

The background of the slide features a laboratory setting with several glass flasks and beakers containing a vibrant purple liquid. The glassware is arranged on a white surface, and the background is a soft, out-of-focus blue and white, suggesting a clean, scientific environment. The overall color palette is dominated by the purple of the liquid and the light blue/white of the background.

# Do Public and Private Firms Behave Differently?

*An examination of Investment in the Chemical Industry*

Benjamin Lallouz

Ernest Timkin

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# About the author

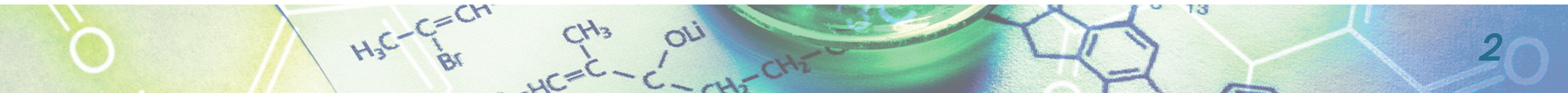
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# About the chosen article

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Title

Do public and private firms behave differently?  
An examination of investment in chemical industry.

Author

Albert Sheen  
University of Oregon

Date

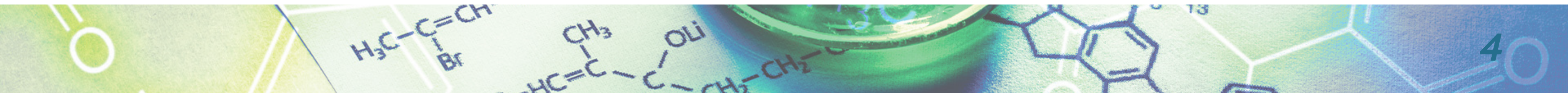
December 2020

Journal

Journal of Financial and Quantitative Analysis

Data set

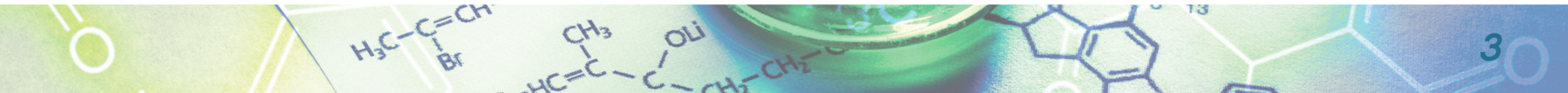
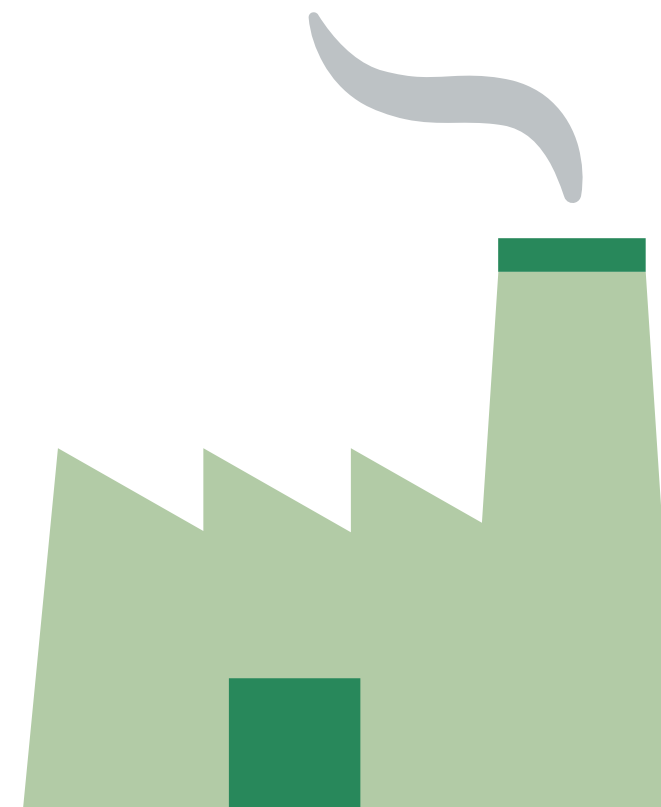
7 commodity chemicals, in total 128 firms





Why choosing only one sector ?

Why the chemical industry ?





# Content

- 01 Introduction
- 02 Data Description and Research Design
- 03 Empirical results
- 04 Conclusion





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# Research Question

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Will a private and a public firm  
invest in a different way ?



# Private vs Public firm

## Private firms

- Concentrated ownership
- Less subject to agency problems
- Protected against WS analysts
- Don't disclose financial statement

## Public firms

- Easier access to capital
- Stock price reflects information
- On average larger firm size
- Separation of ownership and control
- Hard to evaluate investment choices

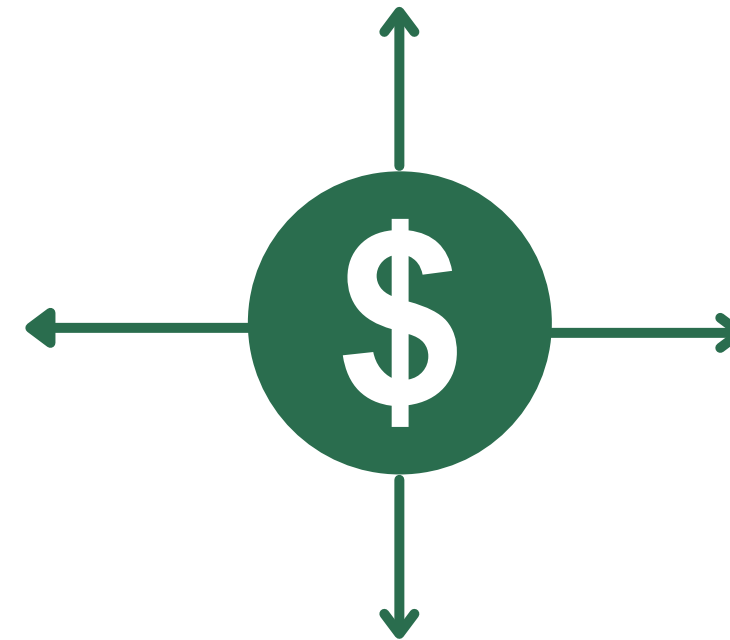


# Two types of challenges

## Challenges



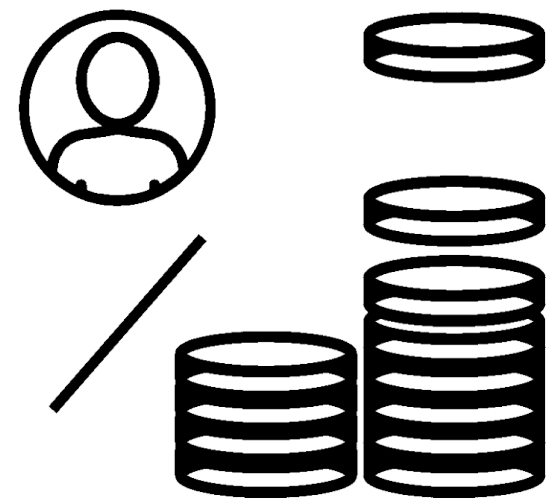
Private firms do not disclose  
financial statements



Evaluation of a firm's  
investment choice

# Two types of investments

## Investment types



Increase of capacity

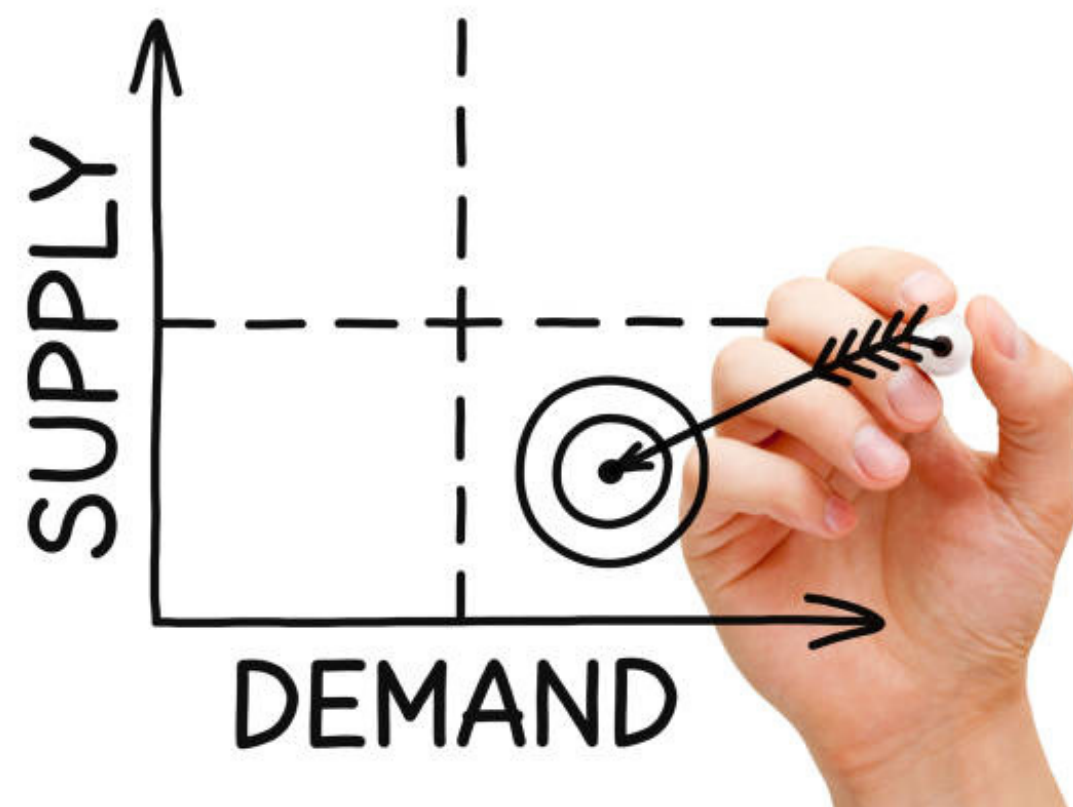


Acquisition



# Basic idea

... that the author implements



Better to open a new store when the demand is high

Profits are higher when a positive demand shock hits the market



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# Data Description and Research Design

Sample period

From 1986 till 2006

Requirements



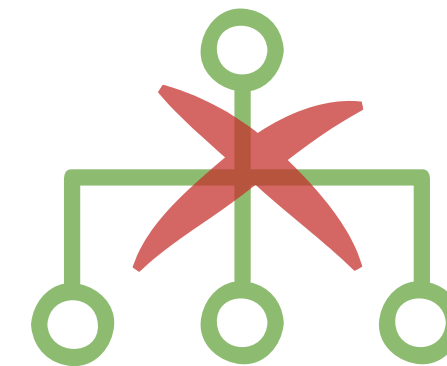
$\geq 1$



Well  
defined



Cannot be  
switched



May not be a  
by-product



Availability  
of sources

# Private and Public firms



Analysis of  
Shareholdings



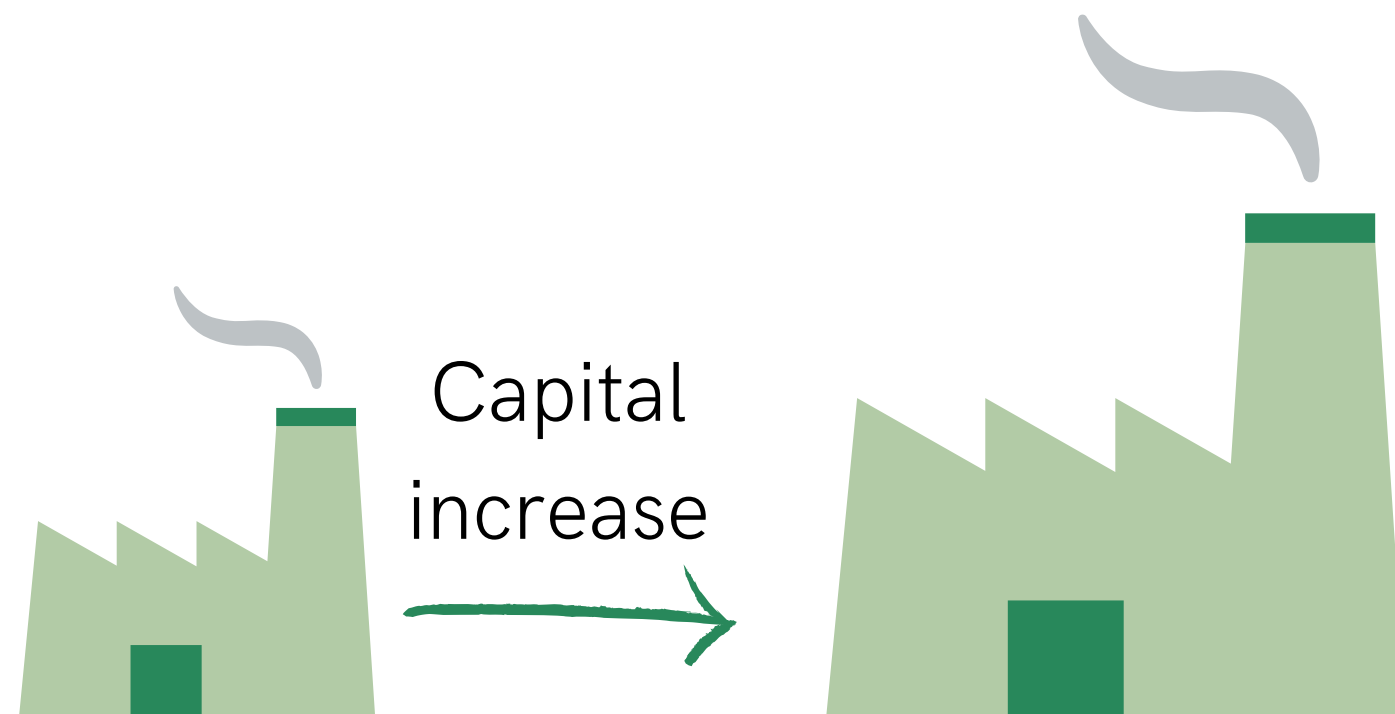
Controlled for size by  
number of employees



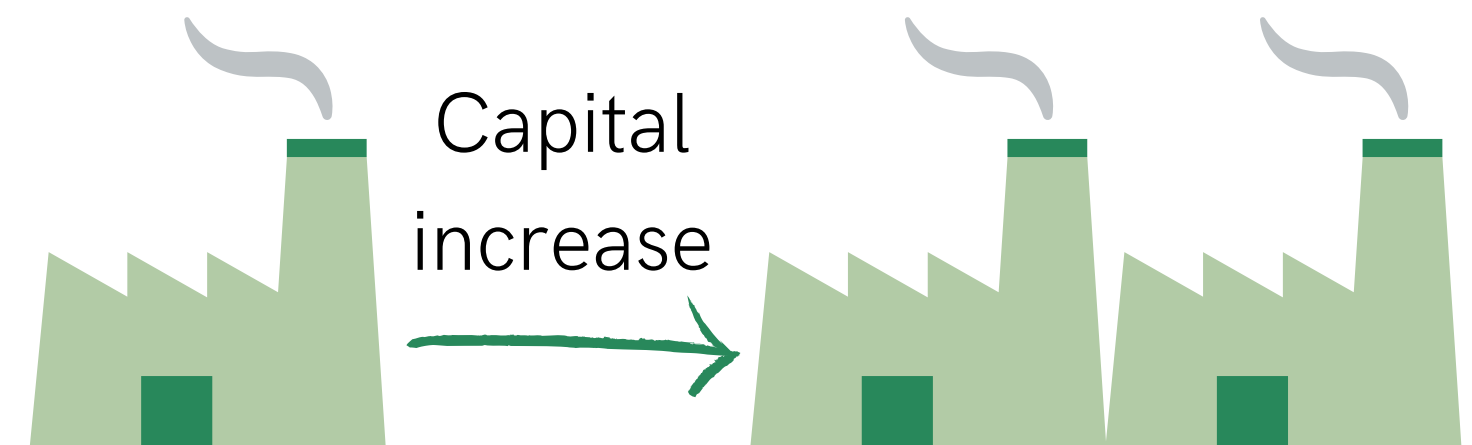


# Types of expansion

## Brownfield expansion



## Greenfield expansion



# Dataset

	Public Firms	Private Firms
Total unique firms	76	52
Mean no. employees	25,440	7,493
Mean market share	5.6%	3.2%
Median market share	2.4%	1.6%



# Demand of Chemicals

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Influenced by



Macro-economic  
factors



Agriculture  
factors

# Demand of Chemicals

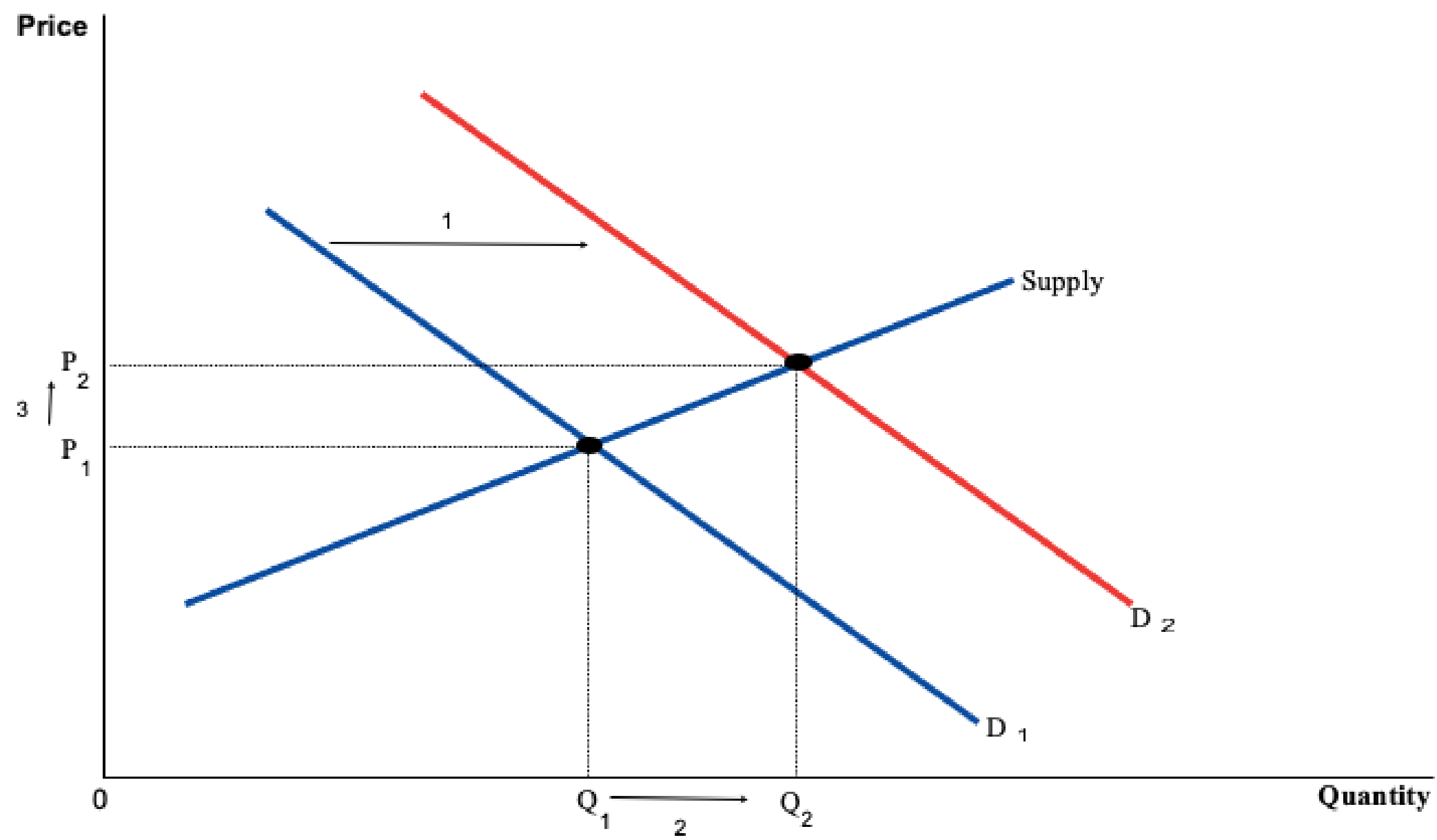
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Timing is  
**EVERYTHING**  
by capital increase



# Demand Shocks

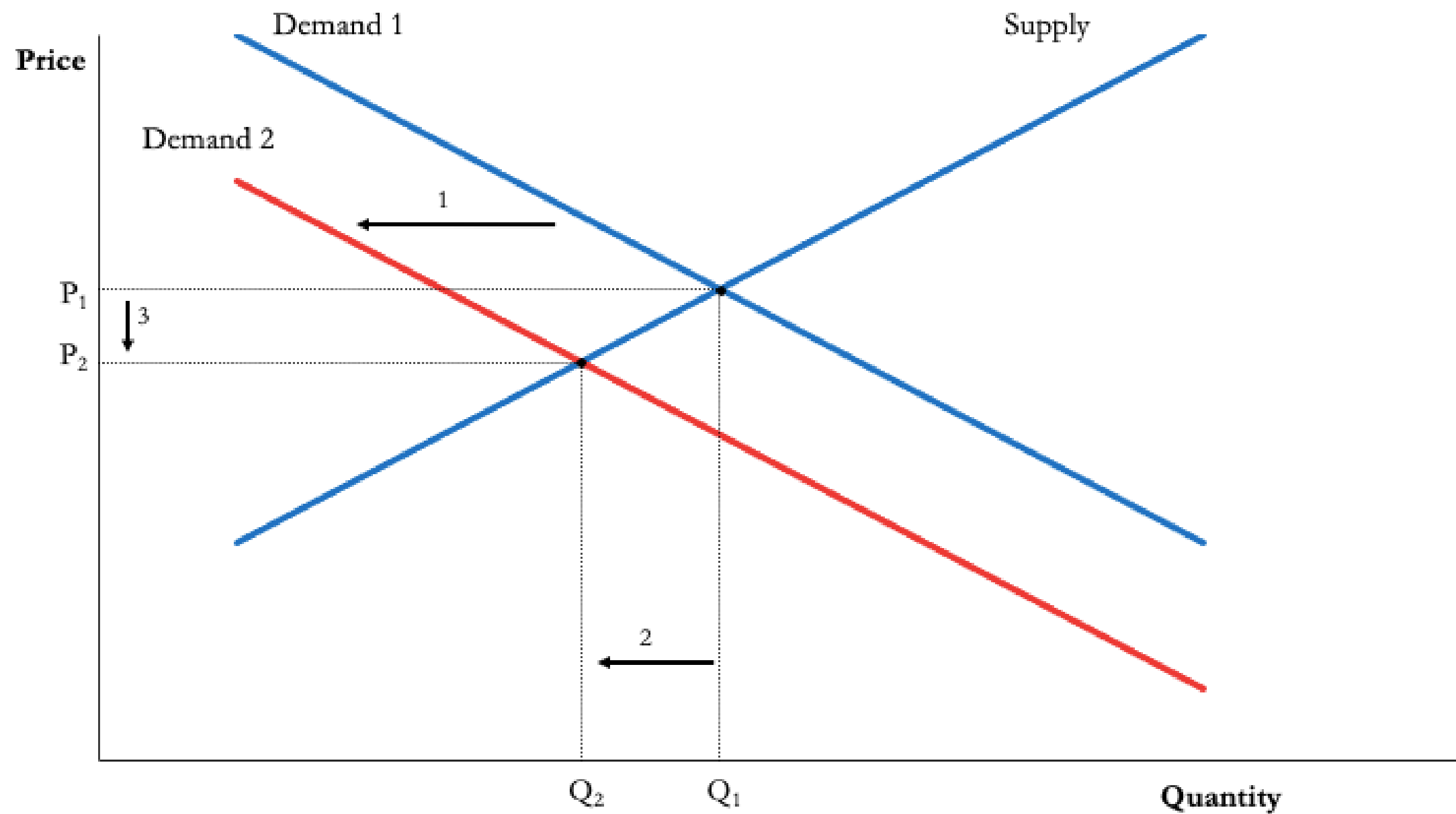
## Positive Demand Shock





# Demand Shocks

## Negative Demand Shock




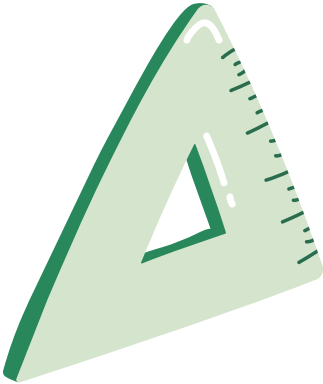


# Content

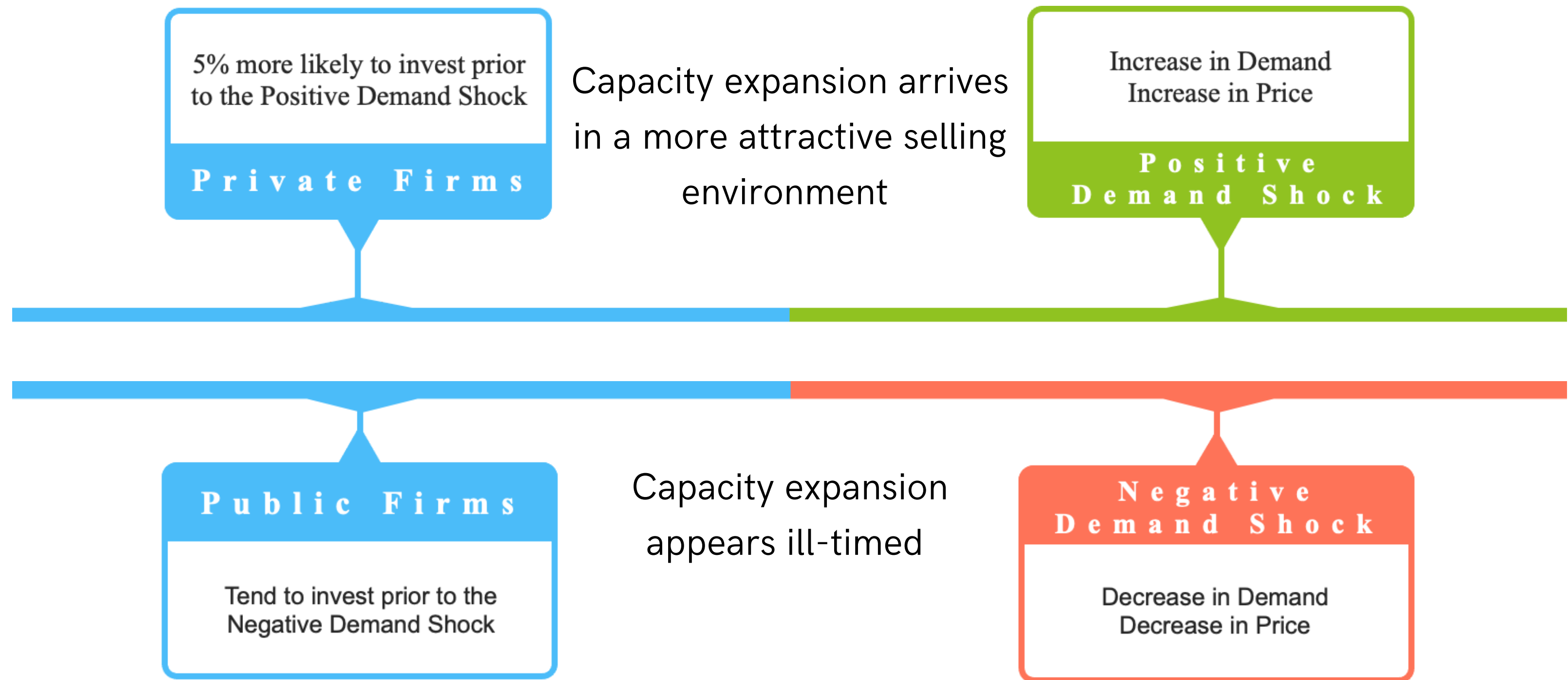
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# Investment Frequency & Increment Size

		Public Firms	Private Firms
	Frequency of capacity construction (average)	11	11
	% of firm years	9.1%	9.5%
	Expansion size to total industry capacity (average)	1.6%	1.1%
	With control variables: investment frequency	No difference	No difference
	Firm size	No difference	No difference

# Investment Timing





# Investment Method

	Public Firms		Private Firms	
	Build	Acquire	Build	Acquire
Positive Demand Shock	Less	Less	More	More
Negative Demand Shock	More	More	Less	Less
Industry Utilization (High)	Less	More	More	Less
Industry Utilization (Low)	More	Less	Less	More

# How are decisions about capacity increases made?

	ALL 1	ALL 2	ACQUIRE 3	<u>BUILD</u> 4	BUILD 5	BUILD 6
DEM_SHK <sub>t-2,t-1</sub>	0.008 (0.62)					
BIGP_SHK <sub>t-2,t-1</sub>		0.094*** (2.66)	0.018 (0.92)	0.077** (2.14)	0.101** (2.37)	0.284* (1.84)
PRIV × BIGP_SHK <sub>t-2,t-1</sub>					-0.073 (-1.42)	-0.117* (-1.89)
FIRM_SIZE × BIGP_SHK <sub>t-2,t-1</sub>						-0.020 (-1.20)
PRIV					-0.031 (-0.34)	-0.028 (-0.31)
No. of obs.	1,964	1,964	1,964	1,964	1,964	1,964

Build new capacity when a big shock hits  
the market

Public are more responsive to past  
positive shocks





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# Conclusion

## Main points

Size and frequency of investment are similar.

Private firm capacity increases are better timed.

Private firms are more likely to strategically choose to build when industry utilization is high and acquire when utilization is low.

Public firms are more likely to open capacity during a negative demand shock.  
Firms "mistakenly believe that abnormally high profits will persist into the future.



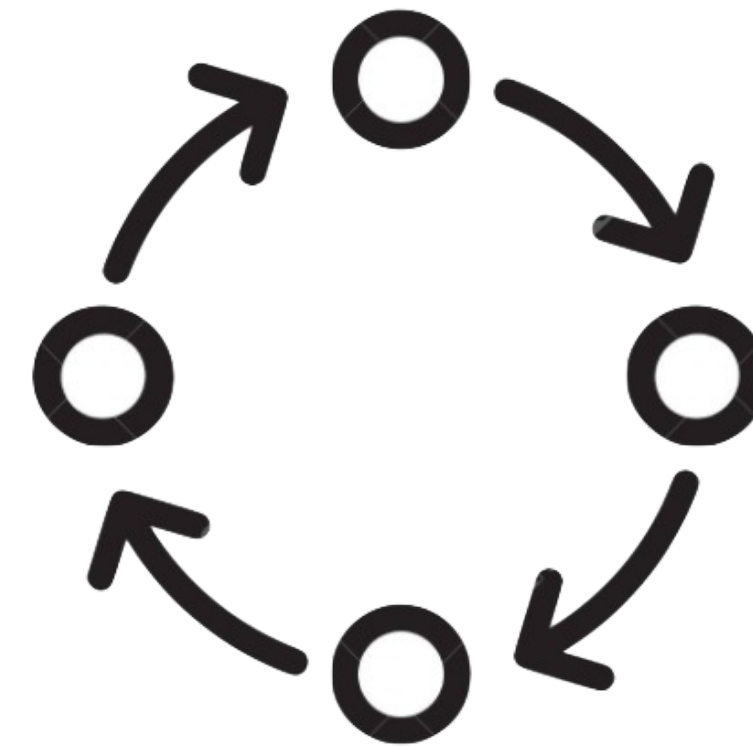
# Critics

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Plan of the article



Methodology



*Conclusion*