

Sustainable management of self-financing public assets

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ABSTRACT

This paper provides a framework for evaluating sustainable management of self-financing Australian public assets when owned by: (i) a government department, (ii) a State owned corporate body, (iii) private investors, or (iv) a not for profit organisation governed by a network of constituents. The framework evaluates the generic characteristics of four different types of governance architectures by considering their: (i) accountability, (ii) quality of service, (iii) operating costs, (iv) funding (v) cost of finance, and (vi) political outcomes. The not for profit alternative introduces “Network Governance” that is identified as a condition precedent for developing sustainable self-governance and enriching democracy.

Keywords: Accountability, Network governance, Privatisation, Stakeholders, Sustainability.

JEL Classifications: D02, D20, D60, D70, G30, H10, L20, L30

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1. Introduction

This paper provides a framework for evaluating sustainable management of Australian public assets when owned by: (i) a government department, (ii) a State owned corporate body, (iii) private investors, or (iv) a not for profit organisation governed by a network of constituents. The framework evaluates the generic characteristics of the four different types of governance architectures by considering their: (i) accountability, (ii) quality of service, (iii) operating costs, (iv) funding (v) cost of finance, and (vi) political outcomes.

A not for profit organization with network governance provides a way for “decomposing the enterprise in efficient information processing respects” (Williamson 1985: 283) to recognize the “neurophysiological limits” of executives (Williamson 1975: 21). As pointed out by Mathews (1996: 32) the “reduction in data transmission and data complexity” can be “prodigious” with a form of network governance based on “holonic” architecture. In this way network governance reduces “communication overload” (Williamson 1985: 281) and "bounded rationality" (Williamson 1975: 4–7). It also allows network governance to greatly enhance the volume and integrity of communications and control for detecting and correcting errors to improve economy, efficiency and effectiveness.

Other attractions of public assets being owned by the constituents they service are: (i) no increase in public sector debt; (ii) replacing Ministerial accountability with constituents being accountable to themselves; (iii) enriching democracy by direct citizen participation in the control of public assets; (iv) changing the role of government from direct intervention to establishing the rules of the game for self-governance; (v) increasing economy, efficiency, effectiveness and sustainability by replacing private sector competition for control through markets and regulation with internal competition for control

among constituents who have competing interests; and (vi) avoiding autocratic or plutocratic control of public assets by investors that creates resentment, undermines democracy and sustainability.

During the end of the twentieth century the UK became a global role model for privatization. But at the turn of the century some privatized enterprises like Railtrack and Welsh Water experienced difficulties. This created interest in finding a different approach based on network governance (Turnbull 2002a).

A key distinguishing characteristic of network governance is that the constitution of the organization divides its control into interdependent centers of power described as a “compound board” (Turnbull 2000b: 1). This division of power can be used to introduce checks and balances. Another key differentiating characteristic is the introduction of politically independent feedback and feed-forward communication and control channels to the various power centers of a compound board. These can be used to create competition for both information and power to improve performance. A feature of network governance is that it allows all citizens affected by an organization, especially its employees, customers and suppliers, to participate in how it is directed and controlled. This provides a condition precedent for minimizing the involvement of the State to further organizational self-governance.

For simplicity and brevity the analysis is restricted to four generic options with two in the Australian government sector and two in the private sector as set out in Table 1: Framework for comparing governance options for self-financing infrastructure. While the form of network governance considered in this paper is in the non-profit private sector, there can be in practice innumerable variations. Elements of network governance can be grafted on to the other options to change the balance of the strengths and weaknesses between them.

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Table 1, Framework for comparing governance options for self-financing infrastructure

Again for simplicity and brevity the consideration of public assets that may not be self-financing are not considered. However, the framework also has relevance to hospitals, schools, universities and other community services whether or not they are self-financing. Such services can be made self-financing indirectly by the government issuing vouchers, credits or providing funding to users in other ways to facilitate choices in service provider. Another simplifying assumption is that only one level of government is involved.

In practice there are many details that would need to be included to allow the costs and benefits of the various governance options to be compared. Without specific details or knowledge of how a government might accept and manage financial, social and political risks only an indicative analysis can be provided. However, this provides a basis for illustrating the framework.

The general scope, context and indicative conclusions of the approach are outlined in Table 1. In the next Section 2, a stylized description of the four types of control architecture are presented as listed in rows 1, 2 and 3 of Table 1. Section 3 considers the resulting accountability regimes as listed in the various rows of 4 of the Table. Section 4 considers how the accountability regimes impact on the quality of services set out in rows 5. Section 5 analyses how the control architectures impact on operating costs detailed in rows 6. Section 6 reviews the comparative costs of funding in rows 7 and 8. Concluding remarks follow in Section 7 that considers the political and social impacts as set out in rows 9 and 10 of Table 1.

2. Control architecture

This Section outlines four different control architectures described in rows 2 and 3 of Table 1 as (i) Departmental, (ii) Corporatised, (iii) Investor, and (iv) Constituent. Corporatised control might be achieved through a special statute or through the use of the Corporations Act. Each of the four control architectures has different implications in providing community services as considered in the following Sections.

Investor control could involve one or more block holders and/or distributed owners of a Publicly Traded Corporation (PTC) or in a privately held entity. In either case control is taken to be organized through a unitary board or management committee. Constituent control means distributed control through a network of boards with separate boards appointed by employees, customers and suppliers. This arrangement illustrated in Turnbull (1995; 2000b) can be introduced without changing the law by introducing replaceable rules in a corporate constitution.

A hierarchical organisation controlled by a single or “unitary” board or committee has what leading international governance experts Monks and Sykes (2002: 12) describe as “inappropriate powers”. In the private sector they obtain absolute power to manage their own conflicts of interests that can corrupt both board members and/or the enterprise (Turnbull 2000b: 115).

The exposure to corruption is overcome in sustainable employee governed firms by dividing power into a number of boards to create a “compound board” as noted in row 3a of Table 1. Australian government departments are subject to somewhat similar checks and balances as a compound board as

explained below. For this reason compound boards are recorded under both the “Departmental” and “Constituent” control categories in row 3a of Table 1.

In an Australian government department, executive remuneration is determined by a Remuneration Tribunal independently constituted from outside the department. In the private sector, executive remuneration is not independently determined. While director remuneration is nominally controlled by shareholders of a PTC, the directors control the proceedings of shareholder meetings allowing directors to control their own remuneration.

Likewise, directors of a PTC control the nomination of directors to the board to make contested elections unusual and rarely do outsiders succeed in being elected with votes counted on a plutocratic basis of one vote per share. Contested elections to Parliament are the norm for Ministers of State in charge of a government department with voting carried out on a democratic basis of one vote per citizen. To become a Minister an individual might in addition be also exposed to competition to become the nominee of his or her party with a private internal contest for Ministerial selection.

Another crucial difference between the private and public sectors is the appointment of the external auditor. The Auditor-General in Australia is not appointed by the head of the department being audited, nor the Minister responsible, Cabinet or the Government. It is Parliament who appoints, remunerates and makes the A-G accountable to it for a fix term. This is quite different from a private sector auditor who may nominally be appointed by shareholders in the UK and Australia but who is controlled by the directors. Having so called “independent” directors control the auditor does not remove this conflict. When directors control the auditor, the purpose of having an auditor to check their accounts for

shareholders is lost as the auditors become an agent of the directors. Unlike UK auditors, US auditors are appointed by the directors to institutionalise the conflicts (Turnbull, 2005a).

Australian government departments are subject to processes not found in the private sector to remove or mitigate the conflicts of interest found in the private sector such as officers appointing and remunerating themselves or controlling the auditor. Public sector processes introduce a division of power as found in compound boards that are ubiquitous in sustainable employee owned corporations (Turnbull 2000b: 177–98). Such division of powers is also found in European companies (Turnbull 2000b: 163) with shareholders committees controlling the Auditor in Hungary Italy, Russia, and Spain (Turnbull 2005a: 64).

There are a number of other checks and balances existing in the public sector that are not found in the private sector that protects the rights of employees, bureaucratic processes to provide fairness, equity, and freedom of information. These processes that protect the quality of employment can add to the cost of public sector organizations. One way to escape some of these qualitative employment processes is to corporatise and/or privatise a public sector business activity.

However, both corporatisation and dominant forms of privatization typically depend upon centralized power that introduces problems discussed in Sections 3 and 4. The next Section considers the accountability implications of the four types of control architecture.

3. Accountability

This Section reviews the accountability regimes of four architectures. How the different types of accountability may affect performance is considered in Section 4.

A departmental organization is directly accountable to its portfolio Minister. The Minister in turn is accountable to Parliament and the electorate. The Minister is also accountable to her parliamentary leader and cabinet colleagues who can determine her political future.

The economy, efficiency, and effectiveness of public infrastructure services may become an agenda item for the election of a government. The market for votes can provide a compelling driver for elected officials to seek improvements in the quality and cost of infrastructure services. Toll roads and railways are examples.

While the public may monitor public infrastructure services as users, the economy, efficiency and effectiveness is typically monitored by the Auditor-General (A-G) and Parliament to whom the A-G is accountable. Key performance indicators used to evaluate the department might not necessarily be determined by the department itself as they are in the private sector. The situation can become less clear with a corporatised organization that may not be subject to auditing by the A-G and with management formally accountable to a board of directors as indicated in row 4b in Table 1.

The Minister responsible for regulating public services may have little relevancy with a departmental organization as indicated in row 4c of Table 1. However, this changes when a department organization is corporatised to make its operations appear to be more like those found in the private sector and so more relevant to the regulating Minister as indicated in Table 1.

Corporatisation can reduce and/or confuse Ministerial accountability to make it “fuzzy” as set out in row 4a of Table 1. There are many ways in which an organization can be corporatised but the perception can be created by the responsible Minister that it is the directors who are accountable. In the private sector it is the directors who appoint the CEO and monitor performance. However, it is common for the CEO of a corporatised organization to be nominated by the portfolio Minister or subject to the agreement of the shareholding Minister as occurs in the private sector when a dominant shareholder is present.

Private sector providers of infrastructure services are exposed to a conflict of interest between their contractual accountability to the government for the quality of services and to their investors for economic performance pursuant to row 4 of Table 1. It is difficult for contracts to anticipate all matters and so accountability becomes “incomplete” as shown in the Table. Accountability to the regulatory Minister becomes most relevant as indicated in rows 4c of Table 1.

When a private sector supplier replaces a public sector supplier of infrastructure services, accountability to the A-G and parliament is replaced with accountability to the directors of the organization and their contract with the government. A tension is created between providing a private profit and a public service. The conflicts can be hidden by privacy rights of the commercial contractors. Some of the conflicts might be exposed when there is accountability to a Parliamentary Committee. However, information can even be hidden with a departmental organization and this becomes even more limited with corporatised organizations as noted in row 4e of Table 1.

A private sector organization owned and controlled by its constituents on whom it depends for its existence and its economic viability is a form of a “multi-stakeholder mutual” organization (Turnbull

2001). A mutual organization controlled by its constituents can introduce “circular” accountability as noted in row 4 of Table 1 because it is owned and controlled by the persons on who it both depends and services. Circular accountability is a condition for self-governance with the governed being directly responsible for monitoring and appointing those who control the organization. A condition precedent for self-regulation and self-governance is a division of powers to introduce checks and balances that creates some forms of “Network governance”. Elements of network governance can also be introduced into organizations controlled by a government or investors (Turnbull 1995, 2000a). While the framework of analysis presented in this article can be used with such hybrid situations it will be omitted for the sake of brevity.

Network governance that introduces self-governance avoids accountability by the Portfolio Minister and makes accountability by the Regulatory Minister indirect to minimize the accountability of government as noted in rows 4b, 4c and 4d in Table 1. Because network governance introduces governance by the constituents for the constituent, transparency by necessity becomes open as noted in row 4e of Table 1.

Beside the political advantages of network governance, it can be used to introduce significant operating benefits that are described in the following Section. Network governance provides a basis for comparing the level of service provided by hierarchical command and control systems inherent in the other three types of control being analyzed.

4. Quality of Service

This section considers the relative effectiveness and responsiveness of the service provided by the four types of control architecture. Network governance is used as a focus for comparison as it is the most uncommon form of governance and so the least understood.

However, market forces favor the emergence of network governance in the more uncertain, dynamic and/or technologically advanced industries such as fashion textiles, electronics and biotechnology noted by Craven, Piercy and Shipp (1996) and Jones, Hesterly and Borgatti (1997). A prominent example of network governance not provided from these industries is the credit card organization, VISA International Inc (Hock 1996).

Network governance is a condition precedent for self-governance (Turnbull 2000b: 118). For this reason network governance is ubiquitous in non trivial sustainable worker owned firms (Turnbull 2000b: 178). The most outstanding example is provided by the nested networks of over 150 network governed firms located around the town of Mondragón in Spain. Thomas and Logan (1982) reported that these firms were more efficient than investor owned firms.

Network governance creates a basis for distributing decision making to the lowest possible level to introduce the “Principle of Subsidiary Function”. One form of this Principle was enunciated by Schumacher (1975: 203) who stated “that no higher order association should undertake any function, which can be undertaken at a lower level”. The economy and efficiency that can arise from adopting the Principle can be explained by its ability to economize the quanta of information that needs to be communicated and processed by higher level officials. In this way it reduces information overload and bounded rationality in a manner similar to the explanation provided by Williamson (1985: 292) for the

unitary (U-form) firms to develop into multidivisional (M-form) firms. A change introduced from the increasing complexity and size of firms during the early twentieth century.

Network governance also allows the people affected by decisions to provide feedback information on the effectiveness of the decisions and feed-forward information on how to direct the organisation.

People who are affected by an organization are commonly described as “stakeholders” (Hill and Jones 1992). Stakeholders include constituents of an organisation whose participation in decision making, communication and control can provide “requisite variety” for the management of complexity (Turnbull, 2002b). When the communication and control architecture of networks adopt the Principle of Subsidiary Function responsiveness is also increased. This is because more decisions are made at the local level to expedite more sensitive and appropriate responses as noted in the previous Section.

Without systemic feedback and feed-forward channels of communication from constituents, hierarchies in either the public or private sector do not have reliable and sustainable processes to identify let alone increase effectiveness and responsiveness. Improvement programs depend upon the motivation of managers and trial and error of discovering what might work as noted by Alchian (1950). The risk of failure and/or costs exceeding benefits introduces a barrier to innovation. Hippel (2005) reports that from 10% to 40% of users modify or adapt products and that in some industries 80% of product innovations arise from users rather than the Research and Development department of a firm. This provides a compelling reason for formally integrating customers into the governance architecture of firms as recommended by Porter (1992: 16–7) and described by Kay (1996), Givens (1991), Hippel (2005) and others.

Hierarchies do not commonly provide a feedback mechanism to take advantage of customer innovations. Nor might there be an incentive in a government department, corporatised organization or private contractor to involve themselves constructively with their customers and other constituents.

The incentive for private sector contractors to government to enhance the level of their service is very much dependent upon the nature of the contractual arrangements. Such contracts are unlikely to provide a profit incentive to improve the level of service from unpredictable changes arising from changes in technology, markets and/or preferences of customers.

However, departmental organizations are likely to be very sensitive to issues that are or can become a political concern to members of the elected government. This is because the tenure of the responsible Minister may depend upon the quality of service provided. But routine service issues are likely to be subjected to the limitations of hierarchies to become sufficiently flexible to be effective and responsive. This problem is also shared by hierarchical organizations in the private sector, even if they are subject to market competition.

Rather than improving the effectiveness and responsiveness of an organization by adopting private sector processes through corporatisation, the opposite could occur. This is because corporatistion transfers direct responsibility for the quality of service from an official subject to contested elections to the directors of the corporation who are rarely if ever subject to contested election. In any event, their accountability is diffused by there being a number of them rather than single official and routine operations are under the direct control of the CEO. In the private sector, CEOs are appointed by the directors but in the public sector the CEO can be a Ministerial appointment to further confuse the perceptions of the public of who is exactly responsible for unsatisfactory service quality or operational

performance. It is the ambiguity in accountability that may perversely provide the motive for senior government officials and their Minister to favor corporatising a government business.

While the public sector may not have a profit incentive it has a political incentive to be responsive and effective to constituents who can be politically significant and/or influential. Ministers of State have the ability to act to improve the effectiveness and responsiveness in a more direct manner over departments than over a corporatised organization.

The profit motive noted in row 5a of Table 1 provides an incentive not found in a government department to monitor and control management. However, dominant controllers also introduce the prospect of related party transactions increasing costs. Compound boards provide a process to check dominant investors and/or management and should be condition precedent for any private sector organization to obtain long term contracts to provide infrastructure services.

Such checks and balances have been developed to a higher degree than that found in Departmental organizations by sustainable employee firms (Turnbull 2000b: 177–98). The inclusion of other constituents like customers and suppliers increases the checks and balances and can be used to introduce internal competition for control as described by Pound (1992, 1993). Internal competition for control can be more sensitive, efficient and practical than relying on the discipline of competition from product markets or markets for control of the firm through the stock exchange.

Dominant theories of the firm like Transaction Cost Economics assume that markets provide an alternative to hierarchies for governing transactions (Williamson 1975, 1985). Ouchi (1996) suggested that clan relationships could also govern transactions. However, to analyze network governance the

framework of Hollingsworth and Lindberg (1985) is required who identify four distinct types of mechanisms that govern transactions being markets, clans, hierarchies and associative behavior.

Transactions governed by associated behavior that are integral part of network governance. However, they are not recognised by accepted theories of the firm. For example, Radner (1992: 1384) stated that "I know no theoretical research to date that compares the relative efficiency of hierarchical and non-hierarchical organizations within a common model". More generally, Jensen (1993: 873) observed that "we're facing the problem of developing a viable theory of organizations". In considering existing theories of the firm Zingales (2000) stated that "they seem to be quite ineffective in helping us cope with the new type of firms that are emerging". The analysis in this article has overcome this problem by being grounded in the science of governance (Turnbull 2000b, 2002b).

The next section considers how the choice of control architecture has implications for the operating costs of the enterprise.

5. Operating costs

This Section considers how governance architecture can affect the economy, efficiency and effectiveness of an organisation.

A basic rationale for privatization is that the opportunity for investors to maximize their profits provides a driver for increasing economy and efficiency. However, Alchian (1950) questions this assumption by arguing that "Profit maximization not a guide to action". The problem with this assumption he points out is the lack of information and uncertainty as to what action a manager can

take to increase profits. He points out that “Success is based on results not motivation” and that managers adapt their behavior to what works by “imitation and trial and error”. If there is uncertainty as to what works then this creates a problem of how controllers of the managers can monitor or “meter” the efforts of employees (Alchian and Demsetz 1972). As pointed out by Barney and Ouchi (1996: 301), “Alchian concludes the assumption that managers are motivated by profits maximization considerations in their decision making is meaningless under conditions of uncertainty”.

The comparative advantage that privatization may provide in increasing economy, efficiency and effectiveness then depends upon the degree that the control architecture can reduce uncertainty. As explained by Downs (1967: 116–8) hierarchies introduce communications, errors, biases and omissions in transmitting control orders down the line and receiving feedback reports on outcomes.

The need for hierarchies arises because they provide a way of reducing information overload. However, this means that orders have to be interpreted for action by subordinates who are also responsible for reducing the information reported up the line on the outcomes. Even with the best intentions the relaying of information leads to errors, distortions and omissions as demonstrated when teams of three or four people compete to be accurate as in the game of ‘Chinese whispers’. In a command and control hierarchy it is rarely in the interest of subordinates to report up the line problems for which she may be held responsible. The motivation to bias, distort or omit bad news is greater for subordinates in the private sector than in the public sector because of the greater ease to dismiss employees.

Another motive for corporatisation is that it can permit the removal of a number of public sector procedures that introduce costs and lack of flexibility. The possibility of corporatisation reducing

operating costs is noted in row 6a of Table 1. The costs savings could be greater in investor and constituent firms.

Another source of cost saving arise from improving X-efficiency that can arise from: “(i) intra-plant motivational efficiency (ii) external motivational efficiency, and (iii) non-market input efficiency” (Leibenstein 1996: 406). “The extent to which a particular firm responds to external pressure, if at all, once pressure is transmitted inside, will depend upon the commitment of the hierarchical commitment network” (Leibenstein 1987: 222). Leibenstein is not referring to network governance, and like Downs (1967) his analysis is made in the context of hierarchies as they occur in the public or private sectors.

The problem of exerting external pressure on a hierarchy to improve intra-plant motivation efficiency may be exacerbated by the various practices in the public service to protect the rights of employees as noted above. These costs are likely to be reduced by corporatisation as noted in row 6a of Table 1 and made less for investor owned firms. Network governance provides a basis to reduce agency costs through aligning the interest of the controllers of the firm with those with whom the firms services. A similar situation arises in worker owned firms where, individuals can be both Agents and Principals to create circular accountability.

For this reason network governance provides a basis to improve “external motivation efficiency” over that available in the Public sector or the Private Sector with an investor controlled firm. As pointed out by Leibenstein (1987: 5) “beyond a certain size the organizations will operate to some degree, in terms of non-market components”. This problem is ameliorated with network governance that introduces internal contestability for corporate control (Pound 1992, 1993). It is further ameliorated by network governance that follows the principle articulated by Simon (1962) who pointed out the advantages of

decomposing organizations into “nearly decomposable systems” or “sub-assemblies” that represented “stable intermediate forms” that were “able to maintain a separate existence”. Such arrangements are inconsistent with command and control hierarchies. Simon was describing what later writers (Mathews 1996) describe as “holons” or what Hock (1996) describes as “Chaords” to explain the organizational architecture of network governance utilized by VISA International Inc.

Network organizations like VISA and Mondragón firms decompose decision making into “nearly decomposable systems” that are “able to maintain a separate existence” illustrate the strategy used in nature to build and manage complexity in the most efficient, effective and sustainable basis. Inherent in this form of organizational architecture is the ability of the “sub-assemblies” to be almost self-governing. This is why the need for government regulation can become “nominal” as noted in row 6b of Table 1 and why compliance costs can become “negligible” in row 6c.

Beside compliance costs within a firm, investor governance of productive activities, especially those involved in monopoly or a dominant market position can introduce significant costs for the government in setting up a regulatory regime. These can be substantial as indicated in row 6b of Table 1.

Both investor and constituent ownership and control provide a way for governments to avoid the need to incur debt to finance infrastructure assets. The source and cost of funding the various options is next considered.

6. Funding options and costs.

This section considers various ways for funding self-financing infrastructure assets and their associated costs. The cost of finance and how its obligations are recognized can be a pivotal issue for governments in deciding if to privatize self-financing assets. Row 7 of Table 1 shows Departmental funding being contributed by tax payers and/or debt with corporatised assets financed only by debt. The use of debt, creditors and equity is assumed for investor projects. Only debt and creditors are assumed for constituent controlled projects.

Interest costs can make a significant impact on the price charged for infrastructure services. For capital intensive projects that have minimal operating expenses like hydro electricity, wind or solar-power, interest can represent a major cost of providing the service. For example, if monthly repayments of principal and interest are made over 20 years then interest rate of 4.3% pa will increase repayments by 50% and an interest rate of 7.95% pa will increase repayments by 100%. With monthly repayments over 30 years, a 5.2% pa interest rate increases the cost of repayments by 200% and by 300% with a 9.4% pa interest rate.

The interest rate paid by investors could be expected to be higher as noted in row 8a of Table 1. The cost of funding would in addition become higher from the need to provide a return on equity after tax commensurate with the risk.

The question must be asked if the price increase created by investor funding can be recovered by increased efficiency of the assets being managed with a profit motive. Given the analysis in the previous Sections this could be problematic. Loose regulation could result in even greater profits for investors and so greater cost for consumers and/or loss of the opportunity to decrease the price charged to consumers.

It is not uncommon for investments that can be written off over 20 years to last much longer. If we assume that the investment time horizon was also 20 years then it would make no difference in the incentive to invest if the ownership of the asset was written off at this time. This provides the basis for Build Own Operate and Transfer (BOOT) projects with investor owned assets transferred to the government after an agreed time. When there is no provision for ownership transfer and the assets continue to operate then the investor obtains cash in excess of that required to provide the incentive to invest to create “Surplus Profits” as indicated in row 8d. Surplus profits are not measured by accountants nor recognised by economists (Turnbull 2006). They may not be trivial and can become up to two or three times greater than the cost of the investment.

Projects controlled by constituents need credit insurance because equity is replaced with “deferred debt”. Some or all of such debt is likely to require credit insurance and/or re-insurance to share the risk of project failure over other projects and through time. The feasibility of using debt without any equity to fund high risk start up companies has been proven by the Mondragón cooperatives (Turnbull, 2000b: 199–224) funded only by bank loans. The cost of credit insurance might be in the form of selling futures in the service being provided. A toll way might pre-sell toll vouchers or a power authority might pre-sell kilowatt hours to create what in effect would become a “transport” or “energy” currency. For this reason, row 7 of Table 1 identifies the source of constituent funding as being from creditor or debtors.

The various options for controlling and funding self-financing infrastructure assets creates different accountability regimes, integrity of services and operating costs. Some of the political and social implications of the various options are considered in the following concluding remarks.

7. Concluding remarks

The four types of governance architecture considered in this paper produce different political and social outcomes. An important political driver for private sector funding is to avoid a debate over the advantages and disadvantages of incurring government debt. Self-financing assets that increase output may be less contentious for such a debate but elected officials generally seek to avoid controversy over government funded projects. Constituent control introduces an option for governments to avoid increasing its debt in much same way as using private investors to finance self-financing infrastructure assets. Private sector contractors may still be used to build and initially operate the assets but they would not own or control them.

With constituent ownership, control would become vested in individuals on the electoral role who were involved as employees of the infrastructure project, its consumers or suppliers or its consumers and suppliers who were individuals. Efficiency would be driven by competition between constituents for control and influence as per the political model of corporate governance described by Pound (1992, 1993). Persson, Roland and Tabellini (1996) provide a formal analysis of the advantages that can be obtained through a division of organizational power with empirical evidence provided by Norris (2005).

Mondragón firms illustrate how the constitution of constituent controlled organizations can be designed to achieve economy, efficiency and effectiveness as reported by Turnbull (2000b: 199–224, 2001). The result enriches the texture of democracy at the micro level to introduce participative social engagement with essential community services, (refer to rows 9 and 10 of Table 1).

Departmental organizations also have their own checks and balances as discussed above. However, departmental projects offer limited political engagement for citizens through the election cycle and there may be many detailed issues in which they could be motivated to act upon if there were other opportunities as would be provided by constituent control. For these reasons Departmental control can result in disengagement by the community as noted in row 10 of Table 1. This need not be so as constituent engagement could be grafted on to bureaucratic silos as described in Turnbull (1995).

While corporatisation may offer some efficiency benefits as noted in row 6 of Table 1, the quality of democracy is degraded by the introduction of a corporate entity and the subsequent loss of direct accountability of an elected official subject to periodic contested elections.

The rhetoric of privatization is that it introduces more effective business practices, competitiveness and the profit motive to increase efficiency to reduce the price of community services. However, it replaces democratic control with plutocratic control. Even if the private sector investors have their shares publicly traded the election of the directors who control the assets is on the basis of one share one vote so the largest investors obtain the most votes. Now days the largest investors are typically investment institutions with around 30% of them being “index trackers” that provides no incentive to incur the time and expense to vote their shares. Even with institutions who are “stock pickers” there is generally a negative incentive to become involved in voting their shares.

In any event, because investment institutions are fiduciaries they cannot vote their shares on social, environmental or political grounds unless they can show there are economic benefits (Spathis and Thurstans 2001). This problem is avoided with a constituent organization with individuals being

shareholders of record without any fiduciary agent interposed between them. This allows constituent corporations to be concerned with the quality of their services and their social, political and environmental impact.

From the analysis presented above it would seem the advantages put forward for privatization appear to be problematical. Of particular concern is the ability of governments to specify in the contractual arrangements with the service provider all the detailed contingencies for service quality. Beside the problem of incomplete contracts there is the problem of how to correct deficiencies that may arise from the contract or are created by changing circumstances. With accountability to investors it may not be possible to make corrections that could disadvantage them. The social outcome for users of the service can be resentment as listed in row 10 of Table 1.

As noted above, elements of constituent participation can be built in to any of the three other methods for controlling infrastructure services to increase their attractions and reduce their disadvantages. This could provide a way to ameliorate the problem to some degree of having incomplete contracts with private investors.

However, the analysis presented indicates that constituent organization could be designed to provide superior economy, efficiency and effectiveness as well as superior political and social outcomes.

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Table 1, Framework for comparing governance options for self-financing infrastructure

1	Ownership	Government		Private	
2	<i>Type of control</i>	Departmental (Not for profit)	Corporatised (Not for profit)	Investor (For profit)	Constituent (Not for profit)
3	<i>Architecture:</i>				
3a	Power distribution:	Compound	Centralized	Centralized	Compound
3b	Control type:	Hierarchy	Hierarchy	Hierarchy	Network
4	<u>Accountability:</u>	Strong	Fuzzy	Contractual	Circular
4a	By government	Full	Full but fuzzy	Incomplete	Negligible
4b	Who is accountable	Portfolio Minister	Directors	Dirctrs/Owners	Constituents
4c	Regulatory minister:	Some relevance	More relevant	Most relevant	Indirect
4d	Monitoring:	Auditor-General	Directors/A-G	Directors/Gov*	Constituents
4e	Transparency:	Limited	More limited	Obscure	Open
5	<u>Quality of service:</u>	Indifferent	Indifferent	Poor	Best
5a	Controlled by:	Bureaucracy	Management	Profit motive	Constituents
5b	Effectiveness:	Uncertain	More uncertain	Least concerned	Highest
5c	Responsiveness	Political issues	Fuzzy	Least concerned	Highest
5d	Monitoring	Auditor General	Directors/AG	Directors/Gov	Constituents
6	<u>Operating costs:</u>	Reference level	Might be less	More or less?	Less
6a	Agency, X-efficiency	Reference level	Marginally less?	Reduced	Minimized
6b	Government regulation	Nominal	Minimal	Substantial	Nominal
6c	Enterprise compliance	Nominal	Nominal	Significant	Negligible
7	<u>Funding:</u>	Taxes/debt	Debt	Equity/Debt/Cr.	Credit/Debt
8	<u>Cost of finance:</u>	Low	Low	Highest	In between
8a	Interest:	Low	Low	Higher	Higher
8b	Credit insurance:	Not applicable	Not applicable	Maybe	Yes
8c	Profits:	Maybe	Maybe	Yes and tax	Reduces price
8d	Surplus profits:	Not applicable	Not applicable	Most likely	Not applicable
9	<u>Political outcomes:</u>	Bureaucratic democracy	Degenerate democracy	Plutocratic control of assets	Enriched democracy
10	<u>Social impact:</u>	Disengagement	Disengagement	Resentment	Engagement