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Best practice pricing principles and the politics of water pricing

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ABSTRACT

Considerable progress has been claimed regarding the establishment of economic reforms in the water sector in Australia, including the development of cost-reflective pricing for water users. This is evidenced by the highly developed status of water markets, especially in agricultural areas, and the substantive efforts that have been made to measure and include the cost of capital and its replacement in charges paid by water users. However, recent government responses to secure additional water for environmental purposes have given rise to a spate of public investments in irrigation infrastructure arguably reminiscent of bygone eras of policy (see, for example, Musgrave, 2008). A critically important, but under-investigated feature of this latest policy response, is that irrigators are subsequently not obliged to pay water prices that reflect the cost of publicly funded irrigation infrastructure. This paper investigates the processes for establishing water charges that are generally cost reflective and contrasts these with the political influences that can markedly distort best practice water pricing. An assessment framework that draws from best practice pricing principles embodied in the National Water Initiative, the Water Industry Regulatory Order and the Victorian Essential Services Commission Act (2001) is used as a framework to consider areas of improvement. Whilst special attention is given to arrangements in Victoria, Australia, we argue that caution about the risks of political interference in water pricing in irrigation should be broadly understood.

1. Introduction

Australian water reforms are frequently highlighted as an exemplar of good practice (see, the Economist, 2003) but Pawsey and Crase (2013) argue that much still needs to be done to improve the transparency of price setting in the water sector. More specifically, they argue that the role played by political or bureaucratic forces in shaping water prices is potentially understated or misunderstood and this has resulted in compromises to economic objectives, especially in the context of water pricing for irrigators. This is of particular importance in the international debate about water sector efficiency and the global discussion centred on the problems of poor water management (Abbott and Cohen, 2009). For instance, across the Organisation for Economic Co-operation and Development (OECD), farmers "benefit from policies that allow them to forego repaying capital expenditures for irrigation infrastructure or to schedule repayment over many years with zero interest" (OECD, 2010, p. 139), regardless of the challenges this creates for improving the efficient allocation of water. These practices clearly contrast with broader proclamations in the *European Water Framework Directive* which aims to improve the status of ground and surface water resources by 2015 and relies heavily on cost-reflective pricing as a vehicle to deliver that outcome (European Commission, 2000). In the US, water prices and the extent of cost recovery varies markedly. Framers with exchange agreements or riparian rights generally pay very low prices (Wilchens, 2010, p. 6) and Ward (2010) notes that political enthusiasm for the concept of ability to pay, as opposed to user pay, manifests in a cross subsidy to farming in irrigation reclamation projects. Examining the risks of political intervention in a jurisdiction acknowledged for reform 'success', like Australia, serves as a timely reminder of the difficulties of getting water prices 'right' and then keeping them aligned with costs.

Shielding Australian agriculture from the impacts of drought has long been portrayed as a 'social responsibility' (Byron, 2011, p. 71), with a widely held view that it is in Australia's long-term national interest to support agriculture in marginal areas. The rationale for subsidising irrigation assets has thus developed along similar lines, although the national reforms of the 1990s and early 2000s sought to draw a line in the sand and remove subsidies and/or make them transparent. Perhaps not unexpectedly, many irrigators do not support paying 'full price' for the services they receive and would prefer that taxpayers share the costs of farming (Byron, 2011).

Regardless of the resistance from farmers, most states in Australia made solid progress towards full-cost recovery during

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this time. However, a major U-turn to water pricing policy occurred in 2007. In the midst of a severe drought, the then Prime Minister announced that his government would deal with water over-allocation in the Murray–Darling Basin once-and-for-all. The subsequent government followed suit and committed $AUD3 billion to buying back water entitlements from irrigators but also assigned almost double this amount to upgrade communal and private irrigation infrastructure, with the aim of 'saving water for the environment' (see, Department of Sustainability, Environment, Water, Population and Communities, 2011).

Many politicians have claimed that public investment in irrigation infrastructure would be justified on environmental grounds and simultaneously increase productivity for irrigated agriculture (Byron, 2011). However, extensive controversy surrounds the $AUD6 billion allocated to irrigation infrastructure with the most noteworthy and expensive project being the $AUD2 billion commitment of tax-payers' funds to the Northern Victorian Irrigation Renewal Project (NVIRP). From an economic efficiency perspective, public investment in this type of infrastructure, when not supported by a reasonable public good rationale, has the potential to seriously distort the price signals received by water users. If a select group of irrigators are provided a subsidy for infrastructure, there are reasonable grounds for assuming that this advantage will allow them to bid water away from other users.

In contrast to the public subsidisation of irrigation infrastructure, there is significant theoretical and empirical evidence on the efficiency gains of water markets, the formation and promotion of which have been vigorously pursued in Australia, especially in the southern Murray–Darling Basin (Crase et al., 2013b). The advantages from this approach have been estimated as significant, with the National Water Commission (2012) noting that interregional and intraregional water trading during the exceptionally dry years of 2007–2008 and 2008–2009 cushioned regional production by about $AUD1.05 billion and $AUD1.2 billion, respectively. Even in wetter years, such as 2010–2011, trade was estimated to bring about $AUD0.5 billion in increased regional production. Given the theoretical and empirical evidence emerging about water markets, it is difficult to reconcile recent policy choices that simultaneously seek to subsidise irrigation infrastructure and deflate water prices for irrigators (Crase et al., 2013b).

This paper investigates how political manoeuvrings to reallocate water can markedly distort best practice water pricing and undermine market reforms actually designed to facilitate an efficient allocation of water rights and ensure the sustainability of irrigation. In the interest of clarity, the scope of this paper is limited to water pricing arrangements in the state of Victoria, Australia, a state with an expansive irrigation sector and a jurisdiction that has been at the forefront of reform (see, Musgrave, 2000; National Water Commission, 2011). Brooks and Harris (2014) focus only on the leadership aspects of Victorian water markets but here we deal with water pricing and contend that there are broader national and international lessons to be drawn from this case.

2. National water reform as an exemplar of best practice

A significant milestone was reached in Australian water policy in 1994 when the Council of Australian Governments agreed to the Water Resource Framework (Council of Australian Governments, 1994). It was decided at the 2003 Council of Australian Governments meeting that the 1994 reform needed further development and this resulted in the National Water Initiative. One stated purpose of the National Water Initiative was the enhancement of water trade between different users, especially rural and urban users (Council of Australian Governments, 2004). In this case, the tradable water rights created in the reforms in the 1990s were further unbundled and clarified.

There is an important two-way relationship between the efficiency that can be delivered by water markets and the process of having cost-reflective tariffs for services that deliver water. First, the improved operation of the water market can facilitate the establishment of more efficient water tariffs. In the absence of a water market, the introduction of cost-reflective pricing can create a perception that use or access rights are being expropriated, especially in established irrigation areas where costs may not have been recovered previously. The mere existence of a water market confirms the presence of access and use rights, making it harder to portray changes to tariffs as the expropriation of rights by price setting agencies.

Second, establishing tariffs that approximately reflect the cost of water services helps limit distortions operating within the water market. For example, if one group of irrigators receives subsidised tariffs and other water users do not, there is an inherent incentive to bid water away from unsubsidised to subsidised uses (Crase et al., 2013b). This occurs regardless of the long-term viability of the beneficiaries, unless of course, the state is able to predict with certainty the future success of individual irrigators. The point is that water markets support the introduction of cost-reflective tariffs for water services and cost-reflective tariffs enhance the efficient operation of water markets and this, in turn, results in the most sustainable irrigation sector.

In the context of institutional reform, the National Water Initiative required state jurisdictions to establish independent bodies to determine water prices for all water users by employing the economic principles embodied in the National Water Initiative. The state of Victoria followed these principles and set in place arrangements for the Essential Services Commission to regulate water prices.

In total, there are 19 state-owned Victorian water corporations covering urban and rural sectors. These can be further categorised into metropolitan urban, regional urban and rural (i.e. irrigation) water providers. Corporations hold monopoly power over water services within a defined geographical area (Department of Sustainability and Environment, 2011). The Essential Services Commission is responsible for regulating prices for retail water, bulk water, irrigation drainage, and diversion services and, in doing so, is directed by the Essential Services Commission Act 2001 and the Water Industry Regulatory Order 2003. In addition, the regulatory role of the Essential Services Commission is governed by the Victorian Water Act 2007. The Victorian institutional arrangements for the management of water are generally considered favourably compared to other jurisdictions (Pawsey and Crase, 2013) at least to the extent that they reflect compliance with the national reform agenda and prima facie afford some separation of price determination from the risks of political intervention. In this context, some insights into the current price setting processes in Victoria are offered below.

3. Processes for setting water prices: a case study from Victoria, Australia

The Water Industry Regulatory Order was issued by the Victorian Minister for Water to offer more explicit guidance to the Essential Services Commission in the economic regulation of water suppliers, including those providing services to irrigators. Its regulatory and pricing principles are consistent with the Council of Australian Government principles embodied in the National Water Initiative. Specifically it highlights that prices should: (1) provide a sustainable revenue stream for publicity-owned water corporations that recover efficient costs; (2) recover expenditure on renewing and rehabilitating existing assets; (3) provide incentive for efficiency improvements; (4) consider the interests of

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