Decolonization: the Role of Changing World Factor Endowments

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My research question: what shaped the economic incentives to decolonization?

Two broad motivations:

- Contribute to our understanding of the economics of institutional change - decolonization being one the most striking changes in political institutions in contemporary history;
- Help improving our understanding of the economic legacy of colonialism.
A large literature can be distilled into three main views, according to which decolonization was due to:

- A rise of colonial nationalism, sparked by the predatory behaviour of colonizers;
- Factors internal to colonizing countries, which made colonialism unattractive to key interest groups and constituencies;
- International factors, such the rise of anti-imperialistic superpowers after World War II.
A very informative literature, but does not study economic incentives formally.

Leaves important questions unanswered:

- Why did colonizers predate too much at a particular point in time, therefore triggering a rise in colonial nationalism?
- How exactly did international economic factors affect the incentives of colonies to revolt?
A few papers study the economic origins of decolonization formally:

- Grossman and Iygun (1995, 1997) model the incentives to decolonization as depending on the technology of colonial investment and rebellion, and study how private returns to rebellion were increased by population growth in the colonies during the late colonial period;

- Gartzke and Rohner (2006) explain the rise and decline of colonialism in terms of random shocks to the distribution of military technology and the increasing opportunity cost of occupation in terms of foregone domestic production.
My approach: how did trade conditions shape the economic incentives to decolonization?

Two parts to that question:

- How would trade conditions differ under different political institutions (colonialism, independence)?
- How did such differences affect the incentives to decolonization?
Structure of the talk

1. Model
   - Economic model
   - Political model
   - Equilibrium

2. Stylized historical evidence

3. Conclusions

4. Related future research
Economic model
Production and factor endowments

- Two goods produced with linear production technologies:
  \[ x = L \quad y = K \]

- Three countries, \( H \), \( F \) and \( E \), with factor endowments:
  \[
  \begin{align*}
  L^H &= 1 & K^H &= \bar{K} \\
  L^F &= 1 & K^F &= \bar{K} (1 + \kappa) \\
  L^E &= 1 & K^E &= \bar{K} (1 + \delta)
  \end{align*}
  \]

where \( \kappa, \delta > 0 \) are exogenous parameters. In the political model, \( H \) will be the colony, \( F \) the colonizer and \( E \) the rest of the world.
A mass 1 of citizens in each country; citizens in all countries share the same preferences:

\[ u(x, y) = x^{\frac{1}{2}} y^{\frac{1}{2}} \]

Citizens in each country are homogenous in terms of factor ownership.
Choose $y$ to be the numeraire, and call $p^J$ the price of $x$ in country $J$.

Market clearing requires that:

$$K^J = \frac{y^J_d}{x^J_d}$$

Given that the RHS is also the MRS, consumer optimization requires that:

$$K^J = p^J_A$$

It is easy to show that indirect utility in country $J$ is strictly convex in $p^J$, and reaches a minimum at $p^J_A$. 
**Economic model**

**Equilibrium prices - trade**

- Four possible trade outcomes: \{H, F, \cdot\}, \{\cdot, F, E\}, \{H, \cdot, E\} and \{H, F, E\}.
- With linear technologies, FPE always obtains: thus, we can find equilibrium prices very conveniently by solving for the integrated trade equilibrium.
- Equilibrium prices:

<table>
<thead>
<tr>
<th>Scenario</th>
<th>Equilibrium Prices</th>
</tr>
</thead>
<tbody>
<tr>
<td>{H, F, \cdot}</td>
<td>(\overline{K} \left(1 + \frac{\kappa}{2}\right))</td>
</tr>
<tr>
<td>{\cdot, F, E}</td>
<td>(p^H)</td>
</tr>
<tr>
<td>{H, \cdot, E}</td>
<td>(\overline{K} \left(1 + \frac{\delta}{2}\right))</td>
</tr>
<tr>
<td>{H, F, E}</td>
<td>(\overline{K} \left(1 + \frac{\kappa+\delta}{3}\right))</td>
</tr>
</tbody>
</table>
Economic model
Preferences over different trade outcomes

$0 \leq \delta^*(\kappa) \leq \kappa/2 \leq \kappa \leq 2\kappa \leq \delta^{**}(\kappa)$

$\text{A} \quad \text{B} \quad \text{C} \quad \text{D} \quad \text{E}$

$H$’s best is to trade with $F \quad F \quad F, E \quad E \quad E$
$F$’s best is to trade with $H, E \quad H, E \quad H \quad H \quad E$
$E$’s best is to trade with $F \quad H \quad H \quad H, F \quad H, F$
Three political states (S):

- **Colonialism** (S = C): defined as F controlling policy in H;
- **Independence** (S = I): decolonization granted voluntarily by F to H. Gives citizens of H control of policy plus exogenous benefit B > 0;
- **Revolution** (S = R): staged by H to obtain decolonization against the will of F. It is always successful, but it has a cost: it gives citizens of H (control of policy plus) exogenous benefit b, a random variable distributed over (−∞, B].

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Two policies:

- **Trade policy**: captured by a matrix of dummies $T$, where $T_{ij} = 1$ if country $J$ is willing to trade with country $I$, 0 otherwise. For trade to occur between country $I$ and country $J$, it must be $T_{ij} = T_{ji} = 1$;

- **Extraction**: captured by a lump-sum transfer ($A$) from $H$ to $F$. There is a minimum, subsistence level of utility ($u$) that $H$ must be left with.
Political model

Timing

1. In a world under Colonialism, nature sets $b$;
2. $F$ chooses whether to stick to Colonialism, or to grant Independence;
3. Policy is set;
4. Under Colonialism, $H$ decides whether to stage a Revolution or not. Under Independence, nothing happens at this stage;
5. Under Revolution, policy is reset under the constraint $T_H^F = 0$. Under other political states, nothing happens at this stage;
6. Production, trade and consumption take place; all payoffs are realized.
Trade Policy

- Date 3: both under Colonialism and under Independence, the (coalition-proof) trade policy Nash equilibrium leads to a trade outcome of the type \( \{H, F, E\} \) independently on the endowment parameters \((\kappa \text{ and } \delta)\).

- Date 5: under Revolution, the equilibrium trade outcome depends on \(\kappa\) and \(\delta\). In particular:
  - If \(\delta \in (0, \delta^*(\kappa))\) it is \(\{\cdot, F, E\}\) - the colony falls into autarchy;
  - If \(\delta \in (\delta^*(\kappa), 2\kappa)\) it is \(\{H, \cdot, E\}\) - the colony can only trade with the rest of the world;
  - If \(\delta \in (2\kappa, \infty)\) it is of the type \(\{H, F, E\}\) - the colony can trade with the rest of the world and, indirectly, with the colonizer.
Under Colonialism, $H$ stages a Revolution iff:

$$b + A(C) > \Pi^H(C, \kappa, \delta) - \Pi^H(R, \kappa, \delta)$$

Thus, if $b > \bar{b} \equiv \Pi^H(C, \kappa, \delta) - \Pi^H(R, \kappa, \delta)$, Revolution can only be avoided by setting $A(C) < 0$, that is negative extraction.

Now plug in maximum extraction. Revolution takes place iff:

$$b + \left[\nu^H_A - u\right] + \Pi^H(C, \kappa, \delta) > \Pi^H(C, \kappa, \delta) - \Pi^H(R, \kappa, \delta)$$

$$b > -\left[\nu^H_A - u\right] - \Pi^H(R, \kappa, \delta)$$

Thus, if $b < b \equiv -\left[\nu^H_A - u\right] - \Pi^H(R, \kappa, \delta)$, Revolution never takes place, not even with maximum extraction.
Equilibrium
Date 1 (stochastic realization of b)

E is a net exporter of x

E is a net importer of x

$\delta / \gamma$

$B$

$\Pi^H(C, \delta, \kappa)$

0

$- (v^H(p^H_A) - u)$

$\delta(\gamma)$

$1/3$

$2/3$

$1$

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Overview

Three main waves of decolonization in contemporary history:

- Latin America (1810 - 1826);
- British settler colonies: Canada, Australia, New Zealand, South Africa, South Rhodesia (self government, 1848 -1923).
- Asia and Africa (1946 - 1976);

I look at historical evidence from the first two waves, focusing on the case of **Spanish America (1810 - 1826)**, **Canada (1848)** and **Australia (1856)**.
These colonies had all relatively open economies at the time of decolonization. In particular, they mainly imported manufactured goods from Europe and exported:

- Silver and agricultural commodities (Spanish America);
- Timber (Canada);
- Wool (Australia).

Broadly consistent with the set up of the model: colonies exchanging labour-intensive goods for capital-intensive goods produced in the colonizer or in the rest of the world.
Spain’s capacity to extract resources from Spanish America became very weak after 1650, underwent a short revival after 1750, and collapsed after the colonies successfully revolted in 1810-1826.

I show that:

- Over the centuries, the pattern of extraction followed closely the relative importance of Spain (vis-à-vis other European powers) as a manufacture provider and trading partner;
- The invasion of Spain by Napoleon, traditionally seen as the trigger for Latin American Independence Wars, was particularly likely to result in an actual rebellion because of the ongoing concentration of manufacturing capital in Britain due to the industrial revolution.
My argument

Canada

- While Britain defended firmly her prerogatives over Canadian policy until the 1830s, in the 1840s she suddenly came to accept Canadian self-government.

- I point out that this coincided with a major discontinuity in the structure of Canadian trade: the beginning of its re-orientation away from Europe and to North America. This happened because of two factors:
  - By the end of the 1830s, rapid economic growth converted the US into a major buyer of timber;
  - In the 1840s, a series of Empire-wide trade reforms implemented by Britain broke the preferential link which had made Canadian timber competitive on the British market.
In Australia, self-government came in the mid 1850s.

I show that, around that time, the world outside the British Empire converted from being a large net exporter of wool to being a large net importer. This was due to the spread of the industrial revolution to continental Europe, and in particular to the catching up with Britain of the French wool textile industries.
I have built a model which links the profitability and sustainability of colonial power to the distribution of world factor endowments.

In particular, as the factor endowments to which colonial trade is attracted become more concentrated outside of the colonizer and the rest of her empire, revolution becomes more attractive; this reduces the capacity of the colonizer to extract wealth from the colony, and increases the likelihood that decolonization has to be granted.

Historical evidence suggests that economic forces very similar to those described by the model were at play in the first two waves of decolonization.
Two potential implications for the debate on the legacy of colonialism:

- Some of the most successful European economies may owe much to the establishment of a virtuous circle between colonialism and capital accumulation - compare to Acemoglu, Johnson and Robinson, AER 2005.

- Authors have argued that colonizers deliberately hindered capital accumulation in colonies, even when this was profitable - is there a trade off between the exploitation of colonial comparative advantage and the sustainability of colonialism?
Related future research

Three main theoretical extensions:

- **Continuous trade policy**: study how the optimal tariff argument introduces another wedge between trade conditions under Colonialism and under Revolution. Key question:
  - Effect on Colonialism of free versus restricted trade?

- **Endogenous factor accumulation**: study how incentives to colonial factor accumulation depend on payoffs under alternative institutions. Key questions:
  - When is colonial comparative advantage fully exploited?
  - How does international factor mobility matter?

- **Heterogeneous colonial society**: study what happens when colonial society is led by an elite. Key question:
  - Is the timing of decolonization endogenous to the expected post-colonial political structure?
Finally...

...thanks for your attention.