The Silver Age of Mercenaries

How Population Decline Drove a Return to Mercenary Armies

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Which Kind of Mercenaries are we Talking About?

Mercenaries as Substitute

Mercenaries as Technology-

Why Call It a Silver Age?

- This paper's name pays Homage to "The Golden Age of Mercenaries" by Dr. Peter Leeson and Dr. Ennio Piano (2021)
  - Their paper coined the term "Golden Age of Mercenaries" to describe the 13th-15th century in Europe, in particular Italy
- Our paper advances their model of the political-economy behind mercenary demand by rulers to explain the **ERAS** of Mercenary usage, regardless of regime popularity
  - The term "Silver Age of Mercenaries," coined by this paper, refers to the resurgence in mercenary employment in Europe from 1618 to 1714
  - By explaining why we see eras of mercenary usage, this paper provides additional modern relevance, as we are seeing an uptick in mercenary employment globally

The Golden Age (13- Mid 15th century)

Era of Professionalization (Mid 15th-16th century)

The Silver Age of Mercenaries (1618-1714)

- Despite earlier professionalism, Mercenary usage saw a resurgence across Europe
- For example, the Army of Sweden during the 30 years war consisted between 50% and 85% mercenariness in any given battle

Baseline Model: Military Composition under Political Insecurity

Leeson & Piano (2021)

Setup and assumptions

- Ruler chooses c ∈ [0,1], the citizen share of the army; mercenary share is 1 − c.
- Citizens and mercenaries are modeled as perfect military substitutes.
- Office rents equal w > 0; the ruler is risk neutral.
- Political support parameter g ∈ [0,1] is the share of citizens who support the regime.
- Mercenary opportunism parameter v ∈ [0,1] captures the severity of mercenary opportunism costs.

Political trade-off

Mercenaries

- Less politically threatening to the ruler than armed citizens
- But impose opportunism costs through plunder, shirking, or desertion

Citizen-soldiers

- More aligned with the polity's defense
- Deposition risk is modeled in reduced form as c(1-g), where 1-g is the share of citizens not loyal to the ruler

Optimization and implication

Ruler's problem

$$\max_{c} \left[1 - c + cg\right]\left[w - wv(1 - c)\right]$$

Interior solution

$$c^* = \frac{g(v-1) + 1 - 2v}{2v(g-1)}$$

Comparative static

$$\frac{\partial c^*}{\partial g} > 0$$

- Greater political security increases the optimal citizen share.
- Political insecurity shifts force composition toward mercenaries.

Golden Age Model: holding military productivity constant, lower regime support reduces the optimal citizen share and increases reliance on mercenaries.

Extension: Demography and the Recruitment Base

Remien et al (working draft)

What changes

- Introduce $R \in (0,1]$, the recruitment base of native-born men available for service.
- $R = 1$ denotes pre-crisis manpower; $R < 1$ denotes demographic contraction.
- Baseline cost per native soldier is ϕ; scarcity raises total native-labor cost to $c\phi/R$.
- Mercenary supply is treated as exogenous to any individual ruler.
- The ruler now chooses force composition over two constraints: **political security** and **demographic conditions**.

Economic mechanism

Holding g fixed

- Lower R raises the shadow price of domestic military labor.
- Native-born soldiers become costlier even if regime support is unchanged.
- Demographic decline therefore shifts the ruler away from citizen/native troops and toward mercenaries.

Interpretation

- In the baseline, mercenary use rises when rulers distrust citizens.
- In the extension, mercenary use also rises when the need for military force remains, but the recruitment base shrinks

Optimization and Implication

Ruler's problem

$$\max_c [1 - c + cg] \left[w - wv(1-c) - c\frac{\phi}{R} \right]$$

Interior solution

$$c^* = \frac{g(v-1) + (1-2v)}{2v(g-1) + \frac{2\phi}{wR}}$$

Comparative statics

$$\frac{\partial c^*}{\partial g} > 0 \qquad \frac{\partial c^*}{\partial R} > 0$$

- Greater political security and a larger recruitment base both increase the optimal native/citizen share.
- Holding g constant, a fall in R increases reliance on mercenaries.

Silver Age Extension: holding regime popularity constant, demographic contraction lowers the optimal native/citizen share and increases reliance on mercenaries.

Venetian Natural Experiment

- The Venetian Republic fights two nearly identical wars against the Ottomans, controlling for external pressures
  - 4th Venetian Ottoman War (1570-1573)
  - 5th Venetian Ottoman War (1645-1669)
- However, in 1575, Venice suffered a debilitating outbreak of plague, from which its population did not recover until 1951
- Therefore, given:
  - Venice was the citizen army state used in the Golden Age of Mercenaries paper
  - The Venetian Republic was an incredibly stable, long-lasting, and domestically popular regime
  - The near identical military challenges of the 4th and 5th Venetian-Ottoman wars
- The Venetian Republic provides an optimum natural experiment to test our theoretical expansion of Leeson and Piano (2021)

Data Acquisition

- We are currently in discussion with the State Archives of Venice over gaining access to the mercenary contracts of the Venetian Republic
- We have contacted several historians on the period who have provided feedback
- Lastly, previous work on this topic has been able to acquire mercenary data from even earlier periods

Modern Relevance