ESNIE European School on New Institutional Economics

History of markets

w/ an emphasis on the markets for information

Vincent Bignon
EconomiX
University Paris – Ouest Nanterre la Défense (P.O.N.D.)

EconomiX

General approach to economic history (cliometrics)

- people were not less rational before!
- Plenty of papers showed this is wrong
- But the set of institutions & incentives changed

$\Rightarrow$ Looking at history is fruitful to learn on the mechanisms that solved econ problems

$\Rightarrow$ Micro approach (involving models and/or data)

Recent developments in the history of markets

- Property right/ expropriation by the state & development:
  - North & Weingast, 1989
  - effect on financial markets: Stasavage (2007), Sussman & Yafeh (2000)
  - & a bunch of papers on effect of enhanced property right in England: Bogard (2007) Bogard & Richardson (2008)
  - Commercial interest rate in 18th c.: Flandreau, Gallimard, Jobst, Nogues, 2008

Recent developments in the history of markets

- Border, technology & the integration of markets (Smithian model of growth):
  - International (transatlantic trade): O'Rourke & Williamson, 1999
  - Domestic: Shiue & Keller, 2005, 2007, 2008
- Financial markets:
  - Domestic: Carlos, Neal & Wandschneider '07 (18th c. England)
  - International (sovereign borrowing): Bordo, Flandreau & Zummer (2004), Mauro, Sussman & Yafeh (2006)

Today’s talk: Motivation

- Topic: Cheating (on quality) & its solutions
- Info on quality: important ingredient to exchange.
- How is information on the quality of goods produced and spread to agents?
- Look at how difficulties to learn good’s quality shaped the institutional features

Impact of informational problem on exchanges

- Having no or distorted info can hurt agents and economic welfare because
  - Underpricing of a good
  - Missed trades
- Focus : Market institution/ specialized agents that dealt with those problem
- Two (potential) solutions:
  - Intermediary (having a certification role)
  - Technology (suppressing the problem of learning the quality: sorting is now possible!)

Goal

- Two case studies
  - Money market: info. on the quality of coins from the middle ages to the modern time
  - Stock market: info on firms listed on the French financial market just before WW 1
- Requisite: explicit about frictions
- Goal: understand the microstructure assuming that it allowed agents to solve the quality problem

Quality problems on coins

- Monetary history: only in the 19th century that we had the technology to make coins of goods quality
- Now coins looks likes this one (except no gold in now)
- But before…

Persian, Greek & Rome’s coins

<- Greek (150/200 BD)

Roman Empire coins

TRAJAN 98/117 a.d.

<- Persian coins (400 BD)

French coins from the early Middle-ages

- **Louis IX - 1226/1270** AD
- **Denier tournois**

- **Louis XI - 1461/1483** AD
- **Blanc au soleil**

Coins from the Renaissance period

- **Charles IX- 1560/1574 AD**
- **Demi-teston 2ème type**

François 1er - 1515/1547 AD

(Teston du Dauphiné 1st type)

From the 1st coins (Cresus) to the last Euros

(561-545 BD)

Implications of coins' varying quality (1)

- Difficult to infer the quality of coins
- coins wear

$\Rightarrow$ people had an incentive to clip them &

$\Rightarrow$ quite easy to counterfeit them

$\Rightarrow$ the monetary system was fragmented

- some neighbors zone could have incentives to make monetary wars with invasion of bad coins…

Implications of coins' varying quality (2)

- All the ingredients of a lemon problem :
  - good reasons why good worn coins are not easy to distinguish from « bad » ones
  - But coins had an intrinsic value (silver or gold content)

  $\Rightarrow$ potentially efficiency loss

Implications of coins' varying quality (3)

- Typically, difficult to be insured against the risks of acquiring a « bad » coin (think at today!)

$\Rightarrow$ Transaction cost was an information cost

$\Rightarrow$ Incentive to learn the « true quality of coins »

- Recently a bunch of papers explore of consequences of this difficulty on
  - The efficiency of the exchange process
  - The institutions that can had help to solve this problem

Efficiency losses linked to coins' quality problems

- Velde, Weber & Wright, 1999:
- Intensive margin: good 'unrecognized' coins could have been underpriced
- Extensive margin: typically some coins were hoarded because unrecognized

Moneychangers (1)

- Existed throughout the whole history of coins (Rome, Islamic world, middle ages…)
- Had the technology to check coins' quality
  - Weight
  - Touchstone
  - Knowledge (!)
- Cost: 0.3% in 1422, 1% in 1370 (in France)

Moneychangers (2)

- Problem: they must tell the truth.
- How ? Role of reputation
- Moneychangers developed either freely or in corporation/guilds.
  - Some were monitored by the state,
  - other were of the same family, came from the same region (cf. Lombard street).
- Trade bills of exchanges (de Roover, ‘48)
- How did their role evolved?

Banks

- During the 16th century:
  - Foundation of the Bank of Amsterdam, the Bank of Hamburg, Nuremberg… (Quinn & Roberds, 2006; Schnabel & Shin, 2007)
- Worked pretty well when the quality of the instrument of the underlying institution is better than the one on coins
- And some banks did help to solve the problem while other failed (S&S, 2007)
  - E.g. the bank of Nuremberg

Banks (2)

- Often, banks that failed were those linked to some government that wanted to extract surplus from the bank (over issuing)
- One of the great success was the bank of Amsterdam, ran by merchants.
- Those banks became the (incumbent) central banks: issue paper money in place of coins

Monetary policy

- Goal: reduction of the variance of the coins' produced

$\Rightarrow$ make the pooling of bad and good coin more difficult

- Solutions:
  - Improved production techno: Sargent & Velde '03
  - Monitoring of mints' activity: Gandal & Sussman '97
  - Periodic introduction of new coins/ debasement Glassman & Redish '88, Bignon & Breton '08

Introduction of new coins

- Minting was free
- New coins were more recognizable
- Ask the mint for a new coin when interested in being signaled as a « good » coin holder

$\Rightarrow$ Rationale for the seigneuriage?

$\uparrow$ Cost to pay for not being taken as a bad coin holder

Debasement

- Exchange of old coins against new ones with lower intrinsic content

⇒ Question: Why did agents accept to pay for this?

⇒ Puzzle: The minting volume was twice higher during debasement than during « normal » time (Rolnick, Velde, Weber, 1996)

⇒ possible solution: Debasement allow to be sorted from « bad » coins' holder because this involve a new coin, more recognizable

Comments (1)

- How micro problems shaped institutions (in this example those that help money to circulate)
- Give a rationale for Gresham's law: « Bad money drives out good money »
- Rolnick & Weber (1986):
  - Too many exceptions to Gresham's law (e.g. US 19C)
  - Traditional explanation: arbitrage opportunity between the money & gold/silver markets
  - Pb: need to assume that prices did not adjust to the intrinsic content of coins (circulation by tale)

  ⇒ require a too high enforcement capacity of the legal value of money

  ⇒ **Guess what changed in the course of centuries**

Comments (2)

- If information problem sufficiently big:
  - Market solution existed : Intermediaries

  $\Rightarrow$ Paying fees to use their services
- Comparison between the transaction cost involved by the friction & the intermediary's fee
- Yet another solution: Public policy:
  - Come w/ cost of improving the technology that allow distinguishing good from bad commodity/coin

  $\Rightarrow$ Cost (for coin): seigneuriage
- It's second best' world!

The market for information in early 20th century France

- Joint work w/ A. Miscio
- Stock market hugely developed in France (Rajan & Zingales ‘03)
- Underlying friction (investors): search for information
- Role of newspapers: collecting and spreading the information on firms’ financial performance

The market for financial information

- Based on qualitative insights, Landier & Thesmar (2007) wrote:

"quick development of the financial market during these times is somewhat striking given the fact that small investors knew close to nothing on the firms in which they put their money"

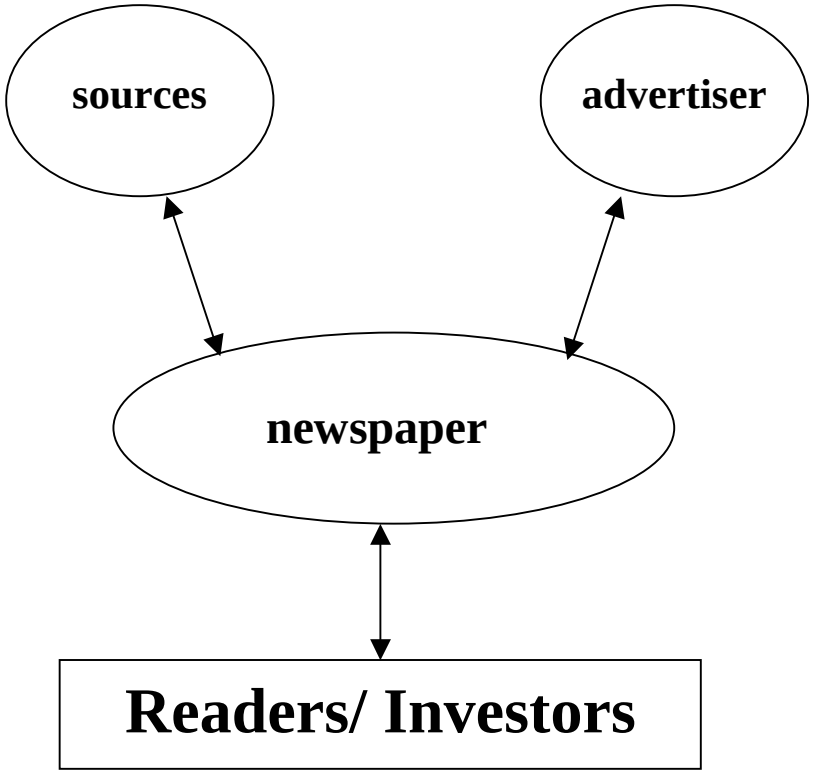
"the venality of the French newspapers confined to bribery"

- Did newspapers add value to readers?

=> Need a quantitative study

Newspaper as an intermediary in information

- Info market: 2 sided
- Sources (Dyck & Zingales, 02, ‘04)
- Readers (Hamilton & Zeckhauser, ‘04, Mullainathan & Shleifer ‘05, Gentskow & Shapiro ‘06)
- Ads market (Reuter & Zitzevitz, ‘06)



Two tests

- What we observe: published info
- H0: newspapers max the info value for readers

  $\Rightarrow$ Firms selected according to finan. performances
- bias w/ sources: disclosed info will be positive
- bias w/ advertising: switch the distribution of disclosed info towards advertising firms

Corruption or payments?

- Firms might have had to pay to appear in newspapers

$\Rightarrow$ not necessarily corruption

- Lizzeri's model
- payment arrangement on two sided markets
  - rating agency (change in the 1970's)
  - bank services
- What indicator of corruption? Look at history

Some historical insights (1)

- # of financial journals: “hundreds” (Albert ‘72)
- they competed to inform investors.
- Corruption of the press: over discussed, many different opinions
- 2 ways to corrupt:
  - paying for editorial content or
  - paying ads

Some historical insights (2)

- Non-specialized press: banks leased the financial section

  Banque de l'Union Parisienne agreed in 1910 on a dealership for managing the financial ads and column of Lafitte's newspapers.

- Raffalovitch (1931) received info. on the payments made to newspapers through *Paribas*

$\Rightarrow$ Investment banks: managed info provision

$\Rightarrow$ variable of the potential press corruption

Newspapers & investment banks

Newspaper's name	Period	Address	Other act.	What activity ?	Bank's address
Journal des finances		5 rue Drouot	Broker		
Cote Desfossés	Weekly	42 rue Notre Dame des Victoires	Broker		
Finance pratique (mention explicite du propriétaire)	Weekly	5 rue Saint Georges	Bank	Société générale du crédit minier et industriel	
Le journal des intérêts financiers	Weekly (1888)	3 & 5 rue Saint Georges	Bank	Crédit Mobilier Français	
Le moniteur du capitaliste et des rentiers	Weekly	50 bd Haussman	Bank	Banque Générale Française	50 bd Haussman Paris
Le mouvement financier	Weekly	9 rue Pelltier	Bank	G. Robinson, banquier	9 rue Pelletier
L'économiste européen	Weekly	11 rue Monsigny	No	Journalist, economist	
L'économiste français	Weekly (1873)		Prof	Sciences Po (1872-80) and College de France	
Le Rentier	3/month (1869)	33 rue Saint Augustin	Prof	Former pdt Paris Statistical Society, vice-pdt Political Econ Society	
La semaine financière	Weekly (1856)	Rue du 4 septembre	No		

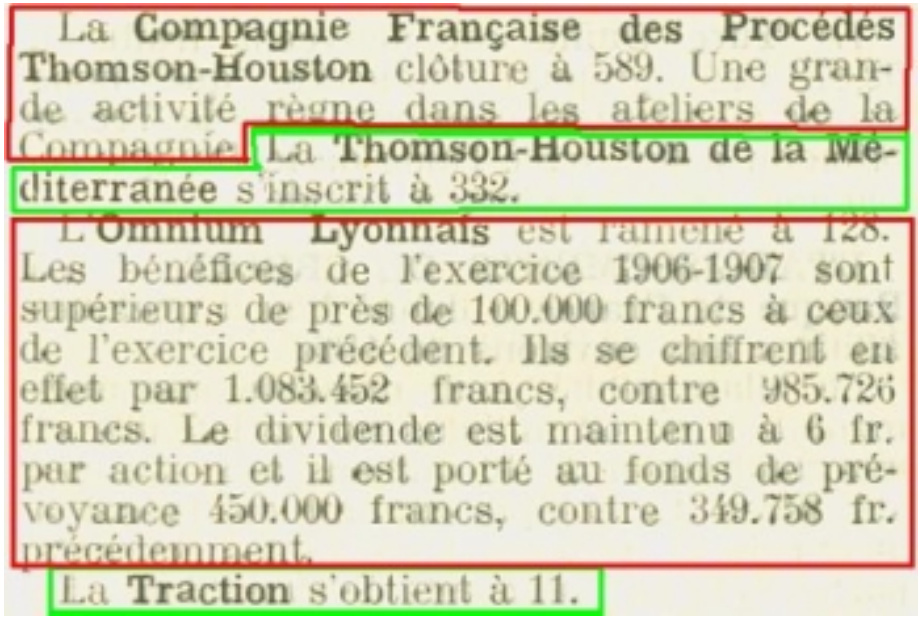
What we have done

- Want to explain media exposure:
- How were firms selected?
- Focus on the quantity of information disclosed for each firms on listed in the Paris Bourse or *en-banque* market.
- Explain it w/
  - financial performances,
  - ads
  - a variable for hidden payments that firms had to pay to appear in editorial part of newspaper

The sample

- 3 leading financial periodicals: *L'Economiste Européen, Le Rentier, La Semaine Financière*
- Quite expensive (50 cent. or 15 cent.)
- **Intuition**: investors chose the best newspapers **Sample of info on firms:** July 1 to Dec. 31, 1907
- For each newspaper, same structure of the informational contend:
  - Section 1: overview of major political and financial events;
  - section 2: info. On financial assets
  - Section 3: the advertisings.

Turning information into an index of media exposure



La **Compagnie Française des Procédés Thomson-Houston** clôture à 589. Une grande activité règne dans les ateliers de la Compagnie. La **Thomson-Houston de la Méditerranée** s'inscrit à 332.

L'**Omnium Lyonnais** est ramené à 128. Les bénéfices de l'exercice 1906-1907 sont supérieurs de près de 100.000 francs à ceux de l'exercice précédent. Ils se chiffrent en effet par 1.083.452 francs, contre 985.726 francs. Le dividende est maintenu à 6 fr. par action et il est porté au fonds de prévoyance 450.000 francs, contre 349.758 fr. précédemment.

La **Traction** s'obtient à 11.

- Text in green = no significant mention

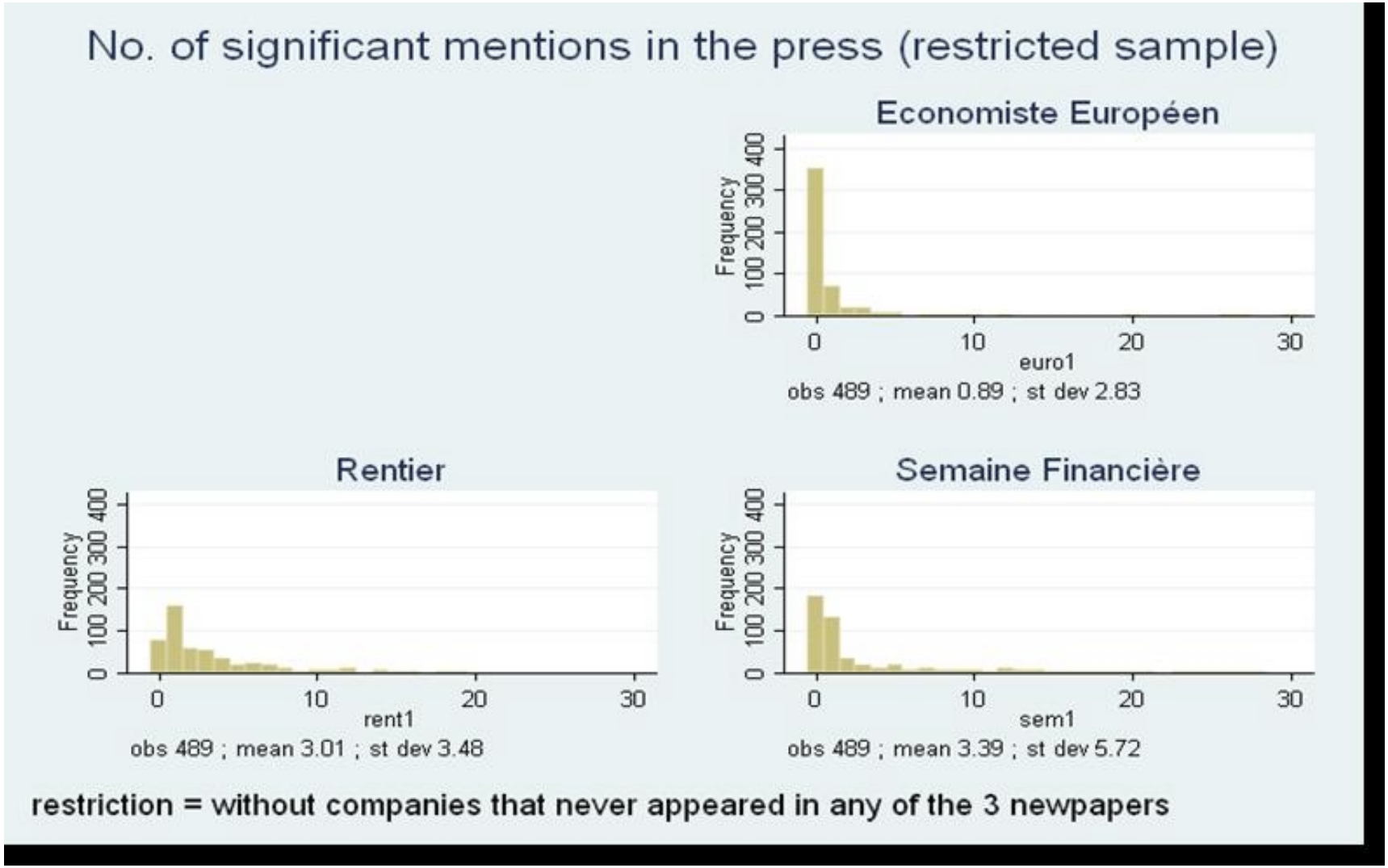
⇒ Info = 0

- Text in red = significant mention

⇒ Info = 1

- Value added: red part as the information could have not been given elsewhere (although not necessarily an interesting one)

Variance of firms' media exposure



Testing for corruption

- For each newspaper: Regression of the quantity of info. published on firms (# of times a company is significantly exposed in the six months)
- RHS variables:
  - Financial variables (performance): liquidity, market capitalization, PER,
  - Link w/ investment banks
  - # of ads published
- Regression: negative-binomial (count model) because
  - allow for overdispersed data (ie. big variance)
  - fits better for events that are not stochastically independent between them

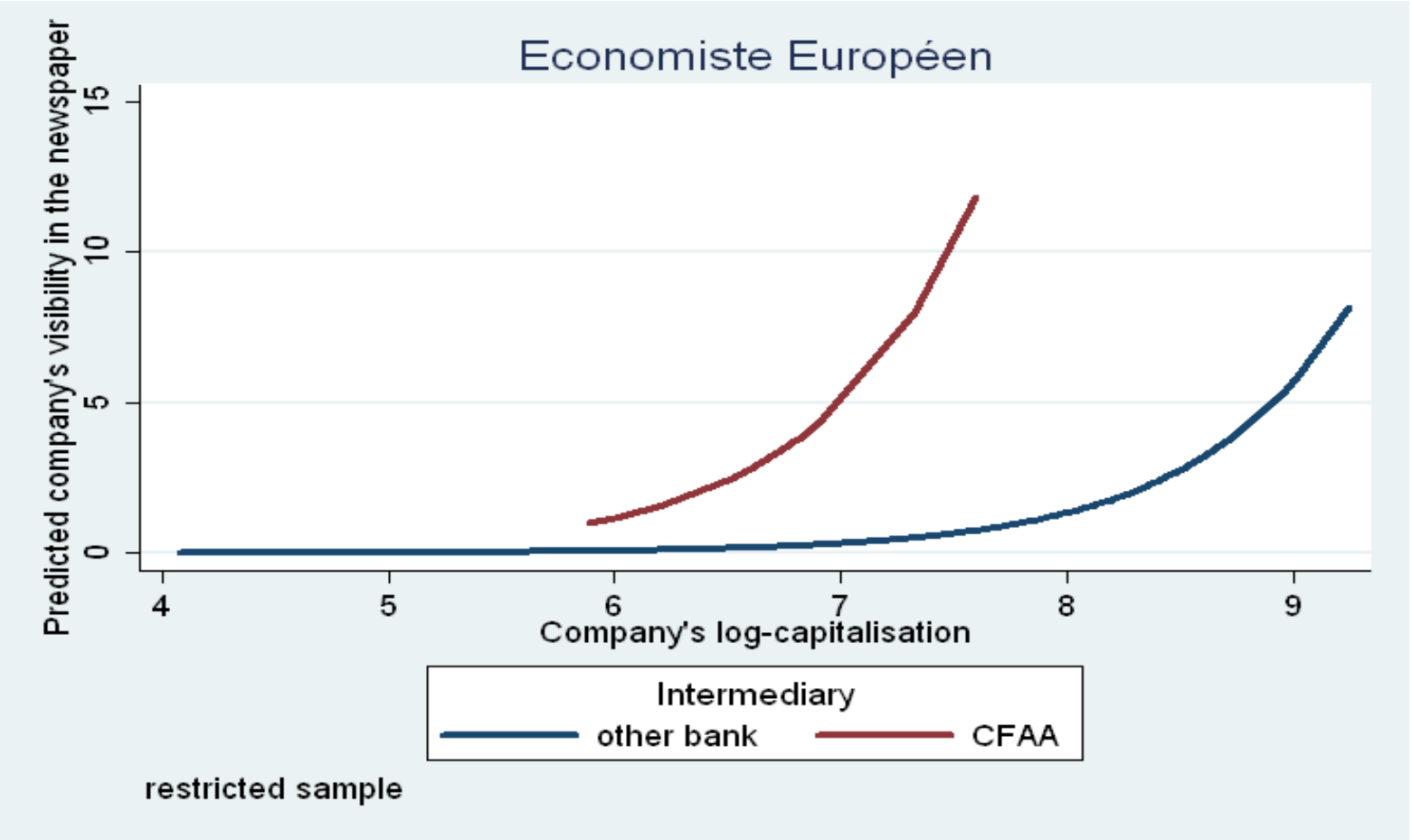
The quantity of info published and financial performances

Model: negative binomial regressions; t-statistics are shown and their significance level (*** 99%, ** 95%, * 90%).									
Dep var	Euro	Euro	Euro	Rent	Rent	Rent	Sem	Sem	Sem
Pseudo R2	0.08	0.12	0.08	0.09	0.09	0.07	0.09	0.10	0.07
obs	754	528	338	754	528	338	754	528	338
Restriction	No	No	Yes	No	No	Yes	No	No	Yes
Liquidity	5.33***	3.93***	2.42***	8.42***	7.12***	3.93***	6.83***	7.19***	4.78***
log_cap	5.73***	6.48***	5.58***	9.37***	7.75***	5.92***	9.79***	8.73***	7.33***
Volatility	0.51			-1.66*			0.39		
log_per		-3.74***	-3.57***		3.84***	5.56***		-1.38	-1.18

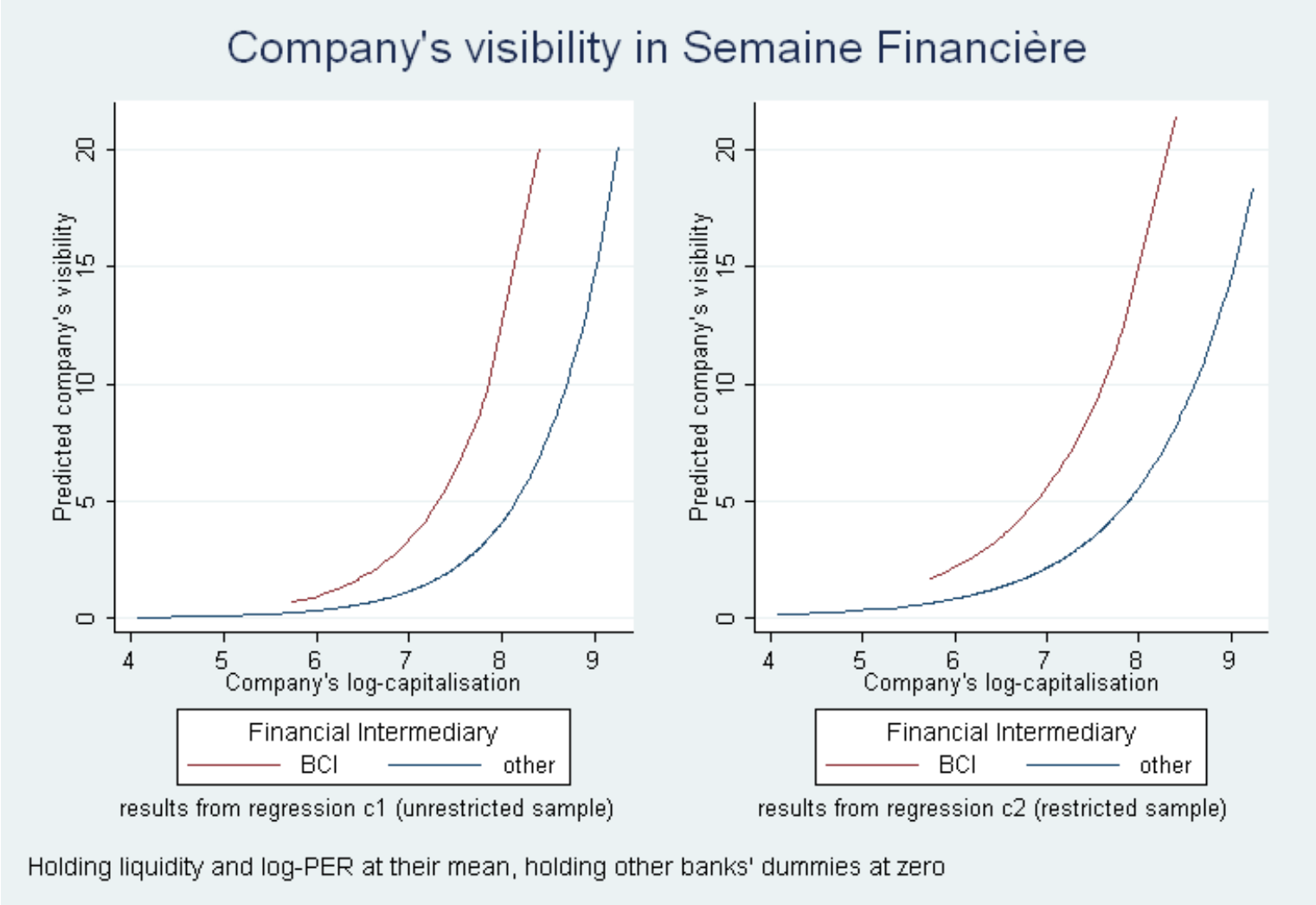
And with investment banks

Tableau recapitulatif de tous les résultats des feuilles “euro”, “rentier”, semaine”												
newpaper	**Eco.Europ.**				**Rentier**				**Semaine Financière**			
specificaiton	1by1	1by1	all	all	1by1	1by1	all	all	1by1	1by1	all	all
restriction	no	yes	no	yes	no	yes	no	yes	no	yes	no	yes
BUP	+	+			++	++	+	++		- -	-	- -
CIC					++	++			++			
BCI									+++	+++	+++	+++
CL		-										
SG											-	-
CFAA	++	++	++	++		++		++				
BPPB					++	++		+	+++	++		
CNEP					+	++						
SM											-	
CM					+			+				
CMAS					- - -	- - -	- - -	- - -	+	++		+
BSF											-	
SMALL_ONLY					-	- -	- -	- -	- -	- -	- -	- -
PARIS_ONLY	- - -	-	- -	- -	- - -	- - -	- - -	- - -	- - -	-	-	-

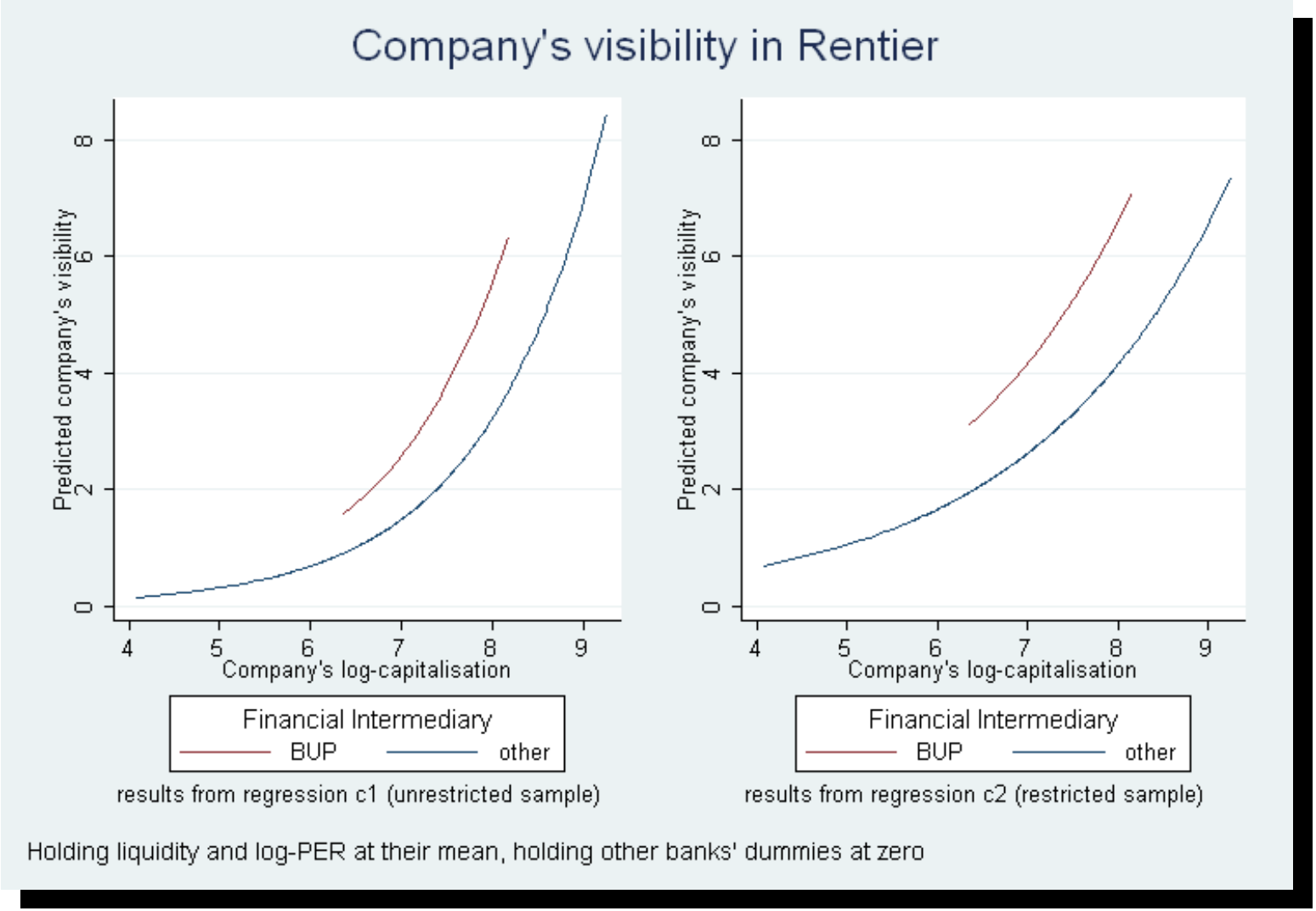
Some bias in *Economiste européen*



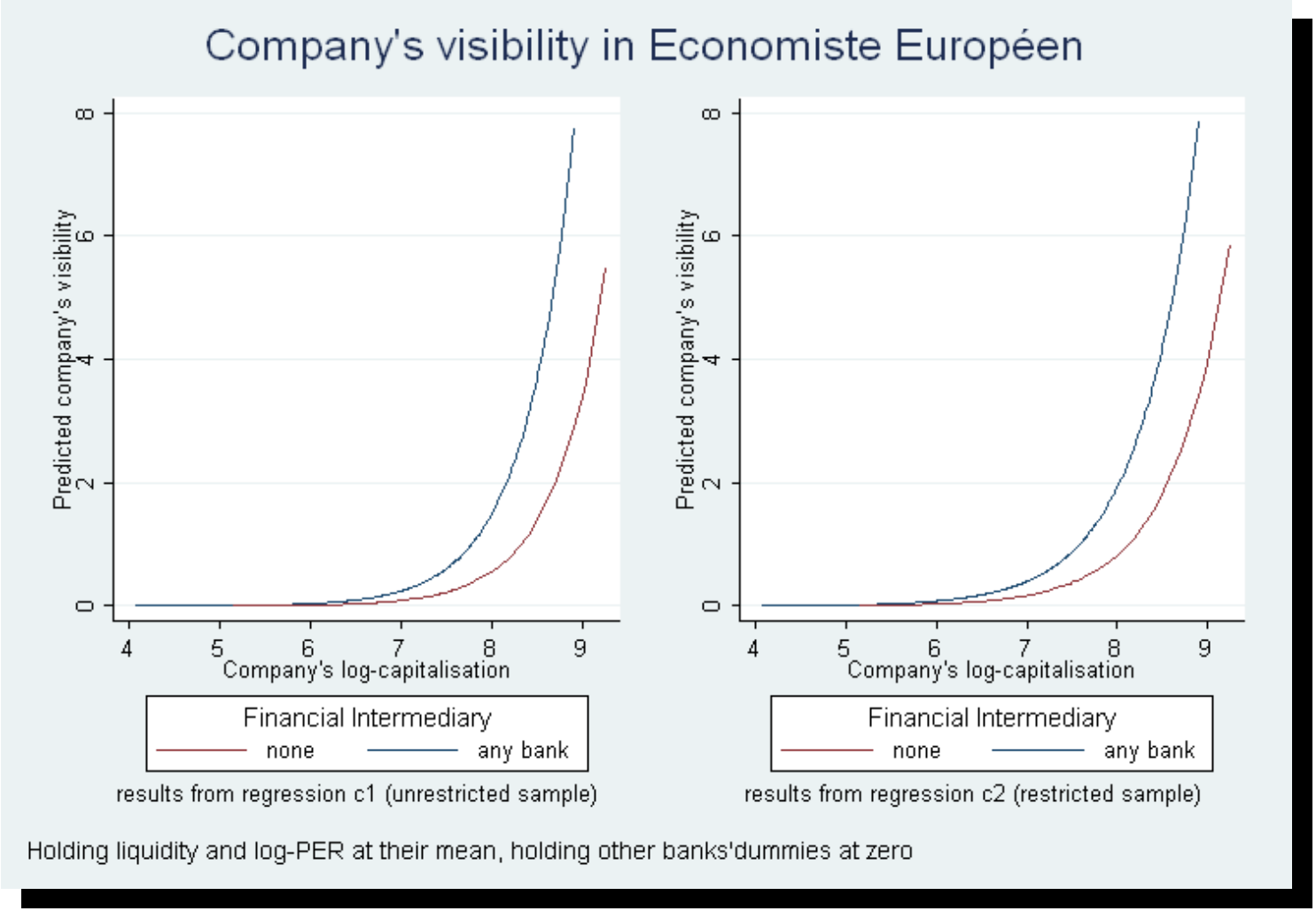
Another in *La semaine financière*



And the one for *Le Rentier*



Finally, banks vs non banks in the *Economiste Européen*



Conclusion (1)

- Media exposure linked to financial performance
- some firms highlighted more than what their financial performance will have predicted
- Bias w/ sources: info is always positive!

But

	Non-weighted sample[1]				Weighted sample			
	Cie capt	Liquidity	Yield 1908	Volatility	Cie capt	Liquidity	Yield 1908	Volatility
Econ. Européen	95	4.13	**6.28**	**7.99**	95	2.24	**3.79**	**1.33**
Rentier	52.2	3.44	**4.41**	**7.82**	153	6.7	**8.03**	**3.96**
Semaine Financière	66	3.57	**5.34**	**13.4**	256	8.39	**12.3**	**4.89**
Whole Sample	*31.5*	*2.47*	*4.29*	*3.06*	*31.5*	*2.47*	*4.29*	*3.06*

Final conclusion

- Still a lot of works to be done
- History is full of problems of info on quality
- Important issue even today
  - learn how those problems were solved
  - allow to construct, apply and test models w/ frictions
  - reasonable work, data are available
- Possible solutions
  - Technology
  - Market : intermediary services
- Potential problem w/ intermediary: cheating
- Problem w/ technology: finding & investing in it