

POLICY LEARNING AND PUBLIC SECTOR INFORMATION TECHNOLOGY

**Contractual and E-government Changes in
the UK, Australia and New Zealand**

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**POLICY LEARNING AND PUBLIC SECTOR IT:
CONTRACTUAL AND E-GOVERNMENT CHANGES IN
THE UK, AUSTRALIA AND NEW ZEALAND**

This paper explores the extent and character of cross-sectoral and cross-national policy learning within the area of government information technology policy. We look particularly at two issues as windows into the wider current development of the sector: the evolution of IT contracting forms and structures, and the development of e-government policies. We explore these issues in three (former) Westminster systems with divergent new public management (NPM) pathways, Britain, Australia and New Zealand. In a complex and hard to penetrate sector like government IT there are no ‘perfect’ cases, no typical representatives of a wider population. The point of our comparative work is primarily to introduce a requisite degree of diagnostic diversity to help explore the variety of causation patterns operating to differentiate national government characteristics from one another. The primary research methodology used has been detailed Web research and systematic documentation analysis across the three governments, extensive interviewing with over 110 officials and IT industry personnel across our countries (mainly focusing on central governments), and some in depth unobtrusive measures censuses and survey work within the UK carried out during 1999 and 2001.¹

The paper has four parts. The first briefly situates the government IT sector within the range of policy learning and policy transfer experiences, brings out its salience for the contemporary evolution of state-civil society relations, and considers some key interpretative expectations that might find applicability in this area. Part 2 sketches salient features of the basic institutional structures and NPM experiences of our three countries in order to focus down on the development of their government IT contracting regimes over the last decade. We show how initially institutionally linked or NPM emulating countries have in fact diverged to very different current contracting models. Part 3 considers the progress of e-government initiatives across the case countries and their relative degrees of success so far in overcoming ‘channel rivalry’ barriers from established departments and agencies; achieving joined-up governance; and maintaining or developing government’s nodality in the Internet era. The final part draws together the findings and considers alternative interpretations.

1. Characterizing government IT as a policy sector

In the modern era the capabilities of governments are defined and constrained increasingly by the distinctive characteristics of their IT systems. All the NATO² 'tools of government' delineated by Hood (1983) depend essentially on the development and possession of particular kinds of systems: especially 'treasure' (T) systems for requisitioning taxes and paying out transfers; and 'authority' (A) systems for not only making complex law but marshalling the coerced information databases and risk-analysis-based compliance activities which chiefly sustain the effectiveness of modern regulatory apparatuses. 'Basic organization' (O¹) tools, the existence of a bureaucratic file-keeping capability to register government instructions and organized personnel structures to see them through to implementation, have so far been less decisively re-shaped by back-office re-engineering and the transition to somewhat more automated processes. On the other hand 'specialized organization' (O²) tools, the technocratic development and structuring of highly professionalized bodies of expertise, have already been effectively transformed in many cases, with some government agencies well on the way to becoming modern 'digital organizations'. Expertise in government's vast layered and siloed legacy systems and in government applications of more recent IT technologies is now a peculiarly strategic, prized and esoteric commodity in itself. And with the advent of the Internet and the Web, there has been an especially radical and still on-going transformation in the operations and salience of perhaps government's most important tool - which Hood terms 'nodality' (N). Hood used this label to denote the central location of government in society's information and communications networks, such that people extensively deliver information to state agencies for free or in a quasi-voluntary compliance mode, and also pay special attention in turn to government's targetted messages and broadcasts.

Considered from a policy learning and transfer viewpoint (on which see Stone, 1999; Dolowitz and marsh, 2000), the broad development of advanced liberal democracies' government information technologies is an intermediate policy sector. We can readily identify some 'advanced' sectors where policy learning reflects strong functional pressures for a concerted response across politics achieved either via formal policy concurrence, or acceptance of international obligations, or agreement to international policy standardization, or more partial but still multi-lateral agreements. Examples of such functional pressures

include strong ecological interactions (as with global warming or whaling); trans-national competitive pressures (as with the possible ‘race to the bottom’ pressures in tax systems); inescapable economies of scale (as with defence procurement in the post-cold war period); essential joint working between countries (as with customs regimes governing international trade); and the development of trans-national regional blocs (notably the complex convergences in the European Union (Radaelli, 2000), or the still fledgling requirements for NAFTA). Not only are such features absent or only weakly present in the field of government IT, but in addition there are no powerful or policy-setting international institutions in the sector, nor are there the elaborate and long-lived mazes of bi-lateral and multi-lateral organizations fostering inter-country co-operation found in fields like defence procurement (see NAO, 2001).

On the other hand, government IT is also no longer a policy area where national governments can easily retain the expertise and the economic and financial wherewithal to ‘plough a lonely furrow’ with distinctive single-country policies. In earlier periods this was not the case. When governments built some of the world’s then largest IT systems in the 1950s and ‘60s the initial cost-savings achieved by automating huge swathes of ‘back-office’ tasks seemed more than sufficient to cost-justify the pursuit of distinctive policies and approaches. This stance was sustained relatively untroubled for long periods of time, and governments backed their own ‘national champions’ in the IT industry and set out distinctive strategies in IT, telecommunications and related fields of science policy (Margetts, 1999). This approach began to fragment in the 1970s, but for most countries it only decisively ended in the late 1980s (Margetts, 1999; Keliher, 1995; Peterson, 1996).

The forces for cross-national standardization of government IT policies which now exert some pressure on national governments are diverse and quite subtle in their impacts:

(a) The ‘easy wins’ of early office automation efforts have long been exhausted, with governments’ second generation computing or automation projects of the 1980s and ‘90s in many cases failing to deliver promised savings and often only disappointing levels of functionality or quite degraded service quality enhancements, a trend also reflected in the private sector (Strassman, 1997). Large IT projects got harder to accomplish successfully, more difficult to plan, more risky in terms of prospective benefit/cost ratios, at exactly the same time as the long post-war expansion of government services slowed under the impacts of inflation, budget deficits and sharply increased fiscal stress. This combination of unfavourable circumstances helps explain why in many countries public sector IT began to be

seen in the 1990s as a peculiarly high risk area, reputationally akin to public sector construction projects in terms of cost over-runs, project delays, 'false savings' or low benefit/cost problems, and agencies' apparent inability to manage major projects effectively or to recognize when things had begun to go wrong. Very similar overview reports on IT projects' risks were issued by different national government auditors (NAO, ; NZNAO, 2000; Treasury Board of Canada, 1998). Substantially similar new 'gateway' and checking institutions and procedures have merged independently in advanced industrial countries, emphasizing the importance of modularizing IT projects, building in 'exit ramps' to allow partial implementations only in the light of experience, creating strong 'milestones' for assessing whether projects should continue, and in some case introducing powerful external checking bodies.

(b) In government as in private sector business IT technology costs have continued to grow despite overall cost falls and productivity gains, as the pace of technical advances has increased and new waves of technology render legacy systems obsolescent or hard to maintain. Previous implied expectations of attaining a 'steady state' condition, formalized for decade after decade by 'big bang' government strategies with IT planning periods of 10 to 15 years, have now been generally succeeded by 3 to 5 year look-aheads. As one Australian government official put it: 'Longer than 5 years it's anyone's guess where the technology'll be; shorter than 3 years, why is this a capital project?'. Instances of mega-buck, decade-long government IT development projects are by no means extinct, especially in the USA where the scale of federal government activities is immense, and in the UK where government is perhaps more centralized than any other established liberal democracy except Japan.

(c) Outsourcing in the private and public sectors has produced substantial consolidation of ownership and control of the expertise in running large computer facilities and complex IT systems worldwide (see Lacity and Willcocks, 2000a and 2000b). In the past, of course, proprietary hardware and software manufacturers always played a large role in how government IT policy developed, often working in partnerships with government staffs, albeit within a conventional procurement model. By and large governments retained their own very extensive in-house IT staffs to plan the strategic evolution of their systems, to manage development jointly with contractors, and to operate the finished systems once the development work was complete. Since the middle 1980s, however, governments have increasingly taken the view that they should get out of the business of running large IT systems directly, and have hived off this role plus much of the development role to industry

prime contractors specializing in systems integration and facilities management (see Margetts, 1999).

The largest such multi-national corporation is the Texas-based EDS, whose corporate publicity boasts that it supports 2.5 million desktops worldwide (many of them in the public sector), a role that sustains corporate business of \$33 billion in 2000, and employee numbers of 126,000 in 55 countries (EDS, 2001). In many countries the large IT systems integration and facilities management firms have acquired a dominant position in terms of controlling access to expertise. They can offer their specialist personnel better paid, more innovative and more varied professional careers than most government agencies can hope to match.

Government outsourcing has been driven by a range of additional motives - such as a concern to cut costs, political and ideological pressures for downsizing government, purchaser/provider separation ideas in new public management, and the bureau-shaping strategies adopted by senior civil servants and public sector managers. Government rules (in Europe EU rules) on the transfer of undertakings often effectively debar any but the largest firms from taking over large government IT centres and their attendant staffs. The end result of these developments has been that in all liberal democracies changes in government IT policies are powerfully conditioned now by the behaviour of private sector firms, in most cases very large multi-nationals operating in market environments that are not usually intensely competitive.

(d) The development of new public management (NPM) ideas in many liberal democracies stressed the assimilation of public sector organizations into a claimed general business management model, focusing on disaggregation, competition, and incentivization (Dunleavy, 1994). An important focus of NPM was on 'best practice research' (Overman and Boyd, 1994), with examples of innovations that worked being pulled out of context in many different countries, regions and tiers of government and assembled into formulaic blue print manuals (for instance, Osborne and Gaebler, 1992). The cross-flow of ideas involved in NPM, and the difference amongst some its variants (such as market liberal, 'residualizing' versions or the more 'humanized' approaches) have been well explored elsewhere (Dunleavy and Hood, 1994; Hood, 1996). As public managers embraced a new ethos of business units and tight corporate management focusing on financial bottom lines they also extensively accepted arguments that government should cease to be involved in activities where it was not 'best in world', and instead focus on 'intelligent enterprise' roles, steering not rowing. This change too had important implications for government IT outsourcing, but more

importantly for the older tradition of governments and administrators seeing public sector administration and public sector systems as *sui generis*, different in kind from private sector applications. Increasingly NPM suggested that government sector business practices should be run in a directly analogous way to similar kinds of work in the large corporations sector.

The possible implications of these trends for cross-national and cross-sectoral policy learning, standardization or even globalization have been seen very differently by competing schools of thought. Conventional ('new') institutionalist approaches, which predominate in the neo-pluralist political science mainstream, stress the importance and distinctiveness of established political, administrative, and professional institutions (March and Olsen, 1976; Cohen et al, 1983). They celebrate the capacity of human institutions to respond to and absorb what might seem standardizing pressures in a wide variety of functionally equivalent ways. Hence they focus on path dependencies, and on the ability of established organizational cultures to filter, fragment or divert developments. Previous work on IT systems in government has strongly suggested the inadequacy of technological determinist approaches (Margetts, 1999), which forecast that in and of themselves the advance of computers and automation would produce pre-determined and common organizational responses. Institutional authors both forecast and detect a continued history of differentiated government policies in their uses of IT and in the ways in which technological and organizational changes around information acquisition and processing will interact with existing patterns of political, administrative, ideological and cultural power.

By contrast approaches influenced by Weberian sociology and mainstream economics identify greater commonalities of response, and much more limited options for institutional patterning of common trends to produce highly differentiated outcomes. The long swing of processes fostering the rationalization and bureaucratization of society which lead to the growth of government and corporate hierarchies have not gone away. The logics of efficiency, the relentless pressures for least cost solutions and for enhanced functionality, operate strongly in governmental as much as in private sector contexts. The ecological linkage of one public sector activity with all others via the budget and centralized allocational institutions (like parliaments or Congress) creates pressures for competition within and between governments which are different in kind from those in the private sector but not a priori less real or effective in their impacts (Breton, 1998). The greater difficulties in developing and evaluating efficiency- or effectiveness-enhancing solutions in many public

sector contexts, and the ‘inorganic’ generalization of public sector management changes produced by political influences can make these processes more complex or dialectical than in the private sector. But the underlying logic remains one of the rationalization of society in which we should expect to see similar if not uniform paths being taken by advanced liberal democracies. The Niklaus Luhman ‘autopoiesis’ variant of this view adds a stress on the differentiation of society into more specialist sub-systems with their own autonomous logics, which articulate with but are not controllable by outside sub-systems, even those still making overarching claims like the political sub-system. This whole line of argument suggests a much more limited potential for distinctive national institutional arrangements to produce a differentiation of policy, and perhaps not for long, with an underlying ratcheting through of combined socio-economic-technological changes in relatively standard ways. In IT policy terms this viewpoint predicts strong policy learning and transfer processes, perhaps mediated extensively by companies, and a the evolution of only a limited range of common approaches.

The radical Weberian approach takes this diagnosis somewhat further, detecting a ‘McDonaldization of society’ (Ritzer, 1993) in which rationalization and globalization processes begin to decisively erode the genetic diversity of regional or local cultures, of social arrangements and of national government policies. A constantly changing but relatively evanescent and non-fundamental display of diversity may float rather epiphenomenally on the surface of a much more powerful and more insistent processes advancing the homogenization of cultures, social arrangements, economic policies and government strategies. In IT policy terms this viewpoint predicts a strong push towards more uniform government IT systems, with multi-national corporations expanding their influence from IT operations alone into wider back office tasks, and essentially advancing the generalization of solutions developed in the private sector into government (Dunleavy, 1994).

2. Institutional structures, NPM trends and IT contracting

Britain

The UK has been the home ground of government-wide ‘new public management’ (NPM) initiatives for nearly two decades now. Conservative governments strongly promoted successively compulsory competitive tendering, strategic review and market-testing and then

the Private Finance Initiative (PFI) from the middle 1980s through to the change of government to Labour in 1997. These policies were applied with particular intensity and in a state-residualizing way to IT by the Conservatives. In 1994, William Waldegrave, then minister with responsibility for public service, said that information technology development was an area ‘from which it was best for the Government to withdraw’ (Treasury and Civil Service Select Committee, 1994: xvii). The Blair government after 1997 removed some of the emphasis upon outsourcing at all costs and stressed a case-by-case approach, greater staff involvement and a more humanized NPM approach. But ministers largely shared the Tory presumption that the private sector was more specialized and competitive in managing large IT facilities and development projects than government could be.

Senior civil service backing for this stance was readily given because of the perceived risks and difficulties of directly managing in-house information systems development. Several high-profile IT disasters in the 1980s and early ‘90s in the National Health Service more or less induced a stasis in information technology in the hospitals sector during the 1990s, with few senior managers there ready to stick their necks out by launching in any way innovative projects. In Whitehall more generally departments and agencies found it progressively harder to recruit and pay qualified IT development or even maintenance programming staff compared with consultancies and specialist IT firms. This trend intensified as the outsourcing market grew in both the public and private sectors. Senior officials responsible for existing IT systems were only too ready to consider contracting out in the early 1990s and PFI or public-private partnership (PPP) deals in the later 1990s, as methods for freeing them from direct responsibility for these ‘poisoned chalice’ tasks. ‘Public sector comparators’ were supposed to be used to evaluate savings from replacing in house staff with company provision. But these speculative internal estimates were almost always constructed very conservatively, projecting forward existing cost patterns and making little allowance for technology advance or new working methods, so that they that almost always produced large nominal cost-savings from introducing outsourcing. All these pressures meant that the spending contracted-out to companies rose from 23 per cent of all civil service IT budgets in 1993, to 30 per cent in 1995, and a projected 54 per cent in 2000 (*Computer Weekly*, 25 February 1999). Thus the outsourcing ratio doubled in less than a decade.

Government IT contracting relationships in the UK showed other strong trends, with the size and length of contracts increasing dramatically by the late 1990s. The previous 5 year average contracts were replaced by deals lasting 7, 10 or even 15 years (see Table 1). The

scale of the deals also moved from the separate contracting out of particular data centres of facilities to the wholesale privatization of departments or agencies biggest and most fundamental systems. The scope and depth of corporations' involvement changed from conventional procurement deals for limited facilities operation to strategic partnership contracts vesting almost sole responsibility for developing and managing departmental or agency systems with the contractor. Civil service IT staffs dwindled in most cases into small advisory or contract management groupings. Public sector agencies embarked on radically new types of relationships with private sector companies, including set-ups where contractors obtain a share of extra revenues generated or savings achieved under an entire systems integration strategy. In the newest PFI and PPP contracts businesses compete to buy central government IT facilities and take over most of their accompanying staff (and liabilities) in return for a future stream of micro-payments triggered by each government use of the system (for instance to process a payment, look up an index number or handle an interaction with a citizen). Because contractors' payments thus depend on the system being available and in use, their interests are hence supposed to be 'aligned' with the agency rather than against it. The PFI and PPP processes are claimed to 'transfer risk' to private-sector providers, especially in the design and implementation of new systems. Previous cost over-runs and delays in the public sector are supposed to be avoided by more incentivized companies with a direct financial stake in timely delivery on cost. All these influences produced a pattern of government-industry relations very distinctive in terms of the financial size, wide scope and lengths of contracts - and the high industrial concentration achieved. Table 1 shows the fifteen largest contracts running in UK central government in 1999-2000, all bar two of which were shared by just four major companies.

In fact these radical changes did not bring with them a clearly stable new pattern of relationships. The new forms of contracting have not clearly proved any easier to manage or less prone to major setbacks than the conventional procurement which preceded them. A contract by Anderson Consulting for a new National Insurance number ran into immediate problems after the government accepted a bid from the company almost half that of other tenderes and a quarter of the public sector comparator case. Despite being almost immediately renegotiated the PFI deal involved was initially seen by an audit office report as offering good value for money (NAO, 1997) only for the contractor to stop operating the old index system as planned, but then not bring the new system into place for almost a year. During this long gap benefits and pensions were being assigned by the department to citizens

Table 1: Top fifteen information and communication technology contracts in UK central government, ranked according to their annual value in 1999-2000

Parent department	Agency or Corporation	Supplier	Contract period (years)	Annual value (£m)
Treasury	Inland Revenue	EDS	10	250
Department of Social Security (DSS)	ITSA (Information Technology Services Agency)	EDS	10	125
Trade & Industry (DTI)	Post Office	ICL	10	75
Treasury	National Savings	Siemens	15	67
DSS	Benefits Agency	Sema	5	61
Treasury	Customs and Excise	ICL	10	50
Employment and Education (DfEE)	Employment Service	EDS	10	30
Environment, Transport & Regions (DETR)	London Transport	EDS	12	25
Home Office	Passport Agency	Siemens	10	23
Home Office	Prison Service	EDS	10	20
DTI	DTI IT	ICL	10	20
DSS (later moved to Inland Revenue)	Contributions Agency	Andersen	7	19
DETR	DVOIT	EDS	5	14
Lord Chancellors Office	Court Service	CSL	10	13
DETR	CAA	EDS	10	10

Source: Kable.direct.com, Kable's subscriber only service; SPP database compiled from Kable data and from trade press. For more details see Bastow et al, 2000.

without full information on their contributions, at a cost yet to be assessed. Another deal between the Passport Office and Siemens was mismanaged, producing a crisis of public confidence and an almost complete breakdown in the agency after huge and escalating delays in issuing passports (NAO, 1999b). And an ill-conceived smart card scheme for issuing benefits involving the social security department, the Post Office and ICL collapsed in 2000, with public sector losses running into tens of millions (NAO, 2000b).

Even where deals stayed in being and delivered on time there have been huge extensions of government's financial exposure, produced by renegotiation of additional elements for deals, or changes of the original contract specification in response to new policy

initiatives. In late 2000 a leaked memo from a company awarded a £100 million defence contract after competition showed that its executives expected to gain a further £400 million of negotiated business. And an NAO investigation of an Inland Revenue outsourcing deal with EDS, initially hailed as offering very substantial cost savings compared with a public sector comparator (NAO, 1995) showed that the initial £250 deal over ten years had already swelled to a total commitment of £1 billion, produced by policy and legislation changes, such as the introduction of income tax self-assessment and the requirement to develop internet filing of tax forms (NAO, 2000a).

By the end of 2000 there was mounting evidence that cost savings were proving far lower than had expected, that IT project management remained inherently risky under the new arrangements and that the risk of catastrophic failure was inherently incapable of being transferred away from government by PFI or PPP arrangements. The government introduced new and strengthened e-government procedures, mainly to encourage agencies to go online (see section 3 below) but also to prevent obsolescence. A new agency the Office of Government Commerce (OGC) was set up to vet all IT deals (and also PFI and PPP contracts more widely). OGC essentially requires projects to be externally assessed at three critical 'gates', which build in exit ramps allowing non-functioning or overly risky projects to be cancelled. The new procedures have been ruthlessly applied to some politically sensitive projects, and new IT contract procedures have been developed by the Cabinet Office acting jointly with Treasury and the audit agency NAO. These stress the importance of modularizing contracts, avoiding 'big bang' schemes and reducing dependence upon proprietary systems in favour of more incremental changes and more open standards which can sustain future competition. These arrangements are still in their infancy but they have had little impact upon the market for government IT, which remains one of the most concentrated in the western world, with the top five or six firms controlling about nine tenths of the market, and EDS alone almost three fifths.

Australia

The new public management influence in Australia shows two distinct stages. The earliest and longest lasting phase took place under Labour governments from the late 1980s to the mid 1990s. Vigorously denounced by the left at the time as the triumph of 'economic rationalism' over Australia's nation-building tradition (Pusey, 1992), this period now seems in retrospect a forerunner of the 'humanized NPM' tradition which ran on from the Hawke/Keating

administrations to resonate also in Clinton's NPR period and to crop up again in 'third way' clothing under Blair (see Margetts, 1996; Castles and Pierson, 2001). In many ways managerial reforms in Canberra into the early 1990s were less ambitious but more successful and more put into effect than parallel changes in Westminster (Zifcak, 1994). Key developments included the implementation of programme management and budgeting within portfolios and the development of more outputs measures and clearer lines of departmental and agency accountability. But the residualizing elements of Thatcher's or Reagan's NPM strategies were largely absent, and the Commonwealth civil service at federal level retained a strong common sense of public service and a distinct ethos, despite some radical changes in programme implementation.

Government IT services were little influenced by the Labour NPM phase, with virtually all departments and agencies retaining strong in-house staffs for development work and most also running their own facilities. Departments and major agencies were widely seen as 'locked in' to long term procurement relationships with major hardware and software firms, especially IBM, EDS, CSC and Accenture, and changes of the suppliers or systems being used occurred only rarely. Small and medium Australian businesses felt locked out of major works. This pattern was beginning to break up towards the end of the Labour period, under pressure from the then Treasurer Beazley. Discussions between ministers and IT industry figures, in particular IBM senior personnel, lead to the emergence of a Labour policy which argued that federal government had failed to sufficiently exploit its contracting position to realize two key objectives. On the one hand, IBM convinced ministers in 1995 that large-scale economies of scale could be made if there was a greater level of integration of IT efforts across departments and agencies, with different units pooling their resources to create fewer and larger IT centres. In fact they projected savings of \$1 billion (ANAO, 2000, paragraph 2.27). This change of view coincided with a decision by the South Australian government to begin contracting out their IT government-wide in a single contract, which went to EDS. On the other hand Labour was concerned to ensure that instead of work being given pre-eminently or exclusively to multi-national corporations based outside Australia, there would be a positive spin-off for the development of the domestic IT industry, especially in the development of small and medium-sized IT enterprises. Issues of supporting home-grown industry are much more electorally important in Australia than in any of the other countries surveyed here, and so this pressure to link government procurement explicitly with 'industry development' (ID) was a key political one.

When the Liberal coalition under John Howard gained power in 1997 these emergent policy lines were subsumed into a much wider and strongly ideological effort to slim down the role of government by undertaking extensive privatizations (also foreshadowed under Labour) and major transfers of assets, especially government property portfolios and the provision of government IT. The previously separate Department of Administration was merged into Finance and an Office of Asset Sales and Information Technology Outsourcing (OASITO) was set up within the combined ministry DOFA to push through the compulsory outsourcing of all in-house government IT operations within five years. To exploit the putative economies of scale that were expected, and to make the whole arrangement more appetizing for the large MNCs who were certain to dominate the resulting forced market, smaller departments and agencies were to be clustered into need-neighbour groups by OASITO. Their IT needs would be met by letting one large contract for integrated facilities for each cluster. Small and medium sized companies were now cut off completely from any direct contractual interaction or even joint solutions or policy development work with federal government agencies, and faced an indefinite future in which all their relations with government would henceforward be mediated by the prime contractors. Their criticism and those from Labour forced a quid pro quo upon the government. The participation of Australian SMEs in the winning contracts for the new IT clusters was made a requirement. And winning contractors for the clusters had to make ID commitments to partnering with domestic SMEs, developing their exports and R&D potential, and facilitating their competitive enhancement to compete in global IT markets. These aspects were not just wish lists but backed up by an intrusive regulatory apparatus run by the Department of Communications, Information Technology and the Arts (DOCITA).

Despite the huge political head of steam behind the drive to outsource all government IT operations, and DOFA's strong administrative pressure, things worked out a long way from the OASITO blueprints. Some of the largest and most IT advanced agencies carried out their own outsourcing without getting involved in the clustering process (Seddon, 2001). Customs contracted out their systems to EDS in 1996 just before the government-wide outsourcing programme began, and one of the dominant government IT players. The Australian Taxation Office (ATO) achieved a single agency cluster of its own, again transferring staff and facilities to EDS. At a later stage the Department of Health also managed to achieve a single agency outsourcing, forming a relatively trouble-free partnership

with IBM, where a uniquely high number of government staff (80 per cent) transferred over to the new supplier.

The first multi-agency cluster consisted of a group of agencies with strong incentives to accomplish outsourcing because many of their systems were on their last legs and needed urgent replacement. Here outsourcing went ahead quite speedily and promised at first substantial cost savings of around 20 per cent. However, during implementation this cluster began to show some signs of the spiralling co-ordination costs and problems between agencies that went on to sap the effectiveness of later multi-agency clusters. The pattern of cost savings achieved favoured only the two largest out of the six agencies in the cluster, and smaller agencies found that their services levels from the new suppliers were extensively shaded or degraded. Only two later multi-agency clusters had been formed by autumn 2000 when the Australian National Audit Office undertook an investigation of OASITO's policy implementation (ANAO, 2000). The report provided solid evidence for the highly effective critical campaign mounted by the Labour senator Kate Lundy. ANAO found only negligible costs savings on the second multi-agency cluster and significant net costs in the third. Their findings seemed to back up a range of earlier studies showing that outsourcing in Australia rarely saved costs in any major way (Cullen, 1994, 1997; Cullen et al, 2001), backed up by earlier international studies showing that outsourcing to achieve cost savings rarely worked (Willcocks and Fitzgerald, 1994; Lacity and Willcocks, 2000a, 2000b). Studies explicitly querying whether the government plan could possibly work dated from the initiatives earliest days (Davis and Wood, 1998).

The co-ordination costs of assembling agencies into clusters and aligning their IT requirements also caused strong delays in the programme and an escalation of consultancy and outside expert costs, especially for the major US law firm Shaw Pitman advising OASITO, but also for the departments and agencies struggling to maintain and protect their interests in the clustering process (Seddon, 2001). A final problem was that when compulsory outsourcing was set in train ministers expected perhaps 70 to 80 per cent of existing staff with knowledge of the established legacy systems to transfer over to the new suppliers. In fact in all clusters and contracts except the Heath/IBM deal, the transfer rate was much lower, around 30 per cent, with many staff choosing to go and work elsewhere in the IT sector or to take early retirement. As a result all the new contractors encountered substantial problems in terms of losing knowledge of the inherited legacy systems (Seddon, 2001).

The uproar over the ANAO findings was considerable (see, for instance, Allard, 2000), seeming to justify long-running Labour and trade union criticisms and echoes of dissent from senior departmental managers. In response the government commissioned one of its own private sector advisors during the set up period for outsourcing to re-examine the initiative. The resulting report (Humphrey, 2000) provided fig leaves to smooth the government's exit from the policy, but essentially concluded that the clustering approach had become a disaster in terms of co-ordination costs. Humphrey also found clustering incompatible with new legislative provisions (on more New Zealand lines) which placed sole financial and legal responsibility for the development of departments' and agencies' internal organization and efficiency on chief executives alone (see Halligan, 2001; Yates, 2001; Broughton and Chalmers, 2000). Humphrey recommended that in future outsourcing should proceed on an agency-by-agency basis only and in response to chief executives' decisions about costs and benefits rather than an artificial timetable. Following the report OASITO was abruptly disbanded, the compulsory outsourcing initiative scrapped and much of the surrounding 'industry development' programme obligations watered down.

By mid 2001 the future directions of IT policy were rather muddled. Close political competition made it hard to predict who would form the next government, and it remained unclear whether several clusters which had been assembled for take-off by the now defunct OASITO would fragment or not, and whether their component agencies would pull out of outsourcing altogether. Meanwhile other aspects of IT policy tended to be neglected. All the OASITO era deals were conventional procurement contracts, which sought to achieve exactly specified service provision arrangements and levels of support. Considerable difficulty was involved in many cases in defining exactly what the contract would cover (the 'inscope' elements) and what would have to be separately negotiated and agreed upon (the 'out of scope' elements, especially changes made necessary by altered government policies or by changing administrative requirements). Partly as a consequence, by 2001 no Commonwealth agency had experimented with any more innovative contractual arrangements. Thus there were no output payments contracts, no PFI deals and no public-private partnerships. Contracts were also relatively short term, with just over five years being the norm, holding out the prospect that some of the OASITO clusters in being could begin to fragment reasonably soon.

In industrial terms the federal government market was completely dominated by multi-nationals. EDS followed a policy of concluding only single agency deals at federal

level and came out best, as well as holding its role in South Australia, lauded by the company as ‘the first whole-of-government outsourcing contract in the world’ after substantial teething problems were overcome (EDS, 2000). IBM set up a special new subsidiary IBM GSA (standing for Government Services Australia) to help meet the industry development aspects of their government contracting. They also contracted with Telstra (the privatized former public telecoms corporation) on another cluster. In due course Telstra’s new IT subsidiary gained another contract on its own. Accenture held another cluster. Small and medium firms had a mixed reaction to the experience of outsourcing. Some gained in a rather patchy way from relationships achieved with the multi-nationals. Others encountered difficulties in holding onto their independence and intellectual property under pressure from big firms. Almost all bemoaned being cut-out of links to government in the outsourcing policy’s heyday.

New Zealand

In the 1980s New Zealand leapt to prominence as an NPM pioneer, first under a right wing Labour government and then under an even more market liberal National administration (see Boston et al, 1996). The 1984 Treasury guide to governance issues became a bible of radical, residualizing NPM proponents. In 1996 the American analyst Alan Schick wrote a much cited evaluation report, commissioned by the New Zealand government, lauding the reorganizers’ achievements as fundamental reforms (Schick, 1996). The key changes in his view were threefold:

- the inauguration of full contracts between ministers and chief executives (acting on behalf of departments and agencies), spelling out exactly what activities or outputs would be delivered in return for budget funding;
- the vesting of virtually complete administrative and financial responsibility for agencies and departments in their chief executives, who served for short term-limited periods, with very strong performance-related pay incentives, and carried a mandate to assert very strong corporate management; and
- the scrapping or weakening of most of the previously existing standardizing constraints from government-wide personnel and input budgeting systems in favour of department and agency chief executives’ autonomy to set their own internal arrangements so long as their contracts to ministers were met within overall budgets.

The early years of the NPM period saw developments in IT policy areas which seemed very similar to those for the UK, not surprisingly since UK advocates of NPM often looked first to New Zealand for inspiration. Central ministries and executive agencies fragmented. By 2001 the New Zealand Public Service was composed of more than 40 separate ministries (mainly small, policy level bodies) and 300 agencies, for a country of 3.5 million people. There were in addition 87 local authorities delivering the full range of local government services. A complex pattern of relationships exists between ministers and departments (which control all the agencies). With only a small Cabinet, many senior ministers have multiple ministerial portfolios. At the same time some larger ministries have contracts with different ministers for different aspects of their work.

The streamlining changes meant that central IT procurement rules were completely scrapped, and previous efforts by the State Services Commission (SSC) to enforce some government-wide direction to IT policy elements were rolled back. The Government Computer Service (GCS), which initially had a monopoly role in running public service IT systems for departments and agencies on a fee basis, was put up for sale in the privatization programme, and acquired by EDS. EDS had powerful incumbent advantages in hanging on to facilities management work for government, and it still retains an estimated four fifths of this market. But the legacy reputation of GCS with agencies was a poor one and tended to stick to EDS since contract relationship problems could not be smoothed overnight. So outsiders argue that the company found it itself inhibited in its ability to move out from facilities management to wider applications development roles.

The Treasury and SSC remained involved somewhat in examining larger IT projects, but in a very secondary way, since the main lines of answerability ran from the department or agency chief executive to the responsible minister, who set out the government's activity or output requirements in return for an overall budget. The expectation was that vigilant chief executives would be strongly incentivized via their performance related pay links to achieve agency outputs at lowest possible costs. They could be safely left to determine in the light to the best available information which IT strategies and developments would best enhance their organization's capacities and interests.

During the 1990s, however, this strategy progressively fell apart and the multiply reformed NPM administrative arrangements began to behave in ways completely different from the UK. One problem was that the corporatization of public service management and encouragement of entrepreneurial, top down, personalized styles created predictable

problems of 'rogue' chief executives. Some officials played the performance related pay schemes for their own advantage; others dominated their ministers or boards for a time; and some engaged in 'pet' schemes with little by way of internal controls. Public policy outcomes in New Zealand were also seen by the public as extensively degraded, with a pervasive emphasis on cost-cutting leading to a coarsening of public service delivery, subtle forms of quality shading, user charges increases and the withdrawal of agency access points from large areas of the country (in favour of variably efficient call centres). Combined with periodic political reorganizations in response to public dissatisfactions there was also relatively little fundamental service or administration re-engineering after the early 1990s and a complete absence of joined-up governance, both ideas apparently far too threatening for the established administrative fiefdoms of chief executives.

In IT policy areas these changes were combined with one major IT development project disaster, the INCIS law and order system supposed to be developed by IBM for the national police. It was intended to replace the police aspects of a previous integrated law and order system (accessible to police, the probation service, the courts and prisons), once a pathbreaker in facilitating network communications across agencies but now creaking and hard to maintain. The INCIS project cost \$NZ 203 million initially, but was abandoned after the client kept changing their requirement specification and IBM managed the project weakly. Agency chief executives responded to this highly public debacle, played out over several years, by strengthening the tendencies already emergent in the system. The cautious line lay in - keeping down IT procurements to the smallest feasible modules; contracting for short periods of 3 to 5 years; maintaining at least two contractors working in competition with each other on all development work; investing heavily in private lawyers and IT consultants to draw up, vet and negotiate every deal; and spending a lot of time during contracts' operation ensuring a clear audit trail that would leave the agency and them personally procedurally in the clear and untainted by any suggestion of impropriety.

The end result has been that by 2001 New Zealand's IT policy configuration could not be further away from its erstwhile NPM partner Britain. Contracts remain ultra traditional in approach, short term, with strong agency controls and a focus on only incremental work. The New Zealand public service remains heavily dependent upon three major legacy systems, covering taxation, social welfare payments and the remains of the previously integrated law and order system, now nibbled away by the growth of separate agency systems. Each of the legacy systems is degrading gently, becoming harder to maintain, patched for new policy

demands and changes (which remain incessant), but not fundamentally re-conceived for modern IT capabilities. Public service networks are complex although most desk tops are relatively modern and similar in age to equivalent private businesses. In Wellington's small and government- and banking-focused world there are extensive direct contacts between politicians, senior civil servants and the top staffs of major firms (especially EDS, Accenture, and Unisys, but not now IBM). But despite these close linkages and concerted pressure from the country's IT industry pressure group, New Zealand central government has yet to conceive let alone launch a single PFI or PPP project, or to introduce any output-remunerated contracts (see ITANZ, 1999). Industry sources speculate that the stagnation of IT contracting approaches and system renewals will extend almost indefinitely. Only possible steps towards a re-centralization of administration which might follow a second victory for the Clarke-lead coalition might hold out a prospect for some major change.

3. E-government strategies

Britain

Under the Conservatives central government became more fragmented, with agencification affecting nearly four fifths of civil service departments' personnel by the late 1990s, and with progressive reductions in the supervisory roles of central departments. Central IT policy machinery was largely 'streamlined' out of existence and ceased to be part of Treasury's remit. By 1996 only a small Central IT Unit in the Cabinet Office was left to try and influence government-wide policy, and it issued an ideas paper suggesting that what is called 'government direct' processes would be more important in the future using call centres, and perhaps the Internet. In autumn 1997 the new premier Tony Blair used his Labour conference speech to pledge that by 2002 at least 25 per cent of all government interactions with citizens would be 'electronic'. By April 1999 the *Modernizing Government* white paper put in place later targets of 50 per cent 'electronic' interactions by 2005 and 100 per cent by 2008 (see Dunleavy, Margetts et al, 1999, Parts 1 and 4).

At the end of 1999 an NAO study *Government on the Web* showed that this apparently rapid conversion to Web-enabled administration was more skin deep than it looked, with huge roadblocks and bureaucratic inertia in some departments (Dunleavy, Margetts et al, 1999). The 'electronic' targets were defined by Whitehall to include phone

calls, electronic data interchange (EDI) systems and electronic transfers to bank accounts (many of which had been in place for twenty years). Targets also referred to capabilities for electronic transactions not actual take-up, so that the Treasury for instance boasted a 100 per cent capability figure but had zero take-up. Actual internet transactions were very small percentages for most departments, but none the less virtually all agencies were already meeting the 25 per cent 'electronic' target two years ahead of time.

Case studies of departments showed that there were no fixed budget lines for Internet developments in many cases, with their relatively small size keeping them 'below the radar' in financial terms (Dunleavy, Margetts et al, Parts 2 and 3). Management lines of responsibility for developing government on the Web were obscure or non-existent. Although senior officials at the height of the dot.com boom were positive in expecting major changes (Dunleavy, Margetts et al, 1999, Part 1), the issue rarely made it to departmental or agency management boards. Spending on Internet developments varied from very small to non-existent, prioritization of Web developments was low, and government Web sites tended to move in spurts with relaunches followed by long static periods. Most sites were elementary with only 'brochureware' contents and low levels of usability. Fundamental re-engineering of departmental processes to respond to the Web capabilities was very rare, although a small number of business-facing agencies and others dealing with IT-literate communities (like science research councils) were moving towards being fully digital agencies, with large-scale cost savings in prospect. Elsewhere, however, the IT systems were so dated as to prevent virtually all staff from seeing Web pages on their desktop, and here Internet developments were largely put on hold, pending the implementation of 'big bang' procurements which over a period of ten years might create the right IT infrastructure.

By end 1999, for instance, only 200 out of 68,000 staff in the Benefits Agency could look at Web pages, and the agency was spending only £35,000 a year on its very basic Web site, out of a running cost budget of £2,400 million a year. This was despite the Department of Social Security sites receiving 130,000 user visits a month and having a user time on site of over half an hour. It seemed clear that many British central government agencies had severe cultural problems in adapting to the Internet era and that 'channel rivalry' problems were likely to be severe in organizations like the Benefits Agency and the Inland Revenue with still paper-based systems. The cost savings from getting rid of the re-keying staffs in these large outfits might be considerable. Even if Web accesses only displaced phone calls there were substantial savings possible - for instance, the Department of Social Security processed

at least 120 million phone calls a year at an average cost of around £2.50 each, while the marginal costs of Web accesses could be very low indeed.

In the run-up to and aftermath of the Public Accounts Committee report on this study there were major changes of government policy. An Office of the E Envoy (OeE) was established in autumn 1999 with a high profile head reporting to the PM, charged to both make Britain the best place in the world to carry on e-commerce and to marshal and direct the government's electronic service delivery (ESD) efforts. OeE appointed a lot of new staff and began work on a new government portal (called UK Online) which began operating in spring 2001 and in time came to be 'brand name' linked to all central department Web sites and a programme for improving e-access also. OeE was given a 'dual key' control over the IT investment plans of Whitehall departments, along with the Office of Government Commerce. OeE began requiring departments to submit six monthly statements of their e-government strategies, and most large agencies set up dedicated teams to meet this need and to co-ordinate and monitor their own e-government efforts. The E-Envoy also convened a group of senior civil servants called 'Information Age Champions' which attempted to meet a severe structural problem in departmental management boards, where outsourcing of IT functions to private companies often left no senior official with IT expertise or interests to represent this aspect in top decision-making. The 'champions' were largely interested officials with non-IT roles who nonetheless agreed to be board-level lobbyists for e-government within departments and major agencies. These two changes sorted out some of the previous problems with agencies having minimal or non-existent Web budgets. They clarified management lines of responsibility and secured more regular top management attention for the issue.

The government also moved forward the 100 per cent 'electronic' capability target from the distant mists of 2008 to 2005. But the Treasury and Cabinet Office essentially abandoned the old way of measuring progress against these across-the-board targets, in so doing stopping the publication of any regular statistics on government Internet transactions. Their new control mechanism ran through the OeE and the Treasury's system of Public Service Agreements (PSAs) and subordinate service-level agreements. PSAs specify output and efficiency improvement targets for departments and agencies. From mid 2000 onwards they began to include strong Internet take-up and transactions requirements for relevant implementation agencies (especially in the taxation and social security areas), as well as productivity gains difficult to meet except by developing Web-based services. OeE worked

on linking Web based systems also with cross-government efforts to boost Web-enabled call centres, IVR (intelligent voice recognition) systems, and a stronger customer services orientation. The need for up-to-date consumer responsiveness was dramatized in mid 1999 by the Passport Agency's almost collapse, after a cost-cutting IT system run on NPM lines went badly awry (NAO, 1999).

How far these efforts have succeeded in turning around the prospects for e-government remains difficult to assess in mid 2001. Central supervisory systems in British government have been strengthened and previous very weak targets improved. Departments and agencies are assigning more priority to e-government issues even though the effective end date for the *Modernizing Government* targets remains distant in 2005. Treasury involvement with the issue has increased and there is more recognition of the need to incentivize departments and agencies to implement radical changes if need be in their methods of working. A programme of tagged incentives for local authorities to adopt Internet delivery has been put in place, costing £125 million over three years.

Yet very substantial problems seem to remain. Large numbers of civil servants and agency staff still do not have Web-compatible desktops or even effective internal Intranets. Fundamental re-engineering of administrative processes to facilitate electronic services delivery is lagging far behind, with excessively complex and hard to maintain systems still in place and pervasive paper-based processes. Ambitious targets for some prominent Web-based schemes have slipped badly. For instance, the aim of getting 600,000 taxpayers to submit self-assessment forms online faltered after Inland Revenue software proved essentially unuseable and a private sector stop-gap had to be substituted. Actual electronic submission rates are projected at less than one twentieth of the target for 2000-1. And many government Web sites continue to show signs of being weakly managed, with static appearances and contents, little development of more interactive features, and few online transactions. Progress in local government also appears to be very slow. The private sector 'dot.bomb' slump also seems to have produced a marked cooling off in senior administrators' assessment of the potential of Web-based services for government.

These mixed or disappointing e-government indicators have come to co-exist with slow and problematic progress on the e-commerce side also. Ambitious targets for government to do 90 per cent of its contracting via e-procurement have been quietly shelved by OeE after being missed by a long way. E-commerce in Britain has been held back by the very slow development of flat rate charges for Internet access amongst telecoms providers.

Both here and in the development of broad-band services, very weak and late interventions by the government telecoms regulator Ofcom against the monopoly owner of the local link services (British Telecom, privatized in 1983) seem to be partly responsible. The UK is now unambiguously lagging behind other countries in broadband access levels, and Internet use by consumers has slowed. Only the expansion of Internet banking and broad maintenance of B2B transactions seems particularly hopeful for the government's e-commerce aims.

Australia

The Liberal coalition government launched Internet issues prominently in 1997 when the Prime Minister John Howard pledged that by the end of 2001 'all appropriate services' would be available on-line via the Internet, with early dates for e-procurement changes to be implemented. By mid 2000 the social background was pretty supportive, with 34 per cent of Australian households having home Internet access and 57 per cent PCs (Canberra Connect, 2001, pp. 10-11). Nearly three fifths of businesses had internet access, especially larger firms. The National Office of the Information Economy (NOIE) was charged both with developing the Australian push into e-commerce and with promoting e-government (DOCITA, 2000a, 2000b). NOIE gained only a restricted budget for background work to ensure interoperability and common Web standards amongst government sites and some piloting work (NOIE, 2001). Some small-scale efforts have been made to facilitate linkages with the 6 state and 2 territory governments which actually carry on most of the services that citizens interact with or use day to day. Links beyond the states to local government have remained almost undeveloped, and are anyway difficult constitutional terrain for the Commonwealth agencies to operate in.

The de facto lead in Internet developments was set not by NOIE but by the large already IT advanced departments, especially ATO, the Customs and Centrelink, the agency delivering labour market and social welfare services across Australia (NOIE, 2001). ATO first pushed ahead electronic filing of income tax and later goods and services tax (GST, the Australian equivalent of VAT) by businesses and by tax practitioners on behalf of personal clients, and later developed direct E-filing by citizens. By 2001 seventy per cent of income tax forms were being filed on line in one of these ways, and ATO had successfully promulgated a new Australian Business Number for companies and enterprises as part and parcel of the introduction of GST. The ABN will form a component part of a well-advanced PKI (public key infrastructure) certification system which the banks are expected to launch

jointly in 2002, a step that should boost e-commerce in the private sector and assist e-procurement with government.

Similarly the Customs moved in the late 1990s to accepting 90 to 95 per cent of their caseload from businesses using private networks directly or smaller firms using agents and intermediaries similarly hooked up to Customs systems. A second stage, Web based version of e-filing (the Cargo Management Re-engineering project) developed by Customs with EDS is due to go live in 2003, and will replace the previous multiple routes in running via a private sector-run 'hub' with direct Web linkages with Customs databases. Finally another large agency, Centrelink runs a Web-based jobs placement service that has regularly been amongst the most heavily used Australian Web sites and offers nationwide details of vacancies updated daily.

Beyond the core of key agencies, Australian government's progress onto the Internet shows a more mixed picture. Virtually all agencies have extensive Web information, and most forms can be downloaded on line. But relatively few agencies present data in a more accessible or search-based form, and still fewer exchange information with citizens or enterprises, allow full on-line transactions. Some smaller agencies are still rushing to implement the basic 1997 pledge that 'all appropriate services' should be on-line by end 2001. The great mass of agencies have not implemented the requirement restrictively - partly because agencies have to account for exceptions. The federal government has a useful locator site and is in the process of implementing around ten intended portal sites, which re-present information to particular target groups of clients (such as the 'business entry point') or for groups of related policy areas (such as culture and tourism). So far these sites have been pretty unsuccessful in giving seamless information, with erratic contents and somewhat clunky operation.

Industry and government interviewees say that it is difficult to avoid the impression that the furore over the Howard government's legislated initiatives, plus a moderately active lead up to the Y2K renewal date, have combined to displace attention from the original 1997 e-government agenda. NOIE's 'government online' Web site has been fairly static for nearly two years, and without a follow-through budget and greater clout in central administrative processes its impact has been small. Although e-commerce and e-government programmes are both nominally influenced by NOIE, in practice there are other powerful departments and agencies whose involvement and agreement is more important, especially DOFA and the trade and industry agencies. Without the progress made by the large tax agencies, Centrelink

and some arms of state government (such as an integrated Web/phone/shopfront effort launched by the Canberra ACT government), it would be easy to see Australia as falling back from its pioneer e-government status to become a slightly complacent and strategy-less follower of a wave now led from elsewhere. The achievement of any joined-up governance objectives via e-government programmes seems particularly unlikely to show much progress. The possible break-up of the OASITO artificial clusters, and the stress chief executive's autonomy, both suggest moves in a fragmenting direction within the Commonwealth tier. And federal/state initiatives on joining up are likely to remain scattered, episodic and hard to predict, partly because of the strong partisan differentiation between Labour and the Liberals and the usual divided control of government across the federal and state levels.

New Zealand

Progress towards e-government has essentially been tardy, despite the presence of some factors which should have facilitated rapid change. New Zealand is located more than 1200 miles away from any other substantial centre of population, and in overcoming this distance problem its population have historically been very progressive in adopting communications innovations. Telephone services are generally good and PC familiarity was high by the mid 1990s, so New Zealand had one of the fastest take-ups of Internet use by both businesses and households, despite problems in providing access to remoter parts of the country. The home internet penetration rate reached 40 per cent in 2000 (Ministry of Social Policy, 2001, p. 92), and is especially high amongst non-pensioner households (49 per cent) and in the two main cities, Auckland and Wellington, whose metropolitan areas account for around half the country's population. As a small country with an agriculturally based economy confronting poor terms of trade and slipping rapidly down the OECD rankings, and with a favourable social culture and the great advantage of speaking English as a native tongue, New Zealand might have been expected to identify e-commerce opportunities as important by the later 1990s. New Zealand's policy elites were certainly made aware early on of Singapore's strong commitment to e-commerce and e-government, of the Irish government's success in attracting IT investments, and of the Finnish government's strategy for economic renewal (Minister for Information Technology's IT advisory Group, 1999). An early policy document explained the Internet's significance for New Zealand as being 'the freezer ship of the 21st century', in terms of allowing products to be exported more easily (NZ Ministry of Commerce, 1998). But the Liberal-lead coalition government elected in 1996 gave the issue

scant attention and e-government none at all. Nor was e-commerce an early priority for the incoming Labour-lead coalition in 1999, pre-occupied with its social agenda.

In the event the Ministry of Economic Development began a slow process of gathering political and administrative support for e-commerce initiatives, and in mid 2000 the State Services Commission (SSC) also set up a unit with around 40 staff to develop a separate e-government strategy, reversing years of disengagement of the centre from IT policy issues in favour of agency autonomy. The strategy was eventually unveiled only in April 2001, approximately four years after the UK and Australian political initiatives and more than five years after Singapore (NZ State Services Commission, 2001). It is essentially a kind of indicative planning or framework document, with agencies exhorted to consider Internet- and Web-based systems and to work together jointly, but without their being *any* additional or tagged budget line for such developments. Meanwhile SSC's e-gov unit is working away on a raft of background issues, co-ordinating the development of government-wide meta-data and Web protocols, fostering inter-operability standards, working on a government portal to arrive in mid 2002, addressing PKI (public key infrastructure) issues, and encouraging the development of e-procurement. Some IT industry people are sceptical that much will come from such work, arguing that unless it is closely linked into what agencies and ministries are doing on the ground it risks becoming worthy but non-relevant - because supply-side factors in what agencies are trying to do and demand-side factors in how citizens respond are constantly changing.

The Wellington civil service generally recognize that their Web provision has slipped behind leading countries and confronts some key problems. Without developmental budgets the SSC is highly reliant on agencies integrating Web delivery into their service modernization plans. The official policy line stresses that multi-channel delivery will apparently always persist into the future and apparently for all agencies, suggesting that paper-based, call centre services, pre-Web electronic linkages and Internet-based services will all endure, despite the obvious cost control problems in this stance for agencies with tight budgets. Existing objective evidence suggests characteristic problems (NZNAO, 1999, Appendix 2) Officials looking on the bright side tend to point out that agencies have well-developed cost accountability structures, and have begun to acquire more output-orientated information. They also have relatively modern IT systems and the system of accountability means that chief executives are incentivized to pay attention to SSC and moderate governmental support for e-government to develop. Virtually all our interviewees also

pointed hopefully to a New Zealand tradition of being early adopters of innovations, the ‘quick Kiwis’ syndrome (see Ministry for Economic Planning, 2000, p. 3). Some also felt that the experience of more or less constant administrative reorganization over nearly two decades suggested that channel rivalry resistances will be lower in their case than for larger countries. However, few foresaw substantial opportunities for cost-savings (given earlier relentless pressure on agency costs) leaving the rationale for e-government changes very dependent on realizing service extensions or quality of service provision improvements.

The chief opportunity for radical cost-savings via e-government in New Zealand would now appear to lie with a re-centralization and re-integration of public service agencies into a much more streamlined and less fragmented structure. There are some early signs of such a change already apparent in the social welfare area. The government portal plan promises a seamless access for citizens who will no longer need to understand the pattern of organizations behind services. But even in areas like encouragement of new business start-ups or e-commerce little progress has been made in achieving the effective integration even of information provision, let alone of approvals and regulation (see Ministry of Economic Planning, 2001). And despite the successive withdrawal of agencies from having outstations in rural areas, there are no one-stop shop schemes in prospect in the public service. Past efforts at agencies joint working have not been very successful, reflecting the problems discussed by Bardach (1999). Achieving joined-up governance via Web-based services is undoubtedly the major area where cost-savings and service improvements could be made, but change here will battle against a conflicting NPM tradition, with an accumulated momentum of nearly two decades. It would rarely be rational action for an agency chief executive to recommend the winding up or re-integration of her organization into a larger neighbour. In addition New Zealand’s important local government tier is lagging behind in terms of Web developments and efforts to link between centre and localities are only just beginning. Other restrictions on change are likely to be the resistance to any single government ID number (following the patterns in the USA and UK) and strong privacy law constraints on data-sharing between government agencies.

In 1993 the right-wing UK Institute of Directors celebrated ‘New Zealand; The Turnaround Economy’ as a paradigm of market liberal change. The IOD chief executive argued that ‘all the world will benefit if the New Zealand model is followed elsewhere’ (Prebble, 1993, p.2). But by summer 2001 the OECD ranked New Zealand 23rd out of its 26 members in terms of GDP per head, with only Greece and Turkey among non-micro states

ranking as less economically developed. ‘The gap between our living standards and those of other developed countries continues to widen’ recognized a leading opposition parliamentarian in 2000 (Upton, 2000). The opportunities for exploiting the country’s English-language base in developing e-commerce may soon begin to fade away. Chinese is expected to be the fastest-growing perhaps new dominant language group on the Internet by 2005-7, a change favouring Singapore and Hong Kong, both running already strongly developed e-commerce pushes closely linked to much more forceful e-government and e-access strategies. It seems hard not to conclude that New Zealand’s too little, too late and too fragmented response has been caused by an accumulation of adverse by-product effects from its long NPM period.

4. Discussion: Key influences for and against policy change

To pull together the findings from the three countries and two aspects of IT policy-making, we first present a synoptic summary of the cases in Table 2. We also add into this table the equivalent bare details from similar work which we have carried out for the same project in the Netherlands and the USA, but which space constraints prevent us from setting out in more detail here. Obviously with only three detailed cases, and two more where readers will have to take our summary characterizations on trust, the scope for a formal hypothesis-testing approach on classic lines is restricted to just a few variables. Yet the case studies make clear that in fact there are many different, relatively complex influences upon the evolution of government IT policies.

The last two columns of the Table address this problem in a modest way, drawing on more detailed information which we have about variations *between* agencies in each of our five countries but which space constraints prevent us from setting out systematically here. The penultimate column shows the association between variables and the level of change in the contracting regime towards outsourcing or non-conventional procurement methods like PFI or longer-term contracts. The last column shows the association between the variables and the extent of change towards an e-government model. We identify three types of associations, shown diagrammatically in Figure 1. With a positive association a move from low to medium to high on the independent variable will foster change.

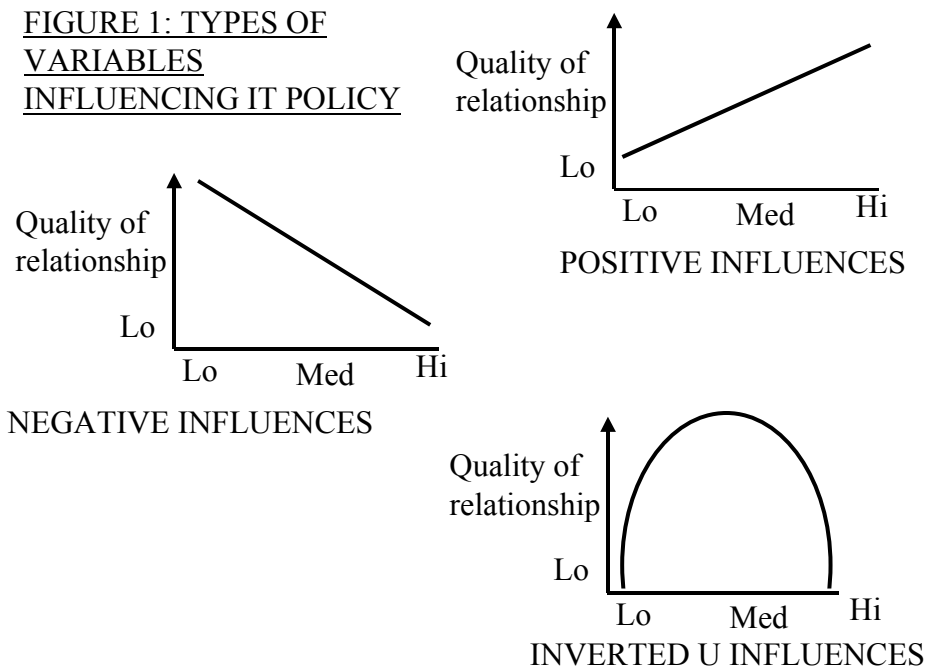
Table 2: Summary results of case analyses for five countries, mid 1990s onwards

Basic aspects	UK	Australia	New Zealand	USA	Netherlands	Association with contract regime change	Association with e-government change
Scale of government	high	medium	low	high	medium	Positive	Nil
Institutional fragmentation	medium	medium	high	high	low	Negative	Negative
Extent of NPM changes	high	high	high	low	low	Positive	Negative
Centralization of IT policy change	medium	high	low	low	medium	Positive	Positive
Political involvement in IT policy	medium	high	low	low	medium	Positive	Positive
Cultural acceptance of change (in public sector, and in society)	low	medium	high	high	medium	Nil	Positive
Industrial concentration in government IT market	high	high	high	low	medium	Positive	Inverted U
Formality/adversariality in contracting and project design	low	medium	high	medium	medium	Inverted U	Negative
Contracting policy							
Level of outsourcing	high	high	high	medium	medium		Negative
Use of output contracts or PFIs etc	high	low	zero	low	low		Nil
Efficacy/stability of contracts regime	low	low	medium	medium	high		Positive

Basic aspects	UK	Australia	New Zealand	USA	Netherlands	Association with contract regime change	Association with e-government change
E-government							
Change since mid 1990s	medium	high	low	medium	medium	Nil	
Institutional fragmentation	medium	medium	high	high	low	Negative	Negative
Importance of government-wide policy	medium	low	low	low	medium	Nil	
Joined up governance potential	high	medium	low	low	high	Positive	

With a negative association a move from low to medium and high on the independent variable will constrain change. And with an inverted U association, a move from low to medium on the independent variable will foster change, but a move from medium to high will constrain change.

FIGURE 1: TYPES OF VARIABLES INFLUENCING IT POLICY



It is apparent that although our three case study countries are all versions of the Westminster system, in relation to IT policy they have quite distinct basic settings on the most relevant basic features. They also show sharply varying outcomes in terms of contractual policy regimes, with the UK moving heavily to new forms of long-run contracting, but New Zealand moving the other way towards very small-scale and conventional procurement projects. There are some underlying tendencies, with a long-run shift towards agency fragmentation or corporatization present in all three countries, but having different contractual outcomes. In e-government there is more of an underlying convergence of approach, especially between the UK and Australia, but even here the detailed settings in Table 2 show divergences.

Before considering the USA and Netherlands two quick thumbnail characterizations of these countries IT policy configuration may be useful. The United States has a pretty

fragmented pattern of federal administration, and a more competitive government IT market with much lower levels of market concentration, facilitated by small business participation rules. There is a mixed pattern of government contracting with an old-style restrictive system based on short run conventional contracts partially overlaid by new forms, such as two tier contracts and a few mega-projects and output-remunerated, PFI-like deals. In e-government the USA shows a rapid spiralling in the numbers of agency Web sites (over 3,500 in the Pentagon alone). But there has been very slow and fractured portal development - the first effective portal project began operating only in fall 2000 after four or five earlier failures, yet cost the government only \$4 million out of its trillion and a half dollar budget. There are still huge problems for citizens in finding and using information. Fragmentation between departments and agencies at federal level is intense and joined-up governance is still a pipe dream (Bardach, 1999), although there are a few efforts to bridge the federal/state divide. But some major agency e-projects, including the electronic filing of IRS tax forms, have been very successful.

The Netherlands shows a different model again, with a pretty integrated, concerted and professionalized public sector broadly retaining its strong in-house IT capabilities while working in corporatist fashion with the IT industry and delivering services with a strong citizenship orientation. Contractual arrangements remain pretty conventional but are non-adversarially run, with generally high effectiveness and only very rare IT policy disasters or failures. The movement forward on e-government is well advanced, with developed public sector intranet infrastructures in central government and innovative, proactive uses of services coming into action. Some areas of administration (like local government) are still lagging. However, e-access policies to combat the digital divide are well developed.

Adding in these two additional countries shows that the complex patterning of influences in our three case study countries recurs, with different but apparently functionally equivalent pathways and combinations. For instance, the reduction of risk and alignment of contractor and public agency interests which the UK seeks to achieve via PFI deals and output-remunerated contracts is achieved in the Netherlands 'polder model' by close working between public officials and companies, an extensive use of a mix of professional expertise sources, and more effective strategic planning within government (including always an IT dimension).

Turning to the final two columns of Table 2, among the eight basic aspects variables there are few that align simply with both kinds of change in contracting regimes and towards

e-government. The strength of political influences for change is a strong positive association in both cases, as is the extent of machinery for centralizing or concerting IT policies across central or federal departments. Similarly the level of institutional fragmentation of government is negatively associated with both main changes analysed here. The extent of NPM changes has different effects: it is positively associated with contractual regime change but negatively with movement towards e-government. We have argued elsewhere that NPM's disaggregation, competition and incentivization emphases clashes systematically with the emphasis of effective e-government and e-democracy trends on open government, joined-up working and a genuinely learning customer orientation throughout an organization (Bastow et al, 2000). The scale of government linked to country size is positively associated with contractual change but not clearly with e-government. Cultural predispositions towards change seem to influence the rate of acceptance of e-government but not of contractual change.

Perhaps the most interesting variables, showing the most complex impacts on policy change, are industrial concentration and the formalization of contractual relations. The greater the power of large firms the more contractual change was likely, and they have clearly benefited from such shifts in all the countries we studies, and been harmed by contractual stasis where it has occurred. But large firms generally have a poor reputation for knowing about or caring about e-government issues. This is not their area of expertise and they tend to emphasize large-scale back office redesigns as a sine qua non for e-services to develop (Whittaker, 2000), rather than favouring creative, incremental change. Thus a medium concentrated industrial pattern has been better for e-change.

The existence of a style of contract relationships which is adversarial and highly formalized clearly has negative impacts for e-government change, which requires creative relationships. But in contracting change another inverted U appears. Moving from weakly formalized contract deals, such as those prevalent in the UK before OGC, to a more disciplined environment with greater awareness of interest clashes and equitable relations between client and contractors, helps the process of contractual change by building mutual confidence. But moving from medium formalization to a more 'paranoid' style, as in New Zealand and some still operating older US processes, can create a stasis in contracting and an over-fragmentation of contracts. One senior business figure aptly characterized the difficulties of striking a constructive balance here as akin to achieving the elusive right parenting style. Children's behaviour can be adversely affected by many different parenting

styles ranging from overly-repressive, to lax and indulgent, or variable and inconsistent. Finding the effective mix in this array of possible mistakes requires constant vigilance and corrective action.

Conclusions

Referring back to the varied policy learning and transfer scenarios outlined at the end of Part 1, we can conclude that the initial characterization of government IT decision-making as an intermediately globalized or internationalized policy sector stands up well to analysis. Despite the centrality of IT development trends for modern business and government organizations alike, their omni-presence as a factor of change and as a conditioning influence on organizational capabilities, the strong homogenization and standard-pattern globalization foreseen by radical Weberian views remains hard to detect. Distinctive institutional influences and patterning remain important across countries and tiers of government, partly reflecting the complexity of influences shown in Table 2 and the presence of many different policy configurations capable of satisfying underlying functional requirements (for levels of cost outlays, efficiency and effectiveness, responsiveness and service modernity) appropriate to differently situated governments. But this diversity does not validate institutionalists' over-claims for the importance of unique path dependency, or for the ability of political and administrative systems to stand out against near-universal trends in advanced industrial countries at acceptable cost. There is clearly a strong underlying rationalization push consistent with the basic Weberian view of social development, which operates to ensure that restrictive limits and penalties attach to most of the range of choices that polities can make in this field. Governments still make their own IT policies, but not as they (alone) choose.

NOTES

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REFERENCES

- T. Allard, (2000) 'Paid \$1m a year but IT hit squad can't deliver savings', *Sydney Morning Herald*, 7 September, p. 3.
- ANAO, Australian National Audit Office (2000) *Implementation of Whole-of-Government Information Technology Infrastructure Consolidation and Outsourcing Initiative* (Canberra: AusInfo), Report No. 9. Available on: www.anao.gov.au
- Bardach, E. (1998) *Getting Agencies to Work Together: The Practice and Theory of Managerial Craftsmanship* (Washington DC: Brookings Institution Press)
- P. Barrett (2001) 'Managing and Monitoring Privatization and Outsourcing Initiatives - Challenges in Maintaining Accountability', Mimeo Speech 7 January, downloaded from: www.anao.gov.au
- Bastow, S., Dunleavy, P., Margetts, H. and Tinkler, J. (2000) 'The Advent of a "Digital State" and Government-Business Relations', (London: LSE/UCL), Paper to the UK Political Studies Association Conference, University of Manchester, 10 April.
- Boston, J., Martin, J., Pallot, J. and Walsh, P. (1996) *Public Management: The New Zealand Model* (Auckland: Oxford University Press).
- Breton, A. (1998) *Competitive Government* (Cambridge: Cambridge University Press).
- Broughton, C. and Chalmers, J. (2001) 'Reconsidering the Revolution? Australian Public Sector Administration in 2000', *Australian Journal of Public Administration*, vol. 60, no. 1, pp. 81-8.
- Canberra Connect (2001) 'Canberra Connect Marketing Plan', (Canberra: Mimeo ACT Government).
- Cohen, M., March, J. and Olsen, J. (1983) 'A garbage can model of organizational choice', *Administrative Sciences Quarterly*, vol. 17, pp. 1-25.
- Cullen, S. (1994) *IT Outsourcing: The Myths Exploded* (Melbourne: Cullen). Consultancy report.
- Cullen, S. (1997) *Information Technology Outsourcing Survey* (Melbourne: Deloitte Touche). Consultancy report.
- Cullen, S., Willcocks, L. and Seddon, P. (2001) *Information Technology Outsourcing Practices in Australia* (Melbourne: Deloitte Touche Tohmatsu). Consultancy report.
- Davis, G. and Wood, T. (1998) 'Is there a future for contracting in the Australian public sector?', *Australian Journal of Public Administration*, vol. 57, no. 4, pp. 85-97.
- DOCITA, Department of Communications, Information Technology and the Arts (2000a) *Government Online: The Commonwealth Government's Strategy* (Canberra: DOCITA).

- DOCITA, Department of Communications, Information Technology and the Arts (2000b) *Government Online Newsletter* (Canberra: DOCITA), September, Issue 2.
- Domberger, S. (1998) *The Contracting Organization* (Oxford: Oxford University Press).
- Dunleavy, P. (1994) 'The globalization of public services production: Can government be "best in world"?' , *Public Policy and Administration*, (1994), vol. 9, no. 2, pp. 36-65. Revised version published in: A. Massey (ed) *Marketization and Globalization of Government Services* (London: Macmillan, 1996).
- Dunleavy, P. and Hood, C. (1994) 'From old public administration to new public management', *Public Money and Management*, (1994), vol. 14, no. 3, pp. 9-16.
- Dunleavy, P., Margetts, H., John, S. and McCarthy, D. *Government on the Web* (London: The Stationary Office), UK National Audit Office report HC 87 Session 1999-2000. Available on: www.nao.gov.uk Click publications, reports by theme, IT. Also at: www.GovernmentOnTheWeb.org
- EDS (2000) 'The first whole-of-government outsourcing contract in the world'. Available on: www.eds.com/case_studies/govsoau.pdf
- EDS (2001) 'Factsheet', on 'About Us', at: www.eds.com
- Haligan, J. (2001a) 'Paradoxes in reform in Australia and New Zealand', in J.J. Hesse, C. Hood and B. Guy Peters (eds) *Paradoxes in Public Sector Reform* (Berlin: Duncker and Humboldt).
- Halligan, J. (2001b) 'Implications of the Humphrey Report', *Canberra Bulletin of Public Administration*, March, no. 99, pp. 1-4.
- Hood, C. (1983) *The Tools of Government* (Basingstoke: Macmillan).
- Humphrey R. (2000) *Report of the Review of the Whole of Government Information Technology Outsourcing Initiative* (Canberra: Commonwealth of Australia), 'the Humphrey Review'.
- ITANZ, Information Technology Association of New Zealand (1999) 'Public and Private Sector Partnership - A New Concept for IT Procurement' (Wellington: Information Technology Association of New Zealand).
- Keliher, L. (1995) 'Core Executive Decision Making on High Technology Issues: The Case of the Alvey Report', in R.A.W. Rhodes and P. Dunleavy (eds) *Prime Minister, Cabinet and Core Executive* (London: Macmillan, 1995).
- Lacity, M. and Wilcocks, L. (1998) 'An empirical investigation of information technology outsourcing practices: Lessons from experience', *Management Information Systems Quarterly*, vol. 22, no. 3, pp363-408.
- Lacity, M. and Wilcocks, L. (2000a) *Global IT Outsourcing: In Search of Business Advantage* (Chicester: Wiley).
- Lacity, M. and Wilcocks, L. (2000b) *Inside Information Technology Outsourcing: A State-of-the-Art Report* (Oxford: Templeton Research, Templeton College).
- March, J. and Olsen, J. (1976) *Ambiguity and Choice in Organizations* (Bergen: Bergen Universitetsforlaget).
- Margetts, H. (1995) 'The automated state', in P. Dunleavy and A. Massey (eds) 'British Public Management: Achievements, Problems and Prospects', Special issue of *Public Policy and Administration*, (1995), vol. 10, no. 2.
- Margetts, H. (1999) *Information Technology in Central Government: Britain and America* (London: Routledge).
- Ministry for Economic Planning (NZ) (2000) *E-Commerce: A Guide for New Zealand Business* (Wellington: Ministry of Economic Planning).
- Ministry of Economic Planning (NZ) (2001) *New Zealand's Standards and Conformance System: A Guide for Business* (Wellington: Ministry of Economic Planning).
- Minister for Information Technology's IT Advisory Group (NZ), (1999) *The Knowledge Economy* (Wellington: Ernst and Young).
- Ministry for Social Policy (NZ) (2001) *The Social Report 2001* (Wellington: Ministry of Social Policy).
- NAO, UK National Audit Office (1995) *Inland Revenue; Market Testing the Information Technology Office* (London: The Stationary Office), HC 245 Session 1994-5.
- NAO, UK National Audit Office (1997) *The Contributions Agency: The Contract to Develop and Operate the Replacement National Insurance Recording System* (London: The Stationary Office), HC 12 Session 1997-8.
- NAO, UK National Audit Office (1999) *The UK Passports Agency: The Passport Delays of Summer 1999* (London: The Stationary Office), HC 812 Session 1998-9. Available on: www.nao.gov.uk Click publications, reports by theme, law and order.
- NAO, UK National Audit Office (2000a) *Inland Revenue /EDS Strategic Partnership: Award*

- of New Work (London: The Stationary Office), HC 35 Session 1999-2000. Available on: www.nao.gov.uk Click publications, reports by theme, revenue departments.
- NAO, UK National Audit Office (2000b) *The Cancellation of the Benefits Payments Card Project* (London: The Stationary Office), HC 857 Session 1999-2000. Available on: www.nao.gov.uk Click publications, reports by theme, social security.
- NAO, UK National Audit Office (2001) *Ministry of Defence: Maximizing the benefits of defence equipment cooperation* (London: The Stationary Office), HC 300 Session 2000-2001. Available on: www.nao.gov.uk Click publications, reports by theme, defence.
- NOIE, National Office for the Information Economy (2001) 'Electronic government in Australia's Information Economy', Speech by the CEO, John Rimmer 9 July. Available at: www.noie.gov.au/publications/speeches/Rimmer/Washington.htm
- NZ Ministry of Commerce (1998) *Electronic Commerce: The 'Freezer Ship' of the 21st Century* (Wellington: Ministry of Commerce).
- NZ Ministry of Economic Development (2000) *Electronic Commerce in New Zealand: A Survey of Businesses on the Internet* (Wellington: Ministry of Economic Development).
- NZ Ministry of Economic Development (2001) *Statistics on Information Technology in New Zealand* (Wellington: Ministry of Economic Development). March 2001.
- NZ Ministry of Justice (2000) *Report of the Ministerial Enquiry into INCIS* (Wellington: Ministry of Justice). Available at: www.justice.govt.nz/pubs/reports/2000/incis_rpt/index.html
- NZNAO, New Zealand National Audit Office, (1999) *Towards Service Excellence: The Responsiveness of Public Agencies to their Clients* (Wellington: NZNAO).
- NZNAO, New Zealand National Audit Office, (2000) *Governance and Oversight of Large Information Technology Projects* (Wellington: NZNAO).
- NZ State Services Commission (2001) *government.nz @ your .service* (Wellington: State Services Commission).
- Osborne, D. and Gaebler, T. (1992) *Reinventing Government: How the Entrepreneurial Spirit is Transforming the Public Sector* (Reading, Mass: Addison-Wesley).
- Overman, S. and Boyd, K. (1994) 'Best practice research and postbureaucratic reform', *Journal of Public Administration Theory and Research and Theory*, vol. 4, no. 1, pp. 67-83.
- Peterson, J. (1996) Xx Eureka book
- Prebble, M. (1993) *New Zealand: The Turnaround Economy* (London: Institute of Directors).
- Pusey, M. (1992) *Economic Rationalism in Canberra: The Nation Building State Changes its Mind* (Sydney: Allen and Unwin).
- Ritzer, G. (1993), *The McDonaldization of Society* (Thousand Oaks: Pine Forge Press).
- Schick, A. (1996) *The Spirit of Reform: Managing the New Zealand State Sector in a Time of Change* (Wellington: State Services Commission). See also a summary of the report and commentaries by R. Mulgan and J. Martin in *Public Sector* (1996), vol. 19, no.4, pp. 2-13.
- Seddon, P. B. (2001) 'The Australian Government's Clustered-Agency IT Outsourcing Experiment', *Communications of the Association for Information Systems*, vol. 5, Article 13. Available (to CAIS subscribers only) on: <http://cais.isworld.org/contents.asp>
- Strassman, P. (1995) 'Outsourcing: A game for losers', *ComputerWorld*, 29 August, vol. 29, no. 34, p. 75.
- Strassman, P. (1997) *The Squandered Computer: Evaluating the Business Alignment of Information Technologies* (New Canaan: Information Technology Press).
- Treasury Board of Canada (1998) *An Enhanced Framework for the Management of Information Technology Projects* (Ottawa: Treasury Board).
- Upton, S. (2000) 'Quo Vadis New Zealand' (Wellington: Mimeo speech to a parliamentary seminar).
- Whittaker, S. (2001) 'Making the Web Work: I before E - No Exceptions', Paper published July/August on: www.eds.com
- Wilhelm, A.G. (2000) *Democracy in the Digital Age: Challenges to Political Life in Cyberspace* (New York: Routledge).
- Willcocks, L. and Fitzgerald, G. (1994) *A Business Guide to IT Outsourcing* (London: Business Intelligence).
- Yates, A. (2001) 'Risk management in the Commonwealth's IT Initiative', *Canberra Bulletin of Public Administration*, March, No. 99, pp. 5-7.
- Zifcak, S. (1994) *New Managerialism: Administrative reform in Whitehall and Canberra* (Milton Keynes: Open University Press).

