

CIBE – Final Report

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1. Introduction

Lack of harmonisation in the regulation of the construction industry has been identified as causing significant costs to industry, particularly for organisations which seek to operate across jurisdictional borders.

The CIBE project was established in response to industry concern about the lack of harmonisation in the regulatory environment, with a goal to better understand:

- The causes of these differences
- How increased harmonisation, or coordination between various spheres of government might be achieved.

In order to set the stage for this, a literature review was completed to examine the issue of harmonisation in regulatory environments, which is excerpted below:

The design and construction market as a whole is valued at over \$40 billion per annum nationally (ACBR 2003). Over half of this building work is conducted across state borders. The lack of coordination between Commonwealth and State governments on construction regulations and policies is argued to negatively impact innovation (Manley 2004) and productivity (Productivity Commission 2004) in Australia. There is both quantitative and qualitative evidence that the Commonwealth is increasing the amount of regulation in all areas, with the Industry Commission reporting that the number of pages of legislation passed is doubling approximately every ten years (Fenna 2004: 99). Thus the lack of coordination between spheres of government, and the consequent deleterious effects on productivity and innovation in the sector have been well documented. The lack of coherency between local governments on processes such as development assessment (Productivity Commission 2004) is also seen to negatively impact upon the productivity of the industry.

Geiger and Hoffman (1998) have noted that the extent of regulation in an industry tends to be negatively associated with firm performance. The cost of complying with variations in regulations between the states has been estimated by the Building Product Innovation Council (2003) as being up to \$600 million per annum for the building product manufacturers alone. Industry in Australia has consistently held that regulations inhibit innovation (Manley 2004). However, recent years have seen a strong deregulation of industry in general (Banks 2005). Further, government regulation has been perceived as enablers of innovation (PricewaterhouseCoopers 2002).

2. Costs associated with the regulatory environment in Australia¹

The costs normally associated with regulatory regimes are compliance costs and direct charges. Typically, approaches to estimation of the cost of regulations examine **direct costs**, such as fees and charges, together **with indirect costs**, such as compliance and reporting costs (OECD 1997). However, in a fragmented system, such as Australia, costs can also be incurred due to procedural delays, either by government, or by industry having to adapt documentation for different spheres of government; lack of predictable outcomes, with variations occurring between spheres of government and sometimes within the same government agency; and lost business, with delays and red tape preventing realisation of business opportunities (OECD 1997). In this paper, we argue these costs should be termed **adaptation costs**.

As a first step in advancing improvements to the current situation, a summary of the current costs experienced by industry will be outlined. First, Table 2 sets out the regulatory costs incurred by construction firms:

¹ This section is verbatim from Furneaux, Brown and Hampson (2007)

Table 1 – Regulatory costs incurred by construction firms (Furneau *et al.* 2006)

	Australian Government	State and Territory Governments	Local governments
Regulatory Costs on Building firms			
Builders Licensing		Direct Costs Indirect Costs Adaptation Costs	
Insurance		Direct Costs Indirect Costs Adaptation Costs	
OH&S	Direct Costs Indirect Costs Adaptation Costs	Direct Costs Indirect Costs Adaptation Costs	
Taxation / Duties and Fees	Direct Costs Indirect Costs	Direct Costs Adaptation Costs	Direct Costs Adaptation Costs
Procurement	Indirect Costs	Indirect Costs Adaptation Costs	Indirect Costs Adaptation Costs
Dispute resolution		Direct Costs Indirect Costs Adaptation Costs	

The regulatory costs associated with construction projects are outlined in Table 3:

Table 2 – Regulatory costs incurred by construction projects (Furneau *et al.* 2006)

	Australian Government	State and Territory Governments	Local governments
Regulatory Costs on Building Projects			
Planning approval	Indirect Costs (possible)	Direct Costs Indirect Costs Adaptation Costs	
Approval to commence building			Direct Costs Indirect Costs Adaptation Costs
Inspection of Buildings			Direct Costs Indirect Costs Adaptation Costs
Enforcement of Building Orders			Direct Costs Indirect Costs Adaptation Costs
Occupancy			Direct Costs Indirect Costs Adaptation Costs

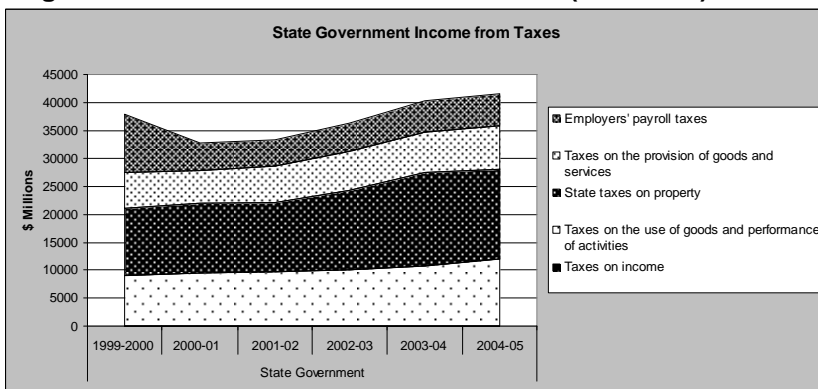
Most costs associated with building *firms* occur at the Commonwealth and state government level, while those costs associated with construction *projects* occur primarily at a local government level. State governments provide a layer of compliance costs with integrated planning acts and similar instruments. There are fees and compliance costs associated with most aspects of the building process, and this is exacerbated when firms work across jurisdictions. Compliance costs can also occur when working across local government boundaries as well. These costs are discussed in detail below.

1.1. Direct costs

The most significant area of direct costs is associated with financial payments to government – typically in the form of taxes, fees and duties. Taxes levied by the Commonwealth government on construction firms include company income tax, goods and services tax, payroll tax and fringe benefits tax (Department of Industry 2007). Income for the Commonwealth government directly related to property was in the order of \$474 million in the 2004-2005 financial year (Australian Bureau of Statistics 2006:11). Unfortunately, disaggregated income data from GST and company tax for the construction industry is not available.

State governments gain income from construction related activities in the form of property taxes, land tax, stamp duty on conveyancing, payroll tax, and land tax (Department of Industry 2007). Income for state and territory governments from property (excluding payroll tax which could not be disaggregated) was \$2,330 million for the 2004–05 financial year (Australian Bureau of Statistics 2006:18). “Taxes on property were the single largest taxation revenue source (38.5%) for state governments in 2004-05” (Australian Bureau of Statistics 2006:4). The property related income has increased in recent years due to the significant rise on property values in most of the states (Australian Bureau of Statistics 2006).

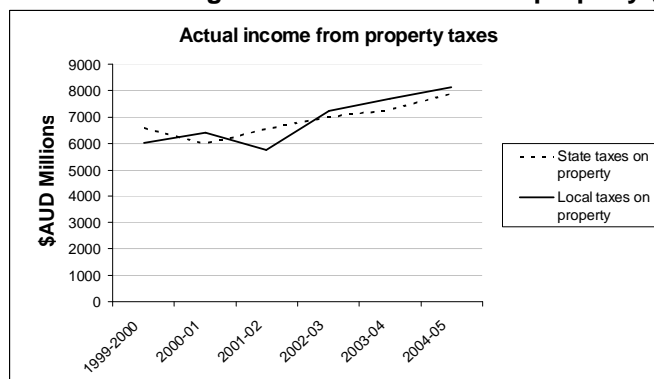
Figure 1 – State income derived from taxes (ABS 2006)



Local governments gain income from property primarily from rates, although they also derive some income from application and inspection fees (Department of Industry 2007). Income from municipal rates was \$6,080 million for the 2004–05 financial year (Australian Bureau of Statistics 2006:12). Taxation from rates on real property, “are the sole form of taxation income for local governments” (Australian Bureau of Statistics 2006:4). It is interesting to note

that actual income for state and local governments from property related taxes are almost identical for state and local governments (see Figure 3 below).

Figure 2 - Actual state and local government income from property (ABS 2006)



Direct costs on the construction therefore were in the order of at least \$8,553 million dollars in the 2004-05 financial year.

1.2. Indirect and Adaptation costs

Indirect costs are associated with companies needing to comply with government regulations. At the national level, this means the Building Code of Australia, together with various national standards, as well as completing taxation returns and GST reporting. At the State and Territory level, this involves business registration and licensing, insurances, compliance with planning acts, occupational health and safety, and training obligations. At the local government level, this means application and inspection processes, for construction. Adaptation costs occur due to: procedural delays, when industry has to adapt documentation for different spheres of government; lack of predictable outcomes, with variations occurring between spheres of government; and lost business opportunities, with delays and red tape preventing realisation of business venture (OECD 1997). Adapting to different development assessment processes is

particularly vexing for construction firms as this falls under the jurisdiction of local governments. Local governments have been charged with fostering national inconsistency due to their focus on meeting local needs (Productivity Commission 2004). The sheer number of local councils (360) compounds this issue.

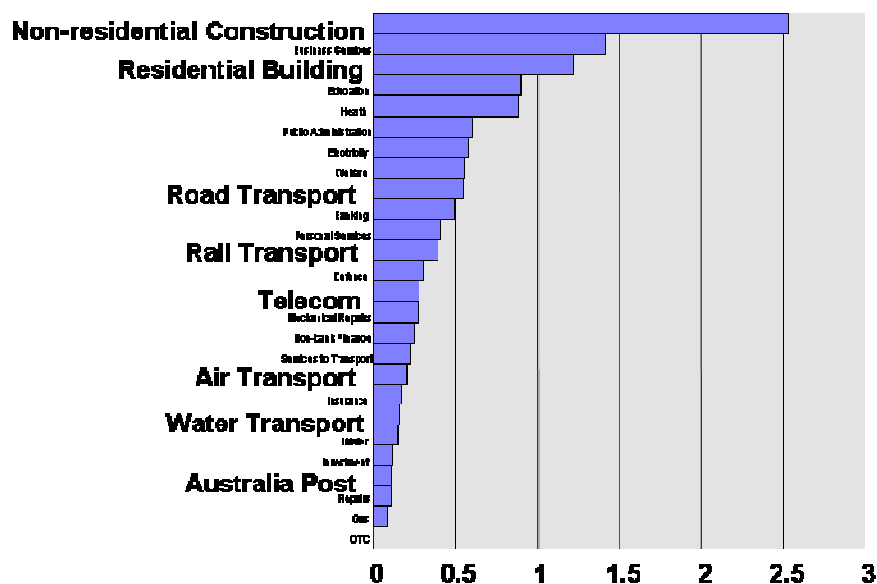
The adaptation costs of variations in regulations between the states has been estimated by the Building Product Innovation Council (2003) as up to \$600 million per annum for building product manufacturers alone. Productivity gains from increased harmonisation of the regulatory system have been estimated in the hundreds of millions of dollars (ABCB 2003). This argument is supported by international research which found that increasing the harmonisation of legislation in a federal system of government reduces what we have termed adaptation costs (OECD 2001). However, indirect costs and adaptation costs are particularly difficult to quantify, with no method of estimating this agreed on in Australia. The *Construction Industry Business Environment* project is working with the Productivity Commission in order to identify the best way of assessing compliance costs incurred by construction (Productivity Commission 2006). It is likely that the method for assessing regulatory costs will be derived from the *Standard Cost Model* (OECD 2004).

An observation was articulated by an industry partner in the early stages of the CIBE project: “The construction industry in Australia is one of the most regulated industries in Australia” (personal communication). This research has shown that each sphere of government in Australia is involved in regulating the activities of construction firms. Additionally, all of the phases of a building project involve at least one level of government. Thus, construction firms and projects experience direct, indirect and adaptation costs from all levels of government, at every phase in a construction project. The situation becomes more complex once an organisation works across jurisdictional boundaries, as they have to adapt to varying regulations at the commonwealth, state, territory or local levels.

1.3. Effect of reducing the regulatory burden on construction industry

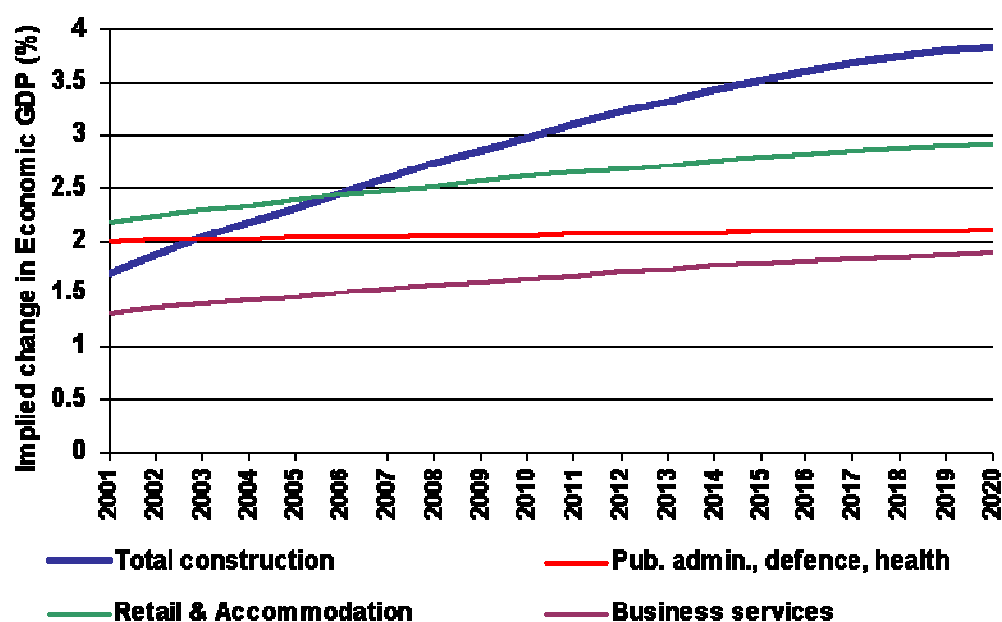
Stoeckel and Quirke (1992) have argued that if costs on industry could be reduced by 10%, this could have a strong positive effect on GDP. Significantly, they predict that a 10% reduction of costs to non-residential construction would have the biggest positive effect on GDP (Figure 3).

Figure 3 – Effect on GDP of reducing costs by 10% (Stoeckel & Quirke 1992)



This finding was reinforced by macroeconomic modelling conducted on behalf of *Construction Innovation* by ACIL Tasman (2005), who found that improvement of productivity in the construction industry will have significant improvement in GDP over time (Figure 4).

Figure 4 – Growth (GDP) Impacts of One-off, Sustained 10% Productivity Gain, by Sector



Thus this research provides qualified support for the contention of industry that the construction industry is faced with a strong regulatory framework which operates at a project and organisational levels. Regulatory regimes are enacted by multiple spheres of government. A reduction in the regulatory burden on the construction industry has been shown to result in strong positive impact upon GDP.

2. Implications for Australian construction firms

Geiger and Hoffman (1998) have noted that the extent of regulation in an industry tends to be negatively associated with firm performance. Consequently, the need to “reduce red tape” and regulatory inconsistencies is argued to be a desirable outcome (OECD 1997) for developed countries. Stoeckel and Quirke (1992) have argued that if regulatory compliance costs on the construction industry could be reduced by 10%, this could have a strong positive effect on GDP. Significantly, the authors predict that a 10% reduction of costs to non-residential construction would have the biggest positive effect on GDP. This finding was reinforced by macroeconomic modelling conducted on behalf of *Construction Innovation* by ACIL Tasman (2005), who found that improvement of productivity in the construction industry will have significant improvement in GDP over time. So how likely is it that regulatory costs experienced by construction firms can be reduced?

2.1. Reduction in regulatory direct costs (taxes) to the construction industry

Firstly, is a reduction in the category of direct costs likely? The Commonwealth gains income from the construction sector through company taxes, income taxes, and the GST. State governments gain income from construction and property through property taxes, stamp duties and the like. In fact, 38.5% of the income received directly by states, not through grants from the Commonwealth, was derived through property tax in 2003-2004 (Australian Bureau of Statistics 2006). Local government derives income from construction and property through application fees, development fees, and rates.

As long as each jurisdiction in Australia derives significant income from the construction industry, relinquishing authority and reduction of the burden would appear unlikely. While it is possible that the states may reduce their direct taxes on construction related duties (e.g. property taxes and stamp duty) in lieu of increased distributions from the Commonwealth GST income, although the spectre of increased reliance on the Commonwealth for funding, and the forgoing reduction in direct income and therefore independence, would appear to make this unlikely (Hamill 2005), or at best a marginal reduction. Is a reduction in indirect costs more likely then?

2.2. Reduction in indirect (compliance) costs to the construction industry

In the Australian Constitution, infrastructure, public works and main roads are the responsibility of the states. Each state has enacted building acts and regulations and some have developed integrated planning acts. Additionally, each state

has regulations which address construction related activities – occupational health and safety, builders licensing, and training; as well as specifications for various types of buildings and building products. Moreover, many state government departments enact policy and legislation around construction activities: public works authorities in the construction of roads, infrastructure and public works; environmental authorities to monitor the impact of construction projects and firms of the environment; and heritage departments to preserve buildings of historical significance; occupational health and safety divisions to promote and monitor safety on construction sites; training departments to promote apprentices and trainees; and even arts departments to promote public art in public works projects. In addition to the roles of the states in construction regulation, much of the day to day construction activity in Australia is overseen by local councils – particularly the provision of development assessment and town planning, building inspections, and local roads and drainage.

The Commonwealth government has also become increasingly involved in construction, primarily through tied grants. Indeed part of the increasing role of the Commonwealth government is in the provision of funding to the states of major grants for infrastructure – to which the Commonwealth can attach conditions (Fenna 2004). Through this mechanism of tied grants, the Commonwealth government appears to also be pursuing a range of other agendas, particularly in the industrial relations and occupational health and safety areas. Thus all three spheres of government have varying regulatory responsibilities and interests in the construction industry. While minor adjustments may be possible, large scale reduction in regulation in direct and indirect costs appear unlikely in the near future. This leaves a reduction in adaptation costs as a possible area of reduced regulatory burden.

2.3. Reduction in adaptation costs to the construction industry

If changes in direct costs and indirect costs are unlikely, at least in the short term, then reduction in the adaptation costs would appear to be a salient way in reducing regulatory burdens. The CRC for Construction Innovation is working with various government agencies and industry associations to improve the harmonisation of regulation in Australia, thereby reducing the regulatory burden on construction firms. The following section sets out a number of mechanisms identified by which states can harmonise their regulations.

3. Mechanisms for achieving coordination in federal systems of government

As the term infers, harmonisation is the process by which differences in laws and policies between two jurisdictions are reduced by adopting similar laws and policies (Leebron 1997). Harmonisation can be in the form of specific regulations; it can facilitate more general policy objectives focussing on guidelines (eg. Goals for pollution); there can be agreement on certain principles; and lastly, harmonisation of structures or procedures, usually to reinforce other types of harmonisation (Leebron 1997). Harmonisation is only possible if states can converge around one commonly agreed standard (Fox 1992).

Majone (1998) argues that within harmonisation, or coordination, there are a number of different levels. Optional harmonisation aims to guarantee the free movement of goods and services, while permitting states to retain their traditional forms of regulation. Minimum harmonisation is where all governments agree to a specific set of minimum standards in regulations, but individual states are able to set higher standards individually (Majone 1998: 313). This case has also been referred to as the ‘race to the bottom’ in Europe as governments resort to the lowest common denominator in order to gain agreement of all parties (Leebron 1997). The best known example in Australia of harmonisation is the Building Code of Australia which seeks to set a minimum standard of performance for buildings and building materials across Australia. This is not the only option for achieving similarity in content of regulation, with a range of possible alternatives discussed below. This range of options is useful to consider when contemplating how to achieve increased coordination in specific areas between governments.

Mechanisms to improve regulatory consistency in a federated system of government have been identified from the literature which are summarised in Table 1 below. The mechanisms, which we have termed options, are listed from most coordinated to least coordinated.

Table 1- Mechanisms for Harmonising Regulations in Federal Systems of Government²

<i>Option 1– Most coordinated</i>	<i>Unilateral Exercise of Power by the Commonwealth</i>	Creating uniformity in regulation in Australia by Commonwealth legislating in such a way as to over-ride all similar state and territory regulations. For such an approach to work, legitimate authority in the constitution, termed a ‘head of power’, needs to be determined. As the Commonwealth lacks head of power for OH&S this option is difficult to enact, although the Commonwealth can attach conditions to funding to the states.
<i>Option 2</i>	<i>Reference of Power to the Commonwealth</i>	The states can elect to refer a state power to the Commonwealth under the Constitution. If a ‘matter’ is referred to the Commonwealth by a state, the Commonwealth is then able to legislate. The Commonwealth government attempted this recently when it requested that the states refer workplace relations powers to the Commonwealth. This attempt failed when the “states advised that they will not refer their [industrial relations] powers” (COAG Communiqué 2005) to the Commonwealth. Cole (2003) suggested this was also unlikely to occur for OH&S regulation.
<i>Option 3</i>	<i>Incorporation by Reference</i>	The incorporation by reference application is where the various parliaments adopt the legislation of a single jurisdiction as amended from time to time in accordance with an intergovernmental agreement (Saunders 1994, 8). The advantage of this form of coordination is that there is need to only change a single piece of legislation, rather than several pieces of legislation although it requires extensive consultation. The <i>Building Code of Australia</i> could be considered an example of this. This option was endorsed by Cole (2003) as the most viable for the construction industry.
<i>Option 4</i>	<i>Complementary or Mirror Legislation</i>	This option requires that the Commonwealth and states work together to achieve legislative coverage of a particular policy area, particularly where there are dual, overlapping to uncertain division of constitutional powers. In these instances, each jurisdiction enacts laws to the extent of its constitutional capacity and the matter is addressed by the participation of all of the legislatures of the Federation. “The Commonwealth and all participating states would pass separate, but totally consistent (although not necessarily identical) pieces of legislation” (Allen Consulting Group 2002, 40). An intergovernmental agreement is normally required to set out the terms and conditions of the arrangement.
<i>Option 5 – moderately coordinated</i>	<i>Mutual Recognition</i>	Under mutual recognition, the rules and regulations of other jurisdictions are recognised. Mutual recognition enables goods or services to be traded across jurisdictions, and means that if the goods or services comply with the legislation in their own jurisdiction, and then are deemed to comply with the requirements of the second jurisdiction, or pathways for achieving compliance are clearly established. Mutual recognition is a one of the vehicles governments can utilise to reduce the regulatory impediments to goods and services mobility across jurisdictions (Productivity Commission 2003).
<i>Option 6</i>	<i>Agreed Legislation or Policies</i>	This mechanism is where governments in question agree to implement similar legislation or policies, which are then implemented by local legislation.
<i>Option 7</i>	<i>Adoptive Recognition</i>	A jurisdiction recognises that the decisions of another jurisdiction meet the requirements of its own legislation regardless of whether this recognition is mutual.
<i>Option 8</i>	<i>Non-Binding National Standards Model</i>	A national authority makes decisions which are adopted to various extents by the respective state or territory ministers.
<i>Option 9</i>	<i>Exchange of Information</i>	Such an exchange can take many forms, including where meetings between Ministers and/or public servants occur on a regular basis to exchange information; or where best practice guidelines or demonstration projects are published with the intention that they will be adopted by other jurisdictions.
<i>Option 10 – not coordinated</i>	<i>Independent Multilateralism</i>	Under this option each jurisdiction goes its own way – so there is no coordination at all between governments. Unlike option one, this option means that the states and the commonwealth all act in an uncoordinated way and pursue disparate policy objectives.

Cooperative agreements are formal arrangements where two or more governments agree to work together. Such agreements include contracts, written undertakings, agreements on similar policies (Opeskin 2001). Informal arrangements typically take place within specific portfolios (eg. Public works) and range from conversations to intergovernmental committees (Opeskin 2001). There are a large range of intergovernmental committees which seek to develop solutions to share information. These arrangements have been referred to as either ‘iron rods’ due to the constrained and focussed nature of the interactions, or ‘threads of gossamer’ which emerge through intergovernmental

² The content of this table is sourced from Allen Consulting Group (2002), Farina (2004), and Opeskin (2001)

relations managers with a wide focus and interaction (Chapman 1989: 55). This is similar to notions of policy networks, characterised by strong or weak ties between actors (Milward & Provan 1998).

Difficulties can arise from these intergovernmental committees however, as a state parliament is not legal bound by an intergovernmental agreement to enact legislation to implement a uniform scheme (Farina 2004). In practical terms, particularly if there is a financial grant being given by the Commonwealth, there is often strong incentive to pass the bill effectively endorsing the agreement.

In the next section we move from a theoretical analysis of harmonisation to specific examples of harmonisation practice in Australia.

4. Improving regulatory and policy consistency – 5 case studies

While the framework above was useful as a framework for understanding how to improve consistency in regulatory environment in federal systems of government, this does little to improve specific regulatory instances. Consequently, the CIBE project set out to examine a number of case studies which sought to identify ways in which regulatory harmonisation could be improved. These case studies were undertaken in the following areas:

- Sustainable built environment
- Procurement
- Occupational Health and Safety
- eBusiness (eGovernment)
- Building Information Modelling

Additionally the project examined the public policy implications of innovations conducted by the CRC for Construction Innovation.

The following pages do not attempt to replicate the case studies in their entirety. Instead, the following paragraphs focus on the central issue of jurisdictional consistency and the mechanisms which might promote improved consistency. Should the reader wish to explore the issues in greater detail, then they are directed to the full case study reports, some of which run for hundreds of pages. The first area reviewed is in the area of sustainability.

4.1. Sustainability³

In August 2005, House of Representatives Standing Committee on Environment and Heritage released the *Sustainable Cities* report which recommended in part that the Australian government establish national sustainability objectives (a sustainability charter) together with reporting mechanisms for progress towards those targets. In September 2007, the House of Representatives Standing Committee on Environment and Heritage released their subsequent *Inquiry into a sustainability charter*, which made a number of specific recommendations as to the implementation of this charter.

In view of the national importance of sustainability to Australia's future, this case study examined what some of the challenges might be to establishing a National Sustainability Charter. Through a review of relevant literature and policy documents, a number of challenges to the establishment of a national set of sustainability targets became clear. These challenges can be broadly classified as: coordinating policy in a federal system of government; gaining the attention of government(s); the process for establishing national values, objectives and indicators; the cost to industry and the need for government funding and incentive mechanisms; and the suitability of current ratings systems for assessing progress towards national goals. The first is of most relevance to this final report.

4.1.1 Achieving Coordination in a Federal System of Government

Under a federal system, powers are divided between a central government and several regional governments. In Australia, power was divided at Federation between the Commonwealth Government and the governments of the six colonies, which were renamed 'states' by the Constitution. Specific areas of legislative power (which are termed "heads

³ This section is taken from Brown Furneaux McFallan and Hertz (2008)

of power" in the Constitution) were given to the Commonwealth Government such as foreign affairs, whereas the states retained legislative power over all other matters that occurred within their borders, such as: police, hospitals, and public transport (Australian Government 2005).⁴

In some circumstances, however, the wording of the Constitution has often created situations where both the Commonwealth and the states claim the authority to make laws over the same matter (Australian Government 2005).

In federations ... policy must be negotiated between and across different levels of government, vertically between Commonwealth, state and local governments, and horizontally between states or local authorities. (O'Faircheallaigh, Wanna & Weller 1999:97).

Environmental policy has been seen historically as primarily the responsibility of the states, with responsibility occasionally being devolved to local government, with the Commonwealth having limited involvement (Department of Environment and Heritage 2001). Responsibility is further distributed between various government departments within jurisdictions, with a net result of a highly uncoordinated approach to planning and management of the environment (Department of Environment and Heritage 2001).

Even within a single jurisdiction such as the Australian Government, responsibility and budget for environmental issues are spread across multiple government departments and agencies (Department of the Environment and Heritage 2005:3). This multiplicity of government agencies presents challenges for the coordination of objectives and targets as the role, relationship and power of any Sustainability Commission would need to be clarified in relation to these other organisations.

Vertical and Horizontal Coordination

In order to overcome difficulties in vertical and horizontal policy coordination, a large range of intergovernmental committees have developed over time (Chapman 1989), the primary one being the Council of Australian Governments (COAG). Difficulties can arise from these intergovernmental committees however, as a state parliament is not necessarily legally bound by an intergovernmental agreement to enact legislation to implement a uniform scheme – even an agreement made at COAG (Farina 2004). In practice, however, most legislation is passed if there is federal funding associated with their enactment.

Consideration should be given as to how coordination will be achieved between the Australian government, the various states and territories and local governments. This vertical and horizontal policy integration is a key element of any Sustainability Charter if it is to be effective. This is particularly true if the goals are aspirational, and require state and local governments to be involved in implementing a Sustainability Charter, as well as monitoring and reporting on it, as is the case in Sweden (Swedish Ministry of the Environment 2004: 9-10). As noted in the *Sustainable Cities Report* (House of Representatives Standing Committee on Environment and Heritage 2005), there may be a need for significant initial investment in order to develop the capability of state/territory and local governments to monitor and report on environmental sustainability targets.

Given the fragmented nature of responsibility for environmental policy at the moment (Department of Environment and Heritage 2001), achieving coordination vertically and horizontally between agencies and jurisdictions is one of the key challenges that a Sustainability Commission is likely to face particularly given the federal system of government, and the dispersed nature of resources, data and authority.

A range of possible roles is put forward for a Sustainability Commission, from a legislative role through to a voluntary coordinating role. If the Commission is to champion a Sustainability Charter vertically and horizontally through all spheres and agencies of government, then a coordinating role would seem appropriate, however, the 'push' of some mandated action may enhance the achievement of policy coherence and a consistent approach. The fragmented nature of environmental policy in Australia (Department of Environment and Heritage 2001) noted above, presents both a challenge and an opportunity (O'Faircheallaigh, Wanna & Weller 1999:97). Given the fragmentation evident, there is a clear role for a single Sustainability Commission to coordinate the establishment, measurement and reporting of sustainability in Australia.

⁴ A complete list of Commonwealth heads of power can be found in Section 51 of the Australian Constitution.

Consequently, the use of a single coordinating agency with significant funding was advocated as the mechanism for harmonisation. A key role of this organisation would be to coordinate a single sustainability charter – a set of goals with values that underpin it, which are agreed to by all states and territories. This can best be classified as an institutional mechanism, rather than a regulatory mechanism, and relies on consultation and agreement, together with incentives, to achieve the harmonisation outcome. This approach to harmonisation does not sit neatly within the framework identified early in the project and outlined in Section 3. It is, though, a pragmatic way forward for governments, which respects sovereignty of individual jurisdictions, and yet enables the achievement of outcomes, which are vital for the future of Australia. The second case study examined the area of government procurement.

4.2. Procurement ⁵

Procurement is a significant activity of all spheres of government – and the procurement of non-housing construction forms a significant percentage of total industry turn over. The contracting out of government services including construction, has been held to deliver cost effective delivery of services. However, each state in Australia has developed their own policies and procedures in relation to the procurement of public works. The majority of this case study highlighted the differences between jurisdictions, with at least four differing sets of institutional arrangements in place in Australia (Furneaux, Brown and Allan 2008). In fact there are some very good reasons why states are different – largely due to the scale of procurement activity. For smaller jurisdictions centralising procurement activities helps to ensure better outcomes for government, particularly through concentrating procurement capability. Larger jurisdictions often decentralised their procurement which makes sense due to the scope and scale of current activities, although a centralising trend appears to be occurring. Given the differences between jurisdictions are due to key differences in size and structure, there seems little chance that consistency will be achieved in the immediate future.

Furneaux, Brown and Allen (2008) note however that while specific institutional arrangements vary between jurisdictions, there was a high level of consistency in the public values that these arrangements attempt to safeguard. Put another way, there are a number of consistent public values across all jurisdictions (such as efficiency, transparency, and due process) although the mechanisms used to safeguard these varied from state to state. Consequently, harmonisation is around agreement of values and goals, not of specific institutional arrangements. As with the sustainability guidelines this does not sit easily in the theoretical framework outlined in Section 3. Procurement arrangements in Australia are closest to a performance based code, which seeks to achieve specific outcomes (efficiency etc.) but leaves the specific mechanisms up to individual jurisdictions.

4.3. Occupational Health & Safety ⁶

The occupational health and safety (OH&S) study examined three attempts to improve the harmonisation of OH&S policies and regulations between the states: Comcare, National Occupational Health and Safety Council (NOHSC) standards, and the building and construction occupational health and safety scheme. For the Comcare scheme, while this at least in theory provided a mechanism for eligible firms to opt out of state based schemes into Commonwealth insurance schemes, this has not occurred in significant numbers to date, although now that a high court case has resolved the matter, larger numbers of firms may elect to participate in the scheme. The NOHSC standards, at least in theory, provide a framework for the harmonisation of OH&S regulation across the country. However, as Brown, Furneaux, Janssen and Allen (2008) have argued, unless the adoption happens into regulation, the level of harmonisation is quite low. Recent attempts to rejuvenate the NOHSC scheme will hopefully bear fruit. The Australian government, building and construction scheme attaches conditions to funding of construction projects – which relate to the accreditation systems of head contractors. While the goal was to enhance consistency across Australia, the likely outcome of such policies are likely to be that head contractors construction works funded from Commonwealth sources will have to comply with the OH&S regulations of both state and federal jurisdictions. This is one key reason why Cole (2003) recommended against attaching OH&S conditions to Commonwealth funding.

A promising development is the recently compiled construction industry OH&S code of practice which was developed by the CRC for Construction Innovation. While such a standard is not part of regulation, if sufficient firms adopt the code, it could form the basis of a de facto standard of practice in the industry. Thus funding, insurance and national standards have all been attempted as mechanisms for improving harmonisation in OH&S regulations in industry. In the end, a standard developed by industry, provided it is adopted widely enough, may yet result in the best harmonisation outcomes. As with the previous studies a voluntary code of practice does not sit easily in the framework outlined in Section 3.

⁵ This section is taken from Furneaux, Brown Allan (2008)

⁶ This section is taken from Brown, Furneaux, Janssen and Allan (2008).

4.4. eBusiness / eGovernment⁷

In initial consultations with industry, differences between local governments on the issue of development assessment, was a major source of angst. The eBusiness case study examined the implementation of a set of technological solutions to improve and streamline development assessment and related processes inside 21 local councils in South East Queensland. This study found that the application of modern ICT technology to DA process (eDA) had the impact of increasing standardisation of a range of health and licensing laws. The DA processes itself was improved, as better information provided to applicants resulted in improved applications and therefore speedier application approval processes. The case study also explored the challenge of implementing technological changes across numerous sized councils, and has wider implications for the adoption of new technology in firms.

The study also noted that a second project was being developed which would extend eDA into new areas (electronic lodgement) together with extending the eDA process beyond local government to state government as well. This project will not be completed until 2009, so is too early to evaluate.

The harmonisation mechanism identified in this case study is a technological solutions. ICT solutions require significant collaboration and coordination to implement effectively, particularly across 21 local councils. It is significant that the project was endorsed by the South East Queensland Council of Mayors, as this provided overall governance for the project, and greatly enhanced the uptake within specific councils. As with the other case studies in the CIBE project, technological solutions do not easily sit within the framework outlined in section 3.

4.5. Building Information Modelling⁸

Building Information Modelling (BIM) may not seem to initially be concerned with harmonisation of regulations. However, as Kiviniemi et al. (2008 p.3) argue – in order for the full potential of BIM to be realised a number of technical standards need to be agreed to at a national and international level. Without agreed to standards for the sharing of information, it would not be possible to share information between different applications provided by software vendors.

While much ado is made in the literature about the need to develop IFC classes, in fact, three different technical specifications are in fact needed (capitalised words are in the original) :

- An exchange format, defining HOW to share the information. IFC (an ISO standard in development) is such a specification
- A reference library, to define WHAT information we are sharing. The IFD Library (an implementation of ISO 12006-3) serves this purpose
- Information requirements, defining WHICH information to share WHEN. The IDM/MVD approach (also an ISO standard in development) forms that specification (Kiviniemi et al. 2008 p.3).

Clearly there is a key role for all governments to be involved in the development of these standards, and their enablement by legislation. Such a development requires the agreement on standards for the sharing of information and fits into the framework outlined in section 3. However, such harmonisation is not at the sub-national level, or even national level. For the ISO standards to be effective, they need to be developed and endorsed at an international level.

5. Lessons drawn from the case studies on harmonisation

As set out in Section 3, there are a number of ways of using regulation as a mechanism of harmonisation, although most attempts to date have been at the lower level, what Majone (1998) called the 'race to the bottom' as each jurisdiction agrees to the lowest common denominator. The clearest example of this is the NOHSC standards where considerable effort has been put into developing national standards, only to not have these adopted in a rather piecemeal manner into legislation. In hindsight, all of the mechanisms identified from the literature review see harmonisation as a regulatory problem – with the implicit goal to get all of the regulations to have similar wording.

The case studies offer a number of important lessons on the issue of harmonisation. While the academic literature places significant emphasis on harmonisation of regulation, what is perhaps most aspect of the case studies in this project is that they do not necessarily rely upon regulation to achieve harmonisation. In other words, the CIBE case

⁷ This section is taken from Burgess, Furneaux, Vassilev, Allan, Ward (2007).

⁸ This section draws on Furneaux and Kivits (2008)

studies provide a significant contribution to knowledge by promoting additional ways of achieving consistency in federal systems of government.

5.1. Sustainability – the Institutional and goals approach

The solution identified in the sustainability study was an institutional one. In this case it is proposed that a central agency be established, whose role will be to negotiate and establish national goals for the environment, and then provide simple public reporting on the progress of these goals to the Australian public. This approach leaves jurisdictional responsibility with the states for sustainability, but seeks to build mutual goals in collaboration with the states. As the Commonwealth lacks head of power over the environment, then this is a salient and workable solution to achieving consistency.

5.2. Procurement – the agreed values approach

The procurement study perhaps best provides cogent reasons as to why the states are different. Different procurement arrangements are required for different jurisdictions. In this case study what is harmonised are the public values which the different jurisdictions seek to protect. Thus the 'best' institutional arrangements for a small jurisdiction might be different for a large jurisdiction. However the goal of providing efficient and effective delivery of public works remains constant. In the case of procurement, it is the values which underlie procurement arrangements which are consistent across jurisdictions.

5.3. OH&S – a Voluntary Industry code of conduct

The notion of a voluntary code of conduct for OH&S in the construction industry is not new theoretically. What is new, is the investment of resources to make this approach a reality. The key here is that if enough industry participants adopt the code and put it into practice, it has potential to become the de facto standard of practice for the industry. Consequently, a voluntary code of practice can become the benchmark for what is acceptable industry practice, particularly as it was developed by the industry itself.

5.4. eBusiness - Technology and regional governance showing the way

The implementation of the eBusiness study showcased voluntary collaboration between local councils which achieved a certain level of harmonisation through the use of technology and joint governance mechanisms (the SEQ Council of Mayors). This collaboration was felt to provide a template for future cooperative activities. While SEQ Council of Mayors does not have constitutional power, as a form of regional government, it has demonstrated the ability to achieve voluntary cooperation and coordination across local government authorities.

5.5. BIM -- International standards

The BIM case study highlighted the need for ISO standards in order for collaboration to occur, and these standards need to be agreed on not just at a local or regional level, but at a national and international level. While much work has begun on this already, there is considerable work still needed to make the potential of BIM a reality.

5.6. Contribution of this project to our understanding of harmonisation processes

Together these studies suggest that there are alternative ways to achieve harmonisation in a federal system of government. While regulatory harmonisation is still a worthwhile aim, often there are very good reasons for differences between jurisdictions. What works for a small jurisdiction, may not be appropriate for a large institution, and vice versa. As the OH&S and eBusiness study shows, sometimes the answer lies outside of the formal structures which rely upon heads of power, enshrined in constitutions.

- For the OH&S study, industry led standards which exceed the requirements of any one jurisdiction, avoids the 'race to the bottom' criticism often levelled against harmonisation attempts, while achieving the goal of ensuring the safety of construction workers. Such an approach is reliant upon good will and strong uptake in the industry, but may useful when there are impasses at the political level.
- For the eBusiness study, the role of the SEQ Council of Mayors was a key element in ensuring that an initiative had the practical power to be implemented. While lacking formal power in a constitutional sense, there was a legitimisation of action in order to achieve outcomes for South East Queensland, a commitment to joint action, and a level of trust and good will to achieve outcomes.

Table 2: Summary of novel approaches to harmonisation

Case study	Method	Process	Implications
Sustainability	Institutional	Creation of a peak body to coordinate action	In order to coordinate a set of national sustainability targets a peak agency is needed to coordinate goal setting, reporting and collaborative action.
Procurement	Institutional	Safeguarding public values	While methods and arrangements vary between jurisdictions, the end goal of ensuring transparency, efficiency, effectiveness is achieved.
OH&S	Standards	Industry developed standards and tools that enable firms to meet requirements of multiple jurisdictions	OH&S is an area where multiple attempts have been made to harmonise regulation. Where there is an ongoing impasse between jurisdictions, industry can develop standards which if adopted widely enough, become the accepted standard of practice. Requires strong uptake by industry and cooperation of government in order to be effective.
eBusiness	Institutional	Council of Mayors provided framework for action. Significant funding and smart implementation assisted realisation.	Regional government is a non-formal method of achieving joint action. While not based on constitutional head of powers, it is a pragmatic joint problem solving mechanism.
BIM	Standards	Working internationally to establish three sets of standards	Standards, when adopted in legislation, are very useful harmonisation mechanisms.

6. Conclusion

Harmonisation can be in the form of specific regulations; it can facilitate more general policy objectives focussing on guidelines (eg. Goals for pollution); there can be agreement on certain principles; and lastly, harmonisation of structures or procedures, usually to reinforce other types of harmonisation (Leebron 1997). The CIBE case studies have indicated that there are a number of novel approaches which act to improve consistency in the regulatory environment.

- Institutional arrangements to set and achieve goals or values
 - Implementation of a national institution with coordination responsibility (Sustainability Commission)
 - Varieties of institutions which act to safeguard a central set of public values (procurement)
- Voluntary code of practice (developed by industry for industry)
- Combination of technology and collaborative governance to achieve similar processes and content (eGovernance in local government)
- International standards (for implementation of BIM)

These arrangements extend our understanding, and tools, of enhancing consistency in regulatory environments, and are excellent examples of policy innovation in Australia.

Appendix A -- Summary of CIBE Deliverables

CIBE set out to achieve a number of specific deliverables in terms of reports, and conference papers. The outcomes delivered in the project are listed below:

Diffusion into Partners Organisations	Conference paper has been distributed to government departments and to APCC.
Curriculum Development (include course code & module, title & Institution)	Nil
Articles in Journals (include date, journal name, article title)	One article in Construct Magazine.
Articles in Refereed Journals (include date, journal name, article title)	~ Furneaux, C.W., Brown, K.A., Allan, D. (2008) Public values embedded in Australian public works procurement: An institutional analysis <i>Public Management and Money</i> 28(3), pp. 167-172.
Reports	<ul style="list-style-type: none"> ~ Furneaux, C.W. and Brown, K.A. (2006) <i>Public Policy Primer for the Construction Industry</i>. Brisbane: Cooperative Research Centre for Construction Innovation, Icon.Net Ltd. ~ Brown, KA and Furneaux, C.W. (2006) <i>Mapping the Regulatory Environment</i>. CIBE Report #1. Brisbane: Cooperative Research Centre for Construction Innovation, Icon.Net Ltd. ~ Furneaux, C.W. and Brown, K.A. (2006) <i>The Policy Implications of CRC CI Research – Report #2</i> (draft report completed) Brisbane: Cooperative Research Centre for Construction Innovation, Icon.Net Ltd. ~ Brown, K.A. and Furneaux, C.W. (2007) <i>Public Policy Implications of CRC for Construction Innovation Research</i>. Construction Industry Business Environment, Report #3. Brisbane: <i>Construction Innovation</i>. ~ Brown, K.A. and Furneaux, C.W. (2007) <i>Streamlining Local Government: Evaluating an eGovernment Initiative in South East Queensland</i> Construction Industry Business Environment, Report #4. Brisbane: <i>Construction Innovation</i>. ~ Brown, K.A. and Furneaux, C.W. (2007) <i>Harmonisation of OH&S Regulations</i> Construction Industry Business Environment, Report #5. Brisbane: <i>Construction Innovation</i>. ~ Brown, K.A. and Furneaux, C.W. (2008) <i>Implications of BIM for Government</i> Report #6. Brisbane: <i>Construction Innovation</i>. ~ McFallan, S. Logan, I. (2008) Barriers and drivers of new public-private infrastructure: Sewer Mining Report #7. Brisbane: <i>Construction Innovation</i>. ~ Furneaux, C.W. and Brown, K.A. (2008) CIBE Project – Report #8. Brisbane: <i>Construction Innovation</i>.
Publications - Books & Chapters in Books (include book and chapter title)	~ Furneaux, C.W., Brown, K.A., Allan, D., McConville, S., McFallan, S., London, K. and Burgess, J. (2006) "Client capabilities and capital works procurement policies: A comparative analysis of Australian jurisdictions" in Brown, K., K. Hampson and P. Brandon. <i>Clients Driving Construction Innovation: Moving Ideas into Practice</i> . Brisbane: Cooperative Research Centre for Construction Innovation, Icon.Net Pty Ltd., pp. 62 – 71.

<p>Conference Papers (include date, location, conf. title & paper title)</p>	<ul style="list-style-type: none"> ~ Brown, K.A. and Furneaux, C.W. (2008) Establishing an Australian national sustainability charter: Challenges in a federated system of government. <i>Public Policy Network Conference 2008</i>. ~ Brown, K.A. & Furneaux, C.W. (2007) Harmonising construction regulation in Australia: Potentials and problems <i>Public Policy Network Conference</i>, 1-2 February 2007, Adelaide. ~ Furneaux, C.W. and Brown, K.A. (2007) Capabilities, institutions and markets: Across jurisdictional analysis of embedded public values in public works procurement in Australia. Paper presented at Infrastructure and Public Values panel track, <i>International Research Symposium in Public Management XI</i>, 2 – 4 April 2007, Potsdam, Germany.
<p>Refereed Conference Papers (include date, location, conf. title & paper title)</p>	<ul style="list-style-type: none"> ~ London, K., Purcell, S. and Bellamy, T. (2006) "Harmonised procurement policy environment – Identifying key themes towards the development of a conceptual model." At <i>CIB W92 - 29th November to 1st December 2006 "Procurement Systems"</i> University of Salford, UK. Paper has been submitted for approval. ~ Brown, K.A. and Furneaux, C.W. (2007) "Mapping the Regulatory Environment: Implications for construction firms". <i>CIB 2007 World Building Conference, Cape Town, South Africa, 14 – 18 May 2007</i> [paper accepted and delivered following blind peer review]. ~ Charles, M. Furneaux, C.W. Pillay, J. Thorpe, D. Castillo, C.P., Brown, KA. (2007) "Uptake of an OHS Code of Practice by Australian Construction Firms" <i>CIB 2007 World Building Conference, Cape Town, South Africa, 14 – 18 May 2007</i> ~ Brown, K.A. and Furneaux, C.W. (2008) Harmonisation of OH&S Regulation in Australia: An Evaluation of three initiatives <i>Third International Conference of the Cooperative Research Centre (CRC) for Construction Innovation – Clients Driving Innovation: Benefiting from Innovation (12-14 March 2008)</i> ~ Furneaux, C.W. Vassilev, N., Burgess, J. and Brown, KA. Harmonising DA: Evaluating an eGovernment initiative in South East Queensland <i>Third International Conference of the Cooperative Research Centre (CRC) for Construction Innovation – Clients Driving Innovation: Benefiting from Innovation (12-14 March 2008)</i>
<p>Industry Presentations (include date, location & number of attendees)</p>	<ul style="list-style-type: none"> ~ Presentations of project to industry partners and to industry already been undertaken.

Submissions to Government Inquiries	<ul style="list-style-type: none">~ Hampson, K., Brown, K.A. and Furneaux, C.W. (2006) "Submission to <i>Performance Benchmarking of Australian Business Regulation</i>", A Commissioned Study by the Productivity Commission. Submission Number 27, dated 30 October 2006. Brisbane: CRC for Construction Innovation.~ Hampson, K., Brown, K.A. and Furneaux, C.W. (2006) "Submission to Brisbane City Council - <i>Draft Brisbane Economic Development Plan</i>". Submission Dated: Friday, 1 September 2006. Brisbane: CRC for Construction Innovation. [Elements of our submission were incorporated into the final Brisbane Economic Development Plan - particularly in relation to infrastructure].~ Hampson, K., Newton, P., Brown, K.A. and Furneaux, C.W. (2006) "Submission to the <i>Inquiry into a Sustainability Charter</i>", House of Representatives Standing Committee on Environment and Heritage. Submission Number 84, dated 30 May 2006. Brisbane: CRC for Construction Innovation. [The CRC was subsequently invited to attend a Round Table discussion (Sydney: Friday 6 October 2006) on the Sustainability Charter, based on this submission. David Hood and Caroline Pidcock were nominated to represent <i>Construction Innovation</i> and ASBEC respectively.] The submission is referenced on the first page of the final report.
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Reference List

- ABCB (2003) *Submission to Productivity Inquiry into first Home Ownership*. Downloaded from <http://www.pc.gov.au/inquiry/housing/subs/sub198.pdf>.
- ACIL Tasman (2005) *Economic Impact Modelling Study: TG Construction Documentation and Scenario Analysis*. A report prepared for the CRC for Construction Innovation. Sydney: ACIL Tasman.
- ACT Basis (Buyers and Sellers Information Service) (2001). www.basis.act.gov.au/basis/
- ALGA (2004) *Annual Report 2003-2004: Australian Local Government Association*. Downloaded from <http://www.alga.asn.au/about/annualReports/2004.php> on 29 October 2005.
- Allen Consulting Group (2002) "Harmonisation of Building Control Administration: Costs and benefits of the National Administration Framework" *Draft Report for the Australian Building Codes Board*". Unpublished report.
- APCC (1998) *National Prequalification Criteria Framework*. Canberra: APCC. http://www.apcc.gov.au/docs/prequalification_criteria.pdf on 10 February 2006.
- APCC (2001) *Asset Management*. Downloaded from <http://www.apcc.gov.au/docs/AssetManagement.pdf> on 10 February 2006.
- APCC (2002) *Client Skills: Skills required by Government as the Construction Industry Client*. Canberra: APCC. Downloaded from <http://www.apcc.gov.au/docs/ClientSkillsSep2002.pdf> on 10 February 2006.
- APCC (2003) *National Procurement Reform Principles*. Downloaded from <http://www.apcc.gov.au/docs/APCCNatProcurementReformPrinciplesMch2003.pdf> on 10 February 2006.
- AusIndustry (2005) Regulation Reduction Incentive Fund Costing Tool. CD ROM. Canberra: AusIndustry.
- Australian Building Codes Board (1997) *Economic Evaluation Model: Building Regulatory Change*. Unpublished paper. Downloaded from http://www.abcb.gov.au/documents/economic_evaluation/eco_eval_model_june971.pdf on 15 November 2005.
- Australian Building Codes Board (2003) *Submission to the Productivity Commission into First Home Ownership*. ACBR, 5 November 2003. <http://www.pc.gov.au/inquiry/housing/subs/sub198.pdf> on 21 September 2005.
- Australian Bureau of Statistics (2005) *Taxation Revenue 2003 – 2004*. Downloaded from <http://www.abs.gov.au/Ausstats/abs@.nsf/0/ACE2B395A8657B91CA256A6800820742?Open> on 19 December 2005.
- Australian Government (2005) *Federation*. <http://www.australia.gov.au/govt-in-aust-1federation> downloaded on 23 February 2006.
- Borins, S. (2001) *The Challenge of Innovating in Government*. Price Waterhouse Cooper Endowment for the Business of Government. NPD.
- Bridgman, P. & Davis, G. (2004) *The Australian Policy Handbook*. Crows Nest, NSW: Allen and Unwin.
- Brown, KA & Furneaux, CW. (2006) *A Primer on Public Policy for the Construction Industry*. Brisbane: QUT.
- Bryman, A. & Bell, E. (2003). *Business Research Methods*. Oxford: Oxford University Press.
- Bryman, A. 1984. The Debate about Quantitative and Qualitative Research: A Question of Method or Epistemology? *The British Journal of Sociology* Vol. 35(1), p. 75 – 92.
- Bryman, A. 1998. *Quantity and Quality in Social Research*. London: Unwin Hyman.
- Building Commission (2002) Ministerial Direction No. 1 *Tendering Provisions for Public Construction*. Downloaded from <http://www.buildingcommission.com.au/asset/1/upload/MinisterialDirectionNo1.pdf> on 20 January 2006.
- Building Commission (2006) *Process Guide – A guide to client control of construction projects* Downloaded from <http://www.buildingcommission.com.au/www/default.asp?casid=3191> on 8 February 2006.

- Building Products Innovation Council (2003) *BPIC Submission to the Productivity Commission into First Home Ownership: The Hidden Costs of Inconsistent Building Regulations*. Downloaded from <http://www.pc.gov.au/inquiry/housing/subs/sub031.pdf> on 15 November 2005.
- Carassus, J. (2004). (Ed.) *The Construction Sector System Approach: An international framework*. CIB Report 293. Rotterdam: International Council for Research and Innovation in Building and Construction.
- Cavana, R.Y., Delahaye, B.L. and Sekaran, U. (2001) *Applied Business Research: Qualitative and Quantitative Methods*. Sydney: John Wiley and Sons.
- Chapman, R. (1989). "Federalism, inter-governmental relations and the Australian policy process" in M. Wood, C. Williams and C. Sharman. *Governing Federations: Constitution, Politics, Resources*. Sydney: Hale & Iremonger Pty Ltd.
- Chun, P. and Associates. (2000). 'State of Play' Document: Comparison of Building Regulatory Framework in Australian States and Territories. Department of Industry, Science and Resources. http://www1.industry.gov.au/library/content_library/BC-StateofPlay.doc
- COAG (2005) *Council of Australian Governments Communiqué, 3 June 2005*. Downloaded from <http://www.coag.gov.au/meetings/030605/coag030605.pdf> on 1 September 2005.
- Cole, T.R.H. (2003). *Final report of the Royal Commission into the Building and Construction Industry: Summary of Findings and Recommendations*. Canberra: AGP.
- Collie Planning and Development Ltd (2002). *State of Play Document: Comparison of Planning Systems in Australian States and Territories*. National Office of Local Government. http://www.daf.gov.au/sop/SOP_updated_2002.pdf
- Commonwealth Department of Finance and Administration (2005) *Commonwealth Procurement Guidelines*. Downloaded from http://www.finance.gov.au/ctc/docs/CPGs_-_January_2005.pdf on 23 January 2006.
- Considine, M. (1994). *Public Policy: A Critical Approach*. Melbourne: Macmillan Education.
- Council of Australian Governments (2004) Principles and Guidelines for National Standard Setting and Regulatory Action by Ministerial Councils and Standard-Setting Bodies. Canberra: AGPS. Downloaded from <http://www.pc.gov.au/orr/reports/external/coag/coag.pdf>, on August 1, 2005.
- Crossfield, L. & Burn, A. (1994). *Review of the Evaluation Function in DEET*. Canberra: AGPS.
- Davis, G., Wanna, J. Warhurst, J. and Weller, P. (1993). *Public Policy in Australia*. 2nd Edition. St. Leonards, NSW: Allen and Unwin.
- de Valence (2004) "Meso-economic analysis of the Australia building and construction industry" in J. Carassus (Ed.) *The Construction Sector System Approach: An international framework*. CIB Report 293. Rotterdam: International Council for Research and Innovation in Building and Construction, pp. 19 – 44.
- Demirag, I. (2004) "Towards Better Governance and Accountability: Exploring the Relationships between the Public, Private and the Community" *Journal of Corporate Citizenship*, 15, pp. 19 – 26.
- Denzin, N.K. and Lincoln, Y.S. (Eds.) (2003). *Strategies of Qualitative Enquiry*. 2nd Edition. Thousand Oaks: Sage.
- Department of Administrative and Information Services (2005) *Services Guide*. Downloaded from http://www.dais.sa.gov.au/webdata/resources/files/dais_services_guide_Oct05.pdf on 23 January 2006.
- Department of Finance (1994). *Doing Evaluations: A Practical Guide*. Canberra: Department of Finance.
- Department of Finance and Administration (2005) *Commonwealth Procurement Guidelines*
- Department of the Premier and Cabinet, (2000). *Queensland Policy Handbook*, 2nd edition. Government Printer: Queensland Government.
- Department of Treasury and Finance, Tasmania (1997) *Procurement Practices Manual*. Adelaide:
- Discussion Document* (2005) (to accompany the Proposed Local Government Legislation Amendment Bill 2005. Downloaded from http://www.lgp.qld.gov.au/Docs/local_govt/review_legislation/Discussion_paper_v2.pdf on 28 October 2005.

- Donaldson, T. & Preston, L.E. (1995) "The stakeholder theory of the corporation: Concepts, evidence and implications" *Academy of Management Review*, Vol. 20(1), pp. 65 – 91.
- Dunn, W.N. (1981). *Public Policy Analysis: An Introduction*. Englewood Cliffs: Prentice-Hall,
- Dutch *Administrative Burdens Model* (2005). Downloaded from http://www.administratievelasten.nl/default.asp?CMS_ITEM=40A700923A254E96A944E0DF8998DAA9X1X40221X35.
- Dye, T.R. (1998). *Understanding public policy*. Upper Saddle River, J.J.: Prentice Hall.
- Eisenhardt, K.M. (1989). "Agency Theory: As Assessment and Review" *Academy of Management Review*, Vol 14(1), 57 – 74.
- Eisner, M.A., Worsham, J. and Ringquist, E. (1996) "Crossing the organizational void: The limits of agency theory in the analysis of regulatory control" *Governance: An International Journal of Policy Administration*, Vol. 9(4), pp. 407 – 428.
- Etzkowitz, H and Leydesdorff, L. (2000) "The dynamics of innovation: From national systems and mode 2 to a triple elix. Of university-industry-government relations" *Research Policy*, Vol 29(2), pp. 109 – 123.
- Farina, A. (Chair) (2004) Report of the Standing Committee on Uniform Legislation and General Purposes in relation to Uniform Legislation and Supporting Documentation. Downloaded from [http://www.parliament.wa.gov.au/Parliament/commit.nsf/\(Report+Lookup+by+Com+ID\)/BD4B1C86307C354A48256EFD0008D9CE/\\$file/ug.iga.040823.rpf.019.xx.a.pdf](http://www.parliament.wa.gov.au/Parliament/commit.nsf/(Report+Lookup+by+Com+ID)/BD4B1C86307C354A48256EFD0008D9CE/$file/ug.iga.040823.rpf.019.xx.a.pdf) on 15 November 2005.
- Fenna, A. (2004). *Australian Public Policy*, 2nd Edition. Frenchs Forest, NSW: Pearson Education.
- Fox, E.M. (1992). "Harmonization of Law and Procedures in a Globalized World" *Antitrust*, Vol. (60), pp. 593 – 598.
- Freeman, R.E. (1984). *Strategic Management: A Stakeholder approach*. Massachusetts: Pitman.
- Funnell, B. (1996): Analysis of qualitative field research. In: A handbook for research in adult and vocational education. R. Funnell (Ed). Adelaide, South Australia: National Council for Vocational Education Research.
- Furneaux, CW, Brown, K., Abel, N. and Burgess, J. (2006) *Mapping the Regulatory environment of the Construction Industry in Australia*. Brisbane: CRC for Construction Innovation. Unpublished report.
- Gage, R.W. (1990). "Key intergovernmental issues and Strategies: An assessment and prognosis" in R.W. Gage & M.P. Mandell. *Strategies for Managing Intergovernmental Policies and Networks*. New York: Praeger.
- Geiger, S.W. & Hoffman, J.J. (1998). "The impact of the regulatory environment and corporate level diversification on firm performance" *Journal of Managerial Issues* Vol. 10(4), 439 – 453.
- Getz, K.A. (2001) "Public affairs and political strategy: Theoretical foundations" *Journal of Public Affairs*, Vol 19(4), Vol. 2(1) 2002, pp. 305 – 329.
- Gomes, R.C. (2004). "Who are the relevant stakeholders to the local government context? Empirical evidences on environmental influences in the decision making process of English local authorities" *Brazilian Administration Review*, Vol. 1(1), pp. 34 – 52.
- Government of South Australia (1996) *Project Initiation Process: Asset Management Policy Series*. Downloaded from [http://147.109.254.181/domino/bfg.nsf/BF6470B28F51292ACA256C980005D576/\\$FILE/PIP.pdf](http://147.109.254.181/domino/bfg.nsf/BF6470B28F51292ACA256C980005D576/$FILE/PIP.pdf) on 21 January 2006.
- Government of South Australia (1998) *SA Government Procurement Reform Strategy*. Department of Administrative and Information Services.
- Hamill, D. (2005) *Taxing Australian Federalism*. Brisbane: Brisbane Institute. Downloaded from http://www.brisnet.org.au/resoiurces/hamill_david_federalism.html on 28 October 2005.
- Hampson, K & Brandon, P. (2004) *Construction 2020: A Vision for Australia's Property and Construction Industry*, Brisbane: Cooperative Research Centre for Construction Innovation.

- Hampson, Keith and Manley, Karen (2001) "Construction Innovation and Public Policy in Australia" in Manseau André and Seaden, George *Innovation in Construction: An International Review of Public Policies*. New York: Taylor & Francis, pp.31 – 59.
- Haralambos, M., van Krieken, R., Smith, P and Holborn, M. (1996) *Sociology: themes and perspectives*. Australian edition. South Melbourne: Longman.
- Harrington, L.K. (1996). "Ethics and policy analysis: Stakeholders' Interests and Regulatory Policy" *Journal of Business Ethics*, Vol. 15(4), pp. 373 – 382.
- Hay, C. (2004). "Theory, stylized heuristic or self-fulfilling prophecy? The status of rational choice theory in public administration" *Public Administration*, Vol. 82(1), pp. 39 – 62.
- Heath, J. and Norman, W. (2004) "Stakeholder Theory, Corporate Governance and Public Management: What can the history of State-Run Enterprises Teach us in the Post-Enron era?" *Journal of Business Ethics*, 53, pp. 247 – 265.
- Hill, M & Hupe, P. (2003) "The Multi-layer problem in implementation research" *Public Management Review*, Vol. 5(4), pp. 471 – 490.
- Hood, C.C. (1983). *The Tools of Government*. London: Macmillan.
- Howard, C. (2005). "The Policy Cycle" *Australian Journal of Public Administration* Vol. 64(3): 3-13.
- Jawahar, I.M. & McLaughlin, G.L. (2001) "Toward a descriptive stakeholder theory: An organizational life cycle approach" *Academy of Management Review*, Vol. 26(3), pp. 397 – 414.
- Jensen, M.C. & Meckling, W.H.J. (1994). "The Nature of Man" *Journal of Applied Corporate Finance*, Vol. 7(2), pp. 4-19.
- Jensen, M.C. (1994). "Self-Interest, Altruism, Incentives & Agency Theory" *Journal of Applied Corporate Finance* Vol. 7(2), pp. 40- 45
- Jones, T.M. (1995). "Instrumental stakeholder theory: A synthesis of ethics and economics" *Academy of Management Review*, Vol. 20(2), 404 – 437.
- Kettner, P.M. & Martin, L.L. (1987). *Purchase of Service Contracting: A Sage Human Services Guide*, Newbury Park: Sage.
- Kiviniemi, A., V. Tarandi, et al. (2008). Review of the Development and Implementation of IFC compatible BIM, Erabuild.
- Kleitz, A. (2003) "Costs and Benefits of Trade Facilitation". *Second International Forum on Trade Facilitation : Sharing the Gains of Globalization in the New Security Environment*, 14-15 May 2003, United Nations Office at Geneva, Switzerland OECD. Downloaded from http://www.unece.org/trade/forums/forum02/presentations/session_ii/akleitz.pdf on 15 November 2005.
- KPMG (2000) "Impact Assessment of Major Reform Initiatives" Unpublished report prepared for the Australian Building Codes Board. Downloaded from http://www.abcb.gov.au/documents/general/impact_maj_reform.pdf on 15 November 2005.
- Leebron, D.W. (1997). "Lying down with Procrustes: An Analysis of Harmonisation Claims" In J. Bhagwati & R.E. Hudec. *Fair trade and Harmonization: Prerequisites for Free Trade?* Volume 1: Economic Analysis. Cambridge, MA: The MIT Press.
- Leydesdorff, L. (2001) "Knowledge based Innovation Systems and the Model of a Triple Helix of University-Industry-Government Relations" *New Economic Windows: New Paradigms for the New Millennium*. Salerno, Italy, September 2001.
- Leydesdorff, L. (forthcoming) "The Knowledge-Based Economy and the Triple Helix Model". In: Wilfred Dolfsma & Luc Soete (Eds.), *Understanding the Dynamics of a Knowledge Economy*, Cheltenham: Edward Elgar, 2006, (forthcoming). Downloaded from <http://www.leydesdorff.net/thmodel/eaape03.pdf>.
- Leydesdorff, L. and Etzkowitz, H. (1996). "Emergence of a Triple Helix of University-Industry-Government Relations" *Science and Policy*, Vol. 23, pp. 279 – 286.
- Leydesdorff, L. and Etzkowitz, H. (1998). "The Triple Helix as a Model for Innovation Studies", *Science and Policy*, Vol. 23(3), pp. 195 – 203.

- Leydesdorff, L. and Etzkowitz, H. (2001). "The transformation of University-industry-government relations" *Electronic Journal of Sociology*, Vol. 5(4).
- Leydesdorff, L. and Etzkowitz, H. (2003). "Guest Editorial: The Triple Helix of university-industry-government relations" *Scientometrics*, Vol. 58(2), pp. 191-203.
- Majone, G. (1999). "Regulation in Comparative Perspective" *Journal of Comparative Policy Analysis: Research and Practice*. Vol. 1, pp. 309 – 324.
- Manley, K. (2004) *BRITE Innovation Survey: Executive Summary*, Brisbane: Cooperative Research Centre for Construction Innovation. http://www.brite.crci.info/publications/pdfs/executivesummary_brite_survey.pdf .
- Manseau, André and Seaden, George (2001) "Analytical Framework" in André Manseau and George Seaden (Eds) *Innovation in Construction: An International Review of Public Policies*. New York: Taylor & Francis, pp. 7 – 18.
- Mellahi, K. & Wood, G. (2003) "The Role and Potential of Stakeholders in "Hollow Participation": Conventional Stakeholder Theory and Institutional Alternatives" *Business and Society Review*, 108(2), pp. 183 – 202.
- Merriam-Webster Online Dictionary. "Policy" Downloaded from <http://www.m-w.com/cgi-bin/dictionary?book=Dictionary&va=policy> on x16 November 2005.
- Mertens, D.M. (2005) *research and Evaluation in Education and Psychology: Integrating diversity with Quantitative, Qualitative and mixed methods*. 2nd Edition. Thousand Oaks: Sage Publications.
- Mitchell, R.K., Agle, B.R, & Wood, D.J. (1997) "Toward a theory of stakeholder identification and salience: Defining the principle of who and what really counts" *Academy of Management Review*, Vol. 22(4) 853 – 886.
- Moe, T. (1997). "The positive theory of public bureaucracy", in D. Mueller (ed.) *Perspectives on Public Choice: A Handbook*. Cambridge University Press: New York.
- Newcombe, R. (2003). "From a client to project stakeholders: a stakeholder mapping approach", *Construction Management and Economics*, 21, pp. 841 – 848.
- Northern Territory Government (2003) *The Northern Territory Procurement Code*.
- NSW Treasury (2004a) (2004) *NSW Government Procurement Policy*. Downloaded from <http://www.treasury.nsw.gov.au/pubs/tpp2004/tpp04-1.pdf> on 16 January 2006.
- NSW Treasury (2004b) *Agency Accreditation Scheme for Construction Projects*. Downloaded from <http://www.treasury.nsw.gov.au/procurement/pdf/accredit.pdf> on 20 January 2006.
- NSW Treasury (2004c) *Total Asset Management Policy*. Downloaded from <http://www.treasury.nsw.gov.au/pubs/tpp2004/tpp04-3.pdf> on 20 January 2006.
- O'Farcheallaigh, C., Wanna, J. and Weller, P. (1999). *Public Sector Management in Australia: New Challenges, New Directions*. 2nd Edition. Melbourne: Macmillan.
- O'Toole, L.J. (1990). "Theoretical Developments in Public Administration: Implications for the Study of Federalism" *Governance: An International Journal of Policy and Administration*. Vol. 3(4), pp. 394 – 415.
- OECD (1994) *Public Consultation in Regulatory Development: Practices and Experiences in Ten OECD Countries*, paper prepared for the PUMA OECD meeting on Public Consultation in Regulatory Development, Paris, October.
- OECD (1997) *OECD Report on Regulatory Reform*. Paris: OECD /OCDE.
- OECD (2001) *Government Capacity to Assure High Quality Regulation*. Paris: OECD / OCDE
- OECD (2004) *The Standard Cost Model: A Framework for Defining and Quantifying Administrative Burdens for Businesses*. Downloaded from: http://epp.eurostat.ec.europa.eu/pls/portal/docs/PAGE/PGP_DS_QUALITY/TAB47143266/STANDARD%20CO ST%20MODEL_DK_SE_NO_BE_UK_NL_2004_EN_1.PDF

- Office of Urban Management (2005) *South East Queensland Infrastructure Plan and Program 2005 – 2026*. Brisbane: Department of Local Government, Planning, Sport and Recreation.
- Opeskin, B.R. (2001). "Mechanisms for intergovernmental relations in federations". *International Social Science Journal* Vol. 53(167), pp. 129-138.
- Osborne, S. (1998) *Voluntary Organisations and Innovation in Public Services*, London: Routledge.
- Osbourne, S.P. and Brown, K.A. (2005) *Managing change and innovation in public service organizations*. New York : Routledge.
- Pandley and Scott (2002) "Red Tape: A Review and Assessment of concepts and measures" *Journal of Public Administration and Theory* 12:4, pp. 553 – 580.
- Parliament of Australia *Joint Standing Committee on Public Works: Role and Operations*. Downloaded from <http://www.aph.gov.au/house/committee/pwc/role.htm> on 23 January 2006.
- Patton, C.V. & Sawick, D.S. (1993). *Basic Methods of Policy Analysis and Planning*. 2nd Ed. Englewood Cliffs: Prentice Hall.
- Peters, B.G. (1998) "Managing Horizontal Government: The Politics of Co-Ordination" *Public Administration*, Vol. 76, pp. 295 – 311.
- Phua, F.T.T. and Rowlinson, S. (2003). "Cultural differences as an explanatory variable for adversarial attitudes in the construction industry: the case of Hong Kong" *Construction Management and Economics*, 21, pp. 777 – 785.
- Price Waterhouse Coopers (2002) *Innovation in the Australian building and Construction Industry – Survey Report*. Canberra: Australian Construction Industry Forum, Department of Industry, Tourism and Resources.
- Productivity Commission (2003) *Evaluation of the Mutual Recognition Schemes*. Research report, 8 October 2003. Canberra: Productivity Commission.
- Productivity Commission (2004) *Reform of Building Regulation Productivity Commission Research Report*. Downloaded from <http://www.pc.gov.au/study/building/finalreport/index.html> on 2 December 2004.
- Proposed Local Government Legislation Amendment Bill 2005*. Consultation draft downloaded from http://www.lgp.qld.gov.au/Docs/local_govt/review_legislation/local_govt_legislation_amendment_bill_2005.pdf on 28 October 2005.
- Public Works Tender Board (1997) *Guidelines*. Launceston:
- QLD Department of Public Works (2004). *State Purchasing Policy*. Brisbane: Department of Public Works.
- Queensland Government (2006) *Capital Works Management Framework*. Brisbane: Department of Public Works, Queensland Government. Downloaded from <http://www.build.qld.gov.au/amps/AmpsDocs/CWMFMRBP.pdf> on 7 December 2005.
- Quiggin, J. (1996) "Private sector involvement in infrastructure projects" *Australian Economic Review*, 96(1), pp. 51- 64.
- Rhodes, R.A.W. (1999) *Control and Power in Central-Local Government Relations*. 2nd edition. Aldershot: Ashgate.
- Rothwell, R. & Zegveld, W. (1981) *Industrial innovation and public policy: preparing for the 1980s and the 1990s*. London : Frances Pinter.
- Ryan, N., Parker, R. and Brown, K. (2003) *Government, Business and Society*, Sydney: Pearson 2nd Ed.
- Saunders, C. (1994) "Australian Economic Union" in A. Mullins and C. Saunders *Economic Union in Federal Systems*. Sydney: The Federation Press.
- Saunders, M. Lewis P. and Thornhill, A. (2000) 2nd Edition. *Research methods for business students*. Harlow, Essex, England: Pearson Education Limited.
- Scholl, H.J. (2001) "Applying stakeholder theory to E-government: Benefits and limits" *Proceedings of the 1st IFIP Conference on e-Commerce and e-Government*, October 2001, Zurich, Switzerland. Downloaded from http://www.ischool.washington.edu/jscholl/Papers/Scholl_IFIP_2001.pdf on 27 October 2005.

- SCM Network (2004) *International Standard Cost Model Manual*. Downloaded from <http://www.oecd.org/dataoecd/32/54/34227698.pdf>
- Shand, D. & Arnberg, M. (1996). 'Background paper' in OECD Responsible Government, PUMA Public Management Service, OECD, Paris: 15-38.
- Smith, Adam (1937) [1776] *An Inquiry into the Nature and Causes of the Wealth of Nations*. New York: Modern Library.
- Stake, R.E. (2003) "Case studies" in Denzin, N.K. and Lincoln, Y.S. (Eds.) (2003). *Strategies of Qualitative Enquiry*. 2nd Edition. Thousand Oaks: Sage, pp. 134 – 164.
- Stake, R.E. (2005) "Qualitative case studies" in Denzin, N. & Lincoln, Y.S. (eds). *The Sage Handbook of Qualitative Research Methods*, 3rd Edition. Thousand Oaks: Sage, pp. 443-466.
- Stoeckel, AB & Quirke, D. (1992) *Services: Setting the Agenda for Reform*, Canberra: Services Industries Research Program, Department of Industry, Technology and Commerce.
- Tennert, J. R., & Schroeder, A. D. (1999, April 10-14, 1999). Stakeholder analysis. Paper presented at the 60th Annual Meeting of the American Society for Public Administration, Orlando, FL.
- Thomson, R., Boerefijn, J. and Stokman, F. (2004). "Actor alignments in the European Union decision making", *European Journal of Political Research*, Vol. 43, pp. 237 – 261.
- Turpin, T. and Garrett-Jones, S. (2003). "A Missing Variable: Evaluating the Institutional Impact from Participating in Government Supported Cross Sector R&D Programs" *Evaluation of Government Funded R&D Activities*, Vienna, 15-16 May 2003.
- WA State Supply Commission Act 1991*.
- Watts, R. (2001) "Models of federal power sharing" *International Social Science Journal*. Vol. 52 (167), pp. 23 – 32.
- Weinstock, D. (2001). "Towards a normative theory of federalism" *International Social Science Journal*, Vol. 53 (167), pp. 75 – 83.
- Weiss, A. (1995). "Cracks in the Foundation of Stakeholder Theory" *Electronic Journal of Radical Organisation Theory*, Vol. 1(1). Downloaded from http://www.mngt.waikato.ac.nz/research/ejrot/Vol1_1/weiss.pdf on 27 October 2005.
- Wheare, K.C. (1963) *Federal Government*. Fourth edition. Oxford: Oxford University Press.
- Wolf, R. (2000) "What is public policy?" quoted in *Voluntary Sector Policy Toolbox*. Downloaded from <http://www.ginsler.com/html/toolbox.htm> on 18 July 2005.
- Wright, D.S. (1978) *Understanding Intergovernmental Relations: Public Policy and Participants Perspectives in Local, State and National Governments*. North Scituate, MA: Duxbury Press.
- Yin, R.K. (2003a) *Applications of Case study research*. 2nd edition. Thousand Oaks: Sage.
- Yin, R.K. (2003b) *Case Study Research: Design and Methods*. 3rd Edition. Thousand Oaks: Sage.
- Zikmund, W.G. (2003). *Business Research Methods*. Mason, OH: Thompson, Southwestern.