

From public to private to...public?

Privatisation, commercialisation,
and recent restructuring of water supply
in England and Wales

PRINWASS conference 24/04/02

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Marketization/ Mercantilización

Privatisation

Change in ownership state => private sector
and/or involvement of the private sector

Commercialisation

Application of ideal-type market institutions
(norms, rules) in water sector management

Private sector water provision

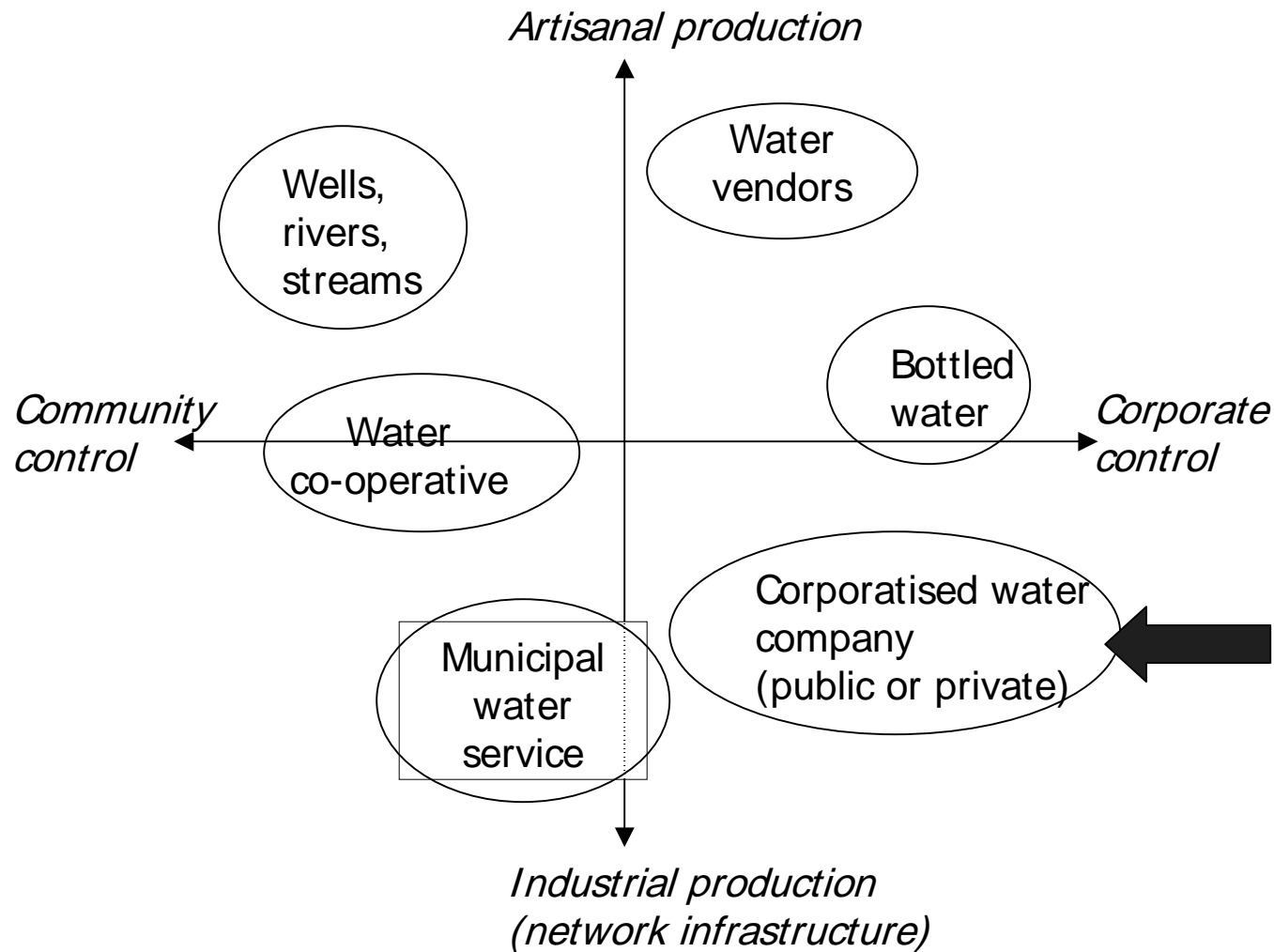
■ Raw water

- Water banks
- Build Own Train Transfer (BOTT)
 - ⇒ Large-scale infrastructure developments (reservoirs, canals)

■ Water supply

- Management contracts
- Asset sale
 - ⇒ Reticulation networks
- Mineral/spring water
- Water vending
 - ⇒ Receptacles

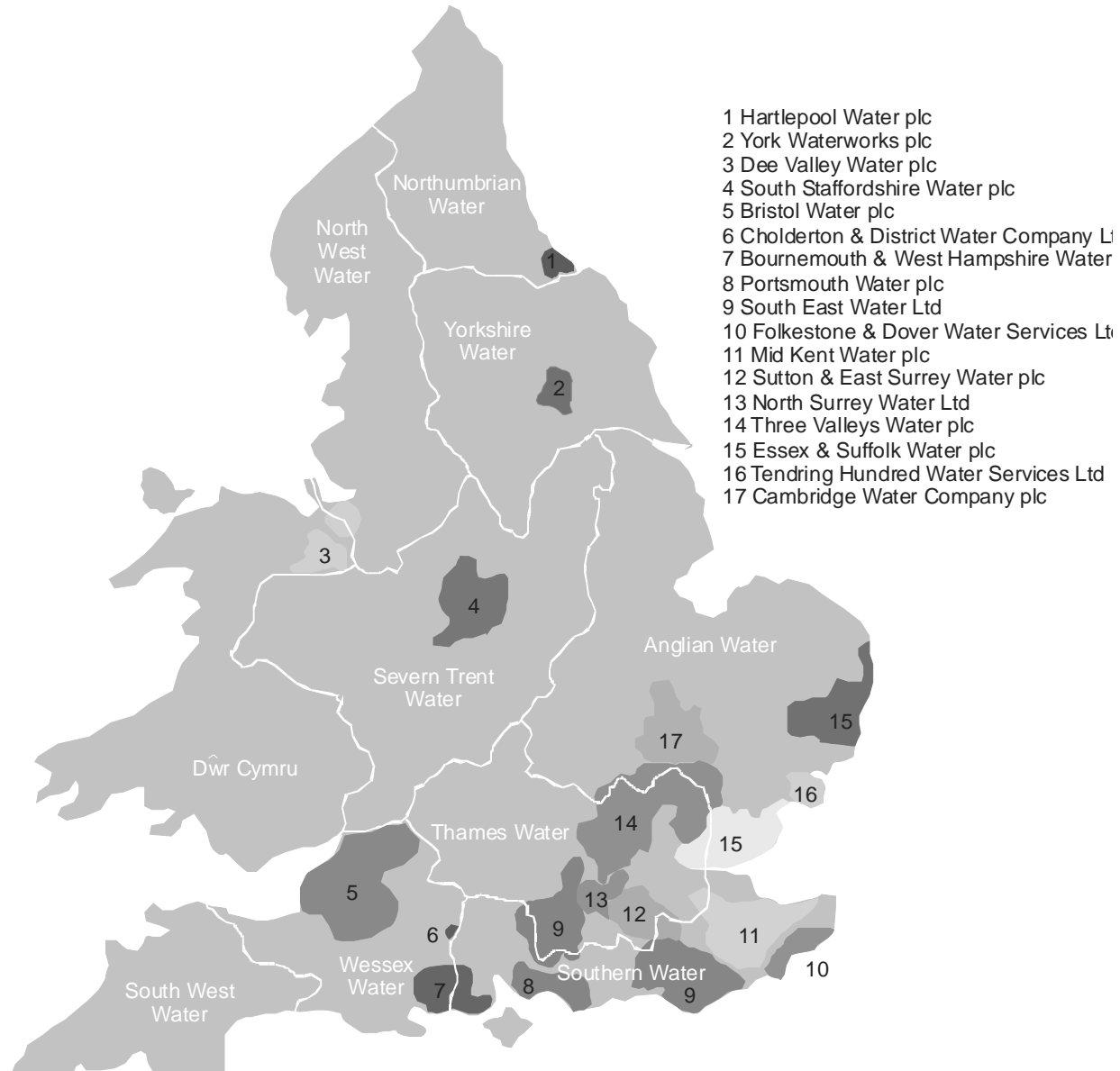
Modes of water supply provision



Modes of private sector participation in networked water supply

Contract Type	Service contract	Management contract	Lease	BOO/ BOT	Concession	Divestiture
Allocation of responsibilities						
Asset Ownership	Public	Public	Public	Public and private	Public	Private or public and private
Capital Investment	Public	Public	Public	Private	Private	Private
Commercial risk	Public	Public	Shared	Private	Private	Private
Operations and maintenance	Public and private	Private	Private	Private	Private	Private
Tariff collection	Public	Public/private	Private	Public	Private	Private
Duration	1-2 years	3-5 years	8-15 years	20-30 years	25-30 years	Indefinite (may be limited by license)
Examples	Mexico City	Gaza City	Guinea	Sydney	Buenos Aires	London

Water and Sewerage Companies and Water-only Companies, England and Wales, 1999



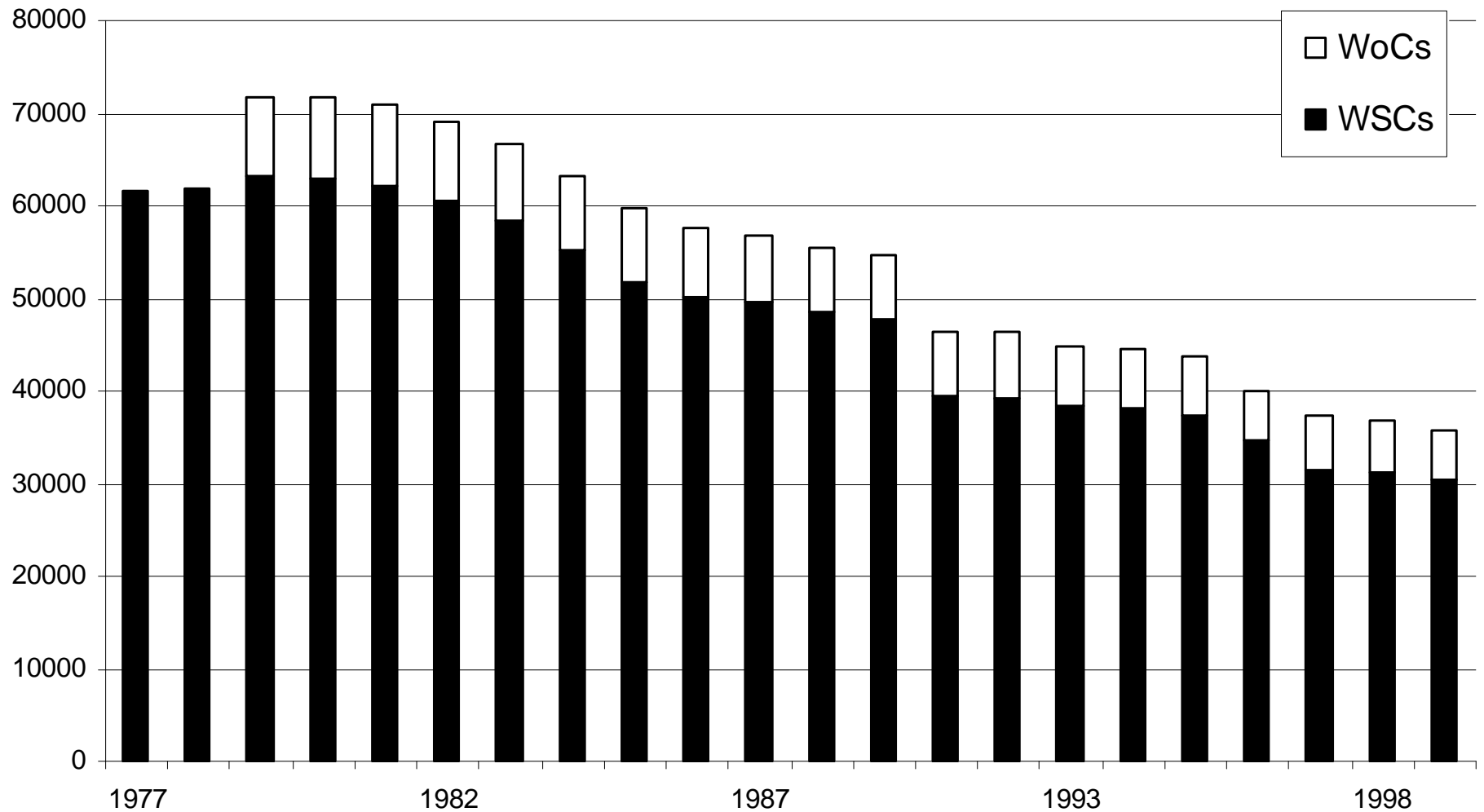
British 'model'

- Vertically-integrated companies
- Spatial monopolies
- External economic regulation
 - 'price-cap'
 - Comparative competition
- External environmental/water quality regulation
 - Command-and-control mechanisms to be replaced by market mechanisms
- Equity finance

Impacts of privatisation?

- Labour
 - Levels of employment, work conditions
- Management
 - Efficiency
- Environment
 - Water quality and water resources
- Consumers
 - Pricing
- Industry
 - Financing of functions over the long-term

Employment levels, English and Welsh water industry (1977 - 1999)



Note: Data for WoCs unavailable before 1979

Data Source: WSA (various years)

Technical efficiency

Water pricing and water conservation

- pricing on basis of Long Run Marginal Cost methodology
- LRMC satisfies price allocative but not cost recovery requirement

Technical efficiency?

The economics of leakage

“Leakage of treated water is not a problem cost-wise. After all the money spent on pipes, a bit of money spent on chemicals etc. is incidental. The water doesn’t cost that much to treat. So companies don’t really lose a lot of money this way, until resources are tight. We are having to decrease leakage because of political reasons and public perception. It was never considered a strain on resources. It is cheaper to go on treating and leaking as long as water is plentiful”

-senior water manager, Thames Water

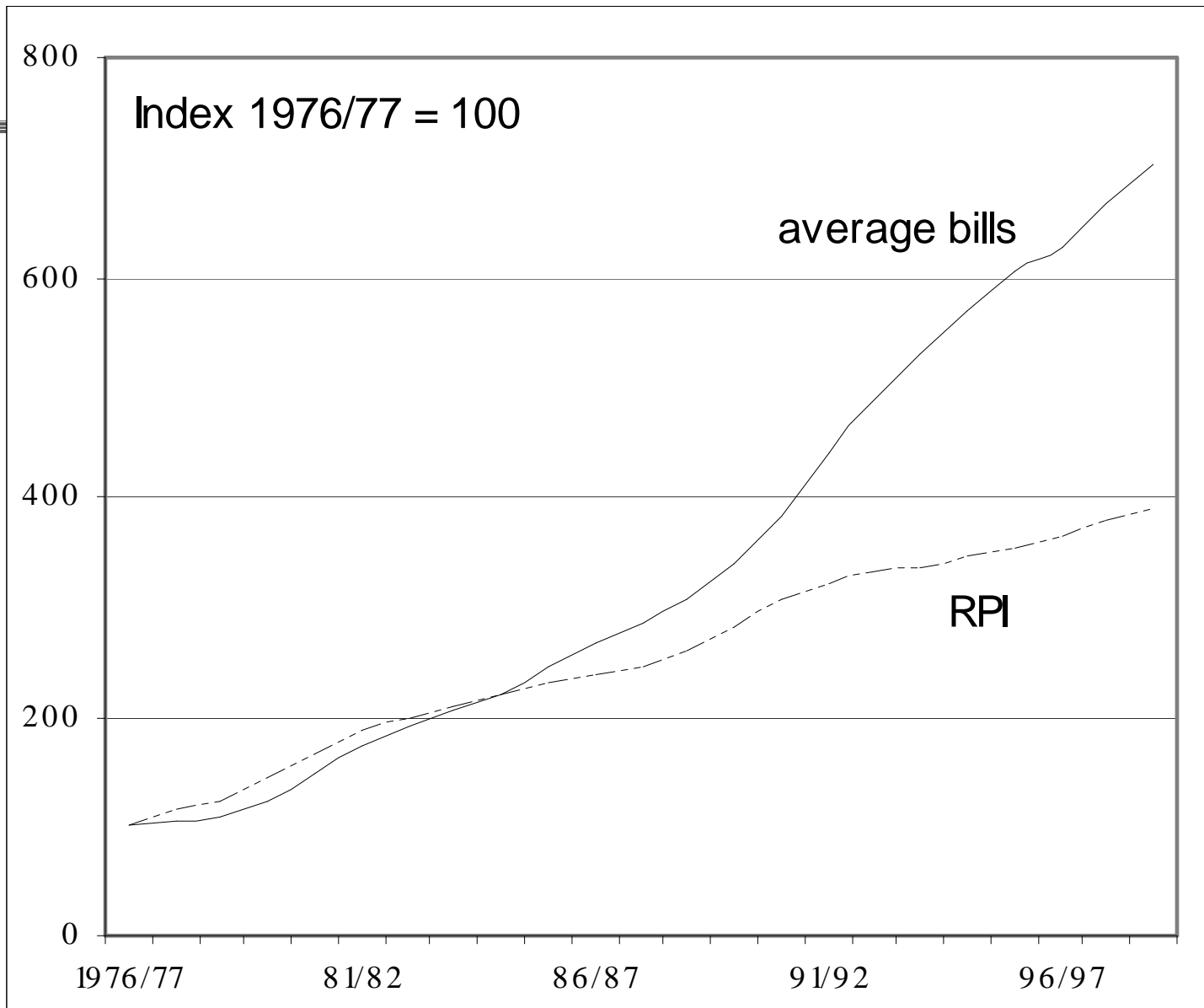
Environmental and drinking water quality

- Increase in river water quality to 'pre-Industrial Revolution' levels
- Water industry remains greatest polluter (numbers of incidents)
- Drinking water quality increases (mandated by EU directives) *but*
- Environmental raiding during drought increases (Yorkshire drought)

Consumers

- From citizen to customer
- From social to economic equity in water pricing
- Installation of meters and differentiation of customer base

Average Domestic Water and Sewerage Services Charges (1976 - 1999)



Social versus economic equity

- Social equity – the ‘ability-to-pay’ principle
 - Equalization - entails cross-subsidization across sectors, classes of consumers, regions
 - *Water as a service*
- Economic equity – the ‘benefit principle’
 - Differentiation - requires full-cost recovery pricing (inter/intra-sectoral, spatial, perhaps even temporal?)
 - *Water as a commodity*

Equalization payments (1978 – 1979)

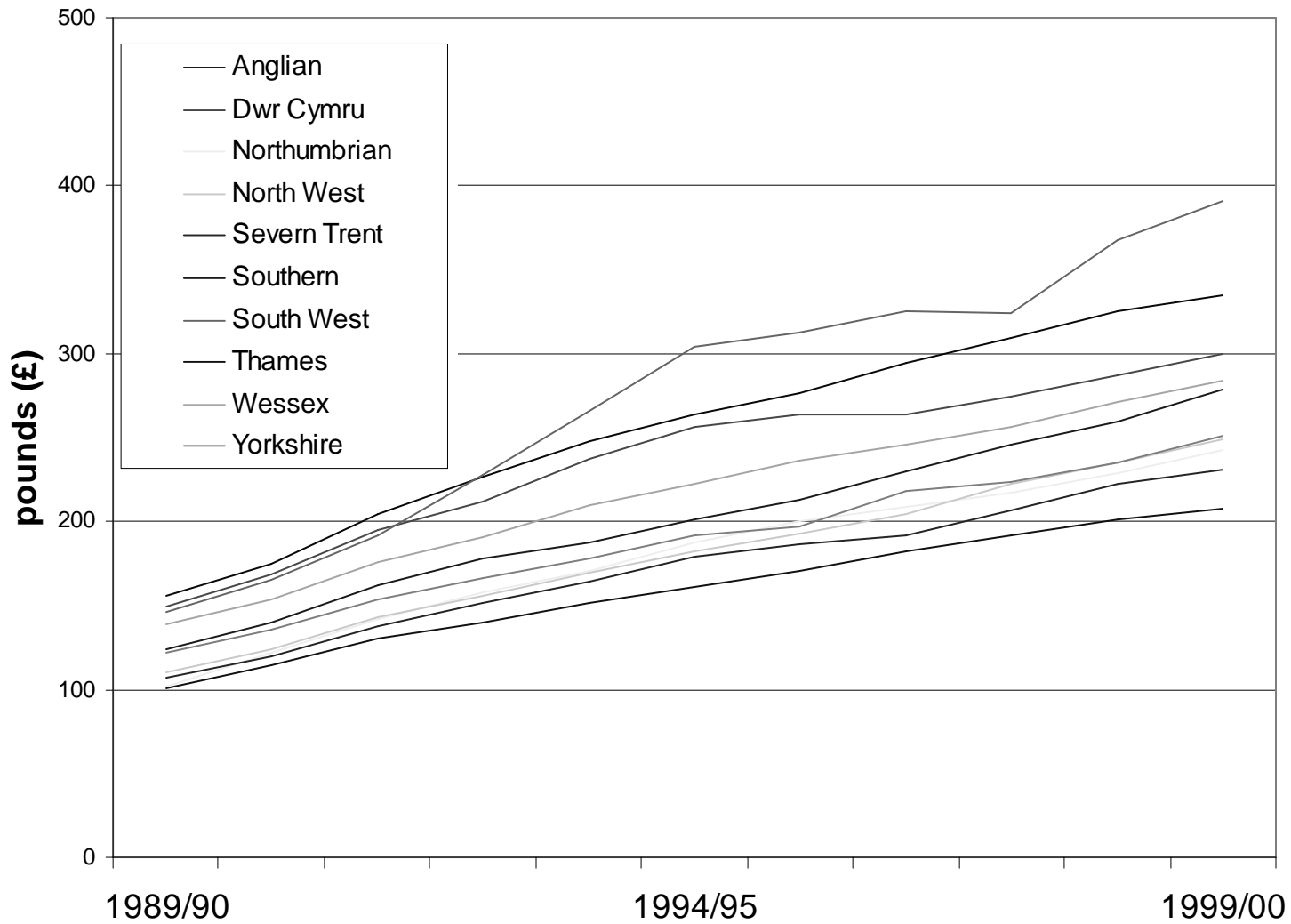
	Welsh WA	Yorkshire WA
Equalization payment/(levy) (£)	3,486,000	(375,000)
Equivalent income per m ³ of water supplied	0.89	(0.08)
Average domestic bill 77/78 (£)	25.40	17.66
Average domestic bill 78/79 (£)*	22.76	20.64
% change	-10.4	16.9

* not corrected for inflation Sources: DOE (1979), S.I. 1977/2165 and CIPFA (1979)

The gradual introduction of economic equity

- Cessation of equalization
- Gradual introduction of metering
- Regional differentiation of charges
- Zonal differentiation of charges
- Introduction of competition = $>$ MC pricing and intra-regional spatial differentiation of charges?

Average unmeasured household charge, water and sewerage, WaSC region



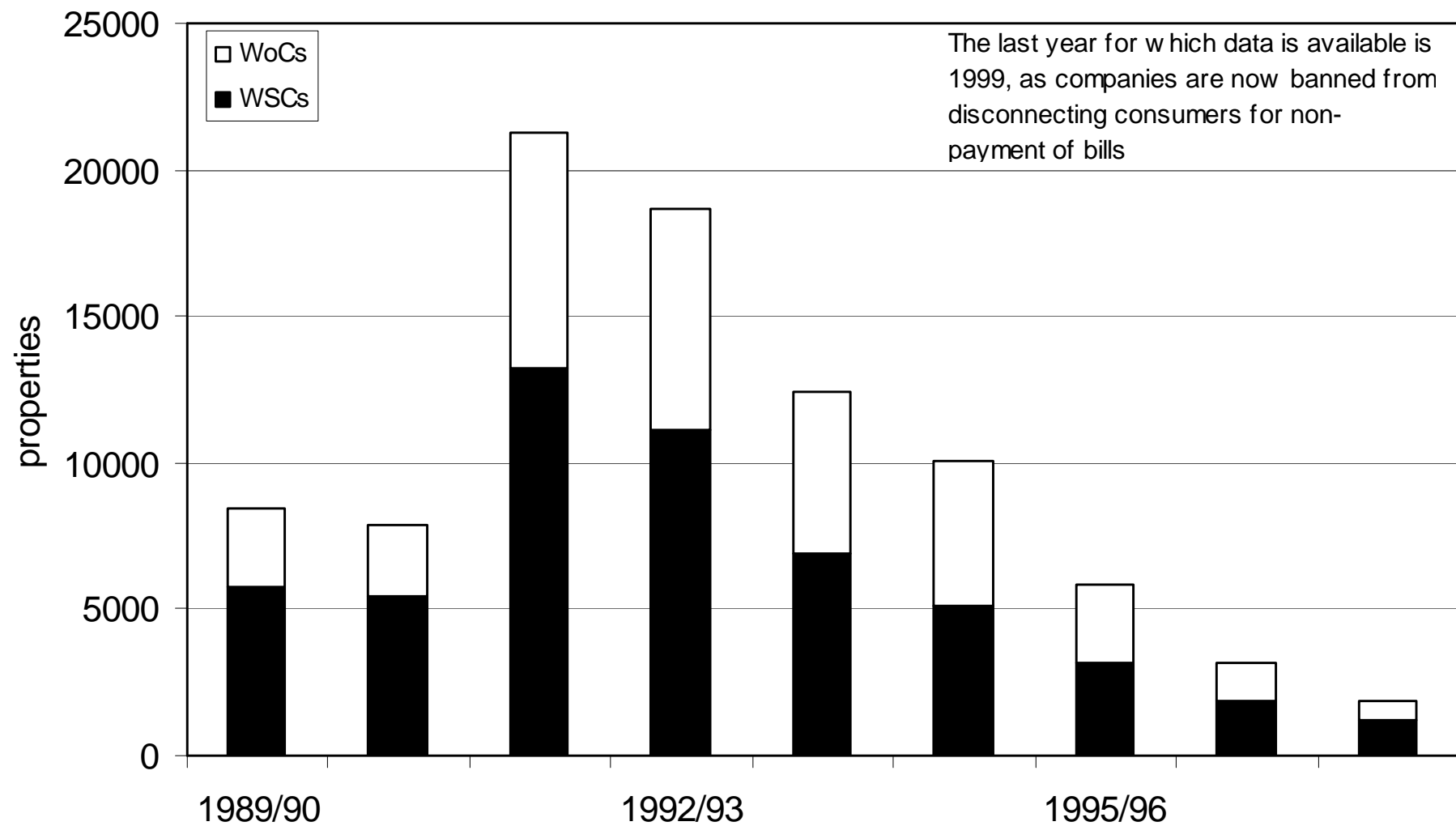
Inter-regional differentiation of charges, 1989 - 2000

	ratio		StdDev
1989/90	1.56	1989/90	19.6
1990/91	1.57	1990/91	21.1
1991/92	1.58	1991/92	25.3
1992/93	1.63	1992/93	30.6
1993/94	1.76	1993/94	37.6
1994/95	1.89	1994/95	43.3
1995/96	1.82	1995/96	43.4
1996/97	1.79	1996/97	43.9
1997/98	1.69	1997/98	41.6
1998/99	1.83	1998/99	48.8
1999/2000	1.88	1999/2000	50.9

Average unmeasured water and sewerage charges, per household 1999/2000

Region	(£)
South West	390
Anglian	335
Dwr Cymru	300
Wessex	284
Southern	279
Yorkshire	251
North West	249
Northumbrian	243
Severn Trent	231
Thames	208
Weighted average	277

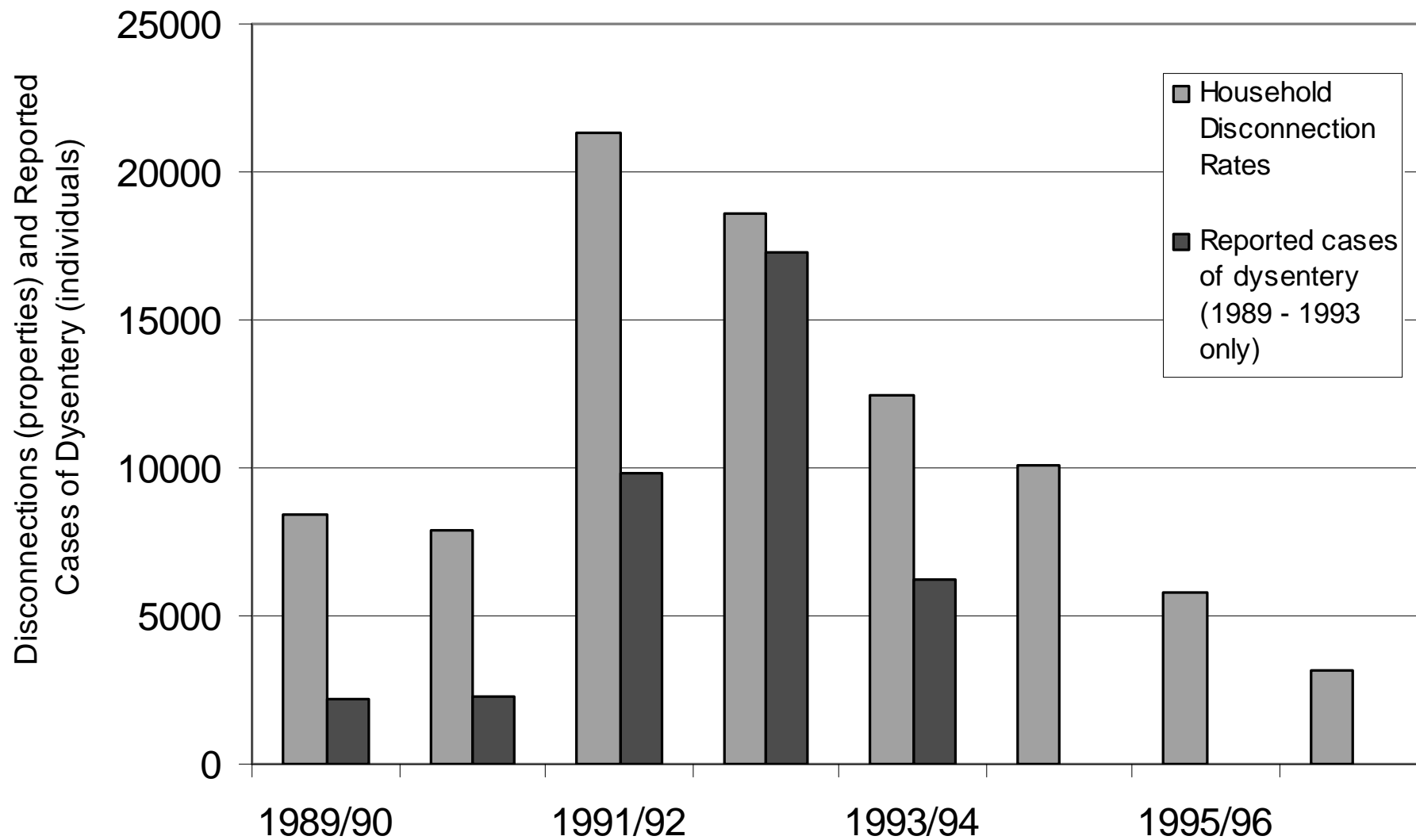
Disconnection rates, water supply companies (1989 - 1998)



The last year for which data is available is 1999, as companies are now banned from disconnecting consumers for non-payment of bills

sources: WSA (various years), Ofwat statistics

Dysentery and Household Water Disconnection Rates, England and Wales (1989-97)



Distributive impacts of privatization

- Public health implications
- Rising prices; access less equitable
- A logic of water profligacy
- Increased efficiency in some areas but gains are perceived to accrue disproportionately to shareholders, rather than consumers

Privatization and entitlements

- Rescripting water entitlements
 - Water: subsidized => utility network
service commodity
 - Citizen => Consumer
 - Universal => Selective Access

Re-regulation

- Consumers
 - Disconnections prohibited
 - Special charges for 'vulnerable' consumers
 - Metering optional
- Environment
 - Leakage criteria imposed
- Water Companies
 - Windfall 'Tax'
 - Prices reduced

The paradox of the British model of privatisation

Capital-intensive water companies can not generate sufficient surplus to meet demands of both shareholders and consumers when regulation is sufficiently stringent and environmental protection and prices maintained at a politically and socially acceptable level

Industry response

- Diversification – ‘multi-utilities’
 - Integrated gas, electricity, television, water
 - Non-regulated services/goods

- Internationalisation – ‘global utilities’
 - Largest is Thames Water: 25 million customers

- Vertical de-integration – ‘virtual utilities’
 - Separate asset ownership and network management

From private to public?

Vertical de-integration

- Strategy
 - Separation of (less profitable) asset ownership from (more profitable) network management
- Methods
 - 'Mutualisation' – users as owners
 - Securitisation – members as owners, with bond financing

*Is the British model converting
into the French model?*

The British model revisited

	1989	2002
Company structure	Vertically integrated	Vertically de-integrated
Market structure	Monopolies to disappear with introduction of competition	Spatial monopolies to remain
Financing	Equity	Bonds
Economic regulation	Light touch, price caps	Regulatory 'creep', modified price cap
Environmental regulation	Market mechanisms	Partial return to command-and-control

The future of the British model

- Within Britain, water supply assets return to public ownership or are absorbed in multi-utilities/global utilities
- Export of the British model of price-cap regulation and comparative competition

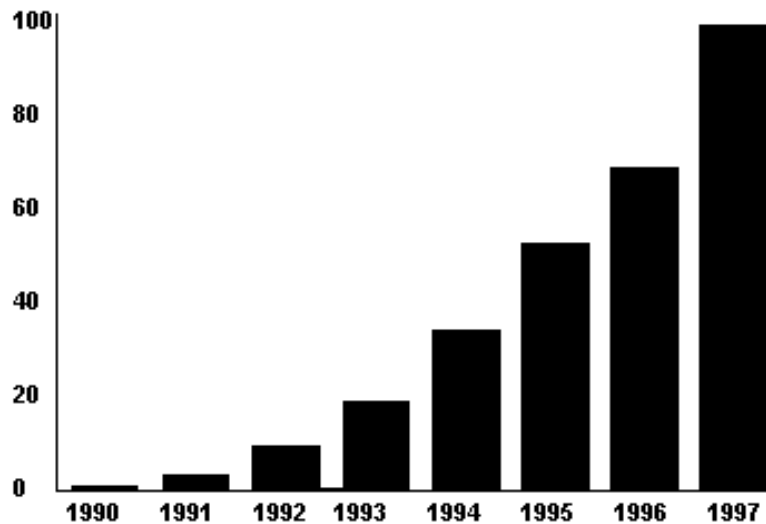
Assessing the impacts of privatisation

- Mode of water production
- Privatization versus commercialization
- Mode of private sector provision
 - Governance, regulation, Market/company structure, incentives, financing
- Impacts: Distributive effects
 - Efficiency: technical versus productive
 - Equity: social versus economic
 - Access: for whom?

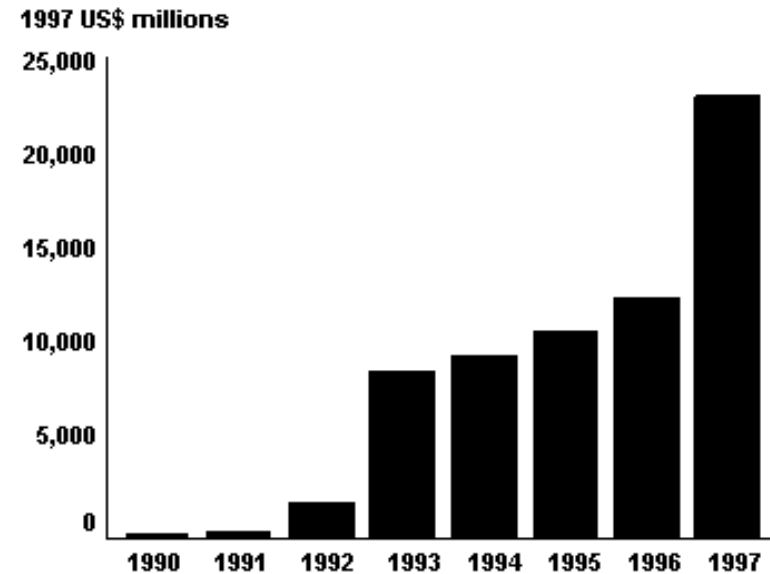


Global water privatisation

Cumulative water and sewerage projects with private sector participation in developing countries, 1990 - 1997



Cumulative new capital expenditure in private water and sewerage projects in developing countries, 1990 - 1997



Adapted from Silva, Tynan et al 1997

What are the impacts of privatization?

Internationalisation

- Strategy

- International services contracts
- International mergers

- Methods

- Ring-fencing of domestic company from international operations
- Take-overs
- Buy-outs

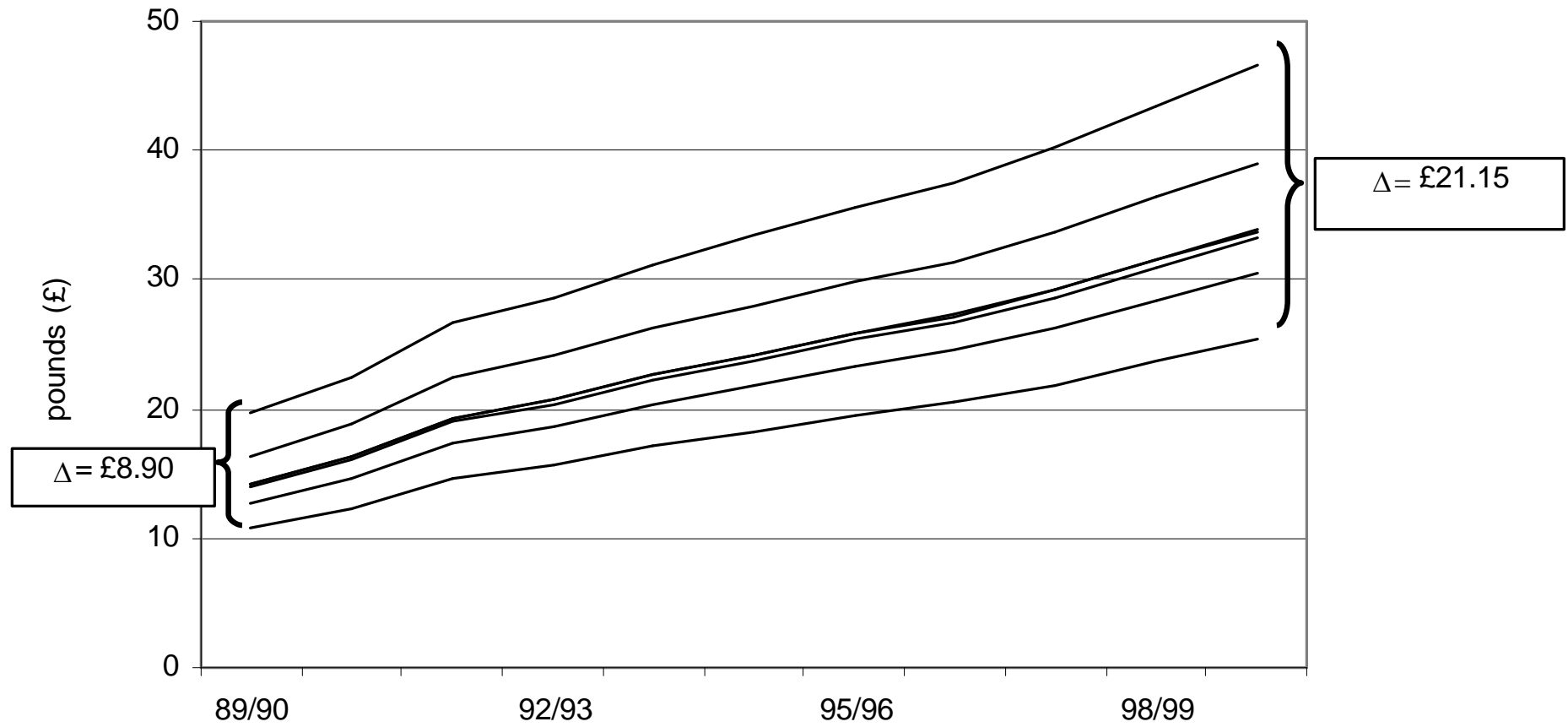
International water privatisation

- Why is privatization a growing trend?
- What are the impacts of privatization?
- What are robust regulatory models?

Why privatise? The pragmatic argument

- Institutional mechanisms now exist
- Out-sourcing capital requirements
- Declining importance of water as a factor of production
- Market as politically neutral allocation institution
- Financing availability and international facilitators
- Private sector expertise
- Decrease bureaucratic 'red tape'
- Globalization and increased competitiveness

Spatial differentiation of water rateable value charges, Thames Water supply zones (1989 - 2000)



source: OfWat (1998) Report on tariff structure and charges (Table C1)

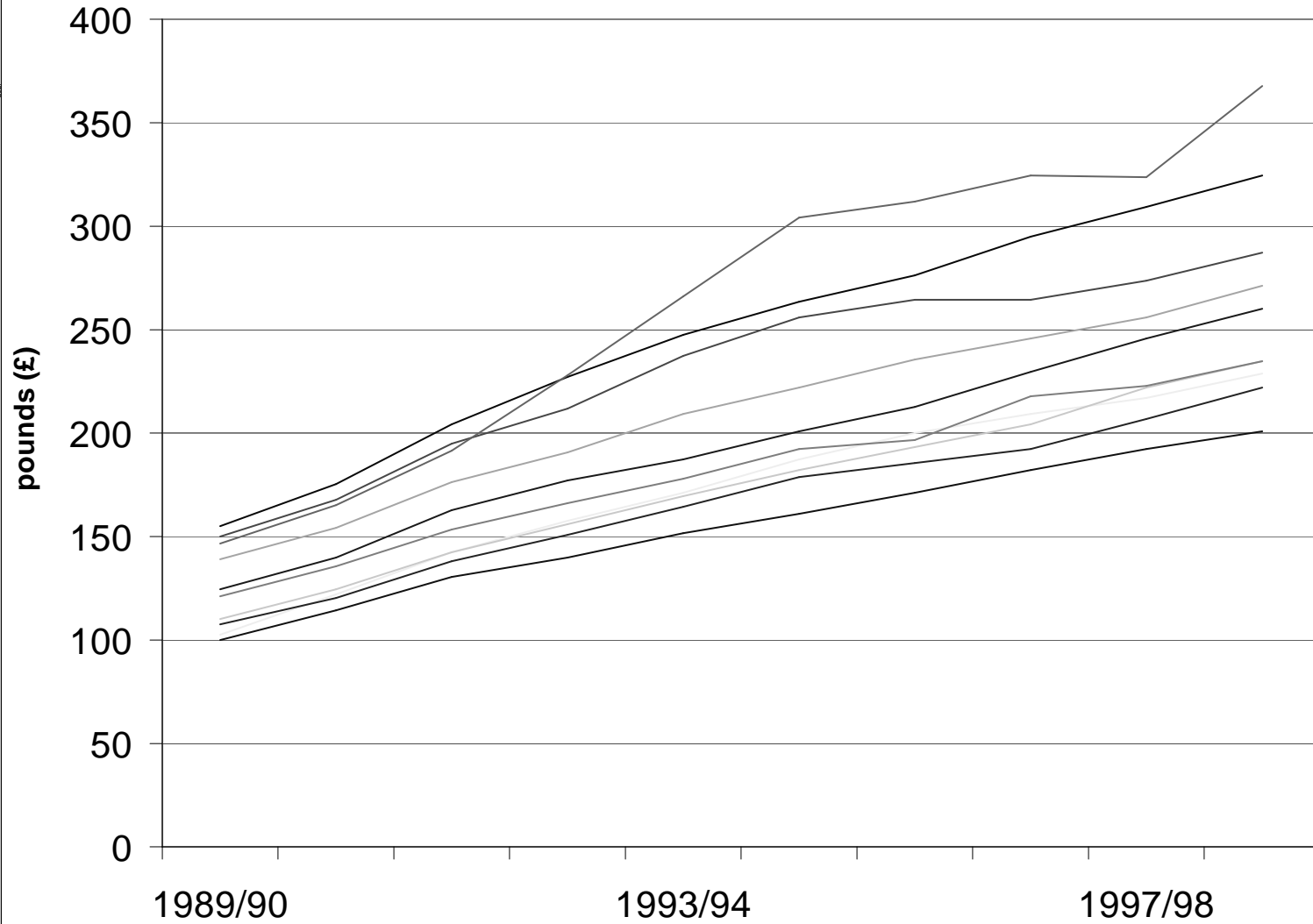
State failure and the customer-consumer

- Subsidised service \Rightarrow sale of a commodity
- Social versus economic equity: full cost-recovery and removal of cross-subsidies
- The customer-consumer:
 - 'Lock-in' to lower standards
 - Differentiation by region and by class
 - Restricted access

Water vs energy & telecommunications

- More capital intensive
- Lower degree of substitutability
- Demand relatively inelastic
- Higher number and degree of externalities
- More heterogenous product
- No national grid
- Not an expanding market

Average household charge, by region



Water supply – at the frontier of the market?

- Supply characterised by market failure
 - Natural monopoly
 - Externalities (both positive and negative)
- Public/Merit good
- Low profitability
 - Capital-intensive
 - Long-lead times for investment
 - Decreasing returns (with universal coverage)

State-controlled water provision – the traditional hydraulic paradigm

Water supply understood to be:

- A factor of production
- A strategic resource
- A material emblem of citizenship
- Large subsidies
- Service rather than business
(e.g. flat rate vs volumetric pricing)
- Security of supply, universal access prioritised

The breakdown of the traditional hydraulic paradigm

- Crisis of public finances and legitimacy
- Water no longer such a strategic resource
- Market is required to redress 'state failure'
- Increases economic efficiency
- Water is assumed to be increasingly scarce

Company	Year of first share sale	Industry
British Petroleum	1979	Oil
National Enterprise Board Investments	1980	Various
British Aerospace	1981	Aerospace
Cable & Wireless	1981	Telecoms
Amersham International	1982	Scientific goods
National Freight Corporation	1982	Road transport
Britoil	1982	Oil
British Rail Hotels	1983	Hotels
Associated British Ports	1983	Ports
British Leyland (Rover)	1984	Car Producer
British Telecom (BT)	1984	Telecoms
Enterprise Oil	1984	Oil
Sealink	1984	Sea transport
British Shipbuilders & Naval Dockyards	1985	Ship building
National Bus Company	1986	Transport
British Gas	1986	Gas
Rolls-Royce	1987	Aero-engines
British Airports Authority	1987	Airports
British Airways	1987	Airlines
Royal Ordnance Factories	1987	Armaments
British Steel	1988	Steel
Water Authorities	1989	Water
Electricity distribution	1990	Electricity
Electricity generation	1991	Electricity
Trust Ports	1991	Ports
Coal Industry	1995	Coal
Railways	1995 – 97	Railways
Nuclear Energy	1996	Electricity

State failure?

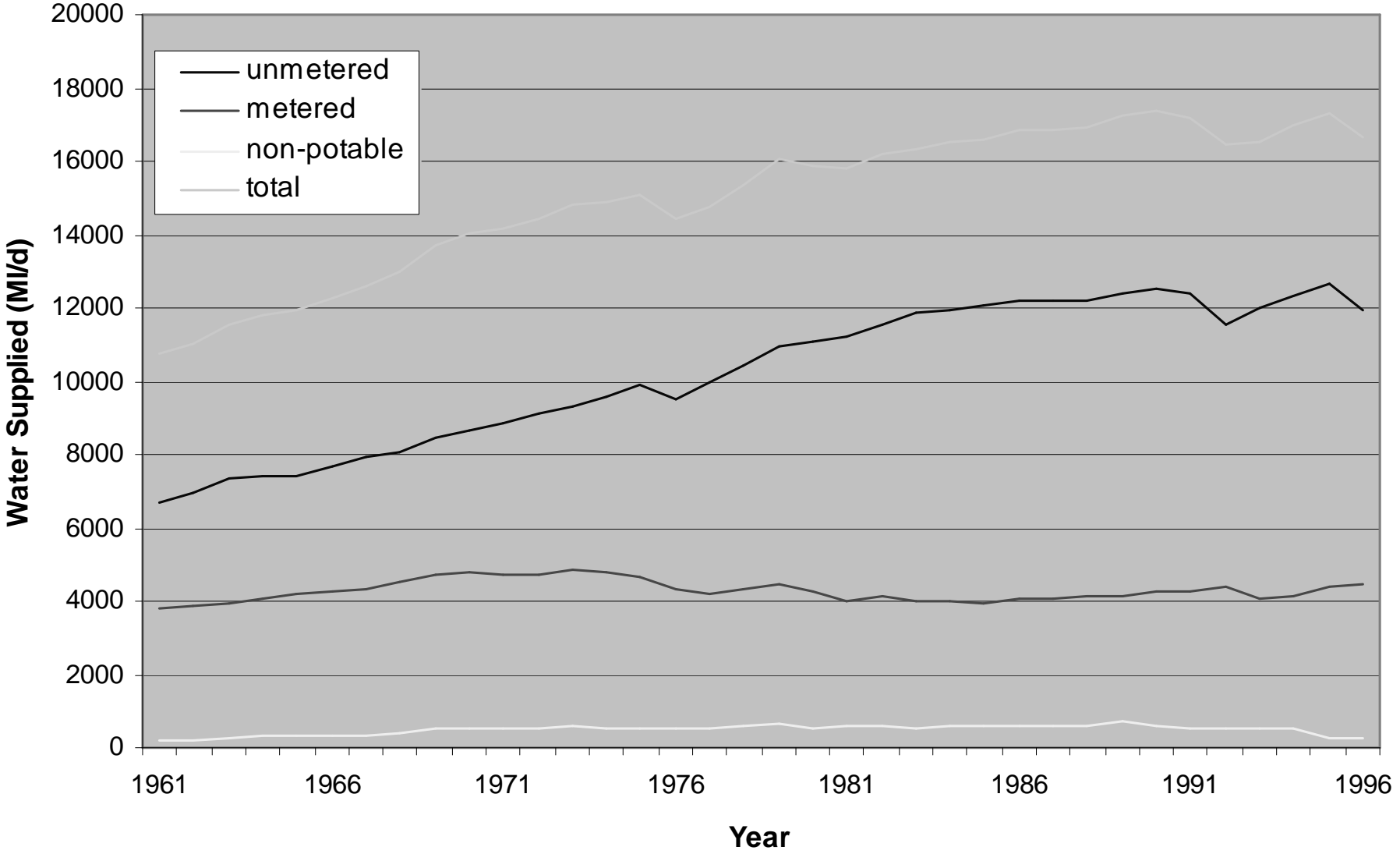
Public sector less efficient?

- Preferential provision of less profitable services
- Efficiency not a primary goal: public health and security of supply

Lack of public sector capacity?

- Required *in order to* privatise

Public Water Supplied, England and Wales (1961 - 1996)



The political response: Re-regulation

- Windfall Tax
- More stringent regulation
 - Leakage reduction
 - Service standards linked to penalties
- Political pressure to improve participation
- Reductions in prices (1999)

Implications for industry

- Greater difficulty in sourcing finance

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