

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

PAPER PRESENTATION

JAIR EBRATT RINCON & DANIEL ALEJANDRO DIAZ DURAN

PONTIFICIA UNIVERSIDAD JAVERIANA. FACULTAD DE CIENCIAS ECONOMICAS Y
ADMINISTRATIVAS.

ECONOMIC GROWTH AND COMPARATIVE DEVELOPMENT

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Authors

Daron Acemoglu (MIT)



AUTHORS

Simon Johnson (MIT)



AUTHORS

James Robinson (Berkeley)



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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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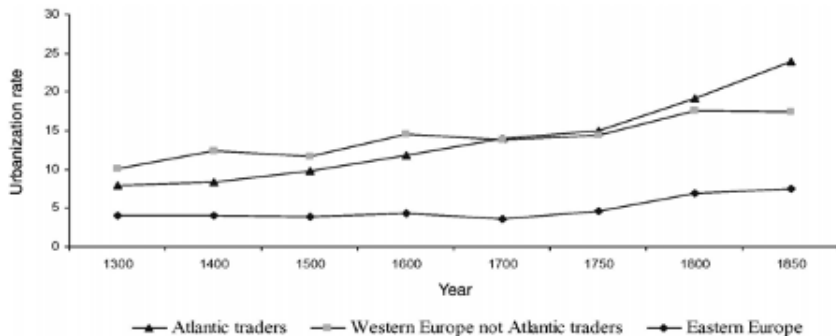
Data

- 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.



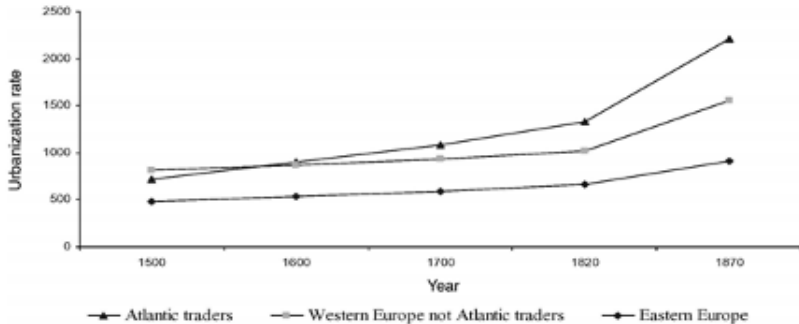
Data

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
- δ_j denote country effects
- X'_{jt} is a vector of other covariates
- ε_{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

Using Atlantic trader dummy as measure of Atlantic trade									
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Panel A: Dependent Variable is Urbanization									
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 Volume of Aggregate Atlantic Trade	0.011 (0.002)	0.011 (0.002)	-0.0090 (0.0049)	-0.0026 (0.0062)		0.0082 (0.0020)	0.0084 (0.0020)	-0.012 (0.004)	-0.009 (0.006)
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 (0.004)	0.017 (0.005)				0.021 (0.004)	0.022 (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
Panel B: Dependent Variable is Log GDP per capita									
Panel, 1300-1820	Panel, 1300-1820	Panel, 1300-1820	Panel, 1300-1820	Panel, 1500-1820, unweighted	Panel, 1500-1870	Panel, 1500-1870	Panel, 1500-1870	Panel, 1500-1870	Panel, 1500-1870, unweighted
Atlantic Trader x Volume of Aggregate Atlantic Trade	0.069 (0.016)	0.068 (0.016)	-0.068 (0.028)	-0.079 (0.028)		0.004 (0.017)	0.039 (0.017)	-0.122 (0.030)	-0.110 (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 (0.03)	0.12 (0.02)				0.16 (0.03)	0.11 (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
Panel C: Dependent Variable is Constraint on the Executive									
Panel, 1300-1850	Panel, 1300-1850	Panel, 1300-1850	Panel, 1300-1850	Panel, 1300-1850, unweighted	Panel, 1500-1850	Panel, 1500-1850	Panel, 1500-1850	Panel, 1500-1850	Panel, 1500-1850, unweighted
Atlantic Trader x Volume of Aggregate Atlantic Trade	0.42 (0.06)	0.42 (0.06)	-0.001 (0.12)	-0.096 (0.12)		0.35 (0.05)	0.34 (0.05)	-0.11 (0.10)	-0.15 (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 (0.11)	0.26 (0.09)				0.47 (0.09)	0.29 (0.07)
R-Squared	0.76	0.81	0.82	0.84	0.76	0.72	0.77	0.78	0.70
Number of Observations	192	192	192	192	192	240	240	240	240

justifying the Hypothesis

Table 10B
Interaction Between Initial Institutions and Atlantic Trade

Interaction between urban institutions and Atlantic trade										
Using coastline-to-area ratio as measure of Atlantic trade										
	(1)	(2)	(3)	(4)	(4)	(5)	(6)	(7)	(8)	(8)
Panel A: Dependent Variable is Urbanization										
	Panel, 1300-1850	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	0.91	0.78
Number of Observations	192	192	192	192	192	240	240	240	240	240
Panel B: Dependent Variable is Log GDP per capita										
	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 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	0.97
Number of Observations	96	96	96	96	96	120	120	120	120	120
Panel C: Dependent Variable is Constraint on the Executive										
	Panel, 1300-1850	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	0.80	0.74
Number of Observations	192	192	192	192	192	240	240	240	240	240

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Contact Information

- jair.ebratt@javeriana.edu.co
- da-diaz@javeriana.edu.co

