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Australian Electricity Reform: The Ownership Debate

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ABSTRACT

A direct and indirect change in the ownership of significant segments of the electricity industry - from the public to the private arena - has been an accompaniment to the structural and regulatory reform of the Australian electricity industry, underway for much of the last decade. While the structural and regulatory aspects of reform have engendered considerable public debate, the debate on the various aspects of the change in ownership - its rationale, methods, and impacts - has however been rather narrow, largely opaque, and mostly surreptitious, confined almost exclusively to the immediate fiscal impacts of the sale of electricity assets. It lacks any substantive consideration of the historical, political, and philosophical underpinnings of this change, and the profound, variegated, and fundamental consequences that this change will inevitably induce in terms of redistributing wealth in society, recasting the balance between the market and the welfare state, reorganizing the institutions of governance, realigning economic and political interests, reinterpreting of the role of the state, and indeed a rethinking on the philosophical foundations of a civilized society. This paper provides reconnoiter of the political and philosophical connects of the change in the ownership of the Australian electricity industry and argues for the need to broaden the nature of the current debate on these issues. While the review focuses on the Australian electricity industry, the messages are relevant for other countries undertaking reform, especially developing countries as they begin to dismantle and privatize their electricity infrastructures.

1. INTRODUCTION

A direct and indirect change in the ownership of significant segments of the electricity industry - from the public to the private arena - has been an accompaniment to the structural and regulatory reform of the Australian electricity industry, underway for much of the last decade. While the structural and regulatory aspects of reform have engendered considerable public debate, the debate on the various aspects of the change in ownership - its rationale, methods, and impacts - has however been rather narrow, largely opaque, and mostly surreptitious, confined almost exclusively to the immediate fiscal impacts of the sale of electricity assets [1]. It lacks any substantive consideration of the historical, political, and philosophical underpinnings of this change, and the profound, variegated, and fundamental consequences that this change will inevitably induce in terms of redistributing wealth in society, recasting the balance between the market and the welfare state, reorganizing the institutions of governance, realigning economic and political interests, reinterpreting of the role of the state, and indeed a rethinking on the philosophical foundations of a civilized society.

Evidence is emerging – as the Australian and other reform experiments around the world unfold – to lend credence to the observations made above, and hence to establish the need to broaden the nature of debate on the issue of industry ownership [2]. This paper is an attempt in that direction. It also provides a platform for building more substantive debate on this issue. While the discussion in

this paper focuses on the Australian electricity industry, the messages are relevant for other countries undertaking reform, especially developing countries as they begin to dismantle and privatize their electricity infrastructures.

2. CHANGES IN INDUSTRY OWNERSHIP: BROAD CONTOURS

This section provides an overview of the broad contours of the changes in the ownership of the Australian electricity industry, emphasizing the underlying influences behind such changes. The term 'privatization' is used - somewhat loosely - in this paper to connote any change in industry ownership and/or control, from the public to the private domain, achieved by, for example, direct sale of assets, leasing out of assets, contracting out of specific functions, and deregulation more generally.

The backdrop: Australia is a confederation of six states and two federal territories (for simplicity of exposition, the territories are referred to as states in this paper). The Australian federation is organized in the form of Westminster-style parliamentary democracy, with clear demarcation between rights and responsibilities of various components of the federation. Electricity supply – in the domestic context – is constitutionally a state matter in Australia; the Commonwealth government has authority over energy imports and exports. The 'residual powers' (i.e., power over matters which have not been specifically assigned by the states to the Commonwealth) reside with the states. The Australian federal system is characterized by extreme vertical fiscal imbalance, with the federal government (called - the Commonwealth) collecting nearly eighty percent of the tax revenue and responsible for only fifty percent of outlays [3]. Any lessening of the state control over its electricity utilities due, for example, to privatization, will therefore augment the existing fiscal imbalance, in favour of the commonwealth.

Private moorings: The electricity industry in each state developed around the state capitals and major rural centers in the late 19th century. The industry ownership was fragmented, consisting of a mix of largely private and some public enterprises. Electricity generation was typically distributed, with separate plant supplying electricity to each town or community, sometimes under private-public operating arrangements [4]. These trends in ownership and operation continued well into the early decades of the 20th century, and they appear to have been motivated by commercial opportunities offered by early technological innovations in electricity, rather than any ideological fixation with one or the other type of ownership.

Shift towards public ownership: The period 1920-1950 was characterized by perceptible shifts towards public ownership in all Australian states. Several factors contributed to this shift. For example, there was recognition of the criticality of electricity as an essential ingredient to the development of a modern, economically prosperous, and socially cohesive society. The technological innovations of those years suggested that large-scale concentrated generation of electricity, its carriage over longer distances, and its provision on a mass-scale was feasible, and indeed economical, as compared with the then prevalent practice of localized generation and distribution. This, it was argued, would require co-ordinated planning and centralized control, which governments were better suited to provide.

Then there was the contention that capital requirements for such mass-scale provision of electricity were immense, far beyond the ability of the private sector to mobilize, and that the risks attendant with this new enterprise were too large to enthuse the private sector to participate in electricity development, unless the returns were excessively high – an outcome that would contravene 'public interest'. It was also argued that the monopoly nature of the electricity industry would result in the private owners earning excessive monopoly rents, at the expense of electricity consumers. Moreover, the short-term profit maximization emphasis of the private investors would preclude the adoption of

longer-term, socially benign perspectives for developing a balanced electricity system. This could compromise national security, the argument continued. The following excerpts corroborate these viewpoints:

'... legislation aimed at regulating the company's activities to ensure that the company did not operate 'exclusively in its own interests and without regard to those of the public' ... a consensus emerged from the committee's view that the state should play a key role in the development of the industry ... the royal commissions had outlined a range of concerns relating to security of supply, the pace of electrification in regional areas, power costs, industry development, shareholder interests and financial advantages of public ownership ... it is difficult for a private authority to justify to its shareholders any investment which, whilst in public interest, would not provide an adequate return within a short time ...' [5,6].

Further fillip to these sentiments for public ownership was provided by the urgency to revive social and economic progress in the aftermath of the Great Depression – which was attributed by many to be the manifestation of rampant private greed, tacitly encouraged by the loosely regulated financial markets of the late 19th and early 20th centuries, and hence the belief that private ownership may not be compatible with the achievement of social goals; the pervasiveness of the Keynesian thinking in much of the Western world; and the British proclivity for public ownership of infrastructure assets - an important aspect in the Australian context.

Moreover, the political authorities of the time had recognized the political appeal of owning and controlling electricity – the electoral attraction of implementing job-creating electricity infrastructure projects; a potential source of revenue; a medium for dispensing political patronage; the opportunities for furthering state social policy objectives through investment decisions and regulated prices; and the strengthening of state sovereignty.

Under the combined influence of these forces, electricity development therefore became embedded in – in fact synonymous with – state economic and political priorities. Various states enacted legislation to acquire privately owned electricity assets, created state electricity authorities and empowered them to own, plan, and operate their electricity systems. By the end of 1950s, more than 90 percent of the Australian electricity industry was publicly owned.

Organization of public ownership - Statutory Authorities: Each state typically exercised control over its electricity industry through an organization entity called statutory authority. A statutory authority – in the context of the Australian Westminster-style parliamentary democracy in general, and for a publicly owned electricity industry in particular – is an organization entity created by a specific act of parliament, responsible for managing electricity assets and/or other functions of the government (e.g., regulation) [7] , in a manner commensurate with the government policy objectives and priorities.

The main rationale for the creation of statutory authorities in Australia was to enable them to perform their assigned roles in a professionally autonomous manner, under the guidance of a professionally-oriented board, removed from day-to-day operational interference by the relevant minister. This is in contrast to a government department, which is directly accountable to the minister on a day-to-day basis, and the minister, in turn, is personally responsible to the parliament for the conduct of the department. According to [8] , 'Statutory Authorities were … an organizational innovation arising from the recognition that the structure of a government department was not appropriate for an organization primarily involved in the production of marketed goods and services'.

Other features of public ownership: An interesting feature of electricity development in Australia is that each state developed its electricity industry in complete isolation from other states, driven primarily by state economic and political priorities – creating employment within the state,

promoting the use of state resources, and ensuring complete independence from other states in meeting electricity needs of the state. Reasons include: the differing geographical, resource, and developmental imperatives across various states; the constitutional status of electricity; and a penchant for state sovereignty – a rather colourful feature of the Australian political diaspora. Consequently, the Australian electricity industry comprised several distinct, state-based electricity systems with contrasting institutional arrangements, decision rules and processes, planning philosophies, design standards, operating practices, and virtually no meaningful interconnection and hence electricity trade between neighbouring states [9].

Notwithstanding these contrasts, a typical state owned utility was vertically integrated, with a single entity responsible for generating, transmitting, and/or distributing electricity to franchised customers. These entities followed centralized planning and operating philosophies with longer-term outlook, motivated by the notion of 'public interest', which, in the context of electricity supply industry, required: 'Security (in the form of reliability, continuity, and sufficiency of supply), and Economy (in the form of the cheapest supply to consumers)' [5]. Further, these entities were the exclusive domains of engineers, working under the guidance of internally appointed boards, the members of which possessed technical expertise in electricity. Electricity tariffs were determined by the state governments, with community service obligations and other policy considerations constituting important factors in such determinations. Subsidies were therefore common.

Further, state electricity utilities were generally exempt from paying commonwealth income and other taxes, although in some states they paid an equivalent amount to their state treasuries; they were however liable for state and local government taxes (e.g., payroll tax, land tax, stamp duty), and for the payment of dividends to their state governments [10]. The statutory authorities – by virtue of their status as public entities - had access to capital at much lower rates as compared with their private counterparts. This – along with the features noted in the foregoing discussion – ensured that adequate and timely investments were made by the utilities. The system security risks were therefore non-existent.

Consolidation of public ownership: In the 1960s, there was further consolidation of this model of industry ownership and operation. This was assisted by ongoing improvements in technology; rapidly rising electricity demand to support economic expansion of post-war years; continuing sway of the Keynesian arguments; and perceptions about the role of government in promoting economic development, employment, social welfare, equity, justice, and other community interests.

Further entrenchment: This model of industry ownership became further entrenched in the 1970s, although some of the major reasons which supported its creation, namely, technological innovations and rapidly rising electricity demand, had ceased to exist. Such entrenchment was due to the emergence of mutually symbiotic relationship between the political and industry interests [9]. The political appeal of owning electricity assets, and employing them as means to promote political agendas and enhance electoral prospects, was overwhelming. This political predilection was effectively harnessed by the state electricity bureaucracies for the purposes of empire-building. Political succor for such empire-building was easily forthcoming, given the political appeal of electricity. Pragmatism is never in short supply in politics! Consequently, by the early 1980s, the state electricity utilities constituted some of the most powerful bureaucracies, oftentimes too powerful for political comfort. The die was therefore cast for a future confrontation between these two powerful interests.

Early concerns about industry ownership and control arrangements: In the early 1980s, concerns began to emerge about the inefficiencies inherent in the electricity industry in Australia. Excess generating capacity, pricing rigidities, cross-subsidies, overstaffing, and poor financial performance were the often cited indicators to express such concern [10,11]. Such inefficiency was

generally attributed to the lack of accountability by the electricity authorities, which it was argued was due primarily to the ineffectiveness of the ownership, control, and management arrangements for the electricity industry.

Emergence of the 'corporate' model of industry ownership: The above noted concerns were viewed by the state political authorities as an opportunity to tame the unaccountable electricity monoliths and to improve their credentials as responsible economic managers. And the electricity utilities, cognizant of the untenability of preserving the status quo, also considered it opportune to improve their image and to ensure their longer-term survival. Consequently, a number of legislative and non-legislative measures were undertaken by the governments and electricity utilities to improve industry performance [9].

Some such specific measures included: appointing independent enquiries to review industry performance, establishing commercially focused performance targets and monitoring schemes; appointing external (i.e., non-electricity) experts to the boards of electricity utilities; developing managerial accountability criteria and enforcement measures; tightening the scrutiny of industry system expansion plans; modifying accounting practices; permitting limited participation by the private sector (for example, purchasing power from privately owned co-generators); restructuring and rationalizing utilities and commercializing their operations; and adopting cost-based pricing principles [7,9,10,12].

Further, consonant with the constitutional status of electricity in Australia and the political exigencies prevalent at the time, each state adopted a different mix of measures to improve industry performance. Notwithstanding these differences, the basic idea behind these measures was to provide commercial orientation to electricity utilities, through improved management and control arrangements, while retaining public ownership. The two generic approaches for such improvement adopted by various states included 'commercialization' and 'corporatization'.

Commercialization - in the Australian context - is typically a less formal, non-legislative approach. It does not normally involve the appointment of a commercial board, and the application of formal commercial disciplines (e.g., Corporations Law). It aims to improve industry performance by reforming administrative procedures, for example, introducing financial and non-financial targets; reducing government involvement on a day-to-day basis; and improving accounting methods and reporting requirements.

Corporatization, on the other hand, aims to improve performance of a publicly owned utility by replicating for it – either through regulation or legislation – the commercial and market disciplines which typically apply to a private utility. The government is the dominant shareholder in this arrangement, and the public corporation is represented by a commercial board, operating in accordance with the provisions of the Corporations Law. A corporation is expected to achieve specific financial and non-financial targets, with monitoring provided by government ministries and agencies. The corporation is given significant professional autonomy and authority to achieve its targets.

These initiatives resulted in significant efficiency gains [9]. In the early 1990s, the electricity utilities in various states were much nimbler, leaner, and commercial organizations, contributing significantly to the state treasuries, and providing adequate, reliable, and reasonably priced electricity to all, while satisfactorily fulfilling key government policy objectives and community service obligations.

Further pressures for reform and the emergence of industry ownership as an issue: In spite of these efficiency gains, the pressures to further reform the industry continued. These pressures arose from the confluence of a host of factors. The early proponents of reform – the commonwealth government, large business, financial and legal consulting groups, merchant banks, and the media - argued that the Australian electricity industry was still inefficient, especially in comparison with its international counterparts, and that further gains were possible. Such inefficiency was attributed to the absence of a 'competitive culture' in the electricity industry. This absence, it was stressed, was

reflected in all facets of the electricity industry – its structure, regulation, ownership, and governance philosophies more generally.

Structurally - it was emphasized - the industry was essentially organized as state based monopolies, thus blunting the competitive edge required to reduce costs and prices. Further, the industry regulation was excessive, intrusive, pandering to a diverse range of community interests, and devoid of commercial focus. These structural and regulatory features - the argument continued - were largely due to the public ownership of the industry which, on account of the rather fuzzy nature of the relationship between the electricity utility and the government, distorted the incentive structure for the public utility managers. Even as corporations, these public utilities - it was averred - remained inefficient because several of the market disciplines still did not apply to them, for example, threat of takeover or mergers on the grounds of inferior performance; risk of insolvency; and the ability to trade in the equity capital [10,11].

The remedy to overcome these deficiencies, it was asserted, resided in adopting a competitive market model for the electricity industry. This would entail a structural unbundling the industry into competitive and monopoly segments; introducing competition in the competitive segments (generation and retail) of the industry; developing light-handed, commercially focused, transparent, and incentive-based regulatory arrangements for the monopoly transmission and distribution networks; and removing the governmental control of the industry, through deregulation and privatization [10].

These changes would, it was contended, improve industry efficiency, and result in lower industry costs and prices. The effects of these lower costs and prices would reverberate throughout the economy and lead to its vivification – increased profits, investments, jobs, and overall prosperity [10,11,13,14].

It was further claimed that privatization would unburden the government of the onerous task of financing expensive investments in electricity infrastructure; transfer risk of unwise investments to private investors; allow better management of risk; reduce public debt and allow governments to focus their efforts on providing better services in the areas of education, transport, health, and community welfare. Also, private investors – working under the watchful eyes of the capital and share markets – would make prudent and timely investments in capacity. Further, such reliance on markets for major decisions (planning, investments, operation) would impart the much needed transparency to decision making, improve industry governance, and promote public confidence, it was stressed.

The success stories of similar reforms elsewhere, in particular in the U.K., and the irrefutable belief in the replicability of such gains for Australia were often cited to instill faith in the proposed remedies. Additional assistance to the case for reform was provided by the pressures created by the credit and risk rating agencies and the media in general. The opposition of the state governments to reform was overcome, and their concurrence – essential, given the constitutional status of electricity – received through the commonwealth assurances to the states to compensate them for any revenue losses during the transition to the new industry arrangements, and indeed to reward them for participation in the reform program. Further, specters of 'banana republic', 'third world electricity systems', and impending 'chronic electricity shortages' were sometimes raised to build an aura of urgency - indeed inevitability - of reform and to win over any Doubting Thomases!

All these forces began to shape political opinion, in favour of change. The political imperative for change was becoming compelling – pressures by credit and risk rating agencies, fiscal inducements by the commonwealth, and the prospects of financial bonanza from the sale of electricity assets. This was further assisted – in fact driven - by the increasing globalization of the world economies and the emerging perceptions that it was only in market competition and private enterprise resided the hopes for a better economic (and by implication, social) future. The political resolve for change was thus firmly established. Any questioning of the bases for the underlying arguments relating, for example, to assessing industry performance and potential benefits of reform, the validity of international

comparisons of electricity industry performances [15], and any alternative viewpoints on improving industry performance were, therefore, unable to dampen the political passion for change.

Electricity reform – restructuring, re-regulation, and privatization: Consequently, in the early-to-mid 1990s, a series of agreements were signed between the commonwealth and the states aimed at introducing economy-wide reforms, including in the electricity industries [3]. The key elements of the electricity reform program included the creation of a National Electricity Market (NEM) in accordance with the precepts of the National Competition Policy (NCP); the NCP emphasized efficiency gains through recourse to competitive markets – a neo-liberal construct. It was envisaged that the NEM will comprise a competitive wholesale market for generation, regulated transmission and distribution markets with legislated access rights, and a competitive retail market.

While the privatization of the electricity industry was not an explicit objective of this reform program (Reserve Bank of Australia, 1997), the attribution of industry woes to public ownership; the inter-linking of the questions of industry restructuring, privatization, and efficiency; the proclamations of the type: '… historically, government owned-businesses have lagged behind their private sector counterparts' [14]; the building of an aura of inevitability about privatization; and the ongoing shenanigans of changes in industry ownership (discussed in the following sections in this paper) - suggest that private ownership was, and remains, the preferred mode of industry ownership for the proponents of reform. According to [8] '… the reform program in the electricity industry consists of a number of elements, which are logically independent, but mutually supportive … the reform program is regarded as complete when the industry is fully privatized'.

In order to comply with the requirements of the NEM, the Australian states which were party to the NEM (New South Wales, Victoria, Queensland, South Australia, Tasmania, and the Australian Capital Territory), progressively introduced reforms in their electricity industries. Each state, however, adopted a different approach to reform with regards to the shape and size of the reformed industry and the speed of reform. Notwithstanding these differences, the general nature of reform included the separation of generation, transmission, distribution, and retail segments of the industry; introduction of competition in generation and retail segments; reorientation of transmission and distribution functions to promote and sustain competition; and the development of market-driven governance arrangements for the conduct of the NEM. By the early 2003, most of these aspects of reform had generally been accomplished.

Additionally, each state has adopted a different model of industry ownership. In New South Wales, Queensland, and Tasmania, electricity assets stay in public ownership. In South Australia, the assets have been leased out to private interests on long-term bases (100 to 200 years); notionally though they are still publicly owned. The Victorian electricity industry was completely privatized in the earlier stages of reform. Tables 1 and 2 provide an overview of the broad contours of the evolving nature of industry ownership in Australia for generation, and transmission and distribution assets, respectively.

3. AN ASSESSMENT

The foregoing discussion, while useful, fails to provide deeper insights into the intrinsic nature of privatization including its true extent, its real intent, and its wider connects. The following discussion addresses some of these issues.

3.1 Extent of Privatization

The stylizing of industry ownership into public or private masks the true extent and the underlying dynamics of electricity privatization in Australia. For example, in New South Wales, while

the electricity industry is publicly owned, almost all non-core, and even some core, activities of the various electricity utilities have been contracted out to private providers, thus significantly whittling down the very essence of public ownership and disguising the true extent of privatization. Moreover, this decision to retain public ownership was an outcome of the failure of sustained and concerted efforts by the New South Wales government to privatize its electricity industry, due to intra-party, and public, opposition. Such opposition was circumvented, in South Australia, by the long-term leasing of electricity assets to private interests.

Another alluring feature of the Australian market for electricity privatization is its ravenous promiscuity – some assets have been re-sold up to five times, and the passion for such change seems insatiable. Further, even the composition of private ownership has been continually changing, through asset re-sales, mergers, and acquisitions, thus imparting a kaleidoscopic versatility to the relationship between industry and political interests, both in domestic and international contexts (Tables 1 and 2 provide tentative support for these observations).

3.2 Intent of Privatization

A meaningful appreciation for the real intent of privatization can be gained by assessing the integrity of various arguments relating to the purported rationale for privatization (as discussed in the previous section of this paper). Any such assessment can however, at best, be exiguous. This is due mainly to the difficulty in disentangling the structural, ownership, and regulatory dimensions of reform – a difficulty compounded by the oblique nature of public discourse on this topic, and the dearth of meaningful, publicly available information on the topic.

The public case for privatization appears to rest – as should also be evident from the discussion in the previous section of the paper - on two intertwined sets of arguments, namely, economic and socio-political. The economic argument essentially links privatization with industry productivity and its vivifying effect on the overall economy. The socio-political argument, on the other hand, emphasizes the benevolent impacts of privatization in the social spheres. The following discussion assesses the veracity of some of these arguments.

Privatization and industry productivity: Consonant with the economic quiddity of the industry reform program, it is customary – in the present climate – to consider electricity prices (and costs) as the main, and oftentimes the ultimate, measure(s) of industry productivity. Supporters of privatization argue that private ownership of industry would result in lower electricity costs and hence prices. This – they contend – is due to the lower risks associated with private ownership, and the earnest efforts by richly-incentivized private managers to seek effective risk and cost minimizing strategies.

Risks and risk management: It is unclear why market risks would be lower in a privatized electricity industry comprising of profit maximizing independent generating units, operating in a quasi-oligopolistic market, facing short- and long-term uncertainty in the magnitude and timing of electricity demand and regulatory environment, expecting to sell electricity in a politically sensitive end-use market, and trading in a commodity whose atypical physical characteristics make it the antithesis of a true market commodity. In fact – and understandably so - the Australian wholesale electricity market is extremely volatile [16] and the regulatory uncertainty has been identified [17] as a major risk factor hindering industry reform. While it is true that wholesale traders can manage piece volatility through bilateral hedging, any such management would however exert an upward pressure on costs and prices.

Besides, it appears that the management of regulatory risk associated with the segment of industry with the largest scope for regulatory uncertainty, namely, monopoly networks, has become indeed problematic in a system with privatized entities as these entities perpetually seek innovative, and oftentimes, competition-undermining ways to manage risk, for example, through alliances between

privatized generation and supply interests. According to [18], 'Industry players are racing to create new group of vertically and horizontally integrated structures (businesses owning generation or gas wells, and retailing in different state markets) in an effort to protect themselves from the wild gyrations of the energy markets and to gain economies of scale; … Pulse, owned by … was a classic example of the new, private energy market'.

Incentives and cost minimization: The argument relating to superior incentives under private ownership draws much of the intellectual imprimatur from Principal-Agent, Public-Choice, and Property-Rights frameworks. These frameworks are however based on rather restrictive behavioural assumptions about human nature, and generally pay limited attention to the influences of cultural, historical, and institutional factors in determining human action and hence market outcomes. They therefore have not been particularly successful in instilling faith in the privatization-improved-productivity argument. Evidence, from various privatization experiments around the world, is mounting to lend support to this observation (see [19,20], for useful discussion on this topic).

Such evidence, in the Australian context, is provided in Table 3. The table shows that industry privatization (industry reform, more generally) of the mid-to-late 1990s has failed to deliver any appreciable reductions in cost and prices and hence any noticeable improvements in industry productivity. The declining trends in costs/prices were already well established prior to the introduction of market-based reform. For example, the average unit cost of electricity had already declined from 12.7 cents in 1986, to 8.5 cents in 1994. Similarly, the average unit price of electricity, for example, for the commercial and industrial sectors had declined from 11.2 cents in 1986, to 9.0 cents in 1994. These cost/price reductions were the direct outcomes of the 'internal reforms' of the publicly-owned electricity utilities undertaken by various state governments and electricity utilities in the mid-to-late 1980s, as discussed in the previous section of this paper.

Further, the table shows that electricity privatization (of the mid-to-late 1990s) in the traditionally high cost/price states (Victoria and South Australia) has failed to narrow the cost/price differentials between these states and the states with public electricity industries (New South Wales and Queensland). Moreover, the cost/price reductions are smaller in states with privatized electricity industries in comparison with states with public electricity utilities. The table also shows that the declining trends in prices have reversed since 2001 and that the prices are on an increase; such increases are more pronounced in states with privatized electricity industries.

There is general consensus in the industry circles that these cost/price increases are likely to accelerate in the coming times due factors that typify the Australian electricity market, namely, high price volatility and increased market risk, excessive – and increasing – cost of regulatory compliance, sharp decline in system capacity margins, market manipulation, and trends towards the emergence of privatized monopolies as industry reconsolidates through mergers and acquisitions. Tables 1 and 2 provide early indications of the emergence of such trends (also see [18,21]).

Privatization and overall economic productivity: The belief in the link between privatization and improved overall economic productivity is premised on the argument that the effects of privatization-induced industry productivity (as reflected in reduced industry costs and prices - discussed above), and reduced budget deficits and public debt would reverberate throughout the economy and result in its vivification.

Budget deficits and public debt: The faith in the benignant nature of the link between privatization and budget deficits/public debt is ostensibly founded on several interrelated premises, namely, budget deficits and public debt are inherently malevolent; their existing sizes are insufferable; and privatization will indubitably eviscerate, indeed irrevocably exterminate, such deficits/debts.

The reported budget deficit for a particular year simply suggests that government payments exceed government receipts for that year. Such deficit can arise due to a variety of reasons, for example, erroneous budget forecasts; shortfall in government receipts and/or excess of government

payments due, for example, to extraneous circumstances; and large investments by the government that would yield monetary benefits in the future years.

Further, the very question - what constitutes deficit – is highly contextual, contingent upon the bases used for developing budget forecasts and reporting budget results, for example, selection of accounting method (cash or accrual); adoption of the very definition of government (i.e., which of the government sub-sectors - general government agencies funded primarily by allocations from the consolidate fund, government trading enterprises (electricity industries, for example) funded largely from revenues received from sale of services to the consumers, off-budget sub-sector, financial institutions, trusts – are included in the definition); and assumptions behind budget forecasts. According to [1], '… a budget deficit is simply an artifact, created by the choice of method used to calculate budget results'. In a similar vein, the notion of public debt is a nuanced construct, subject to the definitional and reporting whims of the political climate of the time.

Such latitude in the construction of these indicators (i.e., deficits/debts), considered alongside some of the underlying shenanigans of the Australian budgetary panorama – namely, the general practice of reporting budgets/budget results only for the budget sector (i.e., agencies funded from the consolidated revenue); frequent recourse by governments to 'coercive' dividends, from government-owned business enterprises in the non-budget sector (e.g., electricity utilities), to improve the budgetary outlook of the budget sector; the relatively (i.e., relative to other developed countries) low, and manageable, levels of public debt; the practice of offsetting interest on accumulated debt against immediate future revenue streams from electricity; and the generally short-term horizon for various analyses – suggests that there is nothing inherently malevolent about these indicators, nor are their sizes reliable indicators of financial performance and hence matters of serious concern. By that token, the argument linking electricity privatization to reduced budget deficit and public debt appears rather amorphous, indeed impertinent. [1,18,22] provide selective evidentiary substantiation for the arguments noted above.)

Equally shapeless therefore appears to be the related claim that such reductions, in conjunction with the reductions in cost/prices (discusses above), would spontaneously translate into economy-wide gains. This claim is generally supported on the bases of empirical studies typically employing Computable General Equilibrium frameworks – frameworks that envisage an economy whose every facet can be represented as a market unit, with each unit, and collectively all units, in a state of perennial equilibrium. Economic growth, in such frameworks, is viewed as a process of frictionless transition from one equilibrium to another, with each step in this process harmoniously dispensing the largesse to the deserving.

The limitations of such frameworks, and hence of the argument that unequivocally links privatization with overall economic benefits, should become apparent from the following evidence. The ex-ante estimates - in the context of Australia - of gains from industry reform - based essentially on Computable General Equilibrium frameworks – have ranged from 0.26 percent to 1.39 percent of national output per year [13,23-26]. Preliminary results of a recent study [27], based on an alternative economic formulation however suggest that industry reforms have contributed merely 0.03 percent to the national output per year over the period 1991-2001. Further, much of these gains are due to investments made in superior technology in the 1980s and, to a lesser extent, due to industry restructuring of the 1990s. Industry privatization does not appear to have exerted any measurable influence on the overall economic performance.

Privatization and social benefits: A claim is often made that electricity privatization – by freeing the government of the burden to pay interest charges on the money borrowed to establish electricity infrastructure and to mobilize resources for investment in the electricity industry and for its ongoing operations – would enhance the ability of the government to devote attention to effectively addressing pressing social needs, e.g., education, health, transport, and social welfare. This appears

to be a strong claim especially when viewed alongside the facts that electricity privatization – while removing the burden of interest charges – would also result in a loss of government earnings due to dividends forgone and, equally importantly, the loss of the power of the government to demand special (i.e., above-normal) dividends from its electricity industries in times of financial need. Clearly, whether or not electricity privatization would enhance government's ability to focus on social spheres would depend on the overall fiscal impacts of privatization. Available evidence in this regard, for the state of Victoria – the pioneer in electricity privatization in the Australian context, does not appear inspiring. For example, according to [8], the fiscal impact of the otherwise successful privatization of the Victorian electricity industry on the Victorian public sector, was, at best, neutral.

Transfer of risk: Electricity privatization, it is argued by some, would transfer market risk, away from the tax-payer, to the private investor. This argument looks puzzling if one recalls that a key reason for electricity nationalization in the 1930s and 1940s was the unwillingness of the private interests to take risks associated with developing electricity infrastructure (as discussed in the previous section of this paper). A suggestion – sometimes made - that such unwillingness was due to the relatively low state of technological development in those years is equally unconvincing if one realizes that 'that' technology was indeed advanced for 'those' years. Besides, electricity demands in those years were rising rapidly, thus offering attractive prospects of higher returns form investments in electricity.

Further, in market regimes motivated by the principles of cost-reflective pricing and user-pays, the notion of private investors as the bearers of market risk appears unintelligible; in such regimes, it is the tax-payer who ultimately bears much of the market risk. The recent melt-downs of major telecommunication, insurance, and banking entities in Australia, and of energy, water, and telecommunication entities in the international contexts, should lend some support to the arguments presented above.

Transparency and public trust: The claim that privatization would promote transparency and public trust does not appear to be supportable on the basis of available evidence. For example, for profit-attuned privatized generation entities, operating in a quasi-oligopolistic market, cost information is commercially confidential and hence not available in the public domain. Even generator offers in the wholesale pool are unreflective of true generation costs because of the strategic considerations that underpin the making of such offers. Further, costs associated with privatized regulated networks in particular, and public regulated networks in general, are largely unreliable due to the legendary regulatory problems arising from 'information asymmetry' and 'asset valuation'. In addition, much of the financial information relating to the contractual positions of various market participants is unavailable for public purview. In such an environment, the prices paid by the end-users are generally disconnected from the actual costs of electricity supply; this removes any remaining prospect of developing meaningful cost estimates form such prices. The transparency (and the associated - public trust) argument gets further dented if one takes note of the veil of secrecy and duplicity that has shrouded much of the debate leading up to the decision to privatize the electricity industry, and the process of privatization itself, in the states of Victoria and South Australia [6,18,21].

3.3 Wider Connects of Privatization

The foregoing discussion suggests that the economic and socio-political cases for the privatization of the electricity industry in Australia are based on questionable premises, largely unsupportable by evidence. This prompts the question: What then is the real intent of electricity

privatization? Some guidance for addressing this question can be obtained by reviewing the wider connects of electricity privatization and their philosophical underpinnings. Wider connects – in the context of the paper – refer to broader aspects of public life that are significantly affected by (and affect the case for) electricity privatization, for example, wealth distribution among various socio-economic groups in society, and governance practices. The performance of an economy assessed in terms of these connects could also provide useful bases for reflecting on the effects of privatization on some of the fundamental tenets of a civil society, namely, equity, justice, and trust.

Wealth distribution: Electricity privatization in Australia has been accompanied by significant transfers of wealth, generally away from the less affluent segments of society towards the more affluent. For example, the sale of revenue generating, technologically mature, and efficiently functioning electricity assets, especially to foreign investors, represents – it is argued by some – a net loss to, and indeed a betrayal of trust for, a large proportion of ordinary Australian tax-payers. This argument assumes additional potency if one takes note of the fact that these assets were created by tax sacrifices made by the past generations of ordinary tax-payers, during times when private interests were unwilling to undertake even relatively modest levels of risks associated with electricity development.

Further, during the initial stages of the implementation of the reform program, there was a significant subsidization of the contestable (large industrial and commercial) customers, by the uncontestable (residential and small business) customers. During these years, while the large customers were able to purchase low-priced (~ $15-25/MWhr) electricity directly from the spot pool or through long-term contracts, the small customers had to pay higher prices (~$40-45/MWhr – the average vesting contract prices) for their electricity. Even from a longer-term perspective, these small customers appear to have been the losers as, by the time they became contestable, the pool prices had already increased to the levels of vesting contract prices.

Governance: Electricity privatization in Australia has fundamentally altered the governance philosophies of the yesteryears, and has resulted in a redefinition of the role of government. (Or, has privatization been prompted by such alteration/redefinition?) The 'social compact' between the government and the community at large has been replaced by 'private contracts' between market players. The belief in the primacy of 'common interest' and in the role of government as the provider of equitable and just redress for such interests through centralized and interventionary approaches, has been substituted by the faith in the supremacy of 'private interests', mediated through private market processes, underpinned by cost-reflective pricing and user-pays principles, with the government's role limited to ensuring a smooth functioning of the market mechanism, through unpartisan and non-interventionist approaches.

Such shifts could, this paper argues, result in the overlooking of the interests of the weaker segments of society who generally lack in the wherewithal required to further their interests through market processes. The privatization-induced diminution in the government's ability to provide redress to such interests could further disadvantage these segments and marginalize their social status.

On this matter, and in the context of the privatized electricity industry in Victoria, [28] has the following to say: '… the transition to privatized electricity and the related separation of generation, transmission, distribution and retail along-with distribution review has created enormous complexity in protecting consumer interests … the existing regulation regime has no mechanism for allowing consumer interests to be protected from exploitation through unfair discriminatory tariffs … residential customers are vulnerable to unfair discriminatory pricing … full retail competition introduces new risks for individual consumers including the loss of privacy and the possibility of being discriminated against by retailers'. And, according to [21], '…privatization has clearly enriched the two State Governments, able to follow this path, as well as the early investors, the multitude of advisors,

consultants, merchant bankers and stockbrokers, and the executives in the industry in those states. Customer benefits have been very limited'.

These beneficiaries of privatization have been over the years – and understandably so – the most vociferous supporters of (further) privatization of the electricity industry. They justify privatization on the grounds that its longer-term benefits would – as 'wins' begin to trickle down to the losers – far outweigh short-term inequity and the associated pain.

The evidence and analyses presented in this paper however demonstrate the fragility of this argument. This also suggests that the case for privatization must rest on ideological-political supports. The frailty of the key filaments of the philosophical construct underpinning the contemporary argument for privatization (in particular its caricature of human beings as essentially (monetary) profit maximizers, free market as the only and ultimate arbiter of all human interests, and the subjugation of the 'common' to the 'private') should further strengthen the above observation.

The current public discourse on this topic – i.e., why privatize – is quintessentially economic. It is clearly unhelpful as it precludes consideration of alternative institutional arrangements that may encompass a judicious balance between the 'public' and the 'private' and hence better serve the needs of all in a society. The importance of such balance is succinctly captured in the following excerpts: '… whether our societies are in some way predisposed towards oscillations between periods of intense preoccupation with public issues and of almost total concentration on individual improvement and private welfare goals…such oscillations can be overdone…Western societies appear to be condemned to long periods of privatization during which they go through an impoverishing 'atrophy of public meanings', followed by spasmodic outbursts of 'publicness' that are hardly likely to be constructive' [29].

Table 1 Privatization of Generation Assets - Australia: Broad Contours

UTILITY	STATE[a]	ASSET			OWNERSHIP CHANGE															
		Capacity	Vintage	Fuel[b]	Year	Nature[c]	Value		BUYER (Percentage share)											
		(MW)	(Year)				$Bn	$/KW	Australia[d]			UK[e]	USA[f]		Hong Kong[g]		Others[h]	
Yallourn Energy	VIC	1450	1981	C	1996	P	2.43	1674	A_1 (26)	A_2 (8)		E_1 (50)					O_1(10)	O_3 (1)
					2000	R	1.60					E_1 (18)			H_1(74)			O_4 (8)
						R									H_1(92)			O_4 (8)
Hazelwood	VIC	1600	1971	C	1996	P	2.40	1475				E_2 (92)	U_1 (8)					
						R_1	0.90		A_3 (8)						H_2(N)	H_3(N)		
Loy Yang A	VIC	2000	1986	C	1997	P	4.85	2400	A_4 (25)				U_1 (50)	U_2(25)				
					2003	R_2	3.50		A_5 (10)	A_6 (35)	A_7(20)						O_2(35)	
						$R_{2'}$							U_5 (N)				O_9 (N)	
Loy Yang B	VIC	500	1993	C	1992	P	0.53	1600					U_3(100)					
		500		C	1997	P	1.15						U_3(100)					
Southern Hydro	VIC	473		H	1997	P	0.39	841	A_8 (100)									
					1993	R_3			A_9 (54)	A_{10}(24)			U_4 (22)					
					2003	R												O_5(100)
Ecogen Energy	VIC	976		G	1999	P	0.36						U_5(100)					
					2003	R			A_{11} (50)									O_6 (50)
Somerton	VIC	150	2002	G					A_6 (100)									
Valley Power Peaker	VIC	300	2002	G	2003								U_3 (60)					O_7 (40)
Kwinana	VIC	116	1996	G									U_3 (70)					
International Power	SA	500	2000	G								E_2(100)						
Flinders Power*	SA	700		C	1999	L	0.47						U_2(100)					
Torrens Island	SA	1280	1977	G		L							U_6(100)					
Optima Energy	SA			G		L	0.32						U_6(100)					
Hallet	SA	220	2002	G					A_6 (100)									
Gladstone	QLD	1695	1982	C	1994		0.75						U_2(100)					
									A_{12} (42)				U_2 (38)					
Milmerran	QLD	840	2002	C					A_{13} (N)								O_8 (N)	
					2003	R									H_4(27)		O_8 (N)	
Callide C	QLD	920	2001	C					A_{14} (50)	A_{13}(50)								
					2003	R			A_{14} (50)	A_{13}(25)					H_4(25)			

Sources: Various, including [8,30-33].

Notes:
[a] VIC - Victoria; SA - South Australia; QLD – Queensland

[b] C - Coal; H - Hydro; G – Gas

[c] P - Privatization; R - Resale; R_1 - Part Resale; R_2 - Legal challenge mounted by the potential buyers against regulators decision to refuse resale; $R_{2'}$ - Potential buyers if R2 lose in court; R_3 - Restructured Consortium; L - 100 year lease; N - Information not known to the author of this paper at the time of developing this table

[d] A_1 - AMP Society; A_2 - State Super Corporation; A_3 - Power Corp (in collaboration with Scottish Power UK); A_4 - Australia's Horizon Energy; A_5 - CBA (Commonwealth Bank of Australia); A_6 - AGL (Australian Gas and Light Company); A_7 - Other Super Funds; A_8 - Infratil Australia; A_9 - Australian Infrastructure Fund; A_{10} - Australia Unisuper Ltd; A_{11} - Primary Infrastructure; A_{12} NRM Consortium (headed by Comalco); A_{13} - InterGen; A_{14} - CS Energy

[e] E_1 - Power Gen; E_2 - National Power

[f] U_1 - CMS Energy Corporation; U_2 - NRG Inc.; U_3 - Edison Mission Energy; U_4 - Alliant Energy; U_5 - AES Transpower; U_6- TXU-US

[g] H_1 - CLP Power International; H_2 - Cheung Hong Infrastructure; H_3 - HongKong Electric; H_4 - China Huaneng Group

[h] O_1 - Itochu Corporation; O_2 - Tokyo Electric; O_3 - Hastings Funds; O_4 - Deutsche Asset Management; O_5 - Meridian energy (NZ); O_6 - Babcock and Brown; O_7 - Contact Energy NZ (U_3 is major shareholder); O_8 - Normandy (Germany); O_9 - Malaysia's Genting

* includes Northern and Playford coal-fired power stations, Leigh Creek coal mine, a rail line and 'company' township

Table 2 Privatization of Transmission and Distribution Assets – Australia: Broad Contours

UTILITY	STATE[a]	ASSET[b]			OWNERSHIP CHANGE								
		System	Capacity		Year	Nature[c]	Value	BUYER (Percentage share)					
			(Circuit kms)	(Consumers)			($Bn)	Australia[d]		UK[e]	USA[f]	Hong Kong[g]	Others[h]
DirectLink	NSW&QLD	T_1	65		2000								O_{12} (100)
MurrayLink	VIC&SA	T_1	180		2002								O_{12} (100)
PowerNet	VIC	T	6,500		1997	P	2.55				U_7 (100)		
					2000	R	2.10						O_{10} (100)
United Energy	VIC	D			1995	P	1.55	A_1&A_2 (24)	A_{15} (48)		U_8 (34)		
		D			2003	R		A_{16} (100)					
		R			2003	R_1		A_6 (100)					
PowerCor	VIC	D	80,000	600,000	1995	P	2.15			E_3 (100)			
		D			2000	R	2.32					H_2&H_3 (100)	
		R			2000	R_1		A_{17} (100)					
Eastern Energy	VIC	D			1995	P	2.08				U_6 (100)		
Solaris	VIC	D			1995	P	0.95	A_6 (50)			U_7 (50)		
		D			1997	R		A_6 (100)					
CitiPower	VIC	D&R	5,054	265,000	1995	P	1.58				U_9 (100)		
		D&R			1998	R	1.70				U_{10} (100)		
		D			2002	R						H_2&H_3 (100)	
		R			2002	R_1		A_{17} (100)					
Pulse Energy	VIC	R				P		A_{18} (100)					
					2003	R	0.88	A_6 (100)					
ElectraNet	SA	T				L	0.94	A_{19} (40)	A_{20} (40)				O_{11} (20)
ETSA Power	SA	D&R	73,111	734,000	2000	L	3.50					H_2&H_3 (100)	
		R				R_1	0.18	A_6 (100)					

Sources: Various, including [31], www.txu.com.au, www.agl.com.au, www.hydroquebec.com, www.transenergie.com.au, www.cki.com.hk

Notes:
[a] NSW - New South Wales; VIC - Victoria; SA - South Australia; QLD – Queensland
[b] T - Transmission; T_1 - Interconnection Transmission; D - Distribution; R – Retaile
[c] P - Privatization; R - Resale; R_1 - Part Resale; L - 200 year lease
[d] A_1 - AMP Investment; A_2 - State Super Corp (NSW); A_6 - AGL; A_{15} - Public float; A_{16} - Alinta; A_{17} - Origin Energy; A_{18} - Pulse Consortium; A_{19} - Powerlink; A_{20} - Macquarie Bank
[e] E_3 - Scottish Power plc
[f] U_6 - Texas Utilities; U_7 - General Public Utility (GPU); U_8 - UtiliCorp; U_9 - Entergy Corporation; U_{10} - American Electric Power
[g] H_2 - Cheung Kong Infrastructure; H_3 - Hong Kong Electric Power
[h] O_{10} - Singapore Power (Singapore); O_{11} - ABB (Sweden); O_{12} - Hydro-Quebec (Canada)

Table 3 Electricity Costs and Prices: General Trends

	INDUSTRY CONSOLIDATION		EARLY CONCERNS		INTERNAL REFORM		MARKET REFORM		
	1960	**1970**	**1980**	**1986**	**1990**	**1994**	**1998**	**2001**	**2002**
				COST					
New South Wales	19.2	13.6	10.6	12.3	10.0	8.1	7.5	7.5	7.6
Victoria	16.7	14.8	11.5	13.5	10.7	10.1	-	-	-
Queensland	20.0	15.2	13.3	12.8	10.2	6.7	6.5	8.4	7.9
South Australia	18.3	13.0	10.0	16.4	11.6	8.6	-	-	-
Average	*16.9*	*13.1*	*10.9*	*12.7*	*10.3*	*8.5*	-	-	-
				PRICES					
New South Wales	19.0	13.5	9.8	11.4	10.2	9.6	7.7	7.5	8.4
Victoria	18.5	14.8	11.1	12.5	10.1	10.4	8.9	9.2	10.2
Queensland	20.8	15.4	12.6	11.9	9.5	9.3	7.1	8.5	8.3
South Australia	18.1	12.8	9.9	13.5	11.9	10.8	9.9	11.4	11.7
Average	*17.5*	*13.2*	*10.2*	*11.7*	*10.2*	*9.9*	*8.7*	*8.6*	*9.0*
Residential									
New South Wales	18.7	13.9	9.3	11.2	10.3	10.5	9.8	9.6	9.6
Victoria	17.5	14.4	10.4	12.3	11.2	13.6	12.8	12.9	13.0
Queensland	20.5	15.0	12.1	14.4	11.2	10.7	9.6	10.0	10.3
South Australia	17.4	11.8	9.2	13.3	11.9	12.0	12.6	13.7	13.7
Average	*18.1*	*13.9*	*10.1*	*12.4*	*11.1*	*11.6*	*10.9*	*11.1*	*11.1*
Commercial and Industry									
New South Wales	19.6	13.2	10.1	11.4	10.1	9.0	6.8	6.5	7.8
Victoria	19.7	15.0	11.5	12.5	9.5	9.1	7.3	7.9	9.2
Queensland	21.2	15.4	12.8	10.6	8.7	8.7	6.1	8.0	7.6
South Australia	17.3	12.6	9.9	13.5	11.7	10.0	8.3	10.0	10.6
Average	*17.2*	*12.6*	*10.1*	*11.2*	*9.6*	*9.0*	*7.6*	*7.5*	*8.1*

Sources: Several, including [31].

Notes: Industry Consolidation – generally refers to post-war expansion phase, with improved technology contributing significantly to cost reduction.
Early Concerns – time period when initial concerns about industry performance were raised.
Internal Reform – period when internal reforms were undertaken by various states in the mid-to-late eighties and early nineties.
Market reform – free market-based reforms, introduced in mid-nineties.
- not available, due to the unavailability of any financial information from the privatised industries in Victoria and South Australia.
Various costs and prices shown are weighted average.

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