

A Global Comparative Analysis of Water Markets: Replicability of Market Intermediaries to Accelerate Market Maturation

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Background

- Policy makers worldwide are turning to water demand management solutions
 - Increasing water scarcity
 - Decreasing supply augmentation options
 - Increasing conflicts and rivalry

“Rival” originates from latin word “rivalis” which means “Those who share a river”

Background

- In this context
- Economic policy instruments (EPI) have received widespread attention
 - Increasingly been implemented for environmental objectives
 - Key water management EPI – water markets

Background

- Formal implemented water markets (WM)
 - Australia, Western USA, South Africa, Chile
- Have not been widely adopted
 - Due to institutional and physical barriers - impede their initiation
- Replication of successful WM tempting
 - Context-dependency of water markets makes successful WM replication difficult
 - Market intermediaries have played crucial role in initiating markets

Research Questions

- *What are the explanatory influences relating to the creation or emergence and success of the different types of market intermediaries?*
- *To what extent can criteria for the transferability of a market intermediary be inductively generated from existing case studies? What are these criteria?*

Research Design

- Predominantly qualitative approach

RQ1 & RQ2

Comparative analysis WM developments and intermediaries in country context.

RQ2

Inductive generation criteria for transferability market intermediaries.

- Outline factual developments in water markets
 - Literature review semi-structured interviews
 - Corroborated with quantitative data
- Case Studies
 - California (USA), Colorado (USA), Victoria (Australia) and Chile

Ten Criteria for Profiling Market Intermediaries are Identified

1. Homogeneity of Water Rights
2. Political Ideology
3. Institutional Environment
4. Objective of the Market Intermediary
5. Hydraulic Infrastructure
6. Distance of Transfers
7. Size of Transfers
8. Frequency of Transfers
9. Time Frame of Trade
10. Cultural Attitudes

Matrix of Ten Dynamic Influences on Market Intermediaries

	Exchange – Sealed Bid Double Auction (SBDA)	Water Bank	Exchange – Bulletin Board (BB)	Broker	
1	Homogeneity of Water Rights	++	=	+	-
	Political Ideology: Free Market	+	+ public ++ private	+	=
2	Institutional Environment: Complexity	+	++ public - private	+	+
	Hydraulic Infrastructure: Sophistication	++	++	++	-
	Distance of Transfers	+	++	+	=
3	Size of Transfers	-	-	-	++
	Frequency of Transfers	++	+	++	-
	Time Frame of Transfers: Temporary	++	+	++	--
4	Cultural Attitude: Acceptance of Intermediary	+	- public ++ private	+	=

Categories of Influence

Consistently Strong Influence	Differentially Strong Influence
Criteria which at least strongly influence (+ + / - -) two market intermediaries	Criteria which at least have three differing degrees of influence on market intermediaries
Hydraulic Infrastructure	Homogeneity of Water Rights
Frequency of Transfers	Political Ideology
Time Frame of Transfers	Distance of Transfers
	Frequency of Transfers
	Time Frame of Transfers
	Cultural Attitude

Closing Remarks

- Context-dependency of water market institutions makes replication of successful models to initiate water markets difficult
- Despite differing context of case studies, it was possible to extrapolate ten generic criteria
 - Water market-related criteria:
 - Exert overall very strong influences on most types of market intermediaries
 - A variety of institutional level criteria
 - Strong influences in differentiating between types of market intermediaries

Closing Remarks

- Matrix, once tested, can be used to rule out the suitability of market intermediaries which otherwise would be created
 - By comparing particular country contexts with the profiles of the market intermediaries,
 - Country X could identify that it has sophisticated infrastructure, frequent, temporary trade, but heterogeneous water rights,
 - Then Exchange-Bulletin Board is more suitable than Exchange – Sealed Bid Double Auction

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THANK YOU

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