

International trade and institutional change:  
A death in Venice

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## Motivation

- Greif (2006): International trade as a catalyst for institutional change (CRS).
- Atlantic Trade (Acemoglu, Johnson, and Robinson (2005)): Initial constraints on executive followed by exogenous growth of international trade empowers a middle class that pushes for growth-promoting institutions.
- Why not Venice?
- Can trade lead to growth-retarding institutional change? Yes: by affecting the evolution of income distribution. To examine this we introduce politics into the Banerjee and Newman (1993) model of occupational choice.

## Exogenous Political Sovereignty (to 1000 A.D.)

- 800 A.D. Eastern and Western Emperors
- 804–815 Peace
  - Charlemagne renounces claim to Venice
  - Byzantium recognizes the elected Doge
- *quid pro quo* Venice provides naval support in exchange for sovereignty and access to markets in Constantinople. Formalized in 992 Chrysobull.
- **'series of fortuitous events'** (Cessi, 1966)

## Exogenous Expansion of International Trade (to 1000 A.D.)

- Broader Context: European trade begins to expand significantly after 950. See *The Commercial Revolution of the Middle Ages, 950–1350* (950-1350) by Lopez (1971)
- Venetian Context
  - Rise of the West (spices and Byzantine wares)
  - Demands from the East (Slaving Slavs, raw materials)
  - Po Valley

## Christian Cities: Population in 1050–1200

1050 A.D.	
Venice	45,000
Regensburg	40,000
Rome	35,000
Naples	30,000
Mainz	30,000
Speyer	25,000
London	25,000
Cologne	21,000
Trier	20,000
Caen	20,000
Lyon	20,000
Paris	20,000
Tours	20,000
Verona	20,000
Worms	20,000
Florence	15,000

## Christian Cities: Population in 1050–1200

1050 A.D.		1200 A.D.	
Venice	45,000	Paris	110,000
Regensburg	40,000	Venice	70,000
Rome	35,000	Florence	60,000
Naples	30,000	Milan	?
Mainz	30,000	Cologne	50,000
Speyer	25,000	Leon	40,000
London	25,000	Ypres	40,000
Cologne	21,000	Rome	35,000
Trier	20,000	Bologna	35,000
Caen	20,000	Toledo	35,000
Lyon	20,000	Verona	33,000
Paris	20,000	Narbonne	31,000
Tours	20,000	Salerno	30,000
Verona	20,000	Pavia	30,000
Worms	20,000	Naples	30,000
Florence	15,000	Genoa	30,000







## The Spectacular Rise of Venice: 1082–1171

- The 1082 Chrysobull
  - Trade privileges
  - Venetian Quarter
- Spectacular growth of Venetian mercantile and naval power.

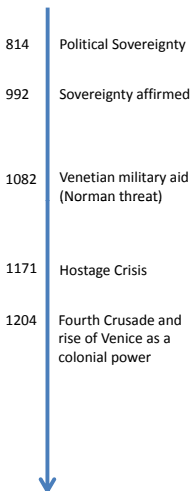
## 1168 and Beyond

- 1168-1171 — Hostage Crisis
- 1204 — Fourth Crusade
- 1204— Venice as a Colonial Power

## A Re-enforcing Mechanism: Routinization of Trade

- The Fourth Crusade: Greater frequency of trade provides more information as does the post-1204 establishment of Venetian colonies.
- Nautical revolution:
  - Dead reckoning, portlan charts, compass, and stern-post rudder all in place by 1275. Sail all year round => high opportunity cost of waiting at port for travelling agent to sell and buy.
  - Galley trade: Most effective as a convoy, large => central coordinated, travelling agent has little discretion. 1267 Mamalukes monopolize Alexandrian trade => Venice responds with a galley trade monopsony.
- Result:
  - Rich merchants can afford factors in each port (high fixed cost, low marginal cost) => Rich merchants lose interest in commenda.
  - Poor merchants operate at a small scale and cannot cover fixed costs => Poor merchants prefer the commenda.

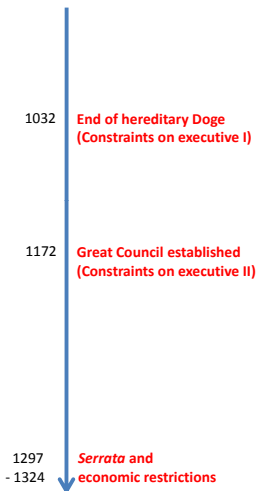
## Relationship with Byzantium



## Rise of International Trade



## Domestic Institutions



## Constitutional Reform: Constraints on the Executive

- Election of Doges: the Venetian Myth.
- Rise of trade starting in 950s: many new families enter politics. Castagnetti (1992a) shows that in Ducal documents of 960, 971 (slave embargo), and 982, the number of new names are 69%, 81% and 65%, respectively. (See also Castagnetti (1992b))
- Crisis 976-1032
- 1032: Reform
  - End of hereditary Doges,
  - Election of a wealthy silk merchant
  - Ducal Council
  - ‘The moment of major political opening of the last decade of the 11th century ... [was due to] ... the take-off of long-distance trade.’ (Castagnetti (1992a))

‘Families who had come to moderate wealth through commercial success were welcomed into the ranks of the elite. In Venice wealth, not land

## 1171 – Constitutional Reform – The Great Council

- Crisis of 1168–1171 ends with murder of Doge. The ‘people’ are blamed.
- Ducal Council elects a new Doge in 1171.
- New Doge sets up a commission for reform
  1. Enlarged Ducal Council nominates Doge
  2. Oath of Office, circumscribing Ducal power. Evolving ‘Constitution’ that is expanded with each Doge e.g., must obey magistrates, must have all decisions approved by Ducal Council, cannot put personal interests ahead of those of the state.
  3. Great Council – Ultimate source of legitimacy in Venice. 450 elected members to decide matters of state. Ducal Council ensures that Doge obeys all decisions of the Great Council. Draws its members from wealthy merchants.
- **Triumph of the Merchants**

## Hall of the Great Council



# Growth of Private Contracting Institutions

1. Independent Magistrates (2), courts, court of appeals
2. Private Contract Law ('Statuti')
  - 2.1 Law Merchant
  - 2.2 Bankruptcy Law
  - 2.3 New legal business forms
  - 2.4 New types of contracts
  - 2.5 Standardized coinage (Enrico Dandolo) for contracts
3. Thick primary and secondary markets for commercial paper (Notes of Exchange)
4. Early banks

## Commenda

- Joint-stock, limited liability
  - Partners' liability limited to joint stock for duration of trip.
  - Individual liability limited to contributed capital.
- Two Partners: *Sedentary and Travelling*.
- *Losses are apportioned according to share of capital.*
- *Profits are apportioned in one of two ways:*
  - *Unilateral commenda:*  
*Sedentary merchant provides 100% of the capital and receives 75% of the profits.*
  - *Bilateral commenda:*  
*Sedentary merchant provides 67% of the capital and receives 50% of the profits.*

**Income Mobility:**  
**Ansaldo Bailardo's Upward Mobility into the Merchant Class**

<b>Trip (year)</b>	<b>Initial Wealth</b>	<b>Invest- ment</b>	<b>Profit</b>	<b>Final Wealth</b>
1156	£0	£0	£18	£18
1157	£18	£18	£74	£92
1158	£92	£64	£78	£170

## Income Mobility: Romano Mairano Upward Mobility into the Nobility

- Neither he nor wives appear in any documents before 1152. He is not noble.
- Between 1152 and 1161, he becomes wealthy using the commenda.
- He is now wealthy enough that he buys shares in a ship and becomes its captain.
- He is based in Constantinople and does business from Venice to Alexandria.
- Between 1163 and 1168, he starts using Sea Loans on which he pays 40–50% interest per year.
- In 1168, he takes out several huge loans which he uses to run the Patriarch of Grado's concession (the largest of 4 wharfs in Constantinople).

## Income Mobility: Mairano's Upward Mobility into the Nobility

Creditor	Loan Size	Date	Due Date
Patriarchy of Grado	500	October 1169	Spring 1171
Leonardo Gimarco	120	November 1169	November 1170
Leonardo Gimarco	240	December 1169	December 1170
Sebastiano Ziani	500	March 1170	Christmas 1170
Pietro Foscari	450	April 1170	Christmas 1170
Warnerio da Ponte	250	May 1170	Carnival 1171
Andrea Dandolo	240	July 1170	Christmas 1170
Filippo Falier	500	August 1170	October 1170
Sebastiano Ziani	125	August 1170	Christmas 1170
Warnerio da Ponte	50	August 1170	Christmas 1170
Leonardo Bon	100	August 1170	October 1170

## Crisis in Byzantine-Venetian relations 1168–1171

- 1168 Venetians not supportive of Byzantine efforts in Italy and against the threatening Normans.
- 1170 Genoese granted their own Quarter in Constantinople, Venetians revolt.
- March 12, 1171: Emperor orchestrates hostage taking of 10,000 Venetians, trade privileges lost.
- Venice attempts to invade, but is unsuccessful. When fleet returns unsuccessfully, the Doge is murdered (a rare event).

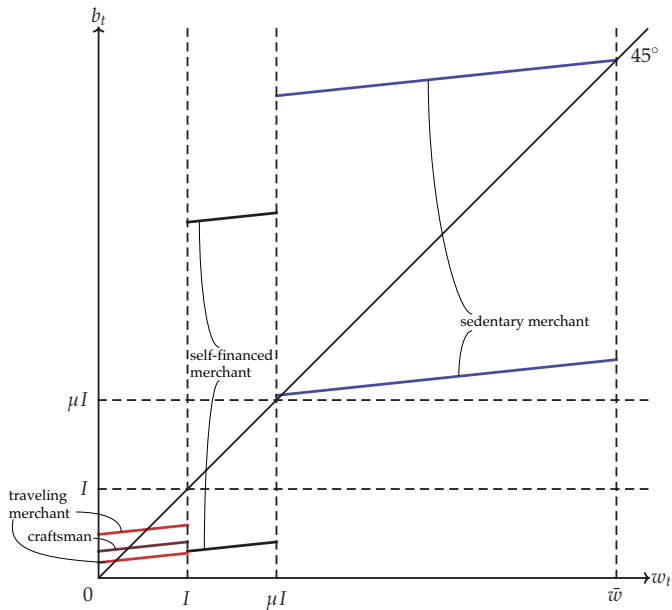
## Income Mobility: Mairano's Upward Mobility into the Nobility

Creditor	Loan Size	Due Date	Payment Date
Filippo Falier	500	October 1170	October 1170
Leonardo Gimarco	120	November 1170	November 1170
Patriarchy of Grado	500	Spring 1171	Jan. 1172, June 1173
Sebastiano Ziani	500	Christmas 1170	April 1174
Andrea Dandolo	240	Christmas 1170	September 1174
Pietro Foscari	450	Christmas 1170	July 1175
Sebastiano Ziani	125	Christmas 1170	September 1176
Warnerio da Ponte	250	Carnival 1171	February 1177
Warnerio da Ponte	50	Christmas 1170	February 1177
Leonardo Bon	100	October 1170	April 1178
Leonardo Gimarco	240	December 1170	July 1183

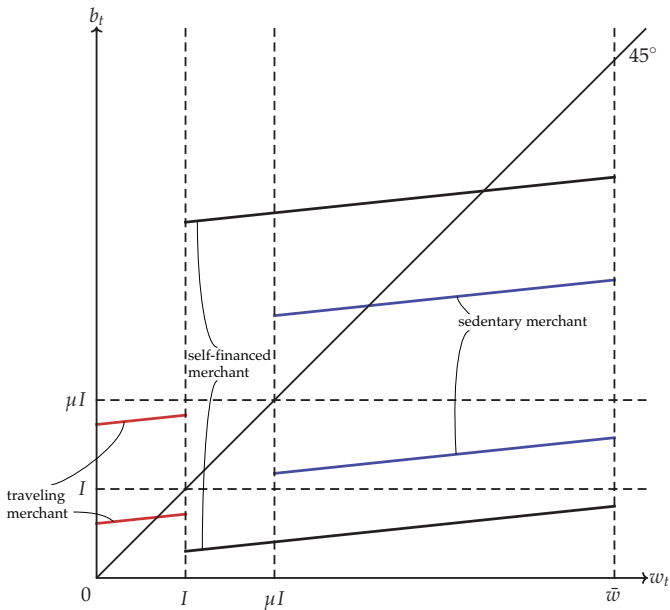
## The puzzle

- International trade created a constituency that supported growth-enhancing institutions (Constraints on the executive and private-contracting institutions).
- **So why did Venice decline? Income Dynamics:**
  1. **Free entry into politics eroded 'nobility' rents**
  2. **Free entry into long-distance trade:**
    - 2.1 Eroded profit margins.
    - 2.2 Raised costs.
    - 2.3 Created the wealth needed for internal financing.
    - 2.4 Induced scale-biased technical change: reduced the risks of trade.
- **Prediction:** When the Great Council members have enough coercive power they will erect barriers to entry into politics and into long-distance trade i.e., there will be institutional regress.

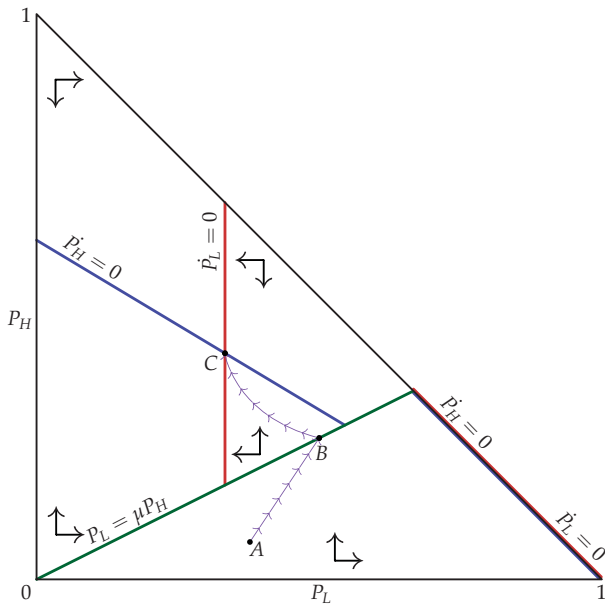
# Occupational choice and bequests, $P_H \leq \mu P_L$



## Occupational choice and bequests, $P_H > \mu P_L$



## Wealth dynamics: early stages



## Sequence of events

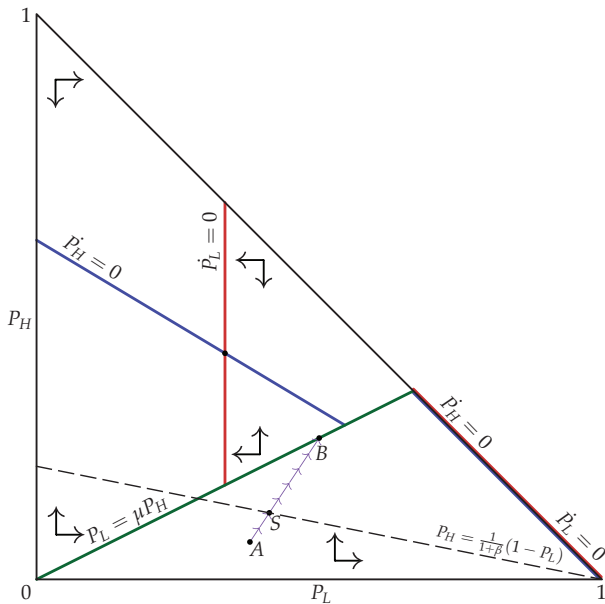
- Nobles vote in the Great Council to decide by simple majority:
  - Whether wealth accumulation above  $w_N$  qualifies a commoner to become a noble.
  - Whether commoners can invest in international trade.
- Citizens unhappy with the decisions choose whether to revolt and nobles choose whether to fight the revolt.
- All mature citizens, nobles and commoners, choose an occupation, which determines how they invest their labour and capital.
- They then realize investment outcomes.
- Entry into the nobility through wealth accumulation takes place if allowed, and nobles enjoy some additional non-pecuniary benefits from their privileges.
- All mature citizens have one child each to whom they bequeath, consume what remains, and pass away.

## Nobility rents and political revolts

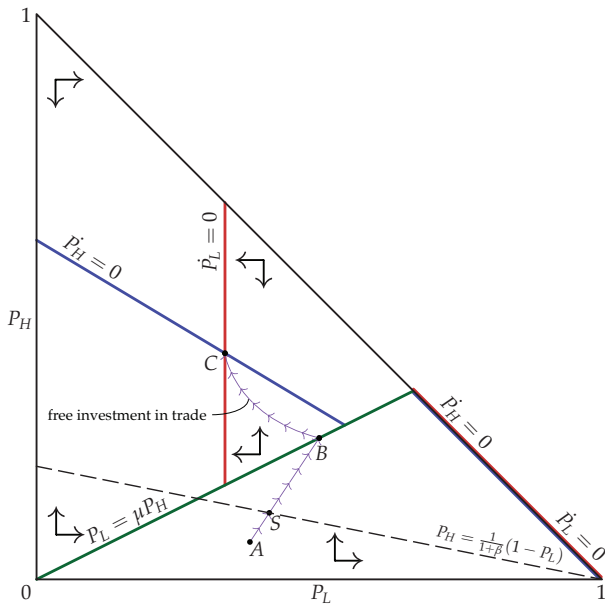
- Total nobility rents  $N$  are split between all nobles.
  - Some nobles attain their status as soon as they reach the age of maturity because of inherited wealth,
  - others attain it later in life once they accumulate sufficient wealth through their own investments and occupation.
- The first of the two votes in the Great Council aims to prevent eventual entry by the latter.
- Assume that  $N$  is large enough relative to  $f$  that nobles are willing to prevent new entry into the nobility whenever they can defeat a revolt, and commoners with an occupation that might allow them to attain wealth  $w_N$  are willing to revolt whenever they can win.
- Because nobles control the state, they fight  $\beta$  times more effectively than commoners in the event of a revolt.
- A Serrata of the Great Council will succeed whenever  $\beta P_N > P_H + P_M - P_N$ , i.e.,

$$P_N > \frac{1}{1 + \beta}(1 - P_L)$$

## Wealth dynamics: early stages



## Wealth dynamics: free investment in trade

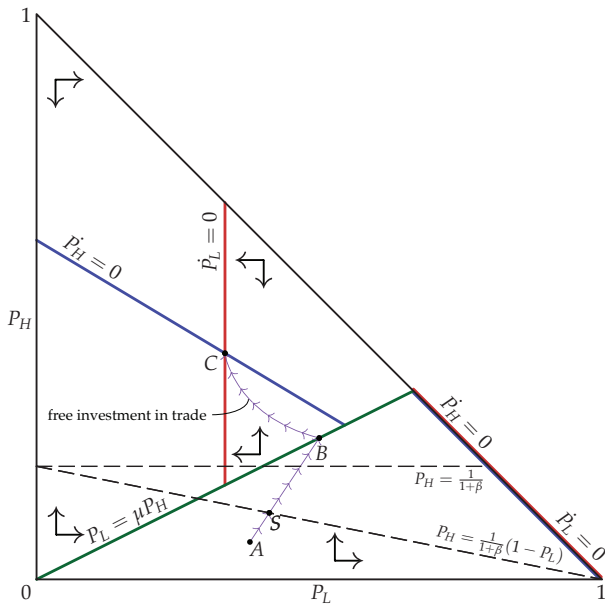


## International trade and economics revolts

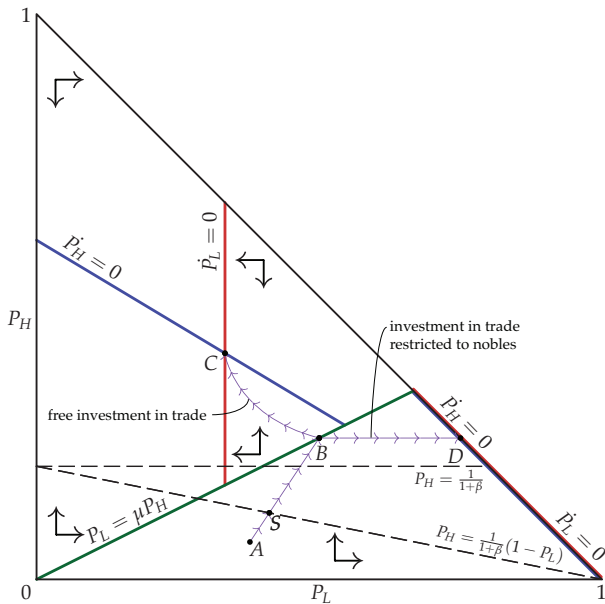
- Consider a situation where  $P_H \geq \mu P_L \geq P_N$ . Assume that  $f$  is small enough that in such a situation nobles are willing to restrict investment in international trade to themselves (to keep  $\alpha$  at  $\underline{\alpha}$ ) whenever they can defeat a revolt, and all commoners are willing to revolt (to increase  $\alpha$  to  $\bar{\alpha}$  for those with  $w > 1$  and to have access to self-financed merchant and sedentary merchant occupations for those with  $w \geq 1$ ) whenever they can win.
- A restriction of investment in international trade to nobles will succeed whenever  $\beta P_N > 1 - P_N$ , i.e.,

$$P_N > \frac{1}{1 + \beta}$$

## Wealth dynamics: free investment in trade



## Wealth dynamics: investment in trade restricted to nobles



## The Serrata in the model

- International trade creates a rising group of wealthy merchants.
- At some point, these wealthy merchants become powerful enough as a group that they can close the Great Council without a successful revolt by up-and-coming merchants.
- However, trade continues to feed the group of nouveau riche, who engage in commerce at a growing scale, even if they are now excluded from the privileges of political power.
- Eventually, this puts downwards pressure on the returns to international trade for nobles.
- Nobles would like to prevent new entry into trade, but that would harm the Venetian population at large.
- To prevent a successful revolt, nobles co-opt the nouveau riche by enlarging the Great Council to include them, just before closing it again and restricting international trade to nobles.

- Despite the *Serrata*, Venice continues engaged in international trade.
- However, relative to the path it would have followed absent the *Serrata*, Venice involves a smaller fraction of its population in international trade, the wealth distribution is much more polarized, and social and economic mobility is reduced to a minimum.

## The Serrata

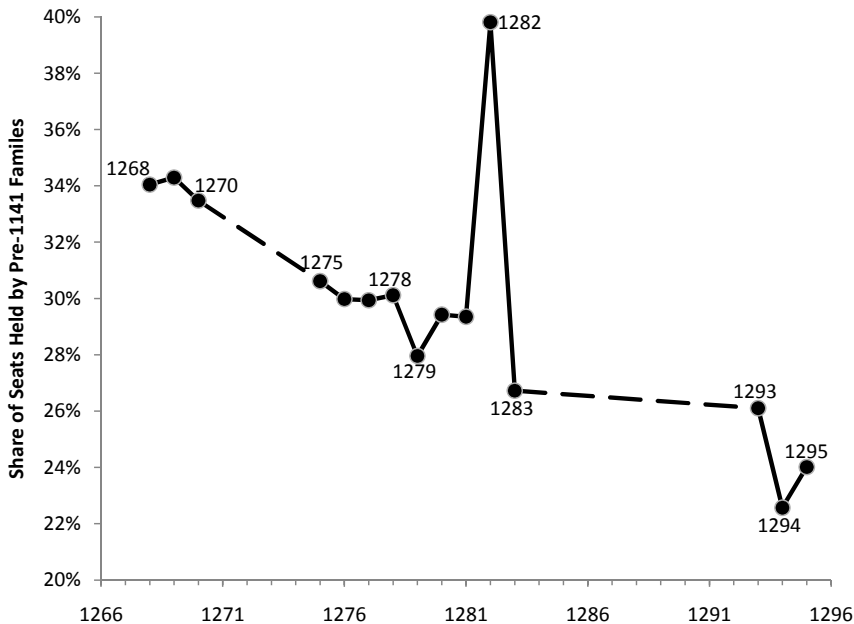
Election rule: Council membership for one year. About 450 members. At end of year, 4 electors chosen to nominate next year's members. This rule is a critical feature of the constitution and is frequently altered to meet exigencies e.g., during first Genoese War (1294-99).

- **October 3, 1286:** Nominations must be confirmed by a majority in the *Quarantia* (tightly controlled by old, rich families). Defeated.
- **October 5, 1286:** Automatic confirmation if fathers and grandfathers served in the Council. Otherwise, require confirmation by Ducal Council. ‘
- **October 17, 1286:** Must be approved by the *Quarantia* and the Doge, Ducal Council and the 40.

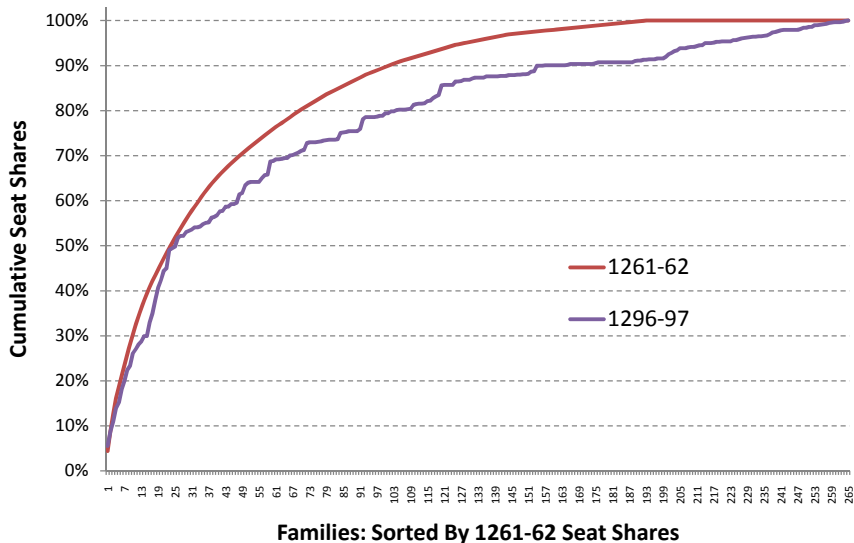
## Voting Data

1. 7,979 seats filled between 1261–62 and 1296–97 sessions.
2. Problems with italian/latin, patronymic/diminutive, branches (de, da, delle, della, de ca', de casa), ad voce, electors, bi-elections

## Share of Great Council Seats Held by Families Dating to Pre-1141



## Share of Great Council Seats Held by Families Dating to 1268–1270



## The Serrata — 'Triumph of the Oligarchs'

- **February, 1297:**
  - If in *Great Council* in the previous 4 years, automatic nomination and approval.
  - New nominations must be approved by the *Quarantia*, but with only 12 votes.
  - 18 month sunset clause.
- **September 11, 1298:** Current members **and their families** no longer need confirmation.
- **September, 1299:** If in *Great Council* in the previous 4 years, automatic approval.
- **September, 1300:** For new nominations, the electors are the *Quarantia*.
- **1315:** *Libro d'Oro*, registry of nobility
- **1323:** **Ancestry is a pre-requisite**, automatic nomination and confirmation at age 25.

## The Serrata – Closure or Opening?

- Large debate about this.
- See Cessi, Lane, Cracco, Chondaji, Rosch
- Numbers increase. Why?
  - Legislative bargain
  - Representative ‘democracy.’
- Serrata in the form it took (hereditary) was an accident of the legislative system. Not foreseen by 1297 legislation.

## Revolts and the Building of State Policing Capacity

1. Pre-empt revolt by allowing entry in 1297-1315. Great Council grows from 450 to 1,500.
2. Repression
  - Boccono (1300).
  - Queirini-Tiepolo (1310). (First 'Us-We' distinction.)
  - **Founding of the Council of Ten in 1310.**
    - \* 1319: The Ten founds its own police force.
    - \* steady growth of coercive state capacity
    - \* Continued unrest e.g., Brothers Barozzi beheaded (1328).
    - \* 1329 becomes permanent.<sup>1</sup>
  - 'In sum, thanks to the Ten's careful investment in the techniques of control, the Serrata's definition of society was not open to question.' ((Ruggiero, 1980, p. 12)). 'Thus the creation of the Ten, with its powerful membership virtually unlimited by older traditions or 'constitutional' checks, added the element of speed and efficiency in

## The Economic Serrata

1. Income mobility from Commenda successes will build up a rich and powerful group of non-nobles.
2. de Lara (2008): Public order, reputation-based institutions
3. 1325: Organization of the Galley trade
4. 1324 *Capitulare Navigantium*: Must pay 300 pounds in taxes in order to trade.

**Long-distance trade is the preserve of the Nobility. This is the demise of private-contracting institutions.**

## An Economic Death in Venice

**1242-1261 ( $N = 90$ )**

		Travelling Party	
		Noble	Commoner
Investor	Noble	58%	11%
	Commoner	9%	22%

**1310-1323 ( $N = 89$ )**

		Travelling Party	
		Noble	Commoner
Investor	Noble	45%	35%
	Commoner	8%	12%

**1324-1342 ( $N = 37$ )**

		Travelling Party	
		Noble	Commoner
Investor	Noble	92%	0%
	Commoner	3%	5%

# The Decline of Commoner Participation in the Colleganza

Period	Number of Contracts		Contracts Involving Non-Nobles		<i>Navigantium</i>
	Total	Avg. per Year	Total	Share	
1073-1221	108	2.2	32	0.30	
1222-1241	112	5.6	66	0.59	
1242-1261	90	4.5	38	0.42	
1310-1314	25	5.0	15	0.60	
1315-1319	29	5.8	17	0.59	
1320-1323	35	8.8	18	0.51	
1324	1	1.0	0	0.00	In Force
1325-1330	19	3.2	3	0.16	
1331-1338	15	1.9	0	0.00	In Force
1339-1342	2	0.5	0	0.00	

## Demise of Venice as a Maritime Power

Acemoglu (2010) Expect decline in entrepreneurialism (with entry barriers, returns do not depend on skill) and directed technical change.

- After 1300, 'Never again was Venice so largely a maritime nation as it had been in the thirteenth century.' (Lane, 1973, p. 170)
- Lose control of Dalmation coast (1344–58) after 350 years.
- Lane describes the middle and later years of the fourteenth century as 'Triumph by Cohesion: Symptoms of Disintegration'
- Second Genoese War (1350-1355): Venice must hire Greek and Catalan sailors.
- Third Genoese War (1378-1381): Venice almost defeated. Note that the Venetian Commander is an unqualified nobleman, but mariners' discontent brings in a qualified commoner.
- 1470 and 1499, Venice is cleared out of the Eastern Mediterranean almost without a fight. Again, the Commander of the fleet is an unqualified nobleman.
- John Cabot (1497)

## Demise of Institutional Dynamism

- Commenda developed elsewhere: Barcelona (where 3 Estates had power) and Genoa (where it evolved into a real joint stock company). The Galley Trade killed the evolution of the commenda.
- Oligarchic-biased technical change kept Venice in the Eastern Mediterranean.
- Banking: deposit banking by 1320, but after this it remains small scale and lacking dynamism.
- The trade-off: a lid on inter-clan rivalry kept it from fragmenting, but retarded its institutional dynamism that was essential for long-term growth and the Atlantic trade.

## Contributions: Why Not Venice?

- Rounding the Horn? No. See Lane on pepper prices to 1499.
- Guilds? No. No merchant guild.
- Ottomans? No. Helpful in trade and also a Dalmatian counterbalance throughout 1300s. No serious issues until 1470.
- Cultural shift to 'landed' values by oligarchs Pirenne (1914)? No.
- Later exogenous sources of Venetian decline. Possible.
  - Climactic change: 10th - 14th is a warm period, 14th - 19th is the little Ice Age. Get more accurate dates for this.
  - Hundred Years War, 1337-1353.
  - Plague 1347.
  - But these come later.

## Contributions:

### Impact of International Trade on Domestic Institutions

- Extend 'Atlantic Trade' of Acemoglu and Johnson (2005) to include both **property-right institutions** and constraints on the executive institutions.
- Extend the critique of 'functionalist' theories such as North and Thomas (1999). See Acemoglu (2003) and Greif (2006)). **A single exogenous trade shock leads first to the rise of good institutions and then to their demise.**

## Causal Channels

Until 1297, an 'Atlantic Trade' model works. But then ...

1. Income mobility
  - 1.1 As incomes grow, the rich are able to self-finance.
  - 1.2 Good institutions mobilize capital, thus eroding profits of incumbents.
  - 1.3 As trade grows, there is scale-biased induced technical change. Super-rich are operating in a segmented market with a competitive fringe.
  - 1.4 When wealth is the criterion for entry into politics, as incomes grow political 'rents' are eroded.
2. 1297-1324: To eliminate erosion of political rents, there is a political revolution (*Serrata*). To further reduce the upward income mobility of middle-income merchants, there is an economic 'revolution' (*Navigantium*) which leads to more state control of international trade and limits access to good contracting institutions.

## Anticipated by Acemoglu (2008)

- *Scale-biased technical change makes oligarchization less costly.*
- *Entrepreneurial deterioration and Oligarch-biased technical change lead to demise.*
- *But Acemoglu does not give enough attention to income mobility and wealth distributions. See Banerjee and Newman (1993).*