

Africa

 ${\sf Jes\'us} \ {\sf Fern\'andez-Villaverde}^1$

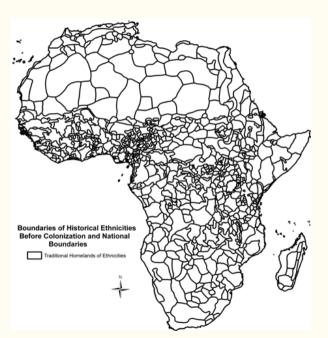
October 31, 2022

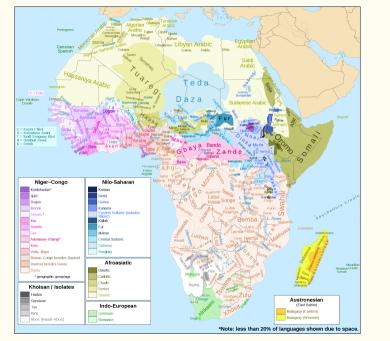
¹University of Pennsylvania

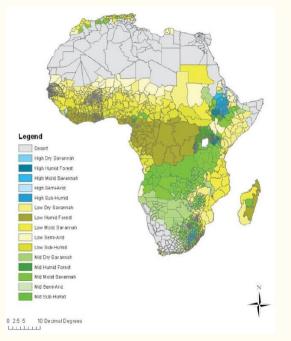
A vast and diverse continent

- Thinking about African economic history since c. 1400 as a whole is challenging task.
- Vast (30.3 million km2; around three times the size of the U.S.) and enormously rich area.
- Cradle of anatomically modern humans (around 300,000 years ago: oldest remains from Jebel Irhoud in Morocco).
- The ancestors of all of us lived in East Africa around 70,000 years ago and (some) spread out to the
 rest of the globe around 50,000 years ago (although our understanding of this process becomes more
 and more complex with each new discovery).
- Genetically, linguistically, and ecologically, Africa is the most diverse continent on the globe.







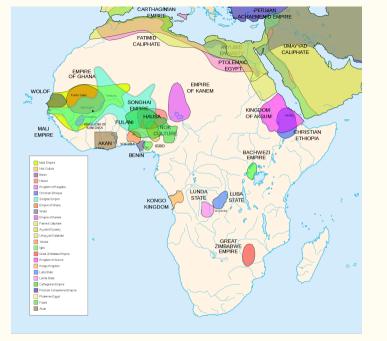


A dynamic continent

- Also, Africa experiences constant change both internally and externally driven during these centuries, with large economic consequences:
 - 1. Climatic and environmental change.
 - 2. Bantu expansion and the rise of the Zulu Empire, Oromo migrations.
 - 3. Expansion of Islam and Christianity.
 - 4. Slavery, colonialism, and independence.
 - 5. Arrival of new crops (maize, cassava, coffee, ...).
 - 6. Integration into world economy.
- You should forget about "ahistorical" concepts of an "eternal Africa" (either as a positive or negative feature) or "one-nation Africa."

Selection of topics

- Among other aspects, need to integrate in a single narrative:
 - 1. Egypt \rightarrow part of the Ottoman empire (1517-1867), later a semi-British colony and a leader of Arab nationalism.
 - West Africa → slave trade with Europe and the Americas, colonial possession, struggles after independence.
 - 3. East Africa \rightarrow slave trade with the Arab world, part of the Indian Ocean network of trade, experiments with socialism in the 1960s-1980s.
 - 4. South Africa → European settlement in Cape Town, independent Boer republics, Apartheid regime, economic center of Sub-Saharan Africa.
- Out of sheer necessity, we will focus on Sub-Saharan Africa.



A point about evidence

- Documentary record is more limited than for other regions.
- For example, we do not even know where the capital of the Mali Empire (c. 1230-1670) was.
- Reasons:
 - 1. Environment.
 - 2. "Records of documentation." For example, highly acidic nature of tropical soil.
 - 3. Ideological structures.
 - 4. Academic framework.
- This does not mean we should not study Africa.
- "The Data Revolution in African Economic History" by Johan Fourie, *Journal of Interdisciplinary History* 47, no. 2 (2016): 193-212.

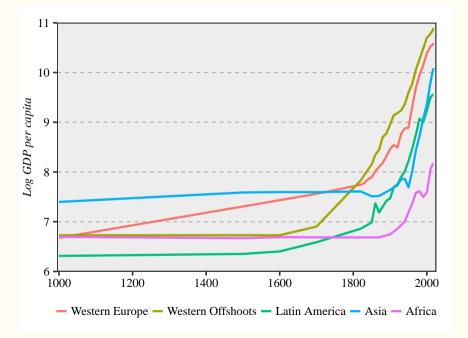
Additional readings

- General history:
 - 1. Africans: The History of a Continent (2nd ed.), by John Iliffe.
 - 2. The Civilizations of Africa: A History to 1800, by Christopher Ehret.
 - 3. The Golden Rhinoceros: Histories of the African Middle Ages, by François-Xavier Fauvelle.
 - 4. A History of Modern Africa: 1800 to the Present (3rd ed.), by Richard J. Reid.
- Economic history:
 - 1. The History of African Development, available at https://www.aehnetwork.org/textbook/.
 - 2. Africa's Development in Historical Perspective, by Emmanuel Akyeampong et al.
 - 3. Economic History Review: Volume 67, Issue 4, Special Issue: The Renaissance of African Economic History, available at PennLibrary.
 - 4. An Economic History of South Africa: Conquest, Discrimination and Development, by Charles H. Feinstein.

The initial conditions

Africa c. 1400

- Likely, Sub-Saharan Africa is the region with the lowest income per capita c. 1400 and today.
- Notice: this low level of income per capita is before slave trade by Europeans starts, but after slave trade by Arabs have been happening at large scale since at least 9th century.
- Similarly, this low level of income per capita is before any major colonial settlements have started.
- Of course, this does not imply that slave trade and colonialism were not detrimental for Africa's development, just that we are analyzing a complex set of interrelated phenomena.
- In fact, slave trade and colonialism need to be understood within the context of Africa's situation c. 1400.

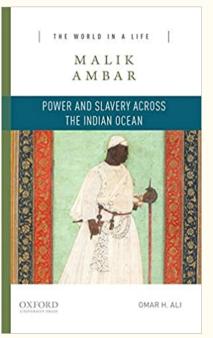


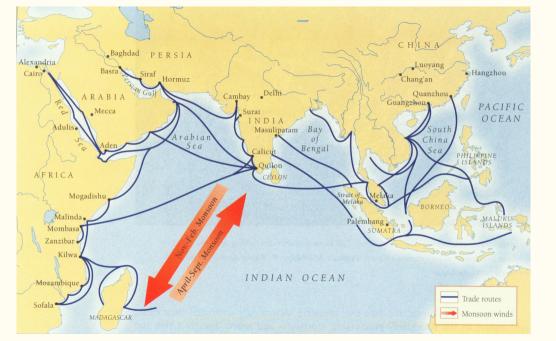












No large agrarian states

No large agrarian state

- By 1400, no large, sustained centralized agrarian state has appeared in Sub-Saharan Africa.
- Partial exception: Ethiopian plateau. Domesticated teff, finger millet, sesame, mustard, ensete, and coffee and husbandry.
- Large agrarian states are required to generate enough population and surplus to sustain technological growth.
- Of course, this is not to say that Africans were worse off. Jared Diamond and James C. Scott have expressed serious doubts about the advantages of states and "civilization."
- Instead, more decentralized agricultural systems based on yams, palm oil, toro, beans, bananas, and plantains. Some sorghum and millet around Lake Chad and in the Bantu expansion.
- Decentralized agriculture was base for smaller and more equalitarian polities.



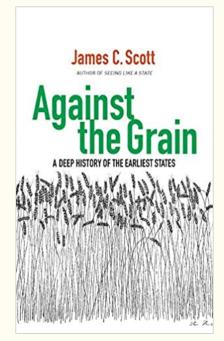


Table 5. Yakö income, 1930s

Panel A: Food production and consumption

The family consists of one man, two women, and 3-4 children (4.75 adult equivalents)

The family cultivates 1.4 acres of yams intercropped with pumpkins and okra. Palm oil and palm wine are harvested from wild stands.

food consumption per adult equivalent

rood consumption per addit equivalent			
	Kg/year	Kcal/day	grams protein/day
yams	489.2	1582	20.5
cowpeas	12.4	114	8.0
meat	4.4	30	2.4
pumpkins	9.6	7	.2
okra	9.6	8	.5
palm oil	2.1	50	o
palm wine	174.7	150	1.0
total		1941	32.6

Cultivating the yam patch takes 307 days. The palm products require 93 days. The meat is purchased.

Panel B: Palm products produced for sale

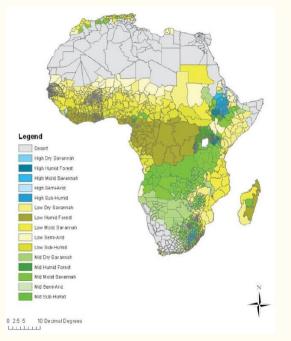
palm oil 12 tins @ 36 pounds palm kernels 747 pounds 93 half-gallon bottles palm wine

Why no large agrarian states?

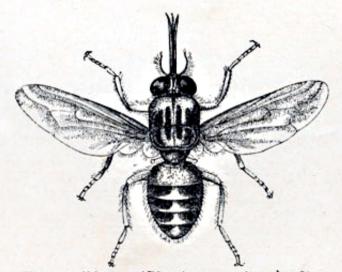
- Traditional explanations based on noncommercial values are hard to defend:
 - Plenty of evidence of markets in Africa well before Europeans arrived.
 - Africans showed considerable ability to adapt to new crops, technologies, and trade when they got in contact with them.
- Two classes of explanations:
 - 1. Explanations based on endowments.
 - 2. Explanations based on timing.
- Explanations are not contradictory.
- Both explanations lead to low population density.

Explanations based on endowments

- Jared Diamond's hypothesis about vertical vs. horizontal axes. Particularly salient after the Sahara dries up about 5,400 years ago. Also, Congo rainforests.
- 2. Mayshar, Moav, and Pascali (2022): appropriability of crops.
- 3. Disease environment: horse, cattle, and sheep died of sleeping sickness carry by tsetse fly, malaria, together with a challenging climate.
- 4. Soil is often low fertility because of old bedrocks and exposed to erosion.
- 5. Long distances with respect to the sea and few easily navigable rivers: high transportation costs. Iron and cotton production in the Kingdom of Kano (999-1349).







Tsetsefliege (Glossina morsitans). 3/1. (Art. Tsetsefliege.)





Explanations based on timing

- Africa just slightly behind in transition toward large agricultural states.
- Similar point in the Americas.
- Early transition to large agricultural states (Mali, Bantu kingdoms,...).

Explanations based on timing, II

- Evidence of iron *forging* already third millennium BCE (Oboui site in the Central African Republic, and Gbatoro, in Cameroon).
- However, these sites seem to be small scale experiments:

Zangato and Holl, On the Iron Front

...scattered LSA foragers 'experimenting' with new technologies and techniques.

- No Bronze age in Sub-Saharan Africa: Large iron and copper smelting only grows around the same time (c. 900 BCE).
- Some researchers have argued that bronze leads to centralization, iron does not.

V. G. Childe, What Happened in History?

Cheap iron democratized agriculture and industry and warfare too.

• Luck or endowments? For example, cooper is very rare in East Africa and quite rate in West Africa.

SPRINGER BRIEFS IN ARCHAEOLOGY CONTRIBUTIONS FROM AFRICA Shadreck Chirikure Metals in Past Societies A Global Perspective on Indigenous African Metallurgy

Ethiopia

Exception: Ethiopia

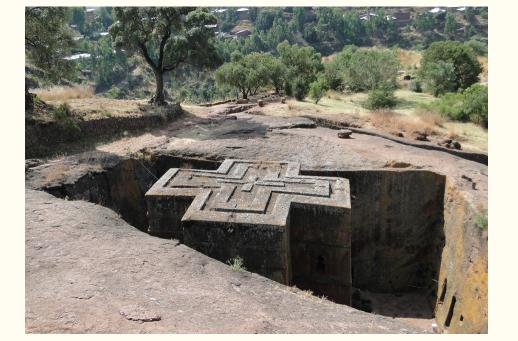
- Ethiopia's highlands have a very different environment.
- Kingdoms of D'mt (c. 980-400 BCE) and Aksum (c. 80 BCE-c. 940).
- Later on, the Solomonic dynasty (900-1974).
- Adoption of the plow.
- Trade of agricultural products, ivory, skins, crystal glass, copper, and brass.
- Particularly well regarded coinage: Aksumite currency become standard in the Red Sea area.





Ethiopia's own path

- Much more complex political and cultural structures:
 - 1. Rock-hewn monolithic churches in Lalibela.
 - 2. Zera Yacob (1599-1692) and Walda Hewat.
- Much more successful at resisting outside conquest (from the northern muslim lands) and colonization (from Europeans).
- First Italo-Ethiopian War (1895-1896) and Battle of Adwa (1896).
- Foundations of an African Civilisation: Aksum and the northern Horn, 1000 BC-AD 1300 by David W. Phillipson.







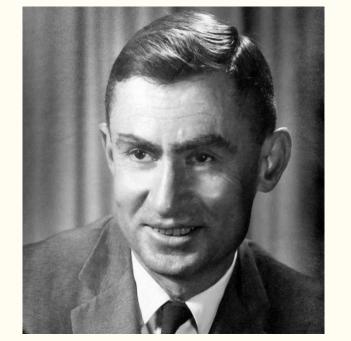
Some institutional consequences

- Low population density: abundance of land.
- Land-extensive agricultural methods (e.g., hoe-based ratio in arable lands).
- Hard to tax land (base of Eurasian fiscal systems).
- Hard to compel labor. Resort to slavery raids, but hard to sustain beyond one generation.
 Nonetheless, slavey within Africa was not "benign."

African slavery

An economic model of slavery

- The Causes of Slavery or Serfdom: A Hypothesis by Evsey Domar.
- Domar postulated that, to have a wealthy upper class of aristocrats, warriors, and bureaucrats that rules over a large coerced population, we need three requirements:
 - 1. Sufficient productivity in the sector where coerced workers are employed to support an upper class with their output. Domar highlighted a low labor/land ratio.
 - 2. Sufficient differential in military effectiveness to make becoming a lord or an unproductive specialist in coercive violence worth the risk.
 - 3. An effective "recapture technology" to keep your enslaved persons (serfs/debt peons) from successfully running away. For example, in Russia, the lords used the Cossacks as a mobile police to enforce serfdom. Europeans preferred other systems, such as language competence or skin color.



AFRICAN STUDIES

TRANSFORMATIONS IN SLAVERY

A History of Slavery in Africa
THIRD EDITION

PAULE. LOVEJOY



West Africa

Exception: West Africa

- Trans-Saharan trade becomes feasible around 300, with the adoption of camels by Berber tribes.
- Big impulse after the Arab conquest of North Africa and the expansion of Islam in the Sahel (common language, legal institutions, cultural affinity).
- West African empires of Ghana, Mali, and Songhai built around the taxation of trans-Saharan trade (a route for the expansion of Islam, which brings its own set of institutional arrangements) and gold production.
- Case of Mansa Musa (1312-1337), ruler of the Mali Empire, and his visit to Cairo in 1324 in route toward his pilgrimage to Mecca.







Trade and cultural exchanges

- Economic life,
 - 1. Exports: ivory, diamonds, animal hides, leatherwork, kola, ostrich feathers, spices, and enslaved persons.
 - 2. Imports: glass vessels and beads, glazed ceramics, copper, books, foodstuffs, salt.
- Sankore Madrasah in Timbuktu, Mali: manuscripts in Arabic, Songhay, and Tamasheq.
- Caravans of Gold, Fragments in Time: Art, Culture, and Exchange across Medieval Saharan Africa by Kathleen Bickford Berzock.

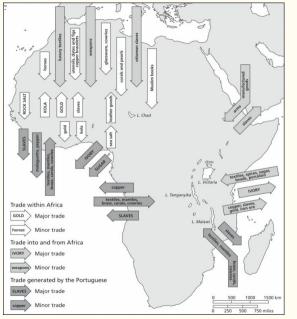




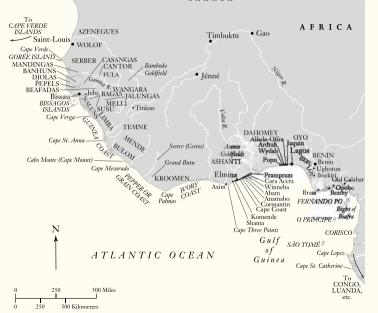
Colonialism

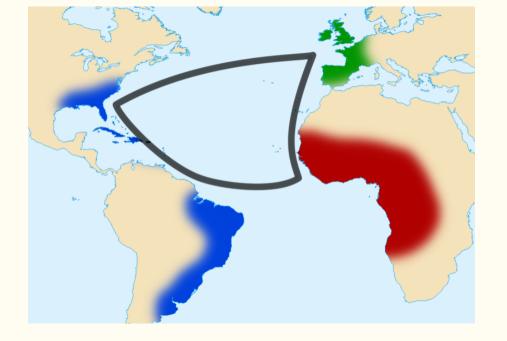
Arrival of the Europeans

- Europeans insert themselves in and transform the pre-existing trade routes in Africa.
- Factories for local exchange and slave trade: Portuguese, Dutch, and English.
- Europeans cannot penetrate in the interior. Partial exception in Cape Colony.
- Kingdoms of Dahomey and the Ashanti specialize in slave raiding in exchange for textiles, alcohol, sugar, firearms, and other manufactures.
- Slave trade largely ends in the three decades after 1807: British Empire abolishes trade and, the next year, sets up the West Africa Squadron. Smuggling lasts until 1870s.
- Long-run consequences.



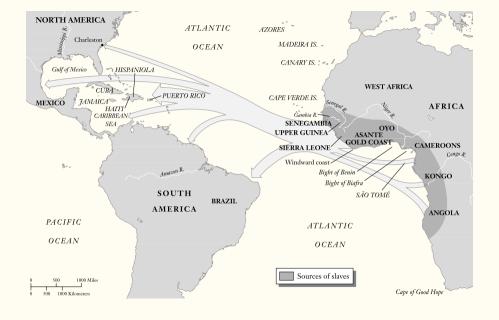
Map 10.1 Trade of Africa 1450-1600



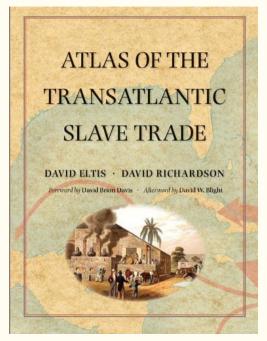














• Check: http://www.slavevoyages.org/

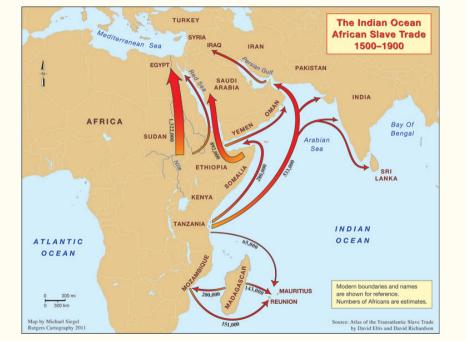


Table 10.1 Estimated slave departures from Sub-Saharan Africa in the different external slave trades, *c*. 1500–*c*. 1900

Trade	1501–1600	1601–1700	1701–1800	1801–1900	Total
Saharan	550,000	700,000	700,000	1,200,000	3,150,000
Red Sea	100,000	100,000	200,000	492,000	892,000
East African	100,000	100,000	400,000	442,000	1,042,000
Atlantic	338,000	1,876,000	6,495,000	4,027,000	12,736,000
Total	1,088,000	2,776,000	7,795,000	6,161,000	17,820,000

THE ATLANTIC SLAVE TRADE

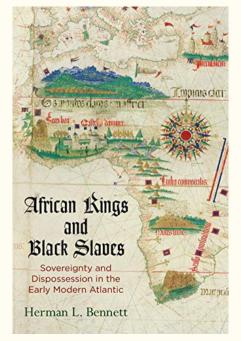
SECOND EDITION

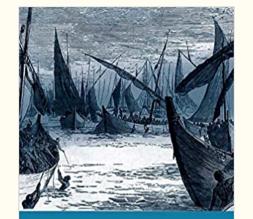
HERBERT S. KLEIN



NEW APPROACHES TO THE AMERICAS

CAMBRIDGE





SLAVES OF ONE MASTER

GLOBALIZATION AND SLAVERY IN ARABIA IN THE AGE OF EMPIRE

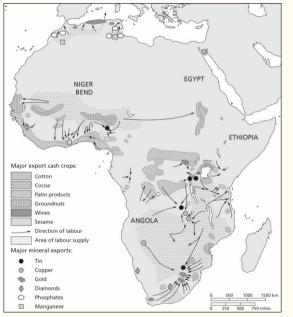
MATTHEW S. HOPPER

Diversification

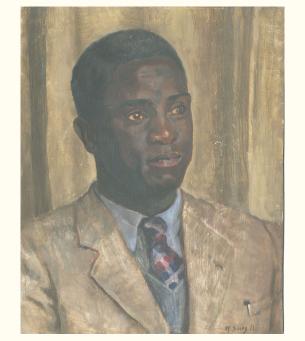
- By the 18th century, African exports diversified.
- Central role of palm oil: lubricant, soap, and candles.
- Also groundnuts, cocoa, coffee, rubber, and minerals.
- How transformative was the transition to the new economy?
 - 1. Classic view in Trade and Politics in the Niger Delta, 1830-1885 by K. O. Dike and An Economic History of West Africa by A.G. Hopkins: "vent-for-surplus theory."
 - 2. Revisionist view in From Slave Trade to "Legitimate" Commerce: The Commercial Transition in Nineteenth-Century West Africa by Robin Law (ed.).

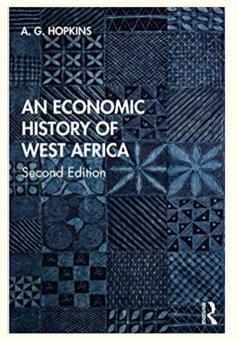






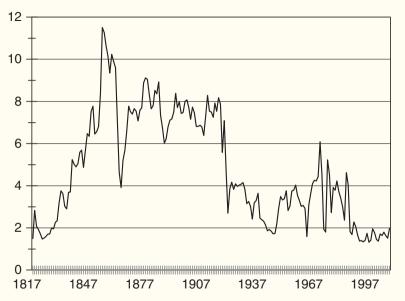
Map 10.2 Export specialization in Africa, c. 1928



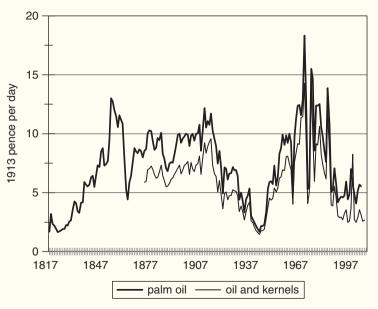


Commodity-exporting economies

- Big feature: commodity-exporting economies are subject to large price (e.g., terms-of-trade) shocks.
- Particularly important when exports are highly concentrated.
- Remediation strategies:
 - 1. Sovereign funds.
 - 2. Cartels.
 - 3. Marketing boards.
- Evidence regarding long-run trends of prices (a popular theory in the 1950s and 1960s) is harder to interpret.



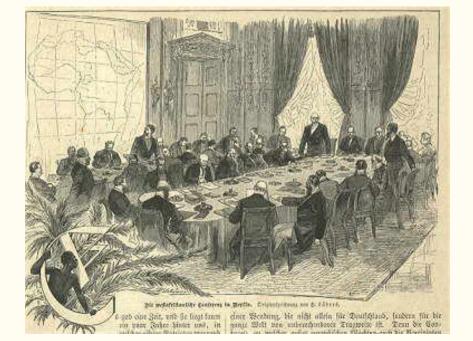
17. Price of palm oil relative to price of cotton cloth

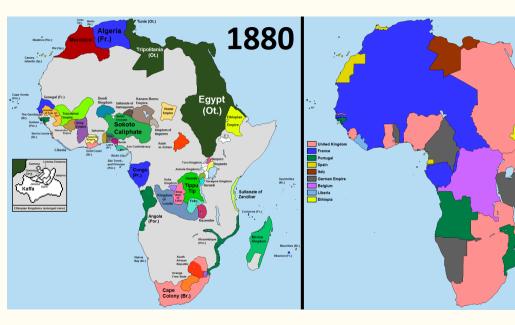


19. Earnings per day from palm oil

High tide of European imperialism

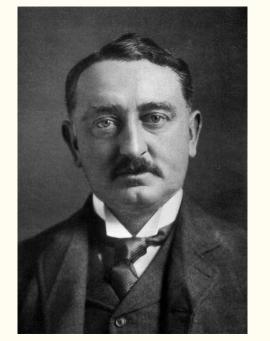
- Most of Africa is conquered by the European powers in the second half of 19th century.
- Mix of different forces:
 - 1. Technological change.
 - 2. Strategic considerations.
 - 3. Internal politics.
- Consolidated in the Berlin Conference of 1884-1885.

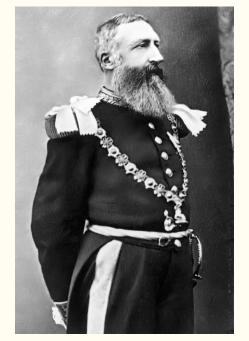


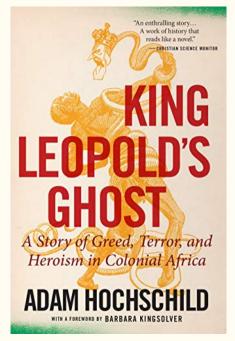


Types of colonies

- 1. Settler colonies: South Africa, Southern Rhodesia, Northern Rhodesia, and Kenya (also Algeria in Northern Africa).
- 2. Peasant-agricultural colonies: West Africa and Uganda.
- 3. Concession company colonies: King Leopold II's Congo, Portuguese colonies, other colonies in Central and Equatorial Africa.



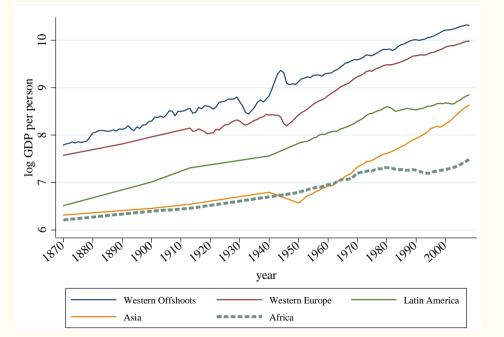


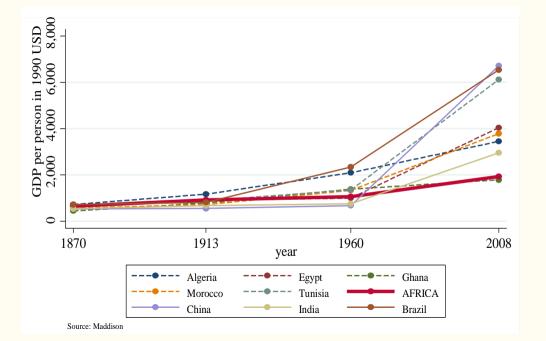


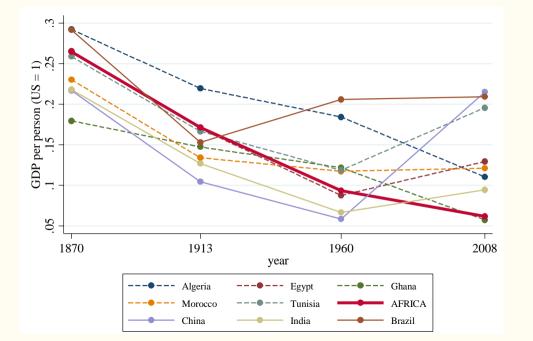
The consequences of colonialism

Consequences

- High colonial time was incredibly short (around 70 years: a lifetime).
- However, large consequences.
- Extremely high human cost.
- Tremendous (although often overlooked) impact of World War I on Africa.
- Disappointing economic growth.







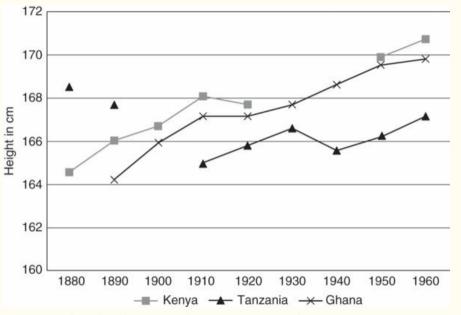


Figure 10.5 Height trends in Ghana, Kenya and Tanzania, 1880–1960s (male)

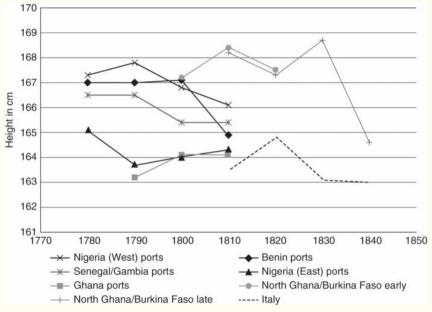
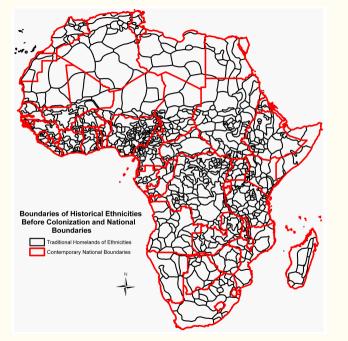
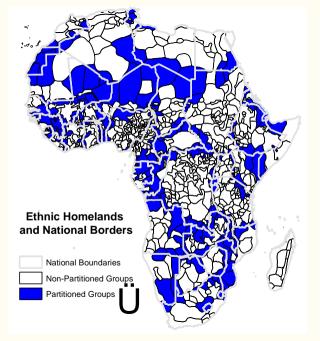


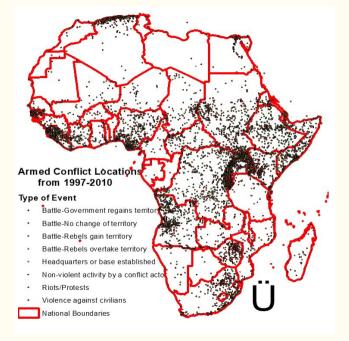
Figure 10.6 Height trends in selected African countries and Italy, 1780–1840s (male)

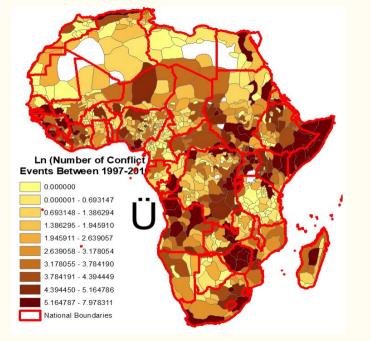
Why?, I

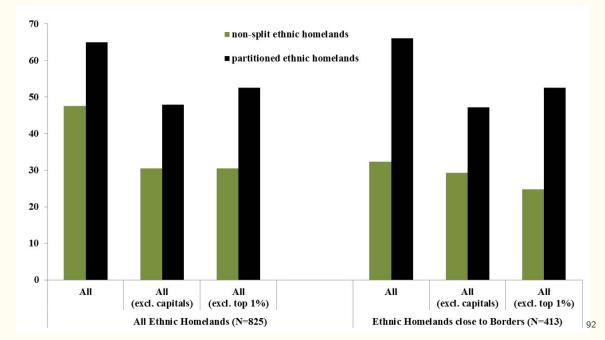
- Legacy of bad institutions:
 - 1. Policies of "divide-and-rule" (tribes, religious communities) and creation of "chiefs."
 - 2. Extractive institutions.
 - 3. Artificial frontiers (Stelios Michalopoulos and Elias Papaioannou).

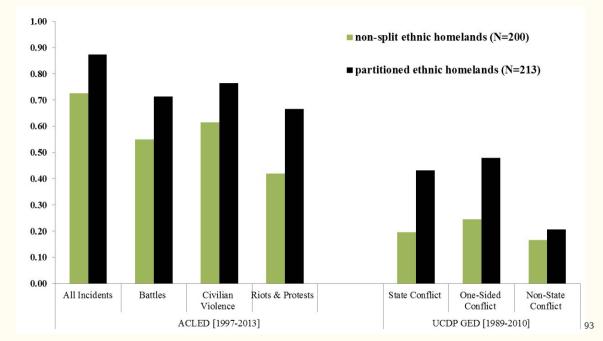


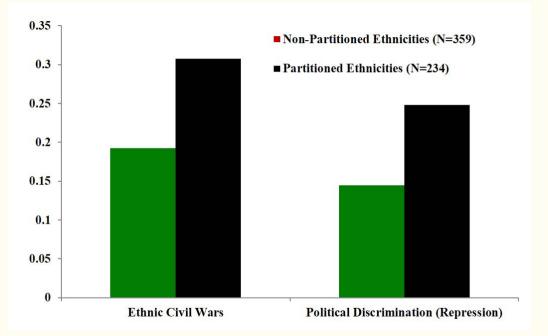












Why?, II

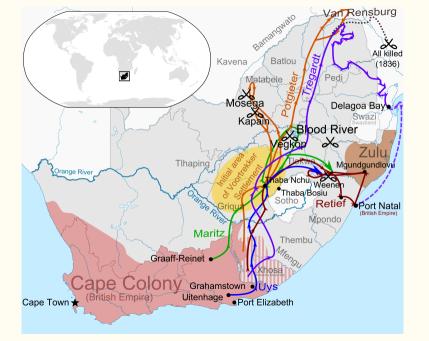
- Next-to-no investment in education.
- Little investment in infrastructures.
- Perverse political-economic incentives.

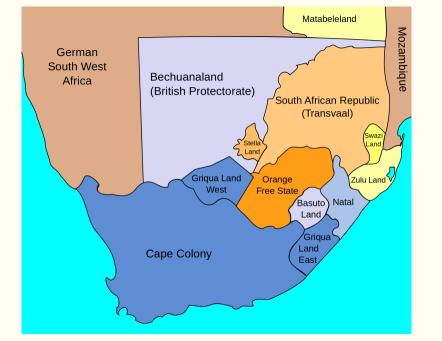
South Africa

The case of South Africa (and Rhodesia), I

- Cape Colony.
- The Great Trek, the Boers Republics, and the (Second) Boer War 1899-1902.
- Union of South Africa in 1910.
- 1913 Natives' Land Act.
- Victory of National Party in 1948: Apartheid and re-distribution of power within English-speakers and Afrikaners.
- Republic of South Africa in 1960 and unilateral withdrawal from the British Commonwealth.
- Rhodesia: Unilateral Declaration of Independence (1965).







NASIONALE PARTY



VIR VOLK EN VADERLAND

The case of South Africa (and Rhodesia), II

- Largest economy in Africa.
- High level of income per capita goes back to the times of the Cape Colony: wine, services, trade.
- Mineral revolution:
 - 1. Diamonds at the town of Kimberley in 1867.
 - 2. Big gold discoveries: Witwatersrand Gold Rush in 1886 and foundation of Johannesburg.
- First: alliance of "Maize and gold."
- Later, government-led industrialization in favor of Afrikaners.

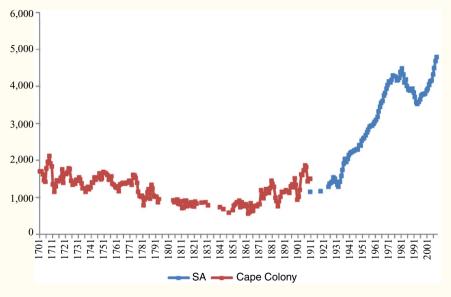


Figure 8. GDP per capita of Cape Colony (1701-1910) and SA (1910-2009), in 1990 dollars

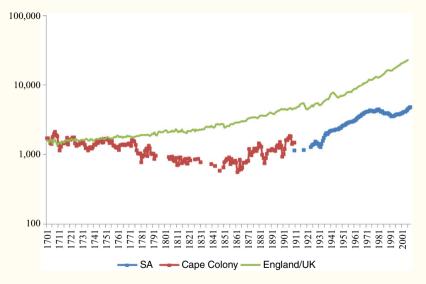


Figure 9. Comparing Cape Colony/South African GDP per capita with that of England/UK Sources: This study, and Maddison (2003) and his website at http://www.ggdc.net/MADDISON/oriindex.htm.

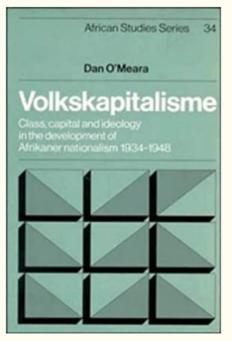




Mary Frances Gerety





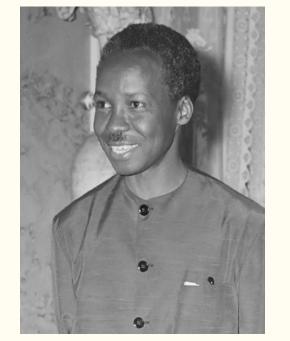


Africa after independence

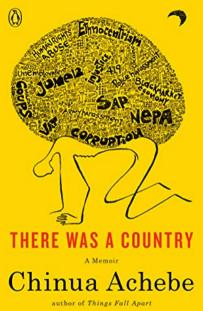
Africa after independence, I

- Ghana becomes independent in 1957 under the leadership of Kwame Nkrumah. Most nations follow in 1960 ("Year of Africa").
- Promising start in the 1960s.
- Economic experiments such as Ujamaa in Tanzania (Julius Nyerere):
 - 1. One-party system: Tanganyika African National Union (today, Chama Cha Mapinduzi).
 - Creation of a national identity: use of Swahili (note: Tanzania at independence was the most linguistically diverse country in East Africa; only around 10% of population are native speakers of Swahili).
 - 3. The villagization of production.
 - 4. Large nationalization of foreign firms. Related: killings of Arabs and Indians in Zanzibar (1964).
- Soon, large conflicts: Biafra (1967-1970).

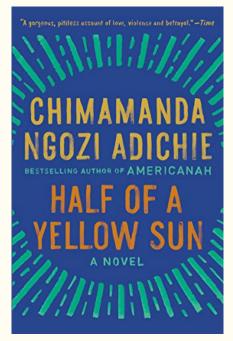








AFF.



Africa after independence, II

- Big debt problems in the 1970s and 1980s.
- End of minority rule in South Africa (1990-1994) (and, before, Rhodesia, which becomes Zimbabwe).
- Reform and commodity boom (oil and minerals) in the 1990s and 2000s.
- Current role of China.
- Problems with numbers.

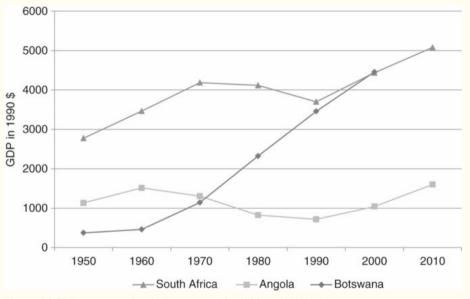


Figure 10.3 GDP per capita in Angola, Botswana and South Africa, 1950–2010s Notes: Y-Axis in Geary-Khamis dollars (1990). The years refer to the beginning of each decade.

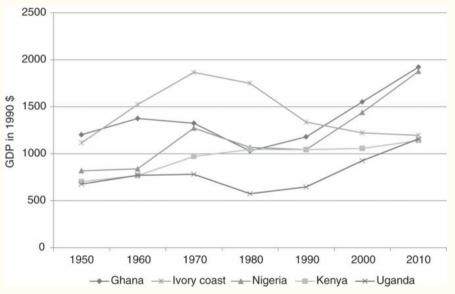


Figure 10.4 GDP per capita in Ghana, Ivory Coast, Kenya, Nigeria and Uganda, 1950–2010s Note: Y-Axis in Geary-Khamis dollars (1990).

