

Assessing the land use impact of port privatization models in European ports

Nathan Bowden and Martin de Jong

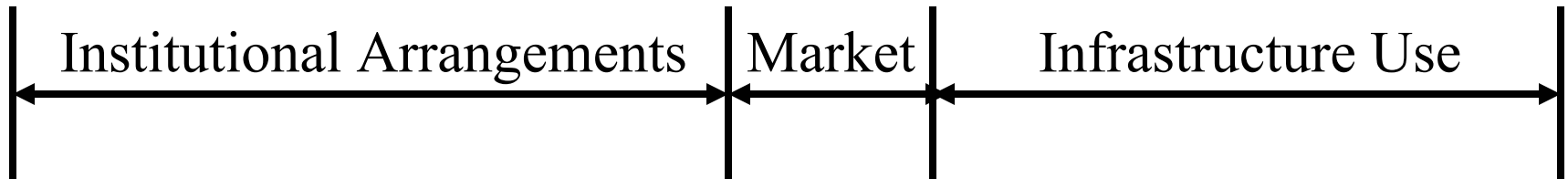
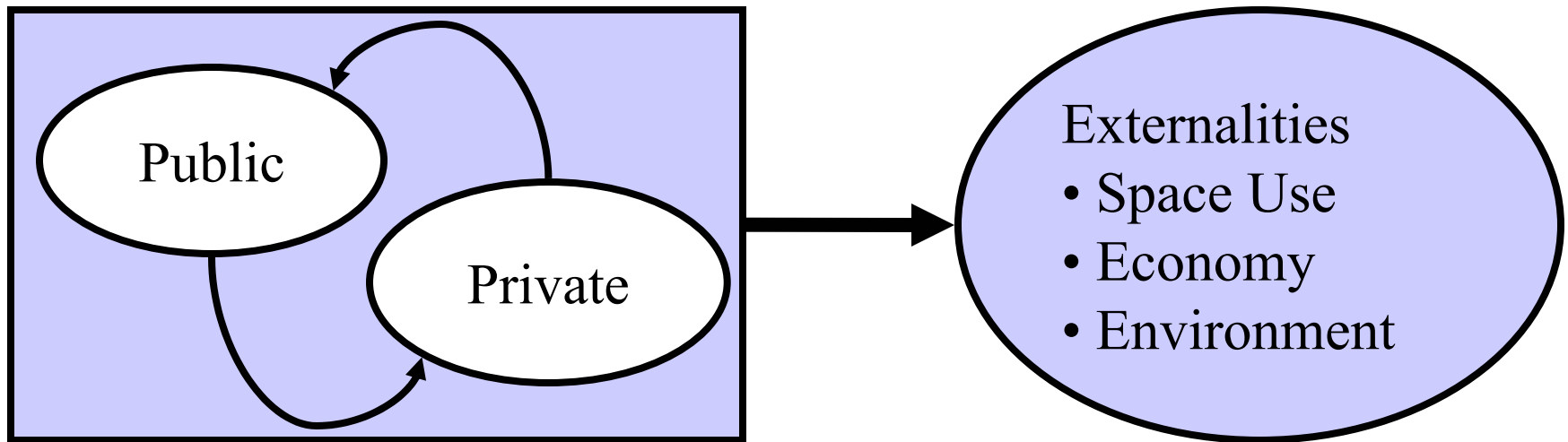
Delft University of Technology

Department of Technology, Policy and Management

The Netherlands



Research Question: How does the institutional structure of a port influence the efficiency of infrastructure use within that port?


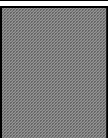
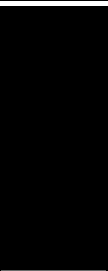
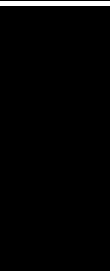
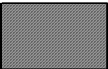

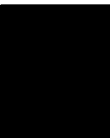


Terminal Operator	Port	Authority	Terminal
Port of Felixstowe Ltd.	Felixstowe	Private	Private
European Combined Terminals	Rotterdam	Public/Private	Private
Hessenatie	Antwerp	Public/Private	Private
Hamburger Hafen und Lagerhaus	Hamburg	Public - Regional	Public
Eurogate Container Terminal			Private
Bremer Lagerhaus Gesellschaft	Bremen	Public - Regional	Public
Port Autonome du Havre	Le Havre	Public - National	Public

- All container terminals handle more than 1,000,000 TEU's/year
- All operate in a competitive manner with each other ????
- Various Institutional Constellations (Private, Private/Public, Public)
- Very often cited in literature with much data produced (Drewry, Marconsult)



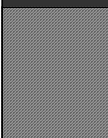


		Scale						
		Environment	Economic Infrastructure	Knowledge Infrastructure	Transregional Infrastructure	Local Infrastructure	Superstructure	Company Assets
Port Functions	Utility	Usus (fructus)						
		Operation						
	Landowner	Construction (abusus)						
		Maintenance						
	Regulator	Inspection and Enforcement						
		Leasing and Contracting						
		Design and Planning						
		Zoning and Permits						

The port of Rotterdam






















		Scale												
		Environment	Economic Infrastructure	Knowledge Infrastructure	Transregional Infrastructure	Local Infrastructure	Superstructure	Company Assets						
Port Functions	Utility													
	Landowner													
	Regulator													
Zoning and Permits														

† An exception is made in the case of dry docks for ship repair, which are completely privatised except for zoning/permits and inspection/enforcement.

The port of Antwerp

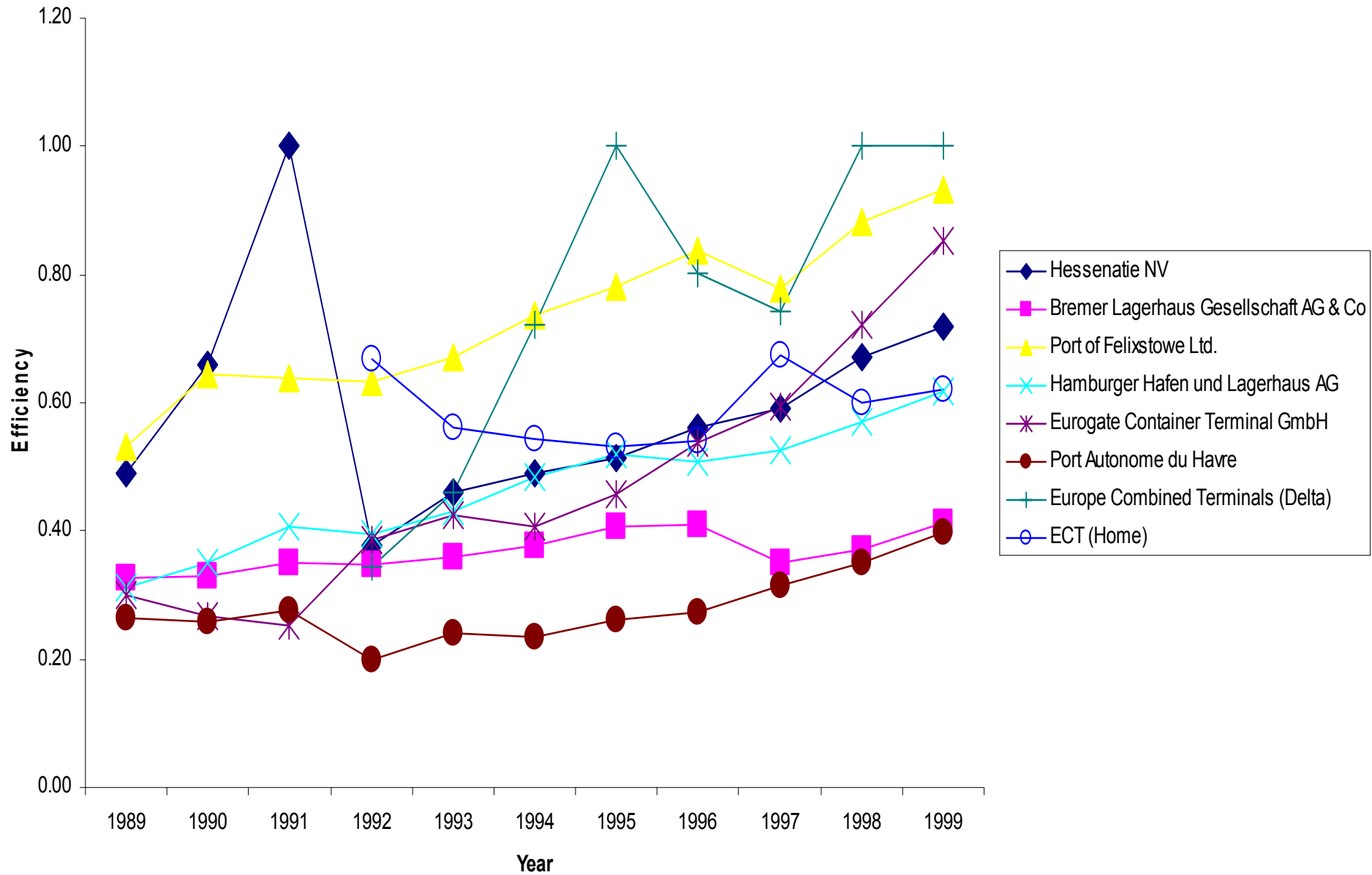
		Scale								
		Environment	Economic Infrastructure	Knowledge Infrastructure	Transregional Infrastructure	Local Infrastructure	Superstructure	Company Assets		
Port Functions	Utility	Usus (fructus)								
		Operation								
	Landowner	Construction (abusus)								
		Maintenance								
	Regulator	Inspection and Enforcement								
		Leasing and Contracting								
		Design and Planning								
		Zoning and Permits								

The port of Hamburg

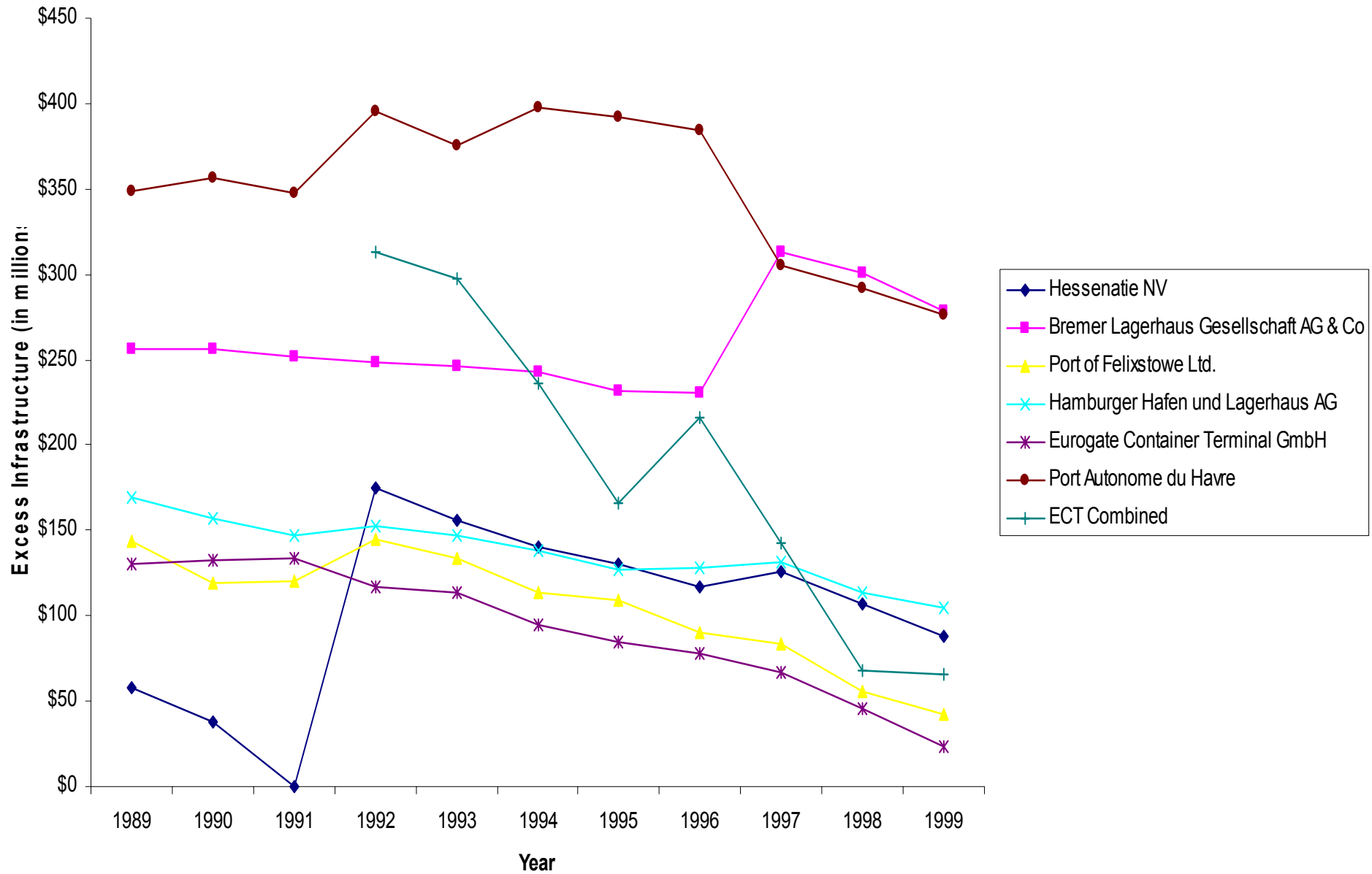
		Scale																					
		Environment	Economic Infrastructure	Knowledge Infrastructure	Transregional Infrastructure	Local Infrastructure	Superstructure	Company Assets															
Port Functions	Utility	Usus (fructus)																					
		Operation																					
	Landowner	Construction (abusus)																					
		Maintenance																					
	Regulator	Inspection and Enforcement																					
		Leasing and Contracting																					
		Design and planning																					
		Zoning and Permits																					

The port of Bremen

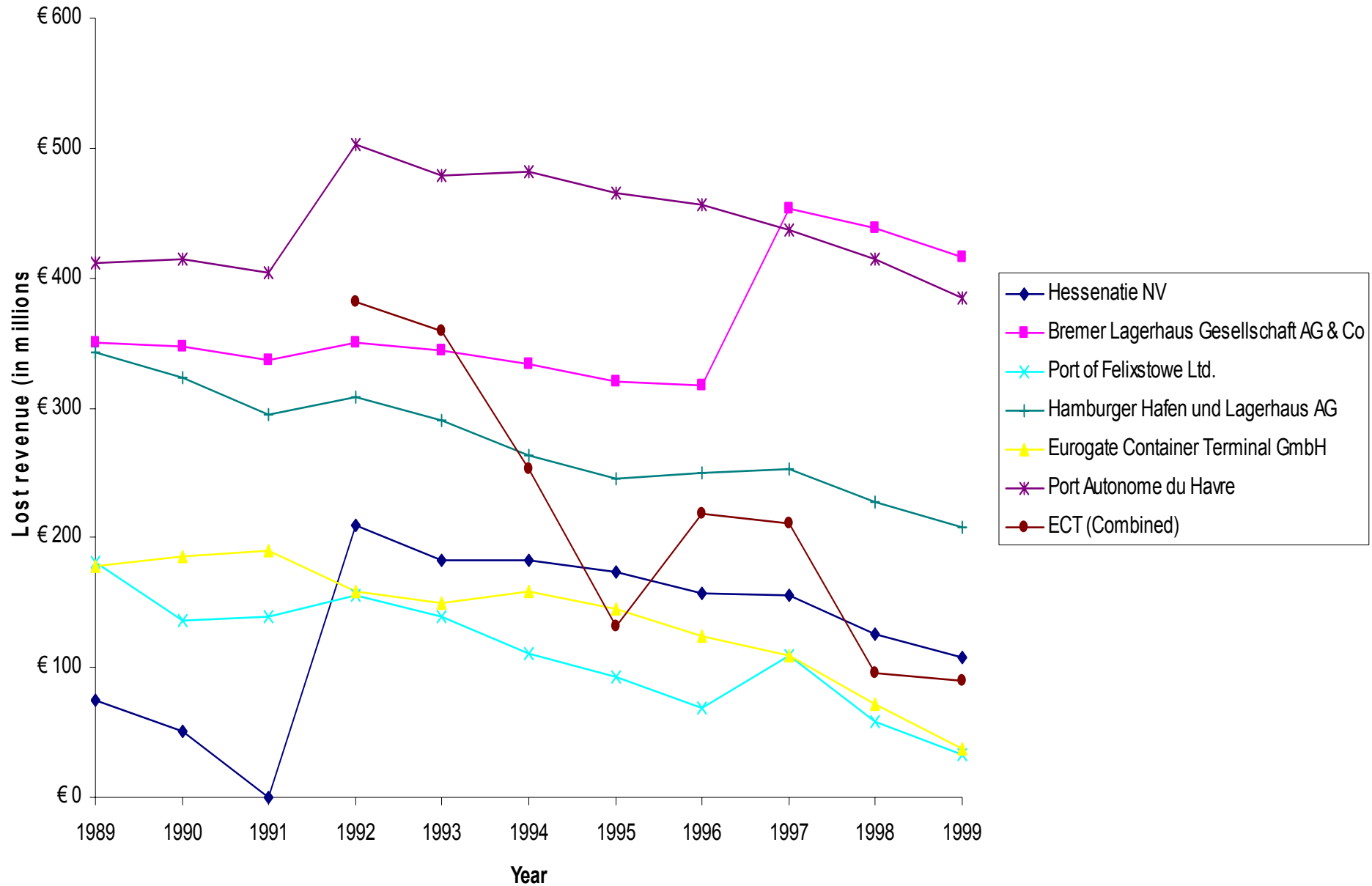
Synchronic Presentation of Port Efficiencies



Over Investment in Infra/Suprastructure



Opportunity Cost



Initial Interpretation of Results

- Private Monopolies seem to perform more efficiently - Felixstowe
- Public Monopolies seem to perform less efficiently – Le Havre, Bremen, Hamburg
- Private Terminal Operators who work in ports of NATIONAL funding of infrastructure seem to work efficiently yet with “peaks and troughs” – Rotterdam and Antwerp
- Private Terminals in ports of REGIONAL interest seem to work less efficiently – Hamburg and Bremen