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Analysis

Speculating a Fire Sale: Options for Chinese Authorities in Implementing a Domestic Ivory Trade Ban

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ABSTRACT

Africa is losing approximately 27,000 elephants a year to a poaching epidemic driven predominantly by demand for ivory in East Asia. In response, the U.S. and China agreed to implement domestic ivory trade bans to complement the international trade ban. The U.S. executed this agreement on 6 July 2016. Chinese authorities announced, on 30 December 2016, that they would end the domestic ivory trade by 31 December 2017. This paper accepts that a large volume of ivory entering China illegally is being stockpiled for speculative purposes. It sketches several scenarios of how ivory speculators, as important interlocutors between supply and final demand, might respond to this domestic ban. We conclude that the optimal elephant conservation policy approach would be for Chinese authorities to provide more specific details about the scope of the ban and how it will deal with stockpiled ivory. Our game theoretic analysis suggests that the ban should be imposed indefinitely; this should be explicitly stipulated to avoid uncertainty and continued speculation. The introduction of any possibility of a future regulated trade will create strong incentives for speculators to bank on elephant extinction, and maximise poaching effort in the short run.

1. Introduction

In September 2015, the United States (U.S.) and China stated publicly that they would be taking 'significant and timely steps' to impose domestic ivory trade bans (Bale, 2015). The U.S. Fish & Wildlife Service (USFWS) then revised the rule for the African elephant promulgated under section 4(d) of the Endangered Species Act of 1973, as amended. The final rule is binding on all states in the U.S. and 'prohibits import and export of African elephant ivory with limited exceptions' and 'limits the number of sport-hunted African elephant trophies imported into the United States to two per hunter per year' (United States Fish and Wildlife Service, 2016). The rule will allow the Service to more strictly regulate trade in African elephant ivory and ensure that the U.S. ivory market is not helping to drive the poaching of elephants in Africa. The ban will do so in large part by making it more difficult to 'launder' illegal elephant ivory through U.S. markets. These markets are large (the U.S. is the second largest ivory retail market in the world after China/Hong Kong), and the probability of illegal ivory being sold is high (Stiles, 2015; Stiles and Martin, 2009). China is the other major – and biggest – ivory market in the world.

The Great Elephant Census Report (Chase et al., 2016) estimates that approximately 27,000 African savannah elephants per year are being lost to poaching (Chase et al., 2016; Wittemyer et al., 2014). They also face threats of habitat contraction and fragmentation (Ripple et al., 2016).

China, on which this paper focuses, published a notice on December 30, 2016, that the processing and sale of ivory and ivory products 'will be stopped by December 31, 2017' (General Office of State Council, 2017). This would have been a difficult political move for the Chinese Communist Party (CCP) after having promoted the ivory trade as a cultural heritage industry concomitant with the one-off ivory sale in 2008. Two recent international decisions will, however, bolster the legitimacy of the Chinese authorities in implementing a near-total domestic ivory trade ban. First, at the September 2016 World Conservation Congress (WCC) of the International Union for the Conservation of Nature (IUCN), members voted (86.11%) in favour of Motion 007, which called for the closure of all domestic ivory markets (IUCN, 2016). This was supplemented by a consensus decision at the 'Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES)' Congress of the Parties (CoP17) in October 2016, to eliminate 'the illegal trade in ivory and domestic ivory markets that contribute to illegal trade' (Chair of the Standing Committee, 2016).

A ban on the international commercial trade in ivory has effectively been in place since a decision taken at the 7th meeting of the Conference

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of the Parties to CITES in October 1989 – all African elephant populations were transferred to CITES Appendix I[1] – came into effect in January 1990; however, two one-off sales were subsequently approved. The second one-off sale in 2008 sale saw 63 t of ivory being sold to China. In 2004, China's State Forest Administration (SFA) had granted 17 companies a license to process raw ivory and 87 outlets the right to sell ivory products. By 2014, there were 37 registered carving factories and 145 retail outlets. 'When the government labelled ivory carving an intangible cultural heritage, it signalled the start of state-backed efforts to preserve and revive the industry. Since the 2008 one-off sale, many of the factories have begun to hire and train new carvers for the first time in decades' (Vira et al., 2014, p. 46). The Chinese government has, since 2008, allowed a quota of 5 t a year of ivory to be officially processed.

The one-off sale, combined with the active promotion of the ivory industry, appeared to send a signal to the market that the ivory trade was legitimate. Therefore, while not solely responsible for the increase in elephant poaching, which has been occurring since 2006 (Maisels et al., 2013; Wittemyer et al., 2014), the sale appears to have been an unhelpful contributing factor to the current ivory crisis. A recent paper published by the National Bureau of Economics (NBER), using a standard econometric 'event study' model, argues that the sale 'corresponds with an abrupt, significant, permanent, robust and geographically widespread increase in the production illegal ivory through elephant poaching, with a corresponding 2009 increase in seizures of raw ivory contraband leaving African countries' (Hsiang and Sekar, 2016a). There is considerable controversy around this paper, with Underwood (2016a), for instance, having issued a strong critique to which Hsiang and Sekar (2016b) responded. The final Underwood (2016b) response holds that the Hsiang and Sekar 'analysis does not properly take account of the properties of the data' (ibid). This dispute remains unresolved at the time of writing but provides useful context for this paper nonetheless.

Some authors, such as Stiles et al. (2015), argue that the poaching crisis has been exacerbated precisely because of the 2007 announcement of a 9-year moratorium on submission of proposals to CITES to sell ivory from those countries with elephant populations on Appendix II (preceding the 2008 one-off sale). They argue that it signalled future scarcity of supply, which drove prices upwards and therefore incentivised poaching. Stiles and his co-authors argue that had the sales been allowed to continue, legal ivory would have likely satisfied consumer demand instead of the scarcity of such ivory inadvertently driving it higher.[2] However, a moratorium on trading ivory for only nine years, relevant to only four Appendix II-elephant countries, seems unlikely to constitute a signal of genuine future scarcity *per se*.

Integrally connected to the question of what impact an international trade ban has on elephant poaching, is how to address the phenomenon of ivory stockpiling for speculative purposes. There is a sizeable disjuncture between the volume of ivory entering China and the volume sold in retail outlets (both legal and illegal) (Stiles et al., 2015). Part of the rationale for domestic ivory trade bans is that the presence of a legal market – even if regulated – provides extensive laundering opportunities for illegal ivory sales (Bennett, 2014, 2011). Inference from the Elephant Trade Information System (ETIS) seizure data is that a large quantity of ivory entering China over the last decade or so has essentially all been illegal, and mostly raw (Underwood et al., 2013).

Even if it is granted that a large quantity of ivory is being sold predominantly through illegal online channels, the inference from the seizure data suggests a high degree of stockpiling for speculation (Moyle, 2014; Stiles et al., 2015; United Nations Office on Drugs and Crime, 2016). The relevant finding from the quantitative modelling in the Stiles et al. (2015, p. 1) paper is: 'the final conclusion of this study is that there has been stockpiling of raw ivory for speculative purposes. It is conceivable that more than 1,000 metric tons of illegal raw ivory remains stored in Chinese warehouses, and additional ivory is possibly stored in Africa and in other Asian countries'. Illegal raw ivory entering China cannot be sold legally, and it therefore must either be sold illegally, laundered through legal outlets, or stockpiled for future sale. Evidence shows that the illegal outlets tend not to sell raw ivory but rather low-end manufactured products (Gao and Clark, 2014; Stiles et al., 2015). For these reasons, the UNODC panel of experts concluded that the 'stockpiling for speculation' conclusion was plausible.[3] As a likely scenario, it is worth analysing.

Speculation in this respect essentially entails banking on policy outcomes in the hope that the ivory price will rise and thereby increase the value of the investment.[4] Also, stockpiling by a small number of players allows them to 'drip-feed' the market, confirming the perception of ivory as a scarce commodity, which serves to keep prices high.

Since at least 2006, demand for ivory in China has increased, largely because of the growth in the size of the Chinese middle class with its higher levels of disposable income. Consumers can now afford ivory products that were previously too expensive (Gao and Clark, 2014). Elephant poaching has consequently become an intractable problem (Chase et al., 2016; Harvey, 2015).

Increased Chinese economic activity in Africa since the early 2000s appears to be a major part of the problem. In some cases Chinese nationals are constructing the infrastructure by which ivory is trafficked (Abernethy et al., 2013; Brennan and Kalsi, 2015) out of range states: 'Ever-growing numbers of Chinese contract workers are going to Africa and buying increasing quantities of illegal ivory to smuggle into China' (Vigne and Martin, 2014, p. 80). Transnational criminal syndicates have also been able to infiltrate law enforcement agencies from parks to ports (Bennett, 2014; UNODC, 2016). This dynamic is compounded by weak governance, corruption and a lack of technical, management and law enforcement capacity in many range states (Bennett, 2014, 2011). Demand is not confined to China; a recent report documents raw ivory price changes in Vietnam, and that the Vietnamese market is growing. (Vigne and Martin, 2016). Chinese consumers clearly remain the largest market though.

A study produced by Stiles et al. (2015) argues that most raw ivory entering China is purchased by speculators, as the volume 'produced' (in Africa) greatly exceeds the quantity that has been processed and made available for legal (and illegal) sale to consumers (in China). This paper treats this finding as a crucial point of departure and sketches several scenarios as to how ivory speculators, as important interlocutors between supply and final demand, might respond to a domestic trade

[1] Convention on International Trade in Endangered Species of Wild Fauna and Flora, Appendices I, II and III, https://cites.org/sites/default/files/notif/E-Notif-2016-064-A.pdf, accessed 22 May 2017.

[2] For an overview of the general debate as to whether a regulated trade would be in the best interests of elephant conversation, see Harvey (2016) and the rebuttal by 't Sas-Rolfes (2016).

[3] Personal communication with one of the members of the UNODC's panel of experts. One anonymous reviewer suggested that we examine the Nadal and Aguayo (2016) paper on the economics of ivory stockpiles. That paper argues against the use of official stockpiles to deter speculation or to sell to lower the price and consequently discourage poaching. We agree with Nadal and Aguayo that neither of these suggested policy options make sense for conservation, especially in the absence of good data about how prices and speculators might respond. Nonetheless, we do accept that non-state actors (speculators) are likely to be stockpiling large quantities of illegal ivory. We agree with Nadal and Aguayo that official stockpiles should indeed be destroyed, as we do elsewhere in Harvey (2016) and Alden and Harvey (2016). To make that an effective policy move in the battle against elephant poaching, we propose in this paper that comprehensive domestic ivory trade bans should be imposed with an indefinite timeline, particularly in China. The strongest reason for this is to encourage a sell-off of privately held large ivory stocks.

[4] One reviewer highlighted the difficulties of treating ivory investment as similar to other types of commodity speculation. We agree to a point – ivory is fundamentally different in form and function to other commodities for which there are well established markets. Our main point, however, is that, until recently, speculators likely doubted that China was going to implement a domestic ivory trade ban. Further, they may have thought (and may still think) that any ban would be time-limited, and so they would have expected a ready return to liquidity with arbitraging possibility. If the duration of the ban remains in doubt – as its length is not explicit in the latest announcement – speculators may still think this way. This amplifies our conviction that if a domestic ban is to be effective at reducing elephant poaching rates, it should be made explicitly indefinite. The paper argues for this as a crucial policy implication.