Easements in the Ivory Trade Ban: Are there Implications for Legal Ivory Trade?

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INTRODUCTION

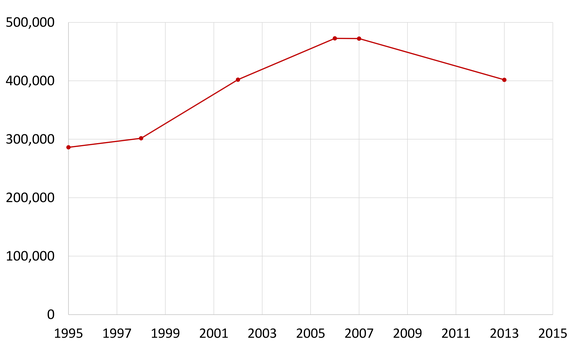
- The African elephant has been at the center of trade for their ivory for centuries.
- From an estimated 26 million African elephants in the 1800s, their population plummeted to 1.3 million in 1979.
- By 1989, the African elephant population declined to 600,000.
- CITES (Convention on the Trade in Endangered Species) listed the African elephant in their Appendix I in 1989, banning commercial ivory trade.

MOTIVATION

- At the 17th Conference of Parties in September & October 2016, CITES vetoed attempts from member countries to renew ivory sales.
- However, CITES had in the past allowed trade of ivory in 1997 and in 2008, from mounting opposition from some southern African countries.

RESEARCH QUESTION

Did the one-off sale in 2008 spur further trade in ivory products?



Estimated African elephant population from 1995

EMPIRICAL SPECIFICATION

Data was analyzed using the Gravity Trade model.

Examines bilateral trade between countries based on their economic weights (GDP), and the distance between the countries.

The basic empirical gravity equation for country *i* and *j* is:

$$T_{ij} = G\frac{Y_i^{\beta_1} Y_j^{\beta_2} Z_{ij}^{\beta_3}}{D_{ij}^{\beta_4}}$$

where Y = GDP, Zij are other factors that affect bilateral trade (e.g., common border), and Dij is the distance between the two countries.

In its log-linearized form, and incorporating country and time fixed effects, the above equation can be expressed as;

$$InT_{ij} = \beta_0 + \alpha_t + \alpha_{ij} + \beta_1 InY_i + \beta_2 InY_j + \beta_3 InZ_{ij} - \beta_4 InD_{ij} + \varepsilon_{ij}$$

Data: The trade value of worked and unworked ivory was obtained from the UN Comtrade database.

Exporting countries	Importing countries
Botswana	Botswana
Namibia	Namibia
South Africa	South Africa
Zimbabwe	Zimbabwe
Zambia	Zambia
Kenya	Kenya
	China
	Japan
	United States
	United Kingdom

The exporting countries were also considered importing countries to accommodate the significant trade in raw ivory and ivory products among Southern African countries.

RESULTS

	No fixed effects			*With fixed effects*		
Parameter	Estimate	Std. Err.	*P-value*	Estimate	Std. Err.	*P-value*
GDP export	1.7149	0.1255	0.0000	-1.2183	0.6814	0.0820
GDP import	0.7758	0.1070	0.0000	0.1655	0.3451	0.6340
distance	-1.8679	0.2210	0.0000	-2.2062	0.2861	0.0000
Corruption index	0.8771	0.4478	0.0580	1.3016	1.1931	0.2820
Contiguous	0.9753	0.4504	0.0370	0.4913	0.5496	0.3770
dummy >= 2008	-0.4356	0.2926	0.1450	-0.0657	0.3086	0.8330

- Time dummy not statistically significant, but has negative coefficient.
- Suggest that trade value in ivory decreased beyond year 2008.
- GDP coefficients significant for both exporting and importing countries.
- Increase in GDP associated with more ivory trade.
- Negative distance coefficient – more trade with countries farther apart.

ELEPHANTS ARE KILLED FOR THEIR TUSKS

DISCUSSION & CONCLUSION

- While legal trade may not have been impacted following 2008, we cannot say the same for illegal trade.
- Poaching is still rife in many Southern African countries (Wittemyer et al. 2014).
- Weak institutions, coupled with corruption enable the masking of illegal ivory into legal channels.

POLICY IMPLICATION

Gradual decline in African elephant population since 2008 indicates the existential threat to the species.

It may take a synergy of approaches in addition to the CITES controlled trade to protect the elephants.