*Liquid Asset: How Business and Government Can Partner to Solve the Freshwater Crisis*. Barton H. Tompson, Jr. Stanford: Stanford University Press, 2024, xiii, 1-302.

Barton, Buzz, Thompson is the nation’s leading legal scholar on freshwater supply/demand, regulation, and governance, particularly for the US West. His 1993 *University of California Law Review* article on water markets and institutions—irrigation districts, water conservation districts, urban water supply organizations, and state regulatory agencies—was the first to describe the organizational landscape found in the economic problem of water.[[1]](#footnote-1) He subsequently became the inaugural director of the Stanford Woods Institute for the Environment and Water in the West. He brings his expertise to outline how the private sector can profitably join with government agencies to address a growing “crisis” in freshwater supplies, distribution, and quality. The book is aimed at a general audience, but it raises many points where economists can make significant contributions. Because freshwater long has been relatively abundant and cheap in the US, it has not attracted much attention. These conditions are changing with a growing role for economic analysis.

The book has four parts: one outlines the general problem of water and the potential role of business in helping to address it; a second describes where private parties and organizations have been active in the supply of municipal water, in western water markets, in environmental protection, and in investing in water as an asset; a third defines new supply technologies and financing opportunities as well as the role of various agents—private and public—for confronting water challenges like groundwater depletion; and a fourth outlines policy recommendations to encourage greater private and public collaboration.

Thompson uses Cape Town to illustrate serious urban water supply shortfalls and Singapore to illustrate major technological successes in confronting them. The most insightful discussion is on the US and Australia. Legal and cultural backgrounds are similar, as are the problems and potential solutions. Four topics listed below could benefit from greater economic analysis.

Urban water pricing. Pricing can help mitigate the need for investment in supply augmentation. Thompson describes options in recycling and desalinization; technological innovation in water-saving devices; mechanics for improved water redistribution and movement; as well as quality improvements and pollution control. Economics suggests that efficient supply improvements depend upon demand estimates and they, in turn, on price. Absent price constraints, any additional supply could be fully absorbed by demand growth. Thompson points to a human right to water, the problems of the poor in accessing and paying for it, and the reluctance of politicians and urban supply agencies to raise water prices. With growing water scarcity, however, pricing is required to moderate and allocate demand. Pricing often is viewed as inequitable. Alternatives, however, also raise equity and social-cohesion questions. These include regulatory controls, such as water days and approved applications; mandated costly water-saving devices, like low-flush toilets, requirements for greywater recycling in new construction, and water-efficiency certification in appliances; as well as local neighborhood monitoring of individual water use for violations. Will these non-price approaches be effective and equitable? In fisheries, another public resource, centralized regulation of inputs and outputs to control harvests did not perform well. Saved stocks remained subject to a race to fish. Eventual adoption of user rights and markets were more effective. What might be learned for water from fishery experiences where considerable data exist?

The economics literature on water pricing is relatively thin. Estimates of the elasticity of demand often show little response to price changes. While some cities use tiered pricing, often quite flat, others like Phoenix, retain level water pricing that changes only by season. Moreover, elasticity analysis generally does not address the uniform assignment to all rate payers of supply infrastructure costs. These can be greater than usage charges so that the resulting combined price is comparatively flat. As indicated by Thompson, infrastructure investment, joint between private and public entities, requires more attention to demand and prices.

Second, *ex ante* and *ex post* cost/benefit analyses of major infrastructure and related management projects could be very informative. Many projects for recycling, efficiency water-use mandates, flood and storm-water control have been around long enough to generate data for analysis. The findings would inform policy reforms suggested in the last chapter. [[2]](#footnote-2)

A third issue involves water markets. This topic is the most empirically detailed in the volume, where benefits and constraints are described along with examples. With climate change and possible alternating periods of drought and excessive precipitation, institutional and physical mechanisms along with technological change are required, as Thompson points out. Water will be moved from historic uses in some agriculture to urban and environmental, as well as from lower-valued crops to higher-valued ones.[[3]](#footnote-3) Storage investment and conservation are required. The US West, along with Australia, Chile, and parts of South Africa with established water rights and exchange, are beneficially situated for the incentives and opportunities provided by markets. Most of the world where water is owned by the state may have fewer institutional options for private investment and individual innovation. Economists could usefully explore the transaction and regulatory costs of water markets and how these costs might be reduced.

Finally, public choice. While there is clear economic theory for predicting and testing the performance of private actors in water, there is nothing comparable for government officials. Thompson points to the Public Trust Doctrine and the role of government in promoting the public interest in water. What is the predictive model? What tests exist regarding the motivation and actions of government officials? When will they provide generalized public benefits as compared to responding to private, influential groups for their advancement in elections, regulatory mandates, and budget support? Where do they obtain information and is there an underlying agenda in favor of certain interests? Given the importance of government policies, innovation, investment, and new institutional arrangements to address the problems of water as described by Buzz Thompson, public choice factors, too often neglected, may be critical in how well water as a Liquid Asset is addressed.

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1. Barton H. Tompson, Jr., Institutional Perspectives on Water Policy and Markets, 81 CALIF. L. REV. 671 (1993). [↑](#footnote-ref-1)
2. For example, see Water Partnerships between Cities and Farms in Southern California and the San Joaquin Valley. Alvar Escriva-Bou, Gokce Sencan, Ellen Hanak, and Robert Wilkinson, 2020. Public Policy Institute of California. [↑](#footnote-ref-2)
3. Agricultural responses are described by the research in Gary D. Libecap and Ariel Dinar, eds., *American Agriculture, Water Resources, and Climate Change*, NBER and University of Chicago Press, 2023. [↑](#footnote-ref-3)