

# What Should We Expect of Microeconomic Reform?

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## Abstract

*This paper examines recent attempts to quantify the effects of some major microeconomic reforms on the Australian economy. These micro reforms improve competitiveness. Such measures, however, would apparently do little to raise the share of the manufacturing sector in national product despite induced improvements in competitiveness. The relationship between micro reform and the balance of payments is explored. Some attempts to measure the impact of specific micro reform on the environment are also analysed.*

## 1. Introduction

Recent announcements of proposed divestiture of public ownership by the Australian government in the domestic airlines, in international air transport, in telecommunications and the Commonwealth Bank are among what many would include in the piecemeal process of microeconomic reform. Yet micro reform is much more than (and not always wholly dependent upon) privatisation. It spans a spectrum of government initiatives that seek to enhance economic welfare through measures designed to better exploit the allocative role of prices.

In Australia, these abovementioned proclamations are the latest in a series of government-inspired changes to individual markets' functioning that began with the Whitlam Government's 25 per cent tariff cut and span

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the floating of the exchange rate and deregulation of financial markets in the 1980s. All were, in a sense, "microeconomic reforms."

Microeconomics as a discipline studies the working of individual markets, but not necessarily in isolation. Some of its deepest insights are into the interaction of markets. The capacity of such interactions to deliver desirable material outcomes for a society provides the reason for microeconomic reform-to encourage efficient markets - not for their own sake, but for the gains they can supposedly bring. These gains come from the perceived ability of markets to:

- \* co-ordinate and reconcile divergent plans of individual producers and consumers,
- \* provide incentives and, consequently,
- \* allocate resources in an efficient fashion.

A policy oriented microeconomist would accordingly see the practical side of microeconomic reform as primarily concerned with:

- (i) identifying markets where there is evidence of **significant** failure in some aspect of the above;
- (ii) establishing what changes are both improving and feasible (open to government influence) in such markets;
- (iii) assessing the form, magnitude, and distribution of any gains flowing from such changes and the period over which they are likely to be realized;
- (iv) establishing the dependence of if any, (ii) and (iii) on the **sequence** of reform. This last task would help governments choose the agenda of reform;
- (v) implementing the agenda.

It is fair to say that in Australia some progress has been made in (i) to (iii) above. It is difficult to see that (iv) has occurred and so the government - inspired micro reform "agenda" is ad hoc. Steps towards more competition in product markets through tariff reductions were taken in the early 1970s (although this process faltered somewhat after the 1974 recession-see Table 1) before any comparable progress in institutional changes to the markets for financial services, other services, or labour.

The significant changes to financial markets that accompanied the implementation of the Campbell report in the early 1980s had therefore been

preceded by governmentally-devised increased openness in some product markets, while others, such as Textiles Clothing and Footwear and Motor Vehicles, remained heavily protected, with assistance levels increasing substantially over the levels that followed the tariff cuts of the early 1970s.

As a result, part of the import competing sector was being subjected to adjustment pressure in an environment where little was being done to lower cost structures through elements of microeconomic reform that are only now being given attention. (These elements include the various government non-tax charges and reforms to competition-and therefore pricing-in the non financial services sector.) The remainder, the least internationally competitive parts of manufacturing, far from being subjected to comparable pressure, was being increasingly sheltered. Furthermore, substantial components of protection were offered through quantitative restrictions such as quotas, whose protective effect increased substantially with the fall in the nominal value of the Australian dollar in the mid 1980s after its float in 1983. Less favoured sectors received protection largely by way of *ad valorem* tariffs whose protective effect was independent of the nominal exchange rate. The increasing disparities in assistance resulting from this path can be seen from Table 1 with a correction of this trend only being evident since 1985.

The notion that selective assistance to some industries can only be at the expense of some others has propelled the anti protection movement in Australia. The evidence examined below suggests that there may still be considerable overall efficiency gains to be had from removing the remaining pockets of high protection. What has been less apparent has been the extent to which resource misallocation due to effects other than border protection has reduced output levels of industries. In some cases the pricing policies and inefficiencies in the service sector have doubtless jeopardised the ability of import competing manufacturers to withstand the effects of ongoing reductions in protection.

## 2. Quantifying the Gains From Micro Reform

As suggested above, the measurement of likely gains from market-directed reforms will first involve some attempt to measure the existing degree of distortion to prices before simulating the removal of this distortion. The analyst must

- a) define what is meant by distortion;
- b) measure it;
- c) simulate the gains from removing it.

Table 1: Average Effective Rates of Assistance for Broad Groups of Australian Manufacturing Industries 1968/69 to 1989/90

	1968/69	1973/74	1977/78	1982/83	1986/87	1989/90
Food, Beverages,	16	18	10	9	5.2	2.6
Tobacco Textiles	43	35	47	54	72	97
Clothing, Footwear	97	64	141	220	176	183
Wood, Wood products	26	16	18	13	18	15
Paper, Paper Products	52	38	24	24	16	8.8
Chemicals, Petroleum,	31	25	19	14	12	11
Coal Products						
Non Metallic Mineral	15	11	5	4	3.5	3.2
Products						
Basic Metal Products	31	22	10	11	8	8.2
Fabricated Metal Products	61	44	30	27	22	18
Transport Equipment	50	39	48	72	47	35
Other Machinery and	43	29	20	18	22	17
Equipment						
Miscellaneous Manufacturing	34	24	30	25	27	22
All Manufacturing	36	27	23	25	19	16

Sources: IAC, Annual Reports 1977, 1978, 1981, 1982, 1984, 1985  
 IC, Annual Report 1989/90 Table A 11.5

Australian attempts at these three tasks are by now well known in the contexts of industry protection where the ORANI multisectional model (Dixon et al 1982) has proved a convenient vehicle for simulating the effects of variously reducing or removing tariff and non-tariff assistance to Australian industry. The economic welfare gains of such experiments were frequently interpreted as the gains in real GDP and/or employment that would flow from the resource reallocation that would follow the realigned (protection free) prices.

The attraction of the ORANI model in such procedures is its ability to capture the interactions of individual market effects and to identify "winners" and "losers", at the industry level. It must be remembered, however, that the model's data base includes the measured input-output relationships of the Australian economy, with all its distortions and market imperfections. The usual application of the model itself assumes that all of the economy's markets, distorted though they may be, generate prices that yield rates of return on capital which can differ across industries but pure on 'monopoly' profits are zero in each industry (i.e. the condition that price should equal average cost is imposed). The use of such a model to examine the effects of deregulation, including implicitly the reduction of monopoly power, will therefore differ in important respects from earlier attempts in other countries to measure the effects of market distortion.

Such attempts as those of Harberger (1954) in the U.S., in contrast, took domestic monopoly power and associated restrictions in output as the focus of analysis. Monopoly pricing in manufacturing was the starting point and the gains from elimination of the dead weight loss resulting from this (a price-equals-marginal cost solution) was the figure to be estimated. The approach was "market by market", and interactions among markets were not explicitly modelled. Later studies (Posner, 1975) shifted the focus to include the costs of regulation in non manufacturing sectors but again were not "general equilibrium" in nature. The differing results of these studies depended in part on the way in which so called "rent seeking" costs were treated, these being the costs to society of resources committed to ensuring the establishment and maintenance of the monopolistic situation. At the higher end of the estimates provided by Posner, costs to American society in excess of 3 per cent of American GNP were attributed to monopolization in manufacturing alone. Implicitly, there would be large gains from reversing the situation.

To the extent that market power is only exercisable through the commitment of sunk costs, the long run marginal costs in regulated and monopolistic industries is raised irreversibly. This has led some commentators (e.g. McCormick et al, 1984) to speculate that the gains from deregulation are

likely to be much less than the losses from **regulation**. The community is **permanently poorer** from the misallocation created by regulatory distortions.

The Industry Commission (IC) in Australia, in its approach, has proceeded in the tradition of Stigler (1956) in assuming that while regulation and protection have raised long run marginal costs, these can be lowered by removing that same regulation and protection.

The most recent attempts to measure the gains from micro reform are published by the Industry Commission (1990a). As estimated by that body, the gains are substantial, eventually generating GDP increases of \$22 million per year (1988-89), a 6.5 per cent increase in real terms. In addition, the increased openness of the economy would lift export volumes by 17.6 per cent and import volumes by 11.6 per cent above current levels. Real wages would be 9.2 per cent higher. The projected distribution of these gains and their sources are documented in Table 2.

According to these simulations, roughly half the gains in real output and trade can be attributed to a move to the "Garnault solution" - the removal of all remaining assistance to agriculture and manufacturing after the current round of phasing down, which commenced in 1988, is complete (see Garnault (1989)). This would, among other things, imply the exposure of the two residual high protection industries, Motor Vehicles and Textiles, Clothing and Footwear, to full international competition. The accompanying ORANI results attribute half of the domestic price reducing effects to such a move (see CPI results in Table 2.)

The further gains are attributable to industry-specific reforms and privatisation in the form of "contracting out" of the provision of many government provided services. Through competitive tendering, it is assumed, a 20 per cent reduction in costs that account for 10 per cent of general government outlays, could be achieved. For the remainder, the analysts have sought to identify individually major distortions amenable to reform. Much of this work was accomplished in the Industries Assistance Commission inquiry into Government non-tax charges (1989). In a number of instances this amounts to the failure of some government bodies and government business enterprises to adopt cost minimizing combinations of capital and labour. These failures are due in some instances to restrictive work practices, overmanning and regulations (railways and coastal shipping). In others they stem from over capacity and inferior management by statutory monopolies of capital stocks yielding rates of return well below the cost of capital (electricity water, postal services).

In these cases it has been assumed that productivity agreements and moves to international best practice will lower costs (e.g. by 30 per cent in

the case of rail freight.) Based on studies of existing inefficiencies, reforms to Australia Post are assumed feasible and of a kind that would achieve a target rate of return of 4 per cent. Like the postal service, telecommunications faces community service obligations. The impact of these on efficiency has been from their discharge through cross subsidization. This has been estimated to equate to an inflation of prices overall by 15 per cent, all of which is assumed capable of removal under alternative arrangements (These might include vouchers, explicit subsidies, etc). Correction of these distortions is simulated to equate to a 20 per cent reduction in Telecom's labour and capital requirements.

The presence of government monopolies of this kind has been seen as giving rise, not to monopoly profits and overt restriction of output, but to cross subsidisation and inflated cost structures. Thus, even though the monopoly profit performances of, say, Telecom and various state electricity authorities have been very different, each has had its reform simulated as equivalent to factor productivity increases. The presumed dissipation of monopoly rents through inappropriate factor choice and product market pricing has been the common approach in the Commission's work. This is in line with the ORANI model formulation where there are no pure monopoly profits.

This approach has also been adopted with respect to domestic air transport where "deregulation" is taken to be synonymous with enhanced competition capable of producing 10 per cent productivity gains. Transport industry reform, taken collectively, gives simulated gains which are only slightly less than the dismantling of protection in lowering the economy's cost structure as measured by the CPI. And the gains generated for real wages are much greater from this source, as is the boost to real output. Export growth, however, appears much more responsive to the removal of protection.

Transport reform is not only dependent on improved performance of government transport enterprises and the airlines. Superior pricing arrangements for road transport have been incorporated by a simulated reduction in motoring taxes not directly road use-related, their reallocation towards heavy vehicle uses and away from cars. Such a move towards a user-pays situation would have been at a cost to government revenue so revenue compensating increases in personal and corporate income taxes were assumed. Additional gains come from optimally chosen road surface life. In this way the reformed pricing structure for road use was presumed to better reflect the damage costs imposed by each road user under a pricing regime where road construction authorities were notionally thought of as self funding and setting road use charges accordingly. Under such a regime,

Table 2: Estimated long-run effects of certain microeconomic reforms<sup>a</sup> using the ORANI Model

Reform of:	Transport excluding rail	Post and telecommunications	Electricity supply	Rural and manufacturing assistance	Improved provision of water services	Rail transport	Contracting out	Total
<b>Macroeconomic variables</b>								
Real GDP	2.0	0.5	0.4	1.1	0.3	1.2	1.0	6.5
Real consumption	2.4	0.5	0.4	0.4	0.3	0.6	0.8	5.4
Real investment	2.0	0.4	0.1	2.4	0.1	1.5	0.7	7.2
Real government spending	1.5	..	0.4	..	0.3	0.6	0.8	3.6
Export volume	2.5	0.7	0.4	8.6	0.3	3.4	1.7	17.6
Import volume	3.3	0.3	0.2	6.2	0.1	1.0	0.5	11.6
Balance of trade	..	..	..	..	..	0.3	0.2	0.5
CPI	-2.4	-0.3	..	-3.8	-0.2	0.3	-0.8	-7.2
Real pre-tax wage rate	4.5	0.6	0.5	1.6	0.4	0.8	0.8	9.2
Aggregate employment (persons)	0.4	..	..	0.1	..	..	0.1	0.6



<b>Reform of:</b>	<b>Transport excluding rail</b>	<b>Post and telecommunications</b>	<b>Electricity supply</b>	<b>Rural and manufacturing assistance</b>	<b>Improved provision of water services</b>	<b>Rail transport</b>	<b>Contracting out</b>	<b>Total</b>
Aggregate capital stock	2.0	0.4	0.1	2.4	0.1	1.5	0.7	7.2
General shift in tax rates	1.4	-1.2	-1.3	2.4	-1.0	-2.5	-2.0	-4.2
<b>Sectoral outputs</b>								
Agriculture	0.4	0.1	-0.1	1.3	0.1	0.4	0.6	2.8
Mining	9.5	1.2	1.0	11.5	0.5	6.5	2.4	32.6
Manufacturing	1.5	0.5	0.2	-1.0	0.1	0.5	0.9	2.7
Services	0.7	0.4	0.4	0.9	0.3	0.8	0.9	4.4

.. Less than 0.05 per cent.

a All results are expressed in percentage changes, except for the balance of trade which is expressed in percentage points of base-period GDP.

Source: IC Annual Report 1989/90 Table A1.2

higher charges would be imposed where demands were least price responsive.

### **3. The Re-allocation Effects of Reform**

A combination of productivity-based gains in transportation and the elimination of cost raising protection is evidently not the source of an Australian manufacturing renaissance. Transport-intensive industries will benefit from the twofold gains of lower vehicle prices, induced by removal of residual protection in that sector, and from the cost-reducing reforms to the provision of transport services. Not surprisingly, given the ORANI assumptions about export supply and demand price elasticities in that sector, mining is the big winner, the source of distortions being removed largely in services and manufacturing.

The projections imply a reallocation of resources such that, in the absence of other changes, mining industries would grow to a GDP share of 6.98 per cent as against their present 5.08 per cent. Despite benefits that would promote overall growth in manufacturing, that sector's share would shrink from 17 per cent to 14.8. Manufacturing's share of total exports would also fall. The service sector would continue to grow relative to manufacturing.

It is important to recognize that, according to these figures, without the compensating gains from other micro reforms, and ignoring underlying trend growth, the removal of remaining protection would cause the manufacturing sector to shrink absolutely, such would be the impact on the high protection industries.

### **4. The Background Economy and the Simulations' Results**

As well as simulating the shocks to the Australian economy produced by envisaged micro-reforms, this type of analysis requires further assumptions about the economic environment in which they might occur. The Commission opted for a setting in which implicit changes in the labour market over the longer term would allow real wage flexibility assumed to be sufficient to maintain employment levels across occupations. This is equivalent to the abandonment of price indexation of wages and a national wages policy with wage setting aligned to individual labour market forces. The gain in aggregate real wages shown by the simulations is due to favourable CPI effects emanating largely from the cost reducing effects of the reforms on domestic goods and services. The changes brought about by micro reform are therefore attributable, to an extent unspecified, on labour

market changes, the details of which have also been left unspecified in the simulation.

The view taken of budget settings is a neutral one. Some individual reforms, such as that to road use charges favouring households, would reduce government revenue. Elsewhere, however productivity gains and other growth stimuli of the reforms would tend to reduce the public sector borrowing requirement in the absence of other policy changes. However no presumption of increased government saving was incorporated and so offsetting adjustments were made to corporate and personal income tax rates to keep the Public Sector Borrowing Requirement constant. This turns out to have consequences for other macro effects of the reforms as discussion below suggests.

The macroeconomic environment, including wages policy, will have a major bearing on the likely quantitative effects of microeconomic reform. The converse is more contentious. Recently Forsyth (1990a, 1990b) has argued that while worthwhile in themselves, reforms like those discussed here would, on their own, have little bearing on Australia's current account deficit. Forsyth identifies that problem as "essentially one of savings and investment" (Forsyth 1990a p.6) If the deficit is to fall, savings must rise or investment fall. Accordingly changes which do not shift savings or investment behaviour will have little if any influence on the balance of payments. Tariff reductions and productivity increases, the core of the Industry Commission's reform simulations, are unlikely, in Forsyth's view, to shift either savings or investment functions significantly. The real exchange rate simply adjusts to whatever level validates domestic savings and investment decisions. With "competitiveness" measured by this real exchange rate, competitiveness reflects balance of payments positions rather than determining them.

The ORANI model allows the real exchange rate to vary either through setting domestic prices as the numeraire and letting the nominal exchange rate fluctuate or by allowing domestic prices to fluctuate relative to foreign ones while the Australian dollar price of foreign currency is held constant. There are no mechanisms in the model to determine "the extent to which induced changes in the real exchange rate will be realized as changes in the domestic inflation rate relative to the foreign rate or as changes in the nominal exchange rate." (Powell, Cooper and McLaren (1983).)

In modelling microeconomic reform, real exchange rate variations have been permitted through domestic price changes. (For an alternative approach, where reduced government spending to target the PSBR/GDP ratio is the centre of interest, and the domestic price level is the numeraire, see Freebairn, 1990). But as Table 2 indicates, the increased competitiveness that is gained by the micro reforms, expressed through a lower real exchange

rate (domestic prices fall on average by 7.2 per cent) is not accompanied by a significant improvement in the Balance of Trade. The expansion in the tradables sector of the economy is in imports as well as exports and the growth in consumption is only slightly less than that in GDP.

Thus the active component of the balance of payments on current account, the trade balance, shows little movement in response to micro reforms in this scenario. The passive component, the payments on foreign debt obligations is not modelled and its sensitivity to changes in the nominal exchange rate not considered, the latter being held fixed.

Given that ORANI is a model in which goods markets clear "instantaneously", there is real wage flexibility and the real exchange rate adjusts without impediment, it is not surprising that it produces predictions which appear to support those who argue that, in the absence of changes in savings behaviour, micro reform will have little impact on the trade balance. Limitations of this kind of model, at least in its present state of development, leave the likely effects on the current account, as opposed to the trade balance, open to conjecture.

The compositional changes predicted in response to micro reform will evidently lead to a more "commodity trade" dependent economy, increasingly exposed to resource price fluctuations. This in turn could be expected to have some effect on the instability of the nominal exchange rate. Increased risk premia would drive up the cost of capital. This would place some dampening effect on investment, possibly with the greatest negative feedback effect in mining, which is among the most capital intensive sectors.

Absent too are any wealth or real balance effects on consumption/savings behaviour in an economy in which there would purportedly be significant downward pressure on the domestic price level.

## **5. Micro Reform and the Environment**

The gains (and losses) with which this discussion has so far dealt are the conventional ones that have long occupied advocates of deregulation. They are measured through such indicators as real GDP effects. The interdependencies which models such as the ORANI model have traditionally captured are market-based and exclude many unpriced effects. The correction of externalities, (unpriced benefits and costs), including such phenomena as agricultural land degradation, watercourse pollution, and loss of amenity from forestry activity, are legitimate and important parts of any microeconomic reform agenda. Full quantification of the likely effects of many reforms designed to correct these externalities requires modification

to the input-output/national accounting framework upon which such models rest, to account for such phenomena as the depreciation of agricultural land.

However, some steps have already been taken to address environmental effects indirectly in assessment of micro reform. For instance, the prospect of higher electricity prices for consumers and increased productivity in power generation has been incorporated with higher forest royalties in simulations designed to show the impact on two sensitive land uses - land under forestry and land used for waste disposal (IC, 1990b). Reforms to electricity pricing and asset management mentioned above, sufficient to earn 8 per cent real rates of return have been combined with the requirement that forest royalties be adjusted to earn 8 per cent real return on forest resources at present harvest rates. Such an exercise is illustrative of the direct and indirect effects of two micro reforms with environmental overtones. The results are reported in Table 3.

The results show some of the interesting conflicts that arise in bringing the pricing of resources and energy closer to market-based outcomes. The more- "rational" use and pricing of electricity resources has a growth-inducing effect, stimulating, along with resource-based exports, domestic activity such as construction, which is forest product-intensive. It also stimulates the additional waste that comes with higher GDP.

More rational pricing of forest land, on the other hand, through higher royalties, has the reverse effect. It would, among other things, provide a strong stimulus to wood products imports, at least in the short run, before investment provides greater capacities for substituting waste paper and non-wood products in activities like paper making.

These results highlight the problems that can arise from piecemeal reform. While efficiency enhancing reforms such as those envisaged for electricity pricing could have their own environmentally benign side effects, (via energy saving effects on Greenhouse gas emissions) the GDP growth which results will place pressure on other environmental resources such as land. To minimize this impact it is necessary to price the potential damage to contain it, in much the same way as user-pay approaches have been incorporated into suggestions for road transport reform.

To this end, micro reform must simultaneously address the urgent need to reform the pricing of waste disposal. International comparisons reveal that moves to user pay based systems and away from the widespread Australian practice of incorporating waste disposal charges in the general property rates can result in 40 per cent reductions in household demands for waste disposal services (IC, 1990b and Skumatz and Brekinridge, 1990).

Failure to implement environment-oriented micro reforms at the same time as economic activity in being stimulated by other cost reducing ration-

Table 3: Microeconomic Reform and the Environment: An Example

	Higher hardwood royalties	Higher softwood royalties	High electricity prices and productivity	Total effect
<b>Land used for</b>				
Waste Disposal	-0.2	-0.2	0.3	-0.2
Hardwood Forestry	-7.6	-1.7	0.2	-9.1
Softwood Forestry	-2.1	-4.6	0.2	-6.5
	(Percentage changes)			
<b>Selected Industry Output Effects</b>				
Agriculture	negligible	negligible	1.4	1.3
Mining	-0.6	-0.1	2.4	2.1
Newsprint	-0.6	-0.6	0.2	-1.0
Printing and Paper	-0.5	-0.4	0.5	-0.4
Packaging Paper	-0.5	-0.4	0.7	-0.2
Saw Milling	-4.2	-3.7	0.3	-7.6
Construction	-0.3	-0.3	0.1	-0.6

Source: IC, Draft Report *Recycling*, Vol. 1 1990 Tables 6.2, 6.3.

alisation runs the risk of entrenching environmental resource misuse. Any unwanted environmental degradation that results would be a consequence not unlike that for some manufacturing industries which experienced protection reduction before any effort was made to reduce the effects of inefficient government non-tax charges.

## 6. Conclusions

Given acceptance of the price elasticities that underlie the ORANI model of the Australian economy, it would seem that a combination of residual protection dismantling and pricing and productivity reforms in key service industries has the potential for significant structural change in the Australian economy. The effects, however, must be kept in perspective, especially given their long run character. Published trend rates of growth between 1974-75 and 1987-88 (ABS catalogue 5211.0, Table 9, 1988-89) show a mining sector growth rate averaging 3.9 per cent, with manufacturing at only 1.6 per cent. If sustained over the next decade, such divergent trends would of themselves produce an Australian economy with an export sector considerably more mining resource dependent than today's. (See Table 4).

*Table 4: Long Term Sectoral Shares Using Projected Trend Growth Rates<sup>(a)</sup>*

Sector	Present	Future	
		(Without Reforms)	With Reforms)
Agriculture	4.15	3.62	3.47
Mining	5.08	5.53	6.98
Manufacturing	17.00	14.80	14.40
Services	73.77	76.05	75.15

(a) Trend rates are taken from Australian National Accounts 1988-89, ABS cat.5211.0, Table 9. Initial shares of gross product are taken from the sale publication, Table 4.

(b) Import duties and imputed bank charges are excluded.

Microeconomic reform, it seems, would serve to enhance these divergences rather than reduce them. But a refusal to abandon remaining manufacturing assistance, while it would halve the gains to the mining sector

projected from these reforms, would do little to modify these structural changes.

It is not surprising then, that those like the Australian Manufacturing Council (1990), who argue for policies which will enlarge manufacturing's share of activity, whether from a dynamic efficiency perspective or some other, have called for policies other than micro reform to provide this stimulus.

Too narrow a view of microeconomic reform would fail to include the considerable potential for addressing some of Australia's more contentious environmental problems through better resource pricing and access. Part of the solution here lies in requiring rates of return on government-managed resources that are nearer economy-wide averages. However, uniform target rates of return would not be likely to be welfare maximizing where there are large divergences between services in the elasticities of demand and in community service obligations.

Finally, it would seem unlikely that all of the productivity-enhancing reforms touched on in this paper can be "disembodied" corrections of resource misallocation or, under another interpretation, removal of x-inefficiencies. Public sector reforms will be accompanied in many instances by investment programs that will change private sector productivity. Gains of this kind are not captured in the simulations discussed above, where static input-output relationships form the basis of the modelling. Significant overseas evidence is being assembled (see Aschaur 1989) demonstrating the evidence of public sector infrastructure investment on private sector productivity. Attempts at quantification which seek first to establish the importance of this link for Australia would be a welcome advance.

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