

## Prices in Sri Lanka and Southern India during the pre-industrial period

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### Introduction

With the current economic development of parts of Asia – in particular, of course, India and China – the question of how past living standards compared to those in the West has become a hot topic in the international literature. One of the central research questions is when exactly the balance tilted in favor of Europe for the first time. Some researchers believe that it only was the Industrial Revolution that (temporarily) gave Europe an advantage. Others argue, however, that Europe already did better much earlier.<sup>1</sup> One source for the disagreement amongst researchers is the fact that long-run data series of the preferred indicators are not widely available. It is only a rather recent development, for example, that long run data series on prices, wages and living standards are becoming available to economic historians.<sup>2</sup> An important bottleneck in this kind of research is that often the required documents are not (or no longer) available in Asia.

The National Archives in The Hague, The Netherlands, hold an important collection to circumvent this problem: the archives of the Dutch East India Company or VOC.<sup>3</sup> This archive, which covers the incredible length of 1,243 meters, holds documents that can offer an important contribution to the rise of the West literature. As commercial company the VOC employed large numbers of clerks that recorded every single sale or purchase that was made. This information was not kept solely at the respective trading posts, but was also shared with local head quarters, the government in Batavia and with the Company's Chambers in the Netherlands. Especially the correspondence with the Chambers in

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<sup>1</sup> The literature is vast. A key publication is Kenneth Pomeranz, *The great divergence. China, Europe, and the making of the modern world economy* (Princeton, 2000).

<sup>2</sup> See, for example, Robert C. Allen, 'Real wages in Europe and Asia: a first look at the long-term patterns', in: Robert C. Allen, Tommy Bengtsson and Martin Dribe (eds.), *Living standards in the past. New perspectives on well-being in Asia and Europe* (Oxford, 2005), 111-130.

<sup>3</sup> Nationaal Archief, The Hague, The Netherlands, inv. no. 1.04.02, Archief van de Verenigde Oost-Indische Compagnie (VOC), 1602-1795 (1811). For the online inventory, see [http://www.nationaalarchief.nl/webviews/page.webview?eadid=NL-HaNA\\_1.04.02](http://www.nationaalarchief.nl/webviews/page.webview?eadid=NL-HaNA_1.04.02). The inventory is also available as PDF at [http://www.nationaalarchief.nl/toegangen/pdf/NL-HaNA\\_1.04.02.ead.pdf](http://www.nationaalarchief.nl/toegangen/pdf/NL-HaNA_1.04.02.ead.pdf).

Amsterdam and Zeeland was important in this respect. Due to the work of these diligent clerks, the collection *Overgekomen brieven en papieren* or *Received letters and documents* is a real treasure trove for economic historians.

By way of exploring the potential of these sources attention will focus here on Sri Lanka and – as it will turn out – Southeastern India. The reason why Sri Lanka – or Ceylon as it was called during the seventeenth and eighteenth centuries – was chosen is that since the VOC had a strong presence there from the mid-seventeenth century onwards, both a large number of primary and secondary sources are available. This does not mean, however, that Sri Lanka is an exceptional case: it is clear that documents of a similar kind to the ones used here are also available for other areas where the VOC was active.<sup>4</sup>

A concise historical introduction to the VOC and its presence in Sri Lanka (and Southeastern India) will not be provided here; but by way of summary a few of the main facts may be given: The VOC was established in 1602 and only developed an open interest in Ceylon during the 1630s. Through warfare the Portuguese were ousted from the island and by the late 1650s the VOC controlled large tracts of coastal region. The inland parts of the island remained under control of the king of Kandy. Colombo became the VOC's political capital and fleets returning to the Netherlands left from Galle, which was located in the Southwestern tip of Ceylon. For publications offering a more elaborate overview the reader is referred to the bibliography at the end of this document.

### **The sources**

Within the present research setup a continuous series of identical quantitative sources are of course the preferred type of documents to use. The question was whether these documents existed and how to locate them in the endless VOC collection. Although a digital version of the inventory of the VOC archive is available, this does not make this task much easier. This is because of the fact that the bulk of the interesting documents were packed annually in large volumes and sent from Asia to The Netherlands. Fortunately the inventory often does mention for which areas a specific volume contains documents, but one then has to check the content list of each and every volume in order to determine whether it contains

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<sup>4</sup> See, for example, the recent work done on the Cape colony: Stan du Plessis and Sophia du Plessis, 'Happy in the service of the company: the purchasing power of VOC salaries at the Cape in the 18th century' and Johan Fourie and Dieter von Fintel, 'The dynamics of inequality in a newly settled, pre-industrial society: The case of the Cape Colony'. Both papers were presented at the World Economic History Congress 2009 in Utrecht.

relevant information. Typescripts of these content lists are available at the National Archive, which means that the relevant documents can be located much faster. However, this task still has to be performed for every volume.

The work done within the TANAP project has removed this barrier. The TANAP researchers have digitized many of the content lists and have assigned the documents to one or more thematically determined topics. All of this information can be consulted at their website, where one can also create a PDF-file with all the sorted information relating to a specific trading post of the VOC.<sup>5</sup>

The bulk of the information compiled by TANAP referred to documents generated within the political sphere (e.g. minutes, letters and reports). Although these documents do contain information about prices, they were not used since the references are too scattered. Only those sources were taken to be of interest in which prices were collected systematically during a longer period of time.

The source from which data has been collected here, were lists presenting evidence on the profits that were made by the VOC on the sale of goods. Each list clearly stated for which office it gave an overview. In some instances a further breakdown was made within the list. Galle, for example, also reported for Matara. From the mid-eighteenth century onwards summary statistics for the entire political unit (i.e. Sri Lanka and Southeastern India) were also available. For these the place name “Hele gouvernement” was used.<sup>6</sup> A typical list would include the name of the product, the quantity (and unit) that was sold, the per unit and overall price for which the product was purchased<sup>7</sup>, the per unit and overall price for which the product was sold, and the profit that was thus made. A distinction was often made between Dutch or European goods on the one hand and domestic or Asian

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<sup>5</sup> TANAP: Towards a new age of partnership in Dutch East India Company archives and research. For more information, see their website: <http://www.tanap.net>. For the files relating to Ceylon and other trading posts, see [http://databases.tanap.net/vocrecords/4\\_virtual\\_reconstruction.cfm](http://databases.tanap.net/vocrecords/4_virtual_reconstruction.cfm). The file used in the present research was auto-generated by the TANAP website at 16 July 2008. It covered the VOC archive inventory numbers 1053-1600, 2325-3987, 7527-9179 and 10406-10435. This document was used as a tool to gain quick access to the source. This means that for some of the missing years in the present database, sources may still be available in the archive. These documents – if any – could unfortunately not be consulted because of a lack of time.

<sup>6</sup> It should be noted, however, that such breakdowns were not made consistently. The Colombo accounts, for example, often – but not always – specified Negombo separately. It can probably be assumed that in those years that this was not done, the Negombo data were simply incorporated by the VOC officials in the Colombo data.

<sup>7</sup> Many goods were obviously brought to Ceylon by the VOC itself. Some detailed lists show that in such cases they used the price in the exporting region and added various transaction costs.

goods on the other. The accounts did not cover a calendar year, but an accounting year. Between 1677 and 1694 this period started on the first of March and ended with the last day of February. Between 1700 and 1790 these were September and August respectively.

The prices that were entered in the database are quoted in the currency that was used by the VOC in Asia: their Asian guilder. Although this currency had the same name as the Dutch guilder, their metallic content was not identical. The Asian currency was usually referred to as “light money” or “Indian reduction”, meaning that its metallic content was lower than the Dutch currency. In order to convert these Asian guilders to Dutch currency one has to multiply by 0.8 or divide by 1.25. Prices were subsequently converted to grams of silver.<sup>8</sup>

For the period 1677-1790 data have been collected for a total of 89 years. Since every VOC office in Ceylon had to report, information could be collected for about twenty larger and ten smaller trading posts. About five of these were located in southern India.<sup>9</sup> All of this information – except the profit data – was entered in a database.<sup>10</sup> Sometimes a specification was made as to who the buyer of the goods was. If present at all, this usually referred to the community (*gemeente*) or private people (*particulieren*). In these instances prices were included. Sometimes, however, a reference was made to high-ranking VOC officials. In these cases a discount was clearly allowed by the VOC. For this reason such prices have not been included in the present database. Since the interest here is in the living standards – and thus the consumption patterns – of the local Asian population, the goods brought in from Europe were disregarded. Only Asian goods – especially those regarding consumption goods – were extracted from this source.<sup>11</sup> The basket of consumables

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<sup>8</sup> The silver content of the Dutch guilder was taken from Jan Luiten van Zanden, ‘Prices and wages and the cost of living in the western part of the Netherlands, 1450-1800’ (available at <http://www.iisg.nl/hpw/brenv.php>). For the period 1681-1800 the guilder contained 9.61 grams of silver; for the years prior to that this was 9.8 grams.

<sup>9</sup> The *Atlas of mutual heritage* (available at: <http://www.nationaalarchief.nl/amh/>) – published by the Dutch National Archive – was very helpful in locating and providing information about many of these places.

<sup>10</sup> Strictly speaking this is not true since this was done in Microsoft Excel, a spreadsheet program. By using a single row for each record and by accurately specifying the way in which the information should be entered in each column, a database format was simulated. This means that the file can easily be imported into such programs as Microsoft Access. The advantage of the latter is that it is much easier to perform queries on the data.

<sup>11</sup> Obviously the sources often referred to products in old Dutch or through a variation of its local name. In many cases the VOC glossary published by the Instituut voor Nederlandse Geschiedenis offered help: *VOC-glossarium. Verklaringen van termen, verzameld uit de Rijks Geschiedkundige Publicatiën, die betrekking hebben op de Verenigde Oost-Indische Compagnie* (available at: <http://www.inghist.nl/Onderzoek/Projecten/VocGlossarium>).

compiled by Robert Allen for early modern Europe has been taken as the guideline here. Obviously this selection process has some arbitrary aspects. It was decided, for example, to only collect the price of one specific sort of textile (i.e. *gingam*). The collection process has resulted in a database that contains 8,520 unique records.<sup>12</sup>

Since the names of the various products have been entered in Dutch, Table 1 offers the English equivalent for the main products. Additions to the name of the product often refer to the specific sort, quality or origin.<sup>13</sup> Table 2 provides information about the units of measurement.

Table 1: *The main products.*

Dutch	English
Arak	Arrack
Bonen	Beans
Boter	Butter
Brandhout	Firewood
Buskruit	Gunpowder
Erwten	Peas
Gingam	Sort of textile
Graan	Grain
IJzer	Iron
Kaars	Candle
Kaneel	Cinnamon
Koper	Copper
Lood	Lead
Nely	Paddy
Olie	Oil
Rijst	Rice

<sup>12</sup> Only in a few instances page margins could not be read properly. In these instances prices were not collected from the respective page.

<sup>13</sup> Where these are not directly evident (e.g. “olie, lamp” for lamp oil) Van Dale’s online dictionary (<http://www.vandale.nl/vandale/opzoeken/woordenboek/?zoekwoord=>) will usually provide a sufficient explanation (in Dutch).

Dutch	English
Rogge	Rye
Staal	Steel
Suiker	Sugar
Tarwe	Wheat
Tin	Tin
Was	Wax
Zeep	Soap
Zout	Salt

Table 2: *Units of measurement.*

Unit	Quantity	Comment
Aam	153.6 liters	
Dubbele kan	3.02 liters	
Halve aam	76.8 liters	
Kan	1.51 liters	
Parra	40 <i>ponden</i> , thus 19.76 kilograms	
Pond / ponden	0.494 kilograms	
Pot	Unknown	
Staaf / staven	Unknown	
Steen	8 pounds	Sometimes 6 pounds, however.
Stuk	1 piece	
Vadem	6 feet * 6 feet, or 2.88 m <sup>2</sup>	Used for firewood (fathom). The volume would depend on the length of the wood.

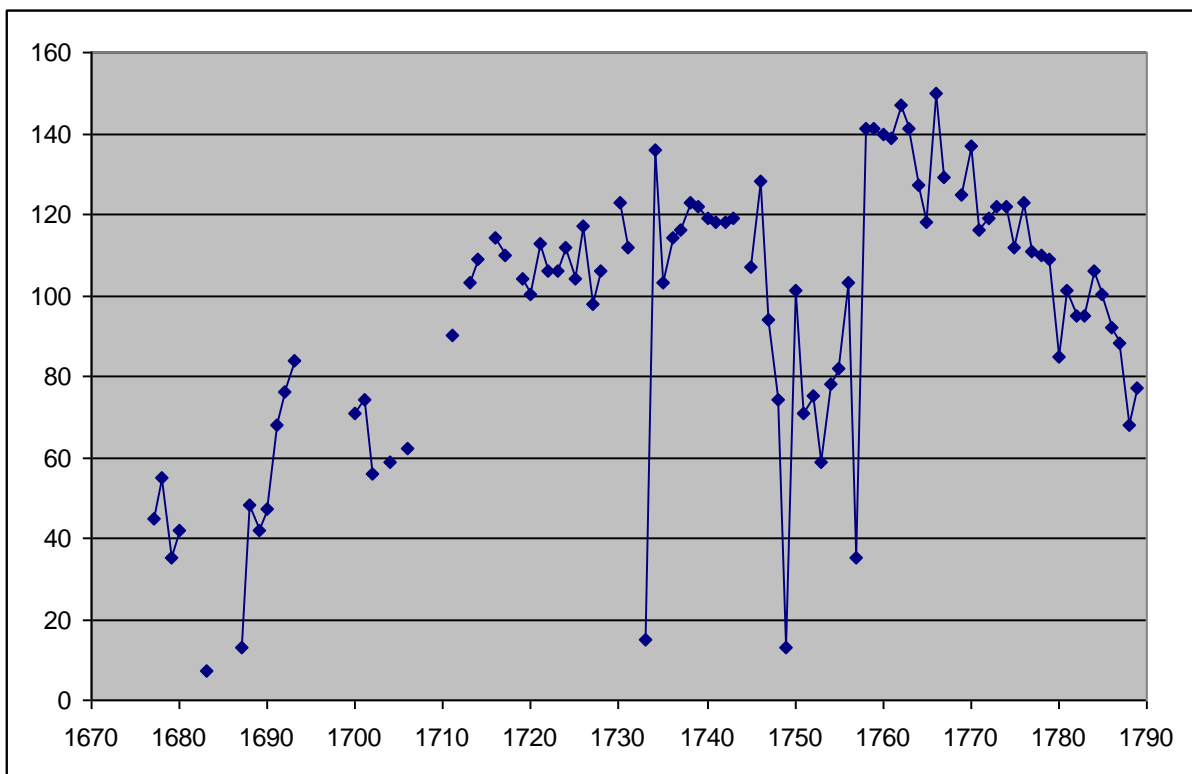
*Source:* Instituut voor Nederlandse Geschiedenis, *VOC-glossarium*; J.M. Verhoeff, *De oude Nederlandse maten en gewichten* (Amsterdam, 1982), 125, 127, 128.

*Note:* Quantities given in the source in lasts or pounds have been converted to parra's. From many entries it was clear that a last consisted of 75 parra's and the parra of 40 pounds.

### Some results

Before discussing the data in more detail, this section will first provide some summary statistics. As Figure 1 shows, the number of annual entries mostly fluctuated between 40 and 80 prior to 1710 and between 100 and 120 after that. The large swings are caused by the fact that not all documents have made their way to the Republic (or have survived). As Table 3 illustrates, the four major towns of Colombo, Galle, Jaffna and Trincomalee were responsible for roughly half of the entries.<sup>14</sup> A wide variety of goods was traded. Of those entered in the database, sugar and copper were most important (see Table 4).

Figure 1: *The chronological distribution of the number of entries.*



<sup>14</sup> This is especially the case when one realizes that some of the smaller offices reported through the lists of these major towns.

Table 3: *The geographical distribution of entries.*

Place	Entries	Share
Colombo	1,266	14.9%
Galle	1,068	12.5%
Jaffna	933	11.0%
Trincomalee	861	10.1%
Kalpitya	734	8.6%
Tuticorin	650	7.6%
Hele gouvernement	574	6.7%
Batticaloa	479	5.6%
Matara	470	5.5%
Mannar	451	5.3%
Manapaar	205	2.4%
Kilakkarai	166	1.9%
Alvatier / Allwatiernegary	109	1.3%
Remainder	554	6.5%
<b>Total</b>	<b>8,520</b>	<b>100.0%</b>

Table 4: *The distribution of products.*

Product	Entries	Share
Sugar	1,234	14.5%
Copper	1,171	13.7%
Wheat	774	9.1%
Tin	765	9.0%
Gingam	556	6.5%
Rice	533	6.3%
Oil	479	5.6%
Salt	475	5.6%
Paddy	461	5.4%
Cinnamon	418	4.9%



Product	Entries	Share
Arrack	417	4.9%
Soap	331	3.9%
Butter	269	3.2%
Wax	102	1.2%
Remainder	535	6.3%
<b>Total</b>	8,520	100.0%

One crucial question obviously is how representative these prices were. Some placards issued by the Company governors in Ceylon suggest that – at points – they tried to regulate price formation. This, however, seems to have been the exception rather than the rule.<sup>15</sup> From a number of data characteristics it can be inferred that the prices most likely refer to market transactions; the discounts allowed to high-ranking VOC officials also point in this direction. In some cases, for example, the VOC recorded that they had made a loss on the trade in a particular good. Had the Company been in a position to set prices, a loss could obviously have been avoided easily. Another indicator is the fact that, rather than being constant over longer periods of time, prices fluctuated from year to year. In addition it should be mentioned that price spreads existed on the island. Figure 2 nicely illustrates the latter facts.

It should, however, be noted that the database also provides evidence that with respect to some products prices did not behave as freely. Japanese copper (Figure 3) and cinnamon (Figure 4) are good examples of this. The fact that the VOC was the only Western company allowed access to Japan gave it a stronger position to regulate the price of imported Japanese copper. The fact that Ceylon was the monopoly producer of high-quality cinnamon explains the position that the VOC was able to maintain with respect to the pricing of this particular product.

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<sup>15</sup> Lodewijk Hovy, *Ceylonees plakkaatboek. Plakkaten en andere wetten uitgevaardigd door het Nederlands bestuur op Ceylon, 1638-1796* (Hilversum, 1991).

Figure 2: The price of paddy, 1680-1800 (in grams of silver per parra).

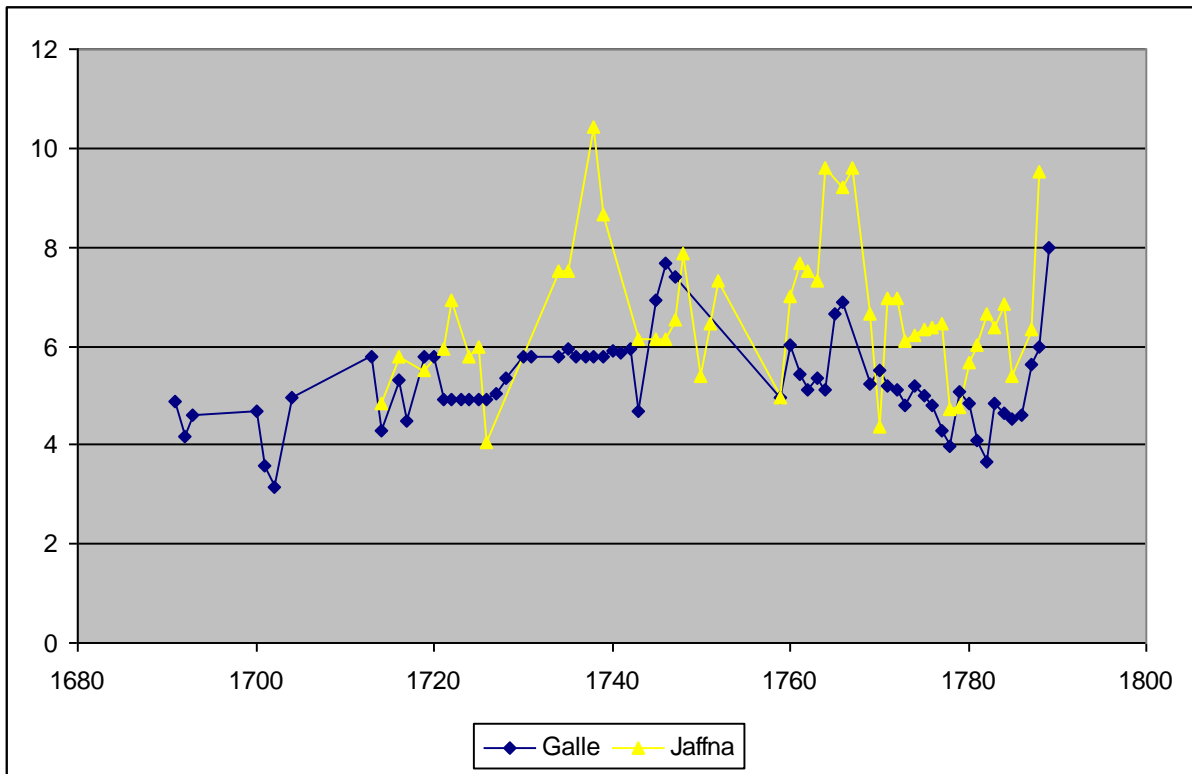


Figure 3: The price of Japanese copper, 1680-1800 (in grams of silver per pound).

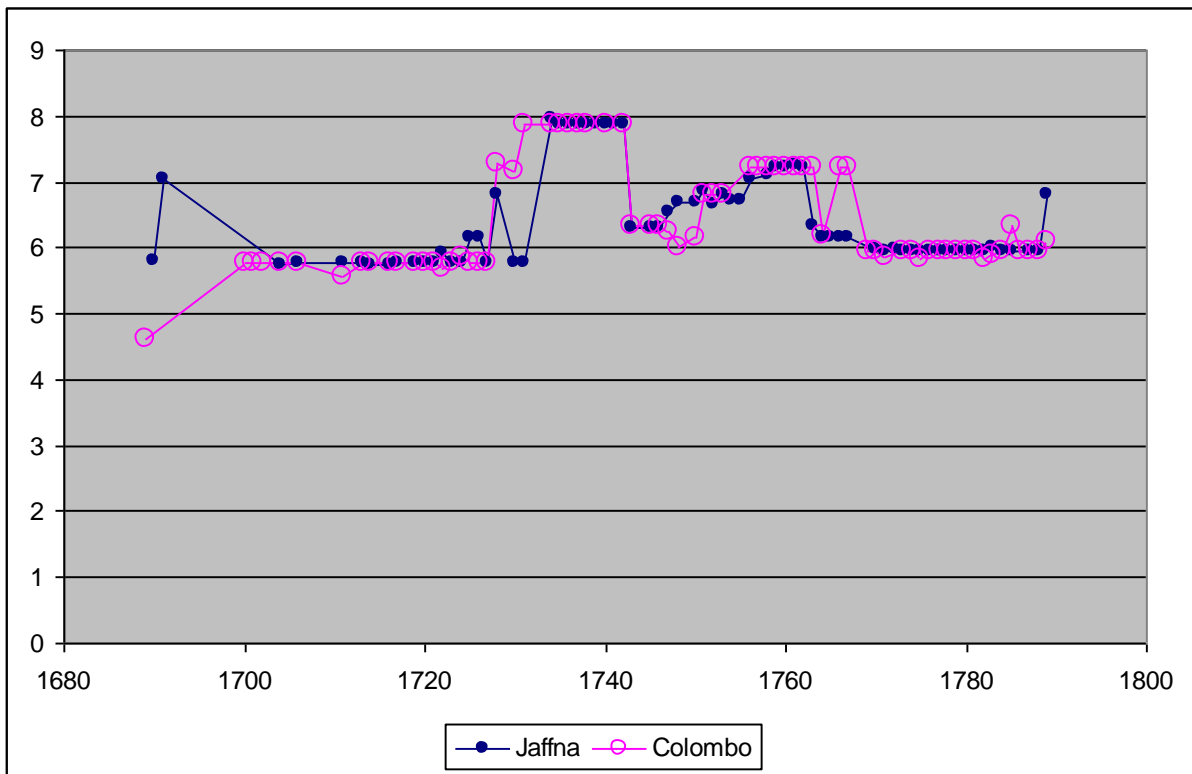
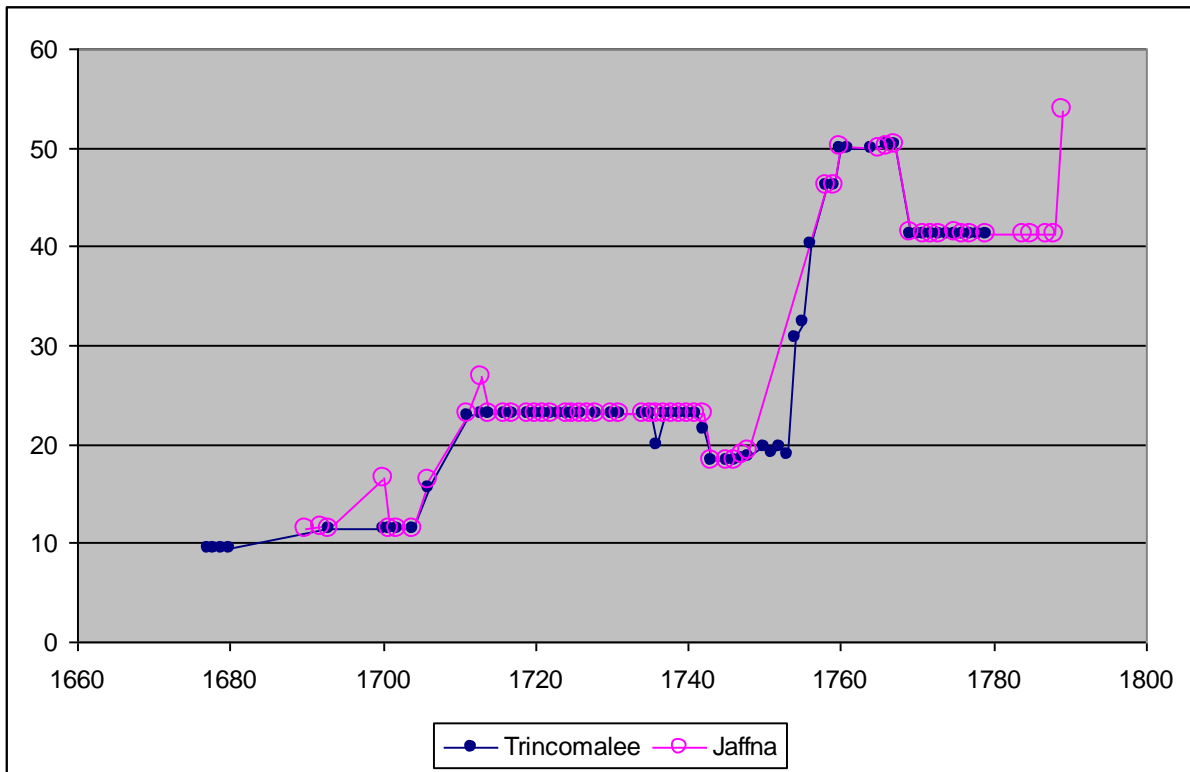


Figure 4: The price of cinnamon, 1680-1800 (in grams of silver per pound).



### Codebook of the database

YEAR	Contains the same information as “Year”, but only includes the first year of the accounting year.
Year	Refers to the accounting year.
Place	Standardized to the names by which the places go nowadays.
Quantity	The quantity of the good that was sold by one of the offices. Quantities are given in fractions.
Unit	Refers to the unit of measurement in which the goods were sold.
Product	The names of the products have been standardized.
Guilder	Refers to the total price for which the goods were sold and gives the number of guilders.
Stuiver	Refers to the total price for which the goods were sold and gives the number of <i>stuivers</i> . A guilder contained 20 <i>stuivers</i> .
Penning	Refers to the total price for which the goods were sold and gives the number of <i>penningen</i> . A <i>stuiver</i> contained 16 <i>penningen</i> , from which it follows that a guilder contained 320 <i>penningen</i> .

Per_Unit	This value has been calculated by adding up the fields “Guilder”, “Stuiver” and “Penning” and subsequently dividing the outcome by “Quantity”. It thus gives the price of the product per one unit of measurement.
Silver	Give the “Per_Unit” price expressed in grams of silver.
Inv_Nr	The inventory number in the VOC archive from which the data in this record were collected.
Film	Refers to the microfilm on which the inventory number was available. Close to 5,700 records refer to a number: these can be found in the National Archive in The Hague. An additional 2,800 prices were collected from the original lists available at the same archive. In such instances the field has been marked by ‘-’.
Page	If the source allowed for it, this field refers to the specific page (or a combination of pages) from which the data were collected. Because the use of microfilm often made it difficult to determine whether a page was <i>recto</i> or <i>verso</i> , this field should be used as approximation of the data points’ location.

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