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Putchock of India and Radix China: Herbal Exchange around Maritime Asia via the VOC during the 17th and 18th Centuries

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ABSTRACT

Putchock (Saussurea costus) has long been grown in the vicinity of Kashmir. It is known by the Chinese as a cure for diarrhea-related symptoms. Radix China (Smilax china) is a herb grown in the hinterland of China which cures symptoms of skin ulceration. The radix China was carried from China to India, while the putchock was carried the other way around. They were carried by official traders belonging to Vietnam, Siam, Ryukyu, Java and so forth. Along with the expansion of European intervention in trans-oceanic trade from the 16th century onward, European chartered companies gradually replaced the Southeast Asian tributary traders and became the main carriers of these trades. In this article, the author collects incomplete quantitative data surviving in the archives of the Dutch East India Company (VOC) on those two herbs in China and India, in order to illustrate the concrete situation of this trans-Asian herbal exchange.

Key Words: putchock, radix China, Dutch East India Company, country trade, herb exchange

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I. Introduction

Long before the expansion of Europe began in the 15th century, commodities must have circulated throughout the Eurasian continent for ages. The commodities suitable for long-range transportation were luxury goods—bullion, jewelry and sophisticated craft manufactures (Abu-Lughod, 1991). Scholars have assumed that pre-modern exchanges between China and India, the world's two largest economic regions, must have predominantly been silk for cotton (Dale, 2009: 85; Ray, 2003: ch. 2; 3; 4). However, although the motivation for the exchanges might have been deeply rooted in everyday needs, the exchanges usually proceeded within concrete cultural contexts on the basis of the different value systems of the parties in the exchanges (Bentley, 1993). In the case of China and India, Buddhism was one such cultural bridge that had impacts on the formation of trading networks and the value of ritual-related artifacts (Sen, 2006; Dale, 2009: 85). A group of aromatic woods were introduced into China from India before the arrival of the Europeans, and the circulation of these new trade goods inevitably had some effects on the local societies prefiguring a pattern that also later occurred in many places after European expansion and early globalization. In sharing the consumption experiences of certain substances, excitement above all, a new set of cultural meanings could have been developed from the original consumption practices, for example, the social changes following the introduction of sugar, chocolate, coffee, tea, betel nuts, and tobacco leaves. Such "matters of exchange" greatly changed the material aspects of human life after the global commercial exchange was accelerated by European expansion (Cook, 2007).

The exchange of herbs falls in the middle ground between goods that were only for the consumption of substances and goods that were consumed under specific cultural contexts. A constant supply to a market of a certain kind of herb in which it occupied a fixed position in the cultural belief (for example, a cure or even a ritual aura) made it difficult to remove it or replace it with other objects with similar functions on a cargo manifest. Goods bearing cultural significance (like herbs) might have been able to bypass the effects of European expansion and preserve the traces of regional maritime interactions that were always in flux. This article aims to observe two kinds of herbal exchanges between East and South Asia. In the case of putchock, it observes how, although the consumption was increasing along with the ever growing inter-connections of Sino-India markets during the 17th and 18th centuries, the persistence of the long-standing herbal exchanges helped the consumer to renew the old worldview in China rather than inspiring curiosity about the changing world

order globally. On the other hand, it examines how a new Chinese herb introduced to India by the Europeans gain fixed ground there in the 17th century but was swallowed by the European market during its 18th-century boom. In conclusion the author will point out how the contrasts between the different circulation paths of those two herbs reveal to us the transformation of the regional market between China and India during the 17th and 18th centuries.

II. Putchock

Putchock, or kústha, is identified as the plant Saussurea lappa Clarke, which grows in Kashmir between 8,000 and 12,000 feet in elevation (Zysk, 1996: 150–151). It was taken as medicine in the northwest of India at least since the medical doctrine of Ayurveda (B.C. 1500–1000). Prof. Kenneth Zysk investigated it to see what herbs were used by the ancient Indian healers, and he figured out that putchock was one of the two basic remedies.[1] It was considered to be a divine, aromatic plant with all-pervading strength, a medicine for all diseases (Zysk, 1996: 39; 1998: 18–19). He traced the manner in which it was used, and found that it was originally employed by healers as a type of fumigant to help to ward off and dispel demons. Later it was crushed, mixed with fresh butter and rubbed on the patient. In traditional Indian medical practices after the ancient period, its aromatic root is used, among other things, for cough and fever and also as a pastille for fumigation (Zysk, 1996: 40). Therefore, by its medical practice since ancient times, putchock was utilized as medicine as well as perfume. A Persian version of Ayurveda was translated to Arabic in about the 8th century, after it had been widely accepted in the Arabic and the Greek worlds. Along with the expansion of Buddhism, the doctrine of Ayurveda was also carried by Buddhists to central Asia. Indian medicine also traveled via central Asia to China when Buddhism was spread to China through the same passage (Mazars, 2006: 15–18). However, when lots of Indian medicine was introduced to China in the Tang dynasty (A.D. 618–907), putchock was thought to be found in southwest provinces of China as well, and therefore was not considered a kind of "foreign medicine".[2] In the collection of prescriptions, "*Qianjin Yaofang* [*Life Saving Prescriptions*] (《千金藥方》)" of a healer Sun Si-miao (孫思邈) (A.D. 581–682), putchock was not marked as a foreign medicine despite his introducing lots of medical thoughts and prescriptions from India in this book. Although he attributed

1 The other kind is bedellium (gulgulu, Commiphora mukul) (Zimmermann, 1988).

2 For a broad references on the transfer of herbs from Persia to China during this time, see: Schottenhammer (2010).

this herb to local origin, he put it into the medicine as well as perfume sections, similar to Indian medical tradition. This is side-evidence that the Indian manner of using putchock in healing practices may have been introduced to the Chinese society at the time and was accepted. The application of putchock as a pastille in India was known by Tao Hong-jing (陶弘景) (A.D. 456–536), who had also pointed out that putchock was imported by trading junks, and no more could be obtained from the native soil of China about a generation earlier than Sun Si-miao (Li et al., 1994: 942). During the Song dynasty (A.D. 960–1279), people gradually realized and accepted that putchock was mostly imported from India (Sun, 2008). Being to the northeast of China, Japan also imported lots of Persian herbs via China following the path of the spread of Mahayana Buddhism (Lin, 1986: 392–397). Almost at the same time, the Chinese pharmacists also developed their way of using putchock to make pills and to test its effects. In the collection of prescriptions made by the court's healing bureau, "*Taiping Huimin Hojijufang* [*Prescriptions of the Imperial Pharmacy*] (《太平惠民和劑局方》)" (A.D. 1151), the pills made from putchock and other ingredients were applied as a remedy for dysentery.[3] Putchock was thus completely absorbed into Chinese pharmacy even though it had to be provided through maritime trade. When a Scottish physician, John Dudgeon, visited China in 1870, he wrote in his observation of Chinese botanical herbal remedies about putchock: "Mu-hsiang (木香), stomachache and diarrhea", and did not mention it was a foreign good at all (Dudgeon, 1870: 332).

In the centuries after the Song dynasty, the importation of putchock was not interrupted. From sporadic Chinese sources, the records on which countries exported it to China can be summarized as below:

3 Almost every prescription in volume three that provides alleviation of the symptoms of digestive upsets contains putchock (Chen et al. eds., 1998).

Table 1: The Countries Exporting Putchock in Chinese Records

Source	Year of Publication	Southeast Asian Countries	Countries on Indian Ocean Rim
Zhufanzhi (《諸蕃志》)	1225	Sri Vijaya (Java)	Naharawara, Guzerat, Malabar (India), Berbera, Somali (Africa), Mirbat, Shehr, Zufar (Arabia)
Songshi (《宋史》)	1345	Champa (Vietnam), Nakon Sri Tammarat (Thailand)[4]	Coromandel (India)
Daoyi Zhilue (《島夷志略》)	1349		Hormuz (Arabia)
Gujin Shuohai (《古今說海》)	1544	Java	Calicut, Hormuz (Arabia)
Ming Huidian (《明會典》)	1587	Vietnam, Siam, Ryukyu, Java, Sumatra	Calicut, Ceylon
Dongxiyang Kao (《東西洋考》)	1617	Palembang, Aceh	
Mingshi (《明史》)	1739	Siam, Sumatra	Ceylon
Huangchao Wenxian Tongkao (《皇朝文獻通考》)	1787	Vietnam	

Sources: Zhao, 1983, Vol. I: 7; 23; 28; 31; II: 11; Toqto'a et al., 1983, Vol. 489: 10; 28–29; 490: 25; Wang, 1983: 51; Lu ed., 1983, Vol. 17: 8; 19: 6; 7; 20: 7; Xu et al., 1983, Vol. 97: 2; 4; 6; 10; 98: 5; 9; 10; Zhang, 1983, Vol. 3: 22; 4: 9; Zhang et al., 1983, Vol. 324: 25; 325: 15; 326: 9; Ji et al., 1983, Vol. 38: 20; 21.

As the above table shows, after putchock was collected at Kashmir, it was carried by either Indian or Arabian traders directly to China or passed along by some intermediary traders in the countries of Southeast Asia. The *Songshi* [*History of Song Dynasty of China*] also recorded that it was carried over land via Khotan, which was located at the margin of the Taklamakan desert (Toqto'a et al., 1983, Vol. 490: 8). Unfortunately there were no quantitative records on imports of putchock within Chinese sources on a regular basis. Nevertheless, it seems that the application of putchock was expanded from medical herbs to pastilles for clothes, and it even became an indispensable ingredient of incense, which most Chinese households

4 In A.D. 1001, the king of Danmeiliu paid tribute including 1,000 catties of putchock (Toqto'a et al., 1983, Vol. 489: 29).

consumed during daily worship. This change in consumption style resulted in increasing demand. A collection of all aromatic compounds, "*Xiangsheng* (《香乘》)", recorded how to mix putchock with other aromatic ingredients to give items certain fragrances in 1618 (Zhou, 1983, Vol. 19: 4; 15). It also recorded how to make incense which could disperse fragrance when burning. A British country trader, Alexander Hamilton, witnessed how Chinese people consumed putchock in the late 17th century:

> The wood Ligna Dulcis grows only in this country. It is rather a weed than a wood, and nothing of it is useful but the root, called putchock, or radix dulicis. I never heard it is used in physick, but is a good ingredient in the composition of perfumes. There are great quantities exported for Surat, and from thence to China, where it generally bears a good price; for being all idolaters, and burning incense before their images, this root beaten into fine powder, and an incense-pot laid over smoothly with ashes, and a furrow made in the ashes, about a quarter of an inch broad, and as much in depth, done very artificially into a great length, the powder is put into that furrow, and fired, and it will burn a long time lie a match, sending forth a fine smoke, whose smell is very grateful. The powder is having the good qualities of maintaining and delaying the fire. (Hamilton, 1727: 126)

> Every house, ship and fishing boat keep a domestick god that they pay adoration to evening and morning, and he has always a small flat table with ledges before him, filled with wood ashes smoothed over, and small furrows drawn thro' the ashes in order, and those furrows filled with powder of "putchock" or radix dulcis mixt with powder of sandal, myrrh or olibanum, and the composition is fired at one end, and it gives a little, but pleasant smoke the whole four and twenty hours, without the least need of mending or renewing it. (Hamilton, 1727: 281)

Putchock was also known by the VOC's employees during the 17th century. A Dutch physician, Jacobus Bontius (A.D. 1592–1631), recorded how this medicine was widely used by Chinese and Indians, and even the inhabitants in South East Asia.[5] From the record of the daily diaries of the Castle Batavia, a rough estimate

5 "As it is a medicine much used by all the Indians, and particularly the Chinese. It is called by the Indian merchants Pucho, and by the Chinese Potsiok." (Bontius, 1931: 33)

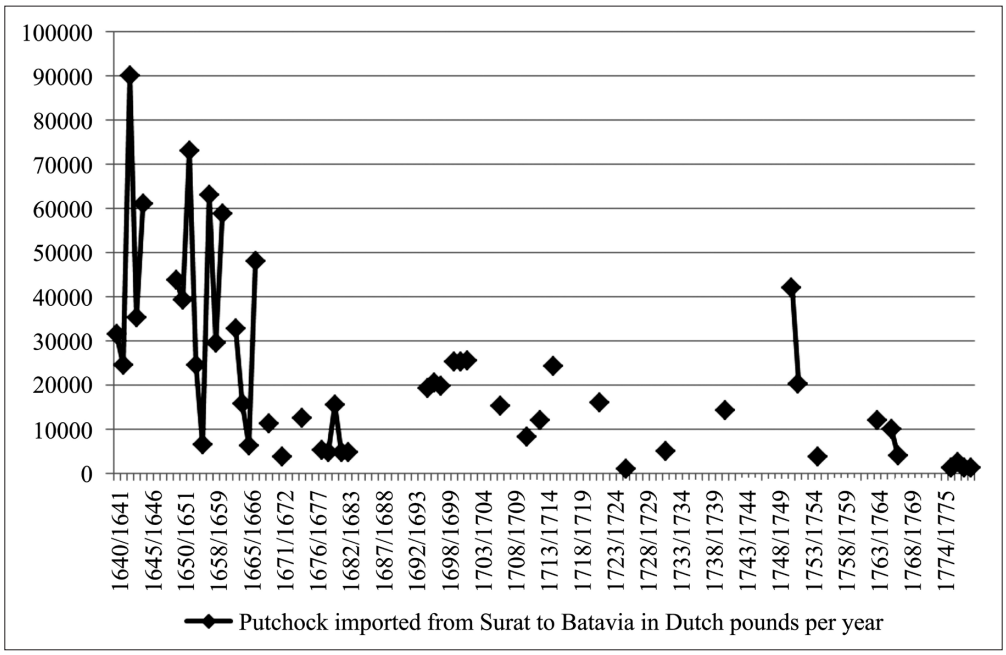

Fig. 1: Putchock Imported from Surat to Batavia (Dutch Pounds per Book Year)
Sources: See Appendix, Table 1.

of the amount imported can be listed as above.

To give the reader a rough impression of the amount imported, as the above figure shows, the Dutch pound is converted into metric tons, (1 Amsterdam pound = 0.494kg). The VOC annually imported between 12 to 45 metric tons of putchock from India into East Asia during the 17th century. The flow after it arrived in Batavia cannot be traced in detail because surviving records did not offer accounts in such detail. However, the surviving account of the 18th century numbers shows almost all of the putchock imported to Batavia is re-exported. In some years the difference between imports and exports can be seen as local consumption, but the amount was negligible (for example: in the book year 1752/53, 2% and in 1763/64, 3%).

From 1640 to 1668, when the VOC was able to re-export it to Chinese harbors either from Taiwan or Batavia, it took on average 40,106 Dutch pounds of putchock away from Surat each year. This amount dropped to 9,087 Dutch pounds during 1669–1676, when the VOC vessels were excluded from the Chinese coast and could only sell it in Japan. The VOC's factory in Taiwan was attacked and occupied by the Chinese Zheng family in 1662; the latter sold their booty from the VOC storage and began to purchase putchock from Japanese hands in 1669 and 1671. Therefore a certain amount of putchock imported by the VOC to Japan must

have been re-exported to China via Zheng's junk traders (Viallé and Blussé eds., 2010: 319).[6] In the following years, although the Batavian authorities conducted several trials to develop China trade again when the Chinese coast was open for free trade again during the three feudatories' rebellion between Sept. 1677 and Aug. 1679, the average amount collected from Surat in those years dropped to 8,541 Dutch pounds per year, apparently due to the competition from all Chinese junks at coastal provinces and other European providers like the Portuguese, English and Danish.[7] Thereafter the VOC ceased further endeavors to build a direct commercial channel with the Chinese Qing court, apart from commercial exchange in the name of tributary missions every eight years. In 1690 they stopped sending any more vessels to China, and thereafter all the imported putchock was carried to Japan and sold there.[8]

The reduction in the imports of putchock, as the above curve displays, can be explained largely by the reduction in profit rates throughout these 150 years (see Figure 2 below). Before the 1680s, the average price of putchock in China was about 26 taels, while the average cost in Surat was about 6.3 taels. The rates of profits were between 216% and 414%. When it came to the 18th century, the prices of putchock in Surat were gradually rising. On the other hand, its prices in China did not rise accordingly at the same pace, and thus could only generate 64% and 19% profit respectively in 1741 and 1765.

As mentioned above, after the 1690s, the VOC decided to supply only the Japanese market with putchock, while the Chinese traders could purchase very limited portions in Batavia as return cargo to fill Chinese demand. For unknown reasons, the VOC did not import any putchock from Surat to either Batavia or Nagasaki during 1681–1693. This probably resulted in the leap of the putchock price to an extremely high level during 1695–1698 in Japan. Thereafter the VOC shipped on average 20,575 Dutch pounds of putchock to Japan per dispatch during 1694–1701. From 1702 to 1723, the VOC fitted out five voyages in 21 years to carry on average 14,971 Dutch pounds per dispatch to Japan. After 1723, the interval

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6 VOC 1278, Missive van't opperhooft Francoijs de Haes uijt het comptoir Nangasackij aenden generael ende raden, Deshima, 9 Jan. 1670, fo. 1857. (VOC, 1602–1795)

7 See Appendix, Table 1. About the activities of Danish vessels sailing around Coromandel and Bantam, see: Diller (1999: 246–247) and Arasaratnam (1991: 49); for English vessels' increasing activities in Bantam during the 1670s, see: Bassett (1955: 339–356; 1990: 6–12); for the increasing Chinese Canton and Fujian junk shipping in Siam during 1674–1680, see: Cheng (2010).

8 The gradual withdrawal of the VOC from China was a long process. For the long and short story of this change, see: Blussé (1996).

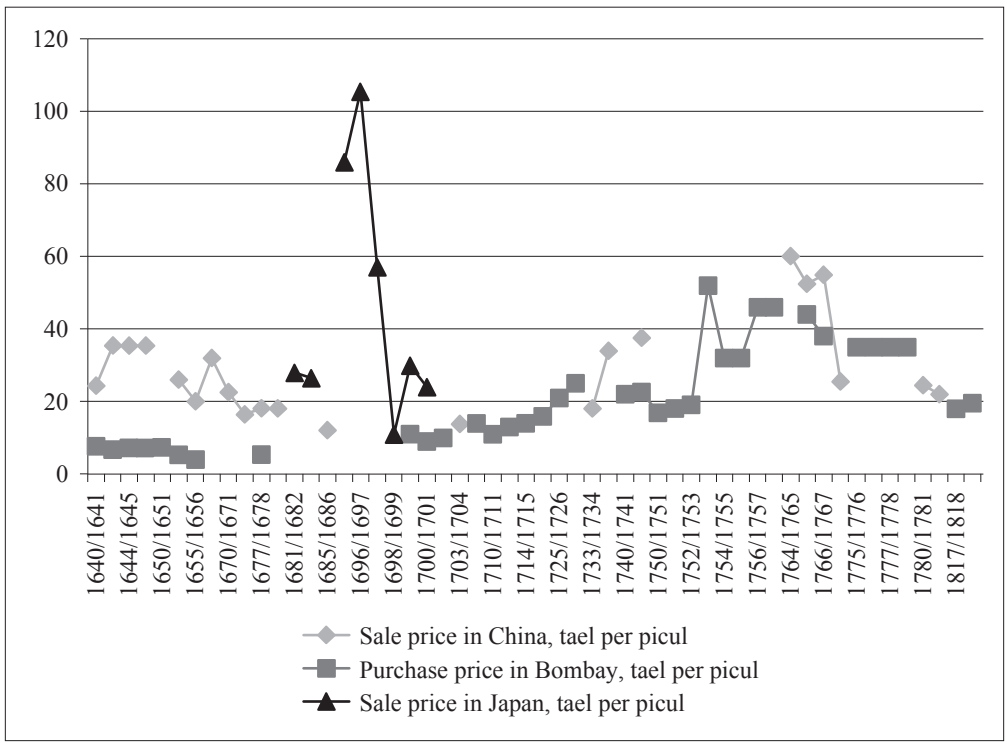

Fig. 2: The Sale Prices of Putchock in China and Japan, and the Cost in Bombay Region (Tael per Picul)

Sources: See Appendix, Table 2.

of each dispatch was gradually extended from five to eight years, and the amount of putchock carried per voyage dropped from 15,000 to 1,000 Dutch pounds at the end of the 18th century. These withdrawal moves tallied with the slowly escalating prices of putchock in Surat after the 1720s. The rise of putchock price in Surat gradually reduced the profit margin.

The antagonism between China and Taiwan ended in 1683 when the Qing incorporated Taiwan as part of China. The Qing Emperor Kanghsi welcomed diverse foreigners to trade along the Chinese coast. The putchock, among other South India goods, was one of those no longer solely provided by the VOC. The VOC records became less informative about the exact amounts of putchock imports via diverse agents to Canton in China after 1683. Always keeping a watchful eye on their Chinese competitors in Nagasaki (because no other nation apart from the Dutch could run business there), the VOC factory in Japan left valuable data on the prices and quantities of putchock imported by the Chinese junks to Japan in the 18th century. From the 18th century onward, the junks sailing from Southeast Asia and bound for Japan became very rare. Most tropical goods were re-exported from

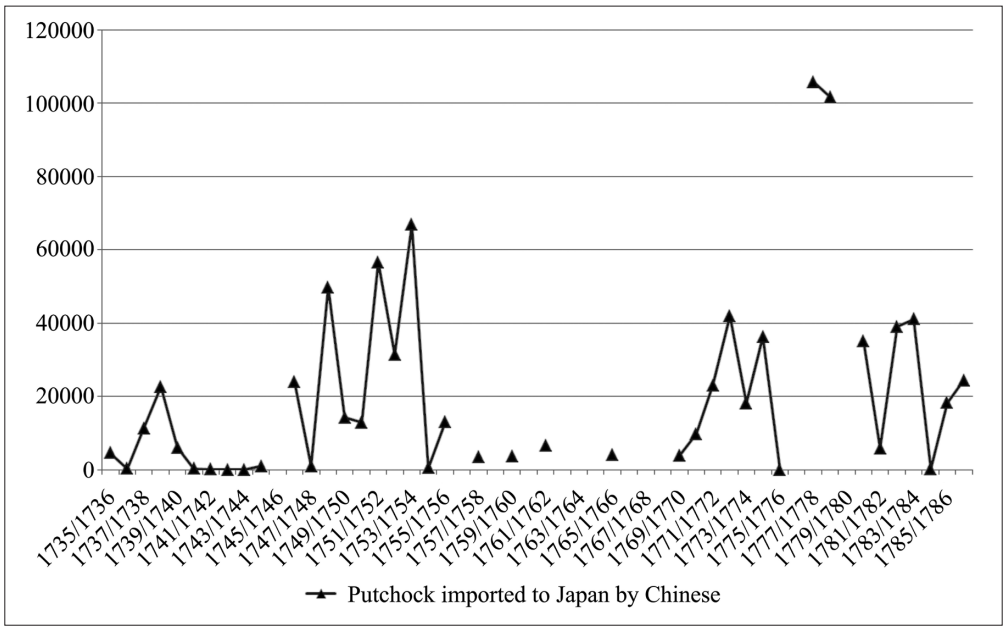

Fig. 3: Putchock Exported by Chinese Junks to Nagasaki (Dutch Pounds per Book Year)

Sources: Nagazumi ed., 1987: 97; 101; 103-104; 105-109; 111; 113-131; 134; 136; 138; 141; 150; 158; 160; 163-168; 173-176; 179-180; 182-184; 187; 189-190; 193-194.

Chinese harbors to Japan (Yao, 2004). Assuming the putchock exported by the Chinese junks to Japan were conditioned by the communications between India and China, the up and downs of the amount of putchock re-exported to Nagasaki by the Chinese junks must have reflected the general situation of supply of putchock in China from India to a certain degree.

As abovementioned, the Dutch factory in Japan recorded the amount of putchock imported via Chinese shipment after 1735, and this offers us a window to speculate on the putchock importation in East Asia. In the above Figure 3, three intervals appear in which the Chinese junks provided the Japanese market with sufficient putchock. They are 1) 1735-1739; 2) 1746-1755; 3) 1771-1784. The scale of putchock importation during the second interval in Japan is approximately equivalent to the average level of Chinese-Japanese importation during 1640-1668. The peak of the third interval even beats the peak of Chinese-Japanese importation together during 1642-1643. Although the amount consumed in Japan cannot reflect the precise consumption in China, it demonstrates clearly that the chain of supply between Surat and Canton was connected well during this time. The question is then, who carried these large amounts of putchock to East Asia from South Asia after the VOC withdrew?

Some evidence shows that English traders may be have carried out this business after the Dutch gave it up when the profits could no longer exceed the cost. The English East India Company (EIC) had established an official relationship with the Chinese regime of Zheng briefly in Taiwan during 1672–1683. In their experience obtained thorough this brief period, they learned about the demand for putchock in China. Their factory in Surat allowed them to supply the demand of the Chinese market with putchock as the VOC did. They had supplied 7,105 Dutch pounds of putchock to Taiwan during the book year 1675–1676, and 12,687.5 Dutch pounds in the book year 1676–1677 (Chang et al. eds., 1995: 236).

During this period, a very small amount of putchock may also have been exported to East Asia via Tennasserim of Siam. From Siam, putchock was constantly carried by junks owned by the Siamese king and his courtiers to either Japan or China in 1675 (to Japan),[9] 1678 (to Japan and China),[10] and 1679 (to China).[11] The VOC continued to supply China with putchock between 1677 and 1683, but ceased to carry it to the Chinese coast thereafter. Before the VOC terminated its voyages to Chinese harbors in 1690, they found the English traders began to carry out this business. In a letter written on the Chinese coast on 8th January 1689, it was reported: "…… the ships from Surat of the English could gain great profit in exporting coarse goods like putchock and cotton from there and exchanging them for sugar, alum, radix China, galangal and quicksilver, which are very cheap here to export to Surat."[12] There was indeed an EIC ship Caesar which arrived in Canton from Bombay in 1688, and the above report probably referred to this vessel as one of the ships from Surat.[13] The profitability at the moment is verified. As the above Figure 2 shows, the putchock prices in Japan between 1695 and 1697 were extraordinarily dear. Accordingly, the evidence can be found in the list of vessels visiting Ayutthaya

9 VOC 1322, Missive van het opperhooft Dirck de Jongh en raedt geschreeven uijt Siam aen haer Eds. tot Batavia, Siam, 14 Nov. 1676, fo. 1198. (VOC, 1602–1795)

10 VOC 1339, Notitie van aengecomene en vertrocken vreemde scheepen en vaertuijgen in en uijt Siam sedert 14 Oct. 1677 tot 11 Sept. 1678, Siam, 13 Nov. 1678, fo. 461. (VOC, 1602–1795)

11 VOC 1350, Extract memorie gestrocken uijt de dagelijcxe aeen te keninge gehouden in't nederlants comptoir in Siam waerbij gesien wert hoedanige soo uijt heemse als inlantse scheepen, joncken, als andere vaartuigen successive van diverse plaatsen hier aangecomen en weeder vertrocken zijn, Pmo. Oct. 1678 tot Ult. Sept. 1679, Siam, not dated, fo. 479. (VOC, 1602–1795)

12 VOC 1453, Rapport van de ondercooplieden Alexander van's Gravenbroeck, Jan Tarant et cetera wegens haere negotie tot Aijmuij aen haer hoog edelens tot Batavia, Canton, 8 Jan. 1689, fo. 292. (VOC, 1602–1795)

13 IOR/G/12/4, Miscellaneous China Papers, Oct. 1684–Nov. 1699, ff. 483. Not dated. (The British Library, 1600–1947)

in 1695, which reveals that the Siamese king fitted out four Chinese junks to trade in China and Japan with goods including putchock.[14] Four years later, in 1699 a Muslim trader imported putchock together with Surat cloth to Ayutthaya; and in 1700 a French country trader made a voyage from Surat to China via Malacca loaded with putchock among other goods.[15] It was recorded in the daily consultations of Madras that the country ship Elizabeth took voyages around Surat, Madras and Canton during 1696–1698 and 1710.[16] More or less in the same period, the Chinese harbor Ningbo became a popular destination for Chinese junks departing from Batavia. Harboring concerns of falling behind any other European traders, the Batavian authorities interviewed a Chinese nachoda to monitor the presence of foreign vessels in Ningbo. Through this interview they found four English ships had visited Ningbo in the year 1700. The Chinese nachoda also pointed out that, apart from the commodities they carried from England, putchock and other goods from India were also unloaded in Ningbo. Furthermore, of those four ships, at least one was intended to sail to Surat later. Five English ships were reported to visit Amoy in the same season, and they also carried putchock to sell there. Not only did English traders enter this business, but a foreign Muslim merchant's vessel also visited Amoy. The main cargo of this Muslim ship was exactly putchock.[17] A rare English manuscript, which contained a brief record of the profit rate of putchock when it was carried by the country ship St. John from Surat to Amoy in 1701, reported that putchock could earn 150% profit, which beat other goods like myrrh, oblibaum and pearl. Only cotton (110%) could compete with it.[18] In a trading season during 1707/8, a Chinese linguist in Amoy also proposed that putchock was one of the most profitable goods that the English could obtain from Surat.[19]

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14 VOC 1580, Memorie van Aangekomene, en vertrockene schpen, jonken, en vaartuijgen in en uijt het koninkrijk van Siam, sedert 10 Jan. tot 26 Oct. 1695, Siam, not dated, fo. 58. (VOC, 1602–1795)

15 VOC 1623, Memorie deraangekomene en Vertrockene Scheepen, Joncken, Chialoepen en Vaartuijgen in en uijt het Coninckrijcke van Siam sedert 29 Jan. tot 12 Sept., Siam, not dated, fo. 112; VOC 1648, Memorie der aangecomene en vertrockene Schepen, Joncken en Chialoupen in en uijt het coninkrijck Siam sedert 19 Dec. 1699 tot 23 Dec. 1700, Siam, not dated, fo. 139. Probably Amphitrite, which arrived at Canton in 1698–1700 and 1702–1703. (VOC, 1602–1795; Froger, 1926)

16 See Table 2.

17 VOC 1630, Beantwoorde vragen door de Chinesen jongst van Nimpio, Aijmuij en Canton tot Batavia gearriveert nopende't getal der joncken en't gedoente der Engelschen aldaer, Batavia, 1701, not dated, fos. 1718–1719. (VOC, 1602–1795)

18 SHL, 1691–1732: 143.

19 Ibid.: 144.

Below are the country ships sailing between Madras and China that were recorded in the consultations of Fort St. George in Madras from 1688 to 1745. Madras at the time served as an entrepôt for the ships bound for China to collect Indian commodities. This incomplete list shows the constant connection between Canton and Bombay was a fact.

Table 2: Country Traders' Ships Sailing between China and Bengal

Periods	Ship's Name	Journey	Nationality (Apart from British)
1688–1689	Moulsford	Amoy-Madras-Amoy	
1689–1690	Princess of Denmark	Madras-Amoy-Madras	Danish
1689–1693	Morning Starr	Madras-Canton-Madras	
1693–1696	Morning Starr	Madras-Canton-Amoy-Madras-Canton	
1696–1697	Elizabeth	Canton-Madras-Canton	
1697–1698	Elizabeth	Canton-Madras-Canton	
1701–1702	Gosfright	Amoy-Madras-Amoy-Madras	
1701–1702	Hampshire	Madras-Amoy-Madras	
1708–1709	Kent	Canton-Madras-Canton-Madras	
1710–1711	Elizabeth	Madras-Canton-Madras-Canton	
1710–1711	Hallifax	Canton-Madras-Canton	
1710–1711	Golden Lyon	Madras-Amoy-Madras	Danish
1713	Kent	Canton-Madras	
1716	William	Bombay-Madras-Canton	
1716	Nightingall	Bombay-Madras-Canton	
1718–1719	Bonita	Madras-Canton-Madras	
1720–1721	Bonita	Canton-Madras-Canton	
1721	Bonita	Canton-Madras-Canton	
1722	Bonita	Madras-Canton	

Table 2 (continued)

Periods	Ship's Name	Journey	Nationality (Apart from British)
1723	Hannover	Madras-Canton-Surat*	
1723	Boone	Madras-Canton-Surat**	
1724	Boone	Madras-Amoy-Canton***	
1724	Moylan	Surat-Canton-Madras-Canton	
1725	Boone	Madras-Canton	
1725–1727	Nossa Senhora	Madras-Macau-Madras	Portuguese
1726–1727	Decker	Madras-Canton-Madras	
1730–1732	Canton Merchant	Madras-Canton-Madras	
1731–1732	Richmond	Madras-Canton-Madras	
1731–1732	Nossa Senhora	Madras-Macau-Madras	Portuguese
1733–1734	Prince Augustus	Madras-Canton-Madras	
1736	Nossa Senhora	Macau-Madras	Portuguese
1739–1741	Nossa Senhora	Macau-Madras-Macau	Portuguese
1743–1744	Ceres	Surat-Canton-Madras-Canton	
1744–1745	Ceres	Surat-Canton-Madras	

Sources: Schmidt et al., 1910–1953 (hereafter "*The Diaries of Fort St. George*"). *The Diaries of Fort St. George*, 1688: 20; 75; 1689: 54; 1690: 18; 1693: 47; 87; 1694: 57; 1696: 24; 69; 1697: 25; 53; 1698: 69; 1701: 7; 30; 54; 1702: 3; 21; 1708: 11; 28; 1710: 47; 50; 57; 1711: 33; 41; 1713: 5; 1716: 73; 1718: 125; 1719: 55; 1720: 54; 106; 1721: 34; 89; 1722: 80; 85; 1723: 59; 62; 64; 1724: 3; 68; 71; 1725: 98; 99; 1726: 87; 1730: 2; 107; 1731: 85; 1732: 2; 34; 50; 1734: 9; 1736: 102; 1739: 100; 1741: 103; 1743: 102; 111; 1744: 130; 1745: 91.

* IOR/G/12/24, Diary and Consultations of the Council in China, Dec. 1722–Feb. 1724, ff. 73. 6 Nov. 1723. (The British Library, 1600–1947) Hannover departed from Canton bound for Surat in the north monsoon season 1723–1724.

** Ibid. Boone was bound for Surat as well as Hannover.

*** IOR/G/12/25, Diary and Consultations of the Council in China, Jun.–Dec. 1724, ff. 8. 4 Dec. 1724. (The British Library, 1600–1947) Because the super cargo of Boone was staying in Amoy, I surmise the Boone must have been there as well.

Apart from the notes about the shipping between Madras and Canton, there are some sporadic records of the cargo of these country ships that confirm that putchock was a very common cargo, even carried directly from Surat. During 1727 and 1729, the country ship the Balle made the round trip between Surat and Canton twice. According the daily journal of an English merchant in Canton, the main cargo she carried was putchock.[20] Four years later, in 1733, when an East India Company's captain wanted to sell some putchock in Canton from his private allowance, he was advised to hold it for a while until the price rose. The supply of putchock must have been quite sufficient in Canton that year. That was also the same year the English merchants in Canton were permitted to dispatch vessels to Surat directly without calling at Madras.[21] Seven years later in 1740, when the EIC's director in Bombay could not offer enough bale capacity to load the putchock to China, the Madras authorities secured help from the country ship Augusta (probably the Prince Augustus as the above table shows) to carry it to Canton.[22] Apparently the EIC servants had also agreed that this good was profitable. This evidence shows that the English country traders constantly carried goods (including putchock and radix China) between Chinese harbors and Surat during the 1680s–1740s. Captain Alexander Hamilton must have witnessed a sudden rise in prices of putchock during the 1690s, as the earlier citation implies. According to the fragmental data of putchock prices in the 18th century, the profits in 1741 (60%) and 1766–67 (19%, 44%) were still considerably higher than at other times. It is during these decades that the VOC withdrew from this trade because the profit was no longer attractive if compared to that during most of the 17th century (between 414% and 216% as mentioned above). It seems the supply of putchock from South Asia in East Asia also fell largely into English hands after this juncture. In a commercial guide published in 1766, the author Robert Stevens pointed out that the Dutch picked up only high quality putchock, while the English could make a profit of about 15 to 25% without sifting impurities from it (Stevens, 1766: 122). This comment remarkably reveals the diverse policies of two companies on this trade. In 1770, the Madras council planned to send a ship to fetch 90 candies (49,736 Dutch pounds) of putchock from Bombay to China directly (Morse, 1926–1929, Vol. V: 149). In 1788, the private cargo on the EIC vessels and country ships together contained 501,760 Dutch pounds of putchock

20 IOR/G/12/28, Diary and Consultations of the Council in China, Dec. 1728–May 1730, ff. 56. 7 Dec. 1729. (The British Library, 1600–1947)

21 IOR/G/12/35, Diary and Consultations of the Council in China, May 1733–May 1734, ff. 35. 13 Aug. 1733. (The British Library, 1600–1947)

22 *The Diaries of Fort St. George*, 1740: 85; 106. (Schmidt et al., 1910–1953)

headed to China, an amount the over 55 times larger than the Dutch exports to East Asia at their height at the 17th century (Morse, 1926–1929, Vol. II: 81). In the following year the Chinese junks carried 101,676 Dutch pounds of putchock to Japan, which is about 1/5 of the amount imported by the English merchants to China in the previous year.

Table 3: The Value of Putchock Imported to Canton via the English in Private Trade

Year	1768	1775–76	1785–86	1795–96
Putchock (Tls.)	4,888	130	4,131	6,132

Sources: Morse, 1926–1929, Vol. V: 134; Pritchard, 1957: 131.

Although I was not able to obtain the actual quantities of putchock that were imported by the English merchants to Canton in the last half of the 18th century, the above table shows some stability in its value for imports in Canton. In the above Table 3, the sudden drop of the amount in 1775 may have either been caused by the price drop in 1774 (sold at 25–26 taels in Canton) (Morse, 1926–1929, Vol. V: 195). The British traders recorded that Canton imported putchock amounting to 846,597 Dutch pounds via EIC ships in the season 1810–1811. Meanwhile the English country ship imported 260,557 Dutch pounds of it to Canton (Milburn, 1813: 482; 484). This means about 542.5 tons of putchock was exported to China via English vessels in total. As a comparison, the contemporary account estimated the Portuguese vessels were loaded with only 15 tons annually (Milburn, 1813: 463). The same source pointed out that within the above amount only 764 Dutch pounds were carried by Chinese junks from Southeast Asian harbors to Canton (Milburn, 1813: 487). This is to say that only 1% of this trade was done by Chinese traders. Although we cannot know what proportion of putchock was carried by the Chinese from Southeast Asia in relation to the English imports each year, some records of the Chinese exports cargo lists in the late 18th century may give us a rough idea. Six junks departed from Batavia with 6,125 Dutch pounds of putchock to carry to Amoy in 1778.[23] Non-exports could be found via visiting Amoy junks in the surviving records of 1777,[24]

23 ID-JaAN, Hoge Regering, 2605, The Daily Journal of Batavia Castle, 31 Dec. 1778, fo. 228. Hereafter "ID-JaAN inventory no., The Batavia Diaries". (Arsip Nasional Republik Indonesia, 1602–1799)

24 ID-JaAN 2604, The Batavia Diaries, 31 Dec. 1777, fo. 220. (Arsip Nasional Republik Indonesia, 1602–1799)

1775[25] and 1774.[26] It can be concluded that the amount of putchock carried by the Amoy junks from Batavia was also negligible in comparison with the enormous volume in British shipments at the time. Within the English trade itself, it is presumable that the EIC had replaced the country traders' major role in this transportation somewhere in the last half of the 18th century. The Chinese traders must have been excluded from this business long before this change, perhaps at the turn from the 17th to the 18th century. Those shifts may have had something to do with the changing nature of the Sino-India trade which I will discuss in my Conclusion.

III. Radix China

In contrast with putchock, which was originally a product of India but became fully accepted as an authentic Chinese medicinal herb, radix China became an Indian medicinal herb despite the fact that it was mostly imported from China.[27] Radix China is labeled as "Smilax china Linn." presently. In China it was called "Tufuling 土伏苓" in classical texts, while had different names in Indian languages. For example, in Hindi and Nepal, it was known as Chobchini; in Bengal, it was called Kumarika (Kirtikar and Basu, 1998: 2494–2497). However, despite being well accepted as a local medicinal herb now, it was not known until the 16th century that it was introduced by the Portuguese in Goa as a treatment against syphilis (Perera, 2014). Just about one decade before the Portuguese sailors arrived in Canton in 1517, syphilis had been spreading at the harbors in China and Japan. Scholars have diverse opinions on how syphilis spread before the Portuguese arrived in Canton. It was transmitted by the Portuguese sailors indirectly via Southeast Asian harbors after they had caused it to be prevalent along the Indian coast (which had close communications with Southeast Asian harbors) in the 16th century (Boomgaard, 2007: 22).

Nevertheless, different traditional cures were widely applied in China at the time. Chinese healers used mercury as a traditional ointment to cure the rash and warts caused by it. Unfortunately, this treatment had the possible side effect of poisoning by mercury. In order to ease this serious side effect, an antidote was introduced: radix China. Thereafter the healers discovered that radix China itself could cure syphilis, and soon this treatment was applied everywhere in the East Asian

25 ID-JaAN 2602, The Batavia Diaries, 31 Dec. 1775, fo. 232. (Arsip Nasional Republik Indonesia, 1602–1799)

26 ID-JaAN 2601, The Batavia Diaries, 31 Dec. 1774, fo. 146. (Arsip Nasional Republik Indonesia, 1602–1799)

27 For a better general introduction on the global circulation of China root, see: Winterbottom (2015).

harbors (Tsai, 2013: 161–163). The Portuguese in Goa learned about this herb around 1535. A Portuguese physician, Garcia d'Orta, accompanied Captain-Major Martin Affonso de Sousa on a fleet in the Indian Ocean in 1534 (Boxer, 1963: 8). In his book he claimed that de Sousa, who was infected with syphilis, was cured by radix China (Borschberg, 2006: 105; Winterbottom, 2015). According to d'Orta, this treatment was learned from a Portuguese citizen living in Malacca who was taught by the Chinese visiting traders (Da Orta, 1892: 259–274).[28] It happened at more or less the same time when de Sousa was conquering a fort belonging to Sultan Bhadur, the ruler of Cambaya (Surat), and therefore became famous (Da Orta, 1892: 260). This herb thus became the most popular imported herb in both India and Europe. The import of radix China to India therefore commenced only after the last half of the 16th century. The Portuguese reached Canton in 1517, and by the middle of the 16th century, they had established Macau as a post to export Chinese goods to Japan and India. Radix China was then a very popular commodity. Later the Dutch occupied Taiwan and established a counter-post to compete on the same business as Macaunese in 1624. Below, a figure demonstrates the amount of radix China exported from China and Taiwan to the Bombay region from 1638 to 1764.

According to Figure 4, there were two peaks of the exports of radix China in 1652 and 1694, respectively 28,680 and 40,588 Dutch pounds, which are equal to 14 tons and 19 tons. If neglecting these two extreme peaks in the 17th century, there seems to have been a tendency of increasing imports of it from 6,000 to 20,000 Dutch pounds throughout most of the 17th century to the Bombay region. Just at the turn of the century, the VOC's previously constant export of radix China faltered dramatically. Not only did the amount of exports drop below 300 Dutch pounds annually, but the frequency became scattered. On the other hand, the main customers to pay for radix China became European rather than Indian. The annual export of radix China via VOC to the Netherlands from 1650 onwards is displayed here as an important reference. It shows clearly in the last several years of the 17th century that a large amount of radix China was distributed to India and Europe in a more equal share. After a short lull at the start of the 18th century, the export amount increased again in the 1720s, and the major market became Europe rather than India. The withdrawal of the VOC from the China-India radix China trade happened in the last few years of the 17th century. Could this be explained by the declining profitability as discussed above in the case of putchock?

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28 The author appreciates the help offered by Prof. Bruno Miranda, Universidade Federal Rural, Brazil, in reading this Portuguese source.

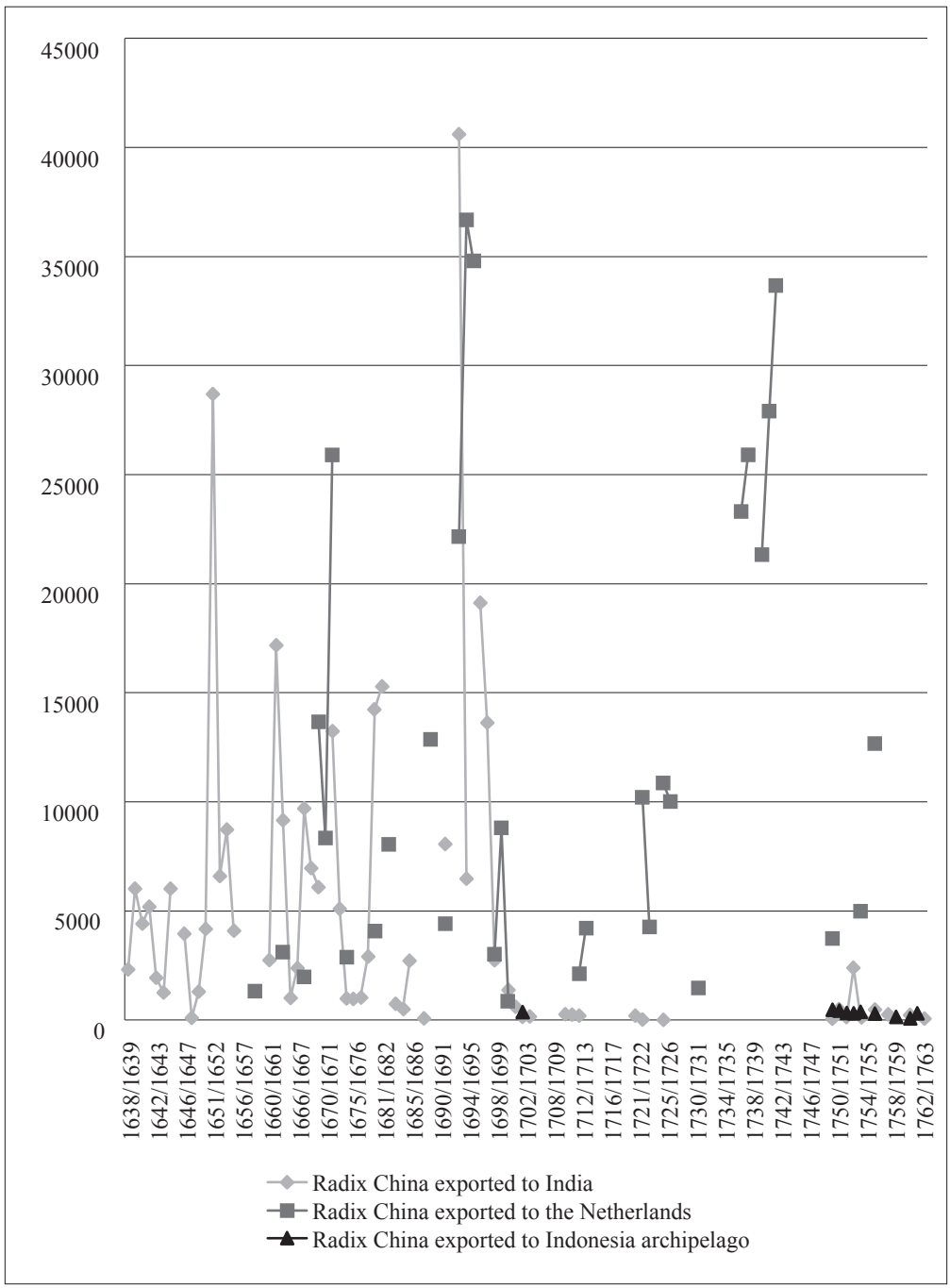

Fig. 4: Radix China Exported to the Bombay Region via VOC (Dutch Pounds per Book Year)

*The amount of radix China exported to Indonesia archipelago before 1700 is not displayed.

Sources: See Appendix, Tables 3, 4 & 5.

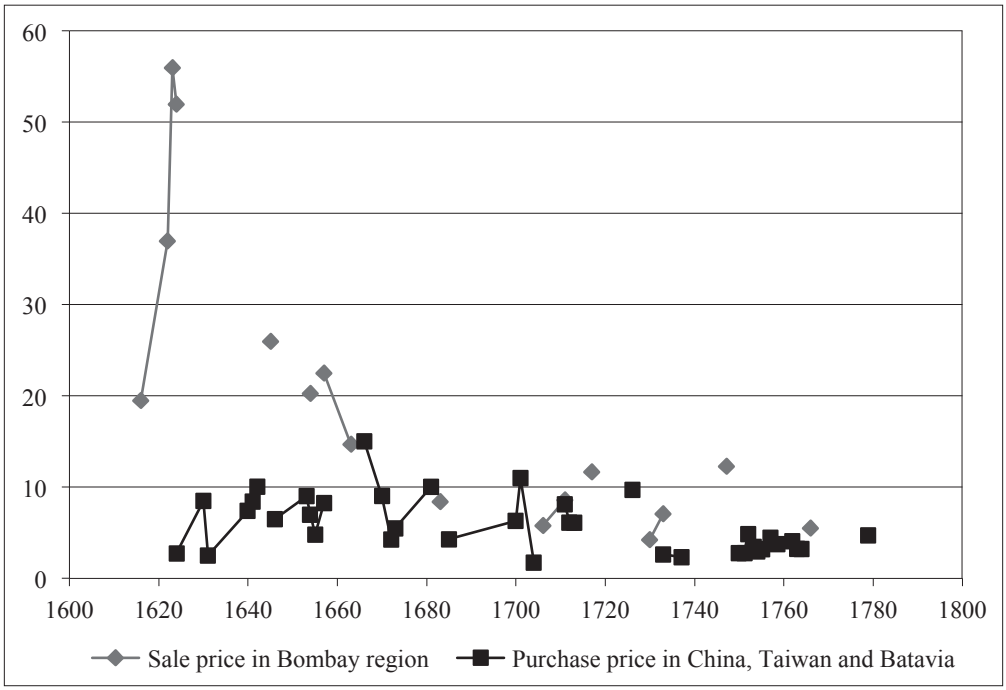

Fig. 5: The Prices of Radix China Purchased in China and Sold in Bombay Region (Rial per Picul)

Sources: See Appendix, Table 6.

If we compare the curve of the prices paid in China and obtained in Bombay, it seems the profit rates dropped and sometimes became negative during the 1680s. Therefore, sliding prices did explain the VOC's retreat from the trade of radix China in India. In the beginning, the price of radix China was extraordinary high during the 1620s when the VOC intruded into East Asian waters and hindered the transportation that had been solely enjoyed by the Portuguese in the 16th and early 17th centuries. In the 1640s, the selling price in the Bombay region began to slide because the Dutch gradually became capable of supplying Chinese goods including radix China. The VOC was still willing to pay dearly for radix China during the 1650s and 1660s, although Chinese suppliers became unable to offer a stable supply due to prolonged civil war. However, after the Chinese empire reunited and opened up to all foreign traders in 1684, the sale prices at Bombay had no chance to be lifted back to the higher level. The free competition caused by country traders (European private traders who ran only the intra-Asian trade) kept the sale price at a low level, and thus it was no longer worthwhile for the VOC to keep it on the cargo list destined for India. Instead, the European market became the real generator of profits.

As mentioned before, the movement of those two commodities, putchock and

radix China, are exactly opposite to each other. Broadly speaking, putchock sailed from Surat to Canton while radix China sailed from Canton to Surat. The chains to connect these two businesses were the VOC's shipment among other intra-Asian transporters: e.g. Portuguese, English, French, Danish and some Asian traders. When the flow of putchock managed by the VOC stood still during 1683–1693, the English and French vessels shrewdly stepped into this vacuum. It seems that when the VOC withdrew their supply of radix China from India and redirected it to Europe, the English merchants carried it along with their expansion in Sino-India trade. In 1672, the EIC once declared radix China to be a commodity which only company vessels were allowed to load (Campbell, 1894: 91). Although this regulation was soon dismissed, this shows that the English merchants had had their eyes on it since the middle of the 17th century. The EIC directors in London once ordered in 1672 the purchase of 500 piculs (61,250 Dutch pounds) of radix China from Taiwan as a trial (Chang et al. eds., 1995: 115). As mentioned above, during the 1690s to 1730s, lots of English country traders engaged in trade between Chinese harbors and Surat via Madras. They were in a good position to make their fortunes by selling putchock. It seems they had also set foot in the business of radix China on the return voyage (or the other way around). In 1708, the Madras authorities ordered 100 piculs of radix China through a country ship named Kent.[29] Later the country ship Marlbro was reported to have been carrying some radix China to be sold in Madras in 1717.[30] The EIC joined this trade briefly in the year 1722 but soon set it aside again. For example, the EIC ship Walpole carried 500 piculs (61,250 Dutch pounds) to Madras, along with the EIC ship Eyles, loaded with 250 piculs (30,625 Dutch pounds) bound for Bombay in the same year (Morse, 1926–1929, Vol. I: 172). They probably re-exported to Surat thereafter. In 1733, the country ship Prince Augustus was loaded with 100 piculs (12,200 Dutch pounds) of radix China when arriving in Madras from China.[31] In the year which followed, 1734, the French country ship Count de Toulouse departed from Canton with 122 piculs (14,945 Dutch pounds) of radix China.[32] It was widely known that the high ranking EIC personnel and servants at Bombay were involved in the private trade via both company and private vessels (country traders) to China, Madras and Bombay in the 1720s and 30s (Davies, 2012:

29 *The Diaries of Fort. St. George*, 1708: 24. 4 May. It was written as "one hundred weight". (Schmidt et al., 1910–1953)

30 *The Diaries of Fort. St. George*, 1717: 125. 31 Jul. (Schmidt et al., 1910–1953)

31 *The Diaries of Fort. St. George*, 1733: 79. 11 May. (Schmidt et al., 1910–1953)

32 IOR/G/12/37, Diary and Consultations of the Council in China, Jan. 1734–Apr. 1735, ff. 129. 24 Dec. 1734. (The British Library, 1600–1947)

119–132). The EIC directors were aware of this conflict of interest and forbade any further private trade without permission of the company authorities at settlements.[33] The EIC servants in Madras also complained that the Portuguese ships from Macau had carried considerably large amounts of Chinese goods to Madras during 1734–35, therefore they would not dispatch any vessel to China during that season.[34] The withdrawal of EIC servants from private trade between China and India, must also have reduced the capacity of English country traders in this field and therefore opened the floor for the country traders of other nationalities.[35] If the radix China exports were really carried by country traders of multiple nationalities, there would be almost no way to trace its quantity and price through official documents. Prof. Paul van Dyke mentioned a full list of cargoes and its carriers at Canton in the year of 1763, which presents a rare chance to show who exported the radix China away in the middle of the 18th century. In this list, the radix China was exported by one English country ship (356.91 piculs), three French East India Company ships (475.89 piculs) and three Danish Asiatic company ships (809.84 piculs). The total export amount was 1642.64 piculs, which is equal to 200,402.08 Dutch pounds. This amount is somewhat lower than the amount that the VOC exported to Europe from Canton during the 1730–40s. Meanwhile, the Canton junks did not carry any radix China abroad this year (Van Dyke, 2004: 162). This number supports my inference—that is, after the VOC withdraw from this trade, the English country traders took it over, although later the smaller European companies also followed suit.[36]

In the case of Sino-India exchanges of both putchock and radix China discussed above, the different perspective on earning strategies resulted in diverse measures being taken by the Dutch and English India companies at the turn from the 17th to the 18th century. When the profit rates of these two goods faltered, the VOC soon gave them up and turned to another profitable market, while the EIC first left them to the country traders and later brought them back as a part of its China-Europe trade package. The different initiatives on Sino-India trade brought the EIC (as well as private English traders attached to it) to be more and more involved in this route, and the VOC concentrated on optimizing the cargo lists so as to guard their existing advantages, and increasingly omitting trivial goods. Seen from the perspective of

33 *The Diaries of Fort St. George*, 1734: 114; 117. 31 Aug.; 9 Sept. (Schmidt et al., 1910–1953) Also see: Ray (1999a: 191).

34 *The Diaries of Fort St. George*, 1735: 68. 9 Jun. (Schmidt et al., 1910–1953)

35 *The Diaries of Fort St. George*, 1739: 98. 3 Jul. (Schmidt et al., 1910–1953)

36 On the general role of the British private traders in the Europe-Asian herb exchange, see: Davies (2012).

the Chinese, as the consumer and provider in this trade, it does not matter at all who the agent is—as long as the flow of goods continues. Below I shall elaborate in a wider context the shift of agents in this flow under the changing global trade, and how the Chinese may have perceived the changes resulting from this shift.

IV. Conclusion

Above I have made observations on two different items from China and India which were absorbed by both cultures during the long historical connections via oceanic trade. Although putchock became a necessity of Chinese daily life, the common Chinese people did not care whether it was a foreign product or not. Chinese scholars had long known of its origin in the vicinity of Kashmir but did not desire to re-affirm this knowledge. In the one thousand years from the 5th century to 15th century, Chinese inhabitants did not really attempt to obtain putchock from its original places, but were content receiving it from intermediary merchants from South and Southeast Asia. When the Arabian mariners visited China in the 10th to 13th centuries, they expanded the coverage of Indian Oceanic trade to the South China Sea, with Canton as the north terminal of it (Chaudhuri, 1985: 49–56). In the 14th and the 15th centuries, apart from Zheng Ho's expeditions, which were an extension of the Arabian Muslim seafaring tradition, the Chinese Ming court actually established a trading system in the guise of a tributary system, claiming Beijing to be the hub of commodities from all its subordinate kingdoms. Feeling the effects of global cooling (the Little Ice Age) in the middle of the 15th century, the Ming court could no longer sustain an externally oriented policy and therefore had to rely on intermediary traders rather than direct links with the Indian coast to import sought-after materials (Nakajima, 2011: 512). The rise of the Ryukyu kingdom enormously benefited from this design because it was granted the status of most trustworthy broker of the Chinese oceanic trade to collect Indian goods from Southeast Asian ports. When the Portuguese opened a direct link from India to China via its Macau settlement, Ryukyu's advantageous status on intermediary trade was weakened (Nakajima, 2011: 515; 519). In the last half of the 17th century, when the new Manchu or Qing court established its rule firmly over China, it instructed the embassy of Ryukyu to no longer to bring putchock and other products of the Indian Ocean as tributary goods.[37] This policy demonstrates the adjustment of the Chinese

37 "…… in 1666, the Emperor Kanghsi gave edict, the agate, ebony, Dalbergia wood, putchock, ivory, tin, agila wood, clove and sandalwood etc. are not native products, no more required as tributary goods." (Zhao, 1981: 14617)

maritime trading system to cope with the impacts of new European brokers.

Since the 9th century, the Chinese had relied on foreign supply of putchock, which was used as a fragrant wood and daily medicinal herb. It was also increasingly used in religious ritual practices which were introduced by Buddhism and accepted by Taoism. The maritime routes became the main supply line and surpassed the land routes during this period as well. The agents of this business were not necessarily Chinese mariners. As recent archeological research shows, in the 10th to 12th centuries, Malay mariners and merchants used to play a heavy role in this trade (So, 1998). From the 13th century onward, after Arabian merchants set foot in Southeast Asia from India, they extended their reach to the Chinese coast and became the main agents of this business. When the Chinese Ming Empire established the tributary trading system in the 14th century and the Indian connections faded away because of the Little Ice Age in the middle of the 15th century, the Chinese court selected a small island kingdom, Ryukyu, to be the agent to connect the Chinese market via Malacca to India. The Portuguese intruded in the East Asian waters in the early 16th century, and soon after they built the trading post in Macau, the Ryukyu's role in providing Indian goods to China was cancelled. The Malay rulers, who benefited from global expansion in spices (especially pepper), retreated from the long-term maritime trade, first yielding it to Chinese and Guajarati merchant carriers, and later allowing Europeans to play this part (Manguin, 1993). In the rivalry between the Dutch and the Portuguese at sea, and in the Ming and Qing conflicts on land during the middle of the 17th century, Taiwan as the post of the VOC played a crucial role in Sino-India trade as well. When all of this turbulence gradually ceased at the end of the 17th century, the shift from the VOC to the EIC and English private traders as the new brokers was gradually taking place, as my previous sections have revealed.

Here I shall add Chinese perspectives on the changes in the agents. The local consumers also sensed that the market of putchock was gradually filling up during the first several decades of the 18th century. As the above discussion has suggested, the imports of putchock after the 1730s became quite sufficient in Canton. Putchock became a local speciality acknowledged by common people there. For example, at this juncture, a Cantonese herbal master, Zhao Jin-shu (趙瑾叔), wrote a poem in 1736 on Chinese herbs. One of the poems praised the effectiveness of putchock. The first sentence of this poem states: "everyone in Canton praises the good of putchock" (Zhao, 1999: 127). In some Chinese records, although nothing was mentioned about the shifting among different European brokers, the Indian cargoes and their carriers were mentioned. A note on the map of the Chinese maritime borders made in the early 18th century (ca. 1723), *Qingchu Haijiang Tushuo* [*Remarks on the Map of the*

Sea Borders in the Early Qing] (《清初海疆圖說》), stated clearly that the French and English traders were both providers of putchock.[38] When the English and French traders came to the attention of the Chinese literati at the turn from the 17th to the 18th century, the roles they played were very similar to those of the Arabian traders in Holmuz in the 8th century, the Malay traders of Srijaya in the 10th century and the Guajarati traders in Bantam in the 15th century.[39] The impressions of Europeans as cruel and treacherous in the 17th century either faded away soon, or simply were ignored. A frequently cited maritime description in the early 18th century written by a Chinese naval officer, Chen Lun-jiong (陳倫炯), gave an account of the goods provided by the French in Pondicherry and the English in Madras in "*Haiguo Wenjianlu* [*Reviews on the Littoral Countries*] (《海國聞見錄》)" as follows: silver, cotton textile, cloves, cassia oil, benzoin, putchock, myrrh, rose maloes etc. (Chen, 1958: 24)[40] Apparently he knew well about the country traders' business carrying putchock from Surat via Madras to Canton. The narrative style of those Chinese sources displayed ignorance or indifference to these distant changes. The Chinese court and the common consumers did not have preferences on who carried on this trade at all, if only the supply of these foreign goods could always be stable.

In a "longue durée" perspective, it is clear that the Chinese authorities hardly desired to control the supply of remote foreign goods unless there were urgent needs. Most East Asian countries enjoyed several decades of peace in the early 18th century. The population recovery drove the Chinese market expansion. In the court's view, it was reasonable to accommodate new agents to provide goods from afar. What mattered was to control the borders. Because the uneven distribution of profits may have caused unrest among the people, the court had to avoid this hazard and watch the border trade closely. The ways to regulate the foreign trade were varied, and the gateways to foreign places were always moving around the periphery of the Chinese empire. The case of the putchock trade shows that the gateways to India were as far as Java on the southern margin of the South China sea, and as near as Ningbo, which was situated in the vicinity of the estuary of the Yangtze River, which commands the entry to major cities in the Chinese hinterland. In between, there was a contact zone including Amoy and Canton on the Chinese shore; Ryukyu,

38 For a list of French ships visiting Canton during the early 18th century, see: Dermigny (1964: 153).

39 Fot the role played by the Persians in the long history of China in importing the herb medicine, see: Schottenhammer (2010).

40 In Chinese he wrote it as "ba-la-sa", which may be transformed from "pat-s-jaak", which refers to putchock in the area of Coromandel, as recorded in Dutch. See: Yule (1903: 745).

Taiwan, and Macau in bordering waters; Vietnam, Siam, and Malacca on the way to India; and Sumatra and Java as the replacements for Malacca when they were strong in maritime transportation. The Chinese court's concerns over this contact zone varied according to its actual abilities of intervention, but it hardly desired to project its influences beyond this zone in the historical period observed above.

Under different circumstances, different harbors within this contact zone could become entrepôts for China to connect with the India market (and beyond). In some extreme situations, even Japan and Korea could become gateways for China to acquire the Indian goods. During the Ming-Qing (Manchu) transition, China's coast was at one point closed to foreign visitors. Chinese mariners based in Taiwan became the offshore agents of Chinese oceanic trade through smuggling. Lots of tropical commodities that Taiwanese merchants obtained at Japanese markets were actually delivered by the VOC ships there from Batavia. In this case Japan briefly became an entrepôt rather than a trading terminal in the 1660s and 1670s. In this way, the exchange of putchock brought by the VOC and radix China brought by the Taiwanese junks proceeded smoothly in neutral Japan, despite the mutual hostilities among Qing officials, Taiwanese smugglers and the VOC.

If the order of trade could be guaranteed by political agreement and economic partnership based on reciprocal principles, there were no concerns on who would be the main agent of maritime foreign trade. The French and English country traders were relatively active in the Sino-India trade during the 1690s–1730s, along with Muslim merchants who called at Chinese harbors. But when the profit rates gradually declined, the local Indian maritime traders also gave up their own vessels and invested in European company ships. This move decisively changed the further composition of this trade. The native traders never returned to this shipping route thereafter. Why were the European companies able to run this business at a profit rate lower than what the native traders could bear? This had something to do with the global involvement in the intra-Asian trade. The case of the Sino-India trade in radix China can serve as a very good example of this unpreceded convergence of Asian and Europe markets.

Unlike putchock, which had occupied an indispensable position in Chinese daily life for a millennium, radix China became part of Indian traditional medical resources only after the Portuguese physicians introduced this herb to Goa when investigating the Indian traditional medical practices. As a cure against syphilis, radix China became a globally known medical herb, although most Chinese people were not aware of how other nations cherished it at the time. The effect of this medicine must have been exaggerated in the beginning of the 17th century. After this feverish reception was over, it remained an indispensable medicinal herb in

India and Europe. As the above table shows, the VOC distributed radix China to Europe mostly from the 18th century onward, while the demand in India still existed. I surmise that the high prices offered in the European market caused this shift. In other words, it was the expansion of the European market and the merger between the Chinese and European markets which resulted in this shift.

Comparing the intra-Asian trade strategies of the VOC and EIC, there was a striking difference in their focus on the profit-making patterns. The VOC engaged in intra-Asian trade to finance the purchasing of spices, which were the ultimately profitable cargoes in the Europe market. In contrast, the EIC, as a latecomer in Asia, was not able to get a share in the Dutch-cornered spice trade, and so had to invest its capital in China trade directly (Nierstrasz, 2015: 43). After the Chinese emperor welcomed the foreign traders after 1684, the VOC was not able to exclude other participants from the Chinese tea trade. The Chinese tea therefore could be supplied at a low price with large quantities in Europe, which in turn created an enormous market expansion. What happened to the Indian textile exports to Europe was a similar story. Free competition enlarged the demand for capital investment, especially in the form of bullion. This demand ensured that in the long run, the one who could pay bullion constantly to Asia would be the winner. The watershed event occurred around 1757, when the EIC began to gain the rights of taxation in Bengal (Nierstrasz, 2015: 40–41). This new financial source, along with the new remittance system that transferred local country traders' fortunes gained through intra-Asian trade to England, relieved the heavy burden of bullion payment. No longer worried about running short of bullion, the EIC outran the VOC because the latter could not resolve this quest by counting on the shrinking profits of spices. When the VOC filtered out the goods that could not provide enough profits in the 18th century from its cargo list, for example, the above discussed putchock, the EIC permitted the country traders to pick it up at their own risk. Those country traders became the founders of English settlements in India. After the EIC obtained the taxation rights in Bengal, they soon exploited this chance to expand their business. Those country traders also recognized that the radix China was a profitable good in China trade, and then filled in the exchange chains between putchock and radix China between India and China, among other goods. In contrast, the VOC followed the same principle to redirect the radix China to the European market when its profit in intra-Asian trade was no longer profitable. After the 1750s, the EIC became more eager both to reduce its bullion expenditures in China by supplying Indian goods and to enter the putchock business again. Therefore the imports of putchock in China increased proportionally with the exports of Chinese tea to Europe. In this stage, no other intra-Asian traders were able to compete with the EIC, which was equipped with the

rich profits gained from the Europe-China markets. Consequently, it goes without saying that no Asian traders could survive within this severe competition because they did not have a chance to bridge the European and Chinese markets from the beginning.

When the VOC withdrew from the China coast in 1690 and the English and French companies' and country traders became active on the China shore, Coromandel and Surat during 1690–1720, it seems that they were just the replacement for Guajarati and Malay traders, and earlier Persian traders in the past who had visited China's shores carrying similar goods for several hundred years. The establishment of the Canton system for Chinese foreign trade was also reminiscent of earlier official trading bureaus. In the first several decades of the 18th century, the contemporaries of Chen Lun-jiong could perceive of the Chinese world order with the old model, without any adjustment. The effects of the merging of the European and Chinese markets, or a more profound economic globalization, which forced the VOC away and eventually caused it to be disbanded, were not visible to the Chinese world. The case of the exchange of putchock and radix China is almost negligible in global economic history, but it allows us to place ourselves in the position of ordinary Chinese people in the early 18th century. In this way we can understand why the Chinese general public, who were consumers with a reasonable interest in traditional foreign goods, was not affected by the unprecedented merging of markets on a global scale, leading to the "great divergence". Incurious about any world economic shifts that generated little impact on their purchases, the Chinese people thereafter were barely aware of the new world constellation of power and wealth taking shape in the following centuries, one in which China would no longer occupy a dominant position. The reason for their indifference was that, from their point of view, the old frame of the world picture remained intact as long as the supplies of the foreign goods used in daily consumption did not appear to be dropping perceptibly (and therefore subject to price increases). Any rivalries between and replacements of agents in the trade with China were immaterial to them, as long as the supply remained steady. This may be just a repetition of what happened to the Malay world at the turn from the 16th to the 17th century. They gave up the hazardous maritime trade, once it was no longer worthwhile, to European agents, and reserved their energy for expanding the production of spices to reap the rich fruits of global exchange.[41]

41 For the withdrawal of the Gujarati traders from intra-Asian trade and their participation in English country trade, see: Ray (1999b).

Appendix

Table 1: The Amount of Putchock Exported from Surat to Batavia

Book Year	Dutch Pounds	Book Year	Dutch Pounds	Book Year	Dutch Pounds
1637/1638	24436.6	1667/1668	47838.5	1712/1713	11962.5
1640/1641	31325.5	1669/1670	11237.5	1714/1715	24106.25
1641/1642	24465	1671/1672	3520	1721/1722	15950
1642/1643	89951	1674/1675	12506.25	1725/1726	1000
1643/1644	35160	1677/1678	5127.5	1731/1732	5000
1644/1645	60944	1678/1679	4531	1740/1741	14250
1649/1650	43730	1679/1680	15406.25	1750/1751	42013
1650/1651	39115.5	1681/1682	4531	1751/1752	20024
1652/1653	73000	1682/1683	4531	1754/1755	3600
1653/1654	24408.54	1694/1695	19031	1763/1764	12000
1654/1655	6374.5	1696/1697	20300	1765/1766	10000
1655/1656	63000	1697/1698	19685.5	1766/1767	4000
1658/1659	29300	1699/1700	25012.5	1775/1776	1200
1659/1660	58600	1700/1701	25012.5	1776/1777	2400
1662/1663	32680	1701/1702	25375	1778/1779	1200
1664/1665	15675.5	1706/1707	15043.75	1779/1780	1200
1665/1666	6243.75	1710/1711	8156.25		

Sources: Unpublished VOC Archives, VOC 875: 188; 876: 397; 398; 1166: 706; 1206: 216; 1208: 430; 431 (VOC, 1602–1795); ID-JaAN, 2495: 601; 2514: 231; 2517: 245; 2518: 373; 429; 2520: 241 (Arsip Nasional Republik Indonesia, 1602–1799); *Dagregisters van het kasteel Zeelandia*, I: 423 (Blussé et al. eds., 1986–2000); *Daghregisters van het kasteel Batavia*, 1640–1641: 307; 1641–1642: 204; 1643–1644: 183; 194; 1644–1645: 242; 244; 1659: 125; 1663: 308; 1664: 371; 1665: 140; 1668: 127; 1670–1671: 110; 116; 1672: 183; 1675: 84; 1678: 33; 223; 224 (above three entries carried by English vessels); 343; 1679: 340 (Chijs et al. eds., 1887–1931); *Generale Missiven*, II: 309; 389; III: 273; 537; IV: 488; 489; 517; 850 (Coolhaas et al. eds., 1960–2007); *Beschryvinge van de Oostindische Compagnie*, 2.3: 224 (before 1700) (Van Dam, 1927–1954); online database of "Bookkeeper-General Batavia" (after 1701) (Schooneveld-Oosterling et al., 2013).

Table 2: The Sale Prices of Putchock in China and Japan, and the Cost in Bombay Region (Tael per Picul)

Book Year	Sale Price in China	Cost in Bombay Region	Sale Price in Japan	Book Year	Sale Price in China	Cost in Bombay Region
1640/1641	24.4	7.7		1703/1704	14	
1642/1643	35.5	6.9		1706/1707		14
1644/1645	35.5	7.2		1710/1711		11
1646/1647	35.5	7.2		1712/1713		13
1650/1651		7.4		1714/1715		14
1654/1655	26	5.3		1721/1722		16
1655/1656	20	4.1		1725/1726		21
1657/1658	32			1731/1732		25
1670/1671	22.5			1733/1734	18	
1675/1676	16.5			1735/1736	34	
1677/1678	18	5.3		1740/1741		22
1678/1679	18			1741/1742	37.5	22.5
1681/1682			28	1750/1751		17
1682/1683			26.5	1751/1752		18
1685/1686	12			1752/1753		19
1695/1696			86	1753/1754		52
1696/1697			105.5	1754/1755		32
1697/1698			57	1756/1757		32
1698/1699			11	1756/1757		46
1699/1700		11	30	1763/1764		46
1700/1701		9	24	1764/1765	60	
1701/1702		10		1765/1766	52.5	44

Table 2 (continued)

Book Year	Sale Price in China	Cost in Bombay Region	Sale Price in Japan	Book Year	Sale Price in China	Cost in Bombay Region
1766/1767	55	38		1778/1779		35
1774/1775	25.5			1780/1781	24.5	
1775/1776		35		1809/1810	22	
1776/1777		35		1817/1818		18
1777/1778		35		1818/1819		19.5

Sources: Unpublished VOC Archives, VOC 865: 216; 1166: 706; 1185: 651; 1206: 203; 1212: 329; 1215: 601; 682; 1222: 35; 1330: 709 (VOC, 1602–1795); *Daghregisters van het kasteel Batavia*, 1640–1641: 315; 1641–1642: 204; 1644–1645: 229; 244 (Chijs et al. eds., 1887–1931); *Dagregisters van het kasteel Zeelandia*, II: 194–195 (Blussé et al. eds., 1986–2000); *Generale Missiven*, II: 172; 210; IV: 220 (Coolhaas et al. eds., 1960–2007); *Beschryvinge van de Oostindische Compagnie* (Van Dam, 1927–1954); unpublished English East India Company's Archives, IOR/G/12/5, ff. 371; IOR/G/12/35, ff. 35 (The British Library, 1600–1947); online database of "Bookkeeper-General Batavia" (Schooneveld-Oosterling et al., 2013); *Report, Relative to the Trade with the East Indies and China*, 424; 425 (The House of Lords of the United Kingdom ed., 1821); *Gazetteer of the Bombay Presidency*, XXVI: 111 (Campbell and Enthoven eds., 1877–1904); Chang et al. eds., 1995: 68; 221; 263; Lockyer, 1711: 148; Morse, 1926–1929, II: 81; V: 119; 194; Milburn, 1813: 491; Nagazumi ed., 1987: 357; 359; 361; 366; 368; 369; 370–371; 373; 376; 378–379; Stevens, 1766: 112; 133.

Table 3: The Radix China Exported by the VOC to Bombay Region (Dutch Pounds per Book Year)

Book Year	Dutch Pounds	Book Year	Dutch Pounds	Book Year	Dutch Pounds	Book Year	Dutch Pounds
1638/1639	2326.54	1663/1664	999	1693/1694	40588	1753/1754	2399
1639/1640	6000	1666/1667	2386	1694/1695	6475	1754/1755	124
1640/1641	4396.4	1667/1668	9714	1696/1697	19125	1756/1757	448
1641/1642	5185	1668/1669	6955	1697/1698	13631	1758/1759	223
1642/1643	1938	1670/1671	6076	1698/1699	2717	1761/1762	253
1643/1644	1420	1671/1672	13239	1700/1701	1378	1763/1764	62
1644/1645	6000	1672/1673	5082	1701/1702	600		
1646/1647	3933.28	1673/1674	978	1702/1703	125		
1648/1649	103	1675/1676	946	1703/1704	150		
1649/1650	1288.32	1676/1677	1026	1710/1711	250		
1650/1651	4163.86	1679/1680	2927	1711/1712	250		
1651/1652	28680.98	1680/1681	14223.805	1712/1713	200		
1652/1653	6598.98	1681/1682	15269	1721/1722	200		
1653/1654	8711.36	1683/1684	700	1722/1723	5		
1655/1656	4087	1684/1685	507	1725/1726	15		
1660/1661	2745.61	1685/1686	2693	1750/1751	87.5		
1661/1662	17158	1688/1689	50	1751/1752	494		
1662/1663	9136.58	1691/1692	8047	1752/1753	124		

Sources: Unpublished VOC Archives, VOC 1146: 756; 1163: 290; 1171: 399; 483; 1183: 542; 1197: 789; 1206: 644; 1208: 187; 1216: 409 (VOC, 1602–1795); ID-JaAN 2497: 1007; 2498: 335; 2499: 779; 2501: 1024; 2505: 597; 2509: 604; 607; 2511: 737; 2513: 526; 527; 2514: 471; 2516: 713; 2517: 720; 829; 2518: 525; 626 (Arsip Nasional Republik Indonesia, 1602–1799); *Daghregisters van het kasteel Batavia*, 1640–1641: 194; 215; 1641–1642: 192; 1643–1644: 183; 1644–1645: 336; 1661: 26; 438; 1663: 209; 1664: 257; 1666–1667: 56; 342; 1668–1669: 170; 415; 1670–1671: 56; 136; 343; 387; 396; 397; 414; 474; 1672: 237; 1673: 198; 199; 214; 270; 1675: 346; 1676: 232; 1680: 553; 630; 703; 1681: 554; 669 (before 1700) (Chijs et al. eds., 1887–1931); online database of "Bookkeeper-General Batavia" (after 1701) (Schooneveld-Oosterling et al., 2013); Chang et al. eds., 1995: 180; 186; 250; 293.

Table 4: The Radix China Exported by the VOC to Europe (Dutch Pounds per Book Year)

Book Year	Dutch Pounds	Book Year	Dutch Pounds
1658/1659	1314	1700/1701	842
1662/1663	3125	1712/1713	2106
1667/1668	1968	1713/1714	4194
1669/1670	13646	1722/1723	10200
1670/1671	8331	1723/1724	4250
1671/1672	25893	1725/1726	10837
1673/1674	2885	1726/1727	10000
1680/1681	4098.4	1731/1732	1445
1682/1683	8039.2	1737/1738	23284
1689/1690	12841.25	1738/1739	25899
1691/1692	4416	1740/1741	21316
1693/1694	22160	1741/1742	27894
1694/1695	36657	1742/1743	33646
1695/1696	34785	1750/1751	3732
1698/1699	3016	1754/1755	4989
1699/1700	8783.5	1756/1757	12600

Sources: (From 1650 to 1674), *Hollandse Mercurius*, Part 10: 112; 14: 123; 19: 114; 21: 75; 22: 75; 23: 147; 25: 175 (Casteleyn et al. eds., 1651–1691); (from 1681 to 1699), *Daghregisters van het kasteel Batavia*, 1680: 774–780 (Chijs et al. eds., 1887–1931); ID-JaAN, 2495: 242–251; 2506: 19; 126–128; 2509: 842; 2512: 99–111; 2514: 112–115; 2515: 86–92; 2518: 525–526; 729–732; 743–747; 2519: 879–883; 2520: 310–311 (Arsip Nasional Republik Indonesia, 1602–1799); (from 1701 to 1764), online database of "Bookkeeper-General Batavia" (Schooneveld-Oosterling et al., 2013).

Table 5: The Radix China Exported by the VOC to Indonesia Archipelago (Dutch Pounds per Book Year)

Book Year	Dutch Pounds	Book Year	Dutch Pounds
1702/1703	400	1754/1755	340
1750/1751	481.25	1756/1757	312.5
1751/1752	452.5	1759/1760	148.75
1752/1753	297.5	1761/1762	87.5
1753/1754	295.8	1762/1763	301.25

Sources: Online database of "Bookkeeper-General Batavia" (Schooneveld-Oosterling et al., 2013).

Table 6: The Prices of Radix China Purchased in China and Sold in Bombay Region (Rial per Picul)

Year	Price Sold in Bombay Region	Price Purchased in China	Year	Price Sold in Bombay Region	Price Purchased in China
1616	19.5		1670		9
1622	37		1672		4.25
1623	56		1673		5.5
1624	52	2.75	1681		10
1630		8.5	1683	8.4	
1631		2.5	1685		4.3
1640		7.4	1700		6.3
1641		8.4	1701		11
1642		10	1704		1.75
1645	26		1706	5.8	
1646		6.5	1711	8.6	8.1
1653		9	1712		6.1
1654	20.3	7	1713		6.1
1655		4.8	1717	11.7	
1657	22.5	8.2	1726		9.7
1663	14.7		1730	4.25	
1666		15	1733	7.1	2.66

Table 6 (continued)

Year	Price Sold in Bombay Region	Price Purchased in China	Year	Price Sold in Bombay Region	Price Purchased in China
1737		2.3	1757		4.4
1747	12.4		1759		3.8
1750		2.8	1762		4.1
1751		2.8	1763		3.2
1752		4.8	1764		3.2
1753		3.4	1766	5.5	
1754		3	1779		4.7
1755		3.2			

Sources: *Beschryvinge van de Oostindische Compagnie*, 2.3: 268; 269; 343; 344 (Van Dam, 1927–1954); unpublished VOC Archives, VOC 851: 61; 855: 7; 873: 217; 1103: 342; 1137: 13; 1139: 528; 1166: 707; 1207: 644; 1208: 187; 424; 1210: 686; 1224: 196; 448; 1258: 1426; 1290: 19; 1368: 654 (VOC, 1602–1795); *Daghregisters van het kasteel Batavia*, 1644–1645: 249; 1663: 309; 1673: 107 (Chijs et al. eds., 1887–1931); *Generale Missiven*, IV: 579; 759 (Coolhaas et al. eds., 1960–2007); SHL, MS56: Far East Trade Papers, 117; 211 (SHL, 1691–1732); online database of "Bookkeeper-General Batavia" (after 1701) (Schooneveld-Oosterling et al., 2013); *The Diaries of Fort St. George*, 1717: 125–128; 1722: 79 (Schmidt et al., 1910–1953); Chang et al. eds., 1995: 68; 160; 687; Lockyer, 1711: 148; 272; Stevens, 1766: 70; Campbell, 1894: 80; Borschberg, 2006: 111; Winterbottom, 2015: 38.

Currency Conversion

(When the conversion rate is mentioned with cited sources at a particular time and place, the author relies on that, rather than the general rates listed below.)

1 rial (piece of eight) = 48–60 stuivers

1 rupee = 28 stuivers

1 tael = 66 stuivers (before 1670)

1 tael = 80 stuivers (after 1670)

1 pound = 4 dollars

1 dollar = 5 shillings = 60 pennies

1 tael = 6 shillings 8 pennies = 80 pennies

Weights

1 picul = 100 catties = 122 Dutch ponds = 3.331 maunds

1 Dutch (Amsterdam) pond = 0.494 kilograms

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印度木香與土伏苓：17 至 18 世紀荷蘭東印度公司的亞洲海域香藥貿易

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摘　要

木香產於喀什米爾高原一帶，長年被中國人作爲治療腹瀉的藥物使用。土伏苓則是中國內陸生產的藥草，對於皮膚潰爛症狀具有療效。土伏苓從中國出口到印度，而木香則是由印度出口到中國。這些香藥也由越南、暹羅、琉球、爪哇等地經營海上貿易的商人來輸運。十六世紀起，當歐洲人進入東亞海域，各特許公司開始取代這些仰賴中華帝國朝貢制度的區域貿易交換活動，甚至成爲主要的載運者。本文藉由荷蘭東印度公司檔案中所遺留的貿易數量記載，檢視在中國與印度之間兩種香藥的交換歷史，以呈現泛亞香藥貿易的實態。

關鍵字：木香、土伏苓、荷蘭東印度公司、港腳貿易、香藥貿易

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