

# THE RISE OF EUROPE: ATLANTIC TRADE, INSTITUTIONAL CHANGE AND ECONOMIC GROWTH

PAPER PRESENTATION

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ECONOMIC GROWTH AND COMPARATIVE DEVELOPMENT

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# Introduction

- Western Europe's accelerated growth since the 19th century.
- “First great divergence ” since the 16th century.
- Little consensus on the reasons for this growth and this divergence.
- Strong institutional differences between Western and Eastern Europe
- Greater Atlantic trade by Western Europe.





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# Hypothesis

- Capitalist institutions are essential for incentives to undertake investment and for sustained economic growth, such as that experienced by Western Europe during the "First Great Divergence".
- Capitalist institutions are favored by commercial interests, especially new groups that do not receive commercial privileges from the state, but are not normally welcome by the monarchy, rulers, and elites.



# Hypothesis

- Institutions favored by economically and politically powerful groups are more likely to prevail.
- Atlantic trade and colonial activity created substantial opportunities for growth, enriching and strengthening commercial interests, including new groups with no ties to the monarchy.



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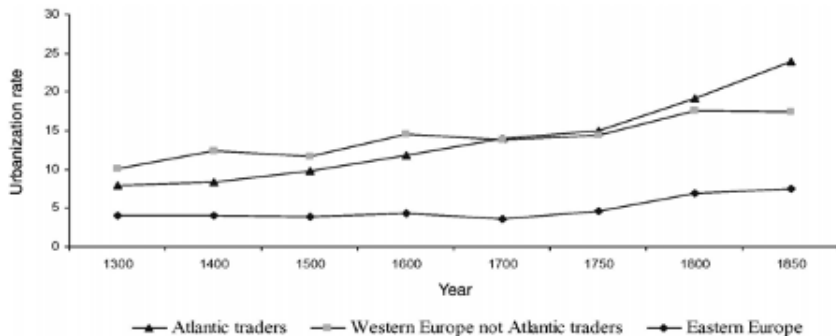
# Data

- European urban population of Bairoch, Batou and Cheve
- Madison'S GDP per capita estimates for 1500, 1600, 1700, 1820 and beyond.
- Bairoch, Batou and Cheve'S city-level data for Europe.



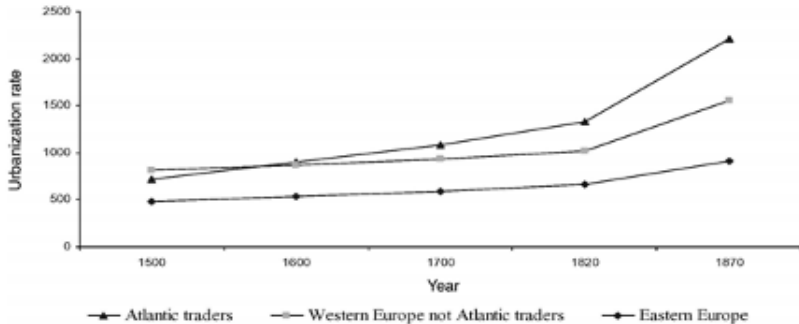
# Data

## Urbanization rates weighted by population



# Data

GPD per capita from 1500 weighted population



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# Model

$$U_{jt} = d_t + \delta_j + \sum_{t \geq 1600} \alpha_t \cdot WE_j \cdot d_t + \sum_{t \geq 1500} \beta_t \cdot PAT_j \cdot d_t + X'_{jt} \cdot \gamma + \varepsilon_{jt}$$

- $U_{jt}$  is urbanization (percentage of population in urban area) in country  $j$  for time  $t$
- $WE_j$  dummy variable that indicates if the country is from Western Europe
- $d_t$ 's denote annual effects
- $\delta_j$  denote country effects
- $X'_{jt}$  is a vector of other covariates
- $\varepsilon_{jt}$  is the term of error
- $PAT_j$  is an indicator for Atlantic merchant



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# Results

- Western European urbanization grew by 6.9 percentage points relative to Eastern Europe between 1500 and 1850.
- Urbanization among Atlantic merchants grew approximately 8.5 percent more than in other western and eastern European nations.



# Results

- Protestant countries presented 4.6 more percentage points of urbanization and 30% more of GDP in the period from 1500 to 1850.
- Inclusion of analysis of war processes
- Inclusion of analysis of hereditary influence of the Roman Empire



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# justifying the Hypothesis

- Measure of "constrain on the executive". It measures the limitations on the use of power by the executive branch and is probably correlated with the security of merchants' property rights.
- Capital protection measure. This measure depends on the formal rights granted to urban merchants, particularly their protection in the event of a dispute with the nobility or the monarch.
- They were based on Langer (1972) and supplemented by stearns (2001)



# justifying the Hypothesis

$$I_{jt} = d_t + \delta_j + \sum_{t \geq 1600} \alpha_t \cdot WE_j \cdot d_t + \sum_{t \geq 1500} \beta_t \cdot PAT_j \cdot d_t + X'_{jt} \cdot \gamma + \varepsilon_{jt}$$

- $I_{jt}$  is our measure of institutions in country  $j$  at time  $t$   
(restriction on the executive in the first part and protection for capital in the second part)
- Empirical results proved that there was a differential evaluation in institutions in Western Europe after 1500
- There is a close connection between Atlantic trade and the development of capitalist institutions



# justifying the Hypothesis

$$U_{jt} = d_t + \delta_j + \sum_{t \geq 1600} \alpha_t \cdot WE_j \cdot d_t + \beta \cdot \ln AT_t \cdot PAT_j + \sum_{t > 1500} \gamma \cdot I_{j,1415} \cdot d_t + \eta \cdot \ln AT_t \cdot PAT_j \cdot I_{j,1415} + \varepsilon_{jt}$$

- $U_{jt}$  is the rate of urbanization
- $AT_t$  is our measure of atlantic trade
- $PAT_j$  is again an indicator for the potential Atlantic trader or the Atlantic coast-area ratio
- $j,1415$  they are the "initial institutions of country j," The average of its institutions (executive restriction) in 1400 and 1500.
- The terms  $\gamma \cdot I_{j,1415} \cdot d_t$  allow any differential economic trend simply related to differences in initial institutions, which would apply without access to the Atlantic





# justifying the Hypothesis

Table 10A  
Interaction Between Initial Institutions and Atlantic Trade

<i>Using Atlantic trader dummy as measure of Atlantic trade</i>									
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
<i>Panel A: Dependent Variable is Urbanization</i>									
Panel, 1300-1850	Panel, 1300-1850	Panel, 1300-1850	Panel, 1300-1850	Panel, 1300-1850, unweighted	Panel, 1600-1850	Panel, 1600-1850	Panel, 1600-1850	Panel, 1600-1850	Panel, 1600-1850, unweighted
Atlantic Trader x	0.011	0.011	-0.0090	-0.0026		0.0082	0.0084	-0.012	-0.009
Volume of Aggregate Atlantic Trade	(0.002)	(0.002)	(0.0049)	(0.0062)		(0.0020)	(0.0020)	(0.004)	(0.005)
p-value for Initial Institutions x year (1600, 1700, 1750, 1800, 1850)	[0.61]		[0.51]	[0.71]	[0.85]	[0.12]		[0.08]	[0.42]
Total Atlantic Trade x Initial Institutions x Atlantic Trader			0.021	0.017				0.021	0.022
			(0.004)	(0.005)				(0.004)	(0.004)
R-Squared	0.87	0.88	0.89	0.90	0.83	0.86	0.86	0.87	0.81
Number of Observations	192	192	192	192	192	240	240	240	240
<i>Panel B: Dependent Variable is Log GDP per capita</i>									
Panel, 1500-1820	Panel, 1500-1820	Panel, 1500-1820	Panel, 1500-1820	Panel, 1500-1820, unweighted	Panel, 1500-1870	Panel, 1500-1870	Panel, 1500-1870	Panel, 1500-1870	Panel, 1500-1870, unweighted
Atlantic Trader x	0.069	0.068	-0.068	-0.079		0.004	0.039	-0.122	-0.110
Volume of Aggregate Atlantic Trade	(0.016)	(0.016)	(0.028)	(0.028)		(0.017)	(0.017)	(0.030)	(0.028)
p-value for Initial Institutions x year (1600, 1700, 1750, 1800, 1850)	[0.40]		[0.31]	[0.004]	[0.08]	[0.66]		[0.64]	[0.58]
Total Atlantic Trade x Initial Institutions x Atlantic Trader			0.14	0.12				0.16	0.11
			(0.03)	(0.02)				(0.03)	(0.02)
R-Squared	0.94	0.96	0.96	0.97	0.97	0.95	0.95	0.95	0.96
Number of Observations	96	96	96	96	96	120	120	120	120
<i>Panel C: Dependent Variable is Constraint on the Executive</i>									
Panel, 1300-1850	Panel, 1300-1850	Panel, 1300-1850	Panel, 1300-1850	Panel, 1300-1850, unweighted	Panel, 1600-1850	Panel, 1600-1850	Panel, 1600-1850	Panel, 1600-1850	Panel, 1600-1850, unweighted
Atlantic Trader x	0.42	0.42	-0.001	-0.096		0.35	0.34	-0.11	-0.15
Volume of Aggregate Atlantic Trade	(0.06)	(0.06)	(0.12)	(0.12)		(0.05)	(0.05)	(0.10)	(0.09)
p-value for Initial Institutions x year (1600, 1700, 1750, 1800, 1850)	[0.27]		[0.14]	[0.008]	[0.69]	[0.43]		[0.33]	[0.95]
Total Atlantic Trade x Initial Institutions x Atlantic Trader			0.44	0.26				0.47	0.29
			(0.11)	(0.09)				(0.09)	(0.07)
R-Squared	0.76	0.81	0.82	0.84	0.76	0.72	0.77	0.78	0.71
Number of Observations	192	192	192	192	192	240	240	240	240

# justifying the Hypothesis

Table 10B  
Interaction Between Initial Institutions and Atlantic Trade

<i>Using coastline-to-area ratio as measure of Atlantic trade</i>									
(1)	(2)	(3)	(4)	(4)	(5)	(6)	(7)	(8)	(8)
<i>Panel A: Dependent Variable is Urbanization</i>									
	Panel, 1300-1850	Panel, 1300-1850	Panel, 1300-1850	Panel, 1300-1850, unweighted	Panel, 1000-1850	Panel, 1000-1850	Panel, 1000-1850	Panel, 1000-1850	Panel, 1000-1850, unweighted
Atlantic Coastline-to-area x Volume of Aggregate Atlantic Trade		0.74 (0.07)	0.74 (0.07)	0.30 (0.28)	0.13 (0.30)	0.64 (0.06)	0.64 (0.06)	0.20 (0.25)	-0.12 (0.25)
p-value for Institutions in 1500 x year (1600, 1700, 1750, 1800, 1850)	[0.61]		[0.45]	[0.30]	[0.97]	[0.12]	[0.12]	[0.04]	[0.40]
Total Atlantic Trade x Institutions in 1500 x Atlantic Coastline-to-area				0.44 (0.28)	0.52 (0.29)			0.43 (0.24)	0.61 (0.24)
R-Squared	0.87	0.93	0.93	0.93	0.83	0.86	0.91	0.91	0.78
Number of Observations	192	192	192	192	192	240	240	240	240
<i>Panel B: Dependent Variable is Log GDP per capita</i>									
	Panel, 1500-1820	Panel, 1500-1820	Panel, 1500-1820	Panel, 1500-1820, unweighted	Panel, 1500-1870	Panel, 1500-1870	Panel, 1500-1870	Panel, 1500-1870	Panel, 1500-1870, unweighted
Atlantic Coastline-to-area x Volume of Aggregate Atlantic Trade		3.38 (0.56)	2.99 (0.44)	-3.42 (1.82)	-2.76 (1.48)	2.82 (0.45)	2.99 (0.44)	-3.42 (1.82)	-3.66 (1.18)
p-value for Institutions in 1500 x year (1600, 1700, 1750, 1800, 1850)	[0.66]		[0.11]	[0.96]	[0.39]	[0.66]	[0.11]	[0.96]	[0.17]
Total Atlantic Trade x Institutions in 1500 x Atlantic Coastline-to-area				6.28 (1.74)	5.40 (1.42)			6.28 (1.74)	5.80 (1.13)
R-Squared	0.95	0.96	0.97	0.97	0.97	0.95	0.96	0.97	0.97
Number of Observations	96	96	96	96	96	120	120	120	120
<i>Panel C: Dependent Variable is Constraint on the Executive</i>									
	Panel, 1300-1850	Panel, 1300-1850	Panel, 1300-1850	Panel, 1300-1850, unweighted	Panel, 1000-1850	Panel, 1000-1850	Panel, 1000-1850	Panel, 1000-1850	Panel, 1000-1850, unweighted
Atlantic Coastline-to-area x Volume of Aggregate Atlantic Trade		11.97 (2.21)	12.96 (2.18)	-12.58 (9.22)	-3.02 (5.43)	13.08 (1.71)	13.83 (1.69)	-6.74 (7.10)	0.14 (4.19)
p-value for Institutions in 1500 x year (1600, 1700, 1750, 1800, 1850)	[0.26]		[0.03]	[0.83]	[0.88]	[0.43]	[0.03]	[0.81]	[0.87]
Total Atlantic Trade x Institutions in 1500 x Atlantic Coastline-to-area				25.19 (8.85)	13.56 (5.26)			20.30 (6.82)	11.61 (4.07)
R-Squared	0.76	0.78	0.80	0.82	0.78	0.72	0.78	0.79	0.74
Number of Observations	192	192	192	192	192	240	240	240	240

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