

Water Markets and the Chimera of Price Distortions

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The role of water markets is receiving increased attention following the Federal government's \$10 billion bid to assume management responsibility for the affairs of the Murray-Darling Basin. The formalised entry of the well-funded Federal government into Australian water politics has raised the prospect of water rights being purchased by government agencies to alleviate the chronic over-allocation that has occurred under some State bureaucracies. The PM's *National Plan for Water Security* announced in January 2007 has allocated up to \$3 Billion to buy back water entitlements and fund related 'exit' mechanisms (p. 11). Generally, States have been reluctant to purchase water directly and in some cases have simply lacked the resources to make any significant impact on over-allocated systems. In the NSW portion of the Murray-Darling, for example, over 50 percent of the average annual runoff is diverted through licensed extractions. This average figure masks the severity of the problem and the Australian Water Resource Assessment (2000) has found that there is considerable overlap between over-developed surface water and groundwater allocations that exceed 100 percent of sustainable yield, particularly in NSW. Little wonder the Premier of NSW is keen to see water management transferred to the Commonwealth (see, for instance, ABC 2007).

In light of the magnitude of this type of misallocation the 'pipes and drains' solutions on offer to date are not enough. Only the most optimistic, foolhardy (or politically desperate) would believe that sufficient water can be 'created' out of engineering efficiencies to restore some order of balance between current water use, increased competition from other users and sustainable yield. Thus, there is a need to contemplate substantial buy-back of water licenses in some jurisdictions.

Several elements of water buy-back are problematic, but these need to be acknowledged for what they are – political constraints rather than economic realities. First, there is a belief that substantial purchase of water entitlements from current agricultural producers (who use about two thirds of the water in Australia) would bring forth unacceptable and widespread social decay in rural communities. This argument ignores the reality that under current arrangements water is only ever likely to be purchased from willing sellers. It simultaneously glosses over the continued decline of rural communities driven by falling terms of trade, not changes in water economics. To rule out the prospect of the government purchasing such entitlements is akin to insisting that those least able to survive in irrigated agriculture continue to endure hardship for the sake of some national perception based on agrarian fundamentalism. It also ignores the fact that the decline of rural communities in Australia has a lot to do with the

competitive advantage of the sector, or lack thereof. Put simply, buying back water is not only the most efficient mechanism for resolving over-allocation it is also likely to be the most equitable.

Not to be thwarted by the obvious logic of this approach, agricultural interests keen to see water resources retained in their current uses, have argued that government buy-back will adversely affect the functioning of the water market by driving up prices to levels that are unacceptable. There are also claims floating around (pun unintended) that government participation in the market would be tantamount to monopoly, with cashed up bureaucracies wielding unacceptable market power.

Such arguments are cunningly designed to appeal to the economic rationalist in most of us – but they are severely flawed and largely driven by rent seeking.

Yes – government agencies purchasing water for perceived environmental benefits will probably drive up the price of entitlements in water markets. However, that is the whole point of the exercise and at least in a market setting such adjustments and their related costs would then become more overt.

The present attempts to address the over-allocation issue have primarily been in the form of engineering fixes and purported ‘water use efficiency’ measures. Those arguing that government buy-back in water markets would produce distortions would also have us believe that there are few distortions in the current approach.

Try this for non-distorting government intervention. In urban communities where water is in short supply, scarcity is presently managed by a range of measures. Some of these include behavioural restrictions which are enforced by encouraging members of the community to report on recalcitrant individuals. Cases of vigilantes taking matters into their own hands by ‘punishing water wasters’ are unequivocally on the rise. Unfortunately, much of this behaviour seriously erodes community goodwill. (I recall the case of a couple who had their lawn poisoned, even though it had been maintained by ‘flavour of the month’ grey water). Despite the protestations of learned people like Alistair Watson (2005) and Geoff Edwards (2007), very little attention has been paid to the distorting influence of this draconian approach to urban water management (and the institutional deficiencies that result in water being managed in this way).

An additional mechanism used by urban water managers is to subsidise purportedly ‘water efficient’ devices. Water-saving dishwashers and rainwater tanks are obvious examples. In the case of the former a ‘back of envelope’ calculation suggests that it would take about \$33,000 of government subsidy to save 1 megalitre of water. By way of contrast the capital cost of the latter has been estimated to run to about \$300,000 for each megalitre ‘saved’ – and that assumes there is sufficient rain for the device to fill and adequate enthusiasm on

the part of the owner to manage the storage. All of this needs to be compared with the current price of water entitlements in agriculture which can be purchased for around \$1,200 per megalitre. Paying 30 to 300 times the value for water does not just distort market signals – it also wastes a lot of money garnered from ill-informed taxpayers.

But the present distortions are not limited to the water demands of urban communities. Obviously, governments have been busy over the last few decades trying to rake back entitlements to secure 'water for the environment'. However, it is important to realise that this is not water for the environment per se. It is water to create an environmental benefit for which many in the electorate are willing to pay. To assume that government would willingly undertake such a task without the widespread support of the electorate is to ignore the fundamental mechanics of political democracy. So, if we accept that political actors act rationally then the majority of Australians must have a preference for restoring some environmental amenity to our rivers. Thus, the focus should be on how governments can accomplish this task in the most cost effective manner. For reasons of sound governance it also makes sense to do so in a transparent and accountable way, else governments run the risk of reallocating too little or too much water to align with community preferences.

When government agencies buy back water entitlements they add to the demand that already exists in the market setting. However, the present disconnect between those who would demand water to produce agricultural, industrial/urban and environmental outputs creates a situation in which the market price for water is artificially lower than it should be. Currently, the market price ostensibly represents agricultural demand, since the other two sectors have been precluded from market participation by political and/or institutional constraints. Put simply, there are already distortions in the water market but these are in the form of restrictions on demand and this bestows benefits on those who can currently buy water at discounted rates. The beneficiaries in this scenario are unlikely to be unsuccessful, struggling farmers; rather they are their profitable neighbours.

The rhetoric from many politicians acknowledges the problem with the market price of water – how often do we hear them say that water is under-valued? However, the irony is that many of those same politicians willingly disguise the true cost of the current water allocation by supporting ludicrous engineering fixes in preference to market participation. The costs that attend these projects are far more difficult to trace than the cost of purchasing water entitlements from a market. This is precisely why politicians can get away with telling the public that they are using taxpayers' money wisely and are able to simultaneously claim to be addressing water over-allocation.

In sum, the repurchase of water entitlements will create some change in the dynamics of water markets and, as with any change to market price there will be some winners and losers. However, this should not be confused with spurious

claims of market power or price distortions. Rather, the current price is already severely distorted and the sooner the government accepts the merits of market adjustment the better for all of us.

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