Organizzazione e regolazione del settore idrico:

un'analisi comparata delle esperienze internazionali

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Pubblico e privato nei servizi idrici

- Dibattito sulla “privatizzazione dei servizi idrici“ polarizzato tra opposti estremismi
  - “mujaheddin del pubblico” vs. “talebani delle gare”
  - paradosso: perché la liberalizzazione coincide con l’aumento delle tariffe ?
- Analisi dell’esperienza internazionale suggerisce una valutazione più attenta e meno ideologica
  - il settore idrico continua a presentare rilevanti “market failures”
  - la differenza non la fa il modello, ma la qualità del sistema di regolazione
  - Attenzione ad usare gli indicatori giusti

Significati alternativi

- Diritti di proprietà privati sulla risorsa
  - la libera appropriazione dell'acqua, salvo casi marginali ed eccezionali, non è in discussione
  - Criteri di efficienza economica nell'attribuzione dei diritti d'uso della risorsa
  - Strumenti di mercato (es. water quality trading)
- Coinvolgimento privato nella gestione dei servizi
  - Forme e modi da valutare ⇔ market failures
  - Analogie e differenze con altre utilities ⇔ no "one size fits all
- Finanziamento: dalla fiscalità alle tariffe
  - progressività vs. "polluter-pays principle"
  - autosufficienza, tempestività, selettività

I principali driver della liberalizzazione

- Necessità di cambiare l'approccio alla politica idrica
  - dalla "politica delle infrastrutture" alla politica del controllo della domanda
  - dalla politica dei "fabbisogni da soddisfare" alla logica della sostenibilità
  - dalla politica settoriale alle politiche integrate
- Necessità di industrializzazione e modelli gestionali imprenditoriali
  - Limiti di efficacia della pianificazione pubblica e necessità di investire i gestori delle scelte strategiche (es. infrastrutture)
  - Crescente complessità e internazionalizzazione della filiera industriale
  - Opportunità di valorizzare sul mercato competenze maturate dalle imprese
- Copertura dei costi e finanziamento sul mercato
  - Finanza non può più gravare interamente sul pubblico
  - Ruolo del privato come "esattore"
  - Utilizzo efficiente delle infrastrutture e dei centri di costo
- Fattori esogeni e trasversali
  - Superiorità di regolazione di tipo "antagonistico" per ciò che attiene alla qualità del servizio nelle sue diverse componenti (es. ambientale)
  - Multiutilities: settore idrico "trascinato" verso il privato dalle trasformazioni in corso in altri mercati più aperti alla concorrenza, es. energia e gas

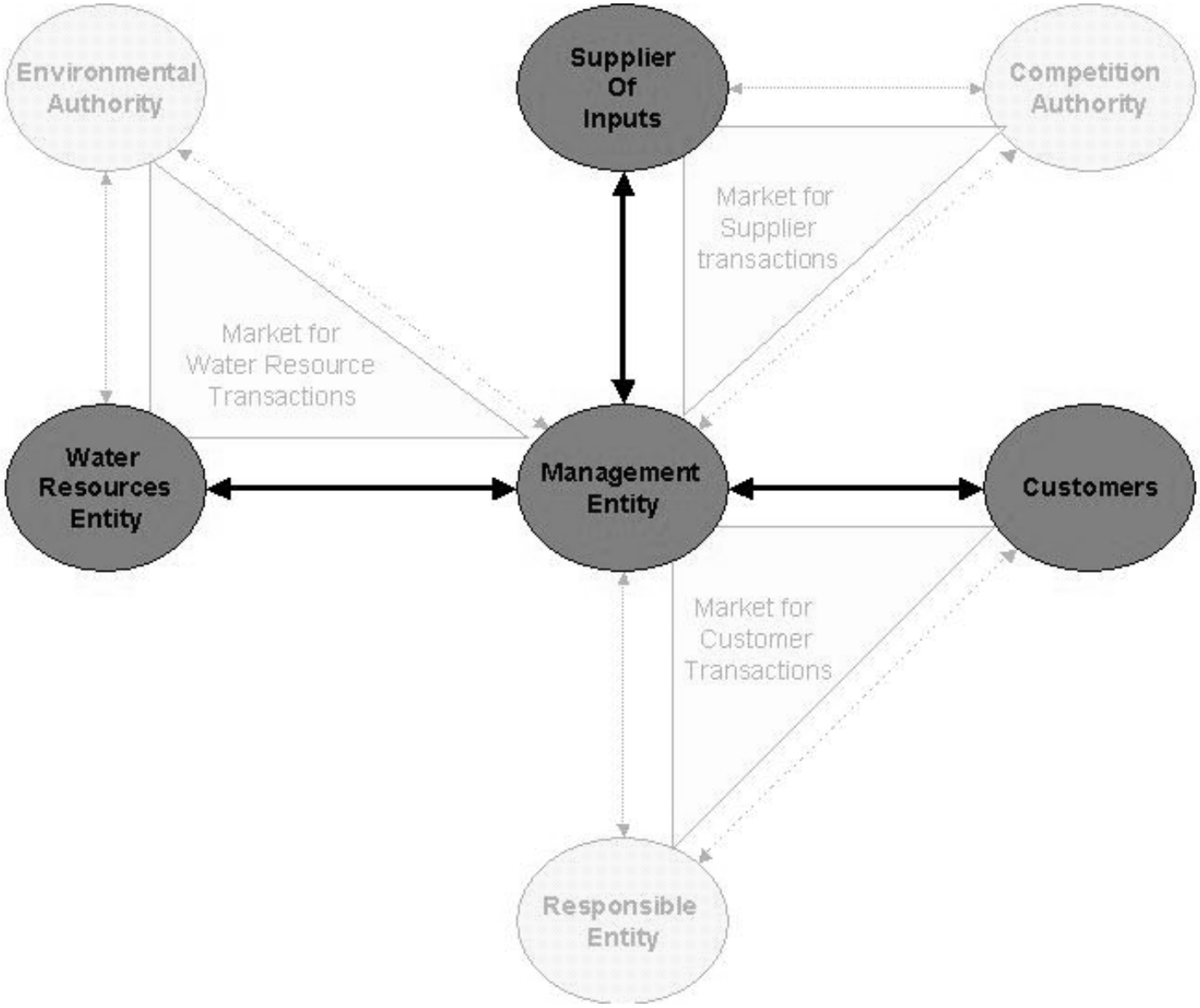
I principali ostacoli alla liberalizzazione

- Introduzione di concorrenza più problematica che in altri SGI
  - concorrenza nel mkt poco praticabile nel settore idrico, a parte casi in cui non conviene estendere le reti fisse o vi sono soggetti abbastanza grandi da poter provvedere da soli (concetto di “grande” è f della complessità di accesso alla risorsa)
  - “Essential facilities” rappresentano la parte più importante del costo
    - limitato interesse di TPA ⇔ unbundling rete / servizi poco utile
    - Fabbisogno di investimenti molto elevato ⇔ fattore critico è efficienza della CAPEX
  - Rilevanza del lungo periodo, incertezza e hold-up
    - gare “fixed price” poco praticabili;
    - meccanismi di “risk sharing” fondamentali nel circoscrivere il rischio per il privato, altrimenti difficilmente sostenibile
  - PPP possibile in varie forme ma aperta al rischio di “cattura”
- Componenti di interesse generale
  - Elevato valore sociale del servizio, costi sociali del “black out” molto elevati
  - Componente “pubblica” della domanda è molto importante: il settore è assimilabile solo in parte alle *utilities* e molto più al caso delle infrastrutture urbane
  - Componente pubblica dela domanda è il principale fattore di crescita del settore
  - Rilevanza del lungo periodo ⇔ tema della sostenibilità
  - Settore in cui la dinamica tariffaria è in ogni caso limitata da ragioni sociali

Contributi recenti della ricerca economica

- Crescente scetticismo riguardo alla possibilità di espandere in modo significativo la concorrenza
  - Evidenza empirica poco robusta a supporto della liberalizzazione
  - Analisi cross-section non evidenziano sempre una superiore performance
  - Analisi di impatto della privatizzazione UK evidenzia che non ci sono stati alcuni dei temuti effetti negativi, ma è ambigua nel valutare i benefici
    - Produttività del lavoro cresce, ma produttività totale dei fattori no
    - Effetto positivo va attribuito alla regolazione e non alla privatizzazione
  - Concorrenza per il mercato tende a favorire imprese verticalmente integrate, a scapito della concorrenza nel mercato lungo la filiera
  - Sostanziale convergenza di risultati sia a livello teorico che empirico
- Ricerca applicata e panel istituzionali confermano queste valutazioni
  - "private sector involvement is minimal in the US; privatization unlikely to grow in the future" NRC - National Research Council – Committee on Privatization of Water Services in the United States, 2002. Privatization of Water Services in the United States. An Assessment of Issues and Experience. Washington DC, National Academy
  - World Bank: dalle concessioni alle "private-public partnerships"
  - UE: documenti della Commissione vedono il settore adatto soprattutto a forme di outsourcing e PPP, non liberalizzazione e privatizzazione radicale

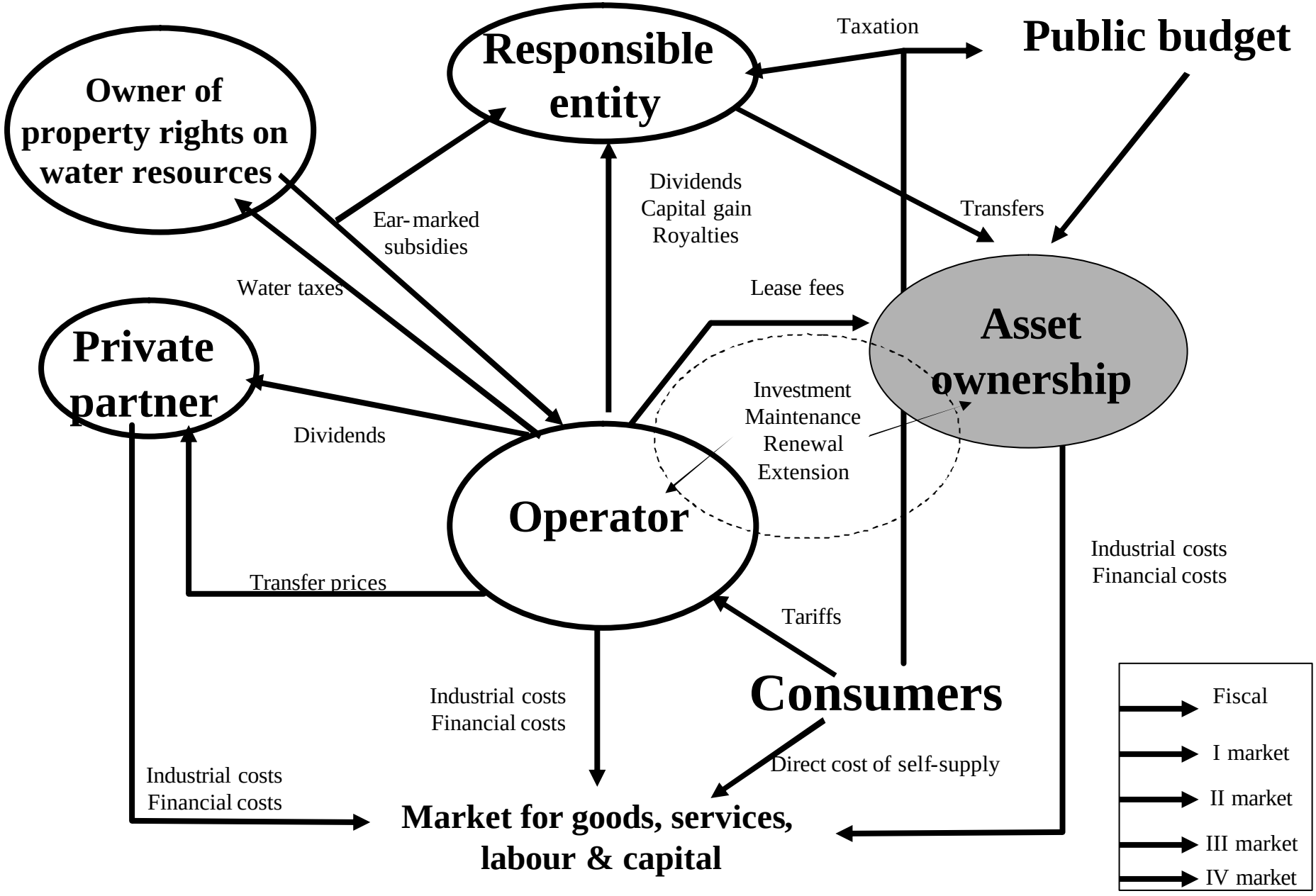
Interactions between water resources and water services



Transactions in the water industry and related market failures

Axis	Description	Regulatory issues / market failures
I	Transactions between the WSS operator and public entities holding the responsibility for service provision	Incomplete contracts
		Transactions costs
		Sunk costs
		Information aymmetries
II	Transactions between the WSS operator and suppliers of inputs along the value chain	Vertical integration
		Cost of capital for long-run undertakings
		Principal-agent relations in procurement
III	Transactions between WSS operator and entities holding the property rights on natural resources	Externalities
		Long-run sustainability of water management systems
		Transactions costs in the trade of water rights
IV	Transactions between WSS operators and final consumers	Natural monopoly
		Public good dimensions (eg health issues)
		Accessibility and affordability issues
		Resilience and flexibility

A general representation of economic and financial flows in WS&S



Different ways of involving the market

- Primary market (operators vs. responsible entities):
  - competitive tendering for operation (and/or asset management)
  - incentive regulation, benchmarking
  - Corporatization (ev. PPP) and soft regulation of public companies
- Secondary market (operators vs. providers of inputs):
  - outsourcing,
  - corporate control,
  - procurement,
  - DBFO
- Tertiary market (operators vs. owners of property rights on water):
  - tradable property rights
  - Innovative agreements (eg with agriculture)
- Quaternary market (operators vs. final consumers):
  - customers' eligibility for free autonomous organizations;
  - users' cooperatives + community systems for asset ownership/management

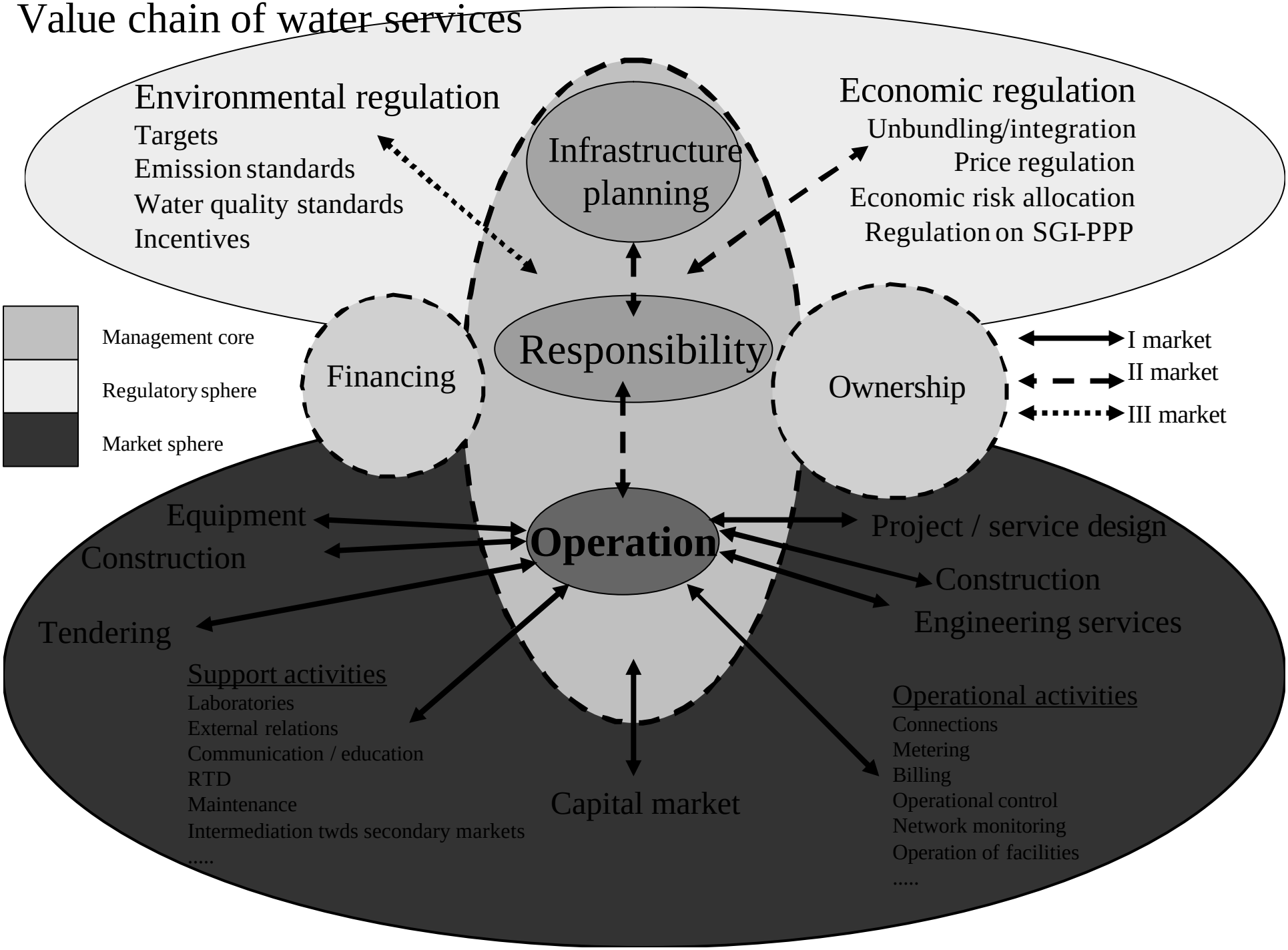
Alternative management models

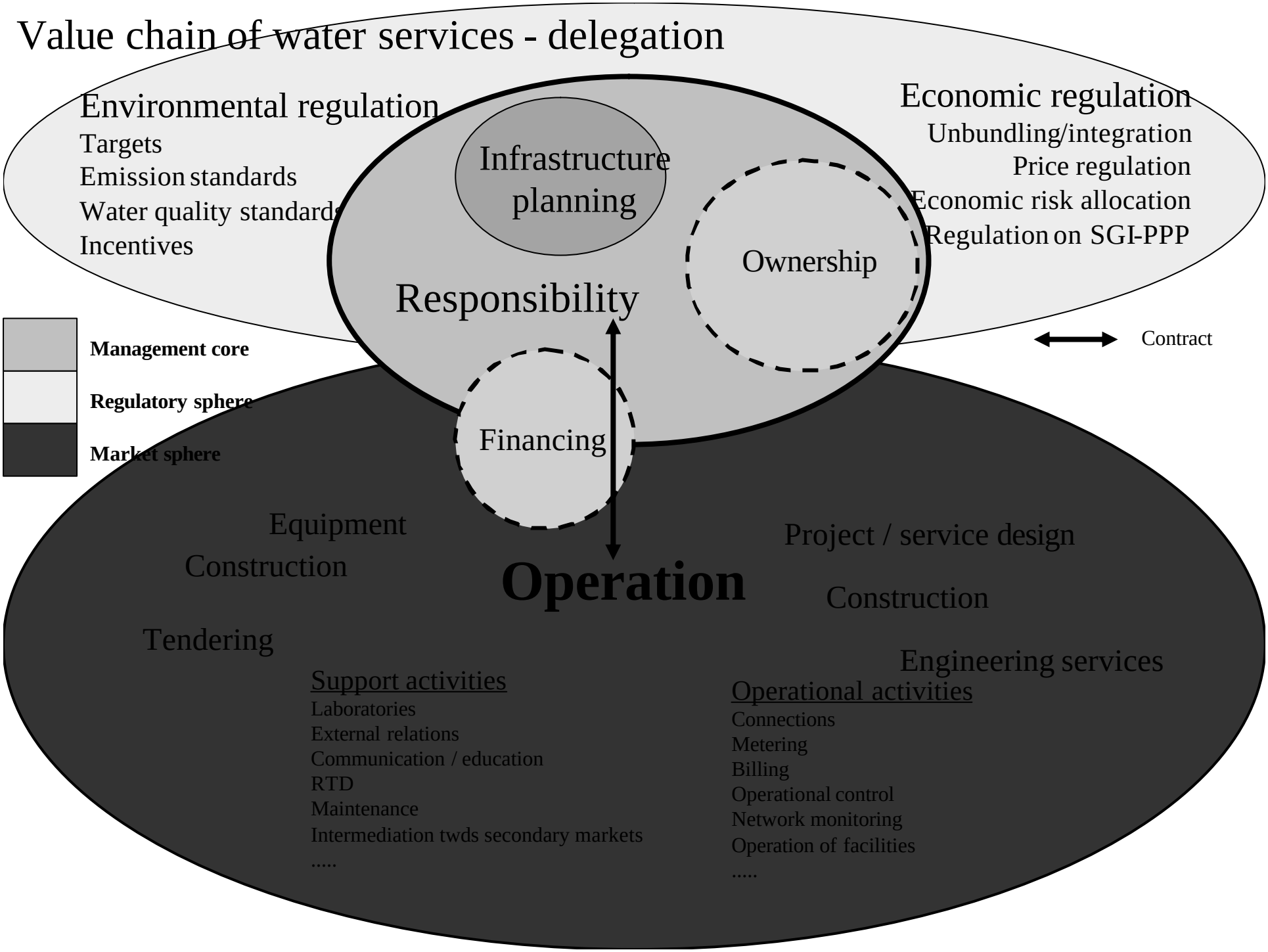
- Regulated monopoly (eg England and Wales)
  - full privatisation of assets and responsibility
  - legal monopoly (no competition)
  - Full sale of water company property on the stock exchange market
  - arms' length regulation
- Delegation (eg France)
  - public responsibility and property of assets
  - (more or less competitive) delegation through lease contracts ("affermage")
  - vertical integration of the water industry along the value chain

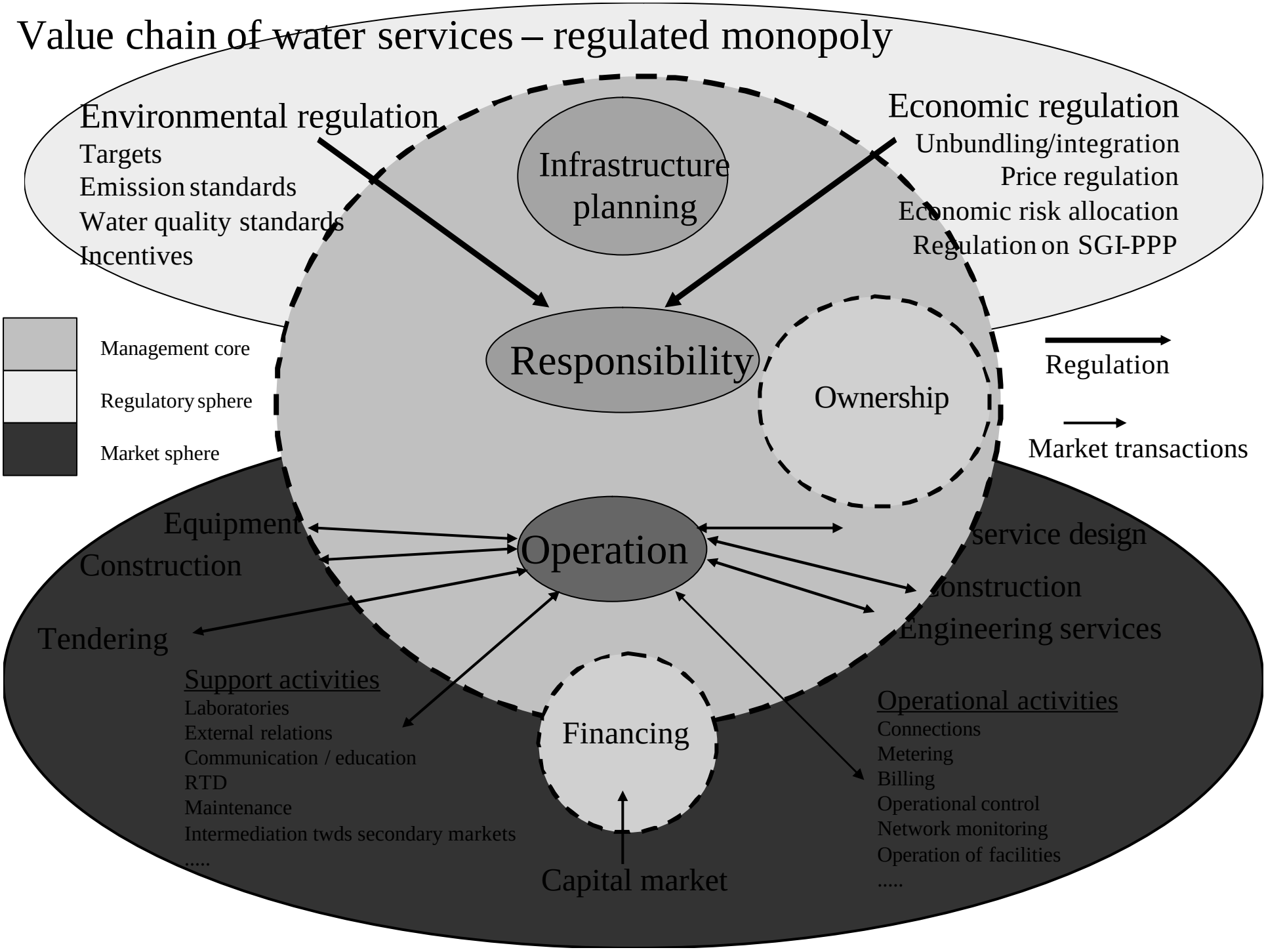
Alternative management models

- Direct public management through own companies
  - (eg Germany, Italy and most of EU; USA):
  - public responsibility
  - public property of assets
  - public management
  - (eventual) partial privatisation of municipal enterprises maintaining entrepreneurial autonomy (D) or with limitations and unbundling (NL)
  - Diffused involvement of private capital market on case-by-case (es. PPP or DBFO for single facilities)
  - competition along the value chain is highest
- Emerging innovative solutions
  - large consumers, groups of consumers or isolated communities eligible for self-supply or autonomous provision
  - private-public partnerships as alternative to delegation or regulated private monopoly
  - corporate privatization of publicly-owned companies

Value chain of water services




Value chain of water services - delegation
Environmental regulation
Targets
Emission standards
Water quality standards
Incentives
Economic regulation
Unbundling/integration
Price regulation
Economic risk allocation
Regulation on SGI-PPP
Infrastructure planning
Ownership
Responsibility
Financing
Contract
Management core
Regulatory sphere
Market sphere
Equipment
Construction
Tendering
Operation
Project / service design
Construction
Engineering services
Support activities
Laboratories
External relations
Communication / education
RTD
Maintenance
Intermediation twds secondary markets
.....
Operational activities
Connections
Metering
Billing
Operational control
Network monitoring
Operation of facilities
.....


Value chain of water services – regulated monopoly
Environmental regulation
Targets
Emission standards
Water quality standards
Incentives
Economic regulation
Unbundling/integration
Price regulation
Economic risk allocation
Regulation on SGI-PPP
Infrastructure planning
Responsibility
Ownership
Management core
Regulatory sphere
Market sphere
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External relations
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Maintenance
Intermediation twds secondary markets
.....
Financing
Capital market
Operational activities
Connections
Metering
Billing
Operational control
Network monitoring
Operation of facilities
.....

Value chain of water services – direct public management

	Delegated	Regulated monopoly	Direct public management
Main example	France	England and Wales	Germany
Other examples (often involving variants)	ITA (few), ESP, East European countries		NL, SWE, ITA AUT, GRE
Ownership of water resources	Public		
	Variant I (US): water rights can be privately appropriated and transferred		
	Variant II (some limited cases in Europe): licensed users can trade use rights under public supervision		
Responible entity	Municipality, ev. voluntarily or compulsorily associated	Water company	Muncipality, ev. associated
Ownership of water companies	Private	Private	Public (responsible entity)
			Often multiutilities
			Minority shares for private partners or other public bodies
Legal form of operator	Private company with concession contract	Private-law company is set up as a responsible entity; it is owned by a parent holding company whose assets are on the market	Public law arrangements with different degrees of autonomy and governance structure
	Variant: specific purpose company jointly owned by municipalities and private companies		Private law companies (with obligation for unbundling in case it is also active on other markets)
Ownership of assets and infrastructure	Responsible entity, either directly or through dedicated private law companies	Operator	Responsible entity
	(poss. mixed during the contract lifetime)	Variant: assets owned by public entities and/or consumers' associations (eg Wales)	Variant: users' associations and individual consumers
Choice of operator	Tender (based on a mixture of economic offer and "beauty contests")	Direct (usually resulting from partial or total privatization of previously publicly-owned firms)	Direct
	Variant (ITA): tender for partner in mixed venture companies, with majority shares in public hands but operational decisions fully delegated to private partner	Variants: municipality may retain shares and even the majority of shares; governance rules protect the private	
Structure of the industry along the value chain	Vertical integration aimed at maximising the value added produced in-house and minimize contract, operation and market risks	Vertical integration on make/buy considerations	Vertical disintegration
		"Contract companies" usually produce only activities that require sunk costs that are specific for that contract; other activities are purchased from the parent company and/or from the market	Market for procurement
			Joint ventures and PPP for specific initiatives (DBFO)
			Variant/trend:
			• increased outsourcing of service activities as well as procurement
			• Horizontal integration of distribution with gas/electricity; sewage treatment with waste management; dedicated companies for raw water production
Patterns of competition	Competition for the I market	No competition in the I market	Competition in the II market
		Inset appointments (possibility for new customers to choose their preferred operator with ev. bulk supply from the main one)	Procurement and outsourcing
		Competition for company ownership in the stock exchange market	
		Yardstick competition (benchmarking)	

Private sector involvement in water services in Europe

	Service Provision Responsibility	Provision of the Operational Services	Participation of Private Investors	Outsourcing, delegating or assigning the Services
A	Municipalities	Municipally owned Companies	Capital investment projects	Outsourcing for specific services
B	Regional Governments and Municipalities	Municipally owned Companies	Capital Investment projects such as BOT for Brussels WWT and minority equity partners in regional companies.	Outsourcing for specific activities done by responsible authority under contract
DK	Municipalities	Municipally owned Companies	Usually for small rural service providers	Responsibility of municipality to delegate or outsource functions.
SF	Municipalities	Municipally owned Companies	No Outsourcing and contracting out of specific services takes place.	
F	Municipalities	A mix of mainly private Operating Companies (2 in particular) and municipalities	Operations undertaken by private companies for about 60% of municipalities – mainly AFFERMAGE contracts	Operational activities and risks can be delegated to third party entities. Outsourcing activities contracted by operating entities, either private or public
D	Municipalities	Municipalities (85%, but 48% of population) or companies with majority municipality shareholding (15% but 52% of population)	Possibilities for equity investment in municipality owned companies and in capital investment contracting schemes	Outsourcing of specific services
GR	Municipalities	Municipalities or Municipally owned companies	Capital investment projects	Specific services are outsourced and contracted to other parties.
IRL	Municipalities	City and county Councils	Capital investment projects – DBOs for wastewater treatment in Cork, Dublin & Limerick. Group Water Schemes – usually covering small rural areas	Outsourcing of some specific functions to other operators like AWG
ITA	Municipalities (associated in ATOs)	A mixture of Municipal/Mixed ltd. companies	Investors in municipality companies and on a concession operation basis	Outsourcing and contracting out of specific activities, particularly in capital investment projects
L	Municipalities	Municipalities	No	No
NL	Municipalities	Municipality (owned or majority publicly owned companies	Investors in municipalities owned companies, but by law not able to take majority holdings. BOT/DBO contracts permitted, such as WWT for The Hague.	Outsourcing of specific services or function permitted.
P	Municipalities	Municipality owned or majority owned Companies	Investors in municipality companies operating concessions	Outsourcing of specific services and delegation of services to concessionaire entities
SPA	Municipalities	Municipalities or municipality/private Companies	Investors in municipality companies operating concessions	Outsourcing the responsibility of municipalities
SVE	Municipalities	Municipally owned Companies	No	Responsibility of the municipality companies to decide. Specific functions are outsourced through Procurement Rules
UK	England-Wales: Private Companies under licence from Government	England-Wales: Private Companies	England-Wales: Full privatisation with 100% private equity structures	England-Wales: Outsourcing of some individual functions.
	Scotland-N.Ireland: Regional Assemblies and Executives	Scotland-N.Ireland: Independent publicly owned Companies	Scotland-N.Ireland: Capital investment projects – BOTs	Scotland-N.Ireland: Some outsourcing of specific functions

Source: adapted from WRc-Ecologic, Study on the application of competition rules in the water sector in the European Community, Report to the European Commission – DgCompetition, 2003

Alternative models: capital cost

- Traditional model
  - Public responsible for both OPEX and CAPEX
  - Cost recovery for OPEX only; public finance for CAPEX
  - Public finance or publicly-guaranteed financial institutions ⇔ interest rate corresponds to conventional inter-government lending rate
- British model: regulated monopoly
  - Private responsible for both OPEX and CAPEX
  - Market finance mechanism + FCR of new investment + existing assets evaluated at the privatization price (in E&W this corresponds only to 5% of reconstruction cost!)
- French model: delegation (lease contracts)
  - Private responsible for OPEX, public for CAPEX
  - FCR includes OPEX + lease charges (corresponding to loans)

Alternative models: capital cost

- German model: publicly-owned, partially privatized companies
  - Public enterprise responsible for both OPEX and CAPEX
  - FCR for the full OPEX + CAPEX of all assets (including existing ones, valued at full reconstruction cost, depreciation according to economic life)
- Italian model: delegation of operation and investment
  - Private (or publicly-owned ltd) responsible for both OPEX and CAPEX
  - Market finance mechanism + FCR for planned investment only
  - Tariff regulation caps the cost of capital at max 7% (whatever the managing model adopted)

Alternative models: economic risk (and r)

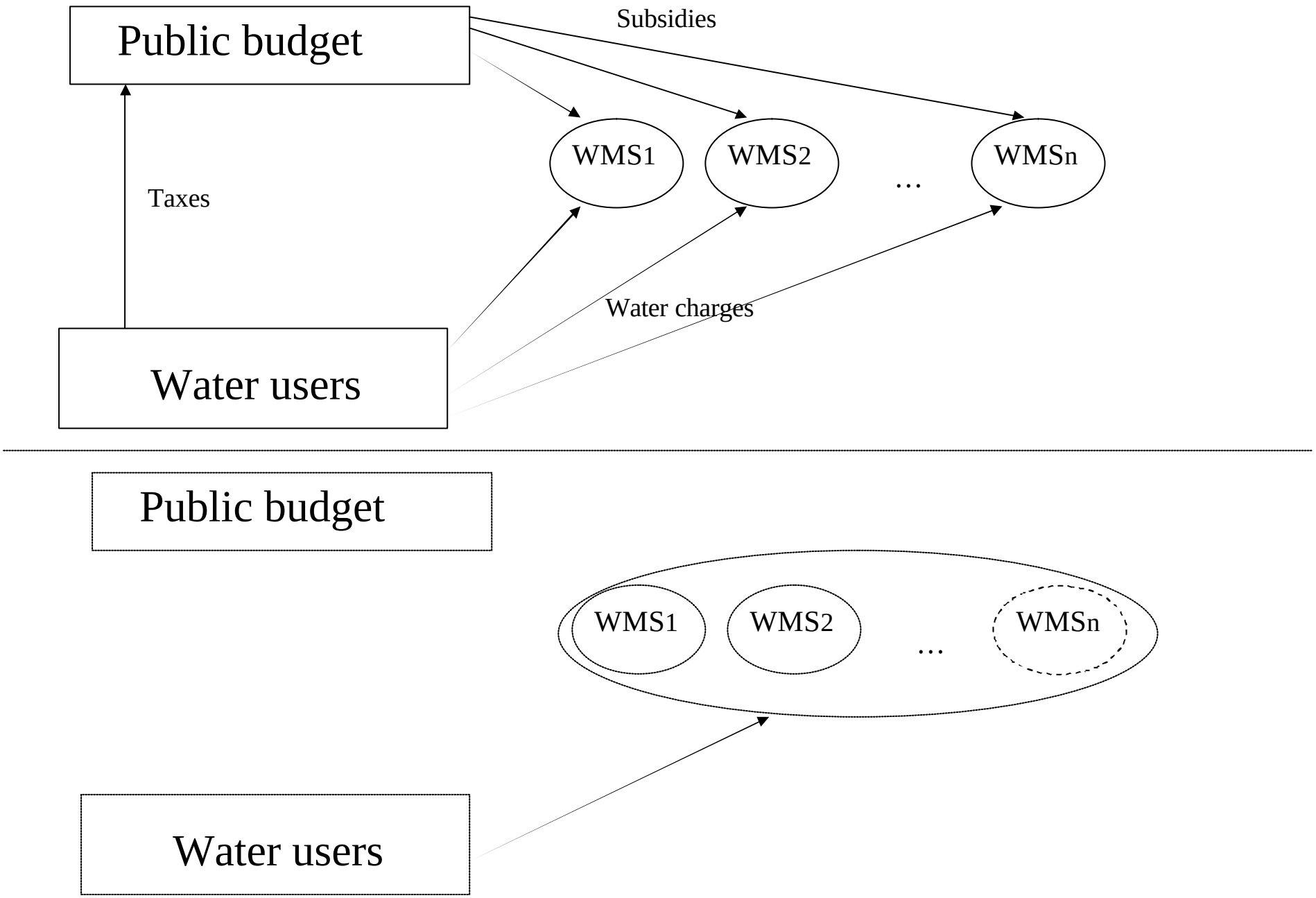
- UK model
  - No market risk (except risk of takeover)
  - Operational and capital risk is borne by water companies
  - Performance risk also borne by water companies (quality regulation)
  - Regulatory risk is reduced since Ofwat is committed to ensure industry viability
- French model
  - Some market risk (although incumbents are normally favoured)
  - Operational and performance risk on the private company
  - Capital risk suffered by municipality (ev. shared)
  - Regulatory risk is reduced via cooperative renegotiation of contracts; tradition of low conflictuality

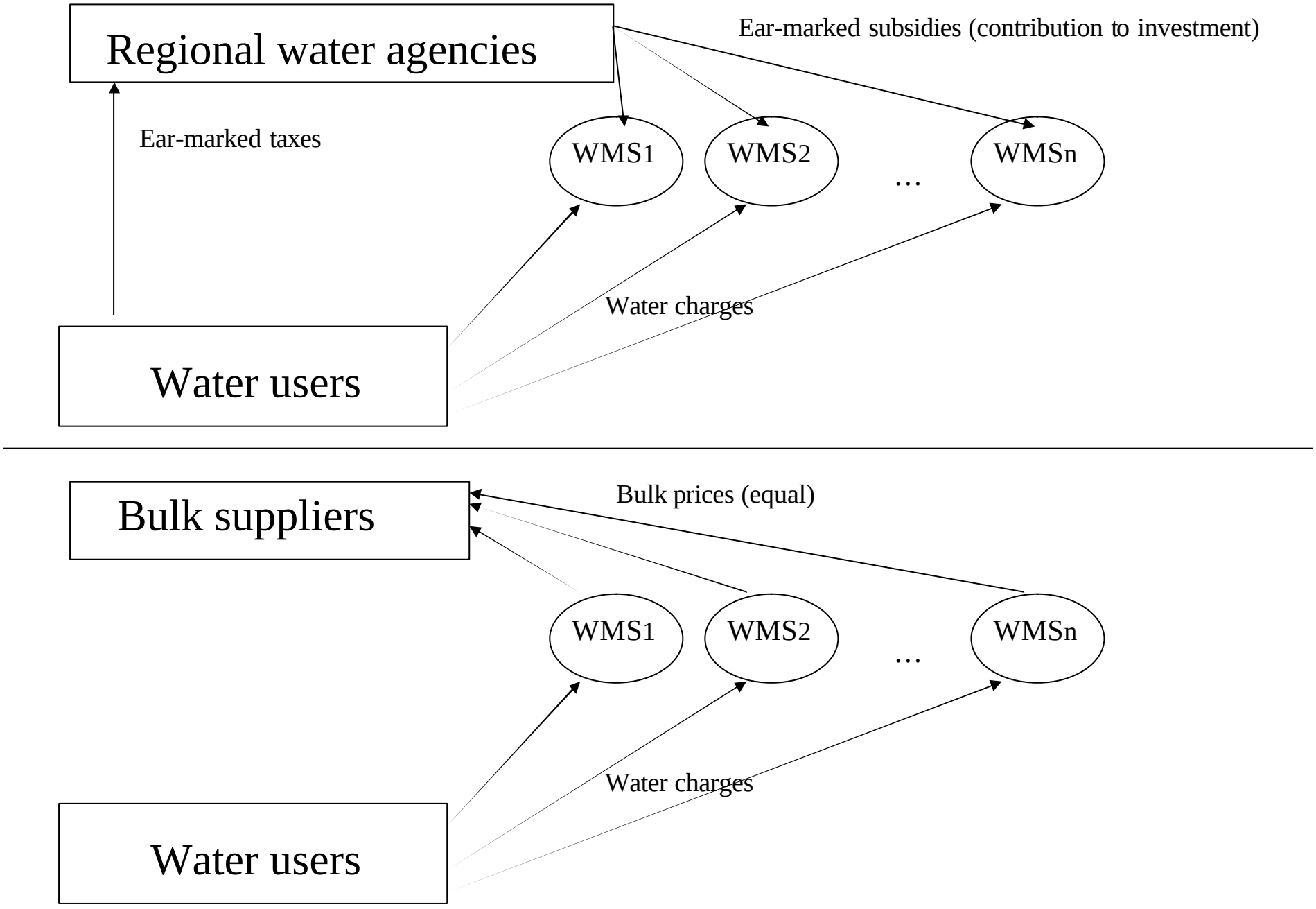
Alternative models: economic risk (and r)

- German model
  - No market risk (publicly-owned companies, even if partially privatized)
  - Performance risk on the company
  - Operational and capital risk on the consumer via commitment to ensure ex-post full-cost recovery
- Italian model
  - Market risk (tenders)
  - Operational and performance risk on the company
  - Capital risk shared and limited by the assumptions contained in the plan (problem: plans should be realistic)
  - Regulatory risk difficult to predict since depends on future attitudes of local authorities; no formal commitment for regulators to ensure viability of investment

Equalization mechanisms

- England and Wales (and to some extent Italy)
  - Large management units ⇔ redistribution between high- and low-cost areas
  - Water charges proportional to property size and not to consumption (E&W)
  - “green dowry”: a significant part of the pre-existing debt has been re-publicized (E&W)
  - Continuing role of the public sector at least for “large” investment (eg interbasin transfers) (Ita)
- France
  - Agences de l’Eau manage an ear-marked budget fuelled by a taxation mechanism ⇔ around 15% of investment is financed at 0 interest
  - Own capital is remunerated only if provided by the private company (what occurs only in a few cases)
  - Two-part tariffs with significant connection charge ⇔ allows some redistribution in favour of large families / low property values
- Germany
  - Cross-subsidies ⇔ cash flows generated by all infrastructure fuel municipal CAPEX
  - Very long depreciation schedules
  - Two-part tariffs with high marginal rate per m3 (but low consumption !!)


Public budget
Subsidies
WMS1
WMS2
…
WMSn
Taxes
Water charges
Water users
Public budget
WMS1
WMS2
…
WMSn
Water users


Regional water agencies
Ear-marked subsidies (contribution to investment)
Ear-marked taxes
WMS1
WMS2
…
WMSn
Water charges
Water users
Bulk suppliers
Bulk prices (equal)
WMS1
WMS2
…
WMSn
Water charges
Water users

Summing up

	Asset value	Depreciation	r	Equalization
Traditional	Not accounted	Not depreciated	based on conventional inter-governmental rate	Public budget
British	New investment + market value of assets bought at privatization	Private sector accounting rules	Market rate based on investors' expectations	Territorial + no volumetric charge
French	Historical cost	Loan reimbursement	Based on public sector borrowing rates	Ear-marked basin systems
German	Full reconstruction cost	True economic life	Based on public sector borrowing rates	Cross-subsidy + public sector guarantees for loans
Italian	New investment	Private sector accounting rules	Market rate based on investors' expectations (capped at max 7%)	Territorial (some) + public budget for large projects

A simulation on an Italian case - I

	Chicken		Intermediate		Public	
	ER	**L**	**ER**	**L**	**ER**	**L**
Actual tariff	111	77	111	77	111	77
Actual operational cost	81	49	85	52	90	54
Actual margin for depreciation	30	28	26	26	21	23
Full cost existing	310	215	222	141	159	88
Full cost after WFD	11	45	9	31	6	22
Total (existing +WFD)	321	260	231	173	165	111
FCR - existing	36%	36%	50%	55%	70%	88%
FCR - existing + WFD	35%	30%	48%	45%	67%	70%
Price increase	190%	236%	109%	123%	49%	43%

- Chicken: depreciation max 30y; market-based r
- Intermediate: depreciation max 40y; public-sector borrowing r
- Public: depreciation = true economic life; r = pure cross-temporal rate
- All scenarios: asset value = reconstruction cost

A simulation on an Italian case - II

	Chicken		Intermediate		Public	
	ER	**L**	**ER**	**L**	**ER**	**L**
Incidence of water bill on average income						
Mean	1,87%	1,41%	1,51%	1,09%	1,16%	0,77%
Min	1,34%	0,72%	1,07%	0,56%	0,81%	0,40%
Max	2,60%	2,35%	2,20%	2,01%	1,80%	1,68%
Incidence of water bill on low incomes						
Mean	4,77%	5,86%	3,86%	4,54%	2,95%	3,21%
Min	3,45%	2,23%	2,77%	1,73%	2,09%	1,24%
Max	6,60%	6,22%	5,27%	4,67%	3,94%	3,74%

Advantages and shortcomings

- Traditional model
  - Advantage: minimizes the cost of capital
  - Shortcoming: need to rely directly or indirectly on public budget and public planning of investment; timing and size not necessarily coherent with needs
- British (and Italian) model
  - Advantage: tariff provides only for new investment
  - Shortcoming: no guarantee that actual investment corresponds to true depreciation; risk that costs are shifted to future generations
- French (and Italian) model
  - Advantage: reduces the cost of capital
  - Shortcoming: risk of “dualism” if OPEX and CAPEX are separated; risk of “capture” is CAPEX is decided by operator but financed by the public
- German model
  - Advantage: cost recovery is ensured in literal terms; infrastructure can be rebuilt at any time
  - Shortcoming: need to monitor the use of cash flows that do not correspond to actual expenditure ⇔ OK if public companies, but careful if private !!
  - Other shortcoming: could lead to “gold plating” (unnecessary investment)

	Delegated	Regulated monopoly	Direct public management
Main risk dimensions for the private	Market risk (tender) and recovery of sunk costs	Regulatory risk	Limited to DBFO and market for procurement
	Operational risk (initial information missing or wrong; emerging new issues during contract lifetime)	Takeover	
	Commitment of public authority to ensure cost recovery and viability	Unforeseen investment	
	Performance standard w/ fixed-price contracts	Public reaction forces regulators to keep down unpopular price increases	
Main risk dimensions for the public	Information asymmetries	Regulatory capture	Lower efficiency
	Technological lock-in		More vulnerable to pressures from workers and consumers
Main risk dimensions for consumers	Collusion leads to extraction of monopoly rent shared by municipality and private company	Higher cost of capital	Lower credibility of quality standard enforcement may lead to deterioration of service quality
	Quality reduction if contracts are not fully specified and/or badly enforced	Cost pass-through	
	Cost pass-through	Quality reduction corresponding to what quality dimensions are actually specified by regulations and service charter and enforced.	
Main risk dimensions for future generations	Tenders foresee insufficient investment	Underinvestment induced by unwillingness to raise tariffs in the short term	Underinvestment
	Technological lock-in		Slowdown of environmental and quality expenditure due to public budget pressures
Main risk dimensions for suppliers / workers	Market power of operator face to suppliers	Pressure for lower salaries – outsourcing and for staffing reductions	Higher competition on procurement and reduced profit margins for suppliers
	Vertical integration		
Public subsidies and likelihood of self-sustaining WSS finance	Obligation for FCR	In principle no subsidies and obligation for FCR; new obligations only when tariff increase allow investment to be viable	Water tariffs and charges intended as local taxes and aimed at long-run FCR
	Mutuality systems financed by ear-marked taxes	Variant: public sector can assume part of the risk for long-term infrastructure renewal in order to guarantee against risk of bankruptcy	Variants: public accounting does not consider depreciation and capital costs; public budget finances investment
	Variant: public budget contributes to investment with specific grants		
Patterns of risk allocation	Investment risk separated from operational risk	All investment responsibilities on the water company (variant: creation of specific purpose companies for the ownership of assets, also responsible for fund raising and owned by public or consumers)	Entirely on the public
		Responsibility for regulators to ensure industry viability	Cost-based tariffs ⇔ economic risk shifted to consumers and/or taxpayers
		Price caps and cost pass-through in order to share risk of unexpected events with consumers	Some limited assumption of risk by private firms in DBFO arrangements

Assessment methodology

- Assessment of scenarios based on a two-step methodology:
  - Net social dividend: will scenarios imply overall efficiency improvement?
  - Individual benefit: how is the net dividend shared among stakeholders ?
- "Net social dividend" could be positive or negative
  - Efficiency improving factors: operational efficiency, more appropriate sizing decisions, higher propension
  - Efficiency reducing factors: risk premium, higher cost of capital
  - Incentives to over-invest or under-invest depend on rewarding structure
- Individual benefits could be positive or negative
  - Even if overall costs are lower, some stakeholders could be worse off (eg higher prices; less employment)
  - Distribution of costs and benefits depends on the regulatory structure
- Key issue is the allocation of economic and performance risk on different actors; this depends very much on the structure of the regulatory system (quality + pricing) than on the model itself

Stakeholders, concerned outcomes and indicators

Stakeholders	Main concerned outcomes	Indicators
Companies and shareholders	Profitability	ROI / EVA
	Corporate value	Net asset value
Responsible entities	Positive externalities (eg public health)	Water-borne diseases
	Synergies w/ public goods provision (eg rainwater management)	
	Coherence with urban development patterns	
	Financial transfers (royalties, canons, revenues from privatization etc)	Canons and royalties
Customers	Value for money	Annual cost per hh
	Affordability	% of water bill on hh budget
	Accessibility	Service interruptions
	Sizing / Capacity to meet peak demand	
Environment / other water uses	Achievement of water quality objectives	Compliance w/ reg
	Compliance with environmental and health protection standards	Contribution of WSS to water environment degradation
Suppliers of inputs (eg workers)	Volume of economic transactions with the water sector	Value added and its composition
	Levels and quality of employment	Mean labour cost
	Salaries	
	Technological development	
Next generations	Maintain the system financially viable in the long term	Actual investment / real depreciation
	Guarantee service functionality / resilience	Degradation of water environment
	Adopt state-of-the-art appropriate technologies	
Taxpayers	Reduce impact of WSS on general budget	Net contribution from/to the public budget

	Delegated	Regulated monopoly	Direct public management
Operational cost	Depends on awarding criteria: *low incentive* if tenders are based on beauty contests and/or protect incumbents; *high incentive* if based on fixed price (trade off with risk)	Permament incentive to reduce costs particularly with price-cap based regulation	Overall weak incentive to reduce costs in order to avoid conflicts with trade unions
			Quasi-market mechanisms (eg subsidy caps), price caps and appropriate management rewarding schemes can provide higher incentives, but lower than in the RM due to the reduced risk of bankruptcy
			Threaten to privatize can be effective if credible
Infrastructure cost	Lowering factor: willingness to reduce conflicts with local people and avoid unnecessary investment; concessions provide permanent disincentive to invest if not explicitly foreseen in the contract	Lowering factor: price-caps provide permanent incentive to minimize capital expenditure	*Lowering factor*: possibility to depreciate over longer time schedules
	Increasing factor: operator is vertically integrated with construction industry, consultancies, equipment manufacturing	Increasing factor: cost pass-through and cost-based regulation provide permanent incentives to expand investment; market often requires shorter repayment schedules	*Increasing factor*: gold-plating, possibility to invest (enhanced if the WSS system is more autonomous from local administration and tariffs are based on FCR); lower incentive to make agreements with neighbouring services in order to share infrastructure and sunk costs
Cost of capital	High, proportional to risk effectively borne	Medium-high; risk that regulator underestimates it for keeping price low	Low, but constrained by public finance conditions, country rating etc
Transactions costs	High (tender, contract, enforcement, monitoring, conflict resolution)	Medium-high (regulatory agencies, reporting)	Medium-low (higher if some of the above remedies are adopted)
Main available strategies for improving performance	Soft regulation providing benchmarking and info	Yardstick competition and econometric benchmarking	Separate operation and management from enforcement
	Separate operation from AMDP	Improve accountability through information, benchmarking, reporting and public participation	Improve accountability through information, benchmarking, reporting and public participation
	Simplify awarding criteria, tender objects (eg single activities vs. integrated service) and contract duration; trade-off with level of PSI	Impose outsourcing through unbundling (trade-off with coordination costs)	Private-law arrangements and contracts
	Increase contractual power of local authorities (associations etc)	Reduce risks by providing guarantees and/or by keeping some part of the risk in public hands	Outsourcing and delegation of tasks
Potential for introducing more competition	Reduce duration of contracts (requires solutions to avoid sunk costs;	Inset appointments	Outsourcing
	Reduce size of contracts (requires that public authorities provide strategic planning of the WSS system)	New customers	DBFO
	One-dimension bids based on economic performance (requires very detailed contract specification and separation btw operation and asset management)	Allowing bigger consumers to bypass the utility	
	Compulsory outsourcing / unbundling btw I and II market		
Potential for outsourcing	Low due to permanent incentives to vertical integration	High, but requires unbundling and transfer price regulation	High; can be further expanded by legal provisions and/or tight price regulation
	More likely for labour-intensive activities and all activities implying sunk costs and local presence		
Potential for community management and individual solutions	Depends on the degree of development of the system, technical availability of low-cost solutions (eg self-treatment of effluents) and local circumstances (eg population density). Suitable for less developed service areas (eg drinking water production wher		

Non esistono solo le gare !!

- Market for corporate control ⇔ garantire la contendibilità proprietaria delle imprese monopoliste e degli asset
- Dall' "intuitu personae" ai "beauty contests" ⇔ meccanismi di aggiudicazione discrezionali ma in un contesto di trasparenza e responsabilizzazione
- Yardstick competition + benchmarking ⇔ confronti comparativi a distanza per valutare l'efficienza e le "best practices"
- Competition through "reputation and embarrassment" ⇔ fare leva sull'interesse delle imprese alla propria immagine
- Accountability and public participation ⇔ limitare il rischio di "cattura del regolatore" attraverso il potenziamento della "voice"
- "Subsidy caps" and "quasi-markets" for public operators ⇔ mettere in concorrenza i soggetti pubblici per l'accesso ai trasferimenti e fondi pubblici
- Community systems, eligible customers ⇔ rendere possibile a determinati segmenti di utenza di provvedere autonomamente
- "Concorrenza tra modelli": la minaccia di privatizzazione è un ottimo strumento per incentivare il pubblico, la minaccia di ri-pubblicizzazione è un ottimo strumento per limitare il potere di mercato del gestore privato

Concorrenza vs. coordinamento verticale

- La concorrenza è possibile in alcune fasi, ma solo se il coordinamento verticale della filiera è svolto dal soggetto pubblico; rischio di “dualismo” se la pianificazione degli investimenti è separata dalla gestione
- Se il coordinamento verticale è affidato al gestore, la concorrenza viene resa di fatto molto più difficile
  - Necessità di contratti con lunghe durate (20-30 anni almeno)
  - Difficile o impossibile scrivere contratti completi ex ante; necessità di rinegoziare continuamente
  - Rischio di comportamento opportunistico sia da parte del gestore che del committente ⇔ importanza delle aspettative sul comportamento futuro dell’ente locale
  - Vantaggi incolmabili per operatore incumbent
- La scelta del legislatore settoriale (l.36/94 e Dlgs 22/97) è stata quella di affidare al gestore responsabilità integrate sulla filiera

Lezioni per il caso italiano - I

- Il problema del settore idrico non è liberalizzare per fare diminuire i prezzi (che sono semmai troppo bassi), ma trovare sul mercato le risorse finanziarie per investimenti di manutenzione straordinaria, rimpiazzo ed estensione delle reti ⇔ il settore ha “bisogno di privato” e la concorrenza permette di governarlo meglio
- La privatizzazione / liberalizzazione non sembra avere portato grandi benefici in termini di riduzione dei costi, ma in compenso nemmeno grandi disastri in termini di riduzione della qualità; evidenza dell’importanza della regolazione (quality + economic)
- Il settore continua ad essere caratterizzato da evidenti fallimenti del mercato; una partecipazione del settore privato può essere giudicata positiva, ma solo se si presta attenzione alle specificità della filiera
- La l.36/94 disegna un modello poco adatto al privato (per lo meno, poco adatto all’affidamento con gara) poiché tende a massimizzare i rischi trasferiti sul gestore (performance, operativo, capitale, regolatorio) aggiungendovi per di più il rischio di mercato

Lezioni per il caso italiano - II

- Un settore che si presta poco alla gara, specie se questa viene intesa per il servizio integrato e mette insieme gestione operativa e investimenti
- “Gara o non gara” rischia di essere un falso problema se non si decide prioritariamente:
  - Quale gara ?
  - Cosa si mette in gara (es. gestione operativa o investimenti; singole attività o “gestione integrata”) ?
  - Quali altri strumenti di regolazione (ex ante vs. ex post) ?
- Rischio che la necessità di specificare dettagliatamente il bando di gara faccia rientrare dalla finestra la pianificazione già in precedenza espulsa dalla porta
- Prioritario è garantire le condizioni affinché l’assetto regolatorio e le modalità di condivisione dei rischi incoraggiano l’investimento

Lezioni per il caso italiano - III

- Favorire modelli alternativi basati ad es.
  - sull'outsourcing di funzioni operative nel quadro di una gestione organizzata dal pubblico, ev. attraverso forme di PPP
  - Sulla separazione tra responsabilità operative e investimenti (ev. valorizzando istituto della SpA patrimoniale)
- Introdurre meccanismi di regolazione ex-post e in corso d'opera
  - valorizzare la proposta progettuale del gestore (piano = obiettivi strategici e non "cose da fare")
  - Disciplinare le modalità di rinegoziazione
- Valorizzare il ruolo degli utenti anche attraverso meccanismi di partecipazione alla governance societaria e/o alla valutazione partecipata dei risultati gestionali
- PPP: attenzione alla specificità italiana
  - Secondo approccio EU, PPP sono strumenti per condividere il rischio con un partner (industriale) privato e NON uno strumento per creare imprese
  - Ma allora come la mettiamo con le ex-municipalizzate che sono PPP, ma con un rapporto ribaltato in cui la competenza industriale appartiene al pubblico?