

Occasional Paper

339

January 2023



China, Africa and the Market for Donkeys: Keeping the Cart Behind the Donkey

LAUREN JOHNSTON

African perspectives
Global insights

Abstract

Millennia ago, the domestication of the donkey in East Africa led to an era of trade-driven prosperity across Africa, Europe and Asia. The donkey as workhorse continues to unlock market access and socio-economic mobility for the world's poorest in Africa, especially in harsh climates. A parallel ancient, consumption-based demand for donkeys in China, however, is causing a clash between the mostly informal and rural donkey market in Africa and a highly lucrative and large-scale consumption-based market in China. Aside from donkey welfare and supply risks, the consequences for the rural poor in Africa – women and girls in particular – are heart-breaking and unnecessary. This paper elaborates on the dynamics of the China–Africa donkey trade and how it embodies the socio-economic complexity of realising the potential of South–South trade. In order to further local support for deeper China–Africa ties and South–South development, it also offers policy suggestions that may help to create a donkey market that supports inclusive, high-quality, mutual development.

Introduction

'If, as Herodotus stated, Egypt is the gift of the Nile, then it is a gift largely delivered by donkeys.'¹ Some 7 000 years ago in East Africa, Nubian and Somalian donkeys and their new pastoralist owners planted the seeds of early global trade and travel. The donkey (*Equus asinus*) was gradually adopted as a domesticated species beyond Eastern Africa, in Egypt and Sudan, and across the African continent and Eurasia.

Some 7 000 years ago in East Africa, Nubian and Somalian donkeys and their new pastoralist owners planted the seeds of early global trade and travel

It was, moreover, a donkey that²

carried Christ into Jerusalem, transported the Greek god Dionysus to his childhood home on Mount Nysa and into battle against the Giants, and provided a mount for Muhammad, who supposedly used it to summon his companions. Long before the arrival of the horse, they were ridden by kings in the Near East, buried near Egypt's first pharaohs and sacrificed to ancient gods across the Fertile Crescent and as far beyond it as Baluchistan and Badajoz.

Unlike horses, which have become enshrined as status symbols, the donkey has become the workhorse of the rural poor, especially in hot, dry and remote areas. Recently, however, the structure of the market for donkeys has been transformed. On the one hand, it still plays its traditional role as workhorse and household capital for the poor in rural Africa and similar environments elsewhere. In these environments, the donkey's role is essentially to make itself redundant by helping the poor to raise their incomes and so be freed from physical drudgery.³ This, in turn, makes it possible to dedicate more time to education and income-earning activities. Access to a donkey is especially transformative for women, with girl children more likely to be able to attend school and women more likely to be able to directly engage in income-earning activities. The donkey, in other words, sits at the heart of social mobility and progress in rural Africa.

High population growth among the poor in Africa, alongside adverse climate events, is also drawing attention to donkeys' valuable resilience and service. The UN estimates that almost

1 Peter Mitchell, *The Donkey in Human History: An Archaeological Perspective* (Oxford: Oxford University Press, 2018).

2 "Donkeys Were Domesticated 7000 Years Ago", *Archaeology Newsroom*, September 15, 2022.

3 Fiona Marshall and Lior Weissbrod, "The Consequences of Women's Use of Donkeys for Pastoral Flexibility: Maasai Ethnoarchaeology", *Documenta Archaeobiologiae* 7 (2009): 59-79.

500 million Africans live in extreme poverty – a number that is rising while population growth exceeds income growth, amid pandemic-related fragilities.⁴ This means Africa has the highest number of poor inhabitants globally, which helps to explain why the continent is home to the highest number of donkeys – some two-thirds of the estimated global population of 53 million donkeys in 2020.⁵

In modern, prosperous China, the donkey has three parallel and historical roles – as a draught or pack animal, a source of meat, and, uniquely, as an input in the production of a traditional Chinese medicine (TCM) health-related consumer product known as *ejiao* (popularly and in modern pharmaceutical regulatory context understood as ‘donkey-hide glue’, but strictly translatable as gelatin, which is not specific to any particular animal).⁶ In today’s China, the demand for donkeys as an input in *ejiao* has superseded the other two roles – to such an extent that this demand now has global implications for donkeys and the communities using them.

To make *ejiao*, collagen is extracted from donkey hides and mixed with herbs and other ingredients to create bars, pills or liquids for consumer or beauty products.⁷ *Ejiao* is believed to have ‘yin’ properties that strengthen the blood, stop bleeding and improve the quality of both vital fluids and sleep.⁸ The word *ejiao* itself is understood to have first appeared in an ancient medical text, Shen Nong’s *Materia Medica*, during the Han dynasty (206 BCE–220 CE). According to a famous Tang dynasty poem (618–907 CE), concubine Yang Yuhuan ate *ejiao* daily to maintain her beauty, while Emperor Xianfeng (1850–1861) of the Qing Dynasty (1644–1911) often gave *ejiao* as a royal offering.⁹

Today, China is home to 1.4 billion people and is the world’s largest economy in terms of purchasing power. Despite already being the biggest trading nation globally, it has plans to increase its trade, especially with Africa.¹⁰ Gains in household income and wealth, greater health insurance coverage, an ageing population and a famous television series are among the factors that have placed *ejiao* within the reach of China’s hundreds of millions of middle-class citizens. Moreover, China’s population is becoming older, which means that it will be home to around 400 million pensioners by the 2030s – translating to rising demand for ageing-friendly health products. *Ejiao*, famously, is one of these.

According to the Shandong *Ejiao* Industry Association, the *ejiao* market in China has increased in size from RMB¹¹ 19.6 billion in 2013 (about \$3.2 billion) to RMB 53.5 billion

4 UN Conference on Trade and Development, “Facts and Figures: Economic Development Report 2021”, Press Release, 2022.

5 UN Data, “Search: Ass”, October 6, 2022.

6 Safflower, “Ejiao – Donkey Hide Gelatine – A Must or a No?”, May 9, 2017; Angie McEliece, “A Look at the History of Ejiao (Donkey Hide Glue) and Its Vegan Substitutes”, Acupuncture and Integrative Medicine College, Berkeley, October 12, 2022.

7 The Donkey Sanctuary, “What is Ejiao”, <https://www.thedonkeysanctuary.org.uk/end-the-donkey-skin-trade/what-is-ejiao>.

8 Natalie Köhle, “Feasting on Donkey Skin”, in *Conspicuous Consumption*, 1st ed., eds. CA Smith, N Köhle and L Jaivin (Canberra: ANU Press, 2018).

9 Ruixue Zhao and Qian Wang, “Dong’e Ejiao’s Long History of Globalizing TCM”, *China Daily*, September 24, 2019.

10 Xi Jinping, “Full Text of the Report to the 20th National Congress of the Communist Party of China”, Ministry of Foreign Affairs of the People’s Republic of China, October 25, 2022.

11 Currency code for the Chinese renminbi.

in 2020 (about \$7.8 billion).¹² Although China is at the centre of *ejiao* demand globally, it is not the only consumer. For example, the US-based Pegasus Foundation, which is campaigning for a ban on *ejiao* in the US, suggests that the *ejiao* market in the US is worth some \$12 million.¹³ Production of *ejiao*, however, remains China-centric, making it the industrial source of demand for donkeys if not exclusively for the final product.

As *ejiao* consumption moves from the elite margins to the ever-expanding Chinese middle class (and possibly even beyond China's borders, especially if China succeeds in its agenda to take TCM globally),¹⁴ the number of donkeys required to meet demand is also increasing. Some 5 million donkeys (roughly 10% of the global donkey population) are now needed annually to satiate China's *ejiao* production demand.¹⁵ One estimate put 2020 production of *ejiao* at 15 288 tons.¹⁶ Yet the upward pressure on prices has not led to greater levels of supply, even within China. Beyond direct reproductive constraints, this is largely because prices paid to would-be donkey breeders have remained sluggish, if not below raising cost. That in turn has pushed Chinese entrepreneurs to search for donkeys abroad.

As Africa is home to the world's largest supply of donkeys, it has become a key market in meeting China's explosive *ejiao* demand. In principle, new export opportunities to China are regarded as a plus – China has been Africa's largest trade partner since 2009, but the continent has been less successful in exporting anything other than raw materials to it. The opportunity to export donkeys, however, is unusually socio-economically complex since in Africa it largely retains its historical role as a workhorse and enabler of social mobility among the poor. When China's *ejiao* demand disrupts this role decades before Africa's poor are able to replace donkeys with mechanised vehicles, this not only fails to foster prosperity but may also see a return to poverty, especially among women.

Given the huge profits being made in China's *ejiao* industry and the restrictions on donkey exports imposed by some African countries (Table 1), there are cases of transnational donkey theft and smuggling, akin to the illicit trade in wildlife. Whereas threats to biodiversity from wildlife demand are relatively understood and receive wide public support across the world, the loss of a domesticated species such as the donkey is typically overlooked. This despite the importance of the donkey to many of the world's poorest, women and girls especially.

These circumstances make the market for donkeys an interesting case study for exploring the nuanced and variable reality of South–South trade and China–Africa relations. Growing ties between China and Africa since the 1990s have had mixed impacts, with China's skyrocketing demand for African minerals and fuels facing criticism and comparison with

12 QQ New, "Market Size, Output, Market Competition Pattern and Development Trend of China's Ejiao Industry in 2021" [translated], September 6, 2021.

13 The Pegasus Foundation, "Campaign to Ban Donkey Hide Products", November 2022.

14 Annie Xianghong Lin et al., "Internationalization of Traditional Chinese Medicine: Current International Market, Internationalization Challenges and Prospective Suggestions", *Chinese Medicine* 13, no. 1 (2018): 1–6.

15 Jessica Murray, "World's Donkeys Being 'Decimated' by Demand for Chinese Medicine", *The Guardian*, November 21, 2019.

16 QQ New, "Market Size, Output".

colonial trade patterns.¹⁷ The more recent donkey trade, its challenges and economic prospects appear to fall awkwardly between:

- the possibility that Chinese consumption may be linked to diminished socio-economic prospects for Africa's poor;
- comparisons between China's demand for donkeys and the broader illicit trade in wildlife and wildlife parts such as rhino horn; and
- the potential of a targeted and formalised donkey-industry export goldmine.

The current China–Africa donkey-market structure and dynamics appear to be a case of the cart ending up before the donkey

The current China–Africa donkey-market structure and dynamics appear to be a case of the cart ending up before the donkey, in turn putting at risk donkeys, the communities reliant on them and possibly even broader China–Africa relations.

The socio-economic impact of the donkey is, unfortunately, relatively under-informed and under-studied, resulting in a lack of facts and impact analysis, as well as regulatory gaps. This has helped transform the trade into a red-button issue that may harm Africa's poorest – women especially – and even China's bigger aspirations in the Global South. Comparison is hence drawn between the 'market for lemons' in economics – which sets out how asymmetric information among second-hand car buyers and sellers can lead to market collapse – and the modern-day China–Africa 'market for donkeys'. The risk is that, while seven millennia ago the donkey helped ignite world trade from East Africa, today's donkey market dynamics risk the opposite – an unwinding of the potential of a broader China-led world trade.

In this context, this paper examines trends and issues in and prospects for the Africa–China donkey trade. It highlights the need for greater education, data and research on the market for donkeys. It is imperative that all sides invest in doing the 'donkey work' to formalise and better regulate the market for donkeys, to ensure the potential for reaping the bigger economic potential of not only donkeys but also China–Africa economic relations. This could include investment in understanding the geographic concentration of the *ejiao* industry in Shandong and how that industry structures itself around a single *ejiao* maker,

¹⁷ S Alemayehu Geda, *The Historical Origin of the African Economic Crisis: From Colonialism to China* (Cambridge: Cambridge Scholars Publishing, 2019); Lauren A Johnston, "The Economics of and Prospects for China's Africa Return", in *The Routledge Handbook of African Development*, eds. Tony Binns, Kenneth Lynch and Etienne Nel (London: Routledge, 2018), 583–600.

Dong'e *Ejiao*, which impacts other aspects of the global donkey trade and donkey supply pipeline. More information, analysis and targeted policy and market interventions could also promote a successful – for all parties – donkey trade, alongside optimal donkey supply in both China and Africa. In the medium term, this may require changes to the *ejiao* market that bring donkey demand in line with donkey supply. That could be induced by restricting the use of donkey-based *ejiao* inputs to medicinal *ejiao* use, and using product substitutes for wellness-based *ejiao* consumption, preserving the humble donkey's unbroken 7 000-year role in fostering global integration and prosperity in the process.

Demand for donkeys

Consumption led by China

UK-based charity The Donkey Sanctuary has linked burgeoning donkey supply in China to the recent Chinese television series *Empresses in the Palace*. It featured women of the imperial court saying at a certain time of day, 'Let's have some *ejiao*.'¹⁸ For China's modern aspiring 'empresses', *ejiao* has become a mainstream consumer product. In ancient times, the donkey was a means of transportation for working people. In the modern era, however, the donkey is valued more as a direct source of inputs for medicinal and consumer goods.

The manufacture of *ejiao* involves a 99-step process undertaken at specific times of the year in which mineral-rich water from Shandong province is combined with donkey-hide collagen and other ingredients.¹⁹ This purportedly produces a product that treats or prevents anything from miscarriage to circulatory issues and premature ageing. Whereas in ancient times *ejiao* was reserved for China's elite, today it is marketed, directly by the *ejiao* industry and indirectly through mediums such as television and social media, to China's booming middle class. China's main *ejiao* producer, Dong'e *Ejiao*, claims that a 'creation of heaven and earth' is now passing 'from the royal tribute to the home of ordinary people'.²⁰ *Ejiao* has become associated with 'ostentatious consumption and gift giving, comparable to ginseng or expensive tea'.²¹ Something of a contemporary Chinese superfood, Shandong walnut *ejiao* cake, for example, contains black sesame, walnut kernel, protein powder, rice wine, red dates, wolfberry, rock sugar and donkey-hide gelatin. As early as 2015 *ejiao* sales were estimated to have passed the \$1 billion mark.²²

18 Kate Bartlett, "Africa's Donkeys Are Being Stolen and Slaughtered for Chinese Medicine", VOA, July 9, 2022.

19 Shang Man, "Shandong Dong'e Gets Association for Ejiao", *China Daily*, December 3, 201.

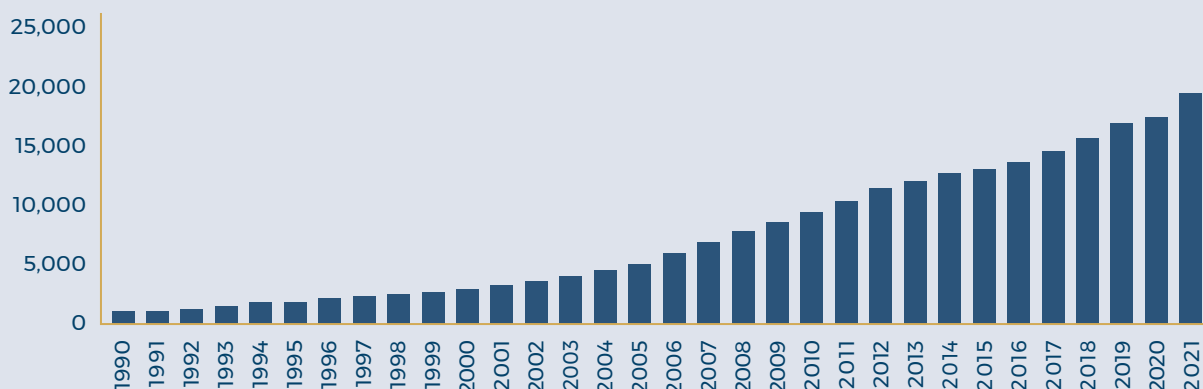
20 Christa Leste-Lasserre, "Chinese Trade in Hides has led to Global Donkey Massacre", *Science*, December 12, 2019; Law Info China, "Government of the People's Republic of China, Law of the People's Republic of China on Traditional Chinese Medicine", December 2016.

21 Köhle, "Feasting on Donkey Skin".

22 Sales of *ejiao* through retail pharmacies amounted to RMB 6.5 billion (about \$1 billion) in 2015. See Customs Information Network, *2016 Annual Donkey Skin Import Analysis Report*, 2017, cited in Richard Bennet and Simone Pfuderer, "Demand for Donkey Hides and Implications for Global Donkey Populations" (Discussion Paper, 93 Annual Conference of the Agricultural Economics Society, University of Warwick, April 15-17, 2019), 6.

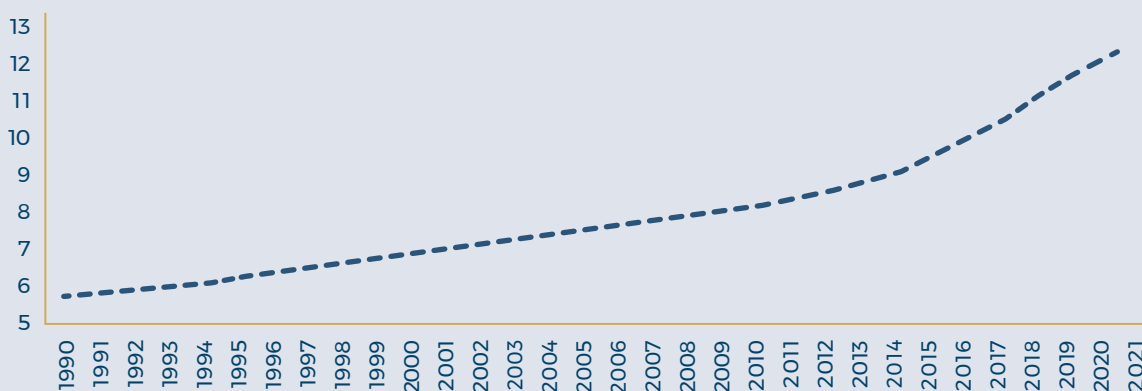
Alongside higher incomes (Figure 1), China’s population structure is also changing, with population ageing helping to drive the rising *ejiao* demand (Figure 2).²³ In parallel, there has also been a dramatic expansion of health insurance coverage in China – between 2004 and 2014 the coverage rate rose by around 1 billion people, from around 200 million to 1.3 billion people. This is the largest expansion in insurance coverage in human history.²⁴ China is, moreover, expected to be home to some 400 million pensioners by the late 2030s.

Figure 1 GNI per capita, PPP (current international \$)



Source: World Bank, “GNI Per Capita, Atlas Method”, 2022

Figure 2 Share of population aged 65 and over (%)



Source: World Bank, “Population Ages 65 and Above (% of Total Population)”, 2022

23 Dimpho Malebogo Matlhola and Ruishan Chen, “Telecoupling of the Trade of Donkey Hides between Botswana and China: Challenges and Opportunities”, *Sustainability* 12, no. 5 (2019): 1730.

24 Bennet and Pfuderer, “Demand for Donkey Hides”, 5.

Recently, the Chinese government has put in place policies to advance the use of TCM, led by the 'Development Plan of Traditional Chinese Healthcare Services (2015–2020)'.²⁵ Since *ejiao* is one of the most widely used TCM products, these policies are likely to encourage demographic and economic structural change toward ever-greater *ejiao* consumption. The question is, can the world's jennies (female donkeys) keep up? And what are the implications for traditional donkey users, ie, the rural poor?²⁶ There are implications, as well, for China's pensioners – what if, by the late 2030s and into the 2040s, when China comes closer to 'peak pensioner' numbers, there are no donkeys, and thus no *ejiao*? Ensuring that there is a sustainable donkey population going forward will be to China's benefit as well.

In 1990, when China was 'much less wealthy than today, around 400 000 donkey hides were sought for *ejiao* production a year. China then also had the world's largest donkey population'.²⁷ It is estimated that demand today is closer to some 5 million donkey hides annually, and China is home to far fewer donkeys.²⁸ Domestic supply constraints appeared around 2010.²⁹ Currently, only about 2 million hides come from China's domestic donkey population.³⁰

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According to Chinese media in May 2022, China has a formal donkey-hide importation agreement with 16 countries.³¹ In fact, current donkey-hide imports exceed domestic demand, resulting in downward pressure on local prices and losses for local farmers. This undermines the potential for sustainable development of the local donkey industry. In addition, of the 3 million or more donkey hides imported annually, The Donkey Sanctuary estimates that between 25% and 35% are from donkeys that were stolen.³²

25 Bennet and Pfuderer, "Demand for Donkey Hides".

26 Horse gelatin cannot be used in place of donkey gelatin, for example, since this is considered to contain 'yang' properties, and not 'yin' properties like the donkey.

27 Matlhola and Chen, "Telecoupling of the Trade", 1730.

28 Bennet and Pfuderer, "Demand for Donkey Hides".

29 Bennet and Pfuderer, "Demand for Donkey Hides", 11.

30 That population is itself mostly concentrated in China's less densely populated outer regions of Inner Mongolia, Qinghai and Xinjiang.

31 Special Breeding Information Network, "Imports of Donkey Products and Domestic Prices of Donkey Products in the First Quarter of 2022", April 4, 2022.

32 Simon Pope, Emily Reeves and Janneke Merckx, *The Global Trade in Donkey Skins: A Ticking Time Bomb*, Report (Sidmouth: The Donkey Sanctuary, May 2022).

In addition to donkey hides, donkey meat is also imported. Some 9 201 tonnes of donkey meat was imported by China in 2021.³³ These imports mainly came from Brazil, which generates some \$3 billion annually from the trade, as well as Pakistan and a handful of other countries.³⁴ Australia has also been a key supplier, but geo-economic tensions and campaigns against the trade have muddled the potential of trade beyond processed donkey hides. Unlike *ejiao*, donkey meat – typically consumed as donkey burgers – is mostly locally sourced and consumed in just few provinces, including Shandong, Hebei and Shanxi provinces, and especially in Hebei, Tianjin and Beijing. While not typically consumed daily, it is reported to be favoured over beef or mutton for being more tender and containing more crude proteins, essential amino acids and unsaturated fatty acids, as well as lower total fat, cholesterol and calories.³⁵

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Demand patterns in Africa

In Africa the donkey remains one of the simplest, most sustainable and affordable means of transporting people, goods and farm inputs and outputs from home to farm to market and vice versa. Even in harsh environments donkeys can travel long distances with a heavy load without showing signs of fatigue. While donkey ownership itself is not a panacea for all household, child-raising and production burdens faced by rural low-income women, donkey ownership does increase productivity and lessen drudgery by, for example, reducing the loads women must otherwise carry themselves.

While donkey ownership itself is not a panacea for all burdens faced by rural low-income women, donkey ownership does increase productivity and lessen drudgery

33 Special Breeding Information Network, "Imports of Donkey Products".

34 Heinrich Boll Stiftung, "Brazil's Trade with China: Donkeys as an Addition", July 13, 2020; Brooke, "Donkey Skin Trade in Latin America: Recommendations for a Growing Problem", December 9, 2021.

35 Li Anlan, "China Has Its Own Take on Burgers and Burritos", *Shine*, April 12, 2019; Paolo Polidori and Silvia Vincenzetti, "Quality and Nutritional Characteristics of Donkey Meat", in *Meat and Meat Processing*, ed. Derrick B McCarthy (Happauge: Nova Science Publishers, June 2017).

A rare survey of donkey owners in Ghana reported numerous advantages to owning a donkey, and for women in particular.³⁶ Four of these are outlined here, with the first being that donkeys support income generation. The use of a donkey not only speeds up the transportation of goods to markets but also enables more produce to be taken on any trip – especially when compared to someone having to carry those goods. In the survey, one 30-year-old donkey owner, a mother of six, noted that,³⁷

without the donkey, possibly we wouldn't [always] have had food to eat ... our yield would have been very small to take care of our household food security. The donkeys are used to increase the farm yield ... helping me to feed my family.

Second, having a donkey supports utilities provision, in that it means one can transport heavier loads of firewood, for example, and make the trip less frequently, as another family reported in the same survey. That in turn frees up labour and time for other income-generating activities, such as 'sowing on someone's farm for money'.³⁸ Importantly, not only are donkeys less prone to illness than cattle but in difficult times they are also less likely to be consumed or sold for consumption. As a result, they are more durable as a household asset.

Third, female donkey owners report experiencing less neck, head and chest pain once they have a donkey to help them transport goods. Some surveyed men in rural Africa in fact complained that women had become lazy and lost the ability to carry loads on their heads – thanks to donkeys. Asked if she would ever sell her donkey, one female donkey owner exclaimed:³⁹

I would never sell my donkeys if they are not very old or sick. Ei!! Sell my donkey and do what? What would I do to feed my family? I don't have a female child to support me. The donkeys are helping me.

Sell my donkey and do what? What would I do to feed my family?

Fourth, owning a donkey was found to save adults about five hours of labour a week, and children 10 hours a week.⁴⁰ The presence of a donkey also tends to free girl children to attend school. And so the donkey has been described as 'priceless', not only for the owner

36 Heather Maggs, Andrew Ainslie and Richard Bennett, "Donkey Ownership Provides a Range of Income Benefits to the Livelihoods of Rural Households in Northern Ghana", *Animals* 11, no. 11 (2021): 3154.

37 Maggs, Ainslie and Bennett, "Donkey Ownership", 3254.

38 Maggs, Ainslie and Bennett, "Donkey Ownership", 3254.

39 Maggs, Ainslie and Bennett, "Donkey Ownership", 3254.

40 Maggs, Ainslie and Bennett, "Donkey Ownership", 3254.

but for the whole community.⁴¹ In line with the Ghana donkey survey, in Kenya the impact of the *ejiao*-related trade has been associated with diminished rural household livelihoods through increasing vulnerabilities to poverty, water insecurity, illiteracy and economic disempowerment, among others.⁴²

A study of donkey owners in South Africa offers a summary of the value of the donkey, which serves to:⁴³

- facilitate employment opportunities via donkey-related work;
- enhance access to markets through transportation of self and goods;
- provide savings opportunities;
- foster opportunities for home ownership and home extensions; and
- provide for income diversification, as donkey-related income can be funnelled into cattle and shop ownership.

In extreme conditions such as drought, the donkey becomes even more valuable. The current drought in the Horn of Africa, for example, has seen donkeys being used to distribute scarce water resources in intense heat – and placing them at risk, as even donkeys struggle to access sufficient hydration.⁴⁴ In Ghana, donkeys already play a role in climate change adaption programmes.⁴⁵ In the era of climate change, in other words, the donkey may become more important than ever, even if incomes continue to increase.

Supply of donkeys

Donkey numbers

In 2020 the planet was home to some 53 million donkeys, 99% of which were found in low- and middle-income countries.⁴⁶ Almost two-thirds of donkeys – some 63% – are found in Africa. Asia is home to a quarter of donkeys, while Europe and Oceania are home to fewer than 1 million donkeys between them (Figure 3).

41 Maggs, Ainslie and Bennett, "Donkey Ownership", 3254.

42 Denis Mutua Musyoka, "Effects of Chinese Donkey Skin Trade on the Livelihoods of Rural Households in Kenya" (PhD diss., US International University-Africa, 2022).

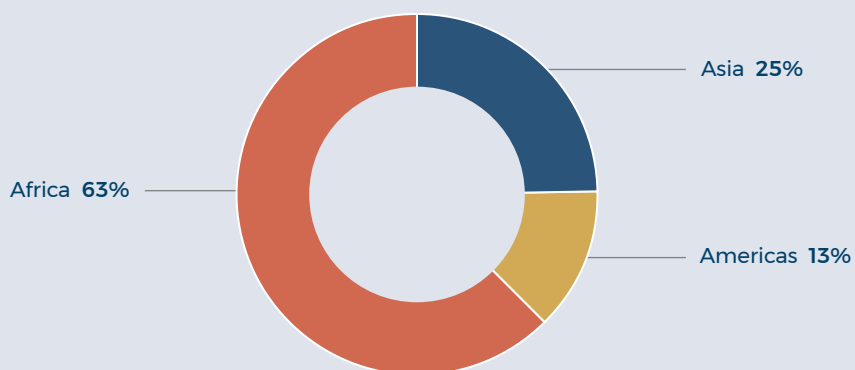
43 Kristen Binda, "A Donkey's Worth in South Africa: Domestic Laborer or Export Product – Socioeconomic Impacts of China's Skin Trade on South African Donkey Owners" (MA Thesis, Charles University in Prague, 2019), 83.

44 *UN News*, "Hunger Still Rising Across East Africa, Says New UN-Backed Report", July 22, 2022.

45 Brooke, "Gaps in Population Data Put Working Horses and Donkeys at Threat", February 3, 2022. "[L]ow income' country refers to countries with a gross national income (GNI) per capita of US\$1,085 or less in 2021, and 'middle-income' economies are those with a GNI per capita of between US\$ 1,066 and \$13,205 in 2021. World Bank, "World Bank Country and Lending Groups", 2022.

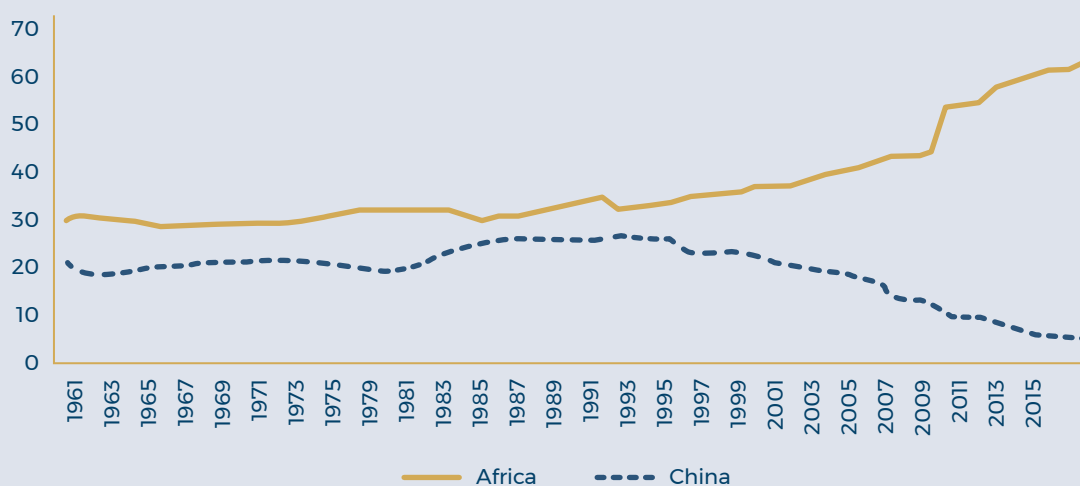
46 *UN News*, "Hunger Still Rising".

Figure 3 Donkeys by region, 2021 (1961–2020)



Source: UN Data, "Commodity Trade Statistics Database", 2022

Figure 4 Donkey numbers, China & Africa



Source: UN Data, <http://data.un.org/datamartinfo.aspx>

At the national level, since the early 1990s and especially from the 2000s on, China's donkey stocks have trended downwards while Africa's have trended up, according to UN estimates (Figure 4). China was home to 7.5 million donkeys in 2020 (around 7.5% of the total) – a much lower share than in the past. Ethiopia, on the other hand, is the world's donkey superpower, with more than 10 million donkeys (some 20% of total stocks). Sudan and Pakistan are otherwise the only countries home to more than 10 % of global stocks, at 14% and 10% respectively. Given the shared land border between China and Pakistan – an important corridor in China's flagship geo-economics policy platform, the Belt and Road

Initiative – China recently also signalled a desire to import more donkeys from Pakistan.⁴⁷ Scientists from both sides are cooperating in related research.⁴⁸ As in the case of Africa, trade would need to be based on donkey farming to ensure a sustainable supply and the mitigation of socio-economic risks for Pakistan’s own poor.

Supply constraints

A fundamental constraint in terms of donkey supply is their breeding cycle. Donkeys are notoriously slow to reproduce – jennies are pregnant for about 12 months and then nurture a foal for an average of four to six months. Jennies tend to give birth to just one foal every other year, and only after reaching two and a half years of age.⁴⁹ Donkeys are also known to be sensitive animals, and hence are relatively difficult to breed.⁵⁰

Moreover, since donkeys deliver hides even when dehydrated and treated badly, unlike other livestock raised for meat consumption, it is not necessary to maintain their welfare. Compounding these inter-related reproductive and welfare challenges is the fact that, on smaller-scale ownership levels, jennies are typically needed for work by their owners, who thus are reluctant to let them breed in the first instance.⁵¹

The cost of raising a donkey is comparable to that of raising a cow, but the sale price of a donkey is lower and not stable. Moreover, while *ejiao* is expensive, donkeys are not – 90% of *ejiao* profits go to the *ejiao* producer.⁵² Despite the value of donkey meat and donkey hide as commodities in China, rural people are hence less keen to raise donkeys.⁵³ Chinese media reports that the net profit on raising a donkey is just RMB 3–5 per day (about 40–75 US cents), which is not sustainable.⁵⁴ Donkeys tend to be bred in the country’s more remote and poorer provinces in the far west and north, far from the lucrative *ejiao* industry in coastal Shandong. In other words, China’s own dramatic regional inequalities, and the related limited profit sharing, mean that there are fewer high-quality breeding donkeys in China itself, which affects foreign donkey markets.

47 “Pakistan to Earn Millions by Exporting Donkeys to China”, *Business Today* (India), February 4, 2019; Talib Haider, “Pakistan to Export Donkeys to China”, *SBS*, February 4, 2019; “China to Import Dogs and Donkeys from Pakistan”, *News 18*, October 6, 2022.

48 Tahir Ali, “Pak-Chinese Researchers Discovered ‘Antioxidant Activity’ in Donkey Meat”, *China Economist Net*, June 22, 2022.

49 Leste-Lasserre, “Chinese Trade in Hides”.

50 Pope, Reeves and Merx, “The Global Trade”.

51 Kuailede Nongcunniu, “The Prices of Donkey Meat and Skin Are Very High, So Why Are Farmers Reluctant to Raise Donkeys? What Is the Reason?”, *Baijiahao*, Baidu, July 25, 2022; Binda, “A Donkey’s Worth”, 78.

52 Nongcunniu, “The Prices of Donkey Meat”.

53 Nongcunniu, “The Prices of Donkey Meat”.

54 Nongcunniu, “The Prices of Donkey Meat”.

Unequal consequences of donkey-market disequilibrium

'Historically, *ejiao* was a regional delicacy, a "medicine for emperors"; today it is a wellness candy, mass-produced for conspicuous consumption by the affluent, an expanding part of China's vast population.'⁵⁵ Yet natural resources are finite, and delicacies, by definition, cannot be mass produced. 'No matter how wealthy a society becomes, not everyone can be the emperor.'⁵⁶

Ejiao was a regional delicacy, a "medicine for emperors"; today it is a wellness candy, mass-produced for conspicuous consumption

For donkeys, the welfare effects of the increased demand for donkey hide, especially given their sensitivity, are many. The emergence of the global trade in donkeys with little or no regulation, around an 'idiosyncratic, opportunistic, and irregular supply chain, with evidenced biosecurity hazards', has proven to be an enabler of organised criminality, socio-economic disruption and even poverty.⁵⁷

Consequences for donkeys

The emergence of a global donkey trade, especially an illicit one, has had severe welfare implications for donkeys. Where official slaughter processes are avoided, there is no assurance that the animals and their hides are disease-free, that export quotas are honoured and that smuggling is not taking place. Indeed, although there is a legal donkey trade, the new illicit parallel trade means that donkeys are the rare domesticated species traded alongside wildlife in the illicit trade. Regulations that protect the welfare of donkeys are typically abandoned accordingly.

In the mid-2010s, in South Africa alone, there were several high-profile cases of donkey abuse linked to Chinese demand for donkey hides. For example, in 2016 officials at OR Tambo International Airport inspected 39 'foul-smelling' cargo containers labelled 'cladding', only to find over 300 undeclared donkey hides destined for Hong Kong.⁵⁸ Also in 2016, the Highveld Horse Care Unit was led to over 5 000 donkey hides in a shipping

55 Köhle, "Feasting on Donkey Skin".

56 Köhle, "Feasting on Donkey Skin".

57 Köhle, "Feasting on Donkey Skin", 43.

58 Seree Bega, "Silent Donkey Holocaust", *IOL*, May 13, 2017.

container just outside Johannesburg. Afterwards they found ‘thousands more’ nearby, only a very ‘small number’ of which the Chinese men charged with the crime could account for with receipts of purchase and documentation showing the donkeys had been processed at a licenced slaughterhouse.⁵⁹ (Slaughterhouses must be able to accommodate the anatomical differences between animals, even donkeys and horses.)

In May 2017 South Africa’s Society for the Prevention of Cruelty to Animals followed a tip-off to a farm near Johannesburg, where its officers found 1 000 donkey hides in bales. It was observed that the donkeys appeared to have been ‘hacked behind their necks to presumably render them paralysed in order for them to be skinned’.⁶⁰ In another case, it was alleged ‘the donkeys were still alive but paralysed or unconscious while being skinned’.⁶¹ In rural South Africa, 35 donkey carcasses were found after having been skinned alive in a rural area of KwaZulu-Natal, with some 100 missing in the same area,⁶² and more than 100 were found ‘bludgeoned to death with hammers’ on a farm in the Northern Cape.⁶³

The rate of donkey consumption in some countries has led to claims of extinction risk. In the case of Botswana, since 2016 about half of the donkey population has been lost. One slaughterhouse in Lentsweletau is estimated to have slaughtered about 60 donkeys per day, or almost 160 000 annually – more than half the domestic donkey population. When donkey owners refuse to sell, their donkeys are often stolen and the hides smuggled via Zimbabwe, South Africa and Mozambique, or from Tanzania via Kenya, to China.⁶⁴

In mid-2021 the head of the Egyptian Farmers Syndicate, Hussein Abdel Rahman Abu Saddam, warned that demand for the country’s donkeys was putting supply at risk.⁶⁵ Although in some cases donkeys had been replaced with affordable, mechanised means of transport, Abu Saddam warned that the donkey’s disappearance from Egypt could still upset the human and environmental ecosystem. He called for those involved in the illegal trade to be punished, and for the establishment of regulatory systems and donkey identification mechanisms.

While smaller than the East and Southern African trade, there have also been cases of donkey smuggling in West Africa. Some areas of Nigeria allow the slaughter of donkeys, typically meaning an informal bush slaughter that carries animal welfare and public health risks alike. This regulatory opening has led to the cross-regional transport of donkeys, which often means donkeys are forced to travel inhumanely long distances on foot or are stacked live in trucks and transported from Mali, Mauritania or Niger. As recently as March 2022,

59 Given Sigauqwe and Govan Whittles, “Why Are Gangs Killing Our Donkeys?”, *Mail & Guardian*, January 20, 2017.

60 National Council of SPCAs, “NSPCA Seizes Donkey and Tiger Skins”, <https://nspca.co.za/seizure-donkey-tiger-skins/>.

61 Pope, Reeves and Merx, *The Global Trade*, 38.

62 Bongani Mthethwa, “Pair Caught with 35 Skinned Donkeys Face Animal Cruelty Charges”, *Sowetan Live*, February 6, 2017.

63 Bega, “Silent Donkey Holocaust”. In general, in smaller slaughterhouses it is common to paralyse an animal or insert a knife behind its ears, or to use an axe to the forehead, but the process is prone to mishap.

64 Matihola and Chen, “Telecoupling of the Trade”, 6.

65 Hagar Hosny, “Chinese Demand for Hides Threatens Egypt’s Donkey Population”, *Al-Monitor*, August 16, 2021.

Nigeria Customs Services seized donkey hides to a value of nearly GBP⁶⁶ 5 000 (about \$6 131), which were being stored in a warehouse in Lagos alongside cannabis valued at GBP 24 000 (about \$29 500).⁶⁷ Some have warned of a risk that Nigeria's donkey population could face extinction.⁶⁸

Consequences for the poor, women and girls in particular

Heart-breaking cases have been reported in which rural households have woken up to find their donkey stolen. There have been cases of villages discovering the skinned remains of their donkeys in a nearby field following an overnight poacher strike.⁶⁹ In South Africa a donkey would fetch \$30 at auction five years ago, but in 2022 this increased to \$125.⁷⁰ The increase in the market price for donkeys usually makes it impossible for families to replace their donkey, leading not only to immediate diminished quality of life and income level but also to downward social mobility.

Heart-breaking cases have been reported in which rural households have woken up to find their donkey stolen

Even donkey owners who agree to sell their animal often find it a short-sighted deal. Donkeys support livelihoods by carrying people and goods to market, school and even health clinics. Their contribution to labour and income frees up children to attend school. Losing a donkey means 'the people become the donkey again'⁷¹ – an elevated risk for girls in particular.⁷²

A family without access to energy, water, nearby schools or a decent roof will keep daughters at home early to help mothers – often anaemic and tired from pregnancies – with household chores or marry them off as soon as possible to benefit from the dowry.

Donkeys have provided important services – and routes out of poverty – for millions over millennia. They reduce hard physical labour in farming and domestic chores where the

66 Currency code for the British pound.

67 Pope, Reeves and Merx, *The Global Trade in Donkey Skins*, 31.

68 Muhammad Abdullahi Maigari et al., "Scavenging for Ejiao's Raw Material and the Extinction of Donkeys in Nigeria", *Global Journal of Sociology: Current Issues* 10, no. 2 (2020): 71-87.

69 Köhle, "Feasting on Donkey Skin".

70 Wandiswa Ntengento, "Chinese Demand for Exotic Cures Switches to Donkey Skins", *Bangkok Post*, June 22, 2022.

71 Leste-Lasserre, "Chinese Trade in Hides".

72 David Pilling, "Niger Questions Wisdom of Sustaining World's Highest Birth Rate", *The Financial Times*, September 20, 2022.

availability of electricity, gas, water and public transport is poor to non-existent, carrying firewood, carting water, and so on. They can also be rented out to generate income and their foals can be sold for profit. The loss of a donkey, even through a willing sale, not only leads to financial losses for owners and communities but also increases physical stress and feelings of hopelessness, anxiety and community tension.⁷³

Lucky Khobe Muntsu, from North-West province in South Africa, had several of his donkeys stolen and found their skinned carcasses after they had apparently been beaten to death:⁷⁴

One of the mares was pregnant. I felt sick. My 17 donkeys mean everything to me ... I used to be able to do six or seven loads [of transport work] a day - now I can only do two because the donkeys become too tired ... I can't sleep. I'm so scared they will come for the rest.

The result can thus be diminished food availability not only for the affected household but for the whole community. The rising demand for *ejiao* in China - which successfully eliminated poverty in 2021 - may thus dramatically interrupt the lives and hopes of the world's poorest people, women especially.

Consequences for the environment

In agriculture, using a donkey to plough land is considered a sustainable means of land management. Compared to heavy machinery, donkeys have a lower impact on the soil and provide manure for crops (instead of fuel-related pollution). Loss of this has been shown to have a negative impact on soil fertility.⁷⁵

Compared to heavy machinery, donkeys have a lower impact on the soil and provide manure for crops (instead of fuel-related pollution)

Moreover, donkeys' small bodies have a lower water and calorific requirement than those of other draught and pack animals, which means that they are preferred by communities in arid and semi-arid areas. During droughts, households using cattle often go back to using donkeys.⁷⁶ In an era of rising climate change-related rainfall and associated unpredictability risks, this hardiness makes it a more valuable animal than in the more climatic-predictable

73 Binda, "A Donkey's Worth".

74 Binda, "A Donkey's Worth".

75 Maigari et al., "Scavenging for Ejjiao's Raw".

76 Binda, "A Donkey's Worth", 3.

past. In September 2022 Voice of America reported on desperate Somalis transporting a few possessions and chronically dehydrated children by donkey cart to emergency shelters and displacement camps.⁷⁷

Consequences for China's rural poor and sick

The modern donkey trade shifts the distribution of welfare gains and losses not only in Africa but also in China. Elderly farmers in harsh Chinese environmental conditions have experienced a similar loss of access to donkeys. In 2017 USA Today interviewed Chinese farmer Ma Yufa, who grows vegetables on steep mountain terraces, a terrain unsuited to tractors. Farming much the way his ancestors did, Ma noted that when he was young his family relied heavily on their donkey. His own donkey, however, died in 2014, and he was unable to replace her: 'There aren't any donkeys left. We have killed them all.'⁷⁸

Beyond agricultural communities, even Chinese consumers are feeling the adverse effects of China's *ejiao* boom. As *ejiao* prices rise, fewer patients can afford the genuine product for its blood cleaning and other properties.⁷⁹ Instead they are 'fobbed off with wellness candies that have no medical efficacy'.⁸⁰ *Ejiao* may be one of the three great treasures of TCM, alongside deer horn and ginseng, but when it becomes a symbol of ostentatious consumption it cannot always benefit those most in need, even in China itself.⁸¹

Consequences for China's soft power and South-South credibility

In July 2022 The Chinese Association (TCA) emerged victorious after a five-year legal battle in Johannesburg's Equality Court about social media posts linked to the incitement of racial hatred. These arose from the treatment of donkeys by Chinese gangs involved in the illicit donkey trade in South Africa. TCA's legal win drew wider, potentially damaging, attention to the China-dominated donkey trade.⁸²

Animal rights activists, members of the media and development scholars are among those critical of the Chinese trade. Some even compare China's donkey trade with patterns of traditional - unequal and, in some cases, harmful - North-South exchange.⁸³

The ability of the donkey skin trade to swiftly eliminate individual livelihoods, community resources, and important linkages to development in a difficult environment is its most serious threat. The fact that this destruction occurs in a

77 Associated Press, "So Many Children Dying: Somalia Drought Brings Famine Fear", VOA, October 8, 2022.

78 Hannah Gardner, "China Has a Donkey Shortage", *US Today*, July 17, 2017.

79 Köhle, "Feasting on Donkey Skin".

80 Köhle, "Feasting on Donkey Skin".

81 Gardner, "China Has a Donkey Shortage".

82 Jeanette Chabalala, "SA Chinese Community Wins Hate Speech Case", *News 24*, July 29, 2022.

83 Michelle Starr, "A Curious Discovery in 9th Century Chinese Noblewoman's Grave Points to Donkey Polo", *Science Alert*, March 17, 2020.

monopolized, deceptive, and violent manner to supply a medically unfounded treatment to satisfy China's rising middle class strongly replicates historically exploitative colonial relationships for Africa.

The ability of the donkey skin trade to swiftly eliminate individual livelihoods, community resources, and important linkages to development in a difficult environment is its most serious threat

In this context of spreading anger and the perception of rising socio-economic costs associated with the donkey trade, whether accurate and or not, there may be a broader risk to both the emergence of a workable donkey trade and to South-South trade and political-economy evolution. A base comparison point is offered by the field of economics, particularly the 'market for lemons' scenario.⁸⁴

Comparison with the 'market for lemons'

The theory set out in the 'market for lemons' explains how asymmetric information between buyers and sellers can lead to market failure – ie, no transactions.⁸⁵ Lemons here refer to poor-quality second-hand cars, which comprise a share of second-hand cars on the market. Unfortunately, buyers do not have the relevant information needed to determine whether a car is a 'lemon' or not.

Logically, two prices are expected in such a market – better-quality cars should sell for a higher price than lower-quality 'lemons'. However, the absence of information forces buyers to aim for an average price between the two prices. That, in turn, means that sellers of quality second-hand cars exit the market as it fails to offer them a fair price. The market for second-hand cars thus collapses.

In the case of China, Africa and the 'market for donkeys', what if the parallel illicit donkey trade is having the same effect? The fear that a legitimate donkey trade is inevitably paired with a secondary illegitimate – and inhumane – one could lead to the collapse of public and civil society support for any donkey trade, let alone the steady evolution of a sustainable one. Moreover, when the poor lose access to donkeys, there could be concurrent pressure to end international trade in donkey products. Table 1 lists the African countries that put up barriers to trade in donkeys with China in recent years. This implies that there may be

84 George A Akerlof, "The Market for 'Lemons': Quality Uncertainty and the Market Mechanism", in *Uncertainty in Economics: Readings and Exercises*, eds. Peter Diamond and Michael Rothschild (Cambridge MA: Academic Press, 1978), 235–251.

85 Akerlof, "The Market for 'Lemons'".

regulatory and market-information lessons from the ‘market for lemons’ for the ‘market for donkeys’, and perhaps for China–Africa and South–South relations overall.

Regulatory changes and challenges

Regulatory responses by governments

The rising Chinese demand for donkeys has had different impacts on different African economies and economic actors. These impacts – and the responses to them – depend on various factors, including donkey supply, the level and nature of public response, and the institutional environment, including the legal system. In Kenya, for example, public outrage led to a ban on exports being implemented in February 2020 by Kenya’s Ministry for Agriculture, Livestock, Fisheries and Cooperatives. Kenya’s donkey exporters, however, took their case against the ban to Kenya’s High Court in June 2020, and won.⁸⁶

TABLE 1 RECENTLY ANNOUNCED NATIONAL DONKEY-MARKET RESTRICTIONS	
Country	Donkey policy
Tanzania	2022: 10-year ban on donkey slaughter (previously banned in 2018, then reversed in 2019)
Côte d’Ivoire	2022: Ban on slaughter and export of donkeys
Kenya	May 2021: High Court revokes ban on the slaughter of donkeys and export of skins
Nigeria	2021: Proposed legislation on banning the slaughter of donkeys and export of skins, bill has not passed into law yet
Ethiopia	2017: Ban on the slaughter and export of donkeys (although a Chinese-owned donkey slaughterhouse opened in Ethiopia in 2021)
Uganda	2017: Ban on the export of donkey skin
Botswana	2017: Ban on the export of donkey skin (it is reported that it quietly revoked the ban in 2018)
Egypt	2016: Egypt and China sign a deal whereby Egypt exports 10 000 male donkeys to China every year
Burkina Faso	2016: Ban on the export of donkey skin
South Africa	Trade in and export of donkey meat and hide are legal. The animals must be slaughtered at a registered equine abattoir. The number of hides that may be exported is restricted to 7 300 a year.

Sources: Brooke, “Tanzania Bans Donkey Slaughter”, January 14, 2022; “Ivory Coast Bans Slaughter of Donkeys”, *Horse Talk*, July 20, 2022; Welttierschulzgesellschaft eV, “Donkey Skin Trade in East Africa”; Ronald L Kato, “Kenya Court Rescinds Ban on Sale of Donkey Meat”, *Africanews*, May 7, 2021; Associated Press, “Nigeria Seizes Donkey Penises to be Smuggled to Hong Kong”, *US News*, September 8, 2022; “Ethiopia Bans the Donkey Skin Trade”, *Il Rugio Degli Asinelli*, April 19, 2017; The Donkey Sanctuary, “Uganda Bans Donkey Skin Trade”, August 24, 2017; Oxpecker Reporters, “Halt the Hunt of Desert Wildlife, Say Namibia’s Experts”, March 9, 2015; Hosney, “Chinese Demand for Hides Threatens Egypt’s Donkey Population”, *Al-Monitor*, August 16, 2021; Fuchsia Dunlop, “Burkina Faso Bans Donkey Skins Exports, Affecting Asian Trade”, *BBC*, August 10, 2016; Glenneis Kriel, “Donkey Farming: Opportunity or Threat?”, *Farmers Weekly*, February 8, 2018

86 “Donkey Abattoirs in Kenya Hopeful as Court Lifts Ban”, *China Daily*, August 7, 2020.

Elsewhere, countries such as Botswana, Burkina Faso, Mali, Niger, Senegal and Tanzania have banned donkey exports. Others, such as South Africa, have banned or limited the donkey trade with requirements for established slaughterhouses and related quotas (Table 1). Implementation of these policy changes has varied according to the strength of regulatory capacity in each country, the need of donkey owners for an income windfall via the sale of a donkey, and other factors.

Allegedly, various levels of illicit donkey trade are taking place to circumvent those bans. The damage done to victims of the illicit trade, and potentially to China–Africa relations overall, is not known. It is likely, however, that the related direct and indirect costs are not without spillover effects in the immediate and long term, as in the case of the Kenyan High Court decision. The export of donkeys may again be allowed, but the concerns of neither Kenya’s donkey-welfare sector nor of those advocating the interests of Kenya’s poorer donkey users have been addressed. Calls continue for the ban to be re-instated, at least until donkey numbers can accommodate the export market without risking the donkey itself or the communities it serves.⁸⁷ Given these complex distributional implications, what was a win for donkey exporters may not necessarily be a win for China–Africa trade overall, or even for Kenyan development.

Formal vs informal and digital trade complexity

As with the illegal wildlife trade, there are fears that quotas and bans merely send the trade underground and lead to more donkey theft, producing even lower returns for donkey owners and more degraded welfare for donkeys than regulated trade. In the case of South Africa, for example, it is understood that donkeys outside of quota (Table 1) are simply being smuggled into Lesotho and sent to China from there.⁸⁸ In such cases, abattoir standards tend to be much lower, implying that efforts to improve donkey welfare in some countries have instead led to diminished donkey welfare, little change to supply sustainability, and even less regulatory oversight overall.

The emergence of e-commerce has, moreover, complicated efforts to formalise the donkey trade around fixed export quotas or to implement bans:⁸⁹

In 2017, The Donkey Sanctuary discovered online B2B traders offering donkey skins alongside wildlife products such as pangolin scales and seahorses. Instances of these co-sales were logged and monitored and appeared to increase in number over the subsequent 12 months, along with a diversification of both the wildlife items offered and the range of countries from which they were being sold. Large numbers of traders registered on the B2B platforms during 2017 and 2018, with the biggest proportion from South Africa, Kenya, and Cameroon, claiming to be able to

87 Musyoka, “Effects of Chinese Donkey”.

88 Bartlett, “Africa’s Donkeys”.

89 Pope, Reeves and Merx, *The Global Trade in Donkey Skins*, 14.

source far more donkey skins in total than the national donkey populations of the countries in which they were operating.

The Donkey Sanctuary also reports finding donkey sellers on many popular social media platforms, including Facebook, Instagram and Twitter. In addition, it is likely that donkeys can be sourced on major Chinese e-commerce platforms such as Alibaba's TMall and Kilimall, a Kenya-based, Chinese-founded e-commerce site. It is unlikely to help that the east of Africa, from Cape Town to Cairo, is the frontier of Africa's donkey population and traditions – and of Africa's e-commerce industry. Without support from e-commerce platforms, donkey-exporting countries may find it difficult to regulate the trade. There are already campaigns underway in the US aimed at a total ban on donkey-related products being sold on Amazon, Facebook, Walmart and other US-based online marketplaces.⁹⁰

Policy priorities: Keeping the cart behind the donkey

The phrase 'to put the cart before the horse' means to do things in the wrong order. China's maturing *ejiao* market has, arguably, created demand for African donkeys without there being sufficient institutional and regulatory protection to ensure that the trade net benefits communities in Africa and is legal.

The result is an emotive debate around a fractured legal and illegal trade, where the losers are not just donkeys but also those who end up doing the donkey work themselves instead – mostly poor African women. With echoes of the 'market for lemons', the result is the collapse of the formal market for donkeys, export bans and strict quotas,⁹¹ as well as an emerging illicit trade. This implies a risk of broader and deeper damage to goodwill toward China-Africa relations, especially given the unique and historical role of the donkey (and other factors discussed here).

These circumstances – alongside the needs of China's ageing population and Africa's poorer population – suggest the donkey industry warrants more attention from the formal industry and policymakers. Some suggestions in that direction are offered here.

Investing in information

In the face of inadequate data on and research into the donkey market, in the first instance there is a need for more information. This includes basic donkey surveys in terms of numbers and economic contributions to individuals, households and communities,

90 The Pegasus Foundation, "Campaign to Ban Donkey Hide Products".

91 Akerlof, "The Market for 'Lemons'".

as well as studies that interrogate the price dynamics and other onward impacts of the rising demand for *ejiao*. This could, for example, include studies of potential links to the emergence of the illicit donkey trade, and how these price increases impact rising poverty, diminished socio-economic mobility and more 'donkey work' alongside less education for girls. Investigation of rising rates of donkey theft would also be helpful, and of the depth of such impacts and how they vary across countries and time.

Unfortunately, until now the donkey industry and trade has not been the darling of the development economics or development studies community. According to one paper, from 1896 to 1980 just one publication a year was published on the topic of donkeys.⁹² While this has improved since, it is still far from sufficient to clarify the direct and indirect socio-economic dynamics of the market for donkeys, formal and illicit. Anecdotal, often animal welfare activist-inspired and small-scale survey research suggests that the impact is, on average, negative for the welfare of typical donkey users, owners and their communities.

In Kenya, the High Court intervention enabled the continuation of the donkey trade with China on the grounds that the industry was sustainable

In Kenya, the High Court intervention enabled the continuation of the donkey trade with China on the grounds that the industry was sustainable. Yet whether or not an industry is sustainable says nothing of the short- and long-term distributional and welfare implications for Kenya and the sub-region's poor or environment. It also does not speak to a potential, less direct, backlash against China-Africa trade in general where such parallel adverse effects are significant. The same is also the case in terms of the broader damage done by the Equality Court victory for TCA in South Africa.

The dynamics of the demand for *ejiao* and complexity of regulatory enforcement across jurisdictions and e-commerce platforms mean that there is no simple answer or mechanism for resolving the related challenges, let alone all of them.⁹³ The historical links between donkeys, *ejiao* and the original Silk Road – and the goals of mutual development today – suggest that it may nonetheless be worth allocating more resources to shedding light on donkey-market dynamics, sooner rather than later, for Chinese and African interests today and into the future. This would allow policymakers, the industry and community groups to become better informed, and take future steps accordingly.

92 Maggs, Ainslie and Bennett, "Donkey Ownership", 3254.

93 Frances Goodrum et al., "The Donkey Skin Trade: Challenges and Opportunities for Policy Change", *Global Policy* 13, no. 2 (2022): 304-309; Pan-African Donkey Conference, <https://panafricandonkeyconference.org/>

Investing in the education of donkey sellers

With surveys reporting that donkey owners usually end up worse off after selling a donkey, some have called on governments in targeted countries to run sensitisation programmes in rural areas that educate donkey owners on the implications of such sales. According to Prof. Amy McLean, an animal scientist at the University of California, Davis, 'We need people to think of donkeys in terms of savings accounts ... If they need to sell a donkey for the money, they need to keep one they can breed so that they always have at least one.'⁹⁴

Monitoring the evolution of the donkey industry in Africa

In 2014, two Chinese-invested donkey slaughterhouses opened in Tanzania, in the Dodoma and Shinyanga regions, which operated until 2017 and 2021 respectively. Their closures were caused by the failure to establish parallel donkey breeding, feeding, housing and disease control as promised.⁹⁵

Kenya's fledgling donkey-breeding and -export industry may offer a new way of doing things. According to Justin Isekon, a breeder working at Goldox Breeding in Kenya,⁹⁶

It is possible to rear donkeys on a large scale and the government should support such ventures. We started this breeder in 2018 and we currently have 161 donkeys. This breeder alone has provided employment to the workers, buys feed and leases grazing land from the locals and provides them with manure.

Goldox, argues Isekon, 'takes all the necessary measures to ensure that donkey populations in the country are not jeopardised' – because the business depends on donkeys. 'We also employ best agricultural practices like artificial insemination technology, which we learnt from China, thereby ensuring high productivity.'⁹⁷ Egyptian agricultural authorities have called for an equivalent – formal means for African countries to realise the value of their donkeys – without jeopardising supply or existing donkey-user needs.

However, there is disagreement on how realistic it is to breed donkeys on a large scale, as well as challenges in controlling the scale of trade. In December 2022 the inaugural pan-African Donkey Conference was convened in Tanzania by the AU, donkey-interested civil society and various African government representatives. Speakers included donkey users, veterinarians with expertise in donkey breeding, several African livestock ministers, and the Tanzanian prime minister. Given the complexity of the issue, despite efforts to regulate and foster the trade (such as those by Tanzania) over the past decade, the conference considered that a pan-African ban on donkey skin trade entirely may be necessary for some

94 Leste-Lasserre, "Chinese Trade in Hides".

95 Karashani, "Tanzania Shuts Down Donkey Abattoir".

96 "Donkey Abattoirs in Kenya".

97 "Donkey Abattoirs in Kenya".

years, until supply assurances can be obtained.⁹⁸ In Tanzania, the single-country ban has merely led to its donkeys disappearing across its land borders instead of via agreed formal trade mechanisms.⁹⁹

Lessons from the ‘market for lemons’ and the illicit wildlife trade

Policy responses to market collapse in the case of Akerlof’s ‘market for lemons’ include institutionalising markers of quality assurance. Ideally, the *ejiao* industry could evolve an equivalent in terms of donkey sustainability and supply legality. This could include a ‘no illegal donkeys’ *ejiao* marker, or a community/sustainably (farmed) *ejiao* brand or market label. An official certification process to market ‘sustainable donkey’ or ‘farmed donkey’ *ejiao* may even become the basis for building international recognition of the responsible evolution of China’s TCM industry.

In the case of the China–Africa donkey trade, these type of steps could be initiated on the Chinese side by the Shandong *ejiao* industry and government leaders through Forum on China–Africa Cooperation agricultural and trade channels, together with representative donkey-industry interests in Africa. This would ensure the emergence of industry certification for *ejiao* akin to the globally recognised ‘child labour-free’, ‘fair trade’ and ‘sustainable fishing’ labels. This could foster not only greater mutual development but also a comprehensive process of sustainable poverty alleviation at both ends. It would also help to ensure that when China hits ‘peak pensioner’ towards the mid-century, that era’s older citizens could access *ejiao*. Current rates of consumption could lead to the donkey’s extinction by then.

In the first instance, such institutions could prevent the need for donkey-industry investors to take legal action against governments trying to protect vulnerable citizens or even acting on grounds of populism. In Kenya, for example, government regulations banned donkey exports, and the trade was restored only via legal action at the level of Kenya’s highest court (and a similar case may not have the same outcome in another country). And while trade may have been restored, the court ruling did not address the range of donkey-trade challenges that led to the government ban to begin with. As a result, the long-run net outcome for the donkey trade, as well as public sentiment toward both it and China–Africa relations in general, is not clear.

Creating sustainable institutions and investment arrangements that ideally reduce or eliminate those risks in the first instance may not only build the foundations of a sustainable new export industry to China but also contribute to successful China–Africa relations more broadly. In 2021 Egyptian industry exports explicitly called for just this. Blockchain and other future digital means of identifying donkeys may also help to track buyers and sellers, and hence determine the origins of donkey hides.

98 Pan-African Donkey Conference.

99 Pan-African Donkey Conference.

Over the past few decades, some high-profile Chinese celebrities have become involved in campaigns that seek to reduce demand for illicitly traded wildlife. An equivalent campaign in China and more regulated donkey trade could create a similar, sustainable trajectory for *ejiao* consumption. Ensuring an appropriate *ejiao* industry standards baseline and encouraging consistency between Chinese ‘empress consumption’ and the needs of the rural poor at home and abroad would also support the development of a high-quality global TCM industry.

A leadership role for Shandong province?

Ejiao is said to have a 3 000-year history in Shandong province. Recently, Shandong played a historical role in internationalising the TCM market, including along the ancient Silk Road.¹⁰⁰ Today the province is responsible for about 80% of China’s *ejiao* production. This production is relatively concentrated – Dong’e *Ejiao* dominates the market, with 60% of total production, followed by the Fu brand, with some 15% of the market, and then Taiji and Tongrentang *Ejiao*, with 10% each. The remaining 5% is far more fragmented and small-scale.¹⁰¹ In terms of brand power, however, Dong’e *Ejiao* rules the market, with its *ejiao* selling for double that of other companies.

In an attempt to sustain donkey numbers, Dong’e *Ejiao* is leading efforts by Shandong’s *ejiao* producers to invest in donkey farms in several less-densely populated regions in China, including Xinjiang, Inner Mongolia, Gansu and Liaoning. It also has been reported that the company plans to establish donkey farms in Australia, Central and South America, Europe, Central Asia and Africa. In the context of plans to take *ejiao* global and expand sales within China as well, such investments in donkey-breeding programmes are essential, if complex. If China can save the famously hard-to-breed panda, arguably its *ejiao* industry should be expected to invest to the same extent in donkeys.

In addition, a new global certification process could be put in place under the lead of the three major *ejiao* producers, potentially at the level of individual donkey identifiers, and overall in terms of certification of a sustainable donkey source. Until such identification processes are in place, donkey-made *ejiao* may have to be reserved for a limited number of users who need its medicinal properties. Those consuming *ejiao* for its general health and wellness properties could instead be encouraged to consume other, more sustainable, ‘superfoods’ or ‘yin’-containing food sources.

The fact that the *ejiao* industry is concentrated in Shandong province may help to facilitate a new regulatory approach, yet the market’s unusual structure overall may also be a hindrance. It is not known, for example, whether Dong’e *Ejiao* has anything to do with the illicit donkey trade or if that trade is synonymous with the more fragmented and marginal *ejiao* players, which may be harder to regulate. African countries could ask Shandong’s

100 Zhao, “Dong’e *Ejiao*’s Long History”.

101 QQ New, “Market Size, Output”.

ejiao industry to shed greater light on this. They may also be called upon to consider a new production structure whereby only strictly medicinal *ejiao* products use donkey-based inputs. The wider and large-scale wellness-based *ejiao* industry could instead use chemical or animal substitutes – at least until the donkey supply pipeline meets the donkey demand pipeline.

Chinese media has reported that donkey-hide imports have resulted in a drop in the country's internal prices for donkey hides, undercutting the development of a sustainable donkey industry and supply within the country. Where the donkey-hide trade involves illicit donkey imports or even imports that are harming Africa's poor – and ultimately China–Africa relations – competition dynamics within China's own donkey-related industries may require a broader industry-wide review. Whether by selective replacement of donkey inputs, improved regulation of the donkey supply pipeline inside and outside of China, and agreed improved standards and standards labelling, this type of review may serve to keep the related trade and development cart behind the donkey. That would also prevent the 'market for donkeys' (and the comprehensive China–Africa trajectory) from risking aspects of collapse in a market failure echo resembling the 'market for lemons'.

Were a more formal and sustainable trade trajectory to result from such changes, thousands of years after the donkey sowed the first seeds of global trade from East Africa, the humble donkey would again be at the heart of globalisation and sustainable economic prosperity.

Recommendations

The need for donkeys in Africa is likely to rise in tandem with population growth and climate change effects – as will the demand for *ejiao* in China. Further, the importance of the donkey to socio-economic progress, including poverty alleviation, means that China's interest in importing donkeys from Africa may have an impact that will extend far beyond the immediate trade. This leads to the following broad recommendations:

- Civil society, industry and trade associations, and the development and economics academic communities should invest more in data and research on the donkey trade, which has largely been ignored thus far. 'Donkey economics' should, for example, clearly establish the value of the donkey to poor communities, and to women, much the same as feminist economics has helped to quantify and communicate the value of

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the contribution of women to the economy. It should also monitor how donkey supply is responding – and feasibly can respond – to changes in donkey demand, and what this means for poverty incidence and levels, women and the social mobility of the poor, in addition to the donkey's very existence. As with the case of market collapse in the 'market for lemons' scenario, the economic and goodwill costs of the illicit donkey trade to the China-Africa relationship should also be established.

- Since a sizeable share of the Chinese demand for *ejiao* is based on conspicuous consumption and gift giving, and not on formally or informally prescribed medication, a campaign should be launched in China targeting conspicuous *ejiao* consumers. This would communicate the challenge of donkey supply keeping up with demand – and the implications for the world's poor and China's reputation. Such a campaign could be modelled on successful celebrity-led campaigns in the country that have helped to place downward pressure on demand for products made using animal parts from the illicit wildlife trade. Given rising *ejiao* demand in the West, and the US especially, a parallel campaign could also be targeted there.
- China's *ejiao* industry should establish internationally recognisable industry standards. These could, for example, include a 'sustainable donkey' or 'farmed donkey-only' *ejiao* label or, from a supply chain perspective, a digital donkey identifier. Since donkeys are almost impossible to breed in large quantities, it is also recommended that a 'lab-donkey' or 'donkey-free' *ejiao* label and product market be established. Given donkey supply constraints and the historical importance of the donkey itself, China's *ejiao* industry could even consider reserving donkey-made *ejiao* for those consuming *ejiao* for explicit medical reasons. A parallel and more mass-produced and -consumed *ejiao* range – for wellness consumers – could instead be made from donkey-friendly (-free) substitutes. This could help to make *ejiao* sustainable at home and abroad and would likely help to market *ejiao* better in markets outside of China. Countries where China promotes the benefits of TCM should be able to expect such minimum labelling standards from the outset, as should Chinese consumers.
- Chinese media reports that the low-cost importation of donkey hides, often illicitly, has made raising donkeys in China itself unprofitable. Where imported donkey hides are illicit or harming socio-economic progress in rural Africa, and hence damaging China-Africa relations, the nature of the competition within China's own donkey-related supply chain may benefit from review. This, in turn, could help prevent any potential comparisons between the 'market for lemons' and the 'market for donkeys'.
- The slow breeding cycle of the donkey lends itself to comparison with the panda. Where China has a formal donkey trade agreement in place with an African country, this should, without exception, include a related breeding programme. In addition, it should place the onus on China to share any related scientific and farming methods that may foster donkey breeding to the necessary sustainable commercial levels. African governments, the AU and donkey welfare agencies need to be positioned to support related

regulations and enforcement. Since not all African countries are so positioned, and given cross-border donkey mobility and trade within Africa, some have instead called for an extra-continental African donkey trade ban.

- The Chinese *ejiao* industry is concentrated both geographically (in Shandong province) and in terms of industry structure. This could be used to establish a Shandong-Africa working group fairly immediately that does the ‘donkey work’ in terms of finding a way to create a sustainable China-Africa market for donkeys and even TCM-related flora and fauna in general. In December 2022 Tanzania hosted the AU-sponsored inaugural Pan-African Donkey Conference. It concluded that a ban on the entire trade may be necessary until a sustainable trajectory for the donkey and its users at both ends is found. AU livestock and resources officials and other experts participating in the conference could work together toward those broader aims via African governments and FOCAC channels with related officials and industry interests in Shandong and its ancient *ejiao* industry. The aim would be to transform the *ejiao*-related donkey trade and broader Africa-TCM industry cooperation into a formalised ‘high-quality development’ and a new frontier in South-South poverty alleviation and common prosperity.

Pan-African Donkey Conference. It concluded that a ban on the entire trade may be necessary until a sustainable trajectory for the donkey and its users at both ends is found

Just as the domestication of the donkey marked a turning point in global trade millennia ago, taking steps today toward a joint approach to the China-Africa donkey trade – even, potentially, a temporary cessation of trade – could be a historical turning point of its own in the evolution of China-Africa relations and China-led globalisation, but only if the right and mutually beneficial steps are taken and enforced. The alternative may be no donkeys, and hence no *ejiao* and no donkey-community support in Africa, in the near future, at all.

Author

Associate Professor Lauren A Johnston

is a Senior Researcher (Consultant), China/Africa, at the South African Institute of International Affairs and an Associate Professor at the China Studies Centre, University of Sydney. An economist by training, she specialises in China's economy and its outbound trade and investment, with Africa especially, and was an ODI Fellow in Sierra Leone. She holds a PhD in Economics from Peking University, an MSc in Development Economics from SOAS (London) and a BA/BCom (Melbourne).

Acknowledgement

SAIIA gratefully acknowledges the generous funding from the Government of Sweden for this research.

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Cover image

Agordat, Eritrea, 2019: Eritrean girl reading her mobile phone while riding a donkey (Eric Lafforgue/Corbis via Getty Images)

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Jan Smuts House, East Campus, University of the Witwatersrand
PO Box 31596, Braamfontein 2017, Johannesburg, South Africa
Tel +27 (0)11 339-2021 · Fax +27 (0)11 339-2154
www.saiia.org.za · info@saiia.org.za