxes.

The VAT was introduced by Pinochet and is the largest single component of the tax system, contributing almost half of total tax revenue in 2005.<sup>188</sup> It is currently excised at a flat rate of nineteen percent with no special regimes and few exemptions. The VAT requires that the merchants and service providers who pay VAT charge the buyers of goods or services an equal amount to the VAT at the point of sale. The total VAT accumulated are calculated and collected monthly.

The stated goals underlying the Chilean tax structure are efficiency, simplicity, and equity. Taxes should be efficient and cause little distortion in economic activities, they should be simple for both taxpayers and authorities, and the criteria for levying taxes should be equal for all taxpayers. In Chile, the income tax is progressive,<sup>189</sup> while the

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<sup>187</sup> In Chile it is referred to as the IVA (Impuestos al Valor Agregado).

<sup>188</sup> This amount has stayed relatively constant, since at least 1993 when the VAT constituted almost half of total tax revenue.

<sup>189</sup> Income tax levels have eight scales and range from five to forty-five percent, source: <http://www.santiago.cl/living/insurance.htm> and (Alm and Martinez-Vazquez 2007).

VAT is regressive, taxing at flat rate irrespective of economic position. In a 1997 study, Engel *et al.* (1997) assessed the taxes and income distribution in Chile. They concluded that the high inequality in Chile is unrelated to the tax system (as of 1996), despite its overall regressive nature. Likewise, the World Bank (1997) concluded that the tax system in Chile appears to be income-equality neutral. While the VAT may be regressive, it is highly productive producing the most yield per percentage point VAT in Latin America (Alm and Martinez-Vazquez 2007, p. 4). However, the income-equality neutrality of the tax system does not imply that the application of the tax is necessarily fair. For example, of the top five percent of income earners it is estimated that only half of them pay at the proper rate, and the rest manipulate the system to pay at the significantly reduced rate (Angell 2005a).

#### 6.1.2 SII AND ADMINISTRATIVE REFORM

The SII is, and since its formation in 1902 has been, a politically autonomous, professional, and powerful institution in Chile. Its political independence is reflected in the long average tenure of SII directors. Its professionalism is witnessed by the historically low levels of corruption which have been episodic rather than systematic (Sánchez 2005, p. 234). The SII also holds a position of perceived and real authority and power. In the 2004 UNDP report, they developed a “Powermeter” to measure the perceived power of different institutions in Chile, with ministries of the economic sphere coming in second most powerful behind communications media.<sup>190</sup>

Pinochet’s military regime had a lasting impact on the nature of the SII. Pinochet simplified and reformed the tax system introducing the VAT. Pinochet also downsized the public sector reducing the SII to almost half-size, degrading its tax collection and auditing capabilities (Sánchez 2005, p. 235). This happened in the context of international pressure to implement the “Washington Consensus” that called for a neoliberal market reforms and the reduction of government expenditure (Smith 2005c, p.

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<sup>190</sup> The ratings were: 1) Communications media 8.6, 2) Ministries of the economic sphere 8.3, 3) Major business groups 8.0, 4) Central Bank 7.4, 11) Regulators 6.1, 12) Mayors 5.9, 16) Armed forces 5.6, 19) Treasury Inspectors Office 5.5, 29) Artists and intellectuals 4.2, 32) Trade unions 3.4.



216). Pinochet also “strengthened Chile’s historical tradition of technocratic insulation, as part of the military’s larger social project to ‘technify’ society, eliminate rent-seeking behaviour on the part of interest groups, and convince the population of the uselessness of ‘politics’” (Sánchez 2005, p. 234).

The Aylwin government, the first government after Pinochet, appointed Javier Etcheberry, a private sector executive, to be the director of the SII. At the time, the SII was considered “the most time-consuming and onerously bureaucratic service in the public sector” (Constance 2000). Etcheberry was set on reducing the level of tax evasion through two means: improving the agencies operating procedures and increasing expertise, and making the system more transparent, simple, and impartial (Angell 2005b). They recruited executives for the SII’s top 150 positions, and asked for special performance bonuses to make managers’ compensation more competitive with the private sector (Sánchez 2005, p. 237).<sup>191</sup> These managers were ordered to conduct more rigorous performance reviews of all staff, and taking a zero tolerance approach to corruption, they periodically fired employees who failed to meet the SII code of behaviour (Constance 2000). This included the creation of the Controller’s office within the SII who “is responsible for presenting the evidence against an employee and proposing appropriate penalties to the Director” (Sánchez 2005, p. 238).

These reforms were done without the benefit of extra resources, making increased bureaucratic efficiency a necessity (Sánchez 2005). This prompted an entire reengineering of the tax administration to “identify procedures that could be eliminated or simplified without breaking the law. Virtually all areas of SII activity underwent substantial change, including Operation Income, Operation VAT, Appraisals, Taxpayers Lifecycle, the tax court, and others” (Sánchez 2005, p. 239). Etcheberry explains,

“I started out focusing on costs and on the uselessness of many of the procedures tax officials were carrying out... Instead of immediately raising salaries and asking Congress for a budget increase, I set out to prove that the same staff and

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<sup>191</sup> They also introduced a fully merit-based system of recruitment and promotion and increased the real salary of the average employ (over 130% in the 1990s) (Angell 2005b)

the same budget could be used much more effectively to combat tax evasion” (Javier Etcheberry quoted in Constance 2000).

Etcheberry’s reforms brought immediate results.<sup>192</sup> For example, income tax evasion fell from fifty to forty percent from 1990 to 1993 (Angell 2005b).<sup>193</sup> The success created a “virtuous cycle” where the Congress became more willing to allocate funds for salary increases and other technological investments (Constance 2000).

Since then the SII has continued reforms and improvements based upon its three strategic pillars to improve tax compliance: facilitate tax compliance, and strengthening audit and prosecution capability. Overall this reflects the goal of implementing tax administration with the “vision to permanently contribute to economic development” through the reduction of tax compliance costs and reducing unfair and illegal competition based on tax evasion and fraud (Toro 2005).

The reforms from 1993 on have yielded similar positive results, although with diminishing returns (see Table 20), with the biggest impacts on the reduction of tax evasion occurring in the early 1990s,

“Weberian and managerial reforms to enhance SII capabilities in fighting evasion have largely run their course for that particular purpose, and that there have been diminishing returns to such a strategy since the mid-1990s. In seeking to determine what is needed to reduce evasion levels from the current 24%, all the evidence points in one direction: additional human resources for the tax agency” (Sánchez 2005, p. 250).

Despite diminishing returns, the overall benefits were significant. Between 1990 and 2000, overall tax evasion fell from 33% to 24% and the number of people filing income tax nearly doubled (Constance 2000) (see Figure 16). The reduction in tax evasion

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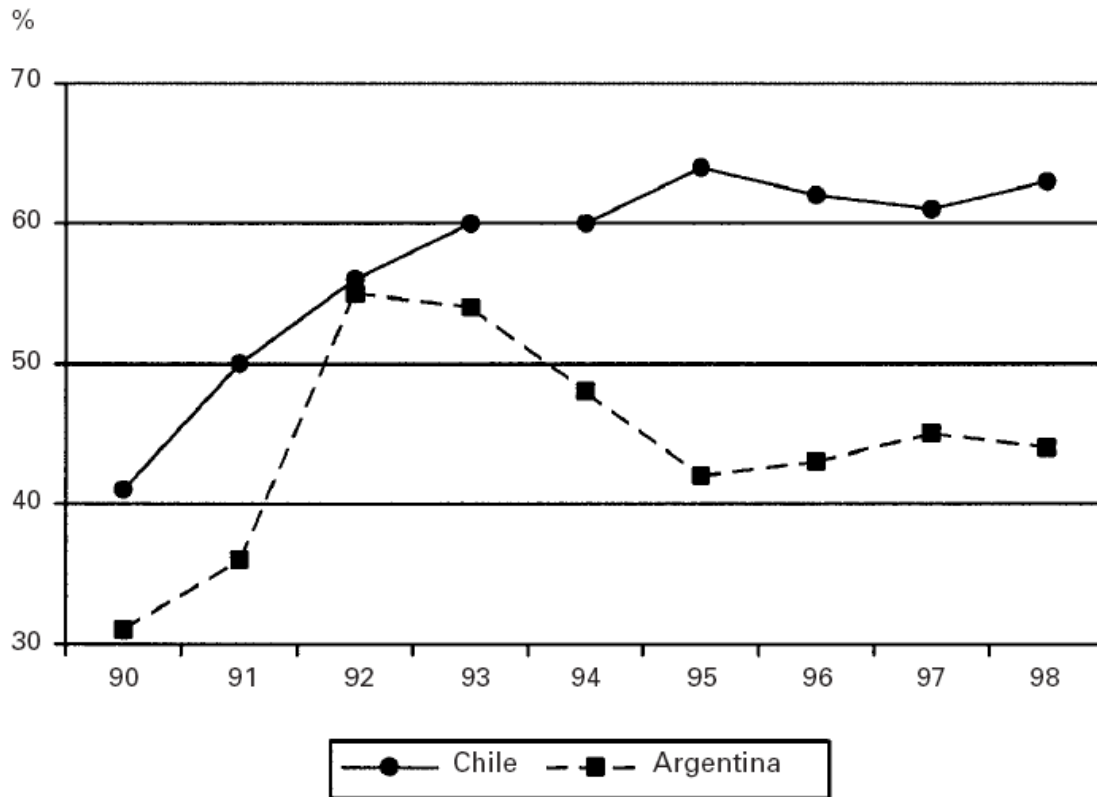
<sup>192</sup> Etcheberry did run into resistance from employees and professional accountants, including strikes and lawsuits, although he was able to overcome them (Constance 2000, Sánchez 2005).

<sup>193</sup> In terms of potential revenue, tax evasion levels fell from thirty percent of potential revenue in 1990 to 18.3% in 1993 (compared to 31.5% Argentina, or 68.2% in Peru, and twenty-three percent in Canada) (Angell 2005b).

produced sizable gains in revenue generated, resulting in over USD\$1 Billion in additional revenue with the 1999 evasion rate as compared to the 1991 rate (Angell 2005a).

<b>Year</b>	<b>% VAT</b>	<b>% Corporate Income Tax</b>
<b>1990</b>	70.4	49.8
<b>1991</b>	73.2	51.6
<b>1992</b>	77.1	55.5
<b>1993</b>	81.7	58.2
<b>1994</b>	80.4	61.3
....	...	...
<b>1997</b>	80.3	61.5
<b>1998</b>	78.0	---
<b>1999</b>	81.7	---

**Table 20 Tax compliance in the 1990's, source: (Serra 2003, p. 379).**



**Figure 16** The rate of voluntary VAT tax compliance in Chile and Argentina from 1990 to 1998, source: (Bergman 2003).

The 1990s also saw a reverse in the downsizing trend, with a thirty-six percent increase in number of staff including a thirty-nine percent increase in the number of auditors (Sánchez 2005, Serra 2003).<sup>194</sup> The SII did continue this expansion and by the late 2006, the SII had increased its staff to around 3700, another twenty-five percent increase. It must be noted that even with these increases, the SII is considered one of the “leanest and most productive tax services in the world” with respect to the number of citizens per tax service employee (Constance 2000).<sup>195</sup> It was found that each SII employee accounts for \$3.4 million, a higher amount than most developed countries (Sánchez 2005).

<sup>194</sup> The number of SII employees went from 1,863 in 1981 to 2,785 in 1999 (Serra 2003).

<sup>195</sup> In 1999, Chile had just one employee for every 4,051 citizens, and by contrast all industrialised European countries have less than 1,000 citizens per tax employee (Constance 2000). That said, only some 2 million citizens pay income tax in a country of 15,000,000, although the VAT does apply across the board.

In 1996, tax evasion was still considered quite large, with around twenty-seven percent of the potential tax base not reported due to loopholes and evasion (Engel *et al.* 1997). Several approaches were taken. During the early nineties the SII began collecting and crossing information. They gathered data on taxpayers' salaries, interest earnings, dividends, and selling of stocks. This enabled them to reconstruct both formal and informal earnings (Sánchez 2005). For informal earnings, the SII can "contrast declared income with the investments that individual or corporation (sic) made during that period" (Sánchez 2005, p. 241). Etcheberry also hired a number of outside consultants to research at regular intervals the nature and extent of evasion (Sánchez 2005). The SII also instituted an incentive system inside the SII where bonuses earned by staff are dependent upon tax revenue exceeding a pre-declared benchmark (Serra 2003). These bonuses can reach up to twenty-seven percent of the functionary's salary depending upon their position. In line with the other public sector reforms in Chile at that time, performance targets were adopted for SII employees.<sup>196</sup>

The overall success of these reforms is difficult to pinpoint, especially given the complexity of any economic system. Data during the 90s suggests that compliance rates have gone up. Serra's (2003) analysis of the improvement of VAT compliance during the 1990s found that while compliance rates improved during this time the increased compliance is partially explained by the strong economic growth during that period.<sup>197</sup> Data from the 1990s shows that the SII has an image of being able to detect non-compliance (Bergman 2003).

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<sup>196</sup> For example, tax employees receive a bonus if tax collection is last years revenue adjusted by this years GDP growth times 1.1 (Serra 2005). The SII, however, has developed its own set of performance measures to assess the organisation's effectiveness given their objectives, which the main ones are: maximising tax revenue and minimise compliance costs (Serra 2005). They have other goals that are means to these two goals as ends including:

"improve the agency's efficiency; promote professional and personal development among its staff; reduce levels of tax evasion and avoidance; facilitate tax compliance and improve taxpayers services; ensure equity and legal precision in the application of tax laws; strengthen and develop greater technological capacity to fulfil the mission" (Serra 2005, p. 119).

<sup>197</sup> One indicator of tax evasion is the size of the "shadow economy". Chile has the smallest shadow economy in 1999/2000 at only 19.8% of GDP. This is comparable to Western countries like Canada at sixteen percent, although double the rate in the US and Switzerland (Alm and Martinez-Vazquez 2007).

The desire to reduce tax evasion still forms a central part of the SII's mission. In 2001 a new law was enacted to target tax evasion with the goal to reduce the economy's global evasion rate from twenty-four to twenty percent by 2005 enabling the government to finance government programmes without requiring higher taxation. Associated with reaching this goal is three objectives: strengthen the capacity to enforce and collect taxes, modernize and increase the efficiency of the tax administration organizations, and eliminate tax evasion opportunities through the modification of legislation.

One element of reducing evasion is through decreasing costs associated with tax compliance. This was done through facilitating the taxpayers experience through the computerisation of the procedures of tax administration and services. There was also a concurrent concerted effort to improve taxpayer service. In 1996, the SII set nationwide standards for public assistance in the areas of income tax, VAT, and other areas, in an attempt to improve the quality of the processes of taxpayer assistance. These standards were subsequently raised between 1998 and 2002. They also instituted a study of taxpayer satisfaction to evaluate and improve performance. One area that was targeted was citizen waiting time to realise all "life-cycle" procedures such as starting a business, obtaining a tax id number, or getting invoices stamped (Serra 2005). The SII instituted a "Maximum Waiting Time" project to guarantee taxpayers a waiting time of no more than 30 minutes for these procedures.<sup>198</sup> The end result has been a marked and documented improvement in that aspect of service (see Table 21). Another significant initiative was the 2003 creation of Taxpayer Attention Centres<sup>199</sup> in the SII office that acts as the gateway for the tax procedures with specialised personal. This also included offering the possibility of self-assistance through the placing of computers in the office. This is a part of the continued push to integrate services and functionalities into the SII web portal to progressively realise the goal of a virtual office.

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<sup>198</sup> When a taxpayer enters the tax office, they take a ticket which registers their time. Software records several variables such as the amount of people waiting and the number of employees attending the public thus allowing for managers to make on the fly changes to improve service and meet the thirty minute service goal (Serra 2003).

<sup>199</sup> Centros de Atención al Contribuyente.

	<b>Number of taxpayers assisted (thousands)</b>	<b>% waiting longer than 30 minutes</b>
<b>1998</b>		7.2
<b>1998</b>		0.2
<b>2000</b>	1,439	0.2
<b>2001</b>	1,542	0.6
<b>2002</b>	1,657	1.0

**Table 21** The number of attended taxpayers and the % that had to wait more than 30 minutes, source: (Serra 2005, p. 121).

In summary, Chile’s approach to tax reform was a slow institution-building approach and its highly institutionalised political environment helped to consolidate the reforms (Sánchez 2005, p. 232). Fighting tax non-compliance was a high priority in Chile, primarily with the goal to add revenue to the treasury as well as enhance overall economic efficiency (Sánchez 2005). This fight had two prongs: improving the capacity to prosecute tax evasion and facilitating tax compliance.

### 6.1.3 THE TAXPAYERS’ “IMAGE” OF THE SII

An important data point that provides relevant contextual information and a point of comparison is an SII commissioned survey conducted in 1996. The goal of the survey was to determine the “image” of the SII with respect to their processes of modernisation. This was the first in a series of survey snapshots funded by the SII that help to give an idea of the progression over time of the change in taxpayers’ opinions of the service and the SII itself. One drawback of the 1996 survey, for our purposes here, is that it did not target a large section of the citizen or taxpaying population. Instead the survey focused on opinions of managers or bosses in large, medium, and small businesses, owners of large, medium, and small retailers, and independent professionals.

Some of the relevant findings are the following:<sup>200</sup>

- SII is a feared organization: First and foremost, the SII is perceived as a very serious and often threatening institution with eighty-one percent of citizens believing that the SII generates fear in taxpayers. This reality has historical roots. The recent history of the Chilean government and the tax authority in particular, is one of an authoritarian relationship. The SII historically has been respected, feared, and maintained an inordinate power asymmetry between them and taxpayers. This perception remains strong even through all the major administrative reforms enacted since 1992.
- The SII is almost universally seen as strict in the completion of its duties (eighty-eight percent) and rigorous in their work (seventy-eight percent). Less people, but still a majority, see the SII as just (fifty-five percent), honest (fifty-nine percent), and professional (fifty-nine percent).<sup>201</sup> By 1996, they were already regarded as modern (sixty-one percent) and having reached a good level technologically (sixty-three percent). The SII received just over a majority of positive evaluations for their efficiency and attention to the public. Their worst characteristic by far was the level of bureaucracy, with only thirty-one percent giving a positive evaluation.<sup>202</sup>
- Citizens' evaluation of the SII in comparison: The evaluations of the SII mean a lot more when comparable to other institutions. The survey allowed for comparisons on twelve factors. Overall, the SII ranks higher than public services

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<sup>200</sup> Some other data from the survey: The SII is considered a very important to absolutely essential organization (over four-fifths) for the development of Chile, higher than the other five institutions asked about including the treasury (seventy-two percent) and municipalities (fifty-nine percent). Around seventy-one percent think that it is very good or excellent for the country that people pay taxes, with the most important reasons being for the development of the country and to help people with little resources. Twenty-three percent believe that taxes are low compared to other countries, fifty-eight percent believe that you never know where taxes go, and fifty-three percent believe that taxes principally go to help those who most need it.

<sup>201</sup> The auditors are viewed as mostly honest, competent, and strict, with fifty-six percent say that the tax inspectors are straight and honest, with only fourteen percent saying that it is easy to avoid taxes through an arrangement with a tax inspector, and two-thirds believe that all or almost all who try to invade receive fines or punishment. About one-third believe that these punishments/fines are too high, with one-fifty saying they are too low, and the last two-fifths either do not know or believe that the fines are just right. Fifty-six percent agree that the auditing practice is strict, with only one-fourth in disagreement.

<sup>202</sup> It is interesting to note that overall, retailers gave a more positive overall general rating of the SII (eighty-percent) compared to businesses (sixty-five percent) and professionals (sixty-six percent).



but lower than private services.<sup>203</sup> It is also helpful to see the trend of taxpayer opinion as of 1996 which will help us better understand and causally attribute the impacts of changes post-1996. In 1996, the SII had a worse image overall than in 1992 (see Table 22). The authors of the study argue that one reason for this decrease is due to the increased expectations the public holds of the SII as a modern, technologically advanced organisation.

- Tax evasion: The place where the SII had improved since 1992 was that it became more difficult to “deceive” improving twenty-eight percent on average (see Table 22). Despite this, citizens still view tax evasion as an issue with seventy-one percent of respondents believing that loopholes are used to avoid paying taxes.<sup>204</sup>

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<sup>203</sup> However, along these same dimensions, the SII ranked lower in 1996 than in 1992.

<sup>204</sup> Depending upon the question there were some differing responses, with sixty-nine percent saying that those with the highest incomes evade the most but also that the wandering retailers are the biggest perpetrators of tax evasion. Increased auditing would be welcome with sixty-one percent of the citizens believe that that the SII should have more resources to increase auditing capacities to reduce evasion.

	<b>Total</b>	<b>Businesses</b>	<b>Retailers</b>	<b>Profes.</b>
Bureaucracy	-21.2	-24.8	-6.5	-17.6
Efficiency	-20.9	-21.6	-17.9	-11.1
Level of technology reached	-20.4	-20.9	-13.7	-11.1
Development of computational processes	-19.3	-22.8	-11.5	-12.3
Professionalism	-17.1	-18.3	-14.3	-11.0
Modern	-14.1	-17.3	-4.9	-13.8
Attention to public	-7.8	-11.8	-2.0	-15.0
Honesty	-5.6	-7.2	-4.4	<b>6.2</b>
Importance for development of Chile	-2.6	-2.7	-1.0	-3.0
Rigorousness in mission completion	-1.4	0.9	-5.7	-5.9
Strict in mission completing	<b>4.0</b>	<b>4.9</b>	<b>3.9</b>	-5.8
Ease to deceive	<b>28.4</b>	<b>29.9</b>	<b>23.8</b>	<b>2.3</b>
Average	-8.2	-9.4	-4.5	-7.6

**Table 22 Comparison between results of Adimark 1992 & 1996 survey. Despite the reform, the image of the SII in 1996 was on average worse than it was in 1992. The highlighted cells are where the system was deemed to improve.**

Fortunately for this research, the 1996 survey asked some questions about citizens' trust in the SII. The Spanish term is "tener confianza", which translates to "to have confidence" and "to trust".<sup>205</sup> The results show that the SII is an institution that instills trust (or confidence) with around ninety percent responding that they trusted the SII.<sup>206</sup>

Perhaps the most interesting finding is that, despite the improvements in the SII and their service between 1992 and 1996, as evidenced by the objective data, the public on the

<sup>205</sup> Moving from English to Spanish, however, there really is only one correlate for trust, "confianza".

<sup>206</sup> The top five reasons for trusting were: good level of professionalism (eighteen percent), it is a regulated organization (fourteen percent), they audit properly (twelve percent), they detect abnormalities (eleven percent), and they complete their functions (around ten percent). Of the ten percent that do not trust, the reasons given were: they do not apply the law in the appropriate manner (two percent), they are dishonest (two percent), slow in informing (two percent), bureaucratic (two percent), and not efficient (one percent).

whole viewed the organisation and service as getting worse. And even more intriguing is the fact that despite this regression, they still maintained very high levels of trust.

#### 6.1.4 THE CURRENT SYSTEM

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).

##### **Intra-SII network**

The intranet-SII network consists of the following:

- **Intranet** that connects all employees where most internal procedures can be carried out,
- **Operating system** for procurement control where the entire procurement cycle is completed electronically,
- **Internet applications** for SII auditors to enable attention to taxpayers in the SII offices,
- **Online publication system** that permits the publication and updating of the content of different pages including new tax regulations.

##### **Interconnectivity between SII and other public entities**

The SII has been developing an electronic platform to connect all public sector organizations and enable them to communicate and exchange information. This amounts to massive agency interoperability that enables the gathering of third-party information about taxpayers such as salaries, interest earned, investment holdings, etc. This interoperability brings several significant benefits, including acting as an impulse for ICT use across different sectors of Chile, as well as enabling a significant increase in the range and type of activities and services that the SII can offer.

##### **Virtual office**

The SII-taxpayer system is often described as SII's virtual office (see Figure 17). Currently, at this site taxpayers can perform a myriad of tasks: 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-invoice for both products and e-receipts (Boleta de Honorarios Electronica) for independent services rendered.



Figure 17 A screenshot of the SII's virtual office homepage, <http://www.sii.cl>, May 2007.

The research in this thesis focuses on citizens' interaction with the SII virtual office and

in particular with their experiences with the *e-income* tax declaration process.<sup>207</sup> Online submitting and paying of income taxes electronically can happen in one of four ways:

1. Through basic software that can be downloaded free of charge from the web site.
2. Through specialised authorized third-party software, also accessible through the site.
3. Through an online interactive tax form where the taxpayer enters the data. The form performs the requisite calculations as well as a series of data check to better improve the accuracy of the declaration.
4. A virtual income tax return proposal that has been pre-filled with the taxpayer data collected by the SII, as facilitated by the electronic platform. This form completes taxes for a wide range of taxpayers, but does not complete the process entirely for those who own their own business. The SII tries to make it clear that this completed form is a simply a *proposal* and that it is the responsibility of the taxpayer to review the data and confirm its veracity before accepting it.

If taxes are owed, payment can happen through a variety of means, both on and off-line. The SII has also established links with the major banks in Chile so that payments can be made online directly from taxpayers' bank accounts. It is also possible to pay online with a credit card. Offline, payments can be made with a bank order charged to a bank account, or simply through a bank, as you might pay an electric or hydro bill.

Irrespective of who supplies the data (third-party organisations, accountant, or taxpayer) for a tax declaration, the ultimate legal responsibility lies with the taxpayer. If the SII presents a proposal and discrepancies exist, it is the responsibility of the taxpayer to contact the organization that supplied that particular information to the SII and rectify the problem. For example, if a taxpayer finds that their interest accrued from a bank account is not accurately represented, they must contact the bank and resolve the discrepancy,

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<sup>207</sup> The online income tax service is but one of many services offered by the SII. It is, of course, impossible to completely differentiate the income tax service from the others services and the entire e-administration system. Therefore, while an emphasis will be on the income tax, other relevant details will be included. The attempt here is to try to limit the analysis to the direct impacts of the income tax service and bring in the others when they appear to causally overlap in some significant manner.

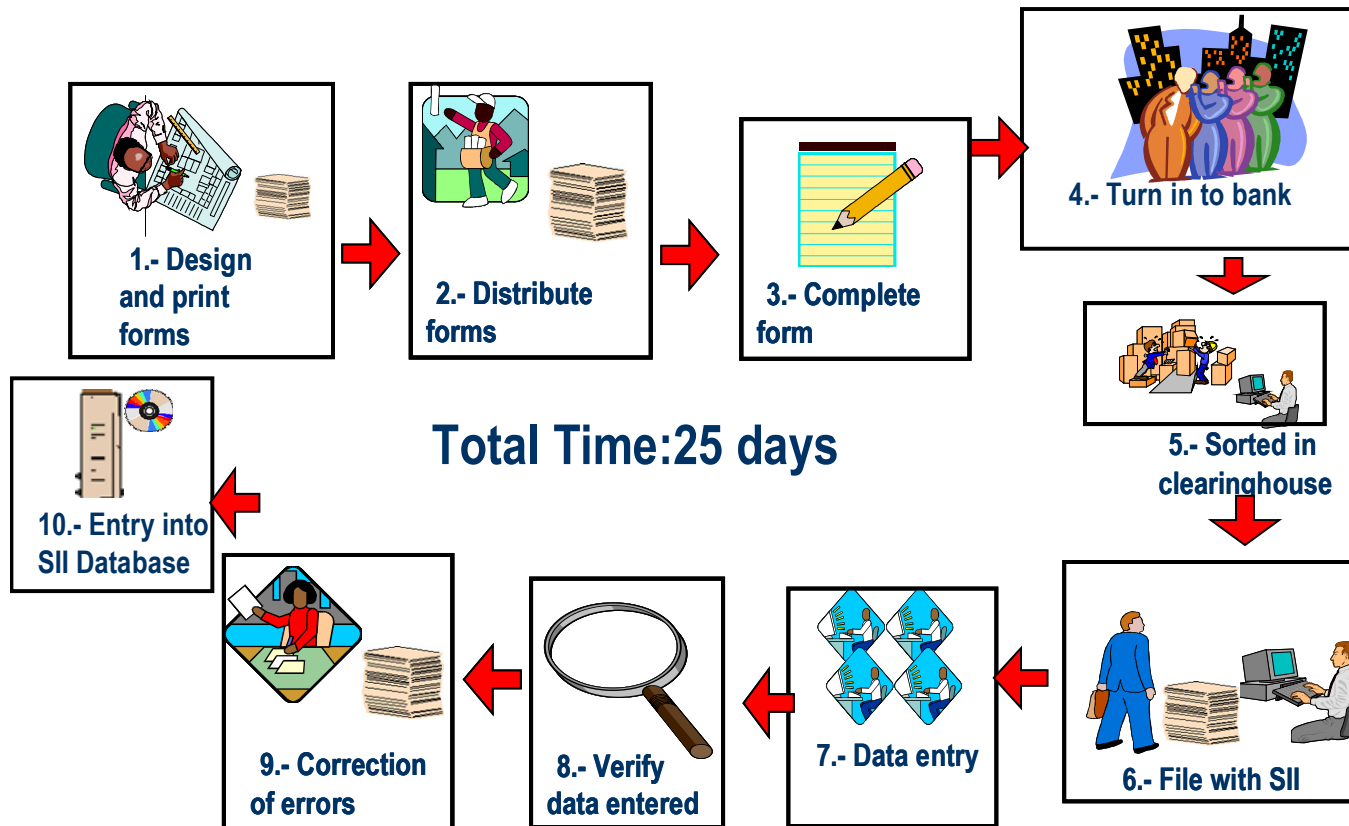
which is then reported to the SII. If errors are made, then the punishment is dependent upon the severity of the error and usually consists of a corresponding fine. Sometimes, other pecuniary incentives are used to encourage the settling of tax matters. For example, if a taxpayer who is a small-business owner has taxes that are not completely up-to-date, then the taxpayer may be denied the ability to receive billing invoices which restricts their ability to do business.

#### 6.1.5 E-TAX SYSTEM IMPLEMENTATION HISTORY<sup>208</sup>

The computerisation of the tax administration has meant dramatic changes for both the administration and delivery of tax related services. The most obvious change has been the movement from a paper and microfiche to a computer-based administration. Prior to the computerisation of the SII the tax administration entailed a massive amount of relatively tedious, and error prone tasks such as the manual entry of all received tax declarations. The standard income tax administration process took on average twenty-five days and is pictured in Figure 18.

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<sup>208</sup> This section draws from a series of external sources such as Sanchez's PhD thesis, but also is highly dependent upon the set of interviews conducted during the IADB study and subsequent interviews of SII employees for the World Bank study.



**Figure 18** The paper-based income tax declaration process, source: (FTAA 2002).

In 1994, in the early stages of the Internet, Etcheberry and others in the SII envisioned that computers could play a role in improving efficiency and service of the tax administration (Sánchez 2005). The use of new ICT and the Internet was seen as a strategic option because it helps to fulfil the main objectives of the SII as an institution.<sup>209</sup> New ICT were believed to enable the following benefits: provision of high-quality services to taxpayers as an incentive for systematically improving tax compliance; minimisation of the costs of tax compliance; optimisation of the SII’s ability to use and manage taxpayer’s information; and providing an example for other public sector institutions.<sup>210</sup>

<sup>209</sup> Recall that they are to facilitate tax compliance, strengthening audit and prosecution capability, and a tax administration that contributes to economic development.

<sup>210</sup> Source: [www.sii.cl](http://www.sii.cl) and (Toro 2005).

When the SII decided to computerise its system they already had created an environment that was conducive to success. Prior to the computerisation process, they had spent several years massively simplifying the internal tax procedures with the aim of creating a more efficient tax administration without increasing costs. This meant a more rational and clearly delineated set of tax processes when it was time to computerise and encode these processes in software (Constance 2000). They also made the decision to base their technological infrastructure on the non-proprietary TCP/IP protocol. This was done to reduce reliance on any one IT supplier, but had the fortuitous outcome of making them compatible to take advantage of the interconnectivity of the Internet.

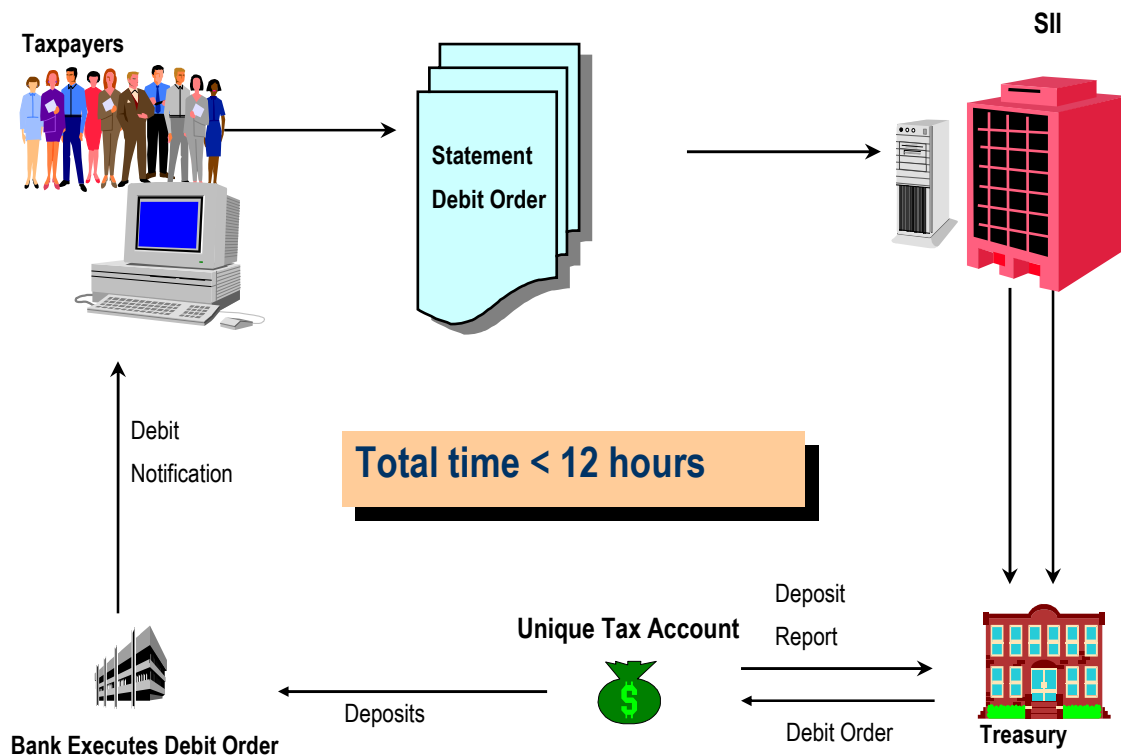
The implementation of the tax system was, like other reforms, incremental. It has proceeded in three main phases: *informational*, *interactive*, and *transactional*. Starting in 1995, the SII created their web-site. The goal was to satisfy the general informational needs of the taxpayers so that they would not have to go to the tax offices. This informational stage “entailed the placement of a significant amount of tax-related information online, including guidelines and filing procedures, taxpayer instructions, and tax principles and policies” (Avgerou *et al.* 2005). The second phase, beginning in 1997, was the next logical utilisation of the Internet to allow taxpayers to interact with the SII online through the incorporation of online help and feedback possibilities. Information was organized and made accessible through decision trees and knowledge-based systems, and taxpayers could make inquiries through email to SII employees. In 2000 they placed an electronic help guide that has been incrementally enhanced to include more services. At this point, the SII had also expanded its informational capabilities delivering personalised taxpayer information.

The transactional stage took the process to its logical next step and marked a significant change in the nature of tax administration and the online service. In 1998, the SII broached the possibility of filing taxes online with the online form, including the issuing of secret access keys that helped to guarantee privacy and authenticity of the information. In 1999 the online tax form was authorised as well as providing the possibility to make tax corrections via the Internet. As the technology and extent of available information



improved, the form was successively built upon until a complete tax proposal emerged. Furthermore, the availability of information allowed for the development of more extensive data cross-checking and has greatly increased the range and extent of auditing. It has also enabled the SII to improve the accuracy and quality of its services, as well as expanding the range of possible services, such as the ability to pay online.

Over the following three years, the SII built on their technological platform to significantly improve the ease of completing tax obligations. In 2000, they introduced a system to enable payments of income tax and VAT online. They improved this system the following year whereby the taxpayers could pay by online debt from their bank account at the moment of declaring online. This was expanded to include credit cards in 2002. Furthermore, in 2001, the SII introduced the online tax declaration proposal. Finally, in 2002 the SII redesigned the SII portal with the objective of facilitating taxpayers in their completion of tax obligations. The standard online income tax declaration process is illustrated in Figure 19 below. The process has been reduced from an average of twenty-five days to twelve *hours*.



**Figure 19 The online income tax declaration process, source: (FTAA 2002).**

This process has resulted in several changes to the internal structure and activities of several groups – a larger internal IT group, and a new department of administrative control that was not possible pre-computerisation. This new department monitors the tax processes and performance with the system generating “monthly management reports” that include indicators for goals for offices and individuals. It also allows for central control and monitoring of the different regions and regional performance. As this happens automatically, it also saves time for the managers at the regional levels. The ability to monitor regional performance from the central office in Santiago has resulted in both increased stress as well as improved performance. In one interview, a SII manager told of how suddenly they would cover the same amount of cases in two months that they had completed the whole year before.<sup>211</sup>

The ability to gather taxpayer financial information from a variety of external sources and cross-check this data has also greatly enhanced the capacity of the auditors. This has resulted in a change of focus, scope, and type of activities they engage in. Originally, auditors spent a large amount of time worrying about and resolving human errors. With the increased accuracy of data and the reduction in human errors, they can focus on discrepancies that are more likely caused on purpose. Furthermore, almost 100% of all tax declarations are run through an automatic auditing process. This process then allows for the highlighting of discrepancies that may warrant extra attention. This allows the auditors to have the software highlight those tax declarations that will potentially yield the greatest payoff if they are audited, increasing their total reduction of tax evasion payoff per case. The auditors are also constantly looking for new ways to utilise all of the new information provided by the system.<sup>212</sup>

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<sup>211</sup> Interviewee: WB-NL-SII-6-10.

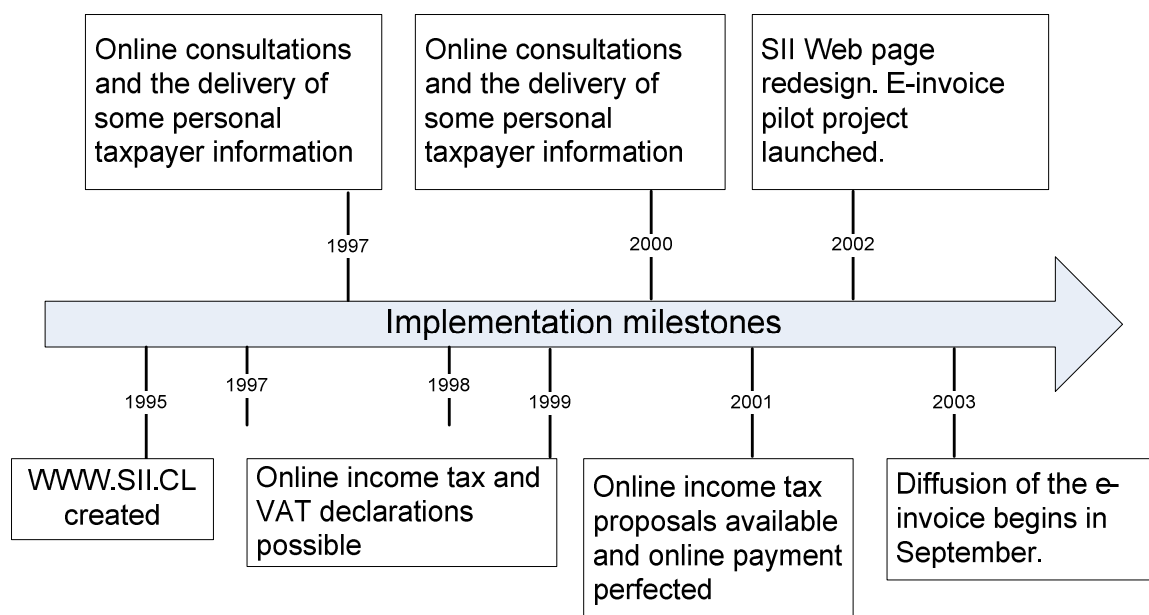
<sup>212</sup> Interviewee: WB-NL-SII-1/5.

Another significant initiative that has emerged in the last seven years is the issuing of electronic invoices (e-invoices).<sup>213</sup> Before issuing e-invoices, paper invoices were numbered, stamped, and issued at the various tax agencies across Chile. A business or contractor had to travel to the tax office and receive a packet of SII stamped invoices that were then used at the point of sale. Working with e-invoices is significantly more complex than paying taxes online. It requires a pc with compatible accounting software, an Internet connection, and a printer. The e-invoices are then received and printed and the sales totals are kept in the accounting package in the computer. These totals are then submitted monthly as the VAT filing. The implementation of the e-invoice began in the early 2000s.<sup>214</sup> In August 2002, the e-invoice pilot project was launched and already proved effective. Consequently, on the 2<sup>nd</sup> of September, 2003, the SII began the process of the diffusion of e-invoices (see Figure 20 for a timeline of the SII tax online implementation).

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<sup>213</sup> In Chile, the e-invoice is called the “Factura Electronica”. The e-invoice was envisioned by the SII as a “revolutionary tool for improving productivity in the private sector” ultimately setting up a “standard platform for e-commerce in the country which will imply a tremendous transformation for doing business in Chile”. Source: [www.sii.cl](http://www.sii.cl).

<sup>214</sup> By 2001 had already received the “Award for the Best Public Initiative” in Chile. See footnote 221 for a list of other awards the online tax service has received.



**Figure 20** The SII tax online implementation milestones.

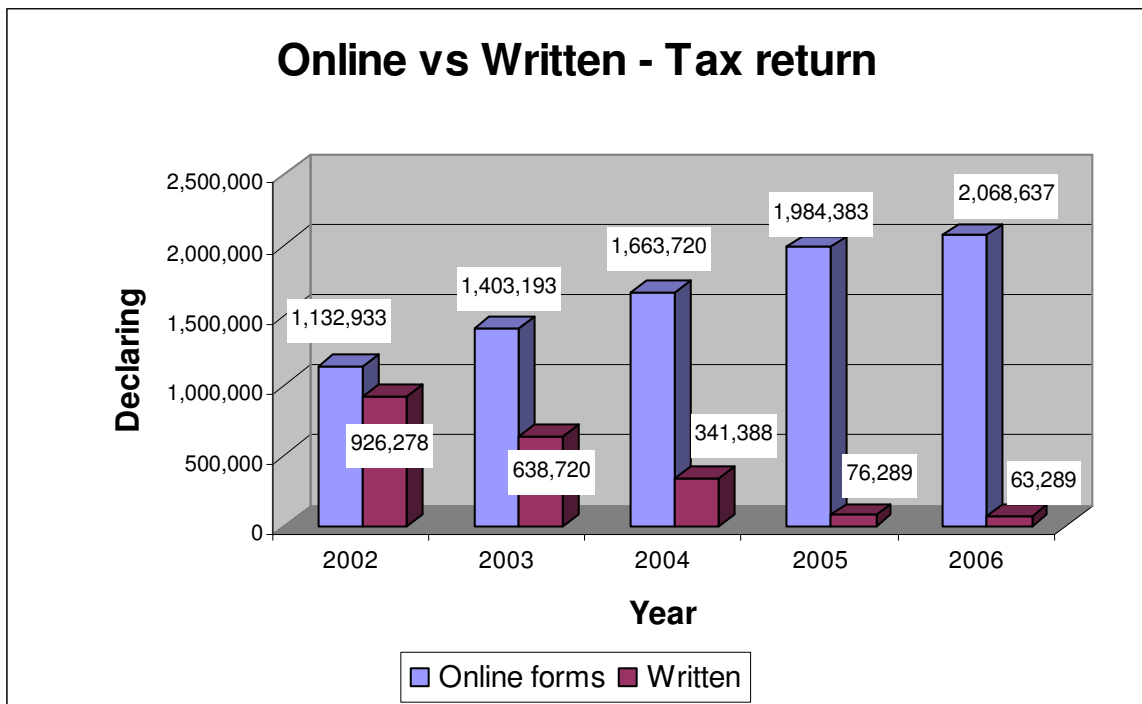
There are two aspects of the implementation process that warrant mention.<sup>215</sup> First, the SII used a series of incentives to encourage transition to an online system. For example, e-filers had extra days to submit (AED 2003). In an attempt to encourage people to pay online, in April 2006, a substantial (70%) reduction in owed taxes was awarded if you paid online rather than through a bank. Second, the SII had the goal of facilitating the taxpayer in completing their obligations. The pinnacle of this strategy is the online tax proposal, described as the “red carpet treatment” in one SII manager interview.<sup>216</sup> Other services are available to facilitate compliance, for example, every year in March and April, tax officials will go out to telecentres to help people perform their tax declarations online and answer any tax related questions.

<sup>215</sup> Two factors that are relevant to the implementation history that have not been mentioned. First are the crucial changes in the Chilean legal code to accommodate the system. Two essential changes were an amendment to Article 30 of the tax code authorising taxpayers to declare taxes on a media other than paper and the digital signature law enacted in 2003. Second, to provide security, the SII implemented a password entry system that entails the issuing of a personal secret key to each taxpayer.

<sup>216</sup> Interviewee: IADB-3.

### 6.1.6 OBJECTIVE OUTCOMES

Judging from the quantitative data regarding the uptake and use of the system as an e-service, it is hard to dispute its success. The transition from a paper-based bureaucracy to a computerised bureaucracy is almost complete.<sup>217</sup> The system is moving towards achieving its goal of putting all major tax transactions online. They now receive 100% of the third party information electronically (Barraza and Hervias 2006). Furthermore, they have almost achieved 100% online filing. Since its inception, online filing has experienced a steady increase. In the first year, 1999, only about five percent of taxpayers (80,365 of 1,711,782) actually paid through the online form. By 2002, more people filed online (over 1.1 million or about 55%) than had filed with paper (925,000). By 2005 the SII has almost reached their goal of 100% e-filing with over ninety-six percent filed online (almost two million). By midnight May ninth of the following year about ninety-seven percent of the taxpayers filed electronically, the equivalent of 2,068,001 received e-documents (see Figure 21).<sup>218</sup>



<sup>217</sup> In one interview with an SII employee they described how when they first worked at the SII it was filled with papers, there were papers everywhere. Now every employee works on a computer.

<sup>218</sup> Source [www.gobiernoelectronico.org/?q=node/4717](http://www.gobiernoelectronico.org/?q=node/4717), last accessed, Sept. 15<sup>th</sup>, 2007.

**Figure 21 Total income tax declarations, online versus written (Barraza and Hervias 2006).**

The system has proven to be both efficient and robust. Its efficiency is reflected in the reduced tax processing time from twenty-five working days to just twelve *hours*. This means that online taxpayers receive their return in terms of days or weeks rather than months. The system has also proven to be remarkably robust to a large amount of traffic. Not only is it Chile's number one Internet destination, but it also has been able to process large amounts of forms in short time periods, especially around the income tax deadline. On May 9<sup>th</sup>, 2006 the SII received and successfully processed over 25,000 tax declarations between 23:00 and midnight.<sup>219</sup>

During this time, the state has also managed to significantly increase tax revenue. Its income tax revenue has increased from 761,450.7 million pesos in 1993 to 3,448,993.7 in 2005, and likewise its VAT revenue has steadily increased from 1,595,746.8 million in 1993 to 5,348,265.7 million in 2005. This increase is undoubtedly partially due to the general increase in GDP of Chile over this timeframe. However, it is also due to the increased tax compliance resulting from decreased evasion. As of 2006, it is estimated that the income tax evasion has been reduced from 40 to 30% and in the last five years, VAT evasion has reduced from 22% to 11%.<sup>220</sup>

#### 6.1.7 SUBJECTIVE OUTCOMES: CITIZENS' PERCEPTIONS OF THE SII CIRCA 2005

The improvements reflected in the objective data regarding SII performance have a subjective correlate in the opinions of citizens. Like the 1996 Adimark survey, the 2005 survey (published in 2006) gives us a comparative insight to changing taxpayer opinions over time. The survey asks citizens to assess ten areas of the SII in 2005 (see Figure 22) and in every area, they have improved from 1996 to 2005 (see Figure 23). Unfortunately, they did not ask questions in 2005 pertaining to trust in the SII, as in 1996.

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<sup>219</sup> Uptake of e-invoices has been more modest, but has increased in the last few years. In 2006, fifty-four percent of the VAT tax returns were completed online each month (Barraza and Hervias 2006).

<sup>220</sup> Diario La Tercera (24-03-07), source: <http://www.sii.cl/SIIPRENSA/2007/2403/01.htm>.

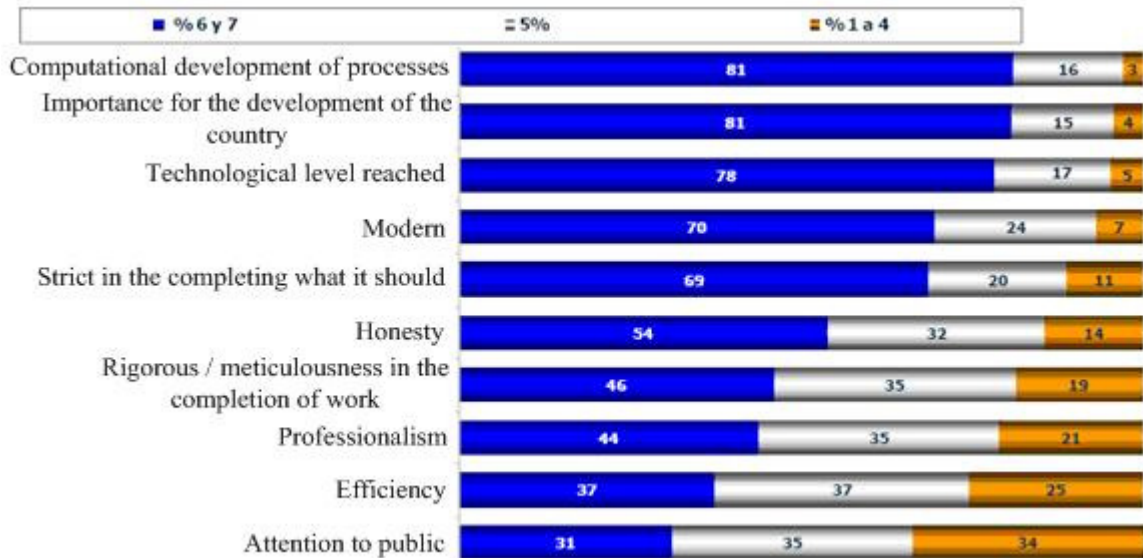


Figure 22 Evaluation of the SII in 2005 (Adimark 2006). The scale is from very bad=1 to excellent = 7. There were a total of 718 responses.

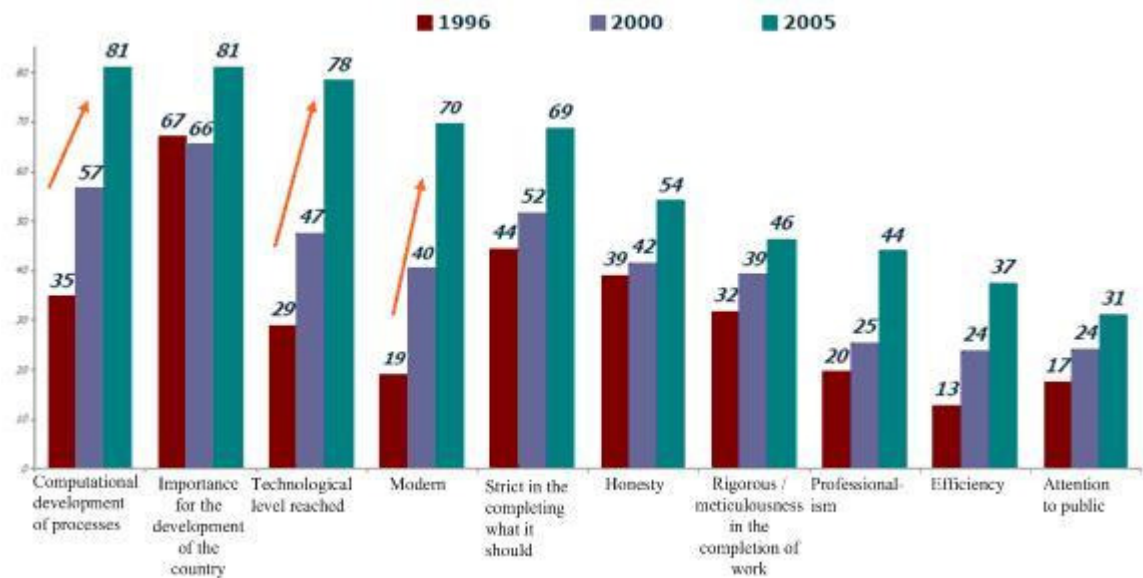
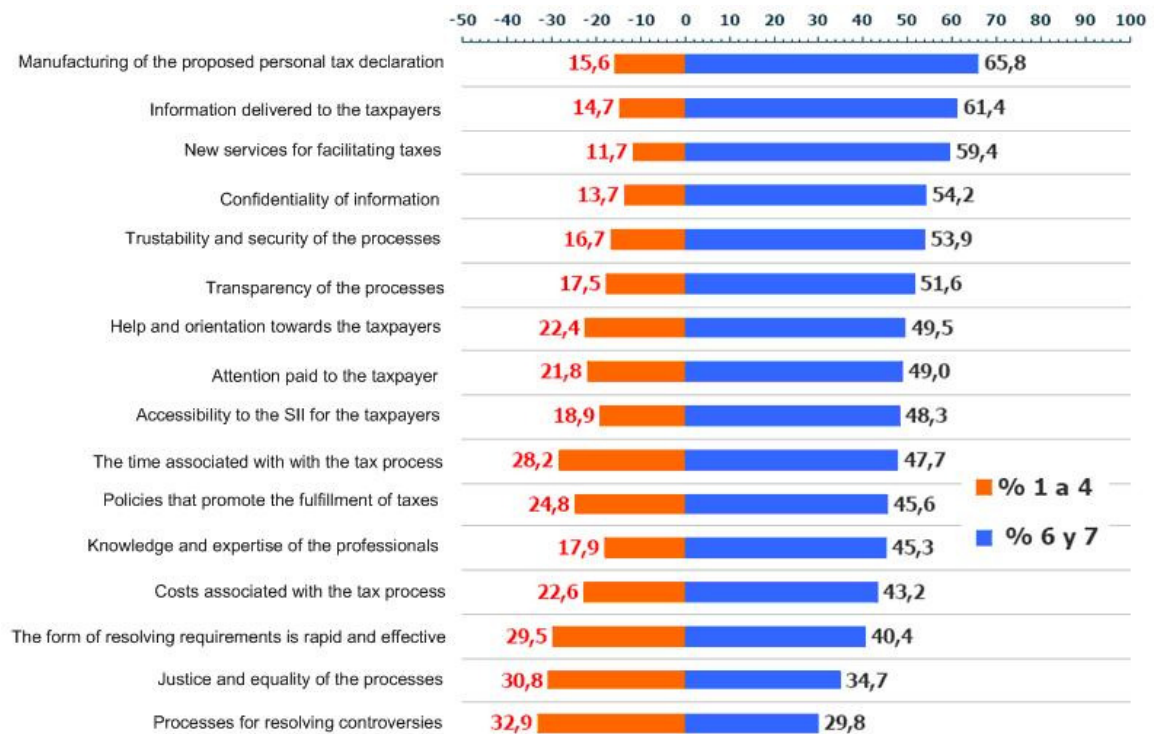


Figure 23 Evaluation of the SII from 1995 – 2005 (Adimark 2006).

The largest improvements came in the areas that reflect the computerisation process: computational development of processes, its technological level, and how modern the SII is. It has also made decent gains in perceptions of competent performance, gaining more than twenty points in the areas of being “strict in completing what it should”,

professionalism, and efficiency. Notably, the smallest gains (but gains nonetheless) came in the area of motivation and concern for the interests of others with attention to public and honesty only increasing fourteen and fifteen points respectively.

When asked a retrospective comparative question about particular specific changes in the SII service, a similar trend emerged (see Figure 24). The new technical services received the best marks, with manufacturing of the proposed personal tax declaration, information delivered to taxpayer, and new services for facilitating taxes rating in the top three. Indicative of the improved perceptions of the performance of the system, in another question, over ninety-five percent of people viewed the information they received, in comparison to a few years earlier, as better or much better in terms of quantity and quality.



**Figure 24 Taxpayers' opinions on recent changes in the SII service (Adimark 2006).**

There were some data that suggest a qualitatively different response between groups surveyed. For example, when asked about the quality of additional information given, the



non-professionals are the least positive with only approximately fifty-four percent saying that they find it better or much better. While eighty-two percent say that the system has much or very much reduced the evasion of taxes, only forty-one percent of non-professionals hold that opinion (see Table 23). However, non-professionals in similar numbers agree that it is difficult to trick the SII (see Table 24). Another significant difference between the groups is that non-professionals are the most likely, by a significant margin, to deal with the SII in person rather than online (see Table 25).

**How much do you think that tax evasion has reduced recently?**

	<b>A lot &amp; enough</b>	<b>Very little &amp; nothing</b>
<b>Total</b>	82%	17%
<b>Business</b>	83%	15%
<b>Commerce</b>	85%	15%
<b>Professional</b>	<b>65%</b>	<b>32%</b>
<b>Non-professional</b>	<b>41%</b>	<b>55%</b>

**Table 23 Taxpayer perception of the reduction of tax evasion in 2005 (Scale = Nothing, Very Little, Little, Enough, A Lot). Source: (Adimark 2006). Non-professionals have a very different perception of the reduction of evasion than the rest of the surveyed groups.**

**How easy or difficult is it to deceive the SII?**

	<b>Difficult &amp; very difficult</b>	<b>Easy &amp; very easy</b>
<b>Total</b>	92%	7%
<b>Business</b>	92%	7%
<b>Commerce</b>	95%	4%
<b>Professional</b>	<b>77%</b>	<b>15%</b>
<b>Non-professional</b>	<b>75%</b>	<b>20%</b>

**Table 24 Taxpayer perception of the ease or difficulty of deceiving the SII (Scale = Very Easy, Easy, Difficult, Very Difficult, Don't Know). Source: (Adimark 2006).**

### How do you access the SII?

	Total	Business	Commercial	Professional	Non-Professional
Internet	86.9	88.3	88.8	77.2	20.5
Personally, SII office	9.3	7.9	9.0	17.6	53.3
Telephone	2.3	2.7	1.6	2.8	1.4
Other / I don't	1.4	1.3	0.6	2.4	24.8

**Table 25 Breakdown of the how different groups interact with the SII (Adimark 2006). Non-professionals use the Internet the least at around twenty-one percent while fifty-three percent still go to the SII offices.**

#### 6.1.8 SUMMARY

By 1999 the SII had already won an award given by the Chilean Association of Information Technology Companies for their contribution to Internet development in Chile. Since then they have continued to receive a wide variety of other accolades as one of the most innovative e-service initiatives in the world.<sup>221</sup> By 2001, the Director of the SII claimed that Chile was more advanced in its use of the Internet for tax purposes than the USA, France, Spain or Germany (Angell 2005b).<sup>222</sup> Of course, these awards are not definite indicators of a more trustworthy system, or a system that will necessarily generate trust. However, when considered in light of the improvements in revenue collection, the decrease in tax evasion (at least in the 1990s), and the swift movement of almost all tax payers online, obviously the SII has been doing *something* right.

<sup>221</sup> Some of the national and international accolades were: 1998 the National Award for Quality in Public Services for the development of the best process of Strategic Planning; 1999 Annual Award for the most outstanding public sector project, given by the Chilean Association of Information Technology Companies; 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.

<sup>222</sup> Etcheberry was quoted from a newspaper article in El Mercurio, February 21<sup>st</sup> 2001.

The current online tax system is undoubtedly one of the most advanced in the world, with high levels of efficiency, an impressive online proposal, and a level of interoperability with third party organizations and information centralisation that might not be possible in other countries. In a relatively short period they have achieved most of their goals of increasing tax revenue, decreasing tax evasion, dramatically reducing tax turn-around time, all while modernising tax administration and greatly facilitating tax compliance. The subjective data suggests that most taxpayers have noticed these changes and the image of the SII has gone up accordingly.

These changes imply broader socio-economic impacts. The economic growth in Chile over the last fifteen years combined with the improved auditing capacity of the SII means that a large section of the society is being incorporated into the system. Increased state revenue has helped fund the social and economic programs that have worked to stave off the impacts of the massive inequality in Chile. Furthermore, the Chilean society has suddenly been thrust, willing or not, into the world of computers and the Internet as the SII has played a major part propelling Chile towards their vision of the information society.

So how have these changes impacted on the trustworthiness of the SII and citizens' institutional trust in the SII? It would appear that such improvements would indicate a more trustworthy institution and that trust would be built accordingly. However, reality is rarely that straightforward, and it is the underlying dynamics that are of interest here. So let us now turn to consider these changes in light of our theories of institutional trustworthiness and trust.

## **6.2 ANALYSIS: TRUSTWORTHINESS**

The goal of this section is to establish objective changes to the SII that have occurred as a result of the introduction of the e-service. This analysis draws from the data presented in the case description, the set of surveys and interviews conducted by the interviewer of the SII employees, and other relevant collected documents. These changes are then linked to

the theory set out in Chapter 4 to establish concrete trust building hypotheses based upon the new trustworthy characteristics. This section will consider the trustworthy components in sequence: competence, interest, and values.

### 6.2.1 COMPETENCE

The data suggest that SII has relatively consistently increased its bureaucratic capacity from the early 1990s until 2006. The improvements began with administrative reform and have continued with the computerisation of the tax administration. The culmination of this has been the relatively smooth and rapid transition to an online service that accounts for nearly 100% of income tax declarations in a short eight years.

#### **Efficiency/Effectiveness**

In terms of objective measures, the SII is an efficient and effective institution, as indicated by its status as one of the most productive tax agency per employee in the world. This efficiency was already realised before the computerisation process was complete. Recall that by 1999, early on in its process of introducing the new technology, Chile had one of the best employees per taxpayer ratios and collection rate (see 6.1.2).<sup>223</sup> Arguably, the efficiency and effectiveness has undoubtedly increased since. There are a variety of ways through which the administration and tax service has been directly enhanced through the new ICT:

- 1) The biggest change to efficiency and effectiveness of the institution arguably came about during its switch to the transactional stage where citizens could complete the tax forms online. This had the major benefits of a) reducing human errors (ninety-eight percent of the managers reported that the accuracy and consistency of data had improved), b) reducing lost information from transported documents, and c) reducing manual data entry. Survey data indicate some of these efficiency gains through the new technology. Employees report that their work processes are simpler (sixty-eight percent) and a reduced load of data handling

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<sup>223</sup> The SII has one employee for every 4,051 citizens, and by contrast, the U.S. has one employee per 2657 citizens and all industrialised European countries have less than 1,000 citizens per tax employee (Constance 2000) corresponding to one employee for each \$3.4 million, a rate higher than in most developed countries (Sánchez 2005).

and record keeping tasks (sixty-two percent). Managers also experience benefits. Eighty-six percent of managers report a reduction in time to generate reports and seventy-eight percent of them believed the cycle time of key processes has been reduced.

- 2) The ability of managers to monitor the internal processes has greatly increased. Ninety-nine percent of managers responded that IT has facilitated adequate supervision over employees (sixty-nine percent strongly agree, thirty-one percent somewhat agree), and eighty-six percent believe that the ability to monitor performance has increased (fifty-six percent strongly and thirty percent somewhat agree). Anecdotal evidence from interviews suggest that this internal monitoring of processes and the setting of performance targets appear to have improved employee performance, especially the accountability of regions which previously could not be monitored at a distance. Furthermore, the automatic generation of reports has reduced the time spent by managers on collecting and collating the data necessary to report to their superiors.
- 3) The increased information sources regarding administrative performance has improved the ability of the organisation in tactical decision and policy making to achieve organizational goals. Eighty-eight percent of managers believe that the SII provides good decision support for the government and ninety-three percent believe that the policy formulation and implementation has improved with IT.
- 4) The auditing capacity has been greatly enhanced with the symbolic processing capabilities of computers. The SII has in place algorithms that effectively audit every tax form, with algorithms designed to identify potentially high-return audits.

This efficiency and effectiveness is ultimately manifested in terms of the service that the SII provides, both online and in the office. The automated completion of the income tax form by the SII is a significant technological accomplishment that indicates a high level of competence. The reduction in the cycle times of significant tax administration processes has meant the reduction of tax turnaround time from months to weeks. The performance of the system itself has proven quite robust, taking on high volumes of tax

declarations with few problems. Office service has also been improved through the increased availability of information to the employees. Attendance times have also been reduced and held below the 30 minutes time limit. Eighty percent of the SII employees surveyed reported a reduced average time to respond to a taxpayer.

C1 Efficiency/effectiveness hypothesis – *The existence of the online tax proposal and the related improved institutional effectiveness and efficiencies such as improved tax turn-around times will tend to build trust.*

C2 Efficiency/effectiveness hypothesis – *The improved in-office service and wait times will tend to build trust.*

### **Performance transparency**

The SII website provides some links to articles and other information regarding the performance of the SII. These are either found in the form of links to news articles written about the SII, awards received, or research concerning taxpayer attention, or services, such as taxpayer surveys. News articles and other information are displayed on a column on the left side of the page. In general, this data communicates positive performance results.

C3 Performance transparency hypothesis – *The positive performance data presented on the web page will tend to build trust provided it meets or exceeds citizens' expectations.*

It is not clear, however, how these data are linked to accountability mechanisms and therefore is not expected to be a contributing mechanism to building trust.

C4 Efficiency/effectiveness hypothesis – *The lack of apparent accountability mechanisms linked to the performance data implies no effect on trust.*

### 6.2.2 MOTIVATIONS: INTERESTS

There are a variety of changes introduced with the e-service that may indicate that the SII takes taxpayers' interests into account. The most prominent are the realisation of concrete user benefits from adopting the e-service as well as potentially increased transparency and accountability of the system. However, some other changes are less clear as to their impact on trustworthiness, such as changes in the power dynamic that may have distrust engendering effects.

#### **Considering users' interests**

**User benefits**        There are several concrete user benefits to using the online income tax declaration service in terms of time and cost savings. In most cases, for taxpayers who are employee income earners without their own business, filing their taxes online can be completed in a matter of minutes and with a few clicks of the mouse. Completion requires only that they verify the accuracy of the tax proposal and accept it. Those with more complicated taxes are still required to complete the tax form, but as much information as possible is still completed for them automatically. If they are receiving a tax refund it will arrive in the mail, generally within a few weeks, rather than in the several months that it took before. If the taxpayer owes money, the complete transaction can be done online. For those who do not have a bank account, this requires queuing and paying at the bank. If there is an error in the information, however, it is the taxpayers' responsibility to sort out the discrepancy. This requires contacting the source of the information (e.g. bank, employer) correcting the mistake and making sure the SII is informed of the correction. This whole process reduces the necessity to visit an SII office and the time loss associated, including travel time and queuing. Depending upon the taxpayer's location, the time savings can be significant; for those who live in rural areas a round trip may take up most of a day. If a trip to the office is necessary, the SII has attempted to reduce the time costs associated, promising that you will be attended to within thirty minutes, something they have successfully adhered to. Cost savings come in

two main forms: eliminating the need to pay an accountant if one was used, and saving money associated with travel costs and the concurrent loss of work income.<sup>224</sup> Also the various incentive systems adopted by the SII to encourage online tax declaration provide more user benefits, such as extra days to submit. As an incentive to adopt the Internet, the SII offers a seventy percent reduction in tax payments for those who pay online.

Another potential benefit of the e-system is the removal of intermediaries in the tax process. A central concern of the SII is the reduction of accountants with the goal of financially benefiting taxpayers. Furthermore, there were concerns with the legal responsibility— for example, accountants could take advantage of their clients and not suffer any consequences as any mistake on a tax form is legally the responsibility of the taxpayer. The use of accountants continues despite the movement online to the radically simplified taxpaying process. Adjusting to this situation, the SII just designed a process to provide an authorized third party with access to the users' account without having to give them the original secret code. This may help reduce abuse by accountants.

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

**E-service quality** The facilitation of tax compliance has been a priority of the SII since the early 1990s. Here two aspects of the service quality are considered: ease of use and usefulness. Both of these are generally assessed through user opinion surveys and are dependent upon a variety of personal factors such as computer literacy and education level.<sup>225</sup> However, without using such surveys, it is possible to highlight some of the characteristics that make the SII both useful and easy to use. The usefulness of the service

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<sup>224</sup> Businesses have also arguably benefited in the same way. Furthermore, the introduction of the factura electrónica (e-invoices), for those businesses that have incorporated it, has cut down on costs. The subdirector of auditing claimed that the “low-end estimate” of cost savings for business moving to the factura electrónica is about 2/3rds, source: IADB-3.

<sup>225</sup> A text readability assessment of the SII main page ([www.sii.cl](http://www.sii.cl)) returned a “Huerta Reading Ease” score of fifty-three which falls in the tenth to twelfth (upper secondary) category. See: The Accessibility Institute, The University of Texas at Austen, <http://www.utexas.edu/research/accessibility/index.html>.



is self-evident. Citizens are obliged to pay taxes, and this service enables them to do so much more efficiently. The ease of completing taxes has also been greatly increased. The online tax proposal simplifies the tax declaration process as much as can be expected without fully completing the process without human intervention. The only obstacles to using this service are a) those that impede e-service adoption, b) lack of a secret code (can be obtained online or in an office), or c) a more complicated tax declaration (for example if you operate a business, but even then as much of the form as possible is completed.) The SII has several initiatives to help overcome some of these obstacles. One of these initiatives is the training of taxpayers in the use of the e-service, generally performed by a SII employee in a local telecentre. Also, around tax time, the SII sends employees to telecentres for a day to help citizens who have difficulties with completing their tax declarations online.

*E-service quality – 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.*

### **Voice**

The e-service introduces several new means of citizen communication with the SII and offers a variety of tax related information online that enables taxpayers to be well informed with respect to tax procedures and their rights and responsibilities. The SII website contains detailed descriptions of the rules and procedures of tax administration, FAQs, and other resources to facilitate the taxpayer to complete their obligations without having to come into the office. In the month of April in 2005 there were more than 600,000 consultations.<sup>226</sup> They also provide other means to get information and ask questions online or by telephone, opportunities that were not available earlier. A new customer service centre was established around 1999 that deals with taxpayer enquiries. Despite these new means of communicating information, they do not actually provide the means to increased *participation* in the sense that it shows a potential to influence SII

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<sup>226</sup> Source: WB-NL-SII-6-10.

policy or an alignment of SII-taxpayer interests. The service does provide easier access to information for those that would be interested in tax policy. At best, this information provides the increased opportunity to perform tax obligations and potentially question tax rulings.

The SII web-site provides new means for providing feedback such as emailing complaints, frequent user surveys, and a feedback link on the webpage. The degree that these feedback mechanisms actually represent true channels of communication and a more trustworthy institution (in terms of taking the feedback seriously) is also not clear. Evidence from interviews suggests that a certain percentage of emails and other comments are taken seriously, but there is a large portion of comments that represent a misunderstanding or confusion on the part of the taxpayer and are ignored. Indicative of this, forty-four percent of managers say that citizen feedback is taken into consideration for decision making, where forty-four percent neither agree nor disagree, and twelve percent disagree. Perhaps, however, the mere existence of the possibilities for feedback will engender trust. At worst, it is expected that the feedback mechanisms will build trust for those who have had some success in their use.

*Voice – 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.*

### **Institutional transparency/accountability**

The SII puts two types of institutional transparency information online:

1. **Internal instructions** (rules of operations) – All of the tax procedures, rules, fines, etc. are accessible online. The SII has done their best to assure that all information necessary is available to avoid any “hidden” costs that might surprise a taxpayer. They also include an organizational chart of the institution that shows many of the managers and their positions inside the organisation. During an

interview this was expressed as a way for the SII to be less secretive and more human. Eighty-five percent of SII employees surveyed found the rules and procedures of the SII online to be very or somewhat transparent.

2. **Transaction information** – When a taxpayer logs into the web page with their unique account and code, they have access to all of the information that the SII has of the taxpayers. Previously, this information was not easily available and it is a movement away from the previous environment of secrecy that was typical of Chilean institutions.

While there is increased transparency, it is not clear that they are linked to effective accountability mechanisms. This provides potentially some level of accountability, of both the SII and of accountants if they are used. The clarity of the rules, regulations, and information make the entirety of the tax process transparent to the user removing many opportunities for manipulating the process. For example, if an accountant is used, all the information is easily available to the citizen to verify if desired. However, if and when there is a significant dispute, the only one recourse for citizens is to resort to the SII tribunal. In this instance, the SII is both the judge and adjudicator, and thus is a questionable independent accountability mechanism.

Institutional transparency and accountability hypothesis – *While the website 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.*

### **Reduced corruption**

The SII has neither a reputation nor a real problem with corruption, currently or prior to the implementation of the e-system. However, the implementation of the system has removed possibilities of small-time corruption. Most of these opportunities existed with street-level employee discretion or the manual transfer of data from one place to another. For example, if an employee was transferring final calculations of tax arrears to the

central office, they could take a bill and sell it to the taxpayer for ½ the price of the amount owed by the taxpayer. However, now that the process is entirely digitized and the communication happens automatically, these avenues of corruption have effectively been eliminated. Of the managers surveyed, fifty-three percent said that corruption has been reduced.<sup>227</sup> However, given that the overall rate of corruption was low, the actual amount of decrease in corruption is unclear.

Corruption hypothesis - *The moderate decrease in opportunities for SII employee corruption through the computerisation of many tax processes will tend to have a moderate impact on building trust.*

**Power**            The SII traditionally has been a powerful Chilean institution with a high degree of autonomy and judicial powers over tax matters. Its pervasiveness in society has always been felt through the ubiquity of the SII stamped receipts that all business are required to give at most points of sale. In the last ten years this power has arguably grown. The amount of personal financial information that is collected and processed in one location raises the spectre of big brother with a high degree of potential to abuse the information for personal or political gain.

This power has arguably been balanced slightly, but it is hard to say to what extent. As discussed above, service quality has improved, and there are increased means for citizens to provide feedback, but there are no real means of stakeholder accountability. Any balancing the citizen-SII power relationship has come through the pre-commitment that occurs through making transparent the processes and information that the SII holds of its taxpayers. This precludes the possibility of secretive or corrupt practices that attempt to manipulate this information. There have been a few symbolic changes also. For example, a long standing tradition of the SII employees was to have their desks higher than the chairs of the taxpayers in a projection of power. While many employees fought against the change, the desks have been lowered to the same height.

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<sup>227</sup> Only three percent strongly disagreed.

Power hypothesis (Big brother) – *The increased power of the SII vis-à-vis the citizens in terms of the collection of information will tend to decrease trust.*

Power hypothesis (Soft sister) – *The increased power is potentially offset by the improved services and taxpayer orientation of the SII. The outcome of this in terms of trust is unclear.*

### 6.2.3 MOTIVATIONS: VALUES

**Institutional ethos** The overarching “mission” of the SII is to collect tax revenue that provides the funds for the functioning of the state. During the 1990s and this decade, the SII has undergone a series of reforms to improve their functioning. Their approach to increasing tax revenue was dual pronged: improving the efficiency and effectiveness of tax collection and enforcement, and facilitating the taxpayer. The introduction of e-services has appeared to enhance the SII’s performance on both aspects. Given various values encompassed by the tax administration and their orientation towards tax collection (increased enforcement, improve service, provide funds for the state), it is unclear what the impact on trust will be.

Overlapping values (institutional ethos) hypothesis – *The mixed value systems expressed by the SII makes the trustworthiness of the SII in these respects unclear.*

### **Procedural justice**

**Increasing citizen compliance** Increasing citizen compliance has been, as discussed, a central component of the execution of the SII’s mandate. The evidence suggests that relatively speaking the SII does quite well in citizen compliance. For example, the typical firm in Chile reports over ninety-eight percent of their sales in contrast to sixty-seven percent in Brazil and sixty-six percent in Nicaragua (Alm and

Martinez-Vazquez 2007). The little data that speak to the question of the changes that have occurred with the introduction of the e-service is evidence that citizen compliance has increased. Income tax evasion and VAT evasion have been reduced between 2001 and 2006 (see 6.1.6).<sup>228</sup> Of the surveyed managers, fifty-four percent believe that fraud detection has been improved with thirty-two percent disagreeing (or strongly disagreeing). The e-invoice has been a big step in the increase in compliance of smaller businesses or retailers. Before, if a business wanted to charge lower prices, all they had to do was not keep good accounting books or issue receipts at the point of sale, and auditing was extremely difficult for the SII. Computerising small businesses transactions online structures this process, rationalises accounting, and links receipts directly to sales electronically.

*Increasing citizen compliance hypothesis – The increased citizen compliance brought about through the improved facilitation of taxpayer compliance and the enhanced ability of the SII to enforce tax payment through the introduction of the e-service will tend to build trust.*

**Removing unnecessary discretion** The shift to online tax services reduces personal interaction between citizens and SII employees. Taking the responsibilities of the interaction out of the hands of SII personnel and putting it online removes the street-level discretion that comes with a street-level bureaucracy. As the SII managers understood and expressed in an interview, the quality of the street-level bureaucrat transaction is highly dependent on the personal factors such as the mood of the bureaucrat that day, what has happened in their lives recently, etc. Computers are not subject to the same whims.

This reduction of discretion occurs both online and when citizens visit the tax office. Before computerisation, SII employees had much more discretion over the first stage of

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<sup>228</sup> From Section 6.1.6, “As of 2006, it is estimated that the income tax evasion has been reduced from 40 to 30% and in the last five years, VAT evasion has reduced from 22% to 11%”. Diario La Tercera (24-03-07), source: <http://www.sii.cl/SIIPRENSA/2007/2403/01.htm>.

tax processing. Now, however, even when interacting with a citizen, employee discretion is limited given the automated and internally transparent nature of the tax processes. Furthermore, the movement of discretion from street-level bureaucrats to software implementers does not seem to have increased unnecessary or arbitrary discretion. The clarity of the processes of tax administration and their amenability to computerisation are helpful in this respect.

It should be noted that there was no evidence to suggest that the introduction of the e-service introduced any arbitrary behaviour, undermining the impartiality of the institution.

Reducing unnecessary discretion hypothesis – *The decrease in unnecessary 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.*

### **Distributive justice**

Determining the value of distributional justice and how it has changed with the new e-service is difficult. The fundamental reason is because the overall distributional impact of taxes on the society is largely determined by tax and other economic policy. As discussed, the income tax policy is progressive and the VAT is regressive, but overall the taxes are considered equal in terms of income distribution. In this respect, the distributional justice value of the SII is a reflection of the values underlying these policies. However, the SII does have jurisdiction over the focus of their enforcement strategy, and this will have distributional impacts.

The e-tax service does not benefit the Chilean society evenly, nor does it bring extra benefits for those of lower socio-economic status. While the online tax service does potentially bring benefits to over two million taxpayers, another six to eight million people of working age do not earn enough to file taxes. Furthermore, the use of the online system presumes a degree of comfort with computers and the tax system that those without computer literacy or easy access to the Internet might not have. Often, these

attributes are linked with lower socio-economic status. The Chilean government as a whole has attempted to address some of these distributional issues through their inclusive ICT policy that attempts to expand access across Chile. Similarly, several SII initiatives have attempted to address these issues (such as sending employees to telecentres to help with tax declarations). Insofar as these initiatives are perceived as being for the benefit of the less well off socio-economically, then the new e-service and the associated services may be seen as embodying a value of distributional justice.

Overall, it is unclear what the impact of the e-service is on the institutional value of distributional justice. The service is only available for a small percentage of the population, and is irrelevant or inaccessible to the rest. An increased concern with small business tax evasion made possible with the inclusion of e-invoices reflects more of a concern with the goal of increasing tax compliance than distributional justice. For example, the SII has been able to incorporate street vendors that have traditionally been outside of the system through an interconnection with the municipality. Street vendors have to register with the municipality and pay municipal taxes and once they do they become incorporated into the national tax system. On the other hand, increased tax compliance provides the government the means for the increase in social services and other social development policies that have benefited many Chileans over the last seventeen years. The SII has also attempted to facilitate taxpayers in lower socio-economic positions through several initiatives suggesting a concern for those less well-off.

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

## **Benevolence**



It is both theoretically and empirically unclear how the e-service has changed the benevolence value of the SII. The data collected do not comment on how interacting with the virtual office might or might not convey respect for the citizen any more or less than contacts at the physical offices.

#### 6.2.4 SUMMARY

This analysis has been of the changes to the trustworthiness of the SII due to the implementation of the e-service. Clearly, the tax online system has brought about significant changes in the processes of tax administration and the delivery of services. Overall, the analysis indicates that the SII is, from an institutional perspective, a more trustworthy institution. However, the complexity of the interaction makes it impossible to say definitively that the SII is more trustworthy as there have been differential impacts depending upon the trustworthy characteristic.

To make more sense of this complex relationship, the analysis broke down the changes to institutional trustworthiness into a variety of areas. There are many areas where the computerisation of the tax administration has clearly brought improvements that suggest a more trustworthy institution: efficiency and effectiveness (speed and accuracy), user benefits (time, cost savings), ease of use and usefulness, transparency (performance information and clear rules and regulations), new mechanisms for feedback, increases taxpayer compliance, decreased opportunities for corruption, and decreased unnecessary discretion (removed street-level discretion for computerised processes). However, there are some mechanisms where the e-service changes are less clear in terms of trustworthiness, and may even make the SII less trustworth: it increases the power of the SII vis-à-vis the citizen, it is a service that only benefits a small portion of the population (distributional justice), and there are a variety of institutional mandates that represent conflicting values. The end result of the analysis is a series of case-specific trust building hypothesis based upon the nature of these trustworthiness changes (see Table 26, Table 27, and Table 28).

<b>Middle-range institutional trust and e-services hypotheses</b>	<b>Case-specific e-tax trustworthiness-to-trust hypotheses</b>	
<b>Efficiency/Effectiveness</b>		
C1	E-services perceived to be more effective and efficient (faster, more accurate, cost savings) tend to build trust.	The existence of the online tax proposal and improved tax turn-around times will tend to build trust.
C2	E-government services that improve the efficiency and effectiveness of the service at the institution's physical office tend to build trust.	The improved in-office service and wait times will tend to build trust.
<b>Performance transparency</b>		
C3	Performance transparency that meets the citizen's expectations will tend to build trust.	The positive performance data presented on the web page will tend to build trust if it exceeds citizens' expectations.
C4	Performance transparency that is linked to effective accountability mechanisms will tend to build trust.	The lack of apparent accountability mechanisms linked to the performance data implies no effect on trust.

**Table 26 Impacts of the tax online system on the trustworthiness of the SII in terms of competence.**

**Middle-range institutional trust and e-services hypotheses**

**Case-specific e-tax trustworthiness-to-trust hypotheses**

<b>Considering users interests</b>	
I1	<p><u>User benefits</u>: E-services that bring user benefits will tend to increase trust.</p> <p>The increased user benefits in terms of time and cost savings for those who use the e-service will tend to build trust.</p>
I2	<p><u>E-service quality</u>: Good e-service quality indicates that the institution considers citizens' interests and therefore tends to build trust.</p> <p>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.</p>
<b>Voice</b>	
I3	<p><u>Voice</u>: Increased possibilities for voice through the provision of information and e-service feedback mechanisms (e-mail, comments) will tend to build trust.</p> <p>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.</p>
<b>Transparency and accountability</b>	
I4	<p><u>Institutional transparency and accountability</u>: Increased transparency of internal processes and service outcomes accompanied by perceived effective accountability mechanisms will tend to build trust.</p> <p>While the website 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.</p>
<b>Corruption</b>	
I5	<p><u>Reduced corruption</u>: A perceived reduction of corruption due to the computerisation and rationalisation of government processes will tend to build trust.</p> <p>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.</p>
<b>Power</b>	
I6	<p><u>Big brother</u>: Increased power for institutions vis-à-vis the citizen through e-services tends to destroy trust.</p> <p>The increased power of the SII vis-à-vis the citizens in terms of the collection of information will tend to decrease trust.</p>
I7	<p><u>Soft sister</u>: Increased power for institutions vis-à-vis the citizen through e-services that results in improved services and user benefits tends to build trust.</p> <p>This increased power is potentially offset by the improved services and taxpayer orientation of the SII.</p>

**Table 27 Impacts of the tax online system on the trustworthiness of the SII in terms of aligned interests.**

<b>Middle-range institutional trust and e-services hypotheses</b>	<b>Case-specific e-tax trustworthiness-to-trust hypotheses</b>
<b>Institutional Ethos</b>	
<b>V1</b>	<p><u>Institutional ethos</u>: Trust outcome is unclear; they may be dependent on associated institutional reforms.</p> <p>The mixed value systems expressed by the SII makes the trustworthiness of the SII in this respect unclear.</p>
<b>Procedural Justice</b>	
<b>V2</b>	<p><u>Citizen compliance</u>: An e-service that increases citizen compliance through increased capacities for surveillance and coercion or through a reduction of compliance costs will tend to increase trust.</p> <p>The increased citizen compliance brought about through the improved facilitation of taxpayer compliance and the enhanced ability of the SII to enforce tax payment through the introduction of the e-service will tend to build trust.</p>
<b>V3</b>	<p><u>Remove unnecessary street-level discretion</u>: E-services that remove unnecessary street-level discretion and increase perceived impartiality will tend to build trust.</p> <p>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.</p>
<b>Distributive Justice</b>	
<b>V4</b>	<p><u>Distributive justice</u>: 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.</p> <p>The implementation of the e-service (benefits small percentage of the population) combined with contextual influences such as the Chilean tax policy (net neutral), IT policy (progressive digital agenda promoting access for all, small business growth), Chilean social development policy (progressive), and SII initiatives (e.g. providing local help at telecentres) reflect conflicting values with respect to distributive justice. The trust outcome is unclear.</p>

**Table 28 Impacts of the tax online system on the trustworthiness of the SII in terms of aligned values.**

### **6.3 ANALYSIS: TRUST**

The goal of this analysis is to better understand how and why trustworthiness qualities of the SII communicated by the e-income tax service are perceived and interpreted in a way that influences citizens' trust perceptions of the SII. In other words, from the perspective of the taxpayer, how do the hypotheses stated above actually play out? This analysis, however, does not systematically go through the case-specific hypotheses as developed above. Rather the focus is on discerning which trustworthy cues are highly salient for

taxpayers trusting decisions, why, for whom, and in what circumstances.<sup>229</sup> This analysis section includes two parts. First, it details the causally salient trustworthy cues, and how they are perceived and interpreted (6.3.1). Second, it briefly covers the marginally or non salient (6.3.2) trustworthiness cues. In all, the analysis touches on all of the trustworthiness-to-trust case-specific hypotheses.

### 6.3.1 SALIENT TRUSTWORTHY CUES

**First hand experience of the consistency of good performance** In general, consistent performance was a very commonly cited reason for trusting. Once a user made the switch to the online service, and the process worked, this experience provided taxpayers with an inductive confidence in the e-system. It also seems that this experience often is conflated (or spills over into) developing trust in the SII as a competent institution. For example, when asked if they trust in the SII or what kind of experience have built trust in the SII:

“The time I have done it, it has been good. It has been good. Without big problems.”<sup>230</sup>

“No problems. No problems getting on the page, it hasn’t been down. I think the confidence is there.”<sup>231</sup>

“I do. Because of my personal experiences. Because I have not had any problems with the service, and when I had to ask a question, they answered me. Perhaps I am lucky.”<sup>232</sup>

“...it is the experience that makes you doubt, if they are trustworthy or not. And up until now they have been good. No problems.”<sup>233</sup>

In general, this is related to relatively new users who had used the service for several years without any problems. In such a situation people generally respond that they trust because they “don’t have or haven’t had a reason to distrust.”<sup>234</sup> For those that have not used the e-service for several years, their level of trust appears to be either (a) withheld

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<sup>229</sup> The most directly applicable data used for this analysis are the taxpayer interviews, although the analysis draws from other sources as well.

<sup>230</sup> Interviewee: SII-2.

<sup>231</sup> Interviewee: TC-SII-2.

<sup>232</sup> Interviewee: TC-3.

<sup>233</sup> Interviewee: SII-CC-8/9.

<sup>234</sup> Interviewee: SII-3.

because they had not dealt with them previously or (b) informed indirectly through the experiences of their family and friends with the SII.

However, the experience of consistent performance over time does not necessarily “spill over” into trust of the institution itself. One interviewee expressed confidence in the e-service,

“[I have] all the confidence ... because the times that I have declared, it has worked.”<sup>235</sup>

However, she withheld judgement of the SII, weighing off different factors such as her limited understanding of the Internet and the fact that she does not have to travel as much when performing the service.

**User benefits** The perception of user benefits influences trust in several important ways. Almost unanimously, people mentioned the benefits of the system including saving time and money. Ninety-eight percent in the WB survey responded that they strongly or somewhat agree with the statement that it is convenient to do taxes online. Performing taxes has become surprisingly easy, especially for those taxpayers who do not have more complex business dealings. The ease of use is so high that one highly salient benefit is the fact that many of those interviewed can meet their income tax yearly obligation in less than five minutes. In fact, in a testament to at least a background level of trust in the competence of the SII (or a high level of fear) many of the citizens interviewed did not bother to even review the tax proposal for errors, simply opting to accept it as presented online.<sup>236</sup>

User benefits are arguably the most salient feature of the service. Indicative of this are the myriad of responses to question about perceptions of the SII that are turned around and answered in terms of user benefits. For example, when asked if the new SII e-service has changed their opinion of the government, one taxpayer responded,

“Yes, 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

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<sup>235</sup> Interviewee: SII-11.

<sup>236</sup> There was significant anecdotal evidence that this was fairly common practice.

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.”<sup>237</sup>

User benefits and consistency of good performance are interrelated. References to good consistent performance generally referenced receiving the tax return check in the mail after filing online. In other words, the salient component of SII performance was the most salient issue concerning taxpayers; receiving their money as soon as possible. It would appear that realisation of user benefits provide one normative definition of what “good” performance is. What is consistency and efficiency are interpreted from the ego-centric perspective of the taxpayer,

“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.”<sup>238</sup>

“*[Q: Would you say that they [the SII] is trustworthy?]* Yes – 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.”<sup>239</sup>

In another example, when asked about his opinion on how the increased efficiency has built trust, one interviewee responded, “More than trust, improved conformity with the efficiency of the service – one does your stuff more rapidly, and that is important.”<sup>240</sup>

User benefits also have been important for building trust as it influences e-service use. People make the switch because of increased convenience, and they then have the chance to experience the performance consistency/user benefits outcomes that appear to inductively build trust in both the e-system and the SII. Very often, in a very straightforward risk/reward calculus, people will engage with the e-service when the calculus is right for them. For example,

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<sup>237</sup> Interviewee: SII-CC-1-3.

<sup>238</sup> Interviewee: TC-SII-2.

<sup>239</sup> Interviewee: SII-CC-11.

<sup>240</sup> Interviewee: SII-3.

“What interests people at this moment is that they [the government] give the services and that they are free.”<sup>241</sup>

One tax employee recounted a story of a man who refused to pay his taxes online despite the incentive of a seventy percent reduction in what he would owe.<sup>242</sup> He did not trust enough in the e-system, it appears, and the risk of something going wrong was too great for him to do it. His risk calculation did not allow him the opportunity to experience both the benefits and the effectiveness of the system.

**Institutional mission and distributive justice**      A less common but still salient issue for many is their understanding of the purpose of the SII. In this domain there were several different interpretations. On one side, people often noted that while the SII was very competent, their overarching goal is to get your money. When asked whether the SII takes citizens’ interests into consideration, some taxpayers responded as follows:

“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.”<sup>243</sup>

“I don’t think so. They 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...”<sup>244</sup>

For these taxpayers, the SII represents an adversarial institution. The taxpayers have understood the divergence of interests between them and the institution and this understanding engenders institutional distrust as predicted theoretically.

This perspective represents a theoretical view of the SII, its mission, and its inter-relation with the state and the citizens that greatly impacts a taxpayer’s interpretation of a trustworthy cue. This institutional understanding works as a theoretical framework that helps them understand and explain SII agency and employee behaviour. For example,

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<sup>241</sup> Interviewee: TC-1.

<sup>242</sup> Interviewee: WB-RL-SII-3.

<sup>243</sup> Interviewee: SII-5.

<sup>244</sup> Interviewee: SII-CC-1-3.



perceived benefits such as an e-service that increases the ease of tax compliance is interpreted as means to gather more revenue and increase auditing powers. Indeed, the benefits can even be seen as a lure to trap unsuspecting taxpayers into the system,

“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!”<sup>245</sup>

However, it is possible that the institutional mission of the SII is considered from the even wider perspective of collecting revenue for the state which in turn provides valuable social services. One interviewee has had positive experiences with the tax online system and when asked about the benefits of the system even though it is trying to get you money he responded,

“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...”<sup>246</sup>

This is even the case for those who may be sceptical of the institution as a whole. For example, one small business owner is extremely sceptical of the SII, having had a series of experiences where an accountant’s mistakes resulted in him being charged large fines. When asked if the SII is a competent institution he responded as follows:

“Good question. The SII should do it [collect taxes] because it is a business that collects taxes so that the country works. And if there is flight of capital, the whole country loses. ... But instead of taking money through fines, they should do it in a better – to take the bull by the horns, as they say – that is, to take the correct decision and that the professionals that work doing the declarations – they should be responsible to the SII”<sup>247</sup>

Interestingly, several taxpayers<sup>248</sup> appeared to hold both of these understandings in their mind concurrently. This appeared to relate to their value of distributive justice. However, in general, the resultant trust positions of these taxpayers was based more on an antagonistic perspective seemingly driven by a more ego-centric motivation (they want to

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<sup>245</sup> Interviewee: SII-6.

<sup>246</sup> Interviewee: SII-CC-11.

<sup>247</sup> Interviewee: SII-CC-5.

<sup>248</sup> Interviewees: SII-5, SII-6, and SII-CC-5.

take my money) rather than the more communal perspective (they provide revenue for the state).

Also related to the value of distributive justice is the knowledge and first-hand experience of inequality in Chilean society that also shapes the interpretations of the some taxpayers. Consequently, evaluations of the SII and the new e-service included considerations of the distributional consequences of tax policy and/or Internet access considerations. Who was really benefiting from these changes? The end result in this case on the whole was increased negative assessments of the SII, with the view that inherent inequalities are not helped by the new e-system. This perception of the distributive justice impacts of the system can be seen in the Adimark 2005 survey, where only thirty-five percent rated the “justice and equality of the process” of the e-system positively, with high negatives.

**Efficiency and effectiveness** While the increased efficiency and effectiveness of the tax administration was expected to be a major contributor to increased trust in the SII, it actually plays an indirect role. When asked about trust, nobody would respond that they trusted more because the SII appears more efficient and/or effective. Rather, efficiency and effectiveness gains are only be perceived through some external manifestations, for example vis-à-vis service quality and user benefits. Specifically in the SII case, there are two examples that come up in discussions: speed of receiving the tax return and the reduction of waiting lines in the office.

“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.”<sup>249</sup>

These are indirect indicators of increased efficiency as a result of the e-service. Ultimately it was these benefits that translated into increased perceptions of efficiency and effectiveness for citizens. In other words, for many people, they had no real idea about what was going on in the SII itself and taxpayers would just assume that there were efficiency increases due to the positive user outcomes.

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<sup>249</sup> Interviewee: SII-3.

**Power** The power differential between the citizens and the SII is clear and apparent to people. Between 2000 and 2005 the amount of people who believe that the SII has a lot of power has reduced, but only very slightly, from eighty-three to seventy-six percent. This may mark an improvement but does not represent a significant shift to the underlying relationship. This perception is more than just a historic-cultural artefact (e.g., a reputation that is difficult to overcome), but is consistent with the objective power balance. The power asymmetry was a very salient component of the relationship for many citizens. Indeed, strong terms like dictator are sometimes used to describe the SII,

“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.”<sup>250</sup>

This SII’s impartiality and lack of compassion is no doubt an unavoidable consequence of the nature of tax collection, but also of a set of cultivated beliefs inside the SII that have been enhanced through the introduction of the e-service. There are two interrelated beliefs that underscore the SII’s behaviour: a) that the SII itself does not make mistakes and b) if there is a discrepancy it is the result of a taxpayer being purposefully misleading. The logical conclusion is that any tax discrepancy must be treated with suspicion and punished accordingly.

Not that this suspicion is necessarily misplaced. There are several logical reasons to conclude that any particular mistake was not made by the SII. First, the financial data the SII processes are received from third party institutions. Consequently, a mistake on a tax proposal most likely resulted from a mistake made by the one who supplied the data. Furthermore, the ultimate legal responsibility for the information falls on the taxpayer who failed to verify the information. Second, it is a common belief that is inherent in Chileans is a self-interested motivation to game the system. Exacerbating this situation is the poor reputation that Chileans have for doing exactly that – small time corruption “a la Chilena” where Chileans are very adept at manipulating the system where and when possible – and thus cannot be trusted. Thirdly, the e-service system itself makes it more

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<sup>250</sup> Interviewee: SII-CC-1-3.

difficult to enter errors through its automatic error checking system. All three of these factors combined make it easy to conclude that any mistake in income tax declaration is the result of at least neglect and at worst bad motivations of the taxpayer.

This perception of power differential does colour the SII-citizen interaction in other important ways. As mentioned above, it is evident in the interactions where accountability flows in only one direction. It also places the citizens in a defensive posture, where they constantly feel uncomfortably under suspicion. For example, taxpayers in general believe that: a) if one has to go into the SII office then one is “in trouble”, b) the SII always believes that if there was a mistake that it was a purposeful manipulation, and c) the fines that are applied are excessive and applied remorselessly. This understandably creates trepidation in taxpayers who are then highly motivated to avoid interaction with the SII when possible.

“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.”<sup>251</sup>

An SII worker who attends to the public described citizens’ reaction as follows,

“They [the taxpayers] don’t want to come – they send accountants because they feel that the SII will always try to find something to try to get them to pay. At the end of the day it is about money. If we notify them and ask them to come to the office – ‘aah, they are going to charge me. Somehow they are going to charge me something.’ This is the image that the people have... some people.”<sup>252</sup>

Clearly this power asymmetry has psychological impacts on the taxpayer. The taxpayer is more prone to give greater weight to negative actions as well as to focus more on the motives of the more powerful SII. For the taxpayers, the power asymmetry tends to cause them to more easily impute bad motives to the actions of SII. This means that the behaviour of street-level SII employees becomes more salient, especially in cases deemed to be discretionary.

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<sup>251</sup> Interviewee: SII-CC-5.

<sup>252</sup> Interviewee: WB-RL-SII-3.

Implicit in this discussion is the fact that the power differential also influences the behaviour of the SII employees. SII employees are aware of their power.<sup>253</sup> One manager at a regional SII office was explicitly concerned with the power asymmetry and viewed it as a significant problem to overcome. Indeed, one of the potential benefits of the new system expressed by the SII managers was the increased impartiality of service delivery. Furthermore, many of those interviewed agreed that the SII takes a sceptical position when dealing with taxpayers who have to come into the office. Such a sceptical and non-benevolent position is only possible when there is little dependence of the employees on the citizens. Overall this results in a reduction of the expressions of benevolence and extending trust, both powerful mechanisms for building trust.

An interesting question that cannot be conclusively answered here is how moving the service online affects this dynamic.<sup>254</sup> The e-service does nothing to address the inherent power asymmetry that has such a profound impact on the citizen-government interaction. However, moving online does change the nature of SII-employee interaction and therefore citizens' *perception* of this power. It reduces in-office SII employee-citizen encounters, and given the reputation of the SII, this might be a good thing for trust. However, it does not seem to adjust the interactions that reflect the accountability of the SII. In fact, it might even be seen to make the SII *more* impartial, something that may only enhance its reputation as unforgiving, damaging trust.

It is also not entirely clear whether or not the user benefits accrued from the e-service provided a soft sister counterweight to the power asymmetry. It is clear that there were many who enjoyed the benefits and did not appear to even notice or consider that it might signify an increase of power. There are several important qualifiers as to why this may be. First, Chilean society has a tradition of being deferential to the government, and does

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<sup>253</sup> The tax employees used to have their chairs and desks at an elevated position with respect to the taxpayer in an expression of their authority. This has since been changed.

<sup>254</sup> This is for a variety of reasons such as the benefits, but also often includes the ability to avoid potential arbitrary discretion by the SII employee. The citizen-taxpayer interaction is also coloured in another manner. The fear citizens have and the relative unpleasantness of dealing with a sensitive subject such as money and taxes may be partially responsible for the anecdotal evidence that taxpayers often enter a SII office in an aggressive mood.

not have a strong tradition of protest. This was evident in the number of interviewees that did not seem to even consider the ramifications of the new powers the SII wield. Second, it is plausible that the new powers were not perceived as a shift beyond the already very asymmetrical power relationship between citizens and the SII. There is some potential evidence for this. Several respondents, when asked about if they were worried about their personal information, responded by stating something to the effect that the government already had your their information.

There is a perfectly plausible (untested) counter-hypothesis to the role of soft-sister to assuage big brother fears that is supported by the evidence. It may be that citizens in general do not notice, or become concerned about power asymmetries unless these power asymmetries touch their lives in some way. From the small sample taken here, small business owners were the group most concerned with the power differential. This is not entirely surprising as they are dependent upon the SII which issues invoices that businesses need to legally charge for products or services rendered. Furthermore, these small businesses did not have their fears of an all powerful SII assuaged by the improved services. People that had past experience with dealing with the SII in the offices also noted the fear of people and the palpable power asymmetry. They were worried that they would be subjected to the onerous fines levied by the SII for any indiscretion.

**Benevolence** It is difficult to comment on the changes that have come about online with respect to the SII's treatment of citizens. It appears that for many taxpayers issues of respect emerge where issues of power are more salient. However, one artefact of the realities of data collection meant that many of those interviewed had come to the telecentres for help in filing of the taxes online. There were two main responses. It is a commonly held sentiment that in general, the interaction with the SII in any tax office is cold and unforgiving. However, many of those interviewed mentioned the quality of personal treatment they received from the SII employee who had visited the telecentre to help in filing out tax forms as an important element of the experience. This appears to have been at least partially important for them in their assessment of the SII as an

institution. One example is that in general, while the SII may be impartial, the SII is seen as unforgiving and coldly applying rules regardless of the circumstances,

“There is no forgiveness. They don’t forgive... If you make a mistake – or something bad – through ignorance, or through carelessness, you can end in prison. Or paying a fine.”<sup>255</sup>

Forgiveness and understanding are components of benevolence.

Ultimately, the transition online is having differential effects, depending upon the past history of interaction that the taxpayer has had with the SII. When asked if the web page was friendlier than dealing with the SII employees and if they would rather interact with the webpage, one focus group of taxpayers responded thusly,

“Of course. Because you don’t have to have contact with the people... They start out from the position that one is acting in bad faith... You come with the attitude that if something bad happened—then you are robbing the state.”<sup>256</sup>

Overall, people prefer the online experience to the comparatively more unpleasant experience of going into an SII office (see Figure 25), most likely for reasons of user benefits as well as the removal of the sometimes unpleasant interactions with SII employees. A few interviewees expressed concerns with the difficulties of asking questions or dealing with complexities online rather than with a person. However, often the benefit of the impartiality of online interaction would outweigh other considerations,

“If a cold person I’d rather deal online.”<sup>257</sup>

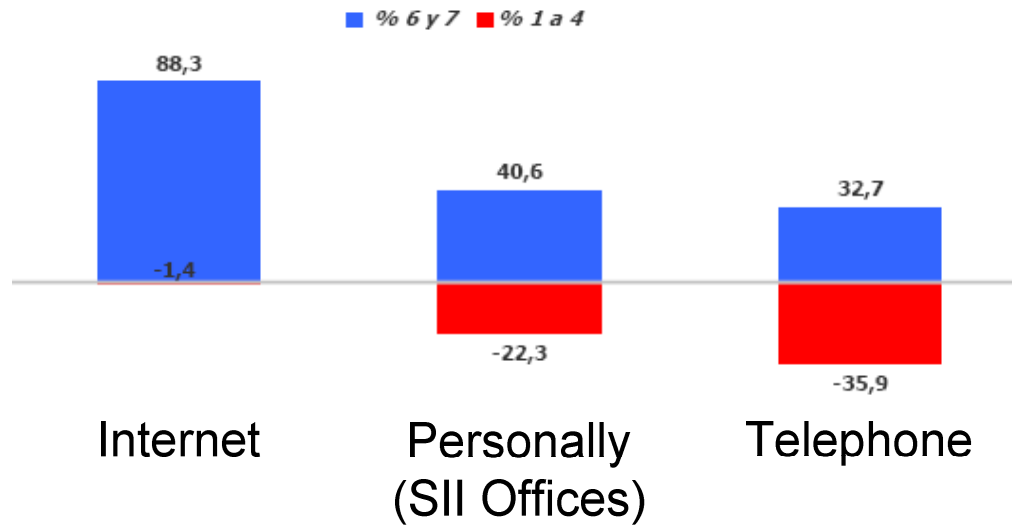
However, if moving online further solidifies the impartiality of the transaction it will completely eliminate the possibility for any compassionate understanding. However, this probably does not make a difference given the SII already is (correctly) perceived as coldly applying the rules without much consideration for extenuating circumstances.

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<sup>255</sup> Interviewee: SII-CC-1-3.

<sup>256</sup> Interviewee: SII-CC-1-3.

<sup>257</sup> Interviewee: SII-CC-6.



**Figure 25** Adimark (2006) survey, Evaluation of the forms of interaction with the SII. The scale is from excellent = 7 to very bad = 1. As compared to the Internet experience, less than half as many people have equally positive ratings of interacting with the SII at the offices or on the telephone.

**Removing unnecessary street-level discretion** A concern of some taxpayers is the ability of the street-level bureaucrats to engage in discretion when interacting with taxpayers. This issue is interrelated with benevolence and power. This concern emerged from those who have had a lot of interaction with the SII at the office, and is most salient for small business owners who are highly dependent on the SII.

An example typifies the discretion/power/benevolence dynamic. One very savvy small businesswoman understood the power dynamic very well. She recounted a story of recent trips to the SII to settle some outstanding problems with her tax situation,

“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, its 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.”<sup>258</sup>

When this is the case, moving online clearly removes this type of unnecessary (and unproductive) discretion.

**ICT as a tool of modernity** Another reason people interpreted the e-service as increasing efficiency and effectiveness is because technology is a symbol of modernity. There is a widespread belief in Chile that ICT are crucial for the modernization of the state and constitute a stage in the natural evolutionary path of the state. The mere implementation of ICT is believed to deterministically improve organizations making them more efficient, structured, and reducing corruption. This general belief was evident in the interviews where almost everyone asked if they viewed ICT as important for the development of Chile responded, “very important”. Of course, those interviewed were in general biased towards a positive view of technology as they were generally those who had gone to telecentre or worked there.<sup>259</sup> However, this belief appears to spread well beyond those interviewed. In the World Bank “wider society” survey, a majority (fifty-six percent) responded that e-services make government more efficient with twenty-two percent neither agreeing nor disagreeing. A further seventy-six percent believe that e-services promote the growth of business.

A few taxpayers, however, hold a slightly more nuanced perspective. While they may admit that technologies may improve certain processes, the focus on the fact that ultimately, institutional processes must work through humans and humans are flawed. These citizens differentiate between the personnel of the tax agency and the structure of the system itself.

“There is a criticism that one makes as a user of the system, but this criticism is about the people – not of the general structure.”<sup>260</sup>

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<sup>258</sup> Interviewee: SII-CC-6.

<sup>259</sup> In the WB “wider society” survey, slightly more than the majority (fifty-six percent) responded that e-services make government more efficient with twenty-two percent neither agreeing nor disagreeing and three-fourths say that e-services promote the growth of business.

<sup>260</sup> Interviewee: SII-CC-6.

In fact, this interviewee argued that the new technology had made the SII workers *lazier*. Consequently, those who take a more social perspective do not necessarily see technology as directly improving efficiency and effectiveness of the public sector.

### 6.3.2 MARGINALLY AND NON-SALIENT TRUSTWORTHY CUES

The following were mechanisms that did not result in trustworthy cues that had very little or nor impact on citizens' trust judgements.

**Performance transparency** Performance transparency online (through the web page) did not emerge in any interviews as a significant factor. A few of the more politically inclined taxpayers did follow performance in the newspapers and that seemed to be significant in their trustworthiness calculus.

**Reduced corruption** Only for a few interviewees was the reduction of corruption potentially an issue, and that was only when directly asked about it. It did not emerge in questions relating to trust. This is not altogether unsurprising. Corruption is not a large issue in Chile, and not widely prevalent in the SII.<sup>261</sup>

**Institutional transparency and accountability** The transparency of the rules and regulations of the SII was not perceived by taxpayers as a highly or even marginally important trustworthy cue. While many agree that there is increased transparency (eighty-five percent of citizens' surveyed responded that the rules and procedures of the SII are clear and sixty-five percent say that decision-making is more transparent) it does not appear to be a salient trustworthiness cue. This was to be expected theoretically because this information was not linked to a perceived effective accountability mechanism.

Interestingly, however, there were other reasons that emerged as to why the increased transparency did not enter into citizens' trust judgments. For a majority of users, interest

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<sup>261</sup> In general the e-service was perceived as slightly reducing corruption. The perception of corrupt SII workers is down from thirty-two to twenty-four percent, and the perception of arbitrariness in the auditing is down to forty-three from around fifty-seven percent.

in and use of information online was mainly restricted to a need-only basis. When the information was needed, it was looked for. The fact that information was there was ignored by most people who simply would go and complete their tax proposal. This disposition may be a reflection of the group interviewed, although there is reason to believe that it is a more widely prevalent phenomenon. Furthermore, the publishing of the rules and regulations online may actually work to decrease trust in a few rare cases. The SII uses the fact that the information is published online to back up their “ignorance of the law is no excuse” policy. A taxpayer can no longer make any excuses that they did not realise something or that they had specific obligations. Indeed, the transparency for some was simply an improved ability to make sure they completed their obligations without an error.

“I have more power to control the errors that I make. I have less of a margin for error because I have more knowledge.”<sup>262</sup>

Another element of institutional transparency is how the SII lets the taxpayer know all of the information that they have of the taxpayer. This was never mentioned or brought-up as a relevant trustworthy cue. Intended to reflect openness and as a departure from institutional secrecy, this feature was generally overlooked for the benefits and convenience that the online proposal offered.

One potential explanation why transparency does not have any impact is because regardless of the information shown online, it is clear that that accountability of actions only flows in one direction. A commonly expressed understanding of taxpayers was that if the SII makes a mistake and takes too much money, then if you can prove it, they will eventually give the money back. However, if you make a mistake, then you will be fined for it and they suffer no consequences.

“If you pay too much, they stay silent, if you pay too little, they charge you.”<sup>263</sup>

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<sup>262</sup> Interviewee: SII-CC-6.

<sup>263</sup> Interviewee: SII-CC-6.

It is no wonder that citizens do not perceive transparency information as trustworthy cues. Without a link between transparency and accountability, placing information online will have a minimal impact.

**Voice** Voice mechanisms did not factor into citizens' trust calculations. This is not surprising as the SII is considered by many to be an impenetrable institution,

“They can access my business space, and me, I can't enter their space. They are hermetically sealed.”<sup>264</sup>

The e-service, while it has introduced several mechanisms for offering criticism or feedback, has not engaged in any truly participatory schemes. Only twenty percent of people believed that the SII takes into consideration the interests of the taxpayers when making policies and rules.<sup>265</sup> While many of those interviewed appeared to like the idea of providing feedback in theory, it did not seem that they thought that feedback really made a genuine difference at this time. However, the point here is that the introduction of the e-service has not appeared to have significantly altered the SII-taxpayer interaction dynamic and thus does not seem to have had an impact on building or destroying trust. It is merely more of the same.

**Citizen compliance** Citizens' tax compliance emerged as an issue for only one interviewee. Rather than with the income tax, the interviewee was a businessman whose concern was business compliance with the VAT tax. Those companies that do not pay VAT have an unfair advantage over those that do in their ability to lower prices (about nineteen percent). Consequently, the businessman viewed the improved levels of compliance for VAT as an extremely good thing.

One potential reason that citizen compliance was not an issue is because the SII appears so effective in its tax collection that it has been relegated to a background condition. An average of ninety-two percent believe that the SII is difficult or very difficult to deceive

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<sup>264</sup> Interviewee: SII-CC-6.

<sup>265</sup> Source: WB survey data.

(Adimark 2006) (see Table 24).<sup>266</sup> In other words, compliance might emerge as more salient if there is a concern for non-compliance.

### 6.3.3 CHAPTER SUMMARY

This chapter has presented the first of two e-service cases in Chile. Overall it is fair to conclude that in many dimensions the SII has emerged as a more trustworthy institution as a result of their new e-tax administration service. Of course, some issues have emerged, particularly in concern to the power relationship between the SII and citizen and their lack of responsiveness and accountability to citizens. Fortunately for Chileans, the SII has remained an apolitical institution with a high integrity for their work.

It is clear that many of the theories of institutional trustworthiness from an institutional perspective are not as relevant to citizens, or work quite as first predicted (see Table 29, Table 30, and Table 31). In general, citizens appear to perceive and be concerned with aspects of the SII that most directly impact on their lives. Paying taxes is an inherently unpleasant obligation that impacts on the quality of citizens' daily lives, especially in the lower socio-economic levels. For the more parochial minded taxpayers, their only concern with respect to the SII is completing their obligations as quickly and painlessly as possible. For the more politically oriented critical taxpayers (a smaller group), trustworthy cues extend beyond simple interactions and are incorporated into theoretical understandings of the position and role of the SII in society. For both groups, the centrality of money to daily existence appears to enhance self-interested values over communal ones.

It is possible to probe deeper into the analysis of the impact of the e-tax online service on the citizen-SII trust relationship. However, to better understand the dynamics, it is helpful to have a comparative case. Therefore, this thesis extends this preliminary analysis of the e-tax service in Chapter 8, the comparative analysis chapter. This will allow for a further development, refinement, and testing of these theories in comparison to the Chilean

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<sup>266</sup> Seventy-seven percent of professionals and seventy-five percent of non-professionals find the SII difficult or very difficult to deceive.

public sector e-procurement system studied in this thesis. Having completed the first of the two cases, it is time to turn to the second case, ChileCompra.

<b>Case-specific e-tax trustworthiness-to-trust hypotheses</b>		<b>E-tax trust outcomes</b>
<b>Efficiency/Effectiveness</b>		
C1	The existence of the online tax proposal and improved tax turn-around times will tend to build trust.	Efficiency and effectiveness were indirectly perceived through the taxpayers' perception of user benefits. In general, it was not some objective effectiveness of the system that was a concern but instead was the taxpayers' normative position that prioritises that an efficient/effective system is one that improves user benefits. Thus efficiency and effectiveness were perceived in the consistency of the delivery of delivering user benefits. Furthermore, the belief in ICT as a tool of modernity did tend to make people believe that the SII was a more modern institution and therefore more efficient and effective.
C2	The improved in-office service and wait times will tend to build trust.	Improved wait times were perceived as a positive user benefit that reflected efficiency gains.
<b>Performance transparency</b>		
C3	The positive performance data presented on the web page will tend to build trust if it exceeds citizens' expectations.	The web page data was basically ignored. Performance information presented in the media was a factor for the more politically minded taxpayers.
C4	The lack of apparent accountability mechanisms linked to the performance data implies no effect on trust.	There was no perceived impact on trust.

**Table 29 Outcomes of the competence hypotheses for building trust.**

**Case-specific e-tax  
trustworthiness-to-trust hypotheses**

**E-tax trust outcomes**

<b>Considering users interests</b>		
<b>I1</b>	<p><u>User benefits</u>: The increased user benefits in terms of time and cost savings for those who use the e-service will tend to build trust.</p>	<p>This is the most salient component of the tax system to taxpayers. It was significant in building good will and trust through acting as a trustworthy cue for the improved efficiency/effectiveness of the system.</p>
<b>I2</b>	<p><u>E-service quality</u>: 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.</p>	<p>The ease of use was also seen as a significant user benefit.</p>
<b>Voice</b>		
<b>I3</b>	<p><u>Voice</u>: 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.</p>	<p>This did not emerge as a factor. Taxpayers were either not interested or did not believe that the new online feedback mechanisms made any real impact.</p>
<b>Transparency and accountability</b>		
<b>I4</b>	<p><u>Institutional transparency and accountability</u>: While the website 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.</p>	<p>Was not perceived to be linked to accountability mechanisms. The introduction of the e-service did not seem to change this dynamic.</p>
<b>Corruption</b>		
<b>I5</b>	<p><u>Reduced corruption</u>: 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.</p>	<p>Did not appear to make a difference in citizens' judgments. Most likely this is because corruption was not originally perceived as a problem.</p>
<b>Power</b>		
<b>I6</b>	<p><u>Big brother</u>: The increased power of the SII vis-à-vis the citizens in terms of the collection of information will tend to decrease trust.</p>	<p>In general, it does not appear that the increased information collection by the SII increased the fear of a big brother state. Businesses are more sensitive to power asymmetries and for them SII employee discretion becomes a more salient issue.</p>
<b>I7</b>	<p><u>Soft sister</u>: This increased power is potentially offset by the improved services and taxpayer orientation of the SII.</p>	<p>There were significant soft sister benefits, but the impacts on trust vis-à-vis overcoming power asymmetry is inconclusive.</p>

**Table 30 Outcomes of the overlapping interests hypotheses for building trust.**

<b>Case-specific e-tax trustworthiness-to-trust hypotheses</b>	<b>E-tax trust outcomes</b>
<b>Institutional Ethos</b>	
<p><b>V1</b></p> <p><u>Institutional ethos</u>: The mixed value systems expressed by the SII makes the trustworthiness of the SII in this respect unclear.</p>	<p>The institutional mission played an important role for several taxpayers. For the most part they viewed the SII as an antagonistic agency whose interests were at odds with the taxpayer (they want to get our money). Sometimes, theoretical understandings of the role of the SII in providing revenue for the state were expressed, but in general the antagonistic view of the SII trumped the communal view.</p>
<b>Procedural Justice</b>	
<p><b>V2</b></p> <p><u>Citizen compliance</u>: The increased citizen compliance brought about through the improved facilitation of taxpayer compliance and the enhanced ability of the SII to enforce tax payment through the introduction of the e-service will tend to build trust.</p>	<p>This did not emerge as a factor impacting trust. However, this may be because the SII already has a good reputation for ensuring compliance.</p>
<p><b>V3</b></p> <p><u>Reducing unnecessary street-level discretion</u>: 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.</p>	<p>SII employees are seen as wielding too much arbitrary and unnecessary discretionary power. Moving online builds trust for those who have experienced this unnecessary discretion.</p>
<b>Distributive Justice</b>	
<p><b>V4</b></p> <p><u>Distributive justice</u>: The implementation of the e-service (benefits small percentage of the population) combined with contextual influences such as the Chilean tax policy (net neutral), IT policy (progressive digital agenda promoting access for all, small business growth), Chilean social development policy (progressive), and SII initiatives (e.g. providing local help at telecentres) reflect conflicting values with respect to distributive justice. The trust outcome is unclear.</p>	<p>A few taxpayers were concerned with the distributive justice components of the tax system, mainly with respect to the fairness of tax policy. These people were generally the same as those who were concerned with the institutional ethos. The inequalities inherent in the Chilean society and the difficulties perceived as a result of the Chilean tax-system (especially for small businesses) tend to decrease the perception of overlapping values between the citizen and the SII.</p>

**Table 31 Outcomes of the overlapping values hypotheses for building trust.**



## 7 CASE II: CHILECOMPRA

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"eProcurement will be one of the most radical changes in organisational practice in the 21<sup>st</sup> Century, as new technology enables public sector organisations to purchase nearly all goods direct from approved suppliers, and totally eliminate costly manual processes. Ultimately these systems will drive down administration costs, rationalise supplier relationships, and free-up more money for front line public services" (Jacobs 2000).

Public sector purchasing plays a behind-the-scenes, yet pivotal, role in the management and operation of government and the achievement of social and economic development goals. Government purchasing of goods and services provides the necessary inputs into the government machine allowing for the proper functioning of government administration and the supply of services. The more efficient and effective these purchasing processes, the more cost effective are the delivery of services, something of special concern for cash-strapped governments. In contrast, poor or corrupt public procurement practices can have serious detrimental impacts on state finances, economy, health and human safety, environment, innovation, values, and finally trust in the government itself, among others (Transparency International 2006).

As the quote at the start of this chapter indicates, the technological logic of ICT provides the opportunity to bring about economic benefits to the public procurement processes such as lower information costs, lower transaction costs, increased competition, and better specialization. The potential gains are substantial. Typically, the public sector spends between ten and twenty percent of its earnings on procurement activities (Anderson 2004, p. 107). In Latin America, the state is the largest purchaser of goods and services (Husmann 2004). Between 2000 and 2006 the Chilean public sector purchasing accounted for between eight to ten percent of Chile's GDP (DCCP 2006a).<sup>267</sup> Even small

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<sup>267</sup> This involved over 600 public sector procurement entities conducting approximately one million transactions per year with over 40,000 domestic and foreign suppliers (DCCP 2002, DCCP 2006a).

savings of a few percentage points translates to savings in the hundreds of millions of dollars.<sup>268</sup>

Beyond efficiency and effectiveness gains, an e-procurement system can potentially influence broader social impacts such as improving trust in the government, contributing toward economic growth, improving distributional equity and efficiency of public procurement, and stimulating the society to move on a path of modernisation and towards a digital society (DCCP 2002, Talero 2001, p. 1). Furthermore, the opening up of the public sector purchasing market sends positive signals to international investors. Public sector procurement is an activity ripe for corrupt activities due to the large amounts of funds whose disbursement depends on the discretionary power of the procurement agent. However, placing public procurement processes online can shed light on these corrupt practices thereby reducing the ease and opportunities while increasing the risks for corrupt behaviour.

The realisation of these benefits is not straightforward, however.<sup>269</sup> While an e-procurement system may hold the promise for restoring faith in the probity of the public sector through increased transparency and government efficiency gains, the actual outcomes are a matter of empirical study. To explore these issues, this chapter presents the second case, an empirical study of Chile's public sector e-procurement platform, ChileCompra ("Chile Buys"). Like the SII's e-tax administration system, ChileCompra is an e-government success story that has altered the dynamics of the public sector purchasing system and the government's relationship with suppliers. Consequently, it

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<sup>268</sup> The realisation of efficiency gains in the private sector have provided an enticing incentive to transfer these practices to the public sector (Panayiotou *et al.* 2004). "The adoption of electronic government procurement (EGP) appears as an inevitable worldwide trend following the explosive growth of electronic commerce (EC) predicted to reach over US \$1 trillion in 2004 in developed countries" (Talero 2001, p. 1).

<sup>269</sup> This is especially true when considering the transfer of a system and practices from the private to the public sector. Procurement in the public sector operates under a different set of constraints than procurement in the private sector. One fundamental difference is that public sector organisations often have to meet multiple, maybe even conflicting goals – and are subject to a variety of financial, legal, contractual, and institutional constraints not found in the private sector context (Anderson 2004, Panayiotou *et al.* 2004, p. 84). Furthermore, arguably public funds should serve the ends of better service levels rather than minimising costs (Panayiotou *et al.* 2004, p. 82).

provides another unique opportunity to examine the links connecting the implementation of e-government to its influences on citizens' trust judgments.

The presentation of this case follows the same structure and approach used for the SII case. This chapter is broken up into two major components, case description (7.1) and within-case analysis (7.2 & 7.3). The first part of the analysis examines whether the implementation of ChileCompra affects the trustworthiness of public sector entities and their purchasing processes while the second part explores whether ChileCompra has an impact on trust from the perspective of the citizens who used it.

### **7.1 CHILECOMPRA: THE E-PROCUREMENT PLATFORM<sup>270</sup>**

E-procurement is viewed here as the process of goods and services acquisition through the use of an electronic system.<sup>271</sup> The e-procurement process can be divided into three main stages: process, decision, and transaction (Anderson 2004). In Chile, these processes are almost completely carried out through ChileCompra (CC), the e-procurement portal.

ChileCompra is an electronic system developed with the goals to make public sector purchasing in the Chilean public sector more efficient, effective, and transparent.<sup>272</sup> Fundamentally, the system is best understood as an electronic portal for the public procurement process that brings purchasers and suppliers together electronically. Its central components are an online catalogue through which purchases can be made directly and an online tendering and bidding system. It also acts as an information portal publishing a wide variety of public sector procurement information freely online.

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<sup>270</sup> If not otherwise cited, a large portion of information in this section comes the DCCP management reports (DCCP 2003, DCCP 2006a, DCCP 2007), and a set of clearly written guides for the practice and management of procurement, produced by the DCCP and placed online at [www.chilecompra.cl](http://www.chilecompra.cl). Where specific data points or quotes are used the citations are given.

<sup>271</sup> This is a more narrow view of e-procurement that might be better referred to as e-purchasing (Anderson 2004).

<sup>272</sup> The DCCP uses the catchword "open-government", which is one of the key factors of their ICT strategy.

ChileCompra is also embedded within a wider political and legal system, with a well defined managerial and procedural structure that complements its technological base. This section details these components. It begins with a description of the legal and political framework surrounding ChileCompra (7.1.1). Next, 7.1.2 outlines in detail the public sector purchasing process. These two sections provide the relevant contextual details to allow for the description of the relevant technical components of the system in 7.1.3. The following two sections attempt to convey the changes that have been brought about through the implementation of ChileCompra: 7.1.4 outlines the implementation history of ChileCompra, and 7.1.5 provides an overview of the outcomes of the system. Finally, 7.1.6 summarises.

#### 7.1.1 CHILEAN PUBLIC SECTOR PURCHASING SYSTEM

Chile's current public sector purchasing system has undergone fairly significant institutional changes since the beginning of this century, many of which are partially attributable to ChileCompra. Two contextual factors have shaped the path of change over the last seven years. First, traditionally, the public procurement function in Chile was characterised by relative institutional weakness. This is especially the case at the regional and municipal levels where there is "relatively low esteem for the procurement function as reflected in low salaries, which have resulted in inadequate staffing and capacity" (World Bank 2004, p. 8).

Second, much of the current public sector purchasing system (PSPS) in Chile was legally defined by the relatively new 2003 Public Procurement Law (19.866). This law provides the legal framework for the electronic procurement of goods and services.<sup>273</sup> The law provides necessary legal support for changing practices, as is often the case with public sector e-procurement systems (World Bank 2002). It also was a major step towards unifying public purchasing practices. The PSPS in Chile consists of a network of public sector legal and executive organisations, most public sector organisations, and private

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<sup>273</sup> "The Procurement Law 19.866, ... provides the legal framework for procurement of goods (with the exception of war materials) and services by agencies of the executive branch, the regional and provincial governments, the municipalities, the Armed Forces, the Central Bank and the CGR [Controller General's Office]" (World Bank 2004, p. 16).

enterprises. These actors are all brought together through ChileCompra, the e-procurement platform that brings together purchasers and sellers (see Figure 26). The 2003 law placed ChileCompra at the heart of the PSPS by making the purchase of all goods and services through ChileCompra mandatory<sup>274</sup> (IADB 2004, World Bank 2004, p. 16) for all public agencies, with some exceptions.<sup>275</sup>

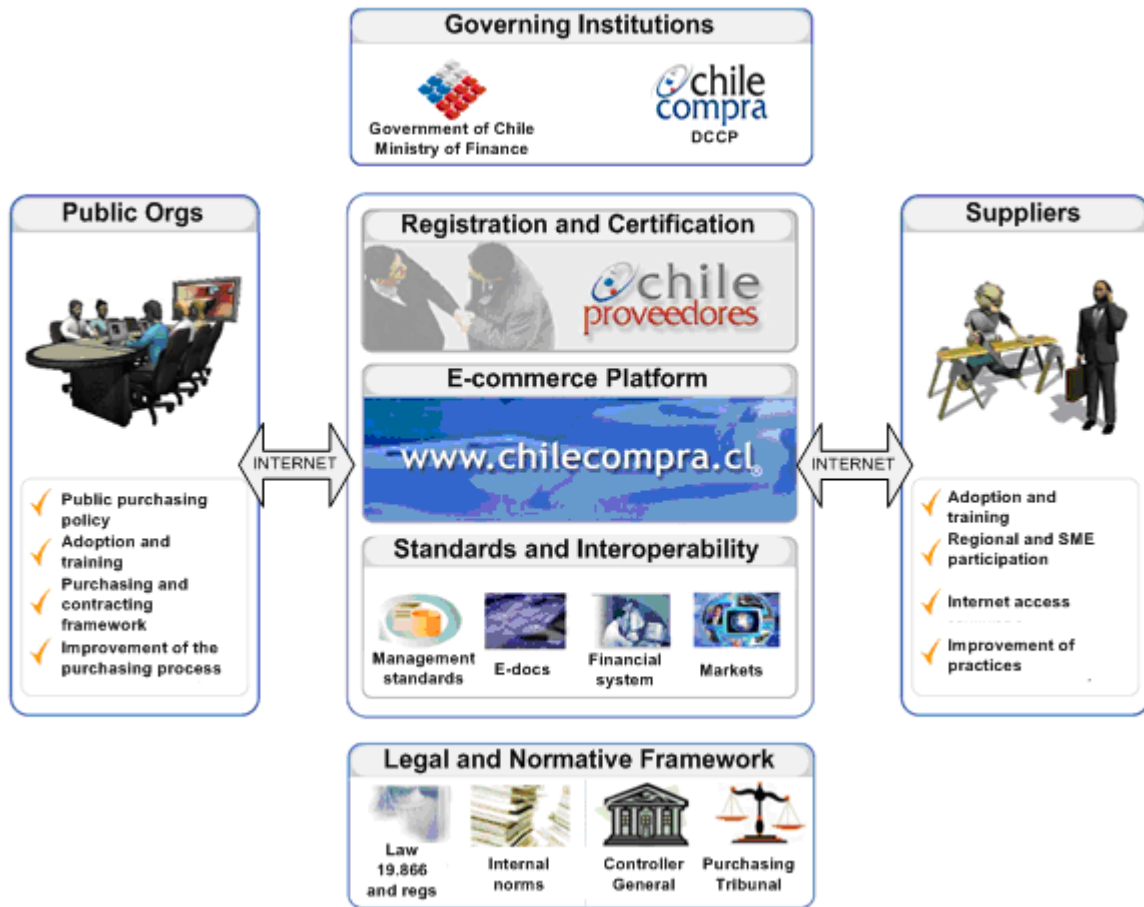


Figure 26 Public sector procurement system in Chile, figure adapted from (DCCP 2006a).

<sup>274</sup> “[Law 19.886] requires that all invitations to bid, bidding documents, inquiries and responses thereto, bid prices, administrative resolutions on award decisions, contract documents and other relevant documents for all state and municipal contract, including public works contracts be posted on ChileCompra platform. Moreover, all procurement transactions for goods and services should be carried out through ChileCompra. Stage agencies are not allowed to award contracts tendered outsider of ChileCompra” (World Bank 2004, p. 18).

<sup>275</sup> For example, the Ministry of Health can make bids through ChileCompra, but buys a lot of medicine through CENBAST, the procurement institution for the health sector with specific expertise the procurement of medicines.

The public procurement law also placed the federal management of the procurement function for goods and services under the jurisdiction of a new entity called the Public Purchasing and Contracting Directorate (DCCP - *Directorate of Public Procurement and Contracting*) within the Ministry of Finance (Ministerio de Hacienda). The DCCP acts as a facilitator for public procurement with the following mission:<sup>276</sup>

“develop policies and initiatives with the object of making transparent and creating value in the public purchasing market thorough the introduction of technological instruments and excellent management, benefiting businesses, public organizations, and citizens” (DCCP 2003, p. 6).<sup>277</sup>

The DCCP functions in three basic areas: management of ChileCompra, technical assistance, and policy and management of purchasing. The DCCP oversees the management of the ChileCompra platform whose development, hosting, and technical operation is outsourced to a private sector consortium. It is also in charge of managing the e-catalogue, a task that includes negotiation with suppliers over set prices for commonly used products and services. The technical assistance it provides is to both the public sector and the suppliers including; a) stage agency training, b) human resource development (including university courses on public procurement management), c) technical support, d) national registry of suppliers, and e) support to small and medium enterprises (World Bank 2004). Finally, the DCCP also performs other activities such as establishing public procurement guidelines, helping to ensure the enactment of the public procurement law, and performing evaluative studies.

There are two other major governmental agencies that play an oversight role in the procurement process, the Public Procurement Tribunal and the General Controller’s Office (CGR - Contraloría General de la Republica). The Public Procurement Tribunal is also in the Ministry of Finance and is the entity with the responsibility for resolving

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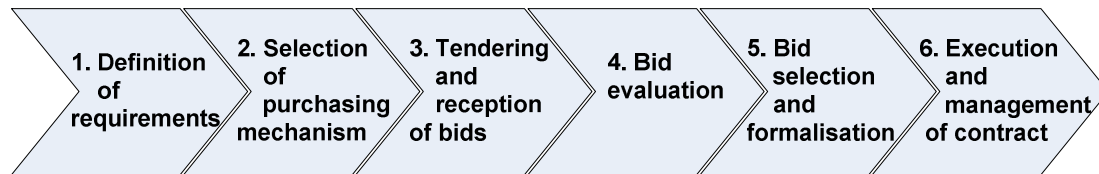
<sup>276</sup> The DCCP has the following strategic objectives; consolidate a transparent and widely accessible public purchasing system, increasing the savings and efficiency of public spending, and promoting e-commerce and e-government (DCCP 2003, p. 6).

<sup>277</sup> Translation mine.

public sector purchasing complaints or disputes.<sup>278</sup> All suppliers have the right to object before the public contracting tribunal (DCCP 2002). The CGR acts as the main oversight body for the public sector. Consequently it has jurisdiction over the practice of public procurement and conducts audits and inspections, among other activities (World Bank 2004, p. 37).<sup>279</sup> In general, the civil society and the private sector trust the oversight intervention of the CGR (World Bank 2004, p. 8).

### 7.1.2 THE PROCUREMENT PROCESS

In Chile, the public sector procurement process can be broken up into six basic steps: (1) definition of requirement, (2) selection of a purchasing mechanism, (3) tendering and reception of bids, (4) bid evaluation, (5) bid selection and formalisation, and (6) the execution and management of the contract (see Figure 27). Of these steps, steps 3-5 (and parts of 6) occur within the ChileCompra system.



**Figure 27** The six steps of public sector acquisition in Chile. Source: [www.chilecompra.cl](http://www.chilecompra.cl).

#### 1. Definition of requirements

Defining the purchasing requirements is arguably one of the most important stages of the process. The definition is an attempt to clarify the needs of a public sector organisation in terms of what, how, and when one wants to purchase. There are many techniques involved in developing good purchasing requirements definitions, such as consulting peers, experts, and suppliers to help with defining the key characteristics of the product or

<sup>278</sup> “[The] responsibility of this court is to hear and resolve complaints related only to administrative actions or omissions in the bidding process and award of all contracts by government actions or omissions in the bidding process and award of all contracts by government agencies covered by the procurement law” (World Bank 2004, p. 19).

<sup>279</sup> “The CGR: (i) carries out ex-ante control of legality (toma de razon); (ii) issue legal opinions on the interpretation of matters of its competence; (iii) conducts audits, inspections and prosecutions; (iv) control compliance of statutory rules of public servants and keeps a registry of those personnel; (v) keeps the national accounts and reviews financial statements issued by stated fiduciary agents; and (vi) reviews and keeps a database of laws, treaties and regulations” (World Bank 2004, p. 37).

service that is needed. Of course, the complexity of these definitions varies greatly depending upon the nature of the product or service required.

The definition acts as the “rules of the game” for both the purchaser and the supplier. There are two main groups of characteristics that must be defined: requirements and/or restrictions, and differentiation factors. Requirements are those that must be met to satisfy the need, for example, the term of fulfilment, product type, expected quantity, and place of delivery. Differentiation factors are those that will be used to evaluate the offers to determine the best offer, for example, post-purchase services, type/length of warranty, experience levels, certifications, quality, and availability of technical service. These criteria are detailed along with a percent of the weight for each that criterion in the evaluation process. For example, the purchaser may stipulate that price will have the heaviest weight at fifty percent, delivery time the next thirty percent while length of warranty, and quality are both weighted only ten percent.

It is important to note that the process of requirement definition is supposed to be linked with the development of the budget and yearly purchasing plan. This yearly plan attempts to predict the needs and hence necessary purchases for the organisation over the course of the year. As stipulated in the 2003 law, this plan needs to include at least the following: a description or specification of the good or service, ChileCompra category code, quantity, estimated cost, method of purchasing, and approximate date for publishing the tender.

## **2 & 3. Selection of purchasing mechanism, tendering, and reception of bids**

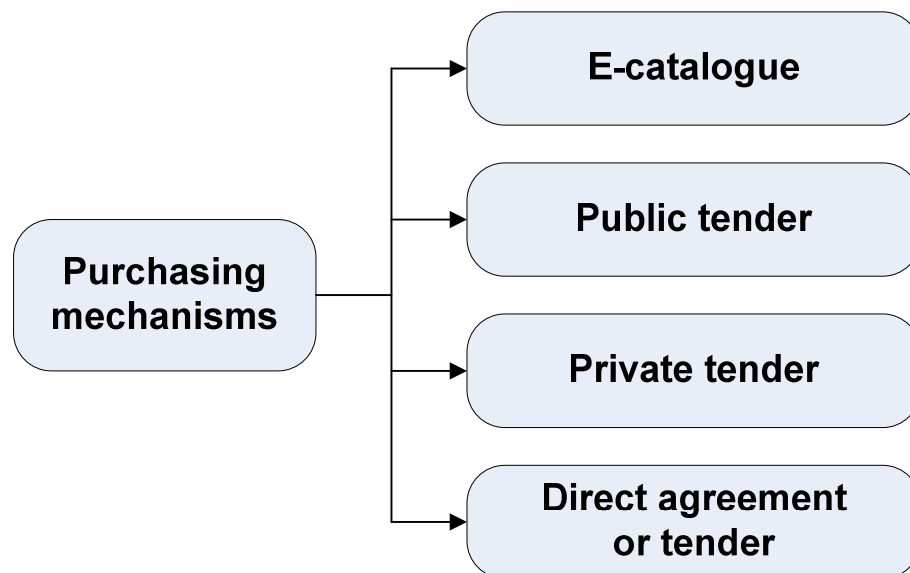
In Chile, the 2003 public purchasing law and regulations established four different purchasing mechanisms: e-catalogue, public tender, private tender, and a direct agreement or tender (see Figure 28). These mechanisms were developed with the goals of maintaining competition and the flexibility to adjust to need. If a purchasing process is used inappropriately then punitive action may result.<sup>280</sup>

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<sup>280</sup> For example, if one chooses to make a private tender due to an emergency situation, it is imperative that they can prove the urgency of the purchase. Furthermore, for all of the requirements where there is a monetary limit determining the purchasing mechanisms, it is forbidden to fragment the purchase into smaller contracts to change the selection of a purchasing mechanism.



Once a process has been selected and a purchase order tendered, there is a minimum period of time that the order is open and offers can be submitted. During the phase of tendering and receipt of offers all contact between the suppliers and the buyer should be done through the system. For example, if there are any questions or consultations, then these are conducted through the mechanisms provided for on the portal, and the questions and answers become available for all to see. It is also possible for the acquisitions officer to modify the purchasing definition, if necessary, before the closing of the tender, although it is suggested that further time is given so that the suppliers can adjust their offers accordingly.



**Figure 28** The four different means for public sector acquisition of goods or services.  
Source: [www.chilecompra.cl](http://www.chilecompra.cl)

The law also established the parameters of the procurement process with respect to the costs of tenders. Any procurement process for large contracts (over 1000UTM)<sup>281</sup> must have a minimum bid period of ten days (and up to sixty days), and must be done through a public procurement process. For contracts between 100 and 1,000 UTM the minimum

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<sup>281</sup> As of August 2007, 1 UTM = 31508 Chilean Pesos, and 517.5 Chilean Peso = 1 USD.

waiting period is five days and may go through any of the procurement processes.<sup>282</sup> Small tenders under three UTM do not require a public tendering process – although the purchase order is still done through ChileCompra.

**E-catalogue** The *Catálogo Electrónico de Convenios Marco* (Agreement Framework Electronic Catalogue, also named *ChileCompra Express*) is an online catalogue of products and services. When looking to purchase a good or service, the public sector organisation is obligated to first look to the E-catalogue.<sup>283</sup> Use of the catalogue is said to bring various advantages including more competitive prices through bulk purchasing contracts, better terms of delivery, direct purchasing eliminating stages of the purchasing process, no inventory costs, and trustworthy suppliers.

**Public tender** The public tender is the most general and common form of public sector purchasing. This process is a competition between bidding suppliers who attempt to match their offers to the purchasing requirements. The specifications are provided to potential suppliers through downloadable documents. The public organisation must select the most convenient bid according to the criteria established in the requirements (see bid selection and formalisation below). This process should always be used unless the product/service is found in the e-catalogue (or an offer is found that is substantially more advantageous), or the purchase corresponds to an exception observed by the 2003 law and regulations.

**Private tender** A private tender is similar to a public tender, except that it is a closed competition between a minimum of three invited suppliers. This process will occur under the following situations: a) after a public tender without offers,<sup>284</sup> b) a contract to carry out or finish a previous contract that had terminated before fulfilment and is less than or equal to 1000 UTM, c) urgent purchases in case of unforeseen

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<sup>282</sup> The law also established that there is to be no difference between non-intellectual services and contracting of consulting services (World Bank 2004, p. 17).

<sup>283</sup> There are some exceptions to this rule; municipalities, the Armed Forces, and the police are not obligated to use the e-catalogue, although it is recommended that they do.

<sup>284</sup> The same product/service requirements must be used.

circumstances or emergencies, d) contracts equal to or less than 100 UTM, e) confidential services, and f) service agreements with foreigners executed outside of national territory.

**Direct agreement of contract**      The direct agreement of contract is a direct purchase from a pre-selected supplier without a bidding stage. This can only be used in exceptional situations such as those outlined above for the private tender. There is one special exception, and that is for situations where the nature of the contract logically dictates that direct agreement is the only feasible purchasing mechanism. For example, a direct agreement might be used when the supplier has exclusive (intellectual, industrial) rights, where a supplier has special (unique) faculties or characteristics, or has provided accessory services to previous purchases or contracts.

#### **4 & 5. Bid evaluation, selection, and formalisation**

The process of bid evaluation differs between the e-catalogue and the other processes where multiple offers are considered. For the e-catalogue, this is a relatively straightforward process of need identification and looking online for the best deal as negotiated by the DCCP on the e-catalogue. At that point in time the purchase can be made through the system. The evaluation process for the standard tendering procurement processes is more involved.<sup>285</sup>

The goal of this process is to choose the offer that best fits the needs of the public organisation. The evaluation process is supposed to be both quantitative and qualitative to compare the offers with respect to the administrative, technical, and economic requirements detailed in the tender. This is done with respect to the weighting system established in the requirements stage to calculate a total point score. The selection of the offer is then made on the basis of these calculations.

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<sup>285</sup> There are two different evaluation procedures, a two-stage and a one-stage. The two-step procedure involves first reviewing the offers for their technical qualifications, keeping the economic details hidden from evaluation. Those that do not qualify technically are declared inadmissible. If they pass the offers are opened to reveal their economic offer. The one-stage process includes all of the information in the evaluation stage. Again during this phase there is to be no contact with the suppliers except through the ChileCompra system.

When a selection is made the results are then communicated to the suppliers. Ideally this includes the points obtained according to the established criteria, the identification of the winning supplier, the methodology used, and the information that went into the decision. In the case that no offers are chosen the tender is declared “deserted”.<sup>286</sup> This can happen when no offers are submitted, or when the offers are not deemed good enough fits for the purchaser.

## **6. Execution and management of contract**

Once the offer has been selected, the bulk of the work that happens through ChileCompra system has occurred. The execution and management of the contract must be done by the public sector organization that made the purchase. This process includes activities such as managing the relationship with the supplier, payment, modifications and completion of the contract (correct amounts/quality/delivery time), and post delivery services. In general, with any tender, the details of the contract should be included as a part of the requirement specification.

The DCCP recommends a process of information management after the completion of the purchase, with the aims of learning from past experience and improving the efficiency and effectiveness of future purchasing practices. The DCCP advises that the public organization maintain their own registry of suppliers that keeps track of their completion or failure to complete orders, and that this is useful information for future purchasing decisions (see Table 32). For example, if a tender was abandoned then the public entity should analyse the problem and make the appropriate corrections for the next similar tender. Or, if the purchase went through the e-catalogue and there was some dissatisfaction with respect to the good/service, the DCCP requests that this information is relayed to the DCCP through the “complaints and suggestions” option on the website.

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<sup>286</sup> In Spanish, “desierta”.

<b>Suggested record</b>	<b>What to register?</b>
Contract	Contract identification data
Location	Where to find the digital archive
Name of purchase	Name of the purchase
Type of contract	New or Renewed
Provider	Provider identification
Purchase mechanism	E-catalogue, public tender, private tender, direct contract
Purchase amount	Purchase amount
Brief description	Brief description
Convenient delivery of product/service	Yes or No
If not convenient: why?	Describe the cause for the inconvenient delivery
Modifications or extensions?	Yes or No
If modifications or extension, why?	Describe cause
Contract completed as anticipated?	Yes or No
If not, why?	Describe
Supplier grade	1.0 to 7.0 (or other scale)

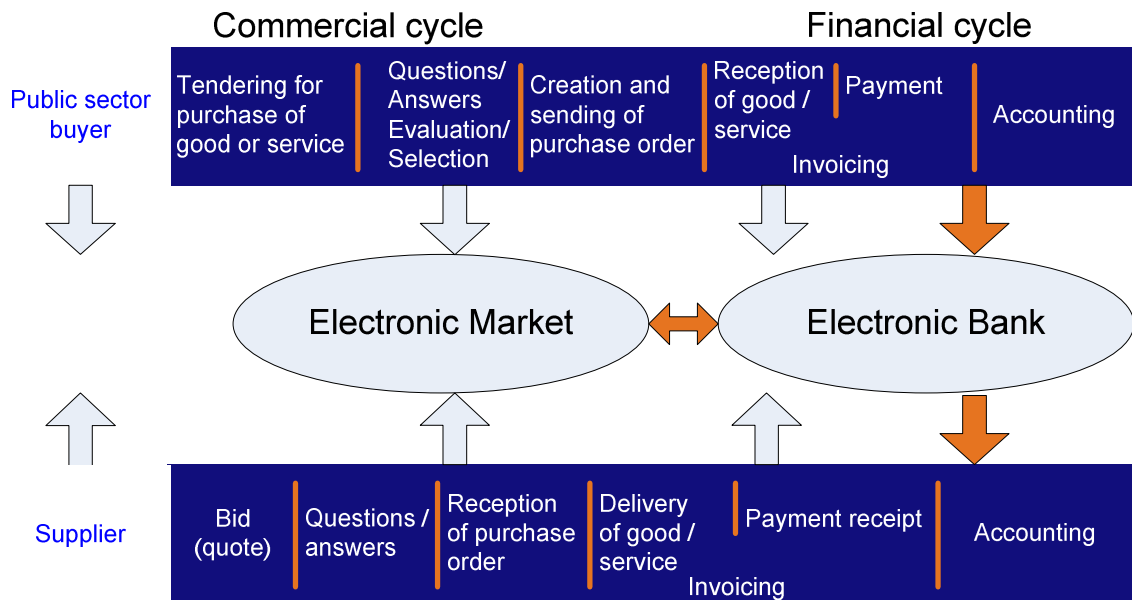
**Table 32 Suggested information to be recorded as part of the post-contract evaluation process, source: [www.chilecompra.cl](http://www.chilecompra.cl). As of 2006, this information can be entered into ChileProveedores, the new online supplier registry (see 7.1.3).**

### 7.1.3 THE E-PLATFORM

The e-platform is the technical instantiation of the e-marketplace with all of its ancillary components and services. A central background feature of the platform is the 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). Besides the security component, there are other aspects that facilitate the procurement processes: an e-market, ChileCompra Express (e-catalogue), ChileProveedores, and relevant procurement information sources.

## The E-Market

The e-market is the online system that allows for public, private, and direct procurement processes (see 7.1.2). Currently, almost the entire purchasing cycle can be completed electronically, from the presentation of a tender, to emitting a purchase order, to billing and electronic payment (see Figure 29). The system now uses the relatively new e-invoices for electronic billing.



**Figure 29** The entire procurement cycle on the ChileCompra platform. Figure adapted from (DCCP 2006a).

For suppliers, the quality of the interaction with the system is highly dependent upon the information provided and personalised configuration profile. Registration in the system requires Internet access, an email account, and official business status granted by the SII. Upon registering, you sign up and provide details of your business including your area of business (“*rubro*”), and the types of purchase tenders you would like to be notified about. When a new tender is published that qualifies according to the entered criteria, the supplier immediately receives an email notifying them of the potential business opportunity. The suppliers can then submit a bid if they choose. Upon the closing of the offer, a decision is made and the suppliers who bid are notified of the outcome of the selection process. For the winner, a purchase order is sent electronically. The supplier

then delivers the good or service and sends the public sector organisation an invoice and receives payment. These last processes can occur online if the supplier uses e-invoices and has a bank account with an integrated bank.

### **ChileCompra Express (e-catalogue)**

The e-catalogue is effectively a virtual store where public sector organisations can purchase goods and services, and is the first stop for public sector purchasing. The catalogue has products and services for set prices, purchasing conditions, and other specifications of the products and services, for a determined time-frame. The purchasing process is straightforward. A purchaser selects what they want and put the selection in their e-shopping cart. They then complete the transaction online and ChileCompra creates a purchase order which is then sent to the chosen suppliers.

In general, the e-catalogue is ideal for simple, routine, or standard purchases. This catalogue allows the public sector to take advantage of the leverage of bulk purchasing agreements to negotiate good deals for the goods and services that are most common to the operation of public sector organisations. The DCCP, who negotiates the deals, uses information of purchasing practices and needs collected from public sector organisations to determine what products and services to incorporate. There is an increasingly expanding range of products and services that can be bought online such as office paper, renting rooms for events, computers, airline tickets, and English courses.

Often agreements will be reached with several suppliers in the same areas resulting in a wider variety of brands and competition. Furthermore, the tenders made by the DCCP for purchasing agreements are made available to suppliers across the country. Those who obtain the minimum point scoring with their offers can have their products in ChileCompra Express. Currently there are more than 130,000 goods and services available with around 490 suppliers (national, regional, large and small) across the country.

## **ChileProveedores<sup>287</sup>**

ChileProveedores (“Chile Suppliers”) is the new national registry of state suppliers completely integrated into ChileCompra. Currently, it is the window for registering and participating in ChileCompra. It offers the service of accrediting businesses as official state suppliers. Those that gain accreditation can maintain in one place all the relevant information about their business (products, services, projects, certifications, etc.) avoiding the process of reproducing the same information every time the business bids on a purchasing tender. It also includes an evaluation system where the public sector entities can evaluate the suppliers after each acquisition process according to their behaviour and the quality of the good or service.

### **Information services**

The ChileCompra platform makes available 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” (World Bank 2004, p. 3). According to the procurement management manual produced by the DCCP, the information provided by ChileCompra (and through improved management of information practices) can also contribute to these three goals: a) making the public sector organisation more effective (better information for short, medium, and long term decisions), b) efficiency gains (better daily management, purchasing decisions), and c) increasing transparency and accountability. There is also information that is relevant for suppliers such as support and training documents and searchable data on prior purchases.

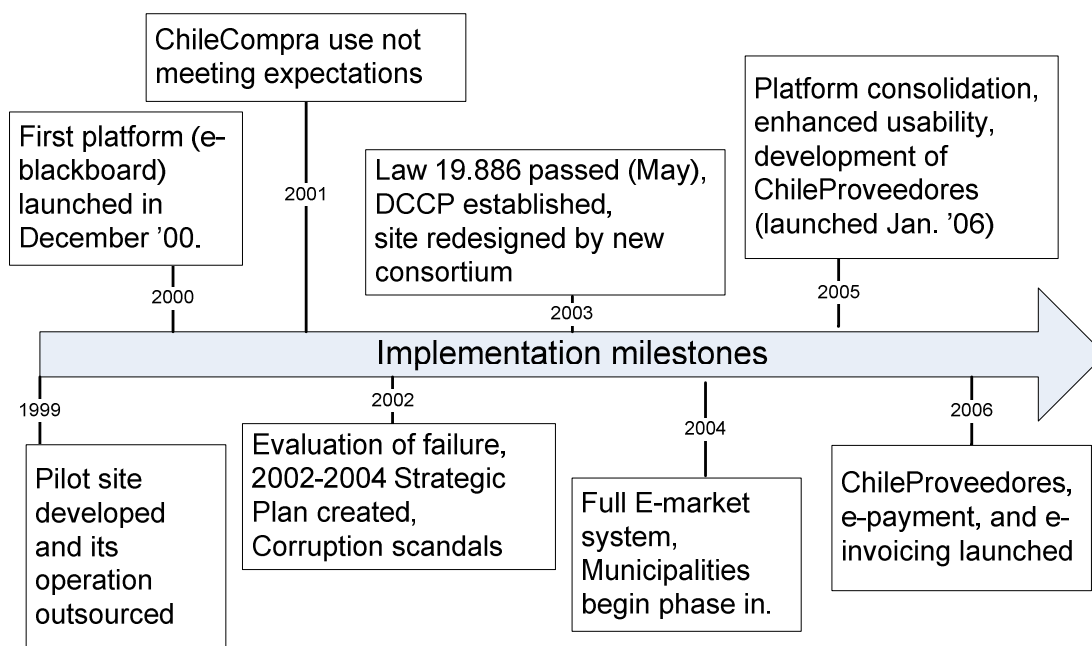
#### 7.1.4 IMPLEMENTATION HISTORY

It is possible to break-up the implementation history of the ChileCompra portal into two stages: a period of inception and failure (1998-2002), and a period of redesign and take-off (2003-2006). A timeline for the different major events can be seen in Figure 30.

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<sup>287</sup> ChileProveedores is a new component of ChileCompra as of Jan. 2006. Thus, the data collected in 2005 and from March-May 2006 do not really comment on this system.





**Figure 30** Timeline of ChileCompra implementation.

### **Platform 1 Online Blackboard: 1998-2002 (inception and failure)**

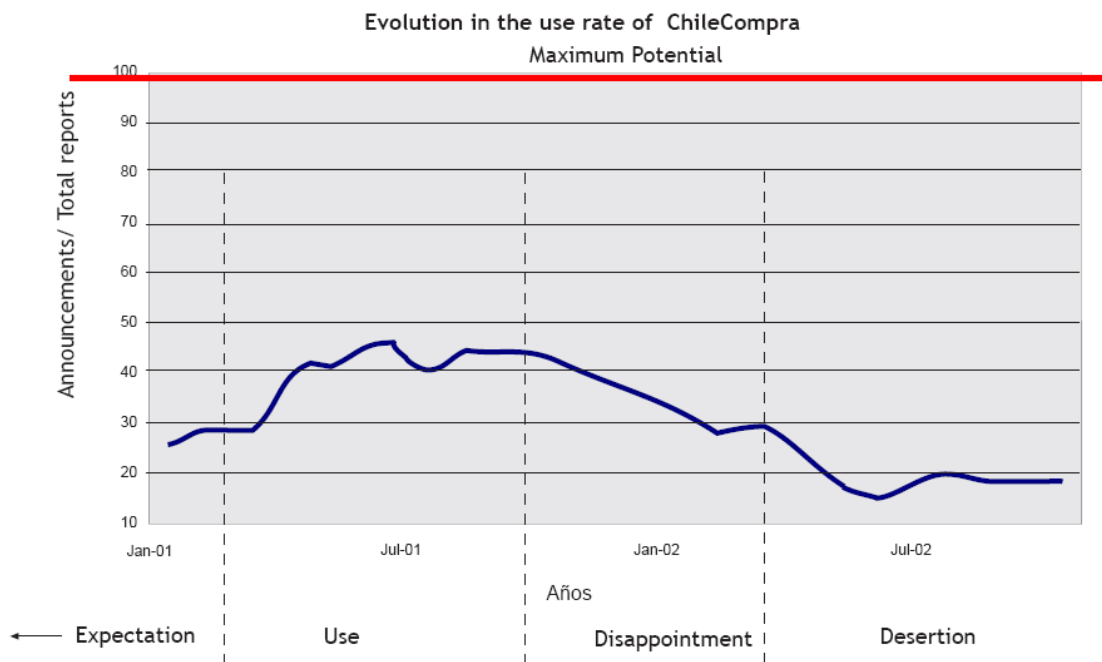
As part of the Modernization of the Public Sector Strategic Plan (1997-2000), the committee of Ministers for State Modernisation proposed an e-system platform for state procurement of goods and services that would help reform of the public sector purchasing and contracting system (World Bank 2004). A pilot system was developed and launched in 1999.<sup>288</sup> In 2000, the portal was officially launched under the control of the state Purchasing/procurement Directorate (DAE - Dirección de Aprovevisionamiento del Estado) who has historically been the Chilean public sectors' main buyer.

The first system served mainly as an information blackboard for the ex-post publishing of completed bids and contracts.<sup>289</sup> This system was upgraded to a contact site, where registered providers offered products and public agencies posted requests, and the e-system matches and sends email to potential vendors (AED 2003).

<sup>288</sup> It was launched under the name [www.compraschile.cl](http://www.compraschile.cl) (Purchases Chile). It was also developed and operated by the same software company who built the SII platform, SONDA.

<sup>289</sup> The site was the Information System for Public Sector Purchasing and Contracting with several areas: acquisitions, requesters, providers, reports, or data.

By 2002 the system was not meeting expectations with only about three percent of the procurement opportunities being posted and 1/60<sup>th</sup> of the potential suppliers using the system regularly (World Bank 2004) (see Figure 31). From the outset, there were a variety of implementation issues resulting in a negative perception and a failure to meet the expectations of both the public agencies and suppliers (DCCP 2002). The end result was a discredited system, with low perceptions of trust, usefulness, and efficiency (World Bank 2004, p. 12) (see Table 33).



**Figure 31** The evolution of the use rate of ChileCompra from 2001 to end 2002, source: (DCCP 2002, p. 12).

<b>General information about ChileCompra</b>	<b>Grade (1 to 7)</b>
General operation of the ChileCompra portal	4.9
Materialization of expectations generated in your agency	4.7
Functionality of the ChileCompra portal	4.6
Helpdesk	5.3
Training for public agencies	4.7

**Table 33 General satisfaction with ChileCompra in 2002 from a DAE user satisfaction survey, Source: (DCCP 2002).**

An independent study commissioned by the Chilean Government concluded that the principle reasons for the failure of ChileCompra in this period were a lack of leadership and adequate management, cultural resistance, lack of political commitment, and inadequate knowledge and technical support (World Bank 2004, p. 4). It also appeared that many public sector organisations continued with their old purchasing practices, resisting the change and potential public scrutiny of transparency (Hussmann 2004).<sup>290</sup>

### **E-transactional marketplace: 2002 – 2006 (redesign and take-off)**

Hussmann (2004) argues that there were several significant events that refocused the governments' efforts to establish ChileCompra. First, in October 2002 a series of public sector purchasing scandals revealed irregular practices and accusations of corruption.<sup>291</sup> This brought the respected public sector purchasing practices under question and made it a political issue. Second was the negotiation of free trade agreements with the European Union in 2002, and with the US in 2003. These factors provided the political impulse behind the new Public Purchasing Law in May 2003, which had been languishing for four years in legislative limbo. Third, a new director of the DAE was appointed who radically changed the DAE's management model and was focused on the process of state modernisation reform and ChileCompra.

<sup>290</sup> Also in 2001, the DAE authorized public organizations to publish purchasing tenders through other e-commerce sites with the effect of diffusing demand and hurting ChileCompra's chances to reach critical mass (Hussmann 2004).

<sup>291</sup> These corrupt practices had been mentioned in a Commission on Public Ethics in 1994, but never received any real political attention (Avgerou *et al.* 2005, p. 2005).

In 2002, a new three year strategic plan<sup>292</sup> was developed with the following stated goals: attain complete transparency of public procurement in Chile, enhance the efficiency of the state, and digitize the purchasing cycle (DCCP 2002). This plan identified several other deficiencies of the system including a multiplicity of rules among public agencies, low procurement management capacity in terms of experts and technology, little attention paid to contracting management, few incentives for improving management, misclassification of business areas, and limited transparency in the contracting process.<sup>293</sup> The new plan had the overriding goals of enhancing transparency,<sup>294</sup> efficiency, and the economy. It has four major areas: a) policy and regulation, b) institutional change, c) enhancing ChileCompra, and d) technical assistance to government agents and suppliers (World Bank 2004).

**Policy and regulation** Historically, there was no unified public procurement system in Chile, partially due to a lack of one comprehensive law that governs public procurement in Chile. The procurement of public works and goods and services generally have been “carried out under separate legal, procedural and organizational frameworks” (World Bank 2004, p. 11). The “Organic Law of State Administration” allowed for ministries, stage agencies, and municipalities to adopt their own procurement regulations (World Bank 2004).

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<sup>292</sup> The 2002-2004 Public Procurement System Strategic Plan.

<sup>293</sup> Arguably, this represented a movement from a more singular technical focus towards a more holistic administrative-management reform and change project. This idea was articulated very clearly in the interview with DCCP employees,

“At the beginning of the project it was seen mostly as a technological project, to implement a new technological tool and that’s it. It didn’t have a legal aspect either that obligated publication on the site... Afterwards began a focus on administration, to provide a technological tool but also to build capacity as well. This was a metamorphosis in terms of administration in general and it seems this was key to the project’s success. It was an administration/management project, not just a technological project,” source: WB-DCCP-1/6.

<sup>294</sup> This was defined as the 100% timely advertising of procurement opportunities and transactions, uniform and efficient procedures, definition and applicability of procurement methods, and rationalization of public procurement through aggregation of demand mechanisms.

The single most defining policy and regulation change was the passage of the Public Procurement Law in 2003 that established the legal framework for public purchasing. As discussed (see 7.1.1), this law worked to unify the purchasing system, obliging most public organisations to purchase through the ChileCompra Platform starting September of 2003. Other excluded organisations were incorporated more gradually, according to their political and organisational realities. Municipalities were incorporated in three phases starting January 2004 depending upon their relative access to resources such as the Internet. ChileCompra use for the Armed Forces became mandatory in January 2005, except for military (weapons) purchases.

**Institutional change**        There were major organisational changes to the public sector procurement system including the creation of the Public Procurement Tribunal and the establishment of the DCCP to take over for the DAE (World Bank 2004). Besides organisational restructuring, another component of institutional change was the Programme to Improve Management (PMG)<sup>295</sup> that supplied management with measurable goals linked to agency and staff financial incentives with the aim of rationalising and improving public sector management practices.<sup>296</sup> This programme has been ongoing since 1998, and began to incorporate ChileCompra in the early 2000s. Significantly, the municipalities and the hospital and health services, two of the largest public sector purchasers who work under a different budgetary system, are not included in the PMG programme.

**Enhancing ChileCompra**        The site went through a complete redesign and important new functionalities were completed in 2003, such as online purchase orders, e-tendering, and the e-catalogue. The fully functioning market was put online in February

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<sup>295</sup> Programa de Mejoramiento de Gestión.

<sup>296</sup> In this area, the DCCP sets the goals and evaluates improvements. By the end of 2003, 131 agencies were included in PMG with ninety-nine of them reaching the fifth and final stage of the procurement process programme (World Bank 2004, p. 24). The stages were described as follows: 1) purchasing capacity building (norms, use of Information system), 2) using the CC system well, 3) integrate efficient purchasing methods into working practices (e.g. e-catalogue), 4) taking advantage of the purchasing plan, and 5) identification and working on weaknesses. Source: WB-DCCP-8.

of 2004, having increasingly added functionalities since the site redesign.<sup>297</sup> The following year, 2005, was a year of consolidation for ChileCompra adding new functionalities such as the pilot for the e-payment and enhanced usability features. In January of 2006, ChileProveedores was launched.

**Training and technical assistance** A major component of the activities of the DCCP is the diffusion and further consolidation of ChileCompra throughout both the public and private sectors. This includes supporting the agencies and enterprises involved in using the system. There are several different activities including a programme of user access, user training, and technical support.<sup>298</sup>

#### 7.1.5 OUTCOMES

For the purposes of the analysis to follow, this part focuses on the outcomes that occurred since the inception of the new system and management, 2003, until May-2006 when the last user interviews were conducted. This part examines both the amount and qualities of ChileCompra usage and the little available data on users' perceptions and experiences.

#### USAGE

By 2003 the execution of the strategic plan had already started to bring changes to Chile's procurement system as witnessed by the massive growth of (now obligatory) purchases through the e-procurement system. By December 2003, the DCCP had done

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<sup>297</sup> The bid for the platform itself was done online and was won through a open competitive process (in July 2003) by a consortium of SONDA and i-construye, another Chilean IT company in Chile (DCCP 2003). The "new electronic platform of ChileCompra was developed on the basis of experienced gained from the operation of the original platform considering the full spectrum of private sector e-commerce facilities that makes possible the use of commercial, off-the-shelf software" (World Bank 2004, p. 3).

<sup>298</sup> Coinciding with all of the other activities to diffuse Internet access to ChileCompra, and in particular focusing on micro and small enterprises, the DCCP has engaged in a "ChileCompra Access Program". From 2006 to December 2007, they have the goal of supporting the 50,000 businesses across the country as well as adding another 10,000 business to the system. The DCCP, along with other educational entities, are offering approximately 1,000 businesses with state management courses, as well as the techniques of selling, use of technology, etc. In 2004 and 2005 over 33,000 public sector buyers and 14,000 buyers attended training courses. In 2006, the DCCP established a ChileCompra accreditation course for buyers and suppliers. In 2002 a help and support desk was established (DCCP 2003). In 2005, 224,268 people were attended to by the helpdesk by telephone, and 35,907 in written form (email, fax, web). In April 18, 2005, they started an online legal assistance service with two external lawyers, where they have received an average of eighty calls a month. There is also a complaint attention system started in May 3, 2005, with 978 complaints in that year (DCCP 2006a).

well on a series of goals they had set (see Table 34).<sup>299</sup> Not surprisingly a majority of transactions (forty-six percent) occurred in the Santiago Metropolis (see Table 35). This growth continued through 2004, and by the years end there were around 84,000 providers in the system and 655 public entities (including 123 municipalities) (Avgerou *et al.* 2005, IADB 2004).

<b>Description</b>	<b>Goal</b>	<b>Achievements</b>
State purchases through ChileCompra	<b>100%</b>	87%
Estimated savings through better prices through using ChileCompra	US\$10,000,000	<b>US\$80,000,000</b>
Total % of goods and services purchased through the e-catalogue	10%	<b>12%</b>
Average # offers/acquisition	3	<b>6.2</b>
Public sector organizations registered in the system	200	<b>567</b>
Suppliers registered in the system	30,000	<b>48,000</b>
Suppliers that generate at least one offer annually	5,000	<b>28,000</b>
Users who grade the quality of service with a 5.5 (1-7) or higher	80%	<b>87%</b>
Public organizations who have reached stage 5 of the Programme to Improve Management	50%	<b>88%</b>

**Table 34 Goals and achievements of the DCCP in 2003, source: (DCCP 2003).**

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<sup>299</sup> For example, eighty-seven percent of all state purchases (of the registered entities) were conducted through ChileCompra, and bringing an estimated savings of around US\$80 million through a seven percent savings on average through better prices (DCCP 2003). The IADB reported that in 2004 the ChileCompra Director Campero explained that “ChileCompra is already paying for itself through savings of \$3 million a year in notices in publications, and because the expenses of entities that use the system have declined by 7 percent, the equivalent of some \$70 million” (IADB 2004).

<b>Region</b>	<b>Number of Transactions (2003)</b>	<b>% of transactions</b>
I	7273	4
II	6394	4
III	6409	4
IV	6243	3
V	12088	7
VI	6090	3
VII	8237	5
VIII	11801	7
IX (Araucania)	9862	5
X	11973	7
XI	5427	3
XII	5671	3
<b>Santiago Metropolis</b>	<b>84866</b>	<b>46</b>
Not classified	322	.2
Total	182656	

**Table 35 Amount of transactions through ChileCompra in 2003. The metropolis of Santiago, the location of a majority of the federal government organizations clearly make the most purchases through the system. Source (DCCP 2003, p. 18).**

Since the end of 2004, ChileCompra has continued consolidating and augmenting its gains (see Table 36). Perhaps as a mark of ChileCompra's coming of age, from 2004 to 2006 it was ranked as the best transactional site in Chile by the Centre of Digital Economy Studies, beating out the second place SII website.<sup>300</sup>

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<sup>300</sup> Source: [www.chilecompra.cl](http://www.chilecompra.cl).



	2003	2004	2005	2006
Amount transacted (Millions USD)	1,038	1,933	2,887	3,466
N° of public business opportunities	186,656	254,256	434,154	459,715
N° Purchase Orders	-	374,931	917,145	1,230,424
N° Purchasing organisations (accumulated)	348	718	883	~900
N° Suppliers (accumulated)	48,006	97,262	164,022	213,981
N° Suppliers who submitted bids (per year)	-	33,451	58,355	65,344
N° Suppliers selected (per year)	-	21,179	37,323	42,974
Amt transacted ChileCompra (millions USD)	945	1,933	2,877	3,466
Amt transacted E-catalogue (Millions USD)	5.5	32.1	77.6	204.8
N° E-catalogue Purchase Orders	7,728	41,091	112,642	180.653

**Table 36 ChileCompra statistics 2003-2006, source: (DCCP 2006a, DCCP 2007).**

In the first trimester of 2006, the 885 public sector organisations that operate through ChileCompra increased their total purchase orders by over seventy percent (over a quarter of a million in 2006) and the amount of e-catalogue transactions by about eighty-six percent compared to the same period in 2005. By 2006, the municipalities were almost completely integrated into the system accounting for forty-three percent of all purchase tenders.<sup>301</sup> This has increased the usage of the system outside the Santiago Metropolitan Region, although public sector organisations in the Santiago Region still account for thirty-one percent off all tenders and accounting for over sixty percent of the total amount transacted.<sup>302</sup>

The existence of ChileCompra has opened up the playing field to a wider variety of suppliers. In 2005, thirty-seven percent of the registered suppliers submitted a bid (up

<sup>301</sup> Purchase tenders by sector: health twenty-three percent, central government agencies nineteen percent, and the armed forces twelve percent. Municipalities and the Ministry of Health emitted over thirty-one percent (each) of all purchase orders, while the central government emitted about twenty-four percent.

<sup>302</sup> Of course, the Santiago Metropolitan Region is home to around thirty-five percent of the total inhabitants of Chile.

from thirty-three percent in 2004).<sup>303</sup> Of all the businesses that bid in 2006, two out of every three won at least one competition. In 2006, sales from small and micro enterprises (SMicEs)<sup>304</sup> increased four percent to thirty-five percent of total transactions, up from thirty-one percent in 2005 (DCCP 2007). This percentage is high considering that sales from SMicEs represented approximately thirteen percent of the total volume of sales in the national economy in 2005 (DCCP 2006b).<sup>305</sup> It does appear, however, that the larger the enterprise, the more effective their bids (i.e. the ratio of bids to purchase orders) (see Table 37). Regionally, sixty-eight percent of the suppliers who received a purchase order were from the metropolitan region of Santiago, and over thirty-eight percent were from the different regions (an increase from twenty-eight in 2005).

<b>Average per Supplier Active in ChileCompra (2005)</b>			
<b>Enterprise size</b>	<b>Bids</b>	<b>Purchase orders won</b>	<b>% Effectiveness</b>
<b>Micro and small</b>	29.5	4.9	16.7%
<b>Medium</b>	69.9	15.5	22.2%
<b>Large</b>	208	62.0	29.8%
<b>Total</b>	31.8	6.7	21.0%

**Table 37 Effectiveness of enterprises by size. The larger the business, the more effective they tend to be in terms of purchase orders received per bid made. Source: (DCCP 2006b, p. 12).**

### **Public Sector Cost/Benefit and Perception of ChileCompra**

In 2005, the Pontificia Universidad Católica de Valparaíso won a DCCP bid to perform an impact study of the ChileCompra system on the Public Sector (PUCV 2006). The study

<sup>303</sup> However small and micro enterprises (SMicEs) have lower activity rates (around thirty-five percent) than medium and large businesses (more than half) (DCCP 2006b).

<sup>304</sup> In Chile there are two types of micro-enterprises. There are the “workers on their own bill” (*Trabajadores por Cuenta Propia*) who use a personal identification number (*RUT*) and the small businesses that are officially established.

<sup>305</sup> It appears that the SMicEs focus on sales to municipalities and the central government which constituted more than sixty-percent of their offers in 2005 (DCCP 2006b).

employed an analysis of the data resulting from the use of ChileCompra along with surveys of public sector users. The results show both fairly significant savings and positive perceptions resulting from the use of ChileCompra.<sup>306</sup> The study estimated that in 2005 there were significant savings to the public sector (over 1.5 million USD) stemming from reduced costs at different stages of the procurement process (see Table 38). They also found, however, that there were a series of costs entailed in the process of incorporating ChileCompra (see Table 39).

Placing a tender	Bid Selection	Sending the purchase order	Total Savings
1,026,622	424,974	131,613	1,602,251

**Table 38** Estimated savings during different stages of the procurement process in 2005. Table adapted from: (PUCV 2006). Figures in USD at July 30, 2007 conversion rate of 1 USD = 525.250 Chilean Pesos.

Are there more costs with respect to...	Yes	No
Investments in new ICT?	88%	12%
Working with parallel information systems?	65%	35%
Integrating information systems?	36%	64%
Increasing acquisitions personnel?	65%	35%
Improving the level of training of purchasing personnel?	74%	26%
Organisational redesign projects?	31%	69%

**Table 39** Summary of the PUCV survey respondents responses with respect to the areas of new costs due to using ChileCompra in 2005, adapted from (PUCV 2006).

In terms of the perceptions of ChileCompra, the study looked at transparency, time and resources used for purchasing, as well as global perception (see Table 40). Overall, the

<sup>306</sup> It must be mentioned, however, that the DCCP takes issue with the methodology employed by the study. In personal communication with the Mathias Klingenberge of the DCCP, it was asserted that these findings are of dubious quality because the survey did not include many opinions of the users with low connectivity, and the sample can not be guaranteed to be completely random.

general impact of ChileCompra is viewed as positive (sixty-five percent) or very positive (twenty-one percent), with very few (seven percent) asserting that the impacts have been negative or very negative (five and two percent respectively). They found that eighty-seven percent of those surveyed believed that there was an increase in the transparency in the purchasing processes. Seventy-seven percent believed that the time for purchasing had diminished when using the e-catalogue, and sixty-one percent with normal tenders. There were also fewer resources used for purchases of both types, with the e-catalogue showing slightly better scores (seventy-nine percent) than the normal tendering process (sixty-eight percent). Finally, fifty-seven percent report an increase in the perceived satisfaction of the internal clients of the acquisition officers, with forty-three percent saying that there has been no change.

	<b>No effect / decrease</b>	<b>Slight improvement</b>	<b>Significant improvement</b>
Transparency of purchasing process	13%	22%	<b>65%</b>
Work time for purchasing through e-catalogue	15%	29%	<b>48%</b>
Work time for purchasing through normal tender process	<b>39%</b>	35%	26%
Resources used for purchasing through e-catalogue	21%	35%	<b>44%</b>
Resources used for purchasing through normal tender process	23%	<b>37%</b>	31%
Satisfaction of internal clients	<b>43%</b>	36%	21%

**Table 40 Summary of public sector perception results in 2005, adapted from: (PUCV 2006).**

### **Private Sector User Perceptions**

For data of private sector users' perspectives, there are two surveys conducted in 2004 of businesses and the public at large to assess their knowledge and opinions of

ChileCompra.<sup>307</sup> Businesses across the spectrum had heard of or used ChileCompra (seventy-two percent), and have a good opinion of it (ninety-three percent good or very good) with eighty-percent saying they would recommend it to other businesses. In 2004, the future of ChileCompra looked bright with seventy-three percent of the businesses surveyed saying they would use the portal in the future. ChileCompra was also fairly well known by the fifty-six percent of the general public<sup>308</sup> and had a good reputation with eighty-four percent saying that they had a good or very good opinion of it.<sup>309</sup> Sixty-four percent responded that ChileCompra increased transparency (only seven percent said it decreased transparency). The only potential negative that emerged from this survey was that around seventeen percent of the people said that the initiative was favoured by big business; however, thirty-one percent viewed it as favoured by everyone.<sup>310</sup>

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<sup>307</sup> Unfortunately, no more recent surveys could be located. While the DCCP has conducted user surveys, the data collected is considered of limited value due to very low response rates and potential bias. Consequently the data is not made available for public consumption. However, the DCCP does report that in December 2005 they reached an eighty percent user satisfaction level with the diverse services offered by the DCCP (DCCP 2006a, p. 15). The two 2004 surveys were conducted by Gemines a market research firm (see: <http://www.gemines.cl>). An in Spanish review of the findings can be found here: <http://www.edicionesespeciales.elmercurio.com/destacadas/detalle/index.asp?idnoticia=0115032005021X0040043&idcuerpo=206>, and here:

[http://foros.chilecompra.cl/mail/informativo/1/n25/informativoch\\_n25.pdf](http://foros.chilecompra.cl/mail/informativo/1/n25/informativoch_n25.pdf) . Last accessed July, 2007.

<sup>308</sup> People in the Metropolitan Region of Santiago knew of ChileCompra at a much higher rate overall (seventy-three percent).

<sup>309</sup> The good opinion was fairly evenly spread over the regions covered by the survey.

<sup>310</sup> While this result was viewed favourably by those in the DCCP suggesting a fairly well informed public with respect to ChileCompra, there is some evidence to suggest that these numbers are somewhat inflated. While conducting interviews of citizens (those that did not use ChileCompra) in the IX region, it was very common to find citizens would not know of the ChileCompra initiative. Perhaps more revealing was that if they said they had heard of the initiative, when asked what ChileCompra was, the citizenry did not have a clear idea what it was. Another example is that sometimes the DCCP receives bad press for the activities of public sector organisations whose bad purchasing practices have been uncovered. This is not helped by the practice of public sector organisations to sometimes push off the blame on the DCCP. Overall, there appears to be some confusion as to the role of the DCCP and that ChileCompra is just a platform that facilitates purchasing and selling, but is not responsible for the activities themselves. In 2004, Tomas Campero, the Director of ChileCompra put out a press release entitled, *It is necessary to distinguish between ChileCompra and its users* and ending by writing, "Don't kill the messenger". Source: Gran Val Paraiso: Diario Libertario y Pluralista, 20/12/2004.

### 7.1.6 SUMMARY

Like the e-tax administration system, ChileCompra as of early 2006 can be characterised as a success.<sup>311</sup> Despite initial troubles, a large portion of the Chilean public sector has adopted ChileCompra, making the purchasing practices more transparent and realising significant savings. It has also expanded the possibilities for selling to the public sector to a wide range of businesses, increasing business opportunities, breaking down information asymmetries, and increasing competition.

## 7.2 ANALYSIS: TRUSTWORTHINESS

Before delving in the trustworthiness analysis, some clarifications must be made. First, *what* institution is made more or less trustworthy? In this case, the concern is with the public sector institutions (and their procurement processes) that use ChileCompra. This analysis becomes slightly trickier than a consideration of a single public sector institution such as the SII. This is because trustworthiness outcomes are most certainly not uniform across all public sector organisations. Rather than trying to cover all the diversity of outcomes, the goal of this analysis will be to uncover the major tendencies that appear at work altering the trustworthiness of the public sector institutions and the process of purchasing. This section follows the same format as the trustworthiness analysis in Chapter 6 covering the trustworthy components in sequence; competence, interest, and values.

### 7.2.1 COMPETENCE

#### **Efficiency/Effectiveness**

There are several standard indicators for measuring the performance of an E-procurement system that reflect the underlying changes in efficiency and effectiveness of the

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<sup>311</sup> The DCCP has received international recognition for their work with ChileCompra included several awards and invitations to participate in various international seminars to present on the Chilean model, their strategies and achievements, and best practices (DCCP 2006a). Awards include: December 2003 the winner of “Best project” in the category of Organisations with high Social Impact in the Digital Chile Challenge, Sept. 2004; the OAE recognized ChileCompra as one of the best practices in the region in public sector e-procurement and was elected as a hemisphere e-procurement leader for 2005; the ICT Development Award in 2004 from the Chilean Association of ICT; the award for Best E-practices given by the Centre of Digital Opportunity of the APEC, September 2005 the Award for the Best Government Web Sites in the Public Service category chosen by leaders in the IT world.

procurement process: i) quantitative measures of use of the system as a percentage of the total number of public procurement transactions, ii) productivity measures in terms of manpower, time, or costs, and iii) measures of savings attributable to the system (Talero 2001, p. 12).

**Usage** The system is highly utilised. By 2006, a majority of public sector institutions were purchasing through ChileCompra, with an increasing (although levelling off) number of purchase orders. However, two of the largest public sector purchasing groups, the municipality and the health sector, are still not fully integrated into ChileCompra. For example, as of 2006, about fifty municipalities (of 342) had very few or no transactions through ChileCompra. This is due to a variety of local constraints such as being located in remote regions, poor technological infrastructure, and a lack of internal administrative reform to aid in the use of ChileCompra.<sup>312</sup>

**Productivity** Productivity measures also indicate that there have been, in general, some improvements to the procurement process.<sup>313</sup> It is clear that ChileCompra has eliminated some manual work involved in the procurement process and increased the competition between suppliers lowering prices,

“It [ChileCompra] has facilitated our work a lot... Before there was even more work... one receives more offers, there are more possibilities, a better field of providers, and they work by taking off all the information from the Internet.”<sup>314</sup>

Many costly, especially in terms of manpower, components of the purchasing process have been replaced by online processes. For example, before ChileCompra, a procurement officer might have to spend time searching out deals, even potentially having to physically travel to visit potential suppliers. Or, a public agency would place an

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<sup>312</sup> The health sector also has not transitioned completely to ChileCompra for a variety of reasons: they already have their own purchasing organisation, the presence of big pharmaceutical companies have resisted increased transparency, and also the complexity of purchasing health products and services (for example the immediate need of purchasing a particular surgical procedure) provides complications that are difficult to incorporate within ChileCompra’s standardised procedures. Source: WB-DCCP-1/6.

<sup>313</sup> We would expect to find productivity gains from an e-procurement system in the cost savings in the process of search, order, and payment; increased information for the customer (Anderson 2004). Given the centrality of information to the purchasing process, both of these components are related.

<sup>314</sup> Interviewee: WB-PS-CC-1.

advertisement in the paper, suppliers would apply either by fax or by delivering the bid in person, and the continued interaction would all be completed either in person or through telephone and fax communication.<sup>315</sup> This has been especially helpful to small municipalities with little funds who might have had difficulties locating providers in distant towns.

In terms of cost savings, the increase in competitive bids has reaped large benefits. This increased competition is evidenced in the jump in average suppliers per purchase tender from an average of 1.7 bids per tender in 2002 to 5.3 bids in 2005 (DCCP 2006a). Furthermore, suppliers can use the information online to compare to past purchases to make their bids more competitive. The benefit of increased competition has not been lost on the purchasers,

“Now they [suppliers] are more competitive, they transfer some of their efficiencies over to us. Before, about five years ago, a provider was with you through a contract and better service wasn’t enforced. Now that’s changed because they know that with a click we can change providers, so they give better service.”<sup>316</sup>

“... in my experience, we save sufficiently compared to the system before. Because, like I said, before we worked with a group of providers who weren’t necessarily the cheapest, but now, no. This is only the economic aspect. In terms of economic criteria, many more competitive offers arrive, because the providers have access and they can go online and compare, see what their competition has offered... so they will lower their process, or do what they need to in order to compete. So, we have spent less overall.”<sup>317</sup>

The e-catalogue reduces these transaction costs even more. There is already a wide variety of products and services available, with a wide range of descriptive information including brand names and other details. This practically eliminates costs for the search,

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<sup>315</sup> The Ministry of Education had a special room and several employees dedicated to receiving and dealing with suppliers. Now with the communication all occurring online, these components have been replaced with email communication and the automatic delivery of bids.

<sup>316</sup> Interviewee: WB-PS-CC-2.

<sup>317</sup> Interviewee: WB-PS-CC-1. Another example,

“There is the perception of the market that the quality of the products is better than before... There is no analysis that I can give you to tell you with certainty that there has been a reduction in prices or an improvement of quality of the offers. ... I think it has changed, because there is another... the perception that they have more competition that makes the provider perform better, offer a better service,” interviewee: WB-PS-CC-3.



order, and payment functions, as well as eliminating the waiting time for the accumulation of bids. The DCCP has calculated that it is about \$50 cheaper per transaction, in terms of procedures.<sup>318</sup> In 2005, the amount of transactions made through the e-catalogue was just under half of all total transactions realised through ChileCompra (DCCP 2006a).

There are trade-offs to moving online, however. Before ChileCompra, experienced procurement officers with well established procurement routines could simply pick up the phone and call a familiar supplier finalising a deal in a matter of minutes. There was no minimum wait time for the procurement process or a need to make a detailed specification of the product or service desired and establishing criteria for bid evaluation.<sup>319</sup> Also, during the transition time, there are costs associated with the acquisitions officers changing their practices to adapt to the new procurement law and the new technology, that may initially appear more difficult, complex, or even unnecessary.

Overall, it appears that the general perception of ChileCompra public sector users reflects these trade-offs and is slightly mixed, leaning towards the positive side.<sup>320</sup> In the World Bank survey, fifty-four percent replied that the total work to purchase products and services had reduced, with forty-two percent indicating that they had increased (see Table 41). The 2005 survey (see Table 40 above) was slightly more positive, with a larger majority indicating an improvement in the work time and amount of resources used for the purchasing processes. The most consistent benefits extend from the e-catalogue which

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<sup>318</sup> Source: WB-DCCP-7

<sup>319</sup> Of course, the inclusion of the e-catalogue with the ability to make instant purchases balances this aspect somewhat.

<sup>320</sup> As another data point, the mixed perception is also reflected in the data on the amount of time from publication to closing of a purchase. Interestingly, while on average the amount of time taken to conduct a transaction for the public sector was reduced from 2004 to 2005 (from 98.5 to 96 hours) this average was skewed by processes involving purchases over 1000 UTMs (reduced from 509.7 hours to 486.6 hours) (DCCP 2006a, p. 68). When looking at transaction between 100-1000UTMs, however, the amount of time on average *increased* significantly from 159.8 to 213 hours. Thus, while there may be reductions of the time for purchasing for the large transactions, others have been increased. Of course, a majority of this time the purchaser is not actively involved in the process and is instead waiting for suppliers to make bids. This may skew the survey results shown in Table 41 without actually making the organisation less productive.

reached levels of seventy-seven and seventy-nine percent of those surveyed saying that there were improvements in these areas.

**Have you perceived a change in the total time of work required to purchase products or services?**

It has reduced a lot	17%
It has reduced somewhat	<b>37.3%</b>
No change	8.7%
It has increased somewhat	<b>18.1%</b>
It has increased a lot	13.7%
No opinion	5.2%

**Table 41 Perceived change in total work for the public sector purchasing process. Source: WB Survey.**

Another drawback to ChileCompra is that the public sector finds itself often with an increased informational gap with respect to many of the new suppliers who enter into the newly expanded market space. This stems from the movement away from a more personal purchaser-supplier relationship based on reputation and a history of past interactions to a more anonymous online relationship. The only information that is available online is the identification number of the business, and there is nothing about the company’s infrastructure, capacities, or past history. This makes it more difficult for the procurement officer to judge the bids, and sometimes results in poor service/product delivery.<sup>321</sup>

<sup>321</sup> Two interviewees expressed it as follows,

“... this type of opening of the market – that has resulted in the inconvenience of not knowing the provider in front of you. Effectively, to not have all the elements to be able to judge if the seller is good or bad beforehand, that produces a conflict if that service is mistaken or badly management, or if they don’t deliver what was estimated,” source: WB-PS-CC-3.

“A negative part of the system is that many providers are pretty bad and this has happened to us. They don’t respond, they make offers and later don’t answer, or they don’t have the thing in stock. You ask yourself, why did they participate if they didn’t have it in stock? And this happens a lot,” source: WB-PS-CC-1.

This information asymmetry also works in the other direction, where new providers are not used to the demands and expectations of the purchaser.<sup>322</sup> The end result is an expanded field of providers that increases the risks of engaging in transactions with untrustworthy providers, resulting in increased costs associated with an incomplete purchase tender. These include the losses to the public sector entity not having the product/service available in a timely fashion and the transaction costs in terms of time and manpower to repeat the tender process.

This informational gap has resulted in some local adaptations (and consequent increases in transaction costs). Some public sector organisations deal with this situation by maintaining a parallel information system that keeps track of particular suppliers and their performance.<sup>323</sup> Larger institutions have to take a slightly different approach as they deal with many de-centralised entities that may do their own purchasing. The Ministry of Education, for example, has set up a feedback loop where programmes that receive services report back to the purchasing department to “close the circle”.

The e-catalogue provides a solution to these problems. A challenge undertaken by the DCCP, rather than the purchasers, is to ensure that providers comply with their agreements. To do so, they have a point system they maintain based upon supplier performance. Furthermore, the e-catalogue provides a lot of information about products, such as brand name, that provides a level of confidence in the product. Thus, purchasing through the e-catalogue solves two major information asymmetries – the quality of the product and supplier.

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<sup>322</sup> For example,

“[It] also produces a lack of knowledge on the sellers’ part of what it is that the Ministry wants in terms of quality of service, and of the interaction inside the Ministry. This produces a gap with respect to the level of certitude that you can have with respect to the quality of a provider,” source: WB-PS-CC-3.

<sup>323</sup> For example,

“We have a system – our own departmental system. We have a book of providers that we keep marking down. We give three opportunities... we put down, provider X didn’t complete the offer, and the people who choose orders know, and now some orders come in and they [the purchasing officers] don’t even pay attention to them, they throw them out,” source: WB-PS-CC-1.

Or were planning on implementing, e.g., “That is an area that we are developing, evaluation of providers...” source: WB-PS-CC-2. ChileProveedores was introduced to deal with this very situation providing an online service to keep track of supplier testimonials.

Another important component of improving effectiveness is the potential for the e-procurement system to aid in the adoption of improved and more strategic procurement practices (Anderson 2004). Overarching all these changes is the influence of the public sector purchasing law of 2003 that worked to standardise purchasing practices. This forced public sector organisations to follow standard practices to comply with the law, necessitating local rule changes.

ChileCompra forces the rationalisation and increased effort on the development of product/service specifications. Also significant was the introduction of the annual purchasing plans and their publication online. Concurrent with this is the series of procurement training courses and management programs that have been offered. These factors have helped establish an increasingly rationalised and planned, rather than reactive, purchasing process.

A key outcome of all of these components was the professionalisation of the procurement officer position in the public sector.<sup>324</sup> The job has been slowly transformed from an administrative to a skilled position.<sup>325</sup> One reason for the increased prominence of the position is that often bonuses for a whole public sector organisation are tied to the achievement of public procurement targets. Furthermore, the incentives become even greater considering that some people can even be fired for not completing the programme, or meeting PMG goals. While there are no data that directly attest to the improvements brought about through the training program, the head of the PMG programme at the DCCP stated that there is a big change between those who have completed the PMG programme compared those who have not, that you “especially

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<sup>324</sup> The professionalisation of the procurement office was a stated goal of the DCCP, source: WB-DCCP-8. This professionalisation has been slowly institutionalised into the system through, in part, the offering of professional training courses (e.g. the programme for management improvement, and other procurement training courses).

<sup>325</sup> As one DCCP manager explained,

“The people who work in purchasing (the procurement office) are no longer in a low position in the organization, they have to know things, they have to have skills. It’s a professional job. ... One of the most rewarding surprises is that the purchasing officers feel more recognized, their position has gotten greater stature and they’ve developed new and more specific skills that are sought after” WB-DCCP-8.

notice when you compare their budget management to those who are not in the programme.’<sup>326</sup>

Further helping in the transition, and movement towards more professionalised practices, was the transitioning in of new employees into the procurement positions in public sector organisations. In both of the municipalities interviewed both had new procurement officers brought in at around the time that the ChileCompra use became obligatory. Thus, for these organisations, it was less of a matter of changing practices than learning new ones.<sup>327</sup>

There are indications that the procurement practices have become, in general, increasingly rationalised and planned, rather than ad-hoc and reactive. One important piece of data that reflects an improved purchasing process is the reduction of urgent purchases, which fell from just above six percent of all purchases in February of 2004 to just over two percent in December of 2005 (DCCP 2006a).<sup>328</sup>

Finally, increased transparency of the purchasing process has meant more opportunities for the discovery and correction of errors by internal auditors. With ChileCompra, the capacity for internal auditing is greatly increased making poor and unclear purchasing

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<sup>326</sup> Interviewee: WB-DCCP-8. This of course, like any incentive system, runs the risk of distorting behaviour. In fact, while there may be some increased integration of the procurement process into the awareness and activities of the institution as a whole, it has also created increased work and demands that sometimes are irrelevant or inappropriate for the institution, thus hurting productivity,

“There are many demands of the PMG – that don’t have any relation to the institution to be able to respond to the demands. The institution may be very limited in their ability and resources to fulfil requirements. They are asking for a lot of information, a lot of additional work and the institution cannot absorb this without more resources. It produces an excess of work for the employees that are there, and this can cause errors, etc. ... You also have people who see the PMG as a tool to receive a bonus the next year. People may get involved to improve the processes only because they want a bonus. ... those that take on the responsibility of the PMG are those that end up running around to complete the requirements of the PMG,” source: WB-PS-CC-3.

<sup>327</sup> This process is summarised by one interviewee,

“The wanted to make this department [procurement] a more professional career department. And in this case, the person that worked here before was just an administrator, that had risen up, and they changed her – last year, when they changed the personnel here. All the people that work here now are new; there is no one from before,” source: WB-PS-CC-1.

<sup>328</sup> With an average of 2.3% in 2005.

orders more visible. Thus, auditing can work actually not just correct errors, but also help to improve the purchasing process,

“If anyone makes a poor use of the concepts of the offer – and evaluates a provider badly, this can be un-transparent, the evaluation. The processes are not guaranteed by the portal. What the portal does permit is that if some information on the portal is wrong – it can be discovered with greater possibility than before.”<sup>329</sup>

**Savings** Overall the changes have resulted in creating significant financial savings for the public sector, to a tune of an estimated USD\$70 million in 2004 (DCCP 2006a). As discussed, it is apparent that the public sector has benefited from both increased competition and thus better prices. This is clearly working with the use of the e-catalogue, where the DCCP is able to negotiate highly competitive prices for a large variety of goods.<sup>330</sup> One municipality remarked that they had seen products up to fifty percent lower through the e-catalogue.<sup>331</sup> Overall, it does appear that there are both significant efficiency and effectiveness gains made in the public sector purchasing process.<sup>332</sup>

This analysis indicates that the changes to the efficiency and effectiveness of the procurement process are the results of interactions and trade-offs between a variety of goals and realities: transparency, effectiveness, efficiency, competition, and the modification of old practices. As a result, some potential efficiency or effectiveness gains are sacrificed for the benefit of other goals, for example, when increased competition leads to increased possibilities of poor service delivery. It does appear, however, that the

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<sup>329</sup> Interviewee: WB-PS-CC-3.

<sup>330</sup> One of the largest potential savings from e-procurement stem from lower prices due to centralised spending (Panayiotou *et al.* 2004) that help to obtain value discounts (Anderson 2004). As of early 2006, there were an estimated 350 business included in the e-catalogue. Source: WB-DCCP-7.

<sup>331</sup> Source: IADB-28.

<sup>332</sup> Another potential reflection of the positive contributions of ICT to the public sector purchasing process is seen in the survey responses to the question “Do you believe (after using ChileCompra) that new ICT can be used to improve public sector administration?” where an overwhelming 91.7% responded yes. Of course, the use and benefits accrued from ChileCompra differ by institution, and therefore the changes to institutional trustworthiness must be considered contextually dependent. For example, the excluded municipalities will obviously not have reaped the benefits or the negatives of the transition to online public purchasing.

greatest benefits are gained through the e-catalogue, which does not appear to come with any unintended disadvantages.<sup>333</sup>

C1 - Efficiency/effectiveness hypothesis: *Overall it appears that ChileCompra has had a positive efficiency/effectiveness impact indicating that it would tend to build trust. The e-catalogue brings larger efficiency/effectiveness benefits and thus will tend to build trust.*

C2 - Efficiency/effectiveness hypothesis: *N/A. There is no “in office” service to improve.*<sup>334</sup>

**Performance transparency** Indicators of performance can, like the e-tax system, be found online. There is a “Citizens Portal” with an “Information Centre” where you can find, among other things, reports, studies, news articles, and a box with statistics entitled “Figures ChileCompra 2007”.<sup>335</sup> The most noticeable indicators of performance that can be seen on the page are the levels of growth in usage, the amounts transacted, the numbers of participants, as well as testimonials from users as to their positive experiences.<sup>336</sup> These numbers have met the DCCP’s expectations, although it is unclear what citizens’ expectations are. It also does not appear that there are any accountability mechanisms linked to these high-level measures.

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<sup>333</sup> However, as we will see, it does run into some tension when considering the overall distributional impacts of ChileCompra.

<sup>334</sup> Hypothesis C2 is: E-government services that improve the efficiency and effectiveness of the service at the institutions office will tend to build trust.

<sup>335</sup> The information in the “Figures” section are: total number of registered suppliers, total number of active providers, number of public organisations registered, amount transacted through ChileCompra, amount transacted through the e-catalogue, the number of orders, and the number of orders through the e-catalogue.

<sup>336</sup> Other indicators of performance that represent the ChileCompra goals such as an increase in transparency, or reduction in corruption, are difficult to quantify and often rely on citizen’s perceptions.

C3 - Performance transparency hypothesis: *The indications that ChileCompra has achieved positive performance outcomes will tend to build trust if they have met citizens' expectations. These indicators are not linked to any accountability mechanisms.*

C4 - Performance transparency hypothesis: *Performance indicators are not linked to any accountability mechanisms.*

## 7.2.2 MOTIVATIONS: ALIGNED INTERESTS

### **Considering User's Interests**

**User benefits** Three potential, and interrelated, user benefits of the system are: 1) the increased availability and access to relevant procurement information, 2) increased potential business opportunities, and 3) reduced transaction costs of sales. ChileCompra forces the placing of highly salient business information online such as the publication of new purchase tenders and the details of past government purchases. These two pieces of information provide the increased potential number of business opportunities and information to improve the quality of resultant bids. Furthermore, the online access reduces transaction costs that existed previously such as making calls, looking in newspapers for sales opportunities, faxing bids, and travel to public sector institutions. According to the World Bank survey only a very few (at most nineteen percent) responded that the time or costs have *increased* as a result of using ChileCompra. On the other hand, forty-two percent believe that total work time has decreased, and thirty-one percent that total costs have decreased (see Table 42 and Table 43).



**Have you perceived a change to the total work time required to...**

	<b>Has reduced a lot</b>	<b>Has somewhat reduced</b>	<b>No changes</b>	<b>Has somewhat increased</b>	<b>Has increased a lot</b>	<b>No opinion</b>
...search for business opportunities?	12%	28%	<b>34%</b>	8%	5%	14%
...participate in the purchasing process?	16%	<b>26%</b>	25%	8%	7%	18%

**Table 42** Private business' perception of the changes due to ChileCompra of the time involved in searching for new business opportunities online and participating in the procurement process, source: World Bank survey.

**Have you perceived a change to the total costs required to...**

	<b>Has reduced a lot</b>	<b>Has somewhat reduced</b>	<b>No changes</b>	<b>Has somewhat increased</b>	<b>Has increased a lot</b>	<b>No opinion</b>
...search for business opportunities?	9%	23%	<b>37%</b>	12%	3%	17%
..participate in the purchasing process?	9%	22%	<b>32%</b>	15%	4%	18%

**Table 43** Private business' perception of the changes due to ChileCompra of the total costs involved in searching for new business opportunities online and participating in the procurement process. Source World Bank survey.

I1 - User benefits hypothesis: *Increased access to relevant procurement information, increased business opportunities, and perceived reduction of transaction costs will tend to increase trust.*

**E-service quality**<sup>337</sup> ChileCompra is highly useful for businesses that wish to sell to the public sector, expanding their potential business opportunities. The current

<sup>337</sup> Recall that e-service quality is related to both usefulness and ease of use.

system has several features that facilitate selling to the public sector. For example, a government supplier can sign up in particular “rumbos” (business areas) to receive emails regarding new business opportunities that arise. Also, there are a number of search functions that allow the perusal of the archive of past purchases. Comparatively, it is much more useful than was the system up to 2002, when mostly only *ex post* purchasing information was posted online.

Ease of use is more difficult to objectively discern because it is highly relative to the user. Our survey data of the users, both public and private, indicates that a majority (sixty-six and fifty-nine percent respectively) view it as very easy or somewhat easy to navigate the ChileCompra web page. Only ten percent suggest that it is somewhat or very difficult. As with the e-tax online system, there have several concurrent efforts to facilitate the ease of use, such as extensive training programmes available for businesses and a site redesign in 2003.

**Is it easy to navigate the ChileCompra website?**

	<b>Public Sector</b>	<b>Businesses</b>
Very easy	30.7%	<b>29.7%</b>
Somewhat easy	<b>35.1%</b>	29.3%
Not easy nor difficult	23.6%	27%
Somewhat difficult	8.4%	8.5%
Very difficult	1.4%	1.9%
No opinion	0.9%	3.5%

**Table 44 Ease of navigating ChileCompra as one indicator for ease of use. Source: World Bank survey.**

I2 - E-service quality: *The high level of usefulness and ease of the use will tend to build trust.*

### **Voice**

ChileCompra provides a wide range of information that helps suppliers to increase their level of interaction and participation in sales to the public sector. Public tenders are available online and will arrive by email if the business is correctly registered with ChileCompra. The data from past purchases allow businesses to better assess their competitive position vis-à-vis other suppliers and to make better strategic decisions. Overall, this information increases the chance for a wider range of opportunities for businesses across Chile. However, this information does not provide any clear link to possibilities of participation in policy decisions, or increased interaction with the government, except in terms of market transactions.

The fundamentals of the public sector-supplier interaction, in terms of allowing suppliers a voice, have not dramatically changed with introduction of ChileCompra. There are two principle types of feedback, only one of which is facilitated by the system. The first type is complaints or suggestions about the system itself. These can then be processed by the DCCP. The second type is complaints with respect to a particular procurement process. These complaints fall out of the jurisdiction of ChileCompra, which simply refers the complaint to the appropriate public sector entity. In this sense, the introduction of ChileCompra has not changed the mechanism for feedback with respect to any particular procurement process since contact still needs to be made with the institution.

I3 – Voice: *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.*

### **Institutional transparency/accountability**

A story that was related twice by interviewees to describe the increased transparency of ChileCompra ran something like this: in 2002, President Lagos asked how much paper the government buys each year, and nobody could answer the question. Now, however, the answer can be found through ChileCompra. As discussed (see 7.1.3), there is a plethora of state procurement information that can be found online (see Table 45) including information on all purchases made through ChileCompra, the terms of the deal, and the name of the supplier.<sup>338</sup>

The Lagos anecdote indicates that there has been a significant change from the situation before ChileCompra.<sup>339</sup> This can also be considered to be highly effective transparency, as the information is almost instantaneous, of relatively high quality, and accessible to the entire public.<sup>340</sup> When surveyed about the transparency of the purchasing process through ChileCompra, eighty-seven percent of the public sector procurement officers believed there was either a significant or slight improvement in transparency (sixty-five and twenty-two percent respectively).

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<sup>338</sup> The director of the DCCP, Tomas Campero wrote in 2004,

“Thanks to ChileCompra today whatever person can know to whom and for how much a contract was made, with indication of prices and times, as well as the background documents that constituted the process, that is to say, the basis for the tender, questions and answers, offers, resolutions and other pertinent documents”. Source: Gran Valparaiso: Diario Libertario y Pluralista, “Hay que distinguir entre ChileCompra y sus usuarios”, 20/12/2004.

<sup>339</sup> As one DCCP employee described it,

“Before, the process to make a purchasing offer [tender] was closed to those who bought and the few providers that participated. Now any person can look and see what’s out there and they can make offers. Now more bad practices are obvious. That also has an impact because it creates more noise, but its because people are waking up to what is happening... and that should happen less and less because the rules ensure more calm because everyone can see the portal and what is happening with buyers and sellers,” source: WB-DCCP-1/6.

<sup>340</sup> “Effective transparency in public procurement depends on the timeliness, quality, and accessibility of procurement information” (Talero 2001, p. 6).

### **ChileCompra Information Sources**

The portal contains information from all purchases made through ChileCompra including: procurement definitions, terms of reference, price, suppliers, etc. The portal includes a basic search feature where users can search for purchases according to the business area, purchaser, and supplier. There is also an advanced search feature where users can search for several criteria simultaneously including name and number of an acquisition, stage of an acquisition, data of publication or closing, purchaser, supplier, region, etc.

Information from management support documents, management improvement programs, legal support materials, and portal training modules.

Yearly purchase plans of public sector organisations.

Frequently asked questions from providers and suppliers.

Diverse news on seminars or meetings in which suppliers/providers may participate.

Quantitative information in management reports from the DCCP, statistics on purchasing and contracts from public sector organisations.

Information on registered suppliers.

**Table 45 Information provided through ChileCompra.**

Despite improved transparency of some aspects of the procurement process, the quality of the information may be compromised. One factor is that the information entered into and displayed on ChileCompra is ultimately a superficial representation of quite complex background processes. One public sector user explains,

“By definition there must be better transparency for the improved flow of information. At a more concrete level, what there is behind the process, if there is an advance, the relationship is not direct, I would say. Because you can have a transparent process in the definition of the use of the portal, because they publish the purchasing specifications, the evaluation criteria, the evaluation, and the tender. But this doesn’t guarantee that what is behind the design of the specifications, the evaluation, and the choice of the offer is transparent.”<sup>341</sup>

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<sup>341</sup> Interviewee: WB-PS-CC-3.

Of these procurement stages, the bid evaluation is typically one of the most difficult stages to be carried out fairly and transparently (Transparency International 2006, p. 42). In Chile, the procurement law obliges the public services to say *what* criteria they are using to decide between bids. It does not, however, oblige them to show how and why they chose particular criteria, nor how they used the criteria to make their decision. Often this means that the public sector purchasers provide terse explanations of their bid selection rather than detailed explanations,

“...they are supposed to give a reason to the provider about their decision, but they are ready-made sentences, for example, ‘because it matches best the criteria’ and that is all, it doesn’t really tell the provider anything.”<sup>342</sup>

Furthermore, the quality of the online information with respect to purchasing decisions is relative to the amount of subjective variables employed to make the decision. This means that, in general, the evaluation of services is less transparent than the evaluation of many other products. For example, printing paper can be easily specified in terms of its size, type, and price. There is not a large variation in other aspects such as quality. However, more subjective judgements are needed to evaluate providers of some services such as research consultants.

“For example, if you want to hire a consultant – experience, creativity, they are not an objective variable.”<sup>343</sup>

Overall, while some areas remain not entirely transparent,<sup>344</sup> what was an almost entirely opaque process is now considerably opened up to outside scrutiny. To some extent this provides for stakeholder accountability. The media has used ChileCompra to follow the purchasing practices of the public sector, although this has often lead to confusions in the past with blame being placed on the DCCP rather than the public institution. Businesses can also use this information and the existence of the tribunal to litigate any disputes.

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<sup>342</sup> Interviewee: WB-DCCP-8.

<sup>343</sup> Interviewee: WB-PS-CC-2.

<sup>344</sup> Another complication with the decision making process can occur when purchasers use parallel information systems that supply information that enter into the decision making process. For example, if a supplier has developed a bad history with a provider and they no longer consider that supplier is no longer considered in the bid evaluation process, as their bid is removed without consideration. The supplier may continue unknowingly submitting bids that don’t have a chance to be considered.

However, it is difficult to dispute subjective data that can always be rationalised after the fact, thus limiting the possibilities for accountability.

Institutional transparency and accountability hypothesis: *The increased institutional transparency and potential for accountability will tend to build trust. However, the low quality of data with respect to several stages of the procurement process represents lower levels of transparency that might mitigate this effect*

### **Reduced corruption**

The focus on transparency for e-government procurement is generally with the goal of reducing opportunities and incentives for fraud (Talero 2001). Interestingly, given the already low level of corruption in Chile, and in the public procurement process,<sup>345</sup> ChileCompra's focus was more on transparency rather than the reduction of corruption.<sup>346</sup> This does not mean, however, that ChileCompra has had no impact on the amount of corruption in the public sector. Fifty-nine percent of the public sector purchasing officers surveyed responded that they somewhat or strongly agree with the statement that ChileCompra eliminates corruption, while twenty-percent neither agree nor disagree (see Table 46).<sup>347</sup>

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<sup>345</sup> It is important to keep in mind that the starting point of ChileCompra was a system that was already comparatively low of corruption: "Chile's public procurement system is considered generally free of corruption supported by probity of the civil servants, decentralization, and good budgetary and control systems" (World Bank 2004, p. 1).

<sup>346</sup> Source: WB-DCCP-1/6.

<sup>347</sup> It must be noted that this is potentially a misleading outcome given the nature of the question; a better question would have been if ChileCompra *reduces* corruption.

**How much to you agree with the following statements?**

	<b>Strongly agree</b>	<b>Somewhat agree</b>	<b>Neither agree nor disagree</b>	<b>Somewhat disagree</b>	<b>Strongly disagree</b>	<b>No opinion</b>
ChileCompra eliminates corruption	21%	<b>38%</b>	20%	13%	7%	1%

**Table 46 Public sector procurement officers’ responses to the statement, ChileCompra eliminates corruption. Source: WB survey.**

ChileCompra has introduced two mechanisms that work to reduce corruption: increased access of the internal auditors to purchasing process information and the reduction of provider-supplier personal interaction. For any Chilean public sector agency, there are two main auditors, the internal controllers that are a part of the institution, and the CGR who is the main federal controlling agency. Both have access to ChileCompra and can use the system to perform their duties. This has meant a general improvement in the quality and timeliness of information used for auditing improving their ability to hold the purchasing officers accountable.<sup>348</sup> In fact, ChileComrpa has even built in functions specific to the needs of the auditors,

“For example, we’ve created other functionalities for auditors – they have a password and they can see everything that is going on within the organisation that they work in and have crosschecks through databases. They administer or check the law.”<sup>349</sup>

The theory is that this increased visibility will deter corruption.

“Today, if I work for a public service and I want to buy something, there is a monitor that is also online who has a password and can see all of my activities every day. You can’t even know when you are being monitored or not. There is a ‘big brother’ so this intimidates people away from corruption.”<sup>350</sup>

It appears to work. Public sector purchasing officers know and understand that participating online opens them up to greater internal scrutiny:

<sup>348</sup> “The other thing from the point of view of the auditors is that it is much easier for an internal auditor to hold accountable processes within the organization from the beginning to end,” source: WB-DCCP-1/6.

<sup>349</sup> Interviewee: WB-DCCP-8.

<sup>350</sup> Interviewee: WB-DCCP-1/6.



“Now they have more tools to be able to check on us. Before they didn’t do much auditing of this department. Now with ChileCompra they have more opportunities. Why? Because the system is open to whomever – so they can go in and see what we are doing.”<sup>351</sup>

“...you know that if you pass the first obstacle there will be other barriers that you can’t control and afterwards they can demand the clarification of the information that is obscure.”<sup>352</sup>

This appears to result in a reduction rather than an elimination of the possibility of corruption. One can continue to sell to a particular seller and justify the sale *ex-post*.

“100% [transparent]? No, because, like I said, someone can always continue with particular providers... One can always say that they worked with these particular providers because these providers have responded well.”<sup>353</sup>

This possibility for corrupt activities increases given the use of the more subjective variables applied in the evaluation (as discussed above in transparency and accountability). Also the use of non-public purchase orders makes it easier to conduct corrupt activities. However, if you sell too often to one seller, or if you make too many private purchase orders, such activities are more readily noticed and may raise a red flag for the auditor or for other businesses to complain.<sup>354</sup>

The other means of reducing corruption comes through the decrease in personal contacts that provide situations ripe for corrupt activities. Personal interaction has been, for the most part, replaced by interactions through the portal, reducing the potential for the development of personal relationships that enter into the bid decision making process. When asked why ChileCompra reduces corruption, one public sector purchasing officer responded as follows,

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<sup>351</sup> Interviewee: WB-PS-CC-1.

<sup>352</sup> Interviewee: WB-PS-CC-3.

<sup>353</sup> Interviewee: WB-PS-CC-1.

<sup>354</sup> The DCCP also understands this still existing possibility of corrupt practices, but believes that there has been a shift in the ability to track poor purchasing practices, “One could do it maybe once, but in the long run one can’t keep up bad behaviour,” source: WB-DCCP-1/6. A purchasing officer in another public sector entity agrees,

“In Chile people are always looking to help themselves, take advantage of opportunities... I think facing this, when there is an agreement between two people, when there is collusion, it can always occur. So transparency, at the moment, one can bypass. The difference is, if one isn’t transparent, people can take notice, there is an implicit risk,” source: WB-PS-CC-2.

“Because now there is no contact with the provider. Because before... what causes the corruption? It was because the public sector employee went out to get quotes from the vender and they begin to talk and they become friends... now today they can't it happens through the Internet or on the telephone.... For me, nothing strange has ever happened... before the providers would come, sit down, they'd come with a present. Now today ... if they send us small things, like a calendar or something, we take that, but ... before the conditions were better for producing corruption.”<sup>355</sup>

Corruption hypothesis: *The moderate decrease in opportunities for the public sector purchasing officer to engage in corrupt purchasing practices will tend to moderately increase trust.*

**Power** Whether there has been change in the power relations between the citizen and the public sector due to ChileCompra is not entirely clear. On the one side, the light of transparency shown on the government's activities and increased accountability potentials constitute a shift of power to businesses, and the public at large, over the government. However, this shift comes at a cost for some businesses. Incorporation into ChileCompra, for example, shines the light of transparency on the suppliers, especially when considering the creation of ChileProvedores. Those companies that have benefited from close personal or working relationships with government entities might lose some of that power. Furthermore, those micro enterprises that had avoided the scrutiny of the SII are required to register as a business with the SII in order to do business online. Thus, they are subject to the relatively large imbalance of power with that entity.

Competition is another mechanism that impacts on the power dynamic. The increased competition between suppliers constitutes a shift of power back to the public sector as they shed dependencies on any one particular supplier. Overall, there is no way to comment empirically on the extent of the shift of power in either direction. As there does not seem to be a major power differential between the suppliers and the government, it is not possible for user benefits (soft sister) to balance out a power discrepancy.

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<sup>355</sup> Interviewee: WB-PS-CC-1.

Power hypothesis: *The shift in power relationships due to ChileCompra is unclear. No trust effects are expected.*

### 7.2.3 MOTIVATIONS: VALUES

**Overlapping Values (Institutional ethos)** The overarching ‘mission’ of ChileCompra is three-fold: improved fairness of the procurement process through increased transparency and improved procurement processes (see procedural justice below), improving the efficiency of the public sector through improved competition, and distributive justice in terms of increased opportunities for micro and small enterprises (see distributive justice below). Each one of these values is concurrently expressed by the DCCP, and to some significant extent, embodied into the technology. However, the values of distributive justice and improved efficiency through competition are often at odds. Not everyone can win. Competition inherently implies some winners and some losers, and thus the extent of the value of distributive justice will be in part determined by the outcomes of the competition.

Overlapping values (institutional ethos) hypothesis: *The ethos of improved efficiency and of distributive and procedural justice will sometimes be at odds, and therefore the outcome is unclear.*

#### **Procedural justice**

Recall that, theoretically, three mechanisms were identified that could change the procedural justice of the public entities: increasing citizen compliance, increasing arbitrary discretion, and the removal of unnecessary discretion. Of those three, only the removal of unnecessary discretion appears to have an impact. Increasing citizen compliance is not applicable to public sector purchasing, and there is no evidence that the system *increases* arbitrary discretion.

**Removing unnecessary discretion** As discussed in the transparency and corruption sections above, there remains – necessarily – some discretion in the

purchasing process, particularly in the areas of market research and product/service selection decisions (Talero 2001). The question is if the introduction of ChileCompra has increased impartiality, despite the necessary discretion.

It does appear as if the standardization of the process, the imposition of the evaluation criteria and the regulatory framework work to increase the impartiality of the process. In many decisions, the procurement officers are constrained by the increased rigors of the process:

“... if you are working without the portal, you had certain tricks that allowed you to play with time, for example. Now with the portal, you have to set dates ... it limits your flexibility – the capacity of each employee over the purchasing process.”<sup>356</sup>

“You can’t leave from the technical specifications of what you are asking for. ... We bought a printer. And you had a specification, that it must be [this and that] and we bought from the provider who made the cheapest offer.”<sup>357</sup>

Of course, while possibilities for corruption exist, it appears that the increased formal requirements work to increase the impartiality of the procurement process over what existed before ChileCompra.

Reducing unnecessary discretion hypothesis: *While complete impartiality is impossible, the use of ChileCompra and the regulatory framework work to increase impartiality of the procurement process.*

### **Distributive justice**

A major selling point of ChileCompra was the promise of increased business opportunities for small businesses, upon which it is believed sustainable economic growth rests.

“We tried to present it as an opportunity for small businesses – that they would not only have access to a bigger market but that they would also learn a new technology that is here to stay.”<sup>358</sup>

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<sup>356</sup> Interviewee: WB-PS-CC-3.

<sup>357</sup> Interviewee: TC-11.

<sup>358</sup> Interviewee: WB-DCCP-9.

However, as discussed above, while ChileCompra does supply increased opportunities to small businesses it has also meant increased competition and lowered prices, causing difficulties for some suppliers.

The data suggest that small businesses have in fact gained from the implementation of ChileCompra. In Chile, micro-enterprises participate in ChileCompra at a greater percentage than they do in the national market. Between 2004 and 2006, small and micro enterprises increased their sales moving from twenty-four to thirty-nine percent, while large businesses fell from sixty-one to forty-three.<sup>359</sup>

Of course, these benefits are not uniform, and there are some components of ChileCompra or the market that make for differential impacts on the involvement of small businesses. For example, the DCCP has had a hard time negotiating good deals with small businesses for the e-catalogue. Experience has told them that there is a trade-off between increasing opportunities for small and medium businesses and obtaining good prices and service,

“...another issue is what role the catalogue should have in the economy... we try to get providers of all sizes but there is a tendency and a temptation to attract big business. If this were a private initiative, we’d get 50 companies and stick to that because we know that they’d be the ones to give good prices, good logistics, good quality services. If they paid me just to make the catalogue efficient, then it wouldn’t be worthwhile to include small and medium business. So the question is how to create a balance between the efficiency of the system and securing access for small and medium enterprises.”<sup>360</sup>

Furthermore, sectors are impacted differently, with some being more or less advantageous for small businesses. For example, in the education and health sectors, interviewees indicated that their market of suppliers remain mostly unchanged,

“The fact is that the same providers that were there before continue today, but through the system. ... Effectively the incorporation of new providers has been limited – but above all in the specialized materials, for example, the printing service.”<sup>361</sup>

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<sup>359</sup> One potential explanation is the high amount of small purchases made by the state that small businesses can take advantage of given their new access to the business opportunities. Source: WB-DCCP-1/6.

<sup>360</sup> Interviewee: WB-DCCP-7.

<sup>361</sup> Interviewee: WB-PS-CC-3.

Distributive justice hypothesis: *Overall, the increase in the representation of small businesses in ChileCompra will tend to build trust with those who hold the distributive justice value.*

#### 7.2.4 SUMMARY

As with the e-tax administration system, it appears that even a conservative estimate of the data presented indicates that the implementation of ChileCompra has increased the trustworthiness of the public purchasing process (for an overview see Table 47, Table 48, & Table 49 below). The most significant changes brought about by ChileCompra are improvements to the competence (in terms of efficiency and effectiveness) and the transparency of the public sector purchasing processes. It also has altered the fundamental values of this process by making it more impartial and by increasing distributional justice. Of course, there are some elements that may limit the overall trustworthiness of the process such as the inability to clearly codify and represent the entirety of the procurement processes online and the conflict between competition and distributive justice. Overall, however, ChileCompra appears to represent a dramatic improvement over the almost entirely un-transparent and fairly unprofessional procurement process that existed prior to ChileCompra.

**Middle-range institutional trust and e-services hypotheses**

**Case-specific ChileCompra trustworthiness-to-trust hypotheses**

<b>Efficiency/Effectiveness</b>	
C1	<p><u>Efficiency/effectiveness I:</u> E-services perceived to be more effective and efficient (faster, more accurate, cost savings) tend to build trust.</p>
	<p>Overall, it appears that ChileCompra has had a positive efficiency/effectiveness impact indicating that it would tend to build trust. The e-catalogue brings larger efficiency and effectiveness benefits and thus will tend to build trust.</p>
C2	<p><u>Efficiency/effectiveness II:</u> E-government services that improve the efficiency and effectiveness of service at the institution's physical office tend to build trust.</p>
	<p>N/A</p>
<b>Performance transparency</b>	
C3	<p><u>Performance transparency I:</u> Performance transparency that meets the citizen's expectations will tend to build trust.</p>
	<p>The indications that ChileCompra has achieved positive performance outcomes will tend to build trust.</p>
C4	<p><u>Performance transparency II:</u> Performance transparency that is linked to effective accountability mechanisms will tend to build trust.</p>
	<p>The performance indicators are not linked to any accountability mechanisms and thus will have no impact on trust.</p>

**Table 47 Impacts of ChileCompra on the trustworthiness in terms of competence.**

**Middle-range institutional trust and e-services hypotheses**

**Case-specific ChileCompra trustworthiness-to-trust hypotheses**

<b>Considering users interests</b>		
I1	<p><u>User benefits</u>: E-services that bring user benefits will tend to increase trust.</p>	Increased access to relevant procurement information, the increased business opportunities, and those who perceive a reduction of transaction costs will tend to increase trust.
I2	<p><u>E-service quality</u>: Good e-service quality indicates that the institution considers citizens' interests and therefore tends to build trust.</p>	The high level of usefulness and ease of the use will tend to build trust.
<b>Voice</b>		
I3	<p><u>Voice</u>: Increased possibilities for voice through the provision of information and e-service feedback mechanisms (e-mail, comments) will tend to build trust.</p>	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.
<b>Transparency and accountability</b>		
I4	<p><u>Institutional transparency and accountability</u>: Increased transparency of internal processes and service outcomes accompanied by perceived effective accountability mechanisms will tend to build trust.</p>	The increased institutional transparency and potential for accountability will tend to build trust. However, the low quality of data with respect to several stages of the procurement process represents lower levels of transparency that might mitigate this effect
<b>Corruption</b>		
I5	<p><u>Reduced corruption</u>: A perceived reduction of corruption due to the computerisation and rationalisation of government processes will tend to build trust.</p>	The moderate decrease in opportunities for the public sector purchasing officer to engage in corrupt purchasing practices will tend to moderately increase trust.
<b>Power</b>		
I6	<p><u>Big brother</u>: Increased power for institutions vis-à-vis the citizen through e-services tends to destroy trust.</p>	The shift in power relationships due to ChileCompra is unclear. No trust effects are expected.
I7	<p><u>Soft sister</u>: Increased power for institutions vis-à-vis the citizen through e-services that results in improved services and user benefits tends to build trust.</p>	N/A

**Table 48 Impacts of ChileCompra on the trustworthiness in terms of overlapping interests.**



<b>Middle-range institutional trust and e-services hypotheses</b>	<b>Case-specific ChileCompra trustworthiness-to-trust hypotheses</b>
<b>Institutional Ethos</b>	
<b>V1</b>	<p><u>Institutional ethos</u>: Trust outcome is unclear; they may be dependent on associated institutional reforms.</p> <p>The ethos of improved efficiency and of distributive and procedural justice will sometimes be at odds, and therefore the outcome is unclear.</p>
<b>Procedural Justice</b>	
<b>V2</b>	<p><u>Citizen compliance</u>: An e-service that increases citizen compliance through increased capacities for surveillance and coercion or through a reduction of compliance costs will tend to increase trust.</p> <p>N/A</p>
<b>V3</b>	<p><u>Remove unnecessary street-level discretion</u>: E-services that remove unnecessary street-level discretion and increase perceived impartiality will tend to build trust.</p> <p>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.</p>
<b>Distributive Justice</b>	
<b>V4</b>	<p><u>Distributive justice</u>: 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.</p> <p>The increase in the representation of small businesses in ChileCompra will tend to build trust with those who hold the distributive justice value.</p>

**Table 49 Impacts of ChileCompra on institutional trustworthiness in terms of overlapping values.**

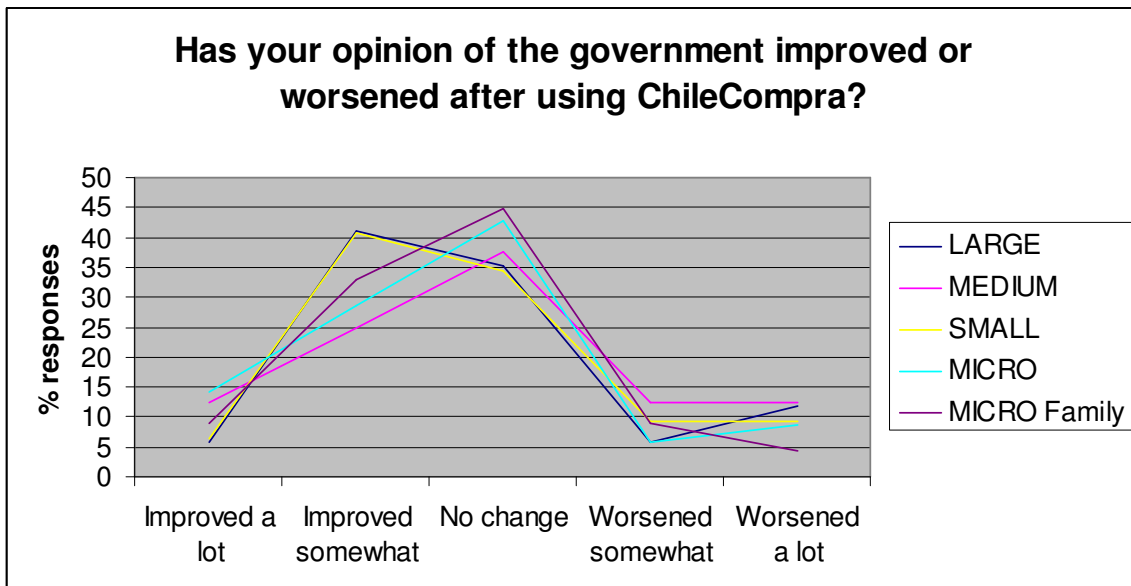
### 7.3 ANALYSIS: TRUST

Given the details of the improvements in trustworthiness it should be no surprise that for the businesses surveyed, only a very few (thirteen percent) have a worse opinion of the government after using ChileCompra. Forty-two percent responded that their opinion of the government has improved a lot or somewhat after using ChileCompra and thirty-seven percent have not changed their opinions (see Table 50). Overall, these results represent the generally positive, although somewhat mixed responses of suppliers to the system. Interestingly, these responses are fairly uniform across all sizes of businesses (see Figure 32). A question remains, however, as to ChileCompra’s influence on *trust* judgments of the public sector entities and their procurement process. This analysis seeks to answer this question. The same approach is taken as in the e-tax case, where the analysis is broken into two components: the salient and the non-salient trustworthy cues.

**Has your image of the government improved or worsened after using ChileCompra?**

It has improved a lot	10.3%
It has improved somewhat	31.8%
No change	<b>36.8%</b>
It has worsened somewhat	6.6%
It has worsened a lot	6.2%
No opinion	8.3%

**Table 50 Suppliers' image of the government after using ChileCompra. Source: WB survey.**



**Figure 32 Suppliers' image of the government after using ChileCompra by size of supplier, source: WB survey.**

7.3.1 SALIENT TRUSTWORTHINESS CUES

**Institutional transparency/accountability**

As the trustworthiness analysis indicates, the implementation of ChileCompra represents a huge jump in institutional transparency in terms of information about government's purchasing process, especially *ex post*. However, suppliers have questions about several

stages of the purchasing process, and in particular, regarding the bid selection process (see Table 51). For example, the same percentage (thirty) of suppliers responded that transparency of the public sector purchasing process has improved as has become worse. Even less, (fourteen percent) believe that the bid selection process is more transparent with ChileCompra, while forty-one percent find it less transparent. On the more positive side, improvements have been noticed (forty-seven percent) in the area of the transparency of the rules and procedures, as might be anticipated with the establishment of an online procurement system that codifies many of the rules of the game.

**How much do you agree with the following statements?**

	<b>Strongly Agree</b>	<b>Somewhat Agree</b>	<b>Neither agree Nor disagree</b>	<b>Somewhat Disagree</b>	<b>Strongly Disagree</b>	<b>No opinion</b>
The bid selection decisions are transparent	1%	13%	15%	15%	26%	<b>31%</b>
ChileCompra adds transparency to the public sector purchasing processes	11%	19%	15%	19%	11%	<b>25%</b>
The rules and procedures of ChileCompra are clearly defined	18%	<b>29%</b>	20%	13%	2%	18%

**Table 51 Business perspectives of ChileCompra from the World Bank survey.**

It must be mentioned that the results from this question are potentially misleading. Notice that the highest numbers are “no opinion” responses. One explanation for the high “no opinion” is the lack of understanding of exactly what “transparency” means. This became clear in several interviews when interviewees were asked questions with the word transparency and this caused some confusion. For example, when asked what transparency meant to the subject, they responded:

“I don’t know, I think that in the moment that you give a value, you have to respect those values... I don’t know in what other way they mean it. The values of the products, that they can’t change them, they are written down on the Internet and afterwards they can’t change it. ... I don’t find it something revolutionary.”<sup>362</sup>

However, these survey data do generally match up with interview data.

As anticipated by the trustworthiness analysis, the transparency of the purchasing process, and in particular the bid selection component, is generally perceived as not very transparent. This emerged as a much more salient cue than the *ex post* purchasing information for accountability purposes. This perception of a lack of transparency emerged for several reasons. First, it appears that the public sector does not always make the best effort to explain the selection process itself.<sup>363</sup> Second, often those interviewed had first-hand experiences that imply potentially less than impartial activity occurring during the purchasing process. For example, when a business wins a bid through not entirely transparent means:<sup>364</sup>

“Once the mayor asked me on the street – check over CC because we are going to have a tender for something. [*Question: Did you win?*] Of course, because the mayor gave me the code, and it is the only bid that I have won.”<sup>365</sup>

Many of those who took issue with the transparency of the bid selection process did so because they could not understand why they *lost* a particular bid. For example,

“We put our best effort forward and when we haven’t won we ask, what happened? ... It is not obvious when one of our competitors beats us out. We

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<sup>362</sup> Interviewee: CC-1.

<sup>363</sup> As on DCCP manager explained,

“They [the suppliers] think that purchases have to be at the lowest price, or because the public sector doesn’t put down all the information they should ... such as why they chose an offer... With the providers there is some apprehension about transparency, that the buyers are not transparent, but in what sense? That the criteria isn’t always clear, they don’t give all the information, sometimes they put the offer in Friday and award someone the contract on Monday, which makes people think it was arranged ahead of time,” source: WB-DCCP-9.

<sup>364</sup> One more example,

“In terms of transparency – it is only going to be with respect to the person in the institution of the government, it has to do with the person who adjudicates the tenders. ... I think that, in general terms, the purchasing processes are more transparent, but for a small municipality ... I made an agreement with someone in the municipality for a project, they chose me [it was pre-arranged]. Something like 15 projects [came in his email] throughout the whole country, but they are pre-arranged. So why am I going to bid? ... In Chile the problem is that the system is ... it was like this before. Now it is the same, although it is ‘transparent’ through the Internet, but at its core, it isn’t. It’s formalised, is all,” source: SII-CC-1/3.

<sup>365</sup> Interviewee: CC-1.

don't really know why. It is obvious in the sense that there is a notation where they say – in ChileCompra they put the mechanism of evaluation – and this mechanism is 30% price, 30% history, 10% CV. Thus, when you see that another institution wins, you think – what would have happened to make them so much better than I?”<sup>366</sup>

“...the muni calls me and says, ‘I need a video – ok? ... You have to bid through CC.’ We have the business all ready – 10 others may bid, but the deal is already set. So it is all the same. I am bored of bidding all over to realize some opportunity, to compete.”<sup>367</sup>

Fitting with these data is the nature of the complaints received by the public sector. One of the most common complaints made to the tribunal is that the purchase order or the selection criteria were not clear.<sup>368</sup> In particular, confusion often results when the cheapest bid does not win. While price is not the only comparison point in any selection criteria, this is not always well understood.<sup>369</sup>

A common theme that emerges from the analysis is that perceptions of transparency resulting from ChileCompra are influenced by the information, activities, and outcomes of the procurement activities of the state that are *highly relevant to the activity of the business*. In other words, the transparency that is related to the provision of information allows for increased participation. Evidence for this comes from the reasons given for

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<sup>366</sup> Interviewee: SII-CC-10.

<sup>367</sup> Interviewee: SII-CC-11. Here is another example,

“Always, when I bid on something in the south. With lower price, quality, what they needed. And someone won who inside of what you can see, or read, because you can see the people who bid – so, somebody won with a price much higher, then mine, and I saw that most of the people – all ten of us had a price more or less the same. And the person who won did not have the same price, because – there was a max price of 5,000,000 pesos – I bid 3,5 someone else 4, someone else 3.7... so all about the same. The guy who won bid 4,999,999. [Question: *why did he win?*] I have no idea. ... They don't explain why some person won and another person did not,” source: SII-CC-11.

<sup>368</sup> As one DCCP employee related,

“...this morning I was working on claims against municipalities and the focus of the claims are that the municipality didn't choose a provider, despite them being the cheapest. But this isn't the only criteria/variable that is relevant under the law,” source: WB-DCCP-1/6.

<sup>369</sup> For example,

“They [suppliers] do call to complain when we don't choose them. Yes, they call a lot, especially if they are the most economical. So I have to tell them that it is not always the most economical – it is generally our first priority, but we also have other priorities, quality, delivery time, and other factors to evaluate. So you explain this to the providers. But anyway, they say, no, and they sometimes get mad, saying that they were the cheapest, and they don't understand the other reasons, I explain it, but they don't understand,” source: WB-PS-CC-1.

why and what information suppliers view as important. While online public procurement information may be important for providing incentives for appropriate behaviour in the public sector, it is not given much importance by suppliers, at least for the theorised purpose of stakeholder accountability.<sup>370</sup> No citizens interviewed had taken the time to actually analyse government purchases online. While some people interviewed may have been aware of the data (not everyone was), nobody expressed an interest in following this up in terms of accountability measures. Rather, transparency of past purchases emerged as highly salient in relation to future bidding activities, allowing suppliers to strategically create and price bids to be more competitive in the marketplace.<sup>371</sup> Ultimately, the perception of transparency is a result of the opening up of business opportunities to all of Chile; an extremely practical concern for all businesses.<sup>372</sup> At the end of the day, it appears that transparency becomes relevant to private businesses when it somehow is linked in with the ultimate interest of the business: the bottom line.<sup>373</sup>

**Reduction of corruption and increased impartiality** While the public sector employees surveyed believed that corruption was reduced, the businesses that use(d)

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<sup>370</sup> Not surprisingly, this is realised by the DCCP,

“Citizens, although not many of them take the time to do so, can see what is going on. Some complain that ChileCompra isn’t transparent, that public organisations aren’t doing this or that, but the reasons they know so much about what is going on with ChileCompra is because it is so transparent,” source: WB-DCCP-1/6.

<sup>371</sup> For example,

“I know that CC has a history, I go look up all the similar work offers in 2005 – let’s say they haven’t done any digital printing offers in 2005, I look for a public sector organization that is similar – because they are more or less the same. And from there it is a bit of shrewdness, I think,” source: SII-CC-6.

“One doesn’t know what is the reason why another organisation won it [the bid], but it is more transparent because you have the option to participate, see what questions the other participants made, how the evaluation is structured, this, including the other participants and to whom they awarded the tender,” source: SII-CC-10.

<sup>372</sup> For example,

“Why does it obligate them to be more transparent? Because they have to open the process to a series of actors that know that they can provide the service,” source: SII-CC-10.

“It [transparency] means that it is easier as a consultant or if you want to work for the state – to find what to do – because you can see on ChileCompra, and there appears, for example, work with iron, which I do, we need to fix a window, I dunno, fix a structure. One looks and it is easier to offer your services. And this helps, it is more direct,” source: SII-CC-5.

<sup>373</sup> Exemplifying this statement, one telecentre manager opined,

“I believe that it is very important that the municipality that there is transparency so they don’t engage in strange behaviours, but for the supplier, I think that it doesn’t matter too much for them. For them, what they want is to sell their product,” source: TC-5.

ChileCompra did not come to a general consensus on the matter. In fact, only ten percent believe that ChileCompra eliminates corruption, while forty-five percent disagree with that statement (see Table 52).<sup>374</sup>

**How much to you agree with the following statements?**

	<b>Strongly Agree</b>	<b>Somewhat Agree</b>	<b>Neither agree Nor disagree</b>	<b>Somewhat Disagree</b>	<b>Strongly Disagree</b>	<b>No opinion</b>
ChileCompra eliminates corruption	5%	10%	21%	22%	<b>23%</b>	18%
Thanks to ChileCompra, the public sector is better controlled	15%	<b>27%</b>	19%	16%	6%	17%

**Table 52 Private businesses responses when asked if ChileCompra eliminates corruption and if the public sector is better held in check with ChileCompra.**

One reason why people perceive that ChileCompra does not eliminate corruption is intimately linked to the problems with transparency—the inability to make the entire purchasing process transparent. In particular, two phases emerged as important: the establishment of the tender (establishing the product/service specifications and evaluation criteria) and the actual decision making process. This lack of transparency combined with the discretion that is necessary when drawing up bid specifications and during the evaluation process means that there is always room for deviation from the purchasing norms for a motivated public procurement officer. This issue becomes increasingly important given that the information regarding these phases is highly relevant for the businesses. Furthermore, as discussed above, several of those interviewed had benefited or otherwise personally experienced such discretion.

While it is commonly agreed that there is some space for manipulation of the purchasing process, it is also commonly agreed that the total potential for corrupt practices has been

<sup>374</sup> It must be noted that this is potentially a misleading outcome given the nature of the question; a better question would have been if ChileCompra *reduces* corruption.

reduced. Ultimately, this issue comes down to the increased impartiality of the procurement process that is not, at least in part, perceived to be determined by objective rather than subjective features,<sup>375</sup>

“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, when we once – with FONASA, I remember, they told us, look you have to do work X and we want you guys to win because the your quality is better, you are on time, etc. 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.”<sup>376</sup>

“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.”<sup>377</sup>

While this reflects the view of the public sector in the trustworthy analysis, the perception of decreased corruption and increased impartiality appear to differ in terms of degree. This is especially clear in the difference in the survey responses. One possible explanation emerges for why there is a disjuncture in the perception of the reduction of corruption between the public sector and the suppliers. At the point of specification and decision making, some discretion remains. Given the salience of this information to the suppliers, this discretion is highly likely to be perceived and interpreted. All of the other constraints that shape the purchasing process are less relevant to the suppliers. Indeed, some constraints will not even be noticeable, for example, the internal auditing capacities of the government. However, it appears that through some particular experiences, such as losing a bid that you expected to win after hearing about it from the municipal procurement officer, seeing that the lowest priced product wins a majority of the time, or

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<sup>375</sup> Other examples include,

“The way it worked, is the way it works now. The only difference is that they have organized their house a bit, today there is a bit more restriction, they can’t just by like that. If I need what you have, but I can’t just buy it from you. I am going to buy it from you, but first I have to fill out the paperwork of requirements, and all that,” source: SII-CC-11.

“Yes, also, because the municipality has always bought from people in the same sector. Thus, these same people insist that the people register because the municipality can’t transact with them if they aren’t registered in ChileCompra. It is obligatory to register in ChileCompra. They always buy from the same people in the same sectors,” TC-5.

<sup>376</sup> Interviewee: SII-CC-6.

<sup>377</sup> Interviewee: SII-CC-8/9.



through the existence of a proper bid decision justification, some suppliers do realise that the evaluation criteria play at least a partially constraining role.

### **Efficiency/Effectiveness**

Along side the substantial improvements in transparency, gains in efficiency and effectiveness were the largest impacts of ChileCompra on the processes of the public sector. The question here is whether or not and how these changes were perceived and interpreted by the suppliers. Two cues emerged that indicate to people that there were changes to the efficiency and effectiveness of the public sector: bid specification and payment period.<sup>378</sup>

**Bid specification** The fact that the public sector had to go through the process of specifying a bid indicates that the public sector is thus obliged to organise their internal processes. This is regarded as an improvement in the effectiveness of the process.

**Payment period** A major concern for many private businesses that deal with the public sector is the period of time that it takes for the public sector to pay. This is especially relevant for small businesses who may invest capital in providing a product or service, and if they are not paid soon enough they enter quickly into financial problems. This is exacerbated by the fact that municipalities, with whom small businesses deal with most frequently, are typically the worst offenders in this area. Indicative of this and the importance of the payment period is that the institution that is most complained about are the municipalities, and the largest complaint are related to the timing of payments.<sup>379</sup> In contrast, not paying on time indicates that they are still internal management issues which implies that despite ChileCompra not much has changed for these public sector entities,

“...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. ...”<sup>380</sup>

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<sup>378</sup> Interestingly, the increased gains from the e-catalogue were never mentioned.

<sup>379</sup> Source: WB-DCCP-9.

<sup>380</sup> Interviewee: SII-CC-8/9.

However, not all businesses attribute the reduction in payment time to the introduction of ChileCompra. Recently, the President declared that all federal public sector services have to pay in thirty days.<sup>381</sup> When asked if there have been any efficiency changes to the public sector thanks to ChileCompra, one interviewee responded thus,

“No. In fact, the opposite. Today, in some things ... well, now that the public sector has to pay in 30 days, maximum – this is important because they wait 6 months and they don’t pay their providers. Today, thanks – not to ChileCompra, but to the position of the President. Nothing to do with CC.”<sup>382</sup>

### **Distributive Justice**

As the trustworthiness analysis showed, the increase in representation of small (and micro) businesses indicates that ChileCompra has had positive distributive impacts. Thus, we would expect at least the businesses with increased opportunities to perceive and appreciate these benefits. This was found to be the case,

“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.”<sup>383</sup>

However, not everyone took such a positive perspective on the distributional impacts of ChileCompra. Understanding the distributive justice impacts can only be done with a consideration of competition, one of the fundamental mechanisms at work with ChileCompra. Many of the small businesses interviewed felt the pinch of increased competition, and not everyone could win.<sup>384</sup> One business told a story of dashed expectations – how he was excited about the increased potential opportunities but after a while he realised that nothing had changed, there was no real increase in sales.<sup>385</sup>

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<sup>381</sup> Note that since it is a federal mandate it does not apply to municipalities.

<sup>382</sup> Interviewee: SII-CC-11.

<sup>383</sup> Interviewee: SII-CC-6.

<sup>384</sup> Even the large business interviewed admitted that margins had been decreased. They compensated by increasing volume, something that is inherently difficult for a smaller business to accomplish.

<sup>385</sup> Interviewee: SII-CC-11.

A common conclusion of those who have problems winning bids is that it is very difficult for small businesses to compete with large businesses, and that ultimately big businesses will win,

“... there was a job X, and the costs of the material alone was Y pesos, and they were charging less than Y, and how is that possible? How do they live or earn? We felt that they were people who made a bid exclusively to knock out the competition, and after they would be the only ones there. They have the resources to hold out, but we sure don't. This is a weakness in the system, one imagines that the system is looking for, above all, transparency, in the second place, to bring about a better distribution of resources, in that – hopefully we all get a piece of the pie.”<sup>386</sup>

“... 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.”<sup>387</sup>

This fact leads some to believe that the system itself was designed for big businesses in the big city, without taking into consideration the situation of the small businesses.<sup>388</sup>

Evidence for the pervasiveness of this belief is an expression has emerged as a play on the name ChileCompra (“Chile Buys”): “Chile Buys, Santiago Sells”.<sup>389</sup>

### **User benefits**

There are several benefits that businesses can derive from the system, for example, the use of the online information to improve strategic future bidding and the increased opportunity of business. However, tangible benefits are dependent upon the outcome of the interactions with ChileCompra. Lowered transaction costs, and increased business

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<sup>386</sup> Interviewee: SII-CC-5.

<sup>387</sup> Interviewee: SII-CC-10.

<sup>388</sup> For example,

“As I told you, there are technologies that, perhaps for some regions of the world, they can be much more useful than in others. For some countries more than others. The same with CC. If you are big, it can be tremendous. If you are small? Not so much. This is comparable to technology in general... It wasn't something spectacular that changed our lives. ...I think the big ones will always win. For the small and medium... there is not much of an advance,” source: CC-1.

“It isn't a problem of trust, it is a programming problem. Perhaps it was a good idea, but poorly programmed. Better for a big city, but not for the small business. Before the businesses depended on the municipality, and suddenly they put ChileCompra and things are cheaper outside of Triaguen,” source: TC-12.

<sup>389</sup> Interviewee: WB-DCCP-9.

opportunities are only *potential* benefits unless they result in sales. Understandably, businesses are not pleased when they do not win,<sup>390</sup>

“The provider that says he has given the best offer and doesn’t win ends up unsatisfied. We have an average of five offers per purchase order, so there are always four that are angry because they didn’t win the sale.”<sup>391</sup>

Thus, the extent of the user benefits are most easily perceived by those businesses that win bids through ChileCompra.

Interestingly, those who have not won bids, have notably differing interpretations of the impacts of ChileCompra on questions of transparency, corruption, and distributive justice than those who have won. Almost all the losers found the system to be opaque, saw few changes to corruption, and disparage the distributive justice outcomes of ChileCompra. One common underlying thread to these perspectives is that these businesses have not derived any increase of sales through ChileCompra. In other words, they have not realised the potential user benefits. Even potential benefits to the public sector are outweighed in the minds of those who have not reaped the benefits. For example, when asked if he thought that there were efficiency and effectiveness changes to the public sector, one interviewee responded thusly,

“Yes, it [the procurement process] is better ordered. But, the benefits for the small businessman is not there. That is my personal experience. Perhaps – for some it has worked, for me no.”<sup>392</sup>

At the end of the day it appears that, for many, issues of efficiency/effectiveness gains, distributive justice, and transparency take a back-seat to the tangible user benefit of increased sales.

However, those who do realise the benefits of increased sales take a more sanguine position. A good example is a group of business people who saw ChileCompra as greatly advancing transparency, even in the area of the purchasing decision,

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<sup>390</sup> Another example,

“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 iron, and if it is cheaper from Temuco, Temuco wins,” source: TC-12.

<sup>391</sup> Interviewee: WB-DCCP-9.

<sup>392</sup> Interviewee: SII-CC-11.

“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.”<sup>393</sup>

“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.”<sup>394</sup>

This is especially interesting for a few reasons. Aspects of the system that are generally regarded as the most confusing and least transparent are interpreted as positive sources of transparency.<sup>395</sup> For example, where normally the fact that the lowest price doesn’t always win is a sign of discretion, here it is a cherished feature of the system. Considering that this situation has brought these company increased sales, it is not a great surprise that they view it in a positive light.

What makes both of these comments even more intriguing is that both of these businesses actively engage in the continuation of personal contacts with the public sector entities outside of the scope of ChileCompra to influence purchases. In other words, they engage in activities that subvert the transparency of the system (much like other suppliers interviewed) and yet these suppliers see the purchasing process as increasing transparency.<sup>396</sup>

### 7.3.2 MARGINAL OR NON-SALIENT TRUSTWORTHY CUES

**Ease of use** While ease of use may be a factor that inhibits or promotes uptake, it does not appear to greatly impact trust judgements. However, for some, the ease of the system is an issue for people in the rural areas and for people without much computer experience. That said, very few found the system difficult and it is also commonly

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<sup>393</sup> Interviewee: WB-CC-1.

<sup>394</sup> Interviewee: SII-CC-6.

<sup>395</sup> Recall that the purchasing decision process is commonly agreed to be one of the least transparent aspects of the system.

<sup>396</sup> Consider for example the following statement,

“... we call the buyers and we say – help me because you are cutting into our margins, because the logistics costs. And so they have helped us, in a form that, in the end, we win a bit in the competitiveness - they improved the conditions, they help us with certain costs,” source: WB-CC-3.

believed that people can learn it quickly. The few concerns with complexity of use that were expressed influence user perspectives of the public sector through its interaction with distributive justice values. Some people interpreted the complexity as a sign that the service was not made for the small towns, but instead is something made for the bigger cities.<sup>397</sup>

**Usefulness** There was no real indication that a consideration of the usefulness of the system played any role beyond the issues of distributive justice and user benefits discussed above.

**Voice** There did not appear to be much consideration of the mechanisms of voice how feedback mechanisms indicated aligned interests. This was anticipated by the feedback hypotheses as ChileCompra does not provide a significant change in the overall set of feedback mechanisms. This is evidenced in the fact that the total number of claims per month is considered rather low.<sup>398</sup> Furthermore, other means of voice, such as using the tribunal requires the ability to hire a judge, a fact that limits a good section of the small businesses. In fact, even the large business interviewee, with many more resources, found the system impenetrable.

**Performance transparency** There was virtually no-one who perceived (or at least mentioned) the performance data on the ChileCompra portal. It is possible that the lack of an easily apparent accountability mechanism limited the impact of the performance data, although the data indicate that for the most part people were not well aware of the performance data.

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<sup>397</sup> For example,

“On all the pages, including ChileCompra, the terminology they use is not the best for micro-enterprises that have little education. Perhaps for the chief of sales for a business, but for a micro-enterprise business person, that sells something like wood or furniture... the pages should be made to fit the people not the people to the pages. ... with all the experience that I have, it is still difficult for me. But for the common person, it is much worse,” source: TC-9.

<sup>398</sup> Source: WB-DCCP-1/6.

**Power (Big brother/soft sister)** As hypothesised, the relationship of power between the businesses and the public sector did not emerge as a salient issue.

**Overlapping values** The values of improved efficiency and procedural justice did not appear widely held by the suppliers (or at least as a central concern), although not much data were collected to comment on this aspect. Values did seem to overlap with respect to distributive justice, and the potential for ChileCompra to increase opportunities for small businesses. However, as predicted in the trustworthiness analysis, often this value was outweighed by the increased competition.

### 7.3.3 CHAPTER SUMMARY

This chapter presented the second of the two e-service cases in Chile, ChileCompra. Overall it is fair to conclude that along many dimensions the public sector purchasing process has emerged as more trustworthy as a result of ChileCompra. Most significantly, improvements have been made to the competence and transparency of the public sector procurement activities. Like the SII, however, there were some potentially confounding issues, such as some opacity in bid specification and selection and the increase in market competition.

These improvements do not directly translate into positive trust perceptions (see Table 53, Table 54, & Table 55). In fact, where trustworthiness changes have appeared most powerful, the relative perception and interpretation of resultant trustworthiness cues have been weak. A major reason for this is that the most salient cues are those that are ultimately related to tangible user benefits. Indications of improved benefits to the public sector and the activities of the public sector are for the most part irrelevant unless they can be used to benefit the supplier. Furthermore, the interpretation of other trustworthiness cues appears altered by the realisation (or not) of user benefits. For example, transparency is problematic if you lose a bid and do not understand why, but is interpreted positively if it aids in improving future bids or if you are winning bids. Efficiency and effectiveness are perceived in terms of when payments are made, and judgements on the distributional impact of the system appear to depend upon the

business' relative success with the system. Interestingly, the potentially confounding factors (e.g., competition, opacity in bid selection) that emerged in the trustworthiness analysis proved to be highly salient for this very reason – they are directly related to the personal benefits derived from the system.

<b>Case-specific ChileCompra trustworthiness-to-trust hypotheses</b>	<b>ChileCompra trust outcomes</b>
<b>Efficiency/Effectiveness</b>	
C1	<p><u>Efficiency/effectiveness I</u>: Overall, it appears that ChileCompra has had a positive efficiency/effectiveness impact indicating that it would tend to build trust. The e-catalogue brings larger efficiency and effectiveness benefits and thus will tend to build trust.</p>
C2	<p><u>Efficiency/effectiveness II</u>:N/A</p>
<b>Performance transparency</b>	
C3	<p><u>Performance transparency I</u>: The indications that ChileCompra has achieved positive performance outcomes will tend to build trust.</p>
C4	<p><u>Performance transparency II</u>: The performance indicators are not linked to any accountability mechanisms and thus will have no impact on trust.</p>

**Table 53 Outcomes of the competence hypotheses for building trust.**



**Case-specific ChileCompra  
trustworthiness-to-trust hypotheses**

**ChileCompra trust outcomes**

<b>Considering users interests</b>		
<b>I1</b>	<p><u>User benefits</u>: Increased access to relevant procurement information, the increased business opportunities, and those who perceive a reduction of transaction costs will tend to increase trust.</p>	<p>Highly salient but the extent of the benefits depends upon the ability to win bids. Those who have not won a bid see little benefit. Furthermore, this experience shapes interpretation of other trustworthiness cues.</p>
<b>I2</b>	<p><u>E-service quality</u>: The high level of usefulness and ease of the use will tend to build trust.</p>	<p>The ease of use was not relevant, except for those who are predisposed to view ChileCompra as irrelevant for the rural businesses. The high level of usefulness was not a relevant cue except when considered in conjunction with relevant information (see I3).</p>
<b>Voice</b>		
<b>I3</b>	<p><u>Voice</u>: 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.</p>	<p>The information provision that allows for suppliers to improve their bidding is viewed positively, however this is because they are directly applicable to the bottom-line: sales (see I1). Voice mechanisms did not emerge as a trustworthiness cue.</p>
<b>Transparency and accountability</b>		
<b>I4</b>	<p><u>Institutional transparency and accountability</u>: The increased institutional transparency and potential for accountability will tend to build trust. However, the low quality of data with respect to several stages of the procurement process represents lower levels of transparency might mitigate this effect.</p>	<p>The inherent purchasing discretion was often interpreted negatively by businesses, especially when the bid was lost. The <i>ex post</i> purchasing information was relevant for future bidding processes (see I3) and not as transparency mechanism.</p>
<b>Corruption</b>		
<b>I5</b>	<p><u>Reduced corruption</u>: The moderate decrease in opportunities for the public sector purchasing officer to engage in corrupt purchasing practices will tend to moderately increase trust.</p>	<p>Corruption is perceived as slightly reduced but the inherent discretion in procurement process indicates that corruption possibilities remain. This appears to build trust, but only slightly.</p>
<b>Power</b>		
<b>I6</b>	<p><u>Big brother</u>: The shift in power relationships due to ChileCompra is unclear. No trust effects are expected.</p>	N/A
<b>I7</b>	<p><u>Soft sister</u>: N/A</p>	N/A

**Table 54 Outcomes of the aligned interests hypotheses for building trust.**

**Case-specific ChileCompra  
trustworthiness-to-trust hypotheses**

**ChileCompra trust outcomes**

<b>Institutional Ethos</b>	
<b>V1</b>	<p><u>Institutional ethos</u>: The ethos of improved efficiency and of distributive and procedural justice will sometimes be at odds, and therefore the outcome is unclear.</p>
	<p>Improved efficiency and procedural justice were not highly important values held by suppliers. Suppliers were concerned with distributive justice mostly when they had trouble selling to the public sector.</p>
<b>Procedural Justice</b>	
<b>V2</b>	<p><u>Citizen compliance</u>: N/A</p>
	<p>N/A</p>
<b>V3</b>	<p><u>Remove unnecessary street-level discretion</u>: 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.</p>
	<p>Due to the existence of the bid and evaluation specifications, there was a perceived increase in impartiality in the procurement process, although, some discretion remained.</p>
<b>Distributive Justice</b>	
<b>V4</b>	<p><u>Distributive justice</u>: The increase in the representation of small businesses in ChileCompra will tend to build trust with those who hold the distributive justice value.</p>
	<p>Perception depends upon personal outcome. A positive outcome tends to build a positive perception of the increased opportunities for small businesses. Increased competition leads to interpretation of the system as big business friendly and inappropriate for the rural context. This tends to decrease trust.</p>

**Table 55 Outcomes of the aligned values hypotheses for building trust.**

## 8 COMPARATIVE ANALYSIS AND DISCUSSION

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A comparative analysis necessarily glosses over minor variations and focuses on broad tendencies that are similar or different between the cases. At this level of analysis, case-specific hypotheses are no longer tested and refined (as in chapters 6 & 7). Rather, the goal is to try to move up one level of abstraction and test and refine the e-services and institutional trust theory by comparing how the predicted outcomes of the individual theories vary across both cases. Of course, this level of theorisation is still close to data and relies on the evidence from the two cases. Consequently, it is best understood as working with middle-range theories that include a causal mechanism, its interaction with the context, and the resultant outcome. This is a refinement of the e-services and institutional trust hypotheses developed in Chapter 4. A less jargon laden way to capture the level of abstraction and explanation attempted here is Tilly's (2006) notion of "superior stories".

"Like everyday stories, superior stories simplify their causes and effects. They maintain unity of time and place, deal with a limited number of actors and actions, as they concentrate on how those actions cause other actions. They omit or minimize errors, unanticipated consequences, indirect effects, incremental effects, simultaneous effects, feedback effects and environmental effects. But within their limited frames they *get the actors, actions, causes, and effects right*. By the standards of a relevant and credible technical account, they simplify radically, but everything they say is true" (pp. 171-172).

The goal of this chapter is to tell a superior story of institutional trust across the two e-services.

The chapter proceeds in two parts and then implications are discussed. Section 8.1 systematically compares, refines, and discusses the manifestations of the institutional trust hypotheses in the two e-services. Section 8.2, entitled "Trust in the Balance", delves deeper into the differences and similarities in the interactions between the two e-services, user experiences, and the inherent value conflicts that exist in any democratic system.

Finally, section 8.3 considers the implications for the theoretical understanding of the relationship between e-services and institutional trust.

### **8.1 CROSS-CASE COMPARISON FOR TESTING, REFINING, AND GENERATING E-GOVERNMENT AND TRUST THEORIES**

Not all of the e-service and institutional trustworthiness-to-trust hypotheses were subjected to confirmation, refutation, or refinement in the within-case analyses. This is because several case-specific institutional trustworthiness-to-trust hypotheses predicted that trust would not be built as the trustworthiness characteristic was not sufficiently established. For example, imagine if a trust building theory suggests aspect A (e.g. a highly interactive system) will build trust B. If, however, for a particular case, A is not realised (the system is not interactive) then we would not expect B to result. Obviously, in such a scenario, it is impossible to comment on the ability of A to bring about B. Only when the antecedent (A) is manifested should we look to see if the consequent is subsequently manifest. The theories can be categorised and considered in three groups: those where the antecedent is not manifested in either case (8.1.1), those where the antecedent is manifest in only one of the two cases (8.1.2), and those where the antecedent is manifest in both cases and therefore the consequents can be compared (8.1.3). Finally, section 8.1.4 seeks to strengthen the validity of the findings by providing a coherent theoretical explanation for the results of the comparison.

#### **8.1.1 NON-TESTED THEORY**

There were two theories where the antecedent was not manifest in either case. While the data cannot comment on their trust building potential, it is interesting to note them as they indicate potentially difficult to establish trustworthiness attributes through e-services.

The first of the two theories was performance transparency linked with evident accountability mechanism (C4). The non-existence of this trustworthy factor in either case is not surprising given the nature of performance transparency. Performance indicators that can both be understood and presented in an easily accessible format are generally macro-level aggregate indicators. Indeed, this is the type of data that is

displayed on both e-service websites. However, as these indicators become coarser in their granularity, direct accountability becomes more difficult. Only a few high ranking officials can be held accountable, at best, even in times of crises, extended poor performance, or out of political exigencies. Like voting, there is only a possibility for a gross accountability mechanism to work effectively, if one exists.

The second theory not tested was the theory of overlapping values to build trust (V1). It was clear from the theory development stage that the technological logic of the e-services did not necessarily embody or signal any one particular value. This is not surprising when considering that there are always competing values systems in a democratic system. Thus, the inclusion of technology at best shifts the relative emphasis on these values, but does not remove the overall tension. This is not a trivial issue, and it is discussed in greater detail in section (8.2).

#### 8.1.2 THEORY TESTED IN ONLY ONE CASE

Each theory that has been tested in only one case has already been analysed in each case study chapter. Here the idea is to discuss them with respect to the larger data analysis picture that is emerging.

One of the four competence theories was manifested by only one service. The SII had (C2) improved efficiency and effectiveness of a service offered at a real office. Clearly, such improvements are only possible for services offered at government offices, which was not the case for ChileCompra. For the SII case, the improved services did appear to make a positive difference for a few interviewees, in particular with respect to the wait time reduction. While nothing conclusive can be gleaned from the rather small amount of data on this aspect, it does lend credence to the importance of the user benefit trust building mechanism discussed in 8.1.3.

There were two interest hypotheses that were also manifested by the e-tax service and not ChileCompra, the big brother (I6) and soft sister hypotheses (I7). Power asymmetries played a critical role in the perception of the SII, but it was not clear how the introduction

of the e-tax service shifted the trust balance. It appears as if those who are most sensitive to the discretion of the SII (such as business owners) notice power asymmetries the most and it seems that improved services did not make a great difference in that respect. Drawing from the broader discussion, a new hypothesis can be suggested: power asymmetries plus negative consequences will tend to destroy trust. Soft sister benefits should be considered a subset of user benefits, but will not necessarily build trust unless they outweigh the manifested negative consequences.

The last two theories that were only manifested in one case are the value theories of improving citizen compliance (V2) and distributive justice (V4). Improving citizen compliance is only an issue with taxes, and is not a concern with ChileCompra. Overall, it does not emerge as a highly perceived factor for building trust, for reasons elaborated in the e-tax administration case. A tentative hypothesis is that citizen compliance as a trustworthiness cue (performance indicators) is not easily gleaned from direct interaction with technology. That said, one would expect that those who would most like to avoid taxes, and no longer can, would be the most likely to notice the compliance ensuring mechanisms.<sup>399</sup>

Finally, while the value of distributive justice is arguably manifested through ChileCompra (increased participation of small and micro businesses) it has differential effects. The suppliers who win bids appreciate the increased opportunities for small businesses. On the other hand, those who do not win bids do not perceive the distributive justice effects and instead focus on other aspects such as increased competition and the benefits for large businesses. Again, this reinforces the importance of direct user outcomes.

### 8.1.3 THEORY COMPARED ACROSS CASES

For the remaining theories, the antecedent trustworthiness requirements are manifested to some degree by both e-services. For these theories it is instructive to compare differences

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<sup>399</sup> If this is the case, it probably would bring about ambiguous trust outcomes given the already antagonistic stance the citizen would have towards the government.

in outcomes and how they relate back to the service. It must be kept in mind that while the antecedent components are considered to exist, there are necessarily some variations between their manifestations. Where these differences are believed to make a causal difference, these differences will be mentioned. The theories are considered in order: competence, interests, and values.

The theories of improved efficiency and effectiveness (C1) and performance transparency (C3) are manifested by both e-services. It was clear from the within-case analyses that both e-services brought about significant improvements to the efficiency and effectiveness of public sector entities along a variety of dimensions. The greatest gains for the SII are capacity improvements resulting from automatisation of previously manual processes. The gains from ChileCompra came mainly from the improved information flow by use of the inter- and intranets that reduces information asymmetries, brings together a wider variety of suppliers, and leverages centralised buying (e-catalogue) to take advantage of improved market competitiveness.

How were these internal procedural improvements perceived? In the case of the e-tax system, people noted the improved effectiveness of the system through fairly tangible outcomes such as consistent service, reduced time to receive tax returns, and shorter wait times at the SII's offices. For ChileCompra, the most relevant cues were the unchanged time to receive payment for goods and services rendered. This implied to the suppliers that despite the technology, the technological changes were mostly cosmetic and that the procurement process continued as before. Indicative of this is the fact that the greatest efficiencies achieved, such as through the e-catalogue, did not emerge as a trustworthy factor for suppliers. Furthermore, in neither of the cases did people refer to the performance transparency information on the web page as a source of knowledge about the efficiency or effectiveness of the service. The overarching theme is that internal

changes were generally not perceived directly (how could they be?), and instead users relied on tangible outcomes of the services to place their judgements.<sup>400</sup>

The e-service qualities of offering user benefits (I1) and having a high e-service quality (I2) were perceived and interpreted in roughly the same manner. User benefits are by definition tangible outcomes of the service. Therefore, it is not surprising that they proved to be highly salient trustworthiness cues. It is instructive to compare the two services, however, to see how they were perceived as delivering user benefits differently and what the resultant outcomes were. The e-tax service delivered several unambiguous user benefits such as time and cost savings. The benefits from ChileCompra on the other hand were mostly *potential* benefits found in increased opportunities. The key factor, over time, was whether or not these benefits were realised. If a business made a sale, then they perceived the benefit and viewed it as positive. If not, then other interpretations, generally less positive, ensue.<sup>401</sup> E-service quality was also perceived and interpreted much as a user benefit. For the e-tax system, ease of use was the equivalent of a direct user benefit – less personal effort required. For ChileCompra, the service was viewed as useful to the extent that it provides potential opportunities. For example, suppliers would take advantage of the online information, considered highly useful, to improve future bid prospects and better understand the market.

The possibilities for voice, (I3) while existing and used in both e-services, did not prove to be a relevant trustworthy cue for those interviewed. There are a few possible reasons for this. The most straightforward explanation is that in neither case was there a chance for truly participatory interaction. The communication channels for feedback are mostly limited to complaints and questions. While this may be helpful at times, perhaps it only weakly indicates an alignment of interests and does not impact on the underlying policy reality.

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<sup>400</sup> Glaser argues that “gains in efficiency and productivity go unrecognized by the average citizen (Glaser 1999, p. 50).

<sup>401</sup> The nature of this dynamic will be taken up in more detail in the Trust balance section below (8.2).



There are some alternative explanations. First, this may be a unique Chilean cultural artefact, given their relative deference to authority. Second, it could be a manifestation of the subgroup interviewed, most of whom were of lower socio-economic status. This group may already feel limited in their inclusion in the overall economic system, reducing their motivation to complain or give feedback. Finally, the inability for online feedback to truly alter and align interests may be due to the currently inherent level of non-responsiveness of public service bureaucracies that are not designed to respond to citizen input. Simply introducing new channels of communication does not fundamentally alter the nature of the bureaucracy.

Institutional transparency and accountability (I4) were manifested to a limited extent in both cases. For the e-tax system, the posting of the rules of the game and the information that the SII had on the citizens do constrain what the SII can do, where legal recourse was theoretically possible if the SII deviated from the rules. This is a form of constraint through pre-commitment. This, however, was not perceived at all by citizens as a means of transparency and accountability. ChileCompra, on the other hand, was designed specifically with transparency in mind and has dramatically increased the transparency of the public sector purchasing process. Notably, according to the survey data, the e-tax system is perceived as more transparent than ChileCompra. This is also especially curious given that ChileCompra appears to bring the potential to hold public sector entities to account for their purchases whereas there is not much potential accountability with the SII (citizens fear and are accountable to the SII, not the other way around).

The data offer one explanation of this phenomenon that also helps to indicate how institutional transparency and accountability might impact on trust judgements. Consider the e-tax system. An analysis of what people noticed about the respective e-services is instructive here. For the SII, the information offered online (namely, the rules of the game, the information held by the SII of the taxpayer, and the activities of the SII) was generally perceived on a need-to-know basis. Many taxpayers simply would accept the tax proposals made by the SII without giving it much more than a cursory check. Others, who had more detailed tax dealings, would go online looking up information pertaining

to them. For ChileCompra, the *ex post* purchasing information was most relevant for businesses in terms of structuring future business proposals rather than as an accountability mechanism. Furthermore, the very relevant bid decision process was salient for every business person. The common thread here is that the most relevant information is not seen as a means to hold an institution accountable, but rather as a means to accomplish a personal end, be that understanding one's tax situation or improving future bids.

The perception of reduced corruption (I5) differed between the two services: it was negligible for the e-tax service while it had a differential impact stemming from the inherent discretion that remained in the procurement process. For the SII, it had most likely had no impact as the SII started from a relatively low level of corruption, and as a result there was no direct interaction of people with corrupt practices, before or after the e-tax system. The public sector purchasing process also is not considered corrupt. For ChileCompra, most interviewees reported that corruption was reduced to a limited extent, but that highly motivated procurement officers could engage in improper practices if they desired. More poignant, however, was the number of suppliers who noted the inability of ChileCompra to reduce corruption entirely, with some arguing that the procurement process was fundamentally unaltered. In particular, suppliers focused on two cues: their own experience engaging in under the table practices and the inability of ChileCompra to make the bid selection process transparent. This was perceived negatively by those suppliers who had difficulty winning bids. The key here is that in the ChileCompra case there remained a highly noticeable degree of discretion that limited the extent to which corruption could be reduced. The perception of that reduction then depended highly upon the outcomes of the process. Those who win do not focus on corruption as an issue and those who do not win bids find corruption a central problem.

The theory that removing unnecessary discretion tends to build trust (V3) is akin to the theory of reduced corruption (I5) and power asymmetries (I6). In this case, many taxpayers had previously had unpleasant experiences interacting with SII employees who were seen as wielding too much discretionary power. This produced an environment of

fear of potential arbitrary behaviour. While the extent of the arbitrary behaviour is unknown, the psychological factor of the power imbalance and fear implies that most interactions will be interpreted in a negative light. Moving online, in this case, represents a reduction in this discretion, and was thus welcomed by those who had the unpleasant prior experiences. The discretion in the public sector purchasing process is situated in the two stages of tender specification and bid selection. For most, the technology only works to partially constrain this discretionary power. Consequently, moving online has not made a major difference in this respect. The major difference between the two services is that the e-tax service addresses the source of the discretion directly, and ChileCompra does so only partially. Overall, however, it did not seem to play a huge factor in influencing trust opinions.

An overview of the findings with respect to all the theories established in Chapter 4 can be seen below in Table 56, Table 57, and Table 58.

Institutional trust and e-government hypotheses	Impact on institutional trustworthiness	Impact on institutional trust
<b>C1</b> <u>Efficiency/effectiveness I</u> : E-services perceived to be more effective and efficient (faster, more accurate, cost savings) will tend to build trust.	Increased efficiencies and effectiveness found in both e-services, mostly through process automation.	The only perceived internal efficiency and effectiveness changes were those associated with direct user cost/benefits. Otherwise, citizens did not appear to notice internal changes.
<b>C2</b> <u>Efficiency/effectiveness II</u> : E-government services that improve the efficiency and effectiveness of the service at the institutions office will tend to build trust.	Only relevant for the SII with improved information for front line civil servants at point of contact and reduced wait times.	Reduced wait time was a trustworthy cue indicating improved competence.
<b>C3</b> <u>Performance transparency I</u> : Performance transparency that meets the citizen's expectations will tend to build trust.	Macro-level performance indicators were placed online.	These indicators did not serve as trustworthy cues.
<b>C4</b> <u>Performance transparency II</u> : Performance transparency that is linked to effective accountability mechanisms will tend to build trust.	Macro-level performance indicators online, but no link with accountability mechanisms.	Not tested in either case.

**Table 56** Comparative findings of trustworthiness and trust outcomes with respect to competence theories.

<b>Institutional trust and e-government hypotheses</b>	<b>Impact on institutional trustworthiness</b>	<b>Impact on institutional trust</b>
<b>I1 <u>User benefits</u>:</b> E-services that bring user benefits will tend to increase trust.	E-tax system brought cost and time savings to the citizen. ChileCompra brought potential opportunities for suppliers.	Real user benefits were powerful trustworthiness cues, whereas theoretical potentials were only cues if realised.
<b>I2 <u>E-service quality</u>:</b> Good e-services quality indicates the consideration of the institution of the citizen's interests and therefore will tend to build trust.	Both services improved ease of service. Both services are obligatory and therefore useful in that respect.	Ease of service and usefulness were interpreted with respect to user benefits.
<b>I3 <u>Voice</u>:</b> The provision of information that enables increased participatory interaction and increased possibilities for voice through e-service feedback mechanisms (e-mail, comments) will tend to build trust.	Voice mechanisms were manifested in both e-services, through e-mail and online complaint systems.	Voice mechanisms were not perceived as trustworthiness cues. This hints at the difficulties of feedback to align interests.
<b>I4 <u>Institutional transparency and accountability</u>:</b> Increased transparency made possible through the increased visibility of internal processes and service outcomes accompanied by perceived effective accountability mechanisms will tend to build trust.	Evident in ChileCompra case through the publishing of public sector procurement processes. The information made transparent by the SII (rules of the game, citizen information) is an indication of credible commitment.	Did not emerge as a salient trustworthy cue because people did not view the information in terms of accountability. For ChileCompra, people were highly sensitive to the limits of transparency (areas of discretion such as bid decision).
<b>I5 <u>Reduced corruption</u>:</b> A perceived reduction of corruption due to the computerisation and rationalisation of government processes will tend to build trust.	Technology constrains corruption for both services. The e-tax system reduces potential for corruption during the manual transfer of data. ChileCompra constrains discretionary activity of public procurement, although within limits.	Not perceived with e-tax system, probably because corruption was not an issue. For ChileCompra, impact was limited due to remaining discretion surrounding pivotal stages of public procurement (e.g., bid selection).
<b>I6 <u>Big brother</u>:</b> Increased power from e-services through the accumulation of information results in increased coercion and control will tend to destroy trust.	Both I6 and I7 are only relevant for the e-tax service.	Power differential were not perceived by most users. Data was inconclusive on the impacts of improved services in reducing the impact of power asymmetries. It may be that power asymmetries are only noticed when they manifest negative consequences.
<b>I7 <u>Soft sister</u>:</b> Increased power from e-services through the accumulation of information results in improved services and user benefits will have differential effects depending upon the focus and sensitivities of the citizen.		

**Table 57 Comparative findings of the trustworthiness and trust outcomes with respect to aligned interests theories.**

Institutional trust and e-government theory	Impact on institutional trustworthiness	Impact on institutional trust
<p><b>V1 <u>Overlapping values</u>:</b> It is not clear <i>a priori</i> how values will overlap as they are associated with a wide variety of institutional factors. Trust outcome is therefore unclear.</p>	<p>Unclear outcomes due to conflicting value systems evident in both e-services.</p>	<p>Not tested. Too ambiguous an original theory.</p>
<p><b>V2 <u>Citizen compliance</u>:</b> If an e-service increases citizen compliance without being perceived as an overly invasive big brother institution than this will tend to increase trust.</p>	<p>Only applicable to the e-tax system. Objectively increased citizen compliance.</p>	<p>Not a salient trustworthy cue.</p>
<p><b>V3 <u>Remove unnecessary street-level discretion</u>:</b> E-services that remove unnecessary street-level discretion and increase perceived impartiality will tend to build trust.</p>	<p>Decreased discretion in e-tax system as compared to dealing with SII employees. Procurement officers have limited discretion through CC, although it still remains in the specification and selection stages.</p>	<p>Same responses as to I4, except that those who had previously negative personal interaction with SII employees preferred to move online.</p>
<p><b>V4 <u>Distributive justice</u>:</b> E-services that create distributive justice (e.g. provide a service for the poor) and the distributive justice value is held by the citizen will tend to increase trust.</p>	<p>ChileCompra increases opportunities for small businesses and therefore should build trust. The e-tax system is embedded in a system with competing values.</p>	<p>Resultant judgement was generally dependent upon the citizen's success with the system.</p>

**Table 58 Comparative findings of trustworthiness and trust outcomes with respect to aligned values theories.**

#### 8.1.4 DISCUSSION: A TRUST HEURISTIC

A pattern emerges from the comparative analysis: people perceive trustworthiness cues and use them to make judgments of the public sector based upon experiences or information that is highly relevant to their lives or business. This finding matches with other studies that show that citizens use direct personal interaction with government officials and agencies as a source of political information (Bok 1997, Kumlin 2004, Soss 1999). Recall that Bok found that people evaluated government agencies more positively if they had direct contact with them rather than only through secondhand information. This shows that direct contact is an important source of information for judging

government agencies. The significance of relevant experiences or information is also indicated by the importance given by users to direct user benefits. For example, achievements of transparency, efficiency, and effectiveness were commonly perceived 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. On the other hand, online information that is not relevant to achieving a goal (e.g., performance indicators, information about rules and regulations that are unrelated to an individuals' tax proposal, information about public sector sales) is either not noticed, or plays at best an indirect role in determining people's perceptions.

The theory of trust established in Chapter 3 provides some insight and theoretical support for these findings. Recall that trustworthiness cues are second best indicators of trustworthiness as it is not possible to fully know the true underlying motivation behind a person or agency's actions. The point of that discussion was that making a trust judgment is an epistemic problem of assessing the meaning and relative trustworthiness of trustworthiness cues. This raises issues of the visibility, clarity of criteria (comprehensibility), memorability, and ease of imitation (is it easy to fake?) of these cues. The trustworthiness cues relied upon by the e-service users score high on all of these criteria. What is more visible to a user than a direct user benefit? Who could miss the fact that they received their tax return in the mail in two weeks when before it took months? Who would not notice or appreciate a shorter waiting line or a sudden increase of sales activity to the public sector? Not only are these examples visible, but they are both easily understood and memorable. You may not understand the tax systems rules and regulations, but you can understand the experience of completing a once onerous tax process for free and in five minutes. Finally, these factors are almost impossible to fake. The municipality either sends the payment on time or it does not. You either wait for under thirty minutes or you do not. The computer either gives you the information you need to inform a future bid, or it does not. It can not *act like* it gives you the information, but not really give it. Perhaps one might believe for a while that the e-services are intentionally (or through incompetence) providing inaccurate information. This

information, however, is open to verification against one's knowledge of the market and any future use of the information to make successful bids.

The other trustworthiness cues do not satisfy these criteria so well. For example, consider the central form of transparency behind ChileCompra; that is, the publishing of public purchases. Theoretically, such information should build trust as it opens up the public sector entity to public scrutiny. However, while it may influence the motivations of civil servants working in the public sector entities, citizens do not appear to rely on it as a trustworthy cue. This cue may be relatively visible (through a bit of exploration on the website for the motivated citizen), but it is certainly not easily understood. Understanding implies the ability to make a normative judgment of the appropriateness, quality, and price (among other factors) of the purchases. However, on what basis would a citizen judge this information? How can they possibly know enough to make an informed judgement as to the qualities of any particular purchase? This was expressed by one CC user,

“I understand transparency as – to say, in this case, to show the amounts that the state spends. But not if we have bought well or bought poorly, or according to the norms. The numbers are there... No one knows if it was necessary or not... In reality, nobody knows if the purchases were well done because nobody is expert enough to know...”<sup>402</sup>

Performance transparency indicators are also relatively visible (on the web page, perhaps on the front page),<sup>403</sup> easily understood (distilled into macro indicators), and memorable (e.g. public sector savings were high). However, performance indicators are problematic for building trust. This is potentially for several reasons: (a) indicators are easily interpreted as susceptible to manipulation,<sup>404</sup> (b) as governmental complexity grows, so does the complexity of the development and comprehension of performance measures, and (c) governments have multiple performance objectives and most citizens do not have

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<sup>402</sup> Interviewee: SII-CC-11.

<sup>403</sup> That said, in these two cases, the data placed online was *not* highly visible as people generally did not spend much time perusing the web page, instead proceeding as straightforwardly as possible to achieve their objective.

<sup>404</sup> Especially if you subscribe to the expression, “There are three kinds of lies: lies, damned lies, and statistics...” – Samuel Clemens



the comprehension of these dimensions and their associated societal implications to effectively judge (Glaser 1999, p. 49). In this sense, it is logical that the more direct user benefits would prove a more powerful information source. Furthermore, many of these outcome indicators may not refer to direct benefits to the particular user, which if the findings here hold, further weakens it as a trustworthy cue.

Fundamentally, transparency as a trust building mechanisms is ambiguous. For example good performance may be deemed poor due to inflated performance expectations (Miller and Listhaug 1999). Transparency may make processes more visible, but this increased transparency may lead to increased distrust if it increases exposure of flaws, or corruption that otherwise would not seen the light of day (O'Hara 2004, p. 257).

This discussion so far has been predicated on the assumption that the problem of institutional trust, for a user, is how to make a judgement about the internal workings of a public sector institution without having access to that information. The user might have only limited knowledge about how government bureaucracies work. As Hardin (1991, 1998) argued, this is an epistemically difficult problem. However, it appears that citizens have found a way around this problem. Users employ a relatively simple trust heuristic that is exceedingly rational and cognitively efficient. People's rationality and time are, of course, limited. Thus, rather than engaging in a theoretical analysis of the impacts of ICT on the public sector bureaucracy, they use the simple technique of interpreting trustworthy cues of service outcomes that directly impact on their lives. While this is certainly not a radical insight, if taken to heart it alters how we might think about e-services and institutional trust, as discussed below (section 8.3).

While this trust heuristic relies on information that is readily available without extra work and easy to incorporate cognitively, the cues are not always accurate portrayals of what is happening in the public sector. In the case of assessing the performance of the SII, judgement based on the speed of the tax return does appear to reflect real internal efficiency improvements. Judgements that ChileCompra limits discretion and corruption but does not eliminate it also correspond with the trustworthiness analysis. However,

objective data show that small businesses have increased their participation in the public sector market but that this information is not perceived by all suppliers. Instead, their personal experience of success or failure leads to a generalisation beyond their situation to the set of small businesses in general. Trust heuristics may be cognitively efficient, but this epistemic efficiency leaves room for error.

## **8.2 TRUST IN THE BALANCE**

Thus far the discussion has been relatively limited in its consideration of the interactivity of different trustworthiness cues and individuals' interpretations. A deeper analysis reveals that there are some dynamic tendencies that shape people's interpretations and can help to explain some of the variation in responses to the e-services. This 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. In this case, the two sides of the balance are the conflicting values that provide logical and plausible explanations for users' interactions with the e-service. What often tips the scale in favour of one explanation or the other is the user's experience in terms of the direct benefits of the system. The resultant explanation then constitutes the citizen's trustworthiness assessment of the institution.

### **8.2.1 ICT IN PUBLIC ADMINISTRATION AND VALUE CONFLICTS**

The discussion so far has not delved deeply into the role of users' values systems in shaping their expectations, perceptions, and interpretations of their interactions with e-services. Recall that expectations emerge from an individual's personal value system, and trustworthy cues that reflect different values will have differential effects depending upon their overlap with the user's values. Given this, no institutional trustworthiness and trust analysis is complete without an analysis of the diversity of interests and values that are met and represented by the institutions and activities of government.

A central feature of democratic governance is the institutionalisation of processes to settle conflicts of interest discursively rather than coercively.<sup>405</sup> Democracy, as discussed in Chapter 1, is in its essence an institutionalisation of distrust. This implies that the points of conflicts between interests and values are precarious points for trust. Here we can learn from the post-modern approach to the study of public administration that seeks to “bring out the inherent contradictions of Western political systems that formally subscribe to clearly defined constitutional forms whilst actually these forms are deeply flawed in practice” (Taylor 1998, p. 27). Taking such a perspective, Frissen (1998), lists several ways that ICT implementations in the public sector have contradictory tendencies. One implication of this perspective is that the outcomes not only fall on a continuum from incremental to transformative, but that they can also be both normatively positive and negative (Bellamy and Taylor 1998, Brewer *et al.* 2006, Frissen 1998). In the same vein, *e-services can be concurrently trustworthy and not trustworthy, depending upon the interest or value perspective taken by the user.*

Significantly, the existence and influence of value conflicts emerged as a central and recurring theme in this comparative analysis. It is well understood that technology, including software and hardware, can embed political values (Introna and Nissenbaum 2000, Winner 1986), and in the public sector, these political values “have constitutional importance” (Nye Jr. 2002, p. 14). Ultimately, any policy represents a conflict of interests and values on some level as it alters who gets what and when, and an e-service is no different (Brewer *et al.* 2006). In general the introduction of technology either magnifies or alters the foci of already existing contradictions.

There were several identifiable value conflicts, or points of tension, that emerged across both studies. The nature of these conflicts differed according to the e-service. Several value conflicts were identified:

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<sup>405</sup> Furthermore, what the inherent values of democratic institutions are is not entirely uncontested. Consequently, there are several normative models of the scope and goal of government; that is what government *should* do (Nye Jr. 1997). There are, for example, a variety of notions of public interest and consequently competing claims to trustworthiness (Barber 1983, p. 67). Complicating the matter is that users can also hold conflicting values simultaneously. For example, in the US, people can simultaneously demand lower taxes and higher spending (Nye Jr. and Zelikow 1997).

- **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 intuition and trust stemming from past experience. There are also situations where time constraints restrict the possibility of real-time transparency, such as a week-long open public procurement process. For example, in the health sector, sometimes medicine needs to be purchased immediately and thus some transparency is sacrificed to meet these ends.<sup>406</sup> Such situations run an increased risk of being seen as partial or corrupt. Thus, there is a balance between the level and nature of transparency and the exigencies of real-time bureaucratic activity.
- **Competition and efficiency versus equality (social and economic justice)** – Some e-government applications can bring the benefit of hard-coding equity into the system (Reddick 2005). However, this is not always the case. Two central goals of ChileCompra are (1) to promote social and economic justice by providing opportunities for small and micro enterprises to sell to the public sector, and (2) to create efficiencies in the public sector through increased competition. From the perspective of the DCCP, positive strides have been made in both these directions. However, from the perspective of the supplier, these goals may be seen to conflict (Husmann 2004, p. 34). For all suppliers, 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 has increased 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. The most efficient approach for the DCCP is to incorporate several large suppliers and not bother with the small businesses that may not have

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<sup>406</sup> As explained by one public sector CC user,

“You have to understand what one is trying to make transparent, one cannot put transparency before the urgency of health care. There are emergencies, people need medications and they are often not manufactured in Chile...” source: WB-PS-CC-4.

the resources to make large scale deals with the government at reduced prices. Thus, from the perspective of the user, the quest to gain efficiencies through market mechanisms is in tension with the goal of increasing opportunities for small businesses.

- **Self versus communal interest (greater good and fairness)** – This tension emerges from the ability of the e-tax system to increase citizen compliance. 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 – communal interest) and negative (now I have to pay taxes – self-interest). In fact, it appears that a person can hold both of these opinions concurrently. An important component of a citizen's view of the communal interest appears to be their perception of fairness that extends beyond the scope of the technology. For example, the perception of the e-tax system was altered by the taxpayer's 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?) Especially critical is the citizen judgment if the technology applies equally to differing groups – for example, does the increased tax compliance come at the expense of taxpayers in a lower socio-economic status and leave big businesses out of it?
- **Power versus improved services** – The tensions between big brother technologies and their concurrent emergence with high-quality e-services has been discussed in detail. The fundamental tension here is that while the SII has increasingly improved its services (potentially improving trust) it has increased its power making trust more precarious. A classic example of this is the balance between efficiency and accountability. If an agency prioritises efficiency (to get better services) it must reduce control mechanisms (accountability) of key processes and therefore increases its own discretionary power over those processes (Pegnato 1997).

These four tensions illustrate how the introduction of technology into democratic governance structures may shift conflicts of interests and values. There are probably more tensions that were not mentioned here.<sup>407</sup>

What makes these points of tension so important is that each value system *gives rise to the possible set of available explanations users employ to understand the e-services*. For example, depending upon your perspective,<sup>408</sup> personal value system, and available information, it is possible to interpret ChileCompra as a) beneficial for the state in that it brings transparency and increases efficiency, b) not really increasing or changing the transparency of public procurement, c) good for small businesses who have increased opportunities, and d) fundamentally biased against small businesses due to increased competition and lowered prices. Likewise, the SII can be seen as a) providing a great user benefit, b) a compassionless institution focused on maximising their tax revenues at the expense of the taxpayer, c) a benefit to society as it provides funds for government services, and d) an expanding instrument of power that perpetuates a fundamentally unequal society. To add to the complexity, it is possible for one person to hold several, even conflicting, interpretations at the same time (Lakoff 2002, pp. 14-16).

### 8.2.2 PERSONAL EXPERIENCE

One question still remains: what makes a user decide on these different possible interpretations of the e-services? What is it about an e-service that may tip a person to see one value over another? The answer proposed here is direct user experience, and in particular, user benefits – the centrally salient trustworthy cue – that provides the weight to tip the balance.

The argument here is simple. The first aspect has been established in the earlier analysis, but merits reiteration. Personal experience, and in particular, user benefits are a highly salient and forceful trustworthy cue when citizens make judgments about the activities of

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<sup>407</sup> For example, there might be an emerging tension between the increased ease of use of a service and the generation and encouragement of informed and involved citizens.

<sup>408</sup> Major determinants of this perspective are your position relative to the rest of society (Sen 1993).

the public sector.<sup>409</sup> The importance of the experience of user benefits (and costs) is that they appear to highly colour the resultant interpretation of trustworthiness cues.

Examples of this interactive dynamic between user benefits and other trustworthiness cues were scattered throughout the within-case analysis. For example, one cue that was visible, memorable, easily understandable, and hard to fake was the efficiency gains made by ChileCompra through achieving better prices. While this could be seen in a positive light if the supplier would take a broader perspective, it is instead 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 one DCCP manager 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!’”<sup>410</sup>

“...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.”<sup>411</sup>

Another example is how power asymmetries between the SII and citizens became salient 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 worry about the 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.

It is now possible to be clearer about how these experiences colour interpretations; they provide evidence for one competing explanation over another. For example, the

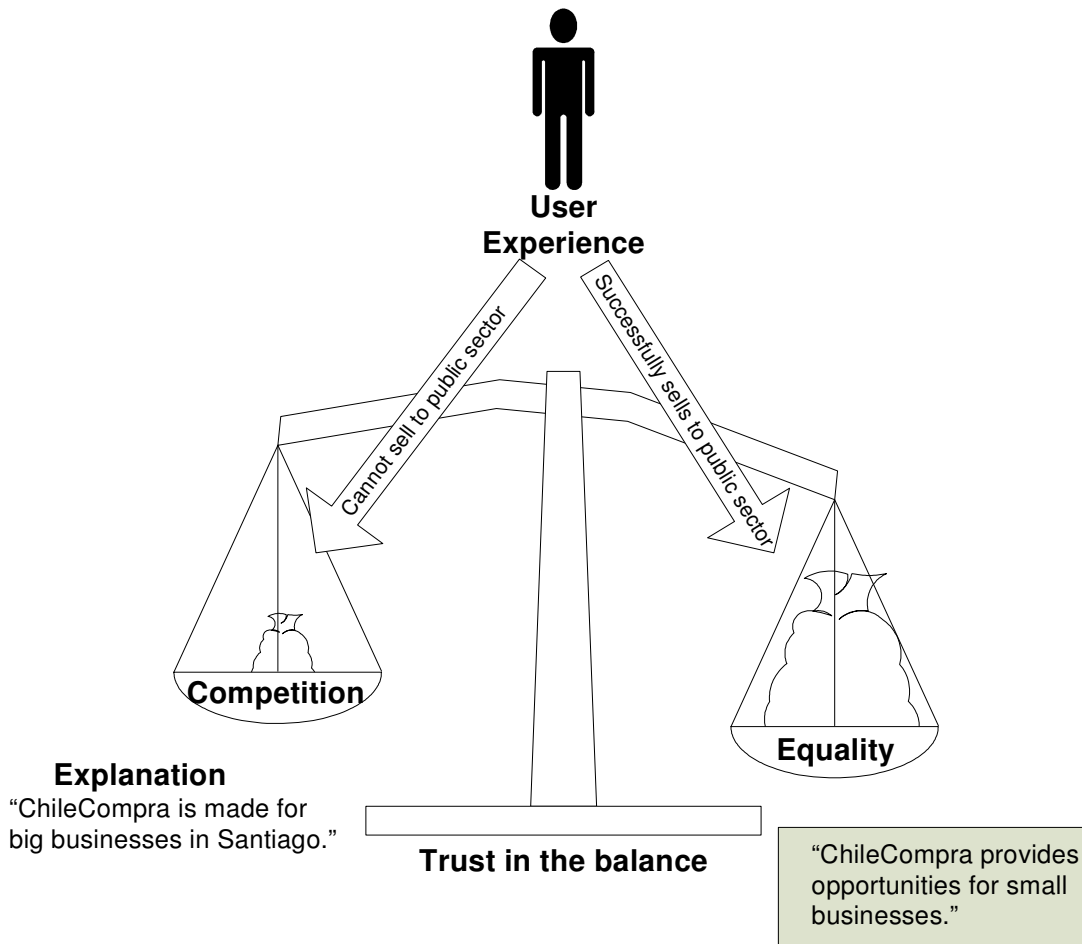
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<sup>409</sup> Exemplary of this, when asked about the trustworthiness of the SII one user responded, “I think so. Because it is the experience that makes you doubt, if they are trustworthy or not. And up until now they have been good. No problems,” source: SII-CC-8/9.

<sup>410</sup> Interviewee: WB-DCCP-9.

<sup>411</sup> Interviewee: WB-PS-CC-2.

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 their 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 (see Figure 33).



**Figure 33** A depiction of the trust balance; the dynamics of user experience, values, and resultant user explanations.



The final step in this dynamic is that these competing explanations represent judgments of the value system of the activities of a public sector entity. You can see the tax agency as fundamentally benevolent or malevolent (aligned versus competing interests). 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 provide 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.

This dynamic highlights an important insight: 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, power/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). Such a dynamic would explain why ChileCompra has a wider set of divergent opinions than the e-tax system.

It must be reiterated to avoid the risk of misinterpretation that this simplistic dynamic represents a tendency. There are, most certainly, a variety of other sources that will alter the dynamic, including previous experiences with the e-service and institution and

relative (to the individual) importance of the competing values. The argument here is that the power of user benefits is strong, and thus this pattern should be empirically evident in any study of the impacts of e-services. Furthermore, there is evidence to suggest that e-services such as the tax online system and ChileCompra represent a significant enough discontinuity from the previous services. At the moments of discovery and interaction with new e-services, it seems as if user benefits are also powerful and salient trustworthy cues.

### 8.2.3 OTHER EVIDENCE

The validity of the findings here in terms of the existence and operation of the trust balance depicted above is strengthened if they are also evidenced in other research. One study, conducted by MacManus (1991) provides evidence for the importance of personal position and experience in the shaping of their evaluation of interaction with the government.<sup>412</sup> MacManus conducted a survey of over 3,000 businesses in the US to find out what they thought of selling to the US government. Two of the relevant findings were:

- Firms that had never received a contract were the least likely to see practices as fair and impartial.
- There was also a sentiment by one-fourth of the firms that too much competition pushed prices too low for their firms to compete. Most interestingly, however, “...businesses that saw themselves as noncompetitive were most likely to lay the blame on the procurement process, not on themselves. They were likely to believe that they would have been competitive *if* government purchasing decisions were based on more than just price” (MacManus 1991, p. 335).

In other words, like ChileCompra, suppliers’ evaluative judgement of the procurement process depended upon their specific outcomes and took the form of competing values, in this case between fairness and competition.

## 8.3 REVISITING E-SERVICES AND INSTITUTIONAL TRUST

If the above findings hold, there are interesting theoretical implications for how we should think about the institutional trust and e-services: a) institutional trust is relational

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<sup>412</sup> Note that the MacManus study was found after the analysis was completed.

and dynamic, b) a major component of citizens' trust is predicated on inductive experiential learning from tangible service outcomes rather than theoretical considerations, c) self-interest considerations will tend to dominate, and d) the relative importance of competence and motivation will differ depending upon the level of salient discretion remaining in the e-service.

Before delving into these implications, it is important to keep in mind two limiting aspects of this discussion. First, we are talking about institutions that are using e-services. Second, citizens are directly interacting with the institution through this e-service. This eliminates many institutions such as the judicial branch and the parliamentary body. Furthermore, there are, as mentioned, indirect influences that are certainly important, but not of concern here.

### 8.3.1 TRUSTWORTHY VERSUS TRUSTED INSTITUTIONS

Definitions of institutional trust in the literature are incomplete. The definitions focus on particular institutional structures and characteristics in which it is argued that citizens should or should not (do or do not) place their trust. However, this notion of institutional trust does not fit with citizens' experiences and behaviours. Recall that institutional trust, according to Warren, requires three conditions: (1) institutions are defined by norms that both the truster and trustee know and the trustee 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. However, as Hardin argues and as is evident in this thesis, citizens appear to reach their judgments based on very little information (contra condition 2), without knowledge of the rules and norms that define the institution (contra condition 1), and in institutions with non-obvious accountability measures (contra condition 3).

The notion of institutional trust promulgated in the literature is a normative institution-centric position. The argument is that if a democratic process were fair, impartial, and participatory, rational citizens would trust them. Given this formulation, if a citizen does not trust in such a process, it might be explained away as a result of a mistaken

judgement based on a limited rationality and access to information. The argument is that if the citizen really knew what was going on, they would trust the process.<sup>413</sup> This, however, is not a theory of institutional *trust*, but rather a theory of institutional *trustworthiness*. That is, institutional trust has been defined from some abstract “objective” understanding of how trust *ought* to be. This is not a standard for measuring institutional trust. Rather, it is a recipe for institutional design to create trustworthy institutions.

If, as appears to be supported by the data in this thesis, trustworthiness is relative to individuals and their expectations and values, then institutional trustworthiness is not necessarily a good theory of *institutional trust*. The movement from trustworthiness cues to trust is where institutional trust is built or destroyed. These two theories, then, need to be understood separately. On the one hand, we need a theory of how to build objectively trustworthy institutions that perform competently and hold to higher democratic values such as inclusion and impartiality. On the other hand, we need a theory of how to build *trusted institutions*. How an institution engenders citizens’ trust is, as we have seen here, clearly not necessarily connected with some universally recognised notion of trustworthiness.

### 8.3.2 THE EXPANDED ROLE OF INDUCTIVE TRUST

The differentiation between trustworthy and trusted institutions brings attention to what constitutes the object of trust. For arguments sake, consider the implications of accepting institutional trust as it is commonly defined. If a citizen trusts in an institution, they trust in the institutional rules and norms, and the impartiality of particular institutionalised processes. However, when talking with citizens, there does not appear to be some “shared

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<sup>413</sup> For example, institutional trust should satisfy Baier’s “expressibility test” where “If one *did* know the conditions of the trust relationship and would *nonetheless* remain in the relationship” (Warren 1999d) (emphasis in original).

knowledge of institutional rules” that are well enough known to underwrite trust.<sup>414</sup> This implies that citizens must place their trust based on a *theoretical* understanding of the working of a public sector administration that is perhaps reinforced through personal experience. While theorists are theoretical, e-service users appear more reality based. As Hardin argues, citizens have little if any first hand knowledge of the actual operation of these processes. Citizens’ trust judgements appear based on an inductive inference of trustworthiness gleaned from information from personal experiences rather than from theoretical knowledge of the rules and processes of a particular bureaucratic entity. Rather than the power of theoretical understanding of the role of technology, it is the power of *real* outcomes that appear to shape people’s perceptions the most. The evidence here points to the epistemic issue that it is impossible – and probably irrational – to judge the trustworthiness of a public entity based upon a theoretical understanding of the potential of technology. People understand that computers *may* constrain civil servants’ discretion, but they do not internalise that reality until they experience it somehow themselves. Computers may bring efficiency, but citizens do not realise it until they see the tangible improvements in service. Thus, when thinking about building institutional trust through e-services, theorists need to shift their focus to include not just the theoretical potential of technology, but instead the tangible outcomes of the technology as they are manifested and relevant to individuals.

It should be noted that citizens do not focus mostly on practical user outcomes because of a conscious choice or some disposition against theoretical understandings. Of course, some people will have a more theoretical understanding of technology and the public sector and may incorporate that in their trust judgments. The reason the citizens interviewed in this study focus on the user outcomes is simply because *it is the easiest and most salient trustworthy cue*, for all the reasons discussed above (see 8.1.4).

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<sup>414</sup> In the conclusion of an edited book on democracy and trust, Warren, discussing trust in institutions, wrote,

“This *shared* knowledge of institutional rules gives the information I need to extend trust. Because the rules of an institution can be known and generalized to a very large number of strangers, the truster can extrapolate these rules to individuals about whom he has little direct knowledge. ... Thus, to ‘trust an institution’ means that the truster knows the normative idea of the institution, and has some confidence in the sanctions that provide additional motivation for the officials to behave according to this idea” (Warren 1999a, p. 349) (emphasis in original).

### 8.3.3 SELF-INTEREST

The data here also concur with Hardin's "encapsulated interest" formulation of trust, that it is fundamentally self-interest, rather than other communal values, that are decisive in people's institutional trust decisions. This is not to argue that people are inherently selfish. Rather, the argument is that the most salient information is based around personal experiences and their associated costs and benefits. The individuals' interpretation of that interaction with the government then tends to be perceived positively or negatively based upon the outcomes of that experience. People base trust-judgements on self-interest because it is the most efficient trust heuristic they have.

Riedl's (2004) findings support the focus on self-interest for institutional trust. Riedl surveyed students' responses to e-government web-sites and concluded, "it is the quotient of gain (multiplied by its likelihood...) and risk which determines trust... familiarity (as) a precondition for trust or distrust does not seem to hold" (Riedl 2004, p. 98). It seems reasonable that as the movement away from trust based on familiarity and close-relations and towards impersonal institutions that there is a concurrent movement in the balance of trust building mechanisms. Where there is no familiarity, no close-ties, there is no reason to look for trustworthy cues in areas such as moral obligations; no need to be seen as trustworthy or emotional motivations to act trustworthy. Thus when removing those sources of trustworthy behaviour from the equation, those that are left are more rational and calculating.

It is also possible that this finding is an outcome of the fact that the two e-service cases trigger self-interest values in people. At the heart of both services is that fundamental component of today's societies: money. Either you are giving it away (taxes) or trying to earn it (ChileCompra). Having money on the mind can change short term subconscious orientations. For example, research shows that when people are psychologically primed with the idea of money, they show reduced helpfulness (Vohs *et al.* 2006). Consequently, users of these services might focus more on the self-interest outcomes than others. The implication of this argument is that other e-services might evoke different responses. That

is entirely plausible. For example, Soss (1999) found that how welfare recipients were treated was a crucial component of citizens' political judgements. Arguably, this may reflect a higher level value and not self-interest, at least in the narrow economic sense.<sup>415</sup> However, arguably, self-respect is a form of self-interest in that it is an egoistic concern with a component of one's self-identity, rather than a non-egoistic concern for the communal interest, for example,

Other research indicates that this self-interested perspective extends to other types of e-services. For example, West (2005, p. 173) found that ordinary people do not appear that interested in engaging with the Internet to change the public sector, but instead are more interested in using it to improve their own personal lives. Thomas and Streib (2003) argue that use of e-government websites is a new form of citizen-initiated contact. They found that citizen-initiated contacts are prompted by several factors including specific perceived needs, and those who have a greater stake in governmental services, as well as a correlation to socio-economic status. The underlying idea here is that, at least with the current set of e-services offered today, self-interest is the motivating factor behind citizens engaging with e-services. Consequently, it is not surprising that e-service interactions would be viewed through self-interest coloured lenses.

#### 8.3.4 COMPETENCE AND MOTIVATIONS

Another implication is the importance of distinguishing between the competence and motivation components of institutional trust. Each aspect appears to play a role at different times. Generally speaking, users saw the SII as competent, even if they saw it as an institution with competing interests. Of course, the SII was also generally seen as impartial and consequently as not deviating from standard practice. This implies that citizens already believed that the SII was limited in their discretionary activities, impartially adhering to the tax code. In such a case, issues of motivation did not emerge as centrally important as a trustworthy cue. Users of ChileCompra, however, focused mostly on motivations behind the bid decision process, and issues of competence were

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<sup>415</sup> Although, equally plausible is the explanation that showing respect hits on the most fundamental self-interest: the citizen's ego.

hardly mentioned. Theoretically, this fits roughly with how we would expect users to react to these two e-services. Where there is discretion, the motivation behind the choices become the focus of trust. Where there is little or no discretion, trust becomes more like the confidence one has in a machine – there is confidence as long as it does the job it is supposed to do.

### 8.3.5 CHAPTER SUMMARY

As a final note, it is important to stress that the argument here is not that direct user outcomes are the only causal factor; they are not. There are other factors are important, such as the individual's past history, trust disposition, socio-economic position, etc. The argument here is the following: *when citizens interact with e-services, direct user outcomes are powerful trustworthy cues that can be highly influential in shaping citizens' resultant interpretations of the behaviour of the public sector agency.*

Perhaps the central outcome of this analysis is the necessity of an analytical distinction between institutional trustworthiness (the study of what makes institutions trustworthy) and trusted institutions (why citizens view institutions as trustworthy). The two may overlap, but they are most certainly not necessarily equivalent. What institutions are trusted is necessarily a relative proposition (trusted by whom?) involving personal calculations of one's interests and values and the perceived outcomes of the activities of these institutions. This implies that the development of trusted institutions is necessarily problematic in a democratic system where there are inherent conflicts of interest and values. Technology will not be able to resolve these issues. Rather they alter the foci of the value conflicts, creating a new configuration of user interpretations and trust judgements.



## 9 CONCLUSION

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“... by changing the terms of trade-off between efficiency, effectiveness, quality and democracy, ICTs offer, in turn, a further, particularly alluring promise: that of shifting the so-called ‘trust deficit’ between governments and citizens from red to black” (Bellamy and Taylor 1998, p. 63).

This thesis is concerned with how e-services are implicated in the process of building trust in institutions of democratic government. Drawing on the findings, chapter 8 discusses some theoretical implications for e-services and trust. This chapter moves beyond that discussion to consider implications for policy and future research and concludes with comments about the future of e-services and trust.

To facilitate the discussion, section 9.1 summarises the findings of this thesis and discusses their potential generalisability. Drawing from these findings, 9.2 considers policy implications for building trustworthy and trusted institutions. Of course, there remains a significant gap in the knowledge. Acknowledging this gap, section 9.3 suggests some hypotheses and outstanding research questions that have been raised in this thesis. Finally, section 9.4 brings the chapter and thesis to a close with final thoughts on the future of e-services and trust.

### 9.1 SUMMARY OF FINDINGS AND GENERALISABILITY

This thesis began with a straightforward, but ultimately complex, question: *how, for whom, and in what contexts do e-services build trust?* The first step to scoping this complexity was to build a conceptual framework that provided structure for the research process. Drawing from a variety of disciplines, the framework postulated linkages among trust, institutional trust, and ICT in the public sector. From this framework, a series of fifteen middle-range hypotheses emerged connecting the implementation of e-services to trust building outcomes.

These hypotheses were then put to the test in two specific cases: an e-tax system and an online public sector procurement system. For each case, more concrete case-specific hypotheses were developed that link trustworthiness changes brought about the e-service to predicted trust outcomes. These hypotheses were then tested and refined in terms of how, for whom, and in what contexts the trustworthy characteristic interacted with citizens' trust judgements of the institutions behind the e-services. Finally, a comparative analysis was done that attempted to draw more general conclusions from the two studies.

#### 9.1.1 SUMMARY OF EMPIRICAL FINDINGS

In terms of trustworthiness, the clearest impacts of ICT were on the internal capacity of the government, where the efficiency and effectiveness gains with the largest impacts stemmed from process automation (e-catalogue, online tax proposal, automated auditing of taxes). This translates into positive service outcomes, such as improved service delivery with subsequent time and cost savings for the users, decreased information asymmetries between suppliers and the government, and increased participation of micro and small businesses in sales to the public sector. Gains in transparency were also achieved, as well as reduced corruption, and opportunities for internal and external monitoring of public sector activities. Overall, the two e-services have clearly improved the internal operations of the public sector in Chile.

The effects of the e-services on building trust were less clear. Increased transparency and the internal efficiency and effectiveness gains were not readily perceived by citizens, contrary to the middle-range and case-specific hypotheses. Several cues such as performance transparency and online feedback mechanisms were hardly perceived at all and did not appear to be linked to citizens' trust judgements. The only theory that had the predicted results was that the delivery of user benefits would be perceived and treated as positive trust building cues. Often, other predicted trustworthiness cues were not perceived directly, but instead were interpreted by users through the lens of a direct benefit/cost to the user. For example, efficiency gains were perceived through the lens of the user benefit of decreased wait times, and effectiveness gains through payment times.

This behaviour can be interpreted as the use of a powerful and highly cognitively efficient trust heuristic: “What have you done for me lately?”

Several broader conclusions were also drawn from the study:

- 1) Trust in institutions is relative, generally based on personal experience of the cost/benefits of a service.
- 2) The relativity of trust in institutions implies a disjuncture between institutional trustworthiness and trusted institutions. Trustworthy institutions, according to a democratic theory rationale, for example, are not necessarily the best designed institutions to build trust. Consequently theories of institutional trustworthiness need to be disassociated from theories of trusted institutions.
- 3) There are structural limitations – or at least inherent difficulties – to building trust through e-services. The nature of democratic governance as institutionalising discursive solutions to conflicts of interests cannot satisfy all people all the time. This places a structural impediment to building trust in the institutions of government because conflicting interests and values are breeding grounds for distrust. Technology does not change this fundamental equation.
- 4) These competing interests and values are decisive points for the formation of trust. Competing explanations of the outcomes of e-services are consistent with belief systems of competing values and interests. Citizens’ experiences with e-services provide evidence supporting one explanation over another, tipping a trust judgment one way or the other.

#### 9.1.2 GENERALISABILITY OF THE FINDINGS?

Before delving into policy considerations, it is important to qualify the findings in terms of their potential applicability to other e-services and other contexts.<sup>416</sup> This study was an attempt to understand the dynamic between e-services and trust that is built or destroyed through *direct* interaction. There is certainly a whole range of important indirect trustworthy cues that act as causal factors that influence trust judgments. For example,

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<sup>416</sup> As we will see, considering the limitations of the generalisability of this research raises many questions that would make for interesting future research.

the role of the media is undoubtedly crucial when considering the impacts of transparency and accountability.<sup>417</sup> The focus on direct influences places significant qualifications on the findings in terms of the strength of the causal mechanisms outlined above. The fundamental problem is that, from this research alone, it is impossible to judge the strength of personal experience as a trustworthy cue compared to other cues. This raises several interesting questions: If indirect evidence contradicts personal experience, what would be the interaction? Are different government agencies judged differently in terms of the types (indirect versus direct) evidence that people use as trustworthy cues?

There are several other considerations that scope the potential generalisability of the findings, and also suggest future avenues for research:

- 1) While it may be possible to draw inferences of causal mechanisms from a single case (Smith 2006), the generalisability of these mechanisms may be contingent upon the particular qualitative features of the case. In this study, the question is if there is a qualitative difference between the e-tax administration and ChileCompra services and other government institutions and services that would alter the operation (or existence) of the causal mechanisms discussed in the findings.
- 2) The Chilean context provides a unique environment because it already has relatively trustworthy institutions of government. Perhaps this results in the reduced salience of trustworthy cues such as impartiality. It is unknown what the dynamic would be in a distrusted government. Indeed, it is conceivable that the findings here are completely irrelevant in such a situation.
- 3) The subgroup interviewed reflects mostly citizens and suppliers in the lower socio-economic demographic. It is conceivable that these users are more sensitive to cost/benefit calculations as they weigh more heavily in their daily activities.
- 4) This study was a snapshot of a short time frame in Chile during a period of fairly substantial change. Therefore it does not capture the dynamic of trust as it

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<sup>417</sup> Indeed, this thesis potentially underscores the importance of third-party information sources in providing digestible information for forming trust judgments beyond the scope of citizens' direct experience.

changes through time and citizens' expectations adjust to the new realities. The dynamic may also radically change once some familiarity with a new e-service has developed.

## **9.2 POLICY IMPLICATIONS: RESTORING TRUST IN GOVERNMENT**

The motivation for the research question asked in this thesis was a concern with how e-services may or may not play a role in building trust in the institutions of government. What do the outcomes of this research tell us about the potential for e-services to act as a catalyst to restore trust in government? This section considers what policy implications we may draw from this research with the goal of exploiting e-services for the goal of building trust in institutions of democratic government. Of course the applicability of policy implications are constrained by the qualifications of section 9.1.2 above. The logic here is – if the findings are true, then what could the government do?

Given the institutional trustworthiness/trusted institution distinction and the relativity of trust, there is a lot of weight to Hardin's argument that rather than concerning ourselves with trust in government we should really be concerned with developing governmental trustworthiness (Hardin 2000, p. 152, Hardin 2002b). This is especially true considering that trust may be misplaced and we most certainly do not want to increase trust in institutions where it is not warranted (Hardin 2000). Policy should, at a minimum, focus on mechanisms to assure that the governments actually do their duty in a competent manner.<sup>418</sup> While this seems a reasonable approach, it only deals with one half of the equation and, of course, does not directly address issues of lost confidence. A highly competent government with no political support is not one that can perform to its potential, and lacking support, will have difficulty undergoing trustworthiness enhancing reforms. Consequently, any policy approach should take both building trustworthy and trusted institutions into account.

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<sup>418</sup> Hardin writes, "... if confidence in government is declining, we should address that problem by enhancing government competence" (Hardin 2000, p. 36)

### 9.2.1 BUILDING TRUSTWORTHY INSTITUTIONS

The straightforward analysis indicates that new ICT can significantly improve the trustworthiness of the public sector across a variety of dimensions. There is no need to belabour that discussion, except to note that there are currently limitations to the potential to codify public sector processes. Potentially future improvements in expert systems and other artificial intelligent applications may bring possibilities to further remove human discretion from public sector processes. If this were to happen, it would raise a number of other important implications: as government becomes more programmatic and front-line discretion disappears, what happens to the role of trust?

With the backdrop of improving the trustworthiness of democratic states, this discussion will focus on a fundamental component of democratic states: checks and balances. How can e-services contribute to improved checks and balances? The mechanism that receives the most attention is that of transparency. In the two cases, transparency altered the incentives of the public sector bureaucrats in two main ways. First, the increased computerisation of processes and the concurrent transparency allowed for the increased possibility for intra- and inter-institutional horizontal accountability. Second, it appeared as if the potential for outside monitoring from citizen or other stakeholders such as the media played into the reasoning of the civil servants. There was the potential that their data could be monitored, and discrepancies found. This is similar to what Meijer (2007), encountered in a case study on transparency in Dutch schools and hospitals. Meijer found that information transparency did indeed have an impact on the activities of the public service organizations, only not as originally envisioned. The fear of negative publicity in the media prompted action by the public service to try to improve upon the performance indicators being reported on. The public sector did not seem to react to citizen stakeholder exit and voice mechanisms, but instead picked up on the transparency itself as the motivating signal.

With new e-government applications the focus of the light of transparency and resultant accountability mechanisms that are brought to bear undergo a change. The introduction of e-services shifts some discretion from policy makers and front-line civil servants to

software designers and engineers. Software code becomes policy. Consequently, the implementation of an e-government service should be subject to accountability measures, at a minimum making algorithms and computer processes transparent (Bovens and Zouridis 2002).

An important question still stands: how might we turn the light on the government and bring in a new age of government accountability to citizens? The findings in this thesis do not paint a positive picture of the potential of the average citizen to watch the government. It does not seem reasonable to expect citizens to get involved in analysing and holding government to account for a variety of reasons including a) the epistemic difficulties of understanding the relationship between transparency and government activities, and b) the limited set of mechanisms available to citizens to hold governments accountable. On a day-to-day basis, this role seems best left to civil society agencies and the free press.

Citizens can, however, be an effective watcher of the government. Seeing how requires a rethinking of what it means to hold the government accountable. Taking a street-level epistemological perspective and the evidence from this thesis, one can hypothesise that citizens would be able to provide effective accountability feedback on service delivery. Citizens are the best placed to pass judgement and offer essential feedback on service delivery, in particular with respect to their direct perceived user benefits. If this is the case, it opens up a new set of interesting possibilities for ICT based interactive accountability mechanisms between citizens and public sector institutions.

### 9.2.2 E-SERVICES AND BUILDING TRUSTED INSTITUTIONS

The first step to building a trusted institution is to accept that any attempt to do so is limited in a democratic society where there are interest and value conflicts over the role of the government.<sup>419</sup> Indeed, these inherent conflicts are the reason why distrust (in the

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<sup>419</sup> Of course, as Warren (2004) argues, trust is more inherently problematic the more directly political the institutions are. This is in contrast to those institutions that provide welfare services and those that regulate airlines and air pollution that might be complex but not inherently problematic in terms of value conflicts. The argument in this thesis is more directly related to the delivery of e-services.

form of checks and balances) has been institutionalised into democratic institutions. This naturally leads political scientists to concern themselves with issues of procedural justice to ensure that the processes are at least impartial and inclusive. This, however, will not necessarily build trust.

The evidence in this thesis suggests a different perspective. To underscore this perspective, it is helpful to draw a parallel to the argument of the classic book, *How to Make Friends and Influence People* (Carnegie 1982). Carnegie's central lesson is that one will be more successful making friends and influencing people if they really put forth an effort to see the world from the other person's perspective. The power of the ego cannot be overstated, especially in terms of focusing attention and therefore openness to trustworthy cues. Government institutions looking to build trust should bear this in mind. Rather than taking an institutional approach to building trust, with horizontal and vertical modes of accountability, institutions should orient themselves to be accountable to citizens. This accountability should be with respect to the delivery of services where: 1) there is interaction with the citizens, 2) citizens are well placed to provide feedback, and 3) the cost/benefit calculus that is so important for trust occurs.

A theoretical framework that overlaps with this perspective is that of public value. Public value is a theoretical perspective "rooted in people's preferences" that considers governments' outputs in terms of what people want, and can be used as an analytical framework to evaluate public sector activities (United Nations 2003). While the UN report identifies three categories of public value – outcomes, services, and trust – the argument here is that positive outcomes from services will be directly causally related to building trust. The trust engendering power of the SII came from the delivery of the 'red-carpet treatment'.<sup>420</sup> ChileCompra, on the other hand, has a more difficult time building trust through direct interaction on a consistent basis. At best it can foster increased opportunities, but it can not guarantee positive outcomes for all.

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<sup>420</sup> Of course, there will always be a subset of people who assess good performance but will never trust, for whatever reason (Glaser 1999).



If the state cannot completely control the balance of winners and losers, such as with ChileCompra, maintaining trust may be largely a combination of performance and managing expectations (Miller and Listhaug 1999, Orren 1997, p. 103). Controlling expectations, however, is most likely difficult for a variety of reasons. First, improvements to some areas of government might raise expectations in other areas. For example, in one interview, an older man told of how when he saw the e-tax service by watching his niece do her taxes online, he became disgruntled with the current online Armed Forces pension system that required him to print out his application and mail it in. Once he realised that such smooth and convenient interactivity was possible, suddenly the current level of online service offered by the Armed Forces was unacceptable. Second, ICT bring with them an already high level of expectations, as they are associated with the progress of modernity. This was a common perception for the Chileans interviewed,<sup>421</sup> and has been seen elsewhere in Latin America (Avgerou *et al.* 2007). Finally, if there is distrust of the government, there will be distrust of the governments' message. A public awareness campaign is certainly not guaranteed to shape expectations in the desired.

Expectations, recall, are rooted in people's value systems. Thus, the more fundamental job is one of managing values systems, rather than expectations. If we want people to react to the cues of trustworthy democratic institutions, such as impartial and fair processes, the norm of fairness needs to override self-interest for those who lose out. In other words, can we "create institutions that encourage citizens to look at problems from more than one perspective and that engage them in the weighing that hard decisions

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<sup>421</sup> For example, one Telecentre manager described people's perceptions as such,

"The people see it [e-services] as a part of modernization. It is necessary. It goes with the economic growth, globalization, with development. The people see it, more or less, as positive. I don't observe negative commentaries about the state services. Perhaps – with the difficulty of navigating the pages. They are very complicated still. But, with all the services that the government delivers through the Internet, the people would like that there were even more services!" source: TC-9.

In other example, while ChileCompra was not universally well received, seventy-eight percent of suppliers in the World Bank survey responded that after working with ChileCompra they believed that new ICT can be used to improve public sector administration. Only twelve percent responded negatively. Most likely, viewing ICT as a necessary tool for the modernisation of the state will play a role in the shaping of the expectations that citizens have regarding the technology.

require” (Lawrence 1997, p. 152)? Can you lose a public procurement bid and realise that the general competition is good for the country rather than assume that the process is rigged?

It might be possible to shift people’s values. Perhaps civic education could stress more communal thinking, for example, through promoting democratic values a strong sense of national identity. Another approach might be to improve the government’s “framing” of the issues. For example, it is possible to describe taxes as a moral duty and social investment rather than as a ‘tax’ – that is, something taxing or painful. This evokes a communal rather than the self-interested frame (Lakoff 2002, pp. 189-192). It is impossible to state here what the impact of such attempts would be.

However, approaches that attempt to manipulate citizens’ values might be swimming upstream against several powerful currents that commingle with the implementation of e-services today. The first influence is the value system that underlies market capitalism that coexists with modern democracies. While the economic expansion that has come with market capitalism arguably aids in the stabilisation of democracy, the inherent necessity of inequality is always in tension with the egalitarian ethos of democracy (Dahl 2000).<sup>422</sup> The consumer capitalism that co-exists with western democracies promotes a self-interested value system over communal values,

“Markets advance individualistic, not social, goals and they encourage us to speak the language of ‘I want,’ not the language of ‘we need.’ Markets preclude ‘we’ thinking and ‘we’ action of any kind at all, trusting in the power of aggregated individual choices (the ‘invisible hand’) somehow to secure the common good” (Barber 1998, pp. 72-73).

Thinkers in the philosophy of technology point towards another trend with a similar effect. Borgmann (1984) argues that technology makes a commodity out of reality. Technology works as a device that prioritises the *production of outcomes* and hides the underlying processes from view,

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<sup>422</sup> Dahl goes on to argue that market-capitalism favours democracy up to a point (polyarchal democracy as he defines it) but that its adverse effects on political equality inhibits further deepening of democracy. I expect that this will become more acute in the near future as access and control over information becomes more and more contested.

“In a device, the relatedness of the world is replaced by a machinery, but the machinery is concealed, and the commodities, which are made available by a device, are enjoyed without the encumbrance of or the engagement with the context” (Borgmann 1984, p. 47).<sup>423</sup>

E-services abstract users’ interaction with the government one further level away from the institutional processes in which they are supposed to place their trust. Users will have less direct experience with the actual processes and more with the outcomes of these processes. This means that the reliance on inductive personal experience from e-service outcomes will become an increasingly relevant currency upon which citizens make political judgements. Such a reality brings self-interested concerns to the fore.

It appears that the adage “all politics is local”<sup>424</sup> will not become any less true in the near future, despite the new levels of interconnectivity enabled by the Internet. At least for the near future, it is safe to assume that self-interested evaluations of e-service outcomes will remain a very powerful means of gauging trustworthiness. Thus, if we wish to build trusted institutions, the best a government can do is be accountable to citizens through the provision of high quality services.<sup>425</sup>

Importantly, it must be understood that this is not an argument for the government to treat the citizen as a customer, as is commonly found in recent approaches to e-government that attempt to extend private sector philosophies into the public sector. These approaches, such as new public management models, incorporate private sector ideals at

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<sup>423</sup> Borgmann, in 1984, went on to write the following about microcomputers,

“... microcomputers are being used more and more widely because they are becoming ‘friendly,’ i.e., easy to operate and understand. But such ‘friendliness’ is just a mark of how wide the gap has become between the function accessible to everyone and the machinery known by nearly no one. And not only lay people are confined to the side of ignorance of this gap, but so are many, perhaps most, of the professional programmers” (Borgmann 1984, p. 47).

<sup>424</sup> The expression comes from the title of the longtime U.S. Congressman and Speaker of the House Thomas P. (Tip) O’Neil’s (with Gary Hymel) book, “All politics is local: and other rules of the game”, a primer for campaigners.

<sup>425</sup> Of course, when engaging in the development of new interactivity and feedback channels, policy makers must be aware of the potential downsides to simple accountability mechanisms based on a few quantitative variables. A major risk is the perversion of incentives, or “perverse learning” (Meijer 2007). This is what happens when an administration, driven to achieve particular accountability goals, maximizes one or a small group of outcome indicators. The end result are negative unintended consequence due to the sacrificing of other essential organizational activities and potentially the overall effectiveness of the agency (Meijer 2007, O’Neill 2002, Thiel and Leeuw 2002).

the expense of democratic values (Cordella 2007). For example, increased personalisation of services as means to increase the efficiency and effectiveness of government, as well as predict and even influence behaviour (Pieterse *et al.* 2007) can be seen as a shift from the traditional values of public bureaucratic value of impartiality and social egalitarianism (Bellamy and Taylor 1998, p. 88, Kallinikos 2004).<sup>426</sup> To ignore these values not only goes against a central role of the public sector bureaucracy, but it also promotes self-interested values (the customer is always right!). This is not to say that a government can not take citizens' perspective into consideration; indeed they should. Rather, it is crucial to be aware of how implementing e-government systems shifts the points of tension between the competing values. For example, it may be possible to improve efficiency to a certain extent with new technologies without sacrificing equality. It is when increases in efficiency mean sacrifices in equality where the public sector must take notice, as opposed to the private sector. A democratic government must strike a balance between improving services, responsiveness to citizens, and the other values of democracy (Glaser 1999, Pegnato 1997).

One last point on building trusted institutions needs to be made. The theory of cognitive inertia predicts that once a citizen generates an explanation, that particular explanation will be relatively intransigent despite new evidence to the contrary. However, the data suggest that the relatively innovative nature and tangible benefits of new e-services constitute a discontinuity from past activities of the government. With ChileCompra, for example, suppliers engaged with the new technology with a positive outlook and high expectations. They were open to idea that the public sector procurement market had fundamentally changed. Depending on how it worked out, the suppliers quickly formed new beliefs, both positive and negative (“nothing has changed”, “now we have more opportunities”), indicating that while e-services have the chance to alter perceptions, after a while that chance can be lost. What the window of opportunity is, and how intransigent

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<sup>426</sup> Bellamy and Talyor (1998) wrote, “... this shift can also be perceived as a retreat from the traditional values of public bureaucracy, namely a commitment to consistency, predictability and impersonality in the disposition of its powers” (p. 89).

people's opinions are, is most likely highly dependent on the person and a matter of future research.

### 9.3 FUTURE E-SERVICE AND TRUST RESEARCH

As typical of research, this thesis opens up many more questions than it (however tentatively) answers. This section briefly lists a series of standing questions that would both help to solidify the findings and to improve the general knowledge of the relationship between e-services and institutional trust.

The first set of research questions are stated in terms of testable hypotheses. These are hypotheses that stem from this research and would help to test and refine the findings of this thesis:

- 1) Independent measures of institutional trustworthiness will not necessarily correlate with levels of trust by the public of the institutions. The institutions that deliver services with higher user benefits (as opposed to costs) will tend to be trusted more.
- 2) Trust will tend to be built better through e-services where a *direct* benefit to the user is delivered over government agencies with less direct, or potential, user benefits. For example, online services that allow for participation will bring less direct benefits and therefore have *less* of an impact on trust than, say, a good e-tax system.
- 3) Trust in automated services will tend to be based on competence judgements rather than interpretations of the value/motivations of the service. Conversely, with services that are highly discretionary, value and motivation considerations will gain in importance.
- 4) For citizens who have a greater focus on self-interested values, user benefits will prove a more effective trust builder than for those with a more communal value system.
- 5) Power asymmetries are negative for trust when they bring about negative consequences. Public sector agencies with a lot of power that manifests negative

consequences that are perceived as greater than the perceived benefits will tend to reduce trust.

- 6) Explanations for the outcomes of e-service interactions will tend to fall on either side of the value conflict dimensions inherent in the technology-democratic government dynamic.

As discussed above (9.1.2), the generalisability of the findings is limited given the specifics of the e-services and Chilean context. A second set of research questions would help to refine the findings and see if, how, and for whom, the findings extend the findings beyond the study population:

- Would another type of e-service, such as online health or education services, appeal to different values and therefore impact on trust differently? Would another manifestation of trustworthiness cues, such as performance indicators, feedback, or user service outcomes be more salient?
- A crucial question that was not considered here is if and how e-government builds trust when embedded in a non-trusted agency. Avgerou *et al.* (2007) conclude from their case study of Brazilian e-voting that “e-government requires active trust formation in ICT and government institutions, rather than overcoming their perceived trustworthiness deficiencies.” In other words, e-government itself is not a means to build trust, but rather that e-government requires trust to be successful. If this is correct, then perhaps the role of building trust with e-government is more limited than is supposed here. Arguably, however, their case does not demonstrate what they conclude at all, for two main reasons. First, the conclusion does not logically follow from a single case study of an e-government application within an already trusted set of institutions. Their study simply does not speak to the ability of e-government to build trust in non-trusted institutions. Second, they do not collect citizen data to understand if the system does build trust at all. Overall, there is a continued need for micro-level studies of the institutional trust building potential of e-services in non-trusted institutions.

- Do those with higher incomes change their values and thus will they be less subject to self-interested concerns?<sup>427</sup> Do people with higher education levels focus more on theoretical trustworthiness cues?
- Given the bias of this research towards how e-services build trust the issue of how e-services might erode trust was mostly ignored. It was assumed that the absence of trust building mechanisms meant no change and that if the opposite of a trust building mechanism existed (i.e. interests actively not aligned) that this eroded trust. Is this the case? It is crucial that research on distrust and mistrust be done to understand the types of interactions that actively destroy any trust relationship to learn to mitigate these effects.
- How do changing expectations of e-services alter trust through time? If the quality of e-services stays the same rather than changes, does that reduce, maintain, or build trust? Do services need to constantly improve to maintain trust? Will currently salient trustworthy cues become less relevant as they are experienced more often? Would new cues take their place? If one area of the government has radically improved their service, does this decrease trust in other areas of the government? Is that necessarily a bad thing? Finally, what is the role of all the hype surrounding new ICT and citizens' expectations? Could this be raising the bar too high only setting up an expectations gap that virtually ensures government failure in the eyes of the citizens?

#### **9.4 THE FINAL WORD**

While the two e-services studied in this thesis are state-of-the-art, they represent only the beginning of the e-government wave. Governments around the world have not yet begun to implement more radically transformative e-government applications. The extent to which e-government will bring such transformations is, however, highly questionable. Two future directions come to mind: pushing efficiencies through increased automation courtesy of new artificial intelligence (AI) algorithms, and increased citizen participation through new forms of Internet enabled interaction.

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<sup>427</sup> Inglehart (1997) argues that as incomes rise and basic necessities of life are met, then people shift from authoritarian values to postmaterial values.

#### 9.4.1 ARTIFICIAL INTELLIGENCE TECHNIQUES

It is still an open question as to the extent that new developments in software can codify and automate “non-legal, non-routine, street-level interactions, such as teaching, nursing, and policing” (Bovens and Zouridis 2002, p. 180). As new forms of artificial intelligence algorithms are developed to find optimal solutions in highly complex solution spaces, it is reasonable to postulate that more and more of these non-routine interactions can be implemented. Considering this hypothetical, what might happen to trust if new advances in AI allow for the automation of many non-routine interactions?

This thesis provides some insight into this question. First, AI solutions are just as problematic, if not more so, in terms of transparency and accountability. AI algorithms are not amenable to transparency as they are dealing with necessarily large and complex solution spaces.<sup>428</sup> Also, implementing institutional processes in software raises accountability issues. New models of accountability need to be developed to deal with the increasing computerisation of governments. Ultimately, people are held accountable, not computers and software. Second, there is a question as to how a person might react to the cold rationality of computer logic. Why would people have any more or less trust in a decision they disagree with, whether it comes from a person or a computer? At the end of the day, will it matter whether or not it was a person or computer that made the decision?

#### 9.4.2 NEW FORMS OF PARTICIPATION

One great hope for revitalising democracy is the interconnectivity and communication possibilities inherent in the Internet and new technologies. Theoretically everyone can be involved at the click of a mouse. It is not clear, however, that new technologies by themselves can alter the fundamentals of these democratic deficits. It is true that new ICT make a difference. ICT potentially lower access barriers by enhancing political resource equality and expand the scope of potential democratic innovations with new modes of

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<sup>428</sup> For example, non-symbolic AI techniques such as genetic algorithms or neural networks have no explicit symbolic representation and thus the only form of transparency involves a mapping of the learned ‘weights’ that, to the untrained eye, does not have much meaning.



communication and collaboration. However, recent experiments in new forms of democratic participation, including online tools, have shown that truly participatory innovations are highly costly, time intensive, and are only one component of more traditional forms of engagement (Smith 2005a, p. 104). This is because e-participation still requires citizens who have the necessary resources (e.g. time, appropriate expertise, incentive, access, awareness, trust) (Smith 2005a, United Nations 2003). New ICT do not resolve these underlying issues.

It is conceivable that new e-participation schemes could have positive outcomes on trust for those involved. The findings of this thesis suggest that one particular component of e-participation is decisive in the citizen-government trust equation: the outcome of e-participation in terms of government responsiveness producing tangible results for the participating citizen. Indeed, government responsiveness is the “ultimate reward and incentive” of e-participation (United Nations 2003).<sup>429</sup> However, this thesis did not put truly participatory e-services to the test. It would seem that a truly participatory process enabled in part by new ICT holds the potential to change the fundamental trust building equation, enabling a direct engagement with the decision making processes and thereby making the fairness of the process a highly salient trustworthiness cue. In such a situation, it seems entirely plausible that this provides at least some counterweight to self-interested considerations of those involved. This, of course, remains to be seen.

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Clearly, the future direction of e-government is still an open question, as well as its impact on trust. This thesis attempts to get a glimpse of understanding of this future. In the larger scheme of things, the direct impacts of e-government services on trust may play a minor role, making relatively inconsequential changes within wider and much more powerful socio-political forces. However, understanding the nature of the impact of e-government applications on the trustworthiness of the public sector and citizens’

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<sup>429</sup> This would suggest that democratic innovations such as participatory budgeting are the best of worlds, providing participation and potentially direct benefits.

reactions to these changes may help us identify ways to try to move towards the larger goal.

It is clear that the introduction of new ICT in government is inextricably tied up with political considerations, constraints, and processes. For a variety of reasons, it is not reasonable to expect governments to willingly engage in disruptive transformational reform fundamentally changing the citizen-government relationship, nor would it be necessarily desirable. Neither can ICT independently bring about this change. ICT only provide new potentials for communication and interaction, and unless the fundamentals of public sector bureaucracies change, then these fundamental communication and interaction patterns will not change.

So how do we move forward? The starting point is the fact that the spread of e-government implementations is not going to stop. Governments will naturally look to take advantage of the natural synergy between ICT and public sector activities. As the head of society, however, the onus falls on the government to direct these changes towards deepening democracy rather than to increasing power and control of the citizenry (Castells 2001, p. 185). Rather than expecting transformational change, perhaps focusing on the more mundane will prove more productive in the long run. Governments can focus on using ICT to improve the trustworthiness of the public sector while simultaneously working to build trusted institutions through added public value and that foster citizen-government interaction in a manner that is epistemically feasible for the citizen, e.g., maximising the citizen's position as service recipient. This thesis has provided some insight into how to move in that direction. Such an approach, while not radical, does constitute one in a series of incremental steps that eventually can lead towards a more transformational deepening of democracy.

*-- The End*

## **AFTERWORD: REFLECTING ON RESEARCH**

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The first two years of this research were spent trying to develop a solid grasp of what I believe to be good social science research. There are different approaches to research, each of which brings its unique benefits and problems to the table. Perhaps due to my prior training in the natural sciences the approach that ultimately appealed to me was analytical rather than descriptive. I struggled against approaches that appear to reject the possibility of gaining knowledge through a scientific process. In my mind, there has to be theory and theory has to be tested or refined in some way. However, I also did not want to uncritically accept these notions of theory and testing without more fully understanding the difficulties and realities of social science research. The result of my exploration was the adoption of the methodological underpinnings, spelled out in Chapter 2, and subsequent research approach. While the arguments espoused in support of my assumptions and research approach were drawn from philosophers and researchers with much practical experience, for me the arguments were still based on logic and many untested background assumptions. As an inexperienced social science researcher, I was taking these ideas mostly on faith (or perhaps trust?). Consequently, this research was just as much a test of these arguments as they were a test of the fifteen e-government to trust hypotheses.

Upon completing this research, and writing up the thesis, I wanted to take a little time to reflect upon the experience and take stock of what I had learned about conducting research. To make a long story short, while the process of research was filled with doubts and concerns, in retrospect I am pleased to report that I still believe the research approach to be justified for the research question proposed in this thesis. Even more strongly, I have come away from this thesis believing that the fundamental assumptions and approach to theorising taken here can greatly aid in making social science research more systematic and cumulative.

This afterward has two sections. The first section will briefly discuss the structured case approach that was used. Here some of the gaps between research and presentation are discussed, as well as the benefits and problems that arose during the research. The second

section lays out several components of the research that, only in retrospect, did I realise were central organising principles.

### **THE STRUCTURED CASE APPROACH**

The presentation of research generally is much neater than the jumbled reality that went into it. This research is no different. The linearity of the end product does not reflect the inherently cyclical process. The resultant neat and structured lines of this thesis only completely crystallised when I began to write it. For example, while I had done a lot of theoretical work before engaging in research and had the benefit of prior fieldwork with the IADB study, the organisational clarity of the fifteen e-service and trust hypotheses did not emerge until the Chapter 4 was written.

Part of the reason for this flexibility and cyclical process was the relatively underspecified nature of the theory going into the research. It was necessary because the state of the theory I was dealing with originally was extensive and yet incomplete. The connection between trustworthiness and trust was constructed through a synthesis of theories from several different disciplines as well as from some direct experience at the research site. Without engagement with the particulars of the cases, it would have been impossible to determine which hypotheses are relevant to the e-services. Had the e-services been different (for example an e-participation system), surely the resultant focus of the theory would have been different. However, even after limiting the number of hypotheses some proved irrelevant to the study. Furthermore, the case-specific hypotheses were not established until a complete analysis was done on each e-service, after the empirical data was collected. Ideally, it would have been completed beforehand and the hypotheses would have been generated. That was a logistical impossibility. Given the time constraints, much of the research on trustworthiness was conducted simultaneously with the research on trust. Finally, this flexibility was necessary; given the newness of the theory I wanted to be open to new possibilities. One of the luxuries of a case study is the ability to explore new areas of interest that emerge, and I firmly believe that had I more firmly established the theory before engaging in research – as it is now in Chapters 3 & 4 – it would have changed again before writing the theory chapter.

Maintaining this flexibility and openness has its downsides. The major one is that the link between interview questions and theory is not as strong in all areas as it could be. Some areas were covered well (transparency and efficiency), some areas were covered that ended up being unimportant (security issues, role of the telecentres), and some areas were not covered as well as I would have liked (benevolence, stakeholder accountability). Not having completely established the case specific trustworthiness outcomes before conducting the trust component of the study meant that it was impossible to follow up these hypotheses in a more systematic manner, allocating resources appropriately.

These problems were mitigated by the overall approach to the research. The key for this research was the theoretically established general framework with abstract categories of potential interaction. Each theorised area of interaction was specified in part by some general questions but was also left open to exploration during the course of the interviews. For example, the prior theoretical work allowed me to focus on trustworthiness cues and how they may reflect on competence and motivation. Within each of these categories, there were a wide range of possibilities, such as efficiency, effectiveness, performance, transparency, and others. In this way the construction of the theory in chapters 3, 4, 6, & 7 followed the same path as the research itself. The base framework was established with general trust theory that helped to provide the boundaries of trust and to figure out what would be the interesting areas of the world to explore. The sub-categories were established with the subsequent theory of trust and government, and so forth.

As mentioned in a footnote in Chapter 1, the case study approach used here is very similar to the structured case method proposed by Carroll and Swatman (2000). I might have benefited from finding this article before I was already done with my research.

#### **ON WHAT I LEARNED ABOUT THE RESEARCH APPROACH**

Here I will comment on what I perceive to be the crucial components of the research, and what I learned about them during the research process. There are other aspects that were

also central to the research approach such as the use of causal middle-range theory and a focus on ontology that will not be belaboured here. Instead, I discuss several other features that I did not see as central in the beginning of the research (or did not realise that I was doing) but in retrospect were defining.

**Analytical approach** – The analytical approach to social science research taken here was essential in the task of complexity reduction. It was easy to see how researchers can get overwhelmed in the field with the complexities of even simple social situations. The benefits were truly realised during the analysis phase, as it provided a built-in starting structure upon which more complex analyses might be conducted. The obvious risk here is miscategorisation – that is, establishing a conceptual framework that has no referent in reality. For this reason tight coupling between theory and empirical data is important, so that theory can be tested and refined. This makes middle-range causal theories essential to research. This cyclical approach is an alternative to the inductive, theory generating, “coding” analyses approaches often featured in qualitative case studies (Miles and Huberman 1994). Of course, both styles of analysis are equally legitimate depending upon the state of theory development and goals of research. However, it seems to me that there is no substitute for the importance of causal theory as the basis for analysing the world.

**Abstract versus concrete** – At some point during my studies I discovered what I see to be the solution to the common debates between competing dichotomies (e.g. deterministic versus non-deterministic, analytical versus description, universal versus contextual, etc). One way to transcend these dichotomies is the differentiation between abstract and concrete. Fundamentally, this is the difference between having an abstract notion of something and the variety of manifestations in reality (e.g. generative mechanisms versus concrete instances causality, a theory of structure versus a particular social relationship). The abstract notion provides the area of commonality that makes comparison possible. Consequently, the dichotomies are seen as just two ends of a common dimension, rather than mutually exclusive. It was this understanding that

allowed for the development of a research orienting set of theory that was not overly constraining and allowed for flexibility according to research site.

**Ideal-typical theorising** – This is the type of theorising that allows for the differentiation between abstract and concrete theories. Ideal-typical theorising involves the analytical differentiation between the core (necessary) aspects of a social concept or theory and the contingent (contextual) features. This differentiation makes theoretical generalisation possible. It then becomes possible to create theory that connects the core components to contingent components. This is the source of applied generalisable knowledge.

**Relational social structure** – Perhaps it is my relative naivety with respect to social science research, but I cannot grasp why everyone does not accept a relational social structure. Not only does it intuitively make sense, but it brings significant analytical benefits. Perhaps the central benefit is the ability to integrate macro and micro theory, something that has been problematic in the social sciences in general, and the study of trust and government in particular. The theoretical framework used here coherently integrates both macro and micro level theories of trust and institutional trust (as well as self-interest and normative accounts of trust). Central to this is accepting the notion of partial causes so that different mechanisms can be co-active. Another important benefit is that a relational social structure promotes social science research that is inherently critical. It is not problematic to include relations that are inherently oppressive if that is part of the existing social structure. Finally, it provides the two categories (structure and agency) of social mechanisms that shape social behaviour and outcomes, *and* a focus on what connects them. Without that understanding, I would not have come to the notion of trustworthiness cues that was so pivotal to this research.

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My respect for the inherent difficulty of the social sciences has dramatically increased through this research process. At the end of the day, the approach adopted here was an attempt to provide me with some much needed order and direction in the face of a highly

complex subject matter and research question. The hope is that I was able to strike the right balance.

Thanks for reading!

-- Matthew L. Smith, 25/09/07

## **APPENDIX I – METHODOLOGY**

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### **METHODS AND ASSUMPTIONS**

There are four main methods of data collection used in this thesis: interviews, focus groups, surveys, and documents.

#### **Interviews and focus groups**

The main source of data is from semi-structured interviews and focus groups. The concern here is to describe the details of the interviews conducted as part of the supplementary research conducted by the author. Details of the World Bank and IADB questions can be found in the respective appendices. These questions drew from the working conceptual framework (see Table 59 for an example). Some flexibility was maintained during the interview process to allow for the exploration of new or emerging themes. Furthermore, depending upon responses, particular topics were explored more in-depth depending upon either the theory or the interests of the researcher. Almost all of the interviews were recorded and transcribed. For the few that were not recorded, extensive notes were taken and the interviews were written up afterwards. All of the interviews were conducted in Spanish.<sup>430</sup>

Focus groups were conducted out of necessity as a means to maximise the time/number of subjects interviewed ratio. Focus groups were conducted of e-service and ChileCompra users and were arranged by telecentre. The approach to the focus group was

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<sup>430</sup> All transcriptions was completed by the author, which consisted of a simultaneous translating the interviews into English.



similar to that used in individual interviews. The question form was used and questions would be directed to the group with an attempt to always get everyone's input on any particular question. Sometimes the focus groups would involve people who used either or both of the services. In these instances, the process would start with one of the e-services and then switch when a maximal number of topics were covered while allowing for sufficient time for a discussion of the second e-service.

### Example interview questions for e-tax system users

Do you have much experience with computers?

What are your experiences with the SII?

Do you trust the SII? Why?

What is the SII's reputation?

Do you believe that the SII is more *efficient* now with new technology? Why (not)?

... *transparent* ...?

... *attentive to citizens* ...?

Have you had any problems with the new service? Is it difficult? Understandable?

Do you think that the SII *is a competent organisation*? Why (not)?

... *considers the interests of the citizens* ... ?

... *has integrity and follows the law* ... ?

Would you say that generally you can trust in a majority of people or that you can not trust in the majority?

Do you believe that new technologies are essential for the development of Chile?

**Table 59** Example interview questions for the online income tax system users.

Several assumptions underlie the questions asked during these interviews:<sup>431</sup>

1. Citizens extract political information from direct information from the government (Bok 1997, Kumlin 2004, Soss 1999). From this information citizens

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<sup>431</sup> The influence of Gambetta and Hamill's (2005) study are strong here.

acquire an idea of the trustworthiness characteristics of the government institution with which they are interacting.

2. Citizens' assessments of trustworthiness is done through evaluating observable trustworthy cues (Gambetta and Hamill 2005) that come through direct and indirect (socio-tropic) sources (Kumlin 2004).
3. Full rationality (complete knowledge) is not presumed – so it is necessary to take on a street-level epistemology (an understanding of trust judgements from the perspective of the citizen) (Hardin 1993) including how and the extent to which irrational reasoning impacts assessments (Gambetta and Hamill 2005, p. 15).

There were two confounding issues that arose during research that provided a problem for data analysis. First, the set of questions altered through time. As the research evolved, certain theoretical issues did not seem applicable, while others asserted themselves. This flexibility of the questioning is part of the responsive and reflexive research cycle that consciously went back and forth between the theory and data. Second, it was not possible to ask all of those interviewed the exact same questions. Depending upon the availability of subjects, which were at times difficult to obtain, the interview time varied accordingly. Sometimes, for example, only the major questions could be asked without much follow-up. The result of these two factors is that the data set is not as complete as might be desired. This is where the importance of the other data sources comes into play. In particular, the survey data supply another source that provides a different perspective on the pervasiveness of particular perceptions.

## SURVEYS

The surveys were completed as part of the World Bank study. The scope of the questions covered a broad range of social impacts of the introduction of the e-government systems. While the questions were designed for a separate study, many questions were asked questions that were highly relevant for this thesis.

Another survey by the author was attempted. The focus of the survey was the connection between trust and citizens' value system. The intention was for an online survey to be

completed by e-service users who attended telecentres. Unfortunately, despite the author's best efforts, he could not get a significant number of respondents.

#### DOCUMENTS

For both cases there was also a plethora of documents available. This includes government documentation on the services, data from the service web-sites, surveys conducted by the DCCP (the public sector entity that manages ChileCompra) and a group contracted by Chilean tax authority on user opinions, research reports, a 2005 Cambridge PhD thesis (in part on the Chilean tax system), a 2004 masters thesis (on ChileCompra), newspaper articles, and government pamphlets. These data were essential in providing both background historical and contextual information as well as insight into the scope and impact of the e-services across Chilean society. An essential component of documentary evidence is the published statistics regarding citizen use of the systems. Underlying the importance of these data is the assumption that the use of a service indicates at least a base level of trust in the agency and the service.

#### DATA SUBJECTS

Obtaining access to interview subjects proved challenging. The selection of research subjects was both theoretically and pragmatically determined. Theoretically, the focus of the research was on users in lower socio-economic status, as well as small and micro businesses. The research was conducted, for the most part, in and around Temuco in the 9<sup>th</sup> region in Chile, as well as in the capital region, Santiago de Chile. The 9<sup>th</sup> region is the poorest region in Chile, and the rural towns around Temuco constitute the lower socio-economic demographic profile in Chile.

Telecentre access points were used as the main subject contact point. This access was facilitated by the Instituto de Informática Educativa, in the Universidad de la Frontera in Temuco who ran a programme coordinating Red Comunitario – a series of telecentres across the 9<sup>th</sup> region. The assumption was that users of the e-tax system and ChileCompra would use the telecentre to access these services.

Subjects were obtained by several means in the telecentres. The first approach was to wait in the telecentres until people were leaving and then attempt to convince them to be interviewed. While this was successful at times, it proved difficult, especially considering that a majority of the telecentre users were not e-tax or ChileCompra users. The second line of attack was to have the telecentre managers arrange interviews with people they knew who were users of the e-tax system or ChileCompra. This proved more successful (and efficient), resulting in more extensive interview periods. The final approach was a result of serendipity. As some of the research was conducted during tax time in Chile, the SII was sending employees to the telecentres to help citizens complete their taxes online. This provided an opportunity to a) talk to the SII functionary and b) find e-tax users. This particular group of e-tax users was in general not very experienced with the technology, and many were new to filing taxes.

## **DATA ANALYSIS**

A comparative case design generally implies two stages of data analysis: within-case and comparative. For each of these stages, a separate analysis was done on the two analytically distinct sections: E-service to trustworthiness, and from trustworthiness to trust. By separating out the trustworthiness and trust analyses it is possible to get a clearer look at the causal connections between e-services, their qualitative features and impacts, and to trace that to citizens' perceptions and interpretations of these services.<sup>432</sup>

Before getting into the details, a quick comment on the nature of the analysis is needed. As will become clear in Chapters 3 and 4, key to analysis is the analytical nature of the theorised relationship between e-government and trust. The result of theorisation is a series of related yet independent hypotheses with a distinct set of independent variables, and roughly the same dependent variable (trust). There is a tricky balance between the application of these hypotheses as analytically distinct mechanisms, and understanding their interrelatedness. Difficulties emerge as citizens' trust judgements weigh many factors across a whole range of variables that move well beyond the limited space of the

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<sup>432</sup> This is especially helpful to tease out when a citizen perception might be wrong or otherwise misinformed; a distinct possibility.

changes to e-services, such as the reputation of the agency, the trusting dispositions of the citizens, prior interaction with the agency, etc. The complete reduction of complexity is most certainly not the goal here. In fact, given that there is no baseline measurement and there are no tools employed to give some objective measure of trust judgements, there is no way to make clear – statistically significant, at least – statements about the hypotheses. Instead the goal is to try to trace the causal paths hypothesised for each different mechanism. This approach celebrates the complexity of the situation as these mechanisms interact with other contextual elements to bring about the final outcome. In this way it is possible to work through complexity analytically, rather than treating it as an irreducible heterogeneous network.

#### WITHIN-CASE ANALYSIS

Each of the two cases was analysed as an independent case following roughly the same analysis approach. The first stage of analysis was of e-service trustworthiness that asks the question: *how does the introduction of the e-service make the public sector entity more trustworthy?* This analysis resembles an evaluation where the evaluation criterion is an *a priori* established objective measure of trustworthiness. This objective measure is theoretically established in the conceptual framework and establishes dimensions of trustworthiness along which one might expect the introduction of the e-services to change the internal operation and outcomes of the administrations that operate them and offer the services. Each dimension is then scrutinised systematically using all available data that comment on changes to that dimension.

The second stage of within-case analysis is the trust analysis (from trustworthiness to trust). In this situation, the analysis is based upon variance between citizens asking: *what are the variations in individual perceptions and interpretations of the trustworthiness of the public sector entity and why do they vary?* The approach taken here was motivated in part by Gambetta & Hamill's (2005, pp. 18-19) ethnographic approach where they focused on taxi drivers accounts of the signs they use to decide whether to pick up a fare or not. It is important to note that this thesis *does not* try to answer *how much*, or *to what extent*. Like Gambetta & Hamill's study, the approach taken here does not allow proper

scientific testing of the hypotheses because there is no way to control and measure the relevant variables (Gambetta and Hamill 2005, p. 19).

For this analysis, each user constitutes one observation in a small-n controlled comparative study (George and Bennett 2005, Gerring 2007). This means that within each within-case analysis there are both individual and comparative (between individual) components. Each individual represents an example of how interaction with an e-service might influence their level of institutional trust. In other words, each individual represents one causal path that is a test of e-government and institutional trust theories that hypothesise how particular aspects of e-services will bring about changes in the trust levels of the citizens. The main technique used to trace each individual's path was the creation of individual user narratives combined with the more analytical technique of a selective focus on the established hypotheses (George and Bennett 2005). Tracing each individual's path involves trying to discern how different trustworthiness characteristics of an e-service (established in the first phase of analysis) (1) are perceived and interpreted by citizens and (2) how they interact with other contextual factors in ways that influence a citizen's trust judgement (see Table 60).

<b>The e-service user narratives</b>
Two main orienting questions are: <ul style="list-style-type: none"><li>A) What features of the technology and experience with the technology do citizens perceive and interpret as trustworthiness cues?</li><li>B) How do these cues interact with contextual (personal, cultural, and structural) mechanisms?</li></ul>
Question A involves further questions, such as: <ul style="list-style-type: none"><li>1) How genuine is a cue (Gambetta and Hamill 2005, p. 9)? – i.e., does it really reflect trustworthiness? Is it based on misconceptions or inaccurate judgements?</li></ul>
Question B involves further questions, such as: <ul style="list-style-type: none"><li>1) Who notices what features over others, and why?</li><li>2) What groups/types of people interpret trustworthy features differently? What features, and why?</li></ul>

**Table 60 The e-service user narratives framework. There were several questions and sub-questions that were used to structure the development of the individual user narratives.**

After establishing as best as possible the causal path and the interrelated variables for each citizen, the next step is comparative analysis between individuals. The goal of the comparative analysis is to compare variations and similarities in the independent variables and relate them to variations and similarities in the dependent variable. This comparison is aided by the inclusion of causal processes as it helps to avoid mistaken inferences (George and Bennett 2005, p. 254). For example, it helps to see if a variance in an independent variable between individuals relates to a difference in the outcomes (George and Bennett 2005, p. 254).

During the course of the trust data collection and analysis, a few important broader themes emerged that help to explain the logical structure of the trust analysis:

1. In citizens' responses to questions regarding their trust and interaction with the e-services, only a few salient features of the e-services stood out. Thus while it is conceivable that all of the trustworthy mechanisms detailed above may contribute a small part to citizens' trust judgments it appears as if only a few are highly relevant.
2. While only a few of the trustworthy mechanisms appear highly relevant, which factor was relevant appears highly dependent upon the characteristics of the individual.
3. These few mechanisms that are most salient in the perceptions of the individual are interrelated and thus defy a simplistic straightforward explanation. To understand the impact of one mechanism, it must be understood in relation to other contextual factors (such as characteristics of the individual) or other trustworthiness cues.

As a result of these three factors, combined with the goal of the analysis, the analysis is broken up into salient and marginally or non-salient cues. Salient cues are those that were readily and often perceived by the users and were subsequently interpreted in a manner that impacted on trust. The marginally or non-salient trustworthiness cues were vary rarely, if at all, perceived and thus appeared to have little impact. Each cue is discussed separately, and then in relation to other cues, in an attempt to simply the explanation while respecting the inherent complexities (Law and Mol 2002).

#### CROSS-CASE COMPARATIVE ANALYSIS

The comparative analysis starts by looking at the sixteen theories established in the theory chapters (3 & 4). As appears in the within-case analyses, several theories are not tested or refined in either case, some are tested or refined in only one case, and the rest were evident in both cases. The first two types of theory can be considered in terms of why (or why not) they were evident in either case, and what we can learn from that. The later type of theory can be considered comparatively. Finally, the analysis looks to see if any more abstract causal trends can be extracted from a comparison of the similarities and variations across both e-services.

#### OTHER TECHNIQUES

Several techniques were employed (along with a comparative analysis) with the goal of improving the quality of the theory testing and refinement (validity) and the theory generation from this study. Two fairly standard techniques were employed: a) drawing extensively on the extant literature to compare and contrast the findings of this study (Eisenhardt 1989) and b) triangulation using multiple data sources. Other benefits flow from the use of causal mechanisms and causal process tracing. The use of causal process tracing provides a way of developing theoretical explanation for empirical relationships (Gerring 2007) and the use of retroductive inference both help to improve the internal and external validity of the study (Tsoukas 1989).<sup>433</sup> Also, process tracing also opens up possibilities for the inductive discovery of new variables (George and Bennett 2005, p. 254).

#### **THE RESEARCH PATH: WHEN, WHERE, AND HOW**

The research can be thought of as broken up into four distinct stages, of which the author was centrally responsible for stages 2-4.

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<sup>433</sup> Taking the black-box explanation one step further, if the research can move from the theoretical explanation of the relationship to an explanation of the underlying structures and mechanisms that make that explanation hold (Tsoukas 1989).



**Stage 1:** (October - November 2004) Theory-development and IADB study of the links between e-government and trustworthiness. The focus of this stage was on the institutional changes resulting from the implementation of the e-services. In-depth interviews were conducted of prominent stakeholders of the two e-services (top government officials, administrators of the tax agencies, administrators in the government agency running ChileCompra, NGO activists, international development aid organizations, actors in government agencies responsible for policies promoting the use of ICT in government and across Chile, and officials in various levels of government administration such as in the Chilean Chamber of Commerce) The end result is modified theory with respect to the potential links between e-government and trust. The author of this study participated in all stages of this research and write-up. The rest of the stages constitute a logical continuation of the research in this stage that laid the empirical foundation of the impacts of e-services on institutional trustworthiness.

**Stage 2:** (October – December 2005) Extending the IADB study and deepening the theory development, twelve interviews were conducted with people who work closely with users of the e-services. The goal of this cycle was to both refine theory and reduce the scope of the inquiry for the following cycle. This stage was entirely designed and conducted by the author.

**Stage 3:** (March – May 2006) This research stage consist of interviews and focus groups with users of the systems. If and when some interesting theoretical issues came up they would be pursued in questioning and in subsequent interviews if theoretically expedient. This stage also included a series of interviews with SII and ChileCompra employees, public sector users of ChileCompra, and more telecentre workers. Finally, this stage included a series of eight surveys for the World Bank asked of the following group: SII managers, SII employees, e-tax users, DCCP managers, DCCP users, ChileCompra public sector users, ChileCompra business users, and a wider-society survey asking general questions. The World Bank study was conducted by the author with the help of one other

consultant, Carolina Seward. For details of the WB methodology, see Appendix II. The other interviews were conducted and transcribed entirely by the author. A summary of the interviews conducted in stages 2 & 3 can be seen below (see Table 61).

**Stage 4:** (June 2006 – Sept. 2007) In this final stage the goal was to close the research loop. This stage contained the concurrent activities of analysis and writing of the thesis. During this stage, the overall focus on theory shifted and some new theory was brought in (and sometimes discarded) when necessary to help understand and explain the data. The most prominent examples of these changes in focus, or inclusion of new theory are a) an increased consideration of power asymmetry and its impacts on trust, and b) increased focus on individual level psychological theories, such as cognitive inertia, and the importance of value systems. This stage was completed entirely by the author.

### Total interviews/focus groups in research stage 2 & 3 by position

Position	# (Interviews/FGs)	# subjects
SII e-tax user	10 (8/2)	14
SII e-tax and CC private sector user	8 (6/2)	11
CC private sector user	3 (3/0)	3
CC public sector user	4 (3/1)	5
SII Employees (Regional Level)	6 (6/0)	6
SII Employees (National Level)	2 (0/2)	10
DCCP Employees	4 (3/1)	9
Biblioredes TC	1 (1/0)	1
IIE Red Comunitaria Leader	2 (2/0)	1
Red Comunitaria TC employees	14 (14/0)	14
Non-user citizens	2 (2/0)	2
<b>Total:</b>	<b>56 (48/8)</b>	<b>76</b>

**Table 61** Total interviews conducted by position during research cycles 2 & 3.

#### ON THE RESEARCH METHODOLOGY

This section briefly continues some of the positives and negatives of the research methodology, as well as what the author might have done differently in retrospect.

#### Advantages, disadvantages, and limitations

Given the central role of theory in this research, it is not surprising that resultant methodology brings with it advantages for theory building (testing, refining, and generation):

1. The interdisciplinary approach allows for the benefit of drawing from other areas of research, rather than re-inventing the wheel,
2. The use of a series of hypotheses has at least two benefits: (1) it aids in the search for interaction effects, and (2) it forces the consideration of alternative

explanations helping to overcome the tendency to not consider alternative explanations and only search for confirming data. While technically the theories put forth were not necessarily competing (they could be co-active mechanisms) in reality, they were all in a very real sense “competing” for the attention of the user.

3. Tracing the complete causal chain affords significant methodological benefits including improving the internal validity of the findings (Tsoukas 1989),
4. The tight coupling of theory to reality (from abstract to concrete) allows for a clear feedback route from empirical findings to theory.
5. A comparative study also brings important analytical benefits. Comparative studies have several benefits including forcing researchers to break with simplistic frames and move beyond simplistic impressions improving the possibility of capturing novel findings, and aiding in the confirmation, extension, and sharpening of theory (Eisenhardt 1989, pp. 533, 541).

This theory-centric research approach does generate some difficulties, however. The foremost problem is that with such an approach a “scholarly knowledge of the subject is crucial” (Sayer 2000, p. 23). This often implies a large commitment ex-ante, including forays into disciplines where the researcher is untrained. Furthermore, unless the researcher can appropriately constrain the scope of the theory, data must be collected to comment on a wide range of theory, increasing the demand for data, and potentially diluting the findings, making the potential to achieve data saturation. This was especially problematic here as conducting two case studies further diluted the amount of research possible on each particular e-service. The hope is that the analytical benefits from a comparative study outweigh the lost depth obtained by increased interview possibilities on one single case.

A major limitation of the use of these methods is that this thesis is not a longitudinal study. This means that it was not possible to do trust measurements before and after the implementation of the services. However, the use of interviews, new and old surveys, and usage data, shed some light on the changes that have occurred over time on two levels (structural, individual) as well as the dynamics of the point of interaction.

A further limitation was that not all interviews allowed for the in-depth interviews or continued interaction with the subject that would be ideal for understanding a person's interpretive scheme (Boland Jr. 1985). However, this study has the advantage of using many highly concrete hypotheses so that the questions that were asked are still relevant to comment on that particular theory.

**With 20/20 hindsight, would I change how I did the research?**

There are (at least three) things that I would have altered about the research approach in retrospect:

1. This research would have been improved by more interviews, and in particular of ChileCompra users, to achieve a higher level of saturation.
2. The analysis might have benefited with an analytical approach such as qualitative comparative analysis which bring advantages for small and intermediate-N research designs (Ragin Forthcoming, Rihoux 2006). That method might have helped tighten the data-theory and to make the analysis slightly more rigorous.
3. The surveys proved to be quite interesting and useful pieces of research. It might have been helpful to introduce a survey-like question to “measure” competence and motivation perceptions of several different government institutions that could have been asked of each interviewee. This would have provided a potential relative measure that would enhance the within-case inter-subject comparative analysis.

## **APPENDIX II – WORLD BANK STUDY METHODOLOGY**

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The World Bank study used in this research consists of two case studies (the e-tax system and ChileCompra) implemented as part of a larger project attempting to develop a methodology to study the social implications of e-government projects. The fundamentals of the WB project are relatively simple. The lead researchers developed an assessment framework that consists of a series of dimensions of social outcomes that were theorised to impact on the different major stakeholders from an e-government project (see Table 62). Then they proceeded to develop a set of indicators and survey or interview questions to assess the indicators, which are subsequently adapted according to the particulars of the case under study. The framework also called for data collection of other objective project information such as the financial costs of the e-government project. The World Bank team did this for eight cases in India. For an example of the framework with dimensions, indicators, and questions, see Table 63 below.

<b>Stakeholders</b>	<b>Key Dimension of Impact</b>
Client	<ul style="list-style-type: none"> <li>• Economic (Direct &amp; Indirect)</li> <li>• Governance (Corruption, Accountability, Transparency, Participation)</li> <li>• Quality of Service (Decency, Fairness, Convenience, etc.)</li> </ul>
Agency (Including Partners in implementation)	<ul style="list-style-type: none"> <li>• Economic (Direct &amp; Indirect)</li> <li>• Governance (Corruption, Accountability, Transparency, Participation)</li> <li>• Performance on Key Non-economic Objectives</li> <li>• Process Improvements</li> </ul>
Society Other Government Departments Government as a whole Civil Society	<ul style="list-style-type: none"> <li>• Economic (Direct &amp; Indirect)</li> <li>• Governance (Corruption, Accountability, Transparency, Participation, Responsiveness)</li> <li>• Development Goals</li> </ul>

**Table 62 The World Bank assessment framework linking stakeholders to key dimensions of impact from an e-government implementation.**

Impacts on Clients			
	Dimension	Indicator	Questions
1	Economic: Direct & Indirect	Direct cost to user: travel costs, travel time, elapsed time for service delivery, cost of repeated visits	Number of trips made for the service
			Average travel cost of making each trip
			...
		Extent of reduction of cost of paying bribes	Payment of bribe to government functionaries/agents: Yes/No
			Total amount paid in bribes to Government functionaries/agents
			...
		Rate of errors and time for recovery	Any errors in the documents which required correction: Yes/No
			Number of trips required for correction to be done
			...
2	Governance: Corruption, Accountability, Transparency, Participation	Levels of corruption	Measured on a scale
		Need for engaging intermediaries	Yes/No
		...	...
...	...	...	...

**Table 63** A partial example of the “Impacts on Clients” dimension and indicator table. Within each dimension are a series of indicators. Within each indicator are a series of questions. For each e-service, the indicators and appropriate questions must be altered to fit the context and attributes of the service.

The two case studies here followed roughly the same approach of adapting an applying the assessment framework. The research on the WB cases was directed and implemented by myself, with the aide of my lovely wife, Carolina. We also employed two staff from the IIE for translation checks and testing of the surveys.

## **INTERVIEW METHODOLOGY**

The approach to interviews was straightforward (details of the interviews and focus groups can be found in Appendix IV). Prior to the interviews, a set of questions were developed according to each of the dimensions. For each interview, the goal was to cover the different indicators in each dimension of impact that was not well covered by the survey work. In other words, the focus was on the more qualitative indicators as well as trying to uncover information explaining links between the implementation and particular outcomes. The questions were asked in a semi-structured manner allowing for open-ended responses. The same method was used in both the interviews and focus groups, but with the focus groups an effort was made to touch on each participant, and extract different perspectives.

The interviewees and focus groups were selected to maximise the representation of the different stakeholders. For example, in the SII Managers focus group interview, there was a manager from almost all of the major departments in the SII.

Interviews were conducted by me in Spanish, with Carolina taking notes. All interviews were recorded and then translated back into English by either Carolina or myself. In total, there were thirteen interview sessions, with nine one-on-one interviews, four focus groups, and a total of twenty-seven subjects overall. The average length of an interview was fifty-seven minutes (ranging from thirty-five to eighty-one).

## **SURVEY METHODOLOGY**

A total of six surveys were conducted with the following stakeholders: SII managers, SII employees, e-tax users, ChileCompra public sector users, ChileCompra private sector users, and the society at large (wider society). The development and implementation of the surveys went through four stages: (1) development, (2) translation, (3) testing and refinement, and (4) distribution.

### **1. Development**



In April, 2006, I received the assessment framework and the sample surveys applied in India. For each of the different stakeholder groups and each project we then went through the corresponding indicators and developed similar questions to the ones in the other questionnaires (or the same when possible) as well as created new questions depending upon the applicability of the indicators to the context of the e-government project being studied. The main goal was to stay as true to the surveys we had received from India as well as following the set of indicators given to us.

## **2. Survey Translation**

The questions we used had to be translated from English into Spanish. Mabel Verdi of the IIE helped us to translate several of the surveys. Based upon her translations we were able to translate the rest of the surveys. We then proceeded to test these translations with a variety of native Spanish speakers who also had some experience with the system, and all of whom were professionals who worked at the IIE. This was done by sitting down side by side with them as they went through the surveys and eliciting their understanding of the questions and adjusting them accordingly.

## **Survey Testing and Refinement**

The surveys were then tested. The majority of the testing consisted of 1) a review by staff at the IIE and also at the SII and ChileCompra and 2) conducting pilot tests. Staying consistent with the approach in India, there was no systematic testing of concept constructs. Rather, the approach was to ensure that those who took the surveys understood the questions as they were originally intended.

At this stage we also began to place the surveys online. The online survey service SurveyMonkey was used. Upon completion, the final versions of each online survey were tested several times by helpful members of the IIE. Revisions were then made based upon their comments on language, structure, and content.

Changes were made such as:

- The surveys were too long, so repetitive or redundant questions were cut.

- The phrasing of several questions was changed. This is because several of the original concepts proved problematic, such as ‘accountability’, ‘transparency’, ‘digital divide’.
- Removed potentially sensitive identifying data questions such as for the RUT, the Chilean Social Security number.

By the end of April we sent the surveys to contacts at each institution, the SII and the DCCP, for review and to add potential questions that might be of use to the institution. We made adjustments according to their comments. This process was repeated for a second round of revisions before we deemed the surveys ready.

We also piloted the wider society survey in the small town of Traiguén. The end result was then translated back to English and sent to project head for approval. On the eleventh of May we pilot tested the wider society survey twice more on locals in Temuco with some computer experience (a secretary and an apartment manager) and it appeared ready to go. However, a few days later we tested it again and found that the subject had a hard time understanding the survey. At this point it was too late to turn back.

We also decided at around this point that the SII taxpayer surveys must be done by hand. Following the more user friendly template developed for the wider society survey, we transferred the SII citizen survey to a paper format. This was also reviewed by people at the IIE.

#### **4. Survey Distribution**

The distribution was different for the different surveys:

- **Wider Society Survey**– Conducted by *hand*. They were conducted in three types of locations: Santiago (metropolis), Temuco (medium-sized city), and small towns (Nueva Imperial, Traiguén, and Lautaro). There were several people that helped in conducting the survey. Note that the helpers had at least a university degree, fluent in Spanish, and were given the instructions to try to reach a diverse cross-section of the population.

- **Santiago:** Twenty-six surveys were conducted by me, Carolina, and a Chilean friend at the bus and train stations as well as on the street in a really nice part of town in Santiago de Chile, the capital of Chile. Three of those were problematic (had to leave quickly, did not seem to understand e-government, and uncomfortable). Another four were filled out by a friend, a friend's relative, and two friends of a friend.
- **Temuco:** Twenty-three were completed by a Masters student at the IIE, two were completed by a relative of a volunteer at UTPC a Chilean NGO, and one was completed by the person in charge of the grounds keeping at our residence.
- **Small Towns:**
  - **Traiguén** (Eleven): Twelve surveys were distributed to the person in charge of the telecentres and eleven were completed
  - **Nueva Imperial** (Fourteen): Ten surveys given to the person in charge of the local telecentre and eight were completed. Also in Nueva Imperial, six were conducted by hand by me and Carolina, two at a women's textile cooperative and the rest in a bus station.
  - **Lautaro** (Fifteen): A volunteer from UTPC conducted fifteen in this small town.
- **SII Managers and Workers** – The SII conducted the survey using internally developed online survey software. This was necessary due to internal rules that no SII employee could navigate to a web page outside of the SII domain.
- **SII citizen user surveys** were conducted *by hand* by Viktor Aguila an Ecuadorian Masters student at the IIE. A total of fifty-five surveys were conducted in the cities of Temuco and Pucon (a tourist centre).
- **ChileCompra User surveys (public sector and businesses)** as well as **SII business** – were completed *online*. For these we received mailing lists from the DCCP. 7433 emails were sent out to registered businesses (326 responses), 9538 to public sector workers (654 responses), and 6,879 emails with the SII business survey (322 responses) to CC registered businesses. Public sector 6.8% response rate, CC business 4.3% response rate, SII business 4.7% response rate.

## **Some Methodological Issues**

There were a series of methodological problems that occurred during the research:

- Often wording, especially in the Wider Society Survey with people who have lower education or no experience with computer had a hard time with the terminology. Example problematic words were transparency, e-governance, digital-divide, and accountability (which did not translate directly in Spanish).
- For many questions we changed the set of possible responses from a range of (1=Ok - 5=Great) to (1=Very Bad - 3=No change - 5=Very Good). This approach includes both positive and negative possibilities that were excluded in the Indian versions of the surveys.
- The DCCP was not targeted with a survey. Rather, employees and managers participated in a focus group and interviews.
- The online response rate was low. This low response rate makes the survey data suspect. Consequently, it must be considered as a secondary and tenuous data point to support that semi-structured interview data. One problem obtaining survey data responses was caused by sending surveys from a non-WB address made people suspicious. The following set of surveys (of CC public sector users) included a WB email address and the response rate was 2% higher.
- Survey Monkey was not fully compatible for Spanish. Some of the pop-up menus if people did not complete a question or something came up in English and they could not be changed.

**Example World Bank survey**

**SURVEY FOR CITIZENS WHO USE  
THE ONLINE INCOME TAX SERVICE**

The Instituto de Informática Educativa from the Universidad de la Frontera (UFRO) is conducting a study on the impact of the online tax system on behalf of the World Bank. With the cooperation of the Servicios de Impuestos Internos (SII) we are collecting the most useful and up to date information about the electronic services offered by the Chilean government. Our objective is to improve the efficiency and effectiveness of these services for citizens. Your participation in completing this survey helps us to achieve this objective.

None of the responses that you choose will compromise your integrity.

Thank you very much!!!

**PART 1: IDENTIFICATION DETAILS**

1. Age	<input type="text"/>	
2. Gender	<input type="text"/>	<i>Male=1, Female=2</i>
3. Educational Attainment	<i>Elementary=1, Secondary School Diploma=2, Degree=3, Post Graduate (MA)=4, Professional Degree=5, MPhil/PhD=6, Others=7</i>	
4. Indicate where you live	<i>City=1, Town/Village=2, Rural Area=3</i>	
5. Occupation	<input type="text"/>	

**PART 2: AWARENESS ABOUT SERVICE**

6. Have you ever heard of the online income tax system?	<input type="text"/>	<i>Si=1 No=2, Skip to 9</i>
7. How long have you been aware of the online income tax service?	<input type="text"/>	<i>0-1 month=1, 1-4 months=2, 4-8 months=3, 8-12 months=4, 12-24 months=5, more than 24 months=6</i>
8. How did you come to know about the online income tax service?	<input type="text"/>	<i>Newspaper=1, Television=2, Interaction with government employees=3 Telecentres=4, Colleagues at office=5, Others=6</i>

**PART 3: DETAILS OF SERVICES USED**

9. Please give details of the services that you have used from the online income tax service:

No	Type of Service	Have you used of the service?	When did you last used the service?
		<i>Yes=1 No=2</i>	<i>Specify Month and Year</i>
1	Impuestos Mensuales		
2	Factura Electrónica		
3	Declaraciones Juradas y Nominas		
4	Atención de Denuncias y Condonaciones		
5	Cartola Tributaria		
6	Material de apoyo asistencia tributaria		
7	Registro de Contribuyentes		
8	Boleta de Honorarios Electrónica		
9	Bienes Raíces		
10	Situación Tributaria		
11	Verificación de documentos		
12	¿Algún Otro? ( <i>Especifique</i> )		

10. Have you ever used the online income tax service?

*Yes=1, skip question 10  
No=2, **end survey after 11.***

11. Why not?

*I do not pay income taxes=1  
I do not know how to use a computer=2  
Too complicated=3  
No access to computers=4  
Other=5, please write...*

**PART 4: INTERACTION WITH THE ONLINE INCOME TAX SERVICE**

12. How do you access the online income tax service?

*Home = 1, Place of business = 2, Telecentre = 3,  
Cybercafé=4, Other = 5*

13. Do you have broadband access?

*Yes=1  
No=2*

14. Is the webpage customer friendly?

*Friendly=1, Somewhat Friendly=2, Neutral=3,  
Somewhat unfriendly=4, Unfriendly=5, No Opinion=8*

15. Is it convenient to complete taxes online?

*Very convenient=1, Somewhat convenient=2, neither convenient nor inconvenient=3, Somewhat inconvenient=4, Very inconvenient=5, No opinion=8*

- |  |  |   |
|--|--|---|
| 16. If you have used the help desk, how did you find the customer service? |  | <i>Very good (customer service)=1, Somewhat good=2, Neutral=3, Somewhat bad=4, Very bad=5, No opinion=8</i> |
| 17. Did they respond to help requests in a timely manner?                  |  | Always=1, Often=4, Sometimes=3, Rarely=4, Never=5, No opinion=8   |

**PART 5: COSTS OF USING ONLINE INCOME TAX SERVICE**

Please provide the following details about your use of the online income tax service:

- |  |  |   |
|--|--|---|
| 18. Average time spent using the Internet in order to complete taxes   |  | <i>0-10 minutes=1, 10-30 minutes=2<br/>30-60 minutes=3, 1-4 hours=4<br/>4-24 hours=5, 1-7 days=6, more than 7 days=7</i>        |
| 19. In comparison to the previous tax system, have your costs increased/reduced?   |  | <i>Significantly reduced=1, Somewhat reduced=2, no changes=3, Somewhat increased=4, Significantly increased=5, No opinion=8</i> |
| 20. In comparison to the previous tax system, has there been any change in the total work time needed to complete taxes? |  | <i>Significantly reduced=1, Somewhat reduced=2, no changes=3, Somewhat increased=4, Significantly increased=5, No opinion=8</i> |
| 21. Have there been any errors in the tax forms that required correction?  |  | <i>Yes=1,<br/>No=2, <b>go to Q.23</b></i>   |
| 22. How long did it take to get the correction fixed?  |  | <i>0 – 1 day=1, 1-3 days=2, 3-7 days=3, 1-2 weeks=4, 2-4 weeks=5, 1-3 months=6, more than 3 months=7</i>                        |
| 23. Have you ever had a problem to resolve with the SII?   |  | <i>Yes=1, No=2, <b>next section</b>, Did not know it was a possibility=3, <b>next section</b></i>                               |
| 24. Are you satisfied with the process undertaken to resolve the problem?  |  | <i>Yes=1, No=2, No opinion=8</i>  |

**PART 6: OVERALL SATISFACTION**

25. How much do you agree with the following statements?

- |  |  |  |
|--|--|--|
| The rules and procedures of the online income tax service are clearly stated |  | <i>Strongly agree=1, somewhat agree=2, Neutral=3, somewhat disagree=4, strongly disagree=5, No Opinion=8</i> |
| The online income tax service saves work time compared to before.            |  | <i>Strongly agree=1, somewhat agree=2, Neutral=3, somewhat disagree=4, strongly disagree=5, No Opinion=8</i> |
| Decision making at the SII is transparent to citizens.                       |  | <i>Strongly agree=1, somewhat agree=2, Neutral=3, somewhat disagree=4, strongly disagree=5, No Opinion=8</i> |

Do you think the electronic administration of tax eliminates corruption?

--

*Strongly agree=1, somewhat agree=2, Neutral=3, somewhat disagree=4, strongly disagree=5, No Opinion=8*

Data entered into the online income tax service is secure and confidential

--

*Strongly agree=1, somewhat agree=2, Neutral=3, somewhat disagree=4, strongly disagree=5, No Opinion=8*

The SII takes into account the opinions of citizens when developing its rules and standards/regulations.

--

*Strongly agree=1, somewhat agree=2, Neutral=3, somewhat disagree=4, strongly disagree=5, No Opinion=8*

26. Please mark the problems, if any, that you have encountered with the online income tax service.

1. Forgot password		6. Time consuming	
2. Portal (website) downtime (not accessible)		7. Slow connection	
3. Complication in Procedures		8. Inaccuracy of completed forms	
4. Internet not easily accessible		9. Other? (Specify)	
5. Complicated terminology			

27. Has your trust in the SII improved/worsened after using this application (the online tax system)?

--

*Significantly improved=1, somewhat improved=2, no change=3, somewhat worsened=4, significantly worsened, No Opinion=8*

28. Do you believe now (after working with the online income tax service) that Information Technology can be used to improve the management of the public sector?

--

*Yes=1  
No=2  
No Opinion=8*

29. Has your image of government improved/worsened after using this application (the online tax system)?

--

*Significantly improved=1, somewhat improved=2, no change=3, somewhat worsened=4, significantly worsened, No Opinion=8*



## APPENDIX III – IADB STUDY METHODOLOGY

---

There is no need to go into extensive detail of the methodology employed for the IADB study, as it has been described elsewhere (Avgerou *et al.* 2005, Avgerou *et al.* 2006). The basics are as follows. The goal of the research was to develop a methodology for assessing future IADB e-government projects in terms of their trust-in-government building potential. Soon after the research began logistical constraints dictated that the focus of the research would be restricted to the relationship between e-government and institutional trustworthiness. The empirical research involved four e-services, two in Chile and two in Brazil. In Chile, the e-services were ChileCompra and the e-tax system. In Brazil, the e-services were a public sector procurement system and an e-voting system. In this thesis, only the Chilean interviews and experience were used. The total amount of Chilean interviews, the positions of the interviewee, and the interview times are all detailed in Appendix IV.

There is a bit of information that is helpful to understanding the project that was not included in the published pieces. The IADB study consisted entirely of sem-structured interviews conducted by various members of the research team. When going out to the field, a research framework was developed to maintain consistency across researchers and research sites. The following is a copy (with only minor modifications) of the framework developed and issued to the researcher team:

“For each country the fieldwork will be directly towards encompassing the following:

- a. A study of the socio-political conditions of the country. Particular emphasis will be given to understanding the public administration context, its historical development, recent reform efforts, etc.
- b. Selection of two (in each country) domains of ICT use, i.e. e-government application, with potential implications on trust. In Chile the chosen domains are online tax and electronic invoicing; in Brazil online tax and e-voting.

- c. For each of these domains the research team will trace the ‘story’ of the ICT application development, the accompanying organizational reform, and the consequent changes in administrative procedures, services to citizens, and/or communication with other agencies. Specifically, for each e-government application we will ask for the following data:
- How did the development of the application start? (e.g. as an initiative of the management of a government department, as an externally funded innovation project, as part of the IS plan suggested by the IT department, etc);
  - Who was the main sponsor? (e.g. a politician, an international agency, a visionary senior administrator);
  - Was this particular innovation initiative linked with a wider political/administrative reform effort? if yes, we’ll trace its origin and unfolding;
  - What were the declared aims/objectives of the e-government project? (as stated in official documents and as felt by those involved in its implementation); what were, more generally, the expectations for changes/improvements associated with the e-government project?
  - Were there any dissenting voices, and concerns that the project was inappropriate, would not work, etc?
  - How smoothly did the project unfold?
- d. In particular, data collection will focus on identifying the features of trustworthy government contact that the system aimed at introducing, or in some ways promised or was hoped to introduce (i.e. intended or expected improvements of government trustworthiness), for example transparency, simplification of procedure, formalization.
- e. Assess the extent to which the e-government innovation had an impact on trustworthiness. We’ll try to trace officially intended, informally expected, and unintended consequences regarding trustworthiness. To that end our study will:
- Identify the main categories of stakeholders, for example political authorities, civil servants, technology experts, management or public admin consultants, foreign donors, categories of citizens affected by the innovation;

- Interview representatives of each stakeholder category and record their views, concerns, problems, etc. regarding the issue of trustworthiness; in other words, examine whether the interventions intended to increase trustworthiness have resulted in increases of trust, or have had other consequences;
- Compile a list of issues of trustworthiness measures and their impact on trust on the basis of the information elicited from the stakeholders and our research teams theoretical sensitization on e-government and trust;
- Collect further evidence to substantiate the issues identified above, e.g. if it is suggested that the online tax produces documentation for citizens makes them feel they have a more accurate and clear information on what tax they owe and how they should pay it, we will collect relevant existing evidence; if it is suggested that citizens feel that even with the online tax system the procedures of dealing with the revenue authorities still have to rely on personal networks to overcome bureaucratic obstacles, we will conduct a small survey to substantiate the claim.”

## APPENDIX IV – INTERVIEWS

---

This appendix lists the interviews done during all stages of the research. Stage one is the IADB study conducted in 2004. In this study, there were a total of twenty-eight interviews (with a total of thirty-seven subjects) in Chile (see Table 64). Stage two consists of interviews conducted in Oct-Dec. 2005 that were of telecenter employees. Stage three contains both the WB study and the rest of the PhD interviews. An overview of interviews in stages two and three can be seen in Table 65. This appendix provides tables that detail the number of interviews, who was interviewed, and for how long, for all the different stages of research. The final section contains the codes used in the body of the thesis to reference the interviews.

### INTERVIEW TABLES

#### Stage 1 (2004) : Total IADB Interviews Conducted in Chile

Position	# Interviews	# subjects
DCCP	7	7
SII	8	9
IADB	1	1
Other government ministries	6	8
NGO	2	3
Private industry	1	1
Municipality (CC user)	1	1
University/Other	2	5
<b>Total:</b>	<b>28</b>	<b>37</b>

**Table 64** Total interviews conducted in Chile during the 2004 IADB research project.

**Stage 2 & 3 (Sept 2005-June 2006): Total interviews/focus groups**

<b>Position</b>	<b># (Interviews/FGs)</b>	<b># subjects</b>
SII e-tax user	10 (8/2)	14
SII e-tax and CC private sector user	8 (6/2)	11
CC private sector user	2 (2/0)	2
CC public sector user	5 (4/1)	6
SII Employees (Regional Level)	6 (6/0)	6
SII Employees (National Level)	2 (0/2)	10
DCCP Employees	4 (3/1)	9
Biblioredes TC	1 (1/0)	1
IIE Red Comunitaria Leader	2 (2/0)	1
Red Comunitaria TC employees	14 (14/0)	14
Non-user citizens	2 (2/0)	2
<b>Total:</b>	<b>56 (48/8)</b>	<b>76</b>

**Table 65 Total interviews conducted by position during research cycles 2 & 3.****Stage 2 (Sept. 2005-Dec. 2005): Telecentre employee interviews**

<b>Position</b>	<b>Interviews</b>	<b># interviewees</b>
Red Comunitaria TC employees	10 (10/0)	10
Biblioredes TC	1 (1/0)	1
IIE Red Comunitaria Leader	2 (2/0)	1
<b>Total:</b>	<b>13</b>	<b>12</b>

**Table 66 Summary of interviews conducted during stage 2 of the field research.**

### Stage 3 (Mar. 2006-June 2006): E-service and Institutional Trust Interviews

Position	# (Interviews/FGs)	# subjects
SII e-tax user	10 (8/2)	14
CC private sector user	2 (2/0)	2
SII e-tax and CC private sector user	7 (5/2)	10
CC public sector user	1 (1/0)	1
SII Employees (Regional Level)	3 (3/0)	3
Red Comunitaria TC employees	4 (4/0)	4
Other	3 (3/0)	3
<b>Total:</b>	<b>30 (26/4)</b>	<b>37</b>

**Table 67** Summary of interviews conducted explicitly concerning the use of the two e-services and institutional trust during stage 3 of the field research.

### Stage 3 (Apr. 2006 – June 2006): World Bank Study Interviews

Position	# (Interviews/FGs)	# subjects
SII Employees (National Level)	2 (0/2)	10
SII Employees (Regional Level)	3 (3/0)	3
DCCP Employees	4 (3/1)	9
CC Public Sector Users	4 (3/1)	5
CC Private Sector Users	1 (1/0)	1
<b>Total:</b>	<b>14 (10/4)</b>	<b>28</b>

**Table 68** Summary of the interviews conducted for the World Bank social impacts of e-government study. These interviews followed the semi-structured format as dictated by the World Bank study and focused on the social impacts of the e-services. Consequently, there were many questions that were 1) relevant for understanding the nature and interactions involved with the implementation of the e-services and 2) relevant for the building of trust and trustworthiness as social outcomes.

## INTERVIEW CODES

This section lists all the interviews done, amount of time per interview, position, and the code that is used to reference that interview in the text of the thesis.

---

### SII E-tax service users

---

<b>Code</b>	<b>Subjects (#)</b>	<b>Interview type</b>	<b>Time (minutes)</b>	<b>Location</b>
SII-1	1	Semi-structured plus survey	15	Nueva Imperial TC
SII-2	1	Semi-structured	30	Nueva Imperial TC
SII-3	1	Semi-structured	7	Nueva Imperial TC
SII-4	1	Semi-structured	40	Lancoche TC
SII-5	1	Semi-structured plus survey	35	Temuco apartment
SII-6	1	Semi-structured	51	Triaguen TC
SII-7/8	2	Focus group semi-structured	30	Nueva Imperial TC
SII-9/12	4	Focus group semi-structured	15	Puerto Saavedra TC
SII-13	1	Semi-structured	20	Puerto Saavedra TC
SII-14	1	Semi-structured	13	Puerto Saavedra TC
<b>Total:</b>	<b>14</b>	<b>Ave time:</b>	<b>25.6</b>	

---

---

## SII E-Tax & CC Private Sector User

---

<b>Code</b>	<b>Subjects (#)</b>	<b>Interview type</b>	<b>Time (minutes)</b>	<b>Location</b>
SII-CC-1/3	3	Focus group semi-structured	83	Lautaro community Centre
SII-CC-4	1	Semi-structured	53	Nueva Imperial TC
SII-CC-5	1	Semi-structured	60	At residence
SII-CC-6	1	2 interviews, semi-structured	60/45	At business office
SII-CC-7	1	Semi-structured	35	Nueva Imperial TC
SII-CC-8/9	2	Focus group semi-structured	67	Nueva Imperial TC
SII-CC-10	1	Semi-structured	50	IIE
SII-CC-11	1	Semi-structured	55	Trianguen
<hr/>				
Total:	<b>10</b>	Ave time:	<b>56.4</b>	

---

## CC Private Sector Users

---

<b>Code</b>	<b>Subjects (#)</b>	<b>Interview type</b>	<b>Time (minutes)</b>	<b>Location</b>
CC-1	1	Semi- structured	30	Trianguen
<hr/>				
Total:	<b>1</b>	Ave time:	<b>30</b>	



---

### CC Public Sector Users

---

<b>Code</b>	<b>People (#)</b>	<b>Interview type</b>	<b>Time (minutes)</b>	<b>Location</b>
PS-CC-1	1	Semi-structured	45	Triaguen Municipality Office
<hr/>				
Total:	<b>1</b>	Ave time:	<b>45</b>	

---

### Regional Level SII Employees

---

<b>Code</b>	<b>People (#)</b>	<b>Interview type</b>	<b>Time (minutes)</b>	<b>Location</b>
RL-SII-1	1	Semi-structured	22	Nueva Imperial TC
RL-SII-2	1	Semi-Structured	25	Puerto Saavedra TC
RL-SII-3	1	Semi-Structured	6	Triaguen TC
<hr/>				
Total:	<b>3</b>	Ave time:	<b>17.6</b>	

---

## Telecentre Employees

<b>Code</b>	<b>Subjects (#)</b>	<b>Interview type</b>	<b>Time (minutes)</b>	<b>Position</b>
IIE-1	1	2 interviews, semi-structured	60/45	Manager Red Comunitaria telecentres in IX region
TC-1	1	Semi-structured	45	Freire Telecentre employee
TC-2	1	Semi-structured	45	Pitrofquen Telecentre employee
TC-3	1	Semi-structured	45	Nueva Imperial TC employee
TC-4	1	Semi-structured	56	Carahue TC employee
TC-5	1	Semi-structured	17	Lancoche TC employee
TC-6	1	Semi-structured	19	Victoria TC employee
TC-7	1	Semi-structured	29	Puerta Saavedra TC employee
TC-8	1	Semi-structured	29	Tolten TC employee
TC-9	1	Semi-structured	20	Lautaro TC employee
TC-10	1	Semi-structured	50	Biblioredes employee
TC-11	1	Semi-structured	10	Carahue TC
TC-12	1	Semi-structured	28	Triaguen TC
TC-13	1	Semi-structured	42	Nueva Imperial TC
TC-14	1	Open-ended	24	Lautauro Community Centre
<b>Total:</b>	<b>15</b>	<b>Ave time:</b>	<b>35.2</b>	

---

## World Bank Interviews

---

<b>Code</b>	<b>People (#)</b>	<b>Interview type</b>	<b>Time (minutes)</b>	<b>Position/Location</b>
WB-DCCP-1/6	6	Focus group, semi-structured	68	DCCP employees / DCCP headquarters in Santiago
WB-DCCP-7	1	Semi-structured	59	Head of Convenios Marcos / DCCP HQs
WB-DCCP-8	1	Semi-structured	81	PMG head / DCCP HQs
WB-DCCP-9	1	Semi-structured	75	Head of Clients Division / DCCP HQs
WB-NL-SII-1/5	5	Focus group, semi-structured	50	National Level SII employees / SII office Santiago
WB-NL-SII-6/10	5	Focus group, semi-structured	71	National Level SII managers / SII office Santiago
WB-PS-CC-1	1	Semi-structured	52	“El Bosque” Santiago municipality employee in charge of purchasing
WB-PS-CC-2	2	Semi-structured	67	FONASA / Santiago
WB-PS-CC-3	1	Semi-structured	62	Ministry of Education in charge of purchasing / Santiago
WB-PS-CC-4	1	Semi-structured	25	FONASA / Santiago
WB-CC-1	1	Semi-structured	45	Large office supply business manager / Santiago
WB-RL-SII-1	1	Semi-structured	37	Head Income Tax / Temuco
WB-RL-SII-2	1	Semi-structured	45	Head Auditing / Temuco
WB-RL-SII-3	1	Semi-structured	35	Taxpayer services / Temuco
<hr/>				
Total:	<b>28</b>	Ave time:	<b>55.1</b>	

---

## IADB Interviews

---

<b>Code</b>	<b>Subjects (#)</b>	<b>Interview type</b>	<b>Time (minutes)</b>	<b>Position/Location</b>
IADB-1	1	Semi-structured	90	DCCP Manager Administration Management / Santiago
IADB-2	1	Semi-structured	170	IADB Representative / Santiago
IADB-3	2	Semi-structured	80	Subdirector of Control, SII /Santiago Project Head of Subdirection of Control, SII / Santiago
IADB-4	2	Semi-structured	80	Manager division of small and medium enterprises, Chamber of Commerce / Santiago Manager of Studies, Chamber of Commerce / Santiago
IADB-5	1	Semi-structured plus survey	60	Governmental Coordinator of ICT/Santiago
IADB-6	1	Semi-structured	115	Executive Director NGO/Santiago
IADB-7	1	Focus group semi-structured	45	VP Sonda / Santiago
IADB-8	2	Focus group semi-structured	75	Division Boss, Universal Access to Information Society, SUBTEL / Santiago Telecommunications Assessor, SUBTEL / Santiago
IADB-9	1	Semi-structured	75	DCCP / Santiago
IADB-10	1	Semi-structured	45	DCCP / Santiago
IADB-11	2	Semi-structured	105	Sercotec / Santiago
IADB-12	1	Semi-structured	45	Chief of Operation Income Taxes, SII / Santiago
IADB-13	1	Semi-structured	100	Chief of Taxpayer Assistance, SII / Santiago
IADB-14	1	Semi-structured	70	Subdirector of Information, SII / Santiago
IADB-15	1	Semi-structured	110	Manager of purchasing, DCCP / Santiago

IADB-16	1	Semi-structured	80	PROCHILE / Santiago
IADB-17	2	Semi-structured	40	Local Office Interview, SII / Santiago
IADB-18	1	Semi-structured	55	Manager Clients Division, DCCP / Santiago
IADB-19	2	Semi-structured	70	Encuentro (Telecentre), Santiago
IADB-20	1	Semi-structured	150	Manager of Digital Literacy Campagin, Min. of Ed. / Santiago
IADB-21	1	Semi-structured	75	Regional Director IX region, SII / Temuco
IADB-22	1	Semi-structured	75	Sales Executive, IX Region, DCCP / Temuco
IADB-23	1	Semi-structured	45	Project Engineer, ICT and Social Development, IIE / Temuco
IADB-24	4	Semi-structured	90	Sociologists / Val Paraiso
IADB-25	1	Semi-structured	75	Chief Officer, E-invoice, DCCP / Santiago
IADB-26	1	Semi-structured	100	Chief Officer, Operation IVA, SII / Santiago
IADB-27	1	Semi-structured	50	CEO, SII / Santiago
IADB-28	1	Semi-structured	75	Chief Procurement Officer, Valaraiso / Valaraiso

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Total: **37** Ave time: **80.2**

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**Non-user**

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<b>Code</b>	<b>People (#)</b>	<b>Interview type</b>	<b>Time (minutes)</b>	<b>Location</b>
NU-1	1	Semi-structured	10	Nueva Imperial TC
NU-2	1	Semi-structured	10	Nueva Imperial bus-stop
NU-3	1	Semi-structured	46	Nueva Imperial TC
<hr/>				
Total:	<b>3</b>	Ave time:	<b>22</b>	

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