Colonial (Dis)Integration: Concession Companies and Human Development in Mozambique

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November 8, 2022
1. Introduction

2. Contribution to the literature

3. Data

4. Estimation and preliminary results

5. Summary
1. Introduction

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1. Introduction: motivation

Figure: “Mozambique’s Chartered Companies: the Rule of the Feeble” (Vail, 1976)
1. Introduction: motivation

- Former African colonial territories emerged from the colonial experience with distorted and dislocated economies. In Mozambique:
  - “The north, the centre, and the south are still as disconnected from each other as they were during the first half of the 20th century” (Newitt and Tornimbeni 2008).
  - “A map of Mozambique at large had become much like a patchwork quilt” (Allina 2012).
  - The “threefold” reality of Mozambique (Alexopoulou and Juif 2015).
1. Introduction: research questions

- Is historical exposure to the rule of concession companies important for understanding the relative under development of parts of Mozambique?

- Do individuals living inside former concessions have different levels of wealth and education when compared to those living outside former concessions?
1. Introduction: identifying assumptions

- Boundaries of the *Companhia do Nyassa* and *Companhia de Moçambique* were defined using salient geographic characteristics - rivers and river basins.

- Their rule lasted for a long period of time in an epoch of early state formation - 35 and 50 years, respectively.
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2. Contribution to the literature

- Institutional legacies of colonial rule in Africa.
  (Hall and Jones 1999); (La Porta et al. 1999); (Acemoglu et al. 2001); (Glaeser et al. 2004); (Gennaioli and Rainer 2007); (Nunn 2008); (Huillery 2011); (Michalopoulos and Papaioannou 2014); (Alsan 2015).

- Extractive institutions, forced labour, indirect rule, and violence on contemporary development outcomes.
  (Nzula et al. 1979); (Banerjee and Iyer 2005); (Dell 2010); (Acemoglu et al. 2014); (van Waijenburg 2015); (Juif and Frankema 2018); (Rodney 2018).

- Concession system on contemporary development outcomes.
  (Lowes and Montero 2021); (Chiovelli, et al. work in progress).
Road Map

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- **Maps from Companhia do Nyassa and Companhia de Moçambique**
  - Appendix: Map Companhia do Nyassa
  - Appendix: Companhia do Nyassa
  - Appendix: Map Companhia de Moçambique
  - Appendix: Companhia de Moçambique

- **Demographic and Health Surveys (DHS) data for Mozambique (2011).**
  - 17,780 respondents (13,745 women and 4,035 men) across 21 stratum living in 611 clusters.

- **Vector and raster data of geographic, precolonial, colonial, and infrastructure and population variables.**
3. Data: DHS data
3. Data: DHS data
3. Data: vector and raster data

▶ Geographic data and variables
  ▶ Elevation, precipitation, temperature, land suitability, ruggedness, rivers and river density, malaria suitability, tsetse fly suitability, distance to Maputo, distance to the coast.

▶ Precolonial data and variables
  ▶ number of slaved individuals during the slave trade, ethnolinguistic diversity, precolonial data such as population density, political centralization, hereditary local headman selection and polygynous.

▶ Colonial data and variables
  ▶ missionary stations in 1903, missionary stations in 1924.

▶ Infrastructure and population data and variables
  ▶ nighttime luminosity, roads and road density.
3. Data: grid of Mozambique
3. Data: land suitability
3. Data: land suitability
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4. Estimation and preliminary results

\[ Y_{i,c,g} = \alpha + \beta Concession_{c,g} + f(distance)_c + \delta X_i + \gamma \Phi_g + \varepsilon_{i,c,g} \]  

\( Y_{i,c,g} \): outcome of interest of individual “i” living in cluster “c” in grid “g”.  
\( Concession_{c} \): dummy variable that equals 1 if cluster “c” in grid “g” is located inside the former concession boundary.  
\( X_i \): vector of covariates for individual “i”.  
\( \Phi_g \): vector of geographic and infrastructure and population covariates in grid “g”.  
\( f(distance)_c \): regression discontinuity (RD) polynomial which controls for smooth functions of the geographic location of cluster “c”.

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4. Estimation and preliminary results

<table>
<thead>
<tr>
<th></th>
<th>Educational attainment (1)</th>
<th>Years of education (2)</th>
<th>Literacy (3)</th>
<th>Wealth Index (4)</th>
<th>Wealth Factor Score (5)</th>
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</thead>
<tbody>
<tr>
<td><strong>Concessions and Human Development, Grid cell level</strong></td>
<td></td>
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</table>

<table>
<thead>
<tr>
<th>Nyassa Company: Lurio River</th>
<th>Within 50 km</th>
<th>Within 100 km</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inside concession</td>
<td>-0.0926</td>
<td>-0.1206 **</td>
</tr>
<tr>
<td>(0.070)</td>
<td>(0.057)</td>
<td>(0.057)</td>
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<tr>
<td>Observations</td>
<td>947</td>
<td>2306</td>
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<tr>
<td>R²</td>
<td>0.333</td>
<td>0.319</td>
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<table>
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<tr>
<th>Mozambique Company: Zambezi River</th>
<th>Within 50 km</th>
<th>Within 100 km</th>
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<tbody>
<tr>
<td>Inside concession</td>
<td>0.0456</td>
<td>0.0063</td>
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<tr>
<td>(3.419)</td>
<td>(0.061)</td>
<td>(0.061)</td>
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<tr>
<td>Observations</td>
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<td>1611</td>
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<tr>
<td>R²</td>
<td>0.451</td>
<td>0.433</td>
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Road Map

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African colonial territories emerged from the colonial experience with distorted and dislocated economies.

Is historical exposure to the rule of concession companies important for understanding the relative under development of parts of Mozambique?

Do individuals living inside former concessions have different levels of wealth and education when compared to those living outside former concessions?

Preliminary results point to different outcomes in education in Companhia do Nyassa and wealth in Companhia de Moçambique.
Thank you