

Economics 172
Issues in African Economic Development

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Lecture 19 – April 3, 2007

- The midterm exam will be returned at the end of class today. The mean score was 19.7 (median score 20.25) out of 29 points in total.

The African slave trade(s)

- There were three distinct, large-scale slave trading routes through the end of the 19th century:

Atlantic Ocean trade *11-13 million*

Sahara, Red Sea trade *5 million*

Indian Ocean trade *2 million*

TOTAL

18-20 million people enslaved

Data on the Atlantic Slave Trade

- At the peak of the trade in the 18th century, huge numbers of Africans were being captured every year:

| | <u># people / year (range)</u> |
|------------|--------------------------------|
| 1450-1600 | 2,500-7,441 |
| 1601-1700 | 13,324-18,680 |
| 1701-1800 | 61,300-97,469 |
| Late 1800s | 33,300-50,230 |

- A 1850 census of Freetown, Sierra Leone indicates that many slaves were taken in war, kidnapped, enslaved after committing a crime, sold by relatives

The Atlantic Slave Trade

- Most slave raiding was carried out by Africans, who sold captured people to European traders at coastal ports (in today's Ghana, Nigeria, Congo, Liberia, Sierra Leone, Benin, Senegal, Cameroon, Angola, ...)
- Europeans traded slaves for horses, textiles, metal goods and tools, and most importantly guns. It is estimated that 20 million guns were traded in all
- Military power brought them more slaves and more political power. Slave traders became wealthy and politically influential in much of coastal West Africa

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- Location relatively close to the Americas, with its booming sugar plantations
- Pre-existing internal slave networks: in the late 1800s, 18-44% of Africans were slaves of other Africans (based on early European colonial surveys) – as domestic slaves, and in mines and plantations

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- Less military might (e.g., compared to Asia)
- Other reasons?

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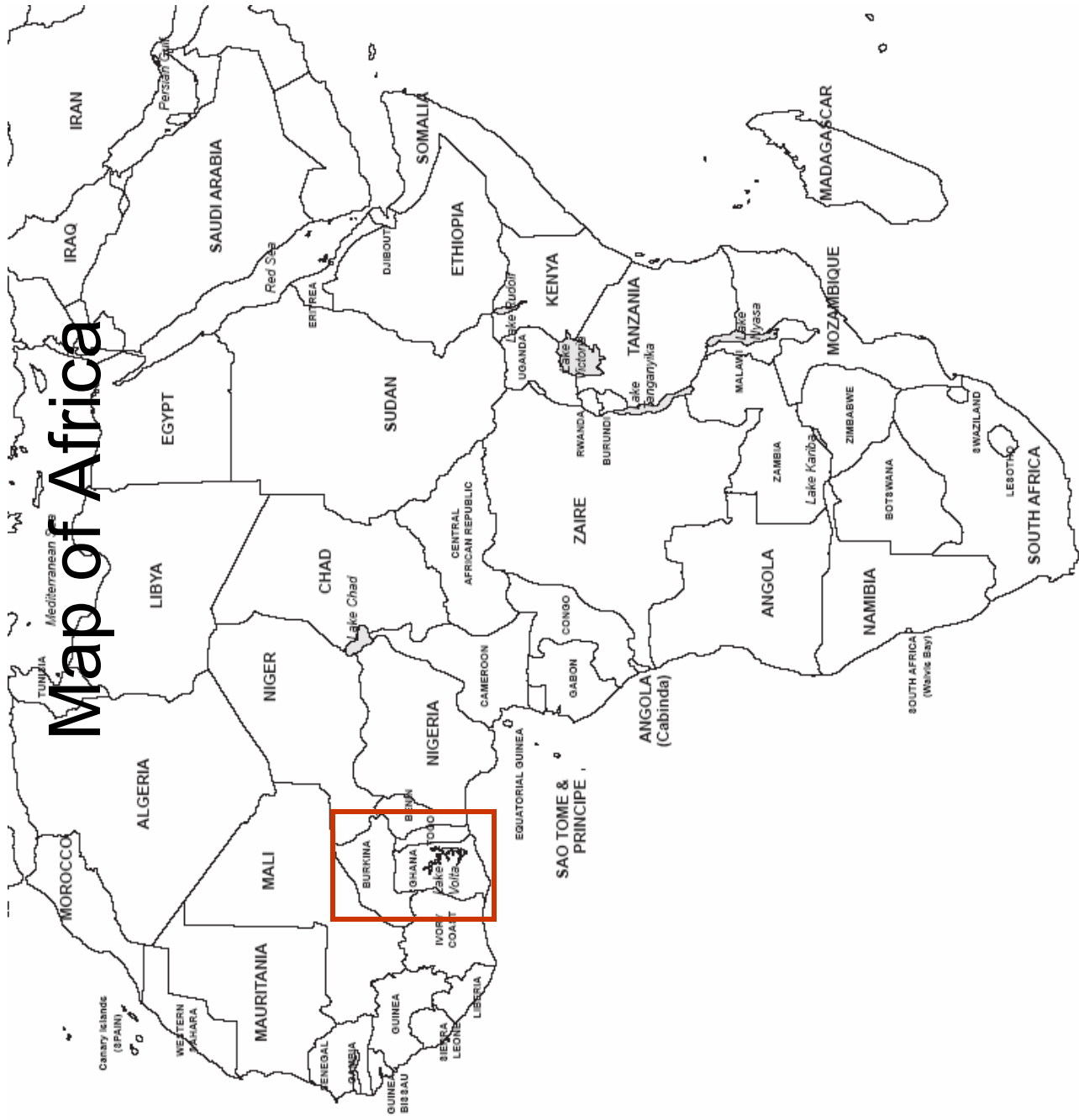
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- Lower population density → less urbanization
- Strategies to avoid capture → lower output
- Shorter time horizons → less investment
- Efforts diverted into slaving, away from production
- Changes in the nature of political power
- Breakdown of social cooperation, cultural changes

Long-run impacts of slavery in Africa

- Nunn (2005) compiled a new dataset on the country of origin of individuals sent to the New World in the Atlantic Ocean and Indian Ocean slave trades, using shipping records, slave ethnicity data
- He assigns people shipped from a particular port as originally coming from that country or its neighbors (e.g., people shipped from ports today in Ghana are assigned to either Ghana or Burkina Faso)
 - Information from 46 different sources on 88,616 people from 480 different ethnic groups for the Atlantic trade, only 3 sources for the Indian Ocean trade



Map of Africa

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- Although an improvement, there are many ways this could generate imperfect data

Numbers of slaves taken, by country

- Nunn constructs a measure of slavery exposure

Table 2: Total Slave Exports, 1400–1913: Top 10 countries

| Country | Number Exported | Percent of total |
|------------|-----------------|------------------|
| Nigeria | 2,326,526 | 13% |
| Zaire | 2,184,318 | 12% |
| Angola | 2,095,149 | 12% |
| Ghana | 1,459,691 | 8% |
| Ethiopia | 1,217,724 | 7% |
| Sudan | 1,174,049 | 7% |
| Benin | 928,963 | 5% |
| Mozambique | 710,657 | 4% |
| Congo | 706,931 | 4% |

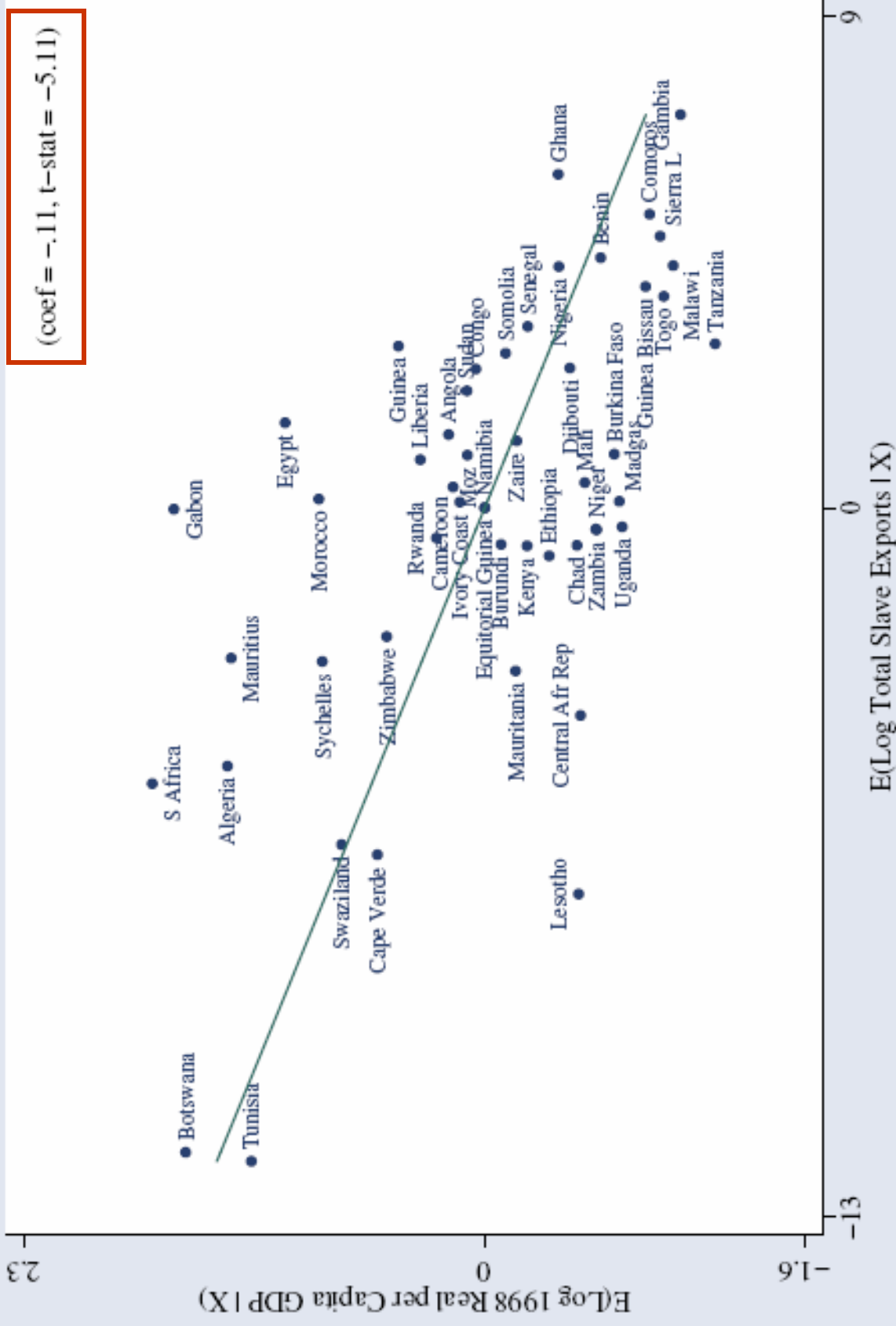
Long-run impacts

- The main regression equation is:

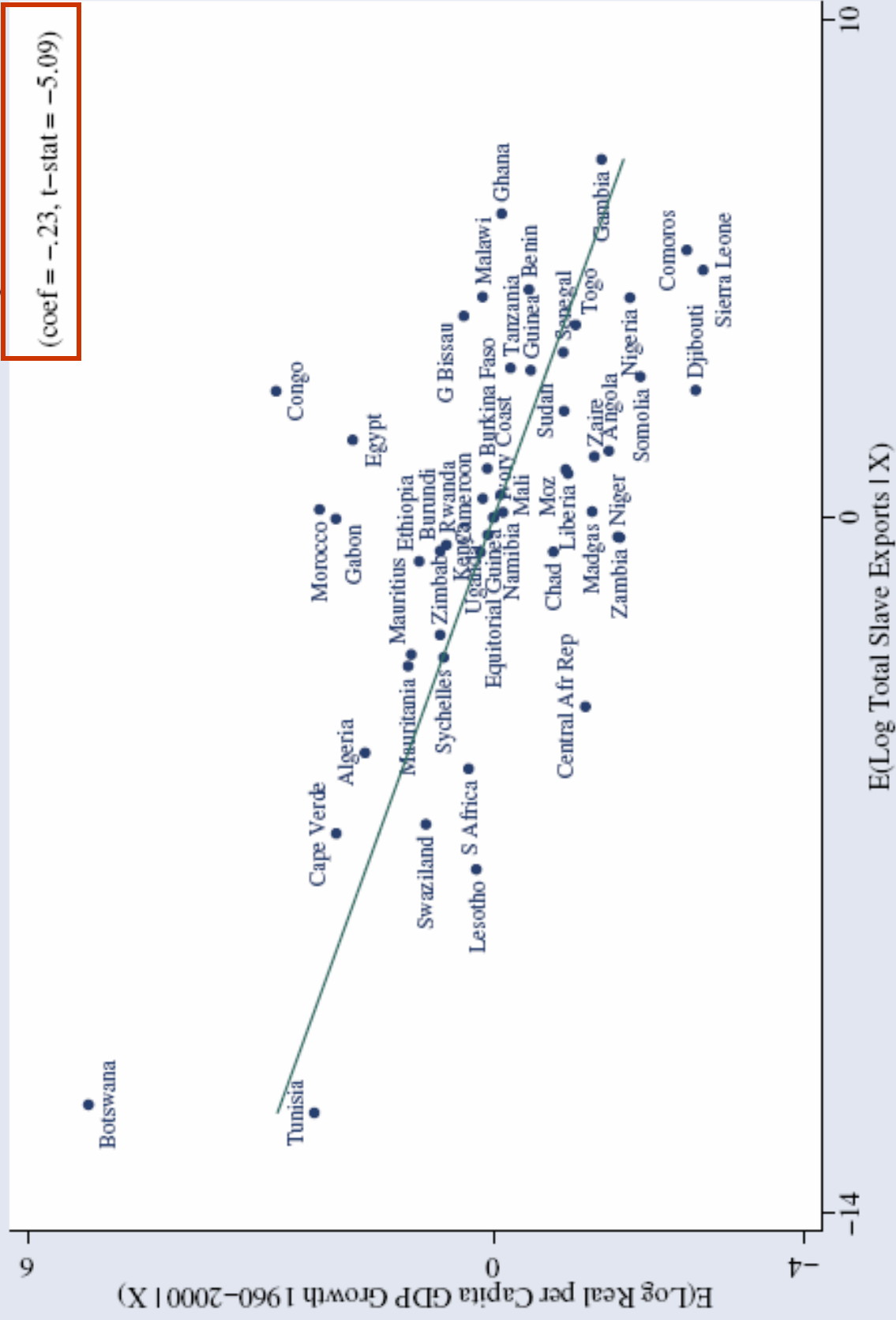
$$Y_i = \beta_0 + \beta_1 \ln(\text{exports})_i + \beta_2 \ln(\text{area})_i + \mathbf{C}'_i \delta + \mathbf{X}'_i \gamma + \varepsilon_i$$

- The Y variables here include long-run income levels (per capita), economic growth rates, political outcomes. Nunn finds consistently negative impacts of slavery exposure on later economic and political development outcomes in Africa

Partial Correlation Plot: Log Income and Slave Exports



Partial Correlation Plot: Growth and Slave Exports



Long-run impacts

- The magnitude of these negative effects is quite large: a 1 s.d. increase in slave exports decreases annual per capita economic growth in 1960-2000 by 1.25%
- There are also adverse impacts on many other political and institutional outcomes (Table 12). How should we interpret the true channels leading to the poor economic development outcomes?

Table 12: $\ln(\text{exports/area})$ and various institutional measures.

| Dependent Variable | (1) | | | | (2) | | | |
|--|-----------|--------|----|-------|-----------|--------|----|-------|
| | beta coef | t-stat | N | R^2 | beta coef | t-stat | N | R^2 |
| <u>Political Stability</u> | | | | | | | | |
| Military coups/year, independence to 2000 | .32 | 2.39 | 52 | .10 | .32 | 2.19 | 52 | .16 |
| Avg number of revolutions per decade 1960–1990 | .22 | 1.54 | 50 | .05 | .19 | 1.32 | 50 | .15 |
| Political Stability 2002 | -.37 | -2.80 | 52 | .14 | -.34 | -2.57 | 52 | .34 |
| <u>Quality of Government</u> | | | | | | | | |
| Government Effectiveness 2002 | -.59 | -5.21 | 52 | .35 | -.58 | -5.10 | 52 | .49 |
| Regulatory Quality 2002 | -.50 | -4.08 | 52 | .25 | -.49 | -4.28 | 52 | .49 |
| Control of Corruption 2002 | -.57 | -4.91 | 52 | .33 | -.62 | -5.58 | 52 | .53 |
| Colonial Dummies | No | | | | Yes | | | |

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|---|-----------|--------|----|-------|-----------|--------|-----|-------|
| | beta coef | t-stat | N | R^2 | beta coef | t-stat | N | R^2 |
| <u>Property Rights</u> | | | | | | | | |
| Average protection against expropriation risk | -.32 | -2.18 | 43 | .10 | -.38 | -2.42 | 43 | .34 |
| Rule of Law 2002 | -.53 | -4.39 | 52 | .28 | -.53 | -4.41 | 52 | .44 |
| <u>Accountability of Government</u> | | | | | | | | |
| Constraint on Executive 1990 | -.31 | -2.18 | 46 | .10 | -.30 | -1.93 | 46 | .21 |
| Voice and Accountability 2002 | -.37 | -2.85 | 52 | .14 | -.34 | -2.66 | 52 | .38 |
| Democracy Level in 1994 (1=low, 7=high) | -.42 | -3.08 | 47 | .17 | -.44 | -3.25 | 47 | .41 |
| Colonial Dummies | | | | | | | | |
| | | | | | | | Yes | |

Interpretation of Nunn's results

- Countries most exposed to European slave trading today look much worse off than other African countries. Several of Africa's success stories (e.g., Botswana) were largely untouched by the trade

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- Countries most exposed to European slave trading today look much worse off than other African countries. Several of Africa's success stories (e.g., Botswana) were largely untouched by the trade
- But it is unclear exactly what the cause of this is. There are many theoretically plausible mechanisms (economic, political, cultural) through which slavery could affect current outcomes
- Omitted variables: were the areas with the weakest political institutions historically most preyed upon?

- For next time: continue readings on the historical legacies of slavery and colonialism (weeks 10-11)

Whiteboard #1

Whiteboard #2

Whiteboard #3

Whiteboard #4

Whiteboard #5

