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A LONGITUDINAL STUDY OF LOCAL E-GOVERNMENT DEVELOPMENT: THE POLICY MAKER PERSPECTIVE

Complete Research

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Abstract

Developments in information and communication technologies have been an enabler of enhanced, citizen focused services by governments around the world. Electronic Government, or E-Government, is widely regarded as a disruptor of traditional e-government service provision through greater citizen access, enhanced democracy, improved information quality, and a range of governmental efficiencies. Local government has been a key e-government focus for many nations due to the wide and varied interactions these governmental agencies have with citizens. A gap in the literature exists that monitors the development of local e-government, especially from the policy maker perspective, of This study presents the findings of a longitudinal study exploring the development of local e-government in New Zealand – from the policy makers' perspective. All local and regional authorities in New Zealand were surveyed in 2000, 2004, and 2012 with the goal of understanding the key considerations associated with the development of e-government strategies and subsequent implementation of associated infrastructure. While local e-government development has been more incremental than transformational, there has been a trend towards greater consideration of citizen-focused issues including the likes of Consumer Confidence, Trust, Accessibility, The Digital Divide, Indigenous Peoples, Security, and Privacy. This offers a degree of reassurance that local authorities remain, and are indeed increasingly, focused on the provision of enhanced services to the communities they serve.

Keywords: E-Government, Local Government, Governmental Issues, Policy Maker Perspective

1 Introduction

Like in many countries around the world, local government authorities in New Zealand have spent close to 20 years transforming the way in which they deliver services, in response to the widely publicised opportunities afforded by electronic commerce. Broadly, the vision of electronic (e) government is based around enhancing public participation and by providing a progressive and reformist approach to bureaucracies (Cumbie & Kar, 2014). While what has transpired in a practical sense may not fully align with what was initially envisioned, there was a clear expectation that e-government was not

about automating existing processes, but in offering improved service delivery, integrated services, and market development (Grant & Chau, 2006).

In recent times, a key focus of e-government research has been in exploring the degree to which this early vision has been realised in practice. To what degree have bureaucracies been reformed? Has a greater level of public participation been achieved? Are we seeing more integrated government service delivery? Much of the empirical work in this area has focused on the views of citizens. For example, Choudrie et al (2013) examined the barriers to e-government use in older age people in the UK, Gauld et al (2010) measured the utilisation of e-government services in Australia and New Zealand, while Barbosa et al (2013) assessed e-government performance via interviews with citizens and organisational government service users.

A different take, i.e. the research gap, on the same question can occur through interacting with the government service providers, rather than the users of those services. This approach has received much less attention than the citizen-centric research, but has the potentially to offer far greater insight into the underlying reasons for the way in which e-government implementation has "played out". Norris & Reddick (2012) have taken this approach employing a large US-based survey of local authorities contrasting data gathered in 2004 against that gathered in 2011. The findings conclude that only incremental change to local government service provision has occurred, a far cry from the highly anticipated transformational effect the technology was expected provide.

This research takes a very similar approach, also focusing on the policy maker perspective within local authorities, but with two key differences. Firstly, it focuses on a much smaller nation (New Zealand) allowing it to survey the entire population of local government service providers. Secondly, and most importantly, it reports data from 2000 (as well as 2004 & 2012) which was when the e-government "hype" was probably at its greatest. It might be argued that the Norris & Reddick (2012) study may have included data taken from a time (2004) which is referred to in the Gartner Hype Cycle as the "Trough of Disillusionment" in which the technology does not live up to enterprises and the media's overinflated expectations (Linden & Fenn, 2003). Indeed, an e-government adaption of the Gartner Hype Cycle (Gartner, 2005) suggests that 2004 was indeed when the Trough of Disillusionment phase started to occur. This research builds on previous studies, including those by the authors (e.g. Deakins et al, 2001; Deakins & Dillon, 2002; Deakins et al., 2007a etc), by addressing the research question: how has the policy maker perspective on local e-government in New Zealand changed in the period 2000 – 2012.

The research is presented as follows. Next the specifics of local e-government are defined with a particular emphasis placed on isolating it from national/central e-government initiatives. The measurement of e-government effectiveness is considered followed by a brief historical account of e-government evolution in New Zealand. A framework of issues surrounding the development of local e-government, based on previous research by the authors is then presented. This framework was key in the development of the survey instrument. Section Three then summarises how the research was carried out. Following this, findings are presented; firstly with demographic information, then by an account of the presence of website features across the three periods. The key results, based around the previously described theoretical framework, are then presented. The paper ends with discussion, conclusions and limitations.

2 Theoretical Background

2.1 Local E-Government and the Policy Maker Perspective

Local e-government is defined as any dependent and independent geographically defined (regional, city, district...) government entity that delivers services to its citizens online. In contrast to their central government counterparts, local authority organisations are more strongly focused on providing front-line services to citizens. Local authorities also operate within dynamic and challenging environments (Hague and Harrop, 2007; Hatch and Cunliffe, 2006), and have proven to be highly dynamic and responsive to changing conditions. In both developed and developing nations they are, thus, moving away from the paradigm of government as a bureaucratic faceless organisation (Exec, 2003; King and Cotterill, 2007; State Services Commission, 2007) to one which is responsive; makes extensive use of ICT; and treats citizens as customers (Ho, 2002; Moon, 2002; Newman et al., 2001).

Benchmarking studies tend to categorise e-government initiatives as being at one of several distinct stages, or levels, of sophistication. The traditional view through the late-1990s was that e-government developments would parallel those being observed in the commercial world; essentially offering basic online information; then citizen-requested information; followed by extra online service channels. It was also expected that a step change in coverage might subsequently occur via extensive online collaborations with a wide range of stakeholders on the way to offering a full e-government service (after De Kare-Silver, 1998). While even recent models of e-government sophistication offer evidence of such progression (e.g. Norris & Reddick, 2012), the advent of Web 2.0 technologies also requires that e-government be viewed against the backdrop of (commercial) online social networking applications and services; in particular because a clear trend has emerged of users expecting to contribute and shape Web content themselves (Wirtz & Nitzsche, 2013; Deakins et al, 2008). Recent research has started to uncover significant use of various social media applications in local government (e.g. Oliveira & Welch, 2013) and these implementations provide transferable Web 2.0 migration paths for other government organisations to consider.

Although citizen-centric research has increased our knowledge about user perceptions, the patchy uptake of many e-government services (Kotamruju & van der Geest, 2012, Wirtz & Nitzsche, 2013) makes it imperative to also understand the policymaker's perspective when considering how local e-government might be made more palatable to citizens. Particularly in these times of financial austerity, local government authorities are increasingly challenged by their political masters and the communities they serve to provide more responsive, efficient and cost-effective e-government services. However, the bases for decisions being made in response to these demands is not well understood. For example, what are the reasons behind the relatively low adoption of online tax collection by local authorities? (Pina et al., 2009) Is the underlying policymaker rationale driven more by national, federal or state government directive or by citizen demand? Is the enabling technology being utilised simply because it is available?

Researchers have shown that successful technology initiatives require a strong collaboration and partnership focus. Yet the degree to which local authorities adopt such best practice is largely unknown. Certainly there is evidence that lack of user involvement impacts the uptake of e-government in general (Kotamraju & van der Geest, 2012).

A definition of e-government that succinctly captures its scope of technology use is, "…a government's uses of ICT; particularly Web-based Internet applications, to enhance the access and delivery of government information and service to stakeholders such as citizens, business partners, public sector employees, and other governments, agencies and entities" (Shan., et al., 2011, p. 173-174). Given the vast amounts of time, public money and effort that national and local governments have invested into transforming public sector relationships with technology (Affisco & Soliman, 2006; Sarikas & Weerakkody, 2007), e-government effectiveness has long been a topic of interest for researchers.

2.2　　E-government in New Zealand

In New Zealand, local government is subordinate to central government (Palmer and Palmer, 2004; Tomblin, 2004). For example, a main function of local government as stated in the Local Government Act 2002, is, 'to promote the social, economic, environmental, and cultural wellbeing of communities in the present and for the future' (Department of Internal Affairs, 2009).

The sector was subject to major restructuring in 1989, which resulted in a reduction of local authorities from 600 to 74, and a decrease in territorial authorities from 200 to 13. There have been isolated amalgamations in the subsequent years, the most prominent being the formation of the Auckland "Super City" council in 2011.

Two distinct types of authority provide local government services: territorial authorities (city or district councils) and regional councils. City and district councils are tasked with providing day-to-day services to their communities. These include community well-being and development; environmental health and safety (building control, civil defence, environmental health, etc.); infrastructural services (roading and transport, sewerage, water); recreation and culture; and resource management, etc. Regional or territorial councils focus more on environmental issues such as water management, flood and erosion control, bio-security, regional land transport planning, and marine pollution (Local Government Online, 2012).

The current e-Government strategy in New Zealand is described in 'Enabling Transformation: A Strategy for E-government 2006' (Transformation, 2006). As the third update since 2001, it builds on the previous strategies in the way they addressed the need for convenient and responsive government information and services, and it establishes a greater emphasis on enabling participation, reflecting recent changes in technology, and particularly the growth in social networking.

Research conducted by the authors, including in New Zealand, has identified significant variations in the adoption of e-local government in terms of money and effort expended, and the associated commitment to widespread adoption of emerging technologies (Deakins & Dillon, 2002).

The Authors reported the results of the first survey and included a comprehensive review of the underpinning literature, and the theoretical foundation, for the survey instrument (Deakins et al., 2001; Deakins & Dillon, 2002). They have also carried out subsequent, related, studies contrasting the state of local e-government in New Zealand with a number of other countries including Taiwan (Deakins et al, 2007a), China (Deakins et al. 2008), Oman (Deakins et al, 2007b), the United Kingdom (Deakins et al. 2010), Australia and Germany (Dillon et al. 2013). Overall, NZ has long been considered a good performer in terms of its e-government initiatives. For example, in terms of the percentage of national sites offering fully online services in 2001, Taiwan had the highest ranking (65 percent) and NZ (48 percent) was ranked fifth in the world (Global E-Government Survey, 2001), well ahead of the high profile e-government performers of the USA (34 percent) and the UK (30 percent). However, when particular aspects of e-government are considered such as the availability of contact information, publications, databases, portals and number of online services, NZ was ranked at 26 out of 196. In 2004, New Zealand had an overall e-government development index ranking of 13 (United Nations, 2004), which was maintained in 2012 (United Nations, 2012), and improved further in 2014 to 9th (United Nations, 2014). Rankings are always likely to be volatile as countries invest in e-government initiatives on an irregular basis.

Since the early 2000's a wealth of data has become available with which to compare country performance in international terms, (e.g. Basu, 2004; Teicher & Dow, 2002; Turner & Higgs, 2003; Ke & Kee Wei, 2004). A consistent finding from these studies is that, while progress was being maintained in many areas, early global development was been somewhat piecemeal and inconsistent at a national level. For example, in Australia, e-government was largely focused at the information-only level and its spread is uneven, particularly in rural and remote areas; Australia, like NZ, has a low population in

proportion to country size and its rural citizens have differing needs to city dwellers. (Teicher & Dow, 2002) As of 2002, Australia was also suffering from a proliferation of portals rather than the desired single entry point to all government organisations and entities. Similarly in the UK, while some early local government websites demonstrated significant levels of sophistication, the majority were still in an emerging phase in 2002. (Giffin & Halpin, 2002)

2.3   Local E-Government Development

A framework of issues surrounding the development of local e-government (in the USA) was developed by the authors (Deakins et al., 2001) from an extensive review of the literature, and this framework was used to underpin the first survey instrument (Deakins & Dillon, 2002). While acknowledging that other countries also have an immense amount of e-government literature and resources, e.g. the Australian Government and Information Management Office. (AGIMO) (http://www.agimo.gov.au), the USA was chosen because of the advanced nature of e-government in that country and its dominance of the e-government literature, at least when the longitudinal research begun (2000). The developed framework (Figure 1) comprises sixteen key issues that must be addressed by e-government policy for successful e-government.
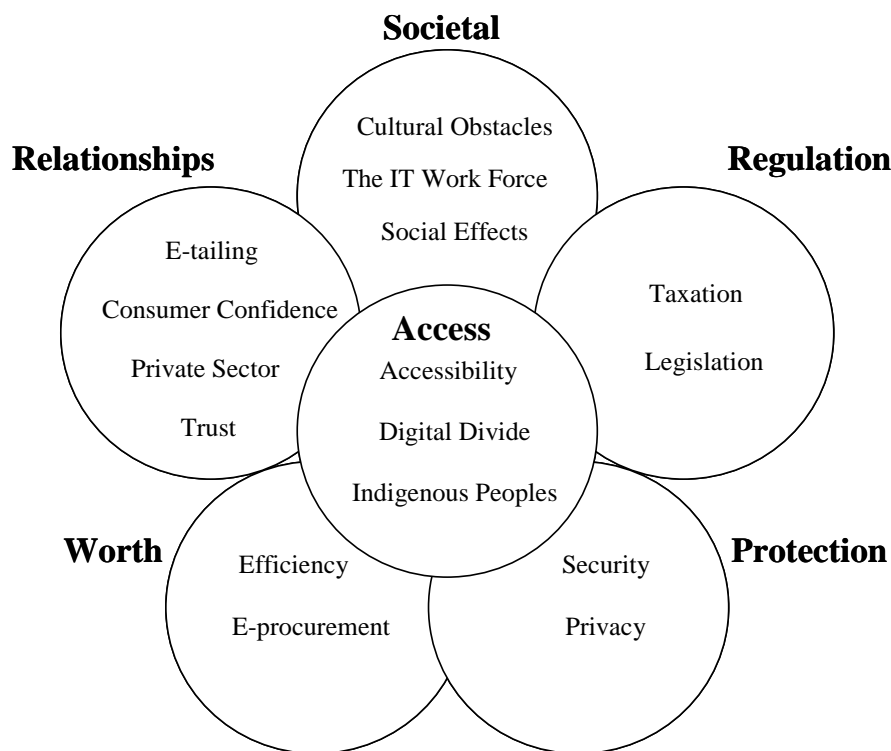

Figure 1. Key issues for the creation of e-government in the USA (Deakins et al., 2001)

These issues are grouped into six related areas: Worth, Access, Relationships, Regulation, Protection, and Societal (WARRPS). It was initially assumed that, although NZ has a smaller economy and population and a different governing system to the US, the same issues-set would apply in general to the NZ situation. Those identified from the US scene considered to apply directly to the NZ e-government scene (judged by a lack of contrary evidence) were issues of: Worth (Efficiency, E-procurement), Relationships (E-tailing), Protection (Security, Privacy), and Societal (Cultural Obsta-

cles, Social Effects). Further investigation revealed that several of the areas did require modification for the NZ environment: Access (Accessibility, Digital Divide, Indigenous Peoples), Relationships (Consumer Confidence, Private Sector, Trust), Regulation (Taxation, Legislation), and Societal (The IT Workforce). Deakins & Dillon (2002) report on these issues in detail.

3 Method

NZ is administered at the regional and local level by a number of administrative bodies. The actual number decreased over the 12-year duration of the study due to amalgamations. The total number of bodies in 2000 was 86. Twelve of these were regional councils responsible for resource management, biosecurity, catchment control, harbour administration, regional civil defence, and regional land transport with the remainder, being city and district councils concerned with community well-being and development, environmental health and safety and infrastructural services such as sewerage, water, roading, etc. By 2012, the total number of authorities had decreased to 78 and now included a unitary council (formed from the amalgamation of local bodies) in addition to local and regional councils. In all three iterations of the study, a mail survey based around the 16 issues in Figure 1 was sent to the Chief Executive/General Manager of every regional and local authority in NZ. The second and third surveys also contained a small number of supplementary questions, none of which were judged to have influenced the interpretation and response of participants to the original questions.

The purpose of the study was outlined to each recipient, who was requested to forward the survey to the appropriate individual within the organisation having most direct involvement with e-government policy development; such policy development is likely to involve determining how (predominantly) information-based services might be enhanced through website and e-commerce technologies. Reminders were sent after three weeks if necessary. In the first survey, 49 usable responses were received from the 86 local and regional authorities contacted, representing a response rate of 57 percent. In the second survey, the number of authorities had reduced to 85 (due to various boundary changes) with 51 usable responses being received, which equated to an improved response rate of 60 percent. Finally in 2012, 24 responses were received from a potential 78, representing a much lower response rate of 31 percent. The use of an online survey was given serious consideration in 2012, and a better response rate was likely as a result, but in order to maintain consistency with the two earlier surveys, it we decided to, again, administer the paper-based questionnaire. This and other limitations are discussed in Section 5.

4 Results

4.1 Key Demographics

Table 1 provides a demographic comparison of the survey respondents. Unsurprisingly, it can be seen that based on the number of employees, the size of local and regional authorities has generally increased, partly in line with the population bases of the participating authorities which has shown a similar upward trend, but also a result of the amalgamations that have taken place.

	2000 (%)	2004 (%)	2012 (%)	Change 2000-2012 (%)
No. of employees				
0-59	33	30	8	-76
60-100	16	19	13	-19
>100	51	57	79	+55
Population base				
0-50,000	64	62	61	-5
50,001-100,000	12	14	13	+8
100,001-200,000	10	10	13	+30
>200,000	14	14	13	-7
Annual expenditure (NZ$ million)				
<10	8	15	0	N/A
10-50	74	55	28	-62
51-100	8	20	44	+450
>100	10	10	28	180
Website expenditure (NZ$)				
<5,000	54	12	23	-57
5,000-9,999	14	17	18	+29
10,000-50,000	21	48	54	+157
>50,000	11	23	5	-55

Table 1. Population Demographics (2000, 2004 & 2012 Values)

In 2000, 74 percent of participating authorities stated their annual (total) expenditure to be NZ$10-50 million and this proportion decreased to 55 percent in 2004 and then 28 percent in 2012. Such a marked change, which is accompanied by an 180 percent increase in authorities claiming annual expenditures of greater than NZ$100 million over the 12 years, can be explained by a higher proportion of very large local authorities participating in the study in 2012. The dramatic increase in the number of authorities in the NZ$51-100 million annual expenditure range can also perhaps be explained by similar variation in the demographics of the responding authorities.

Website expenditure figures are particularly interesting. While spending has increased overall, there has been a reduction in the percentage of the most costly implementations. This might indicate a movement away from new developments into more of a maintenance and renewal phase.

4.2 Website Features

All three surveys required respondents to report the presence of 21 ideal e-government website features. These were based on criteria from The Oultwood Local Government Web Site Index (Oultwood, 2000), which synthesises the best features of local government websites across Australia, Canada, Eire, New Zealand, South Africa, the US, and the UK. Table 2 shows the percentage of websites each feature is reported to be present in, for each of 2000, 2004 and 2012. Clear trends, as judged by the authors, are highlighted and briefly discussed.

Ref.	Feature	2000 (%)	2004 (%)	2012 (%)
1	Search engine	59	100	100
2	Press releases	79	69	100
3	Downloadable documents & forms	85	100	96
4	Minutes archive	38	54	92
5	Council's responsibilities	85	100	88
6	Fast loading web pages	76	69	88
7	Simple web pages	88	50	88
8	Site navigation help	47	92	83
9	Events Diary	65	92	83
10	Local tax collection	3	69	71
11	Library catalogue, reservation, renewal	18	33	71
12	Frequently Asked Questions (FAQs)	32	85	58
13	Cemetery index	3	31	58
14	GIS (mapping)	21	54	54
15	Local panoramas/aerial photos	44	92	50
16	Telephone directories	47	38	42
17	Online bill payments	0	15	38
18	Web-visitor survey	24	69	29
19	Highway web cameras	6	54	8
20	E-tailing	3	0	8
21	Virtual tours	6	38	4

Table 2. Reported Website Features (2000, 2004 & 2012 values)

The four highlighted features have all increased in presence significantly over the 12 year duration of the study. The minutes archive is a comparatively trivial feature and simply a result of information management and publication advancements. The growth in online library catalogues, reservations, and renewals, as well as cemetery indexes is similar, but likely to have involved greater offline and online systems integration. Online tax collection and online bill payments may in fact be the same thing. These are likely to have been very much future-focused activities in 2000, but with the widespread use of online payments in other online domains, as well as enhanced online security, are likely to be more realistic today.

4.3   Key Issues

4.3.1   Societal Issues

Across the three periods, significant consideration was given to the internal culture of the local authority and the impact that might have on the e-government development, and vice-versa. Figure 2a, does not show any obvious indicator of change to the extent considered over the 12-year duration of the study.

NZ has long suffered with shortages in IT graduates, particularly those skilled in contemporary technologies such as web-based. Figure 2b suggests that the IT workforce has demanded greater consideration as time has elapsed with the number of responding organisations stating that they consider it to a large extent doubling between 2000 and 2012. Finally, respondents were asked to what extent they considered social effects when developing their websites. Figure 2c indicates that, in 2000, 19 percent of respondents did not understand what the desirable and undesirable social effects might be, and overall did not feel strongly that this was an important issue for them to address. This lack of under-

stand appeared to have disappeared by 2012 and the results also suggest that social issues were being considered more.
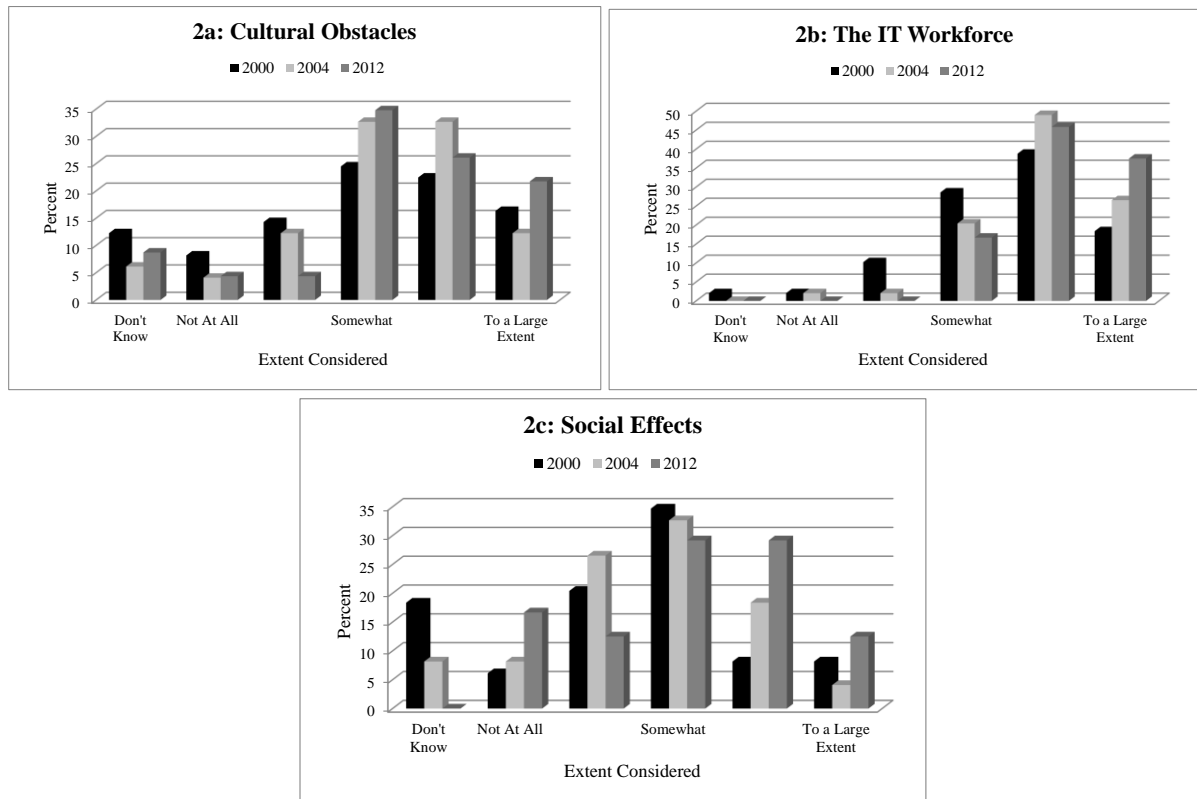

2a: Cultural Obstacles

■2000 ■2004 ■2012

2b: The IT Workforce

■2000 ■2004 ■2012

2c: Social Effects

■2000 ■2004 ■2012

Figure 2. Societal Issues

4.3.2   Relationship Issues

It is noteworthy that e-tailing (Figure 3a) has not historically been a key governmental focus or indeed area of expertise. It is observed that 2000 results demonstrate both a lack of understanding of e-tailing and an overall low significance rating by respondents. While understanding is likely to have improved during the duration of the study, there still appears to be only moderate consideration given to the relevance of e-tailing in the local government sector. As a small nation, NZ government agencies are often reliant on partnerships with the private sector and indeed much to gain from obtaining the support and feedback of businesses in the private sector before e-government services are implemented. Figure 3b indicates that roughly half of respondents, in each of the 3 periods, rated the significance as being 'Somewhat' or higher. No significant change in consideration occurred between 2000 and 2012. Consumer confidence and trust in performing online transactions is critical to the success of this new commerce medium. Figures 3c and 3d both confirm the view that consumer confidence and trust were, and remain, significant issues for local authority policymakers when they implement and maintain a website. Sensitivity to these issues may also be a reflection of the 'public good' environment in which local government staff operate and the continual media presence of issues of online trust.
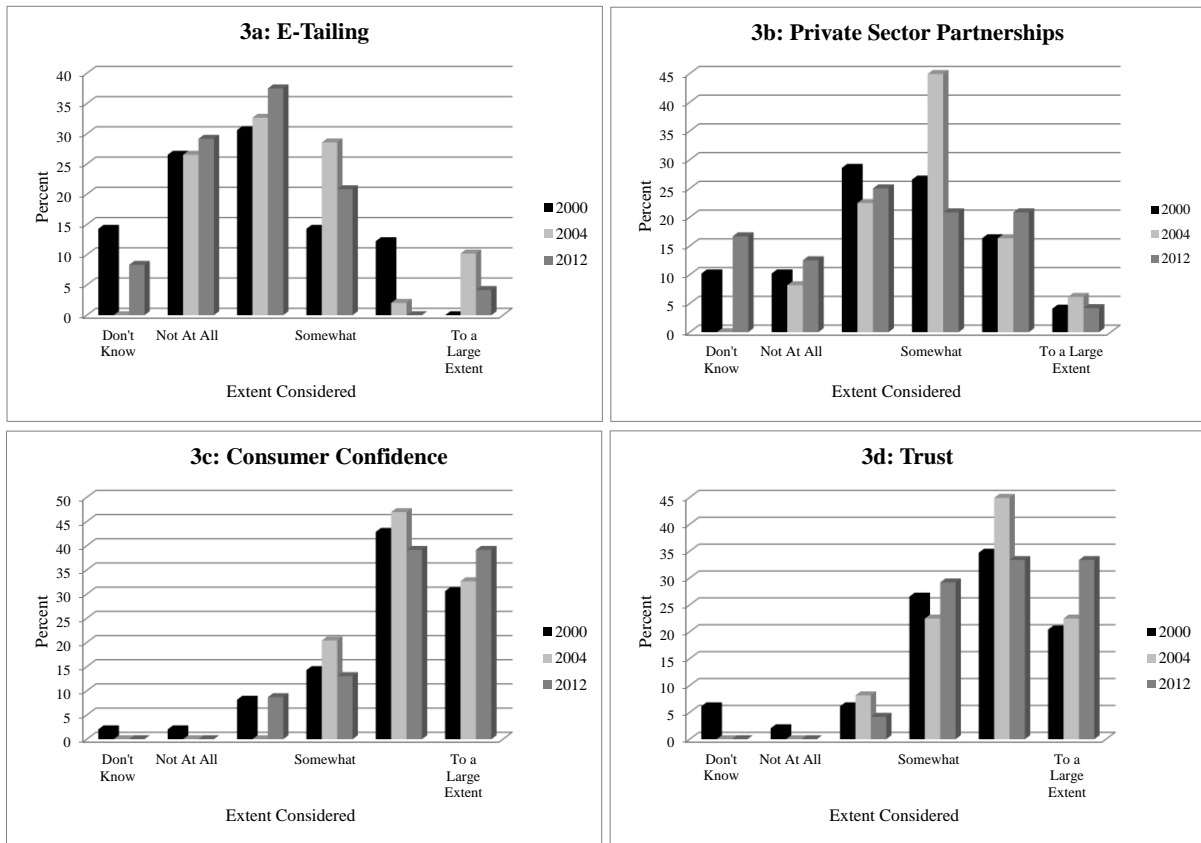
Figure 3. Relationship Issues

4.3.3 Regulation Issues

Findings suggest that issues surrounding tax collection (Figure 4a) are becoming increasingly important for NZ government. This likely reflects the growing maturity of e-government and the mechanisms now in places for dealing with online financial transactions. The subject of taxation of the Internet is at the forefront of international e-commerce regulatory debate. Overall, the attitude of local authorities appears to have changed somewhat with more authorities reporting that they would give some consideration to online local tax collection. By contrast, there has been little change in the attitude of local authorities when considering legislative issues. It is remains one of the most important considerations with in excess of 60% of participants considering it to a large extent in 2012.
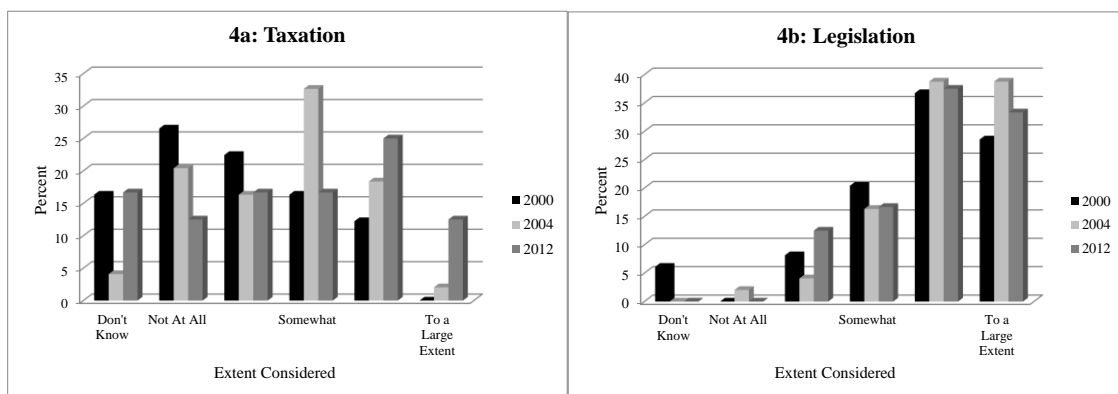

Figure 4. Regulation Issues

4.3.4 Accessibility Issues

The success of local e-government is heavily dependent on achieving widespread access to every citizen. Figure 5 presents the findings for issues associated with accessibility. In each period, accessibility (Figure 5a) was felt to be a significant issue when developing and maintaining a Local Authority website. In 2000 there was a wide range of opinion on the subject of the digital divide (Figure 5b) with 20% not understanding the issue. This level of understanding has decreased over time while the consideration given to the issue has, unsurprisingly, increased. There has been a similar movement to place greater emphasis on the needs of indigenous peoples (Figure 5c), which is especially important in NZ.
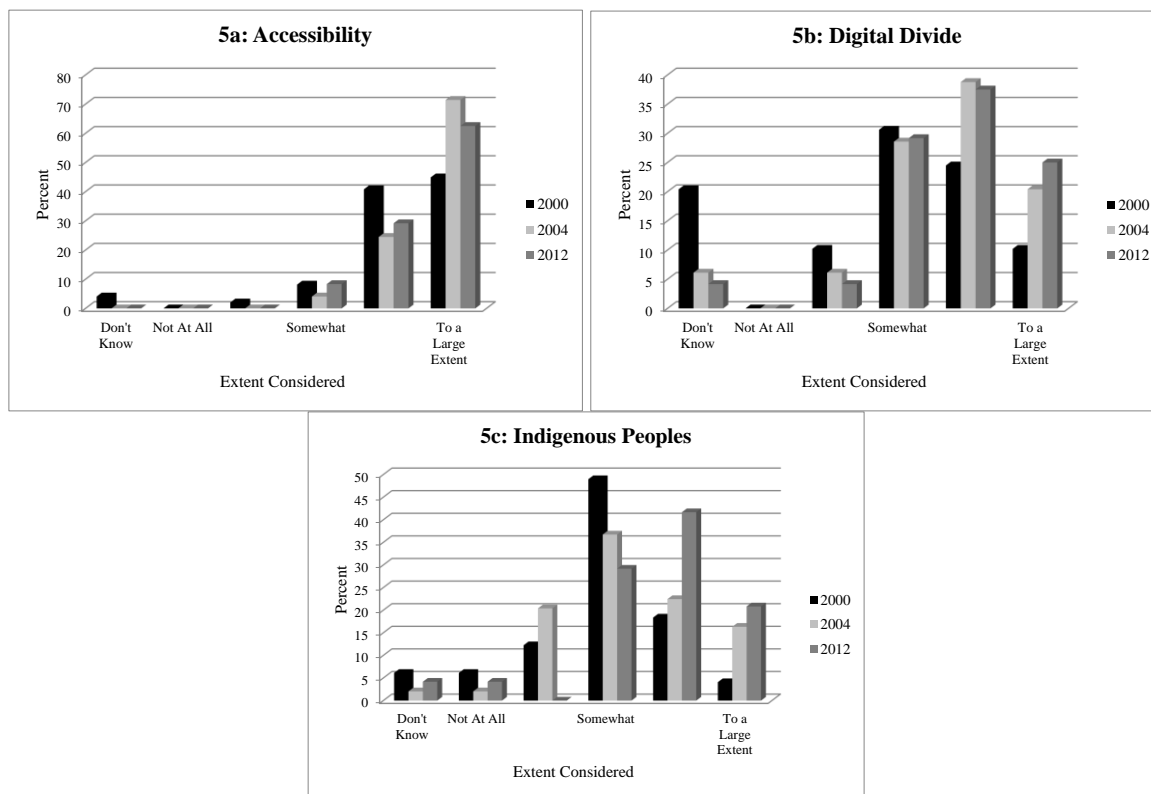

Figure 5. Accessibility Issues

4.3.5 Worth Issues

While internal efficiency has always been seen as a key consideration in local e-government development, it would appear from the findings (Figure 6a) that this consideration has increased as time has passed. This may be due to the unexpected effort and expense that has occurred with many e-government implementations, alternatively it may simply have emerged as a key benefit. Similarly, developing an e-government presence can save time and money through the adoption of E-procurement, which creates the potential for savings on bulk purchase pricing and transaction costs. Figure 6b shows that, in 2000, approximately 14 percent of respondents were unaware of these e-procurement advantages. It is surprising to the authors that there has not been an upward trend in the consideration of e-procurement, especially as it becomes a key cost-saving initiative of central government. One likely explanation is that this increased emphasis centrally, has simply not yet filtered down into the local government domain.
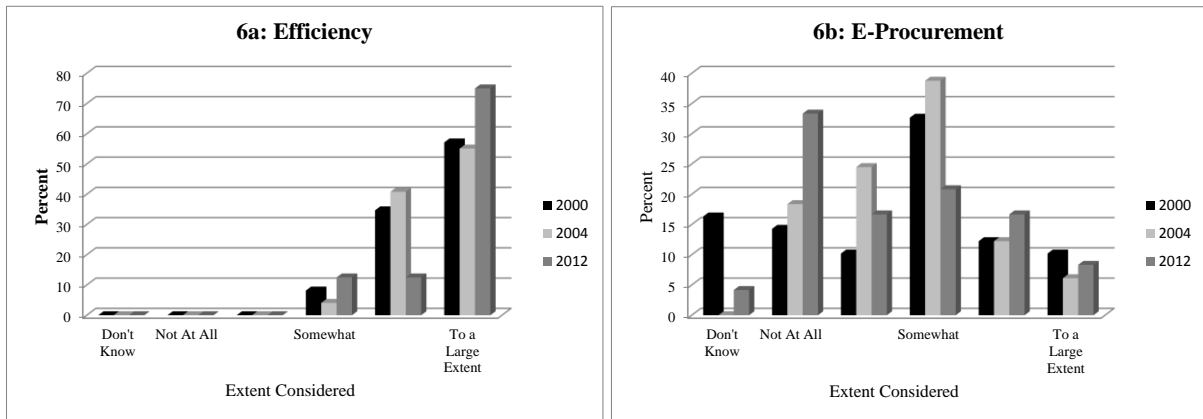
Figure 6. Worth Issues

4.3.6 Protection Issues

Issues of security and privacy are important to ensure citizens don't doubt the security of the information they provide over the Internet. Figures 7a and 7b both indicate that many local authorities were aware of these issues even before 2000, and rated them as being significant. In both cases, the consideration given has only increased as time has passed. This might also be due to the increasing levels of information (such as personal information) now available online.
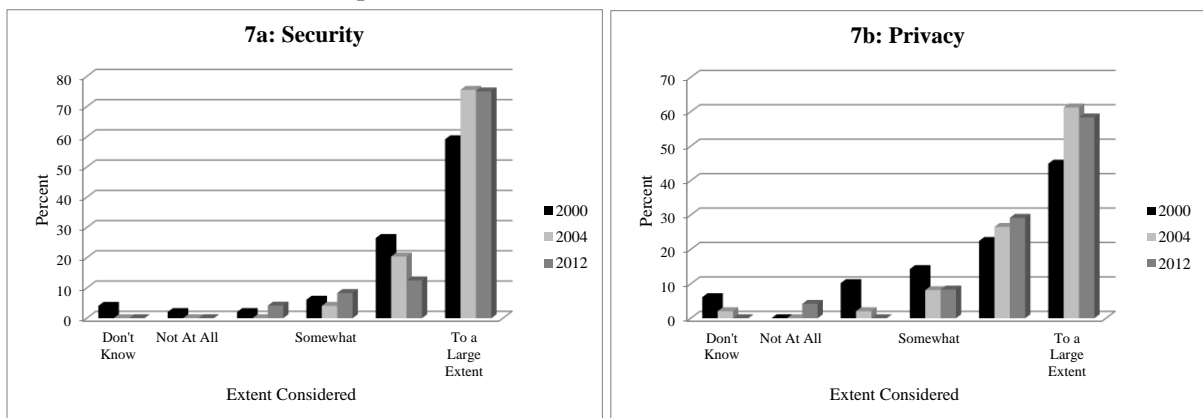

Figure 7. Protection Issues

5 Discussion and Conclusions

This longitudinal study has tracked the evolution of e-local government in New Zealand across the years 2000-2004-2012. To the best of our knowledge, no other e-local government study to-date has published longitudinal findings coving a period of this duration. The research has uncovered a number of interesting developments that provide insight to the degree of e-government enterprise transformation that has taken place. Every local authority has an operational website and all allow some degree of website interaction (e.g. online cemetery search functionality), although there is minimal consistency in this regard. Many authorities expend significant effort and resource on maintaining or revitalising their virtual presence. Eighteen out of twenty-one desirable Oultwood Local Government Web Site Index features showed increased incidence between 2000 and 2014, with local tax collection being the most marked (increasing from 3 percent to 71 percent of responding organisations).

The primary focus of the research was to understand, as time has passed and relevant expertise grows, how the views of local e-government policy makers have changed. This was assessed by assessing the

significance that respondents accorded to sixteen key policy issues judged by the authors to be vital to e-government success.

Interestingly, in assessing responses to the 16 key issues, and the change in responses across the three time periods, two general classifications can be identified. Firstly, those issues where significant and increasing levels of consideration are placed (The IT Workforce, Consumer Confidence, Trust, Legislation, Accessibility, The Digital Divide, Indigenous Peoples, Efficiency, Security, and Privacy). The others (Cultural Obstacles, Social Effects, E-Tailing, Private Sector Partnerships, Taxation and E-Procurement) are best classified as inconsistent and somewhat variable. It is interesting to note that, without exception, each of the six issues in this latter category were reported after the completion of the 2000 survey as being comparatively poorly understood by the survey respondents. As time has passed, this lack of understanding has all but disappeared, yet local authorities are still not giving these issues the same level of consideration as those in the first group. Research by others support that comparative lack of concern around some of these issues. For example in terms of e-procurement, Alcaide-Muñoz et al (2014) note, in relation to e-procurement, that "respondents did not consider that the introduction of e-government produced an increase in municipal purchases via internet, or any increased quality or reduced cost in the procurement of municipal goods and services", np.

Returning to the first classification, it is encouraging to see increasing consideration being given to predominantly citizen-focused issues (Consumer Confidence, Trust, Accessibility, The Digital Divide, Indigenous Peoples, Security, and Privacy) rather than simply focusing on internal goals and objectives (such as Efficiency and The IT Workforce). This should give the public a degree of confidence that citizen-focused issues are central to local e-government developments.

Overall, this study has shown that while New Zealand may still have some way to go in achieving its goal of achieving transformation e-government "status", it has made steady progress since 2000 and attention is being focused in the right areas. With respect to the stated research question, it is fair to say that the change in the policy maker perspective has been much less between the second and third periods of data collection, than between the first and the second. There certainly hasn't been radical change across the entire period. It must be noted that the findings of this study are specific to the unique New Zealand context. While we have observed similar trends in our related research in other countries, it cannot be assumed that the findings of this study would be replicated elsewhere.

Every study has its limitations and the major limitation of the present study is that a 100 percent response rate from policymakers was not achieved, giving incomplete snapshots of the local e-government scene. The responding organizations across the three years are also likely to be different, making direct comparisons impossible. It would also have been preferable, at least in the latter iteration, to have used an online survey tool, however it was decided that the benefit of possible increase in response rate this might lead to, did not out-weigh the impact using a different survey mechanism might have on the comparability and subsequent reliability of the findings.

Acknowledgement

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