A microeconomia do trabalho assalariado forçado na África portuguesa: Evidências dos Sena Sugar Estates, 1920-1974

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Agenda

1. Motivation
2. Sena Sugar Estates
3. Counterfactual analysis
4. Conclusion

(1) Motivation

Historical debates

Economic history of colonialism (esp. in Africa) has sustained two long-standing debates:

1. To what extent were colonial institutions ‘extractive’?
   - Techniques & experiences of extraction (historians)
   - Implications for long-run development (economists)
2. Were (large) settler/colonial enterprises profitable?
   - Did advantageous treatment pay-off?
   - Was empire ‘worth it’?

Sources of colonial rents

Various techniques of extraction (c.f., Amin, 1972):

1. Privileged allocation & protection of property rights
   - Forced land resettlement in RSA (Abel, 2019)
   - Restrictions on cash crops (Frankema et al., 2016)
2. Preferential market access to the metropole (Brown, 1985)
   - Stabilize home access to raw commodities
   - Incentivize production/investment
3. Labour repression/coercion
   - Coffee in Rwanda (Blouin, 2021)
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Our contribution

Detailed microeconomic evidence on nature and implications of extractive institutions lacking.

We focus on forced wage labour (FWL) in Mozambique:

1. What were rates of extraction from native labour?
2. Did extraction contribute to firm profitability
3. Why did FWL persist?

We look at this in the context of Sena Sugar Estates plc. – colonial Mozambique's largest employer

Adopt a counterfactual approach, reconstructed series of annual accounts and financial records (1920-1974) + simple econometric analysis of firm productivity

Widespread use of FWL in Portuguese colonies

Following abolition of slavery, the *problema de mão-de-obra* was a recurring issue in Lisbon and overseas administrations (Jerónimo & Monteiro, 2012).

Recurrent themes: (i) economic development perceived to be impossible without African (native) labour; and (ii) such labour would not be available spontaneously at quality and quantity desired.

But how to stimulate labour? Four planks (1899-1961):

- Penalization of vagrancy and indolence
- Legal status of *indígena*, requiring state intervention
- Work *should be* voluntary, but state can compel if not
- Poll taxes (cash or kind) [as per *mussoco* of *prazos*]

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Forced labour in practice

Different forms of labour:

- *Voluntário*: present for employment to private employers (e.g., to pay taxes)
- *Contratado*: forced labour for private employers often through direct state authority
- *Chibalo*: corveé for public works (mostly women)
- *Conta própria*: limited

Until 1942, wage rates linked directly to head tax obligations $\implies$ often employers would transfer value direct to local administration.

Local authorities played a direct role in recruitment and enforcement, not least due to critical importance of 'native' tax returns (Havik, 2013)

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(2) Sena Sugar Estates

Sena Sugar Estates

Early history of 'adventure capitalism':

- **1890**: John Peter (Pitt) Hornung founds the *Companhia de Assucar de Mocambique* (CAM) and begins the first sugar plantation in Mopeia, Prazo Maganja d'aquem Chire, (left bank of Zambézi) aquired via family connections
- **1905**: Hornung leases 5,000 hectares in Prazo Caia from Companhia de Moçambique, builds Sena Sugar Factory at Villa Fontes, (right bank of Zambézi)
- **1906**: construction begins on Lisbon sugar refinery (*Refinaria Colonial*) with a capacity of 20,000 tons p.a. (inaugurated 1909)
- **1909**: Hornung acquires the Marromeu estate of the Sociedade Assucareira de Africa Oriental Portuguesa, in Prazo Luabo (right bank of Zambézi)
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Data

Collate financial and administrative records, plus colonial era correspondence, from multiple sources.

Primary sources:

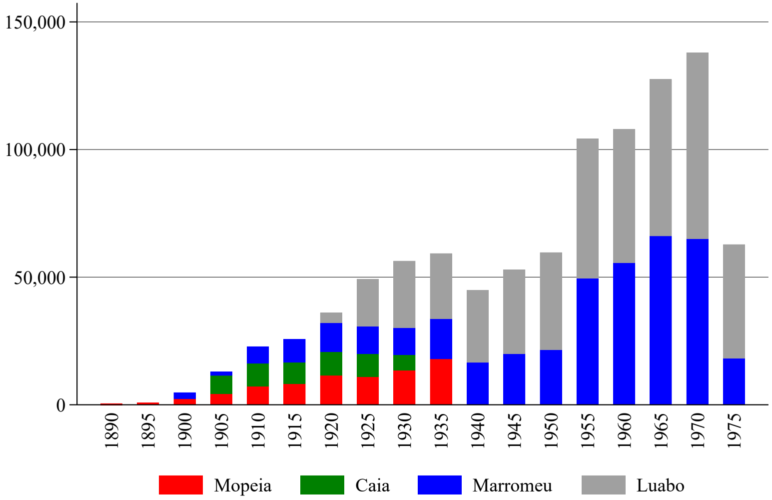
- The Hornung Papers (West Sussex Record Office)
- The Oury archive (Borthwick Institute, Uni. of York)
- Sena Sugar Estates reports and accounts (Uni. of York)
- Colonial files in *Arquivo Histórico de Moçambique*, UEM

Secondary sources (access to estate archives, now lost):

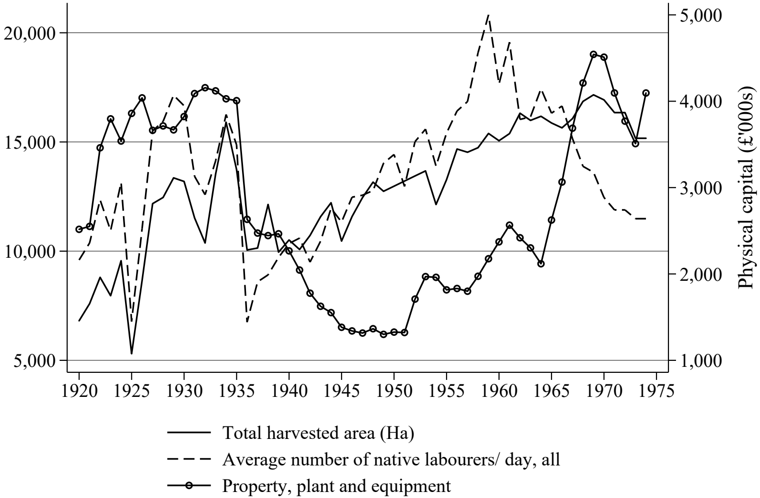
- Vail and White (1980)
- Head (1980)
- Lapperre (2020)

Digitialize and clean $\rightarrow$ 86 variables (1920-1974)

Production volumes (tonnes, raw sugar)

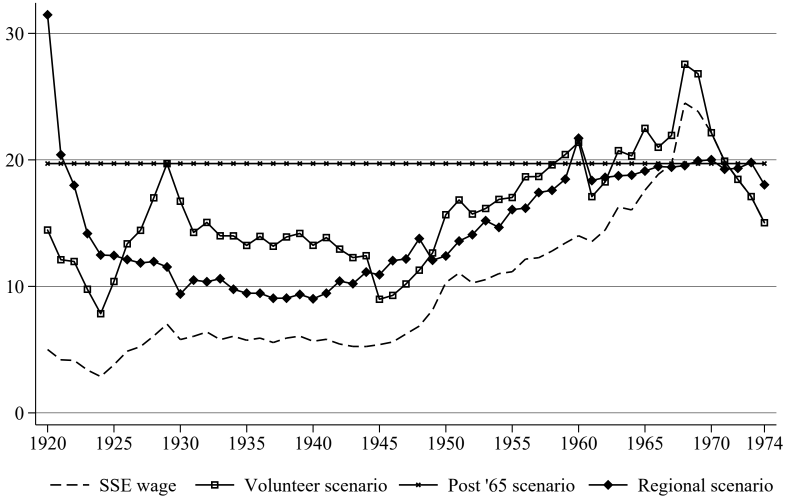


Factor inputs

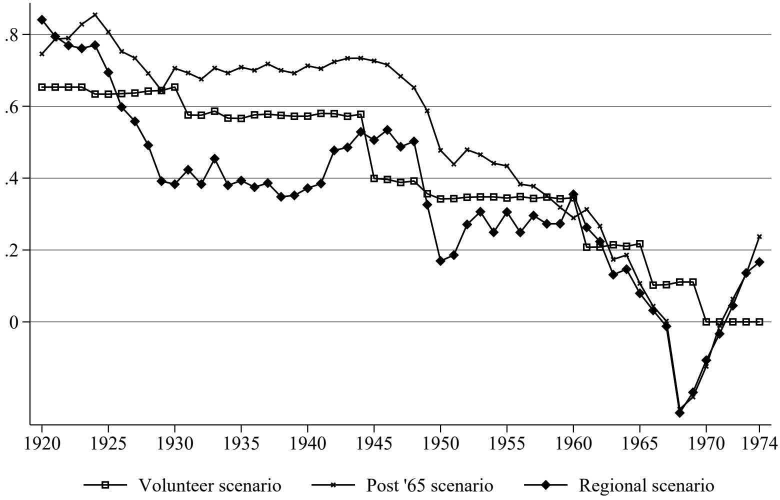


(3) Counterfactual analysis

Alternative labour scenarios



Implied rates of extraction



Implications for profitability

	(I)	(II)	(III)	(IV)	(V)	(VI)
Labour	0.07	0.28**	0.22*	0.14	0.41***	0.25**
	(0.12)	(0.12)	(0.11)	(0.11)	(0.12)	(0.11)
Land area	1.25***	0.62***	0.62***	0.67***	0.73***	0.81***
	(0.17)	(0.22)	(0.21)	(0.20)	(0.18)	(0.17)
Physical capital	0.33***	0.24***	0.23***	0.10	0.31***	0.16***
	(0.04)	(0.04)	(0.04)	(0.06)	(0.05)	(0.05)
Time		0.01***	0.01	0.00	-0.00	-0.01***
		(0.00)	(0.00)	(0.00)	(0.01)	(0.00)
Global price index		-0.01	-0.01	0.02	-0.02	0.02
		(0.05)	(0.04)	(0.03)	(0.04)	(0.02)
Total labour costs / worker (log.)			0.25**			
			(0.11)			
Direct labour costs / worker (log.)				0.35***		0.45***
				(0.10)		(0.08)
Native recruit. costs / worker (log.)				-0.06		-0.06*
				(0.04)		(0.04)
European cost share					-0.60***	-0.71***
					(0.21)	(0.15)
Obs.	55	55	55	55	55	55
R sq.	0.87	0.91	0.91	0.92	0.93	0.95
Returns to scale	1.65	1.15	1.07	0.91	1.46	1.22
(prob.)	0.00	0.39	0.70	0.60	0.01	0.13

significance: * 10% ** 5% *** 1%

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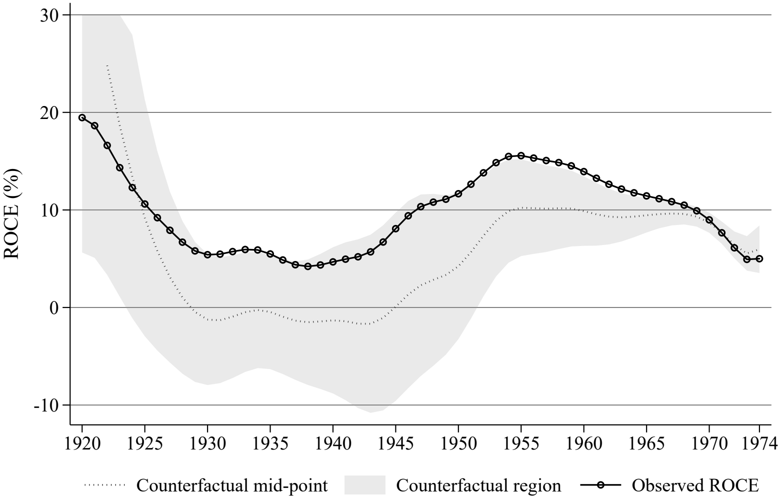

(4) Conclusion

Conclusion

- Persistence of ‘colonial rents’ in Portuguese Africa via FWL
- Clear evidence of high rates of labour extraction – workers paid about half a free(r) market counterfactual
- From an accounting perspective, higher costs $\implies$ significantly lower firm profitability (SSE possibly not viable)
- BUT, evidence suggests larger colonial rents associated with lower total factor productivity
- Allowing for a positive productivity response to higher wages $\implies$ profitability likely much less badly affected

Reflections

Economic viability of free labour cannot be rejected.

So, why was it resisted for so long?

Potential explanations:

- Dominance of accounting view
- Racial prejudice
- Technology of production (need for seasonal labour)
- Colonial desire to maintain head tax revenues