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**EXPLAINING SHIP TRAFFIC FLUCTUATIONS IN THE EARLY  
CAPE SETTLEMENT: 1652–1793**

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# Explaining ship traffic fluctuations in the early Cape settlement: 1652–1793

WILLEM H. BOSHOFF AND JOHAN FOURIE<sup>1</sup>

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## ABSTRACT

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The only reliable estimate of the number of ships that arrived in the Cape Colony was published by Beyers in 1929. Unfortunately, this data series has a number of restrictions. It only accounts for the number of ships arriving at the Cape during the period 1700–1793. It also does not distinguish between the types of ships used or compensate for the length of their stay.

Using a new electronic data source detailing every ship that anchored in Table Bay during the existence of the Dutch East India Company, this paper provides new insights into the pattern of ship traffic fluctuations in the early Cape Colony. Historical evidence from this period supports the empirical results. While many gaps still remain, the new empirical evidence can be used in future research on this neglected period of South Africa's economic history.

Keywords: Cape colony, Data, Economic history, Dutch East India company, Cliometrics  
JEL codes: N17, E32, N77

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# Explaining ship traffic fluctuations in the early Cape settlement: 1652–1793

## 1. INTRODUCTION

The first Europeans to settle in South Africa arrived in 1652 to establish a halfway station for ships sailing between Europe and the East Indies under the command of the Dutch East India Company (VOC).<sup>2</sup> The settlement was intended as a place of recovery for VOC ships and sailors and, perhaps more importantly, as a source of fresh produce for passing ships. Consequently, it is not surprising that historical descriptions of the early Cape Colony contain many references to ships and their role in economic life.

Yet, the pattern of ship traffic during the period of VOC control is relatively unexplained in the literature. Few studies note the importance of ships for the Cape economy, notably among historians who argue that the Cape was heavily dependent on the demand from these ships.<sup>3</sup> More recently, Van Duin and Ross have argued that although the Cape economy was far more market-oriented than previously thought, ships played only a secondary role to local demand.<sup>4</sup>

Nevertheless, in all these studies, fluctuations in ship traffic were assumed to be caused by exogenous factors or, worse, not explained at all. Using new data obtained from the three-volume publication *Dutch-Asiatic Shipping in the Seventeenth and Eighteenth Centuries* by Bruijn, Gaastra and Schöffer (1979–1987), this paper attempts to shed more light on the historical growth and decline of ship traffic in Table Bay. Unfortunately, although this voluminous dataset captures the shipping information for each ship that left and returned to the Netherlands, it excludes all foreign ships arriving in Table Bay.

The expanded data offer interesting insights into the fluctuations in the number of Dutch ships over the period. Using new econometric techniques on business cycle analysis, medium-term fluctuations are identified to show the empirical relevance of the exercise. Historical evidence supports the empirical results. While some gaps remain in the analysis, particularly with regard to foreign ships, this new empirical evidence can be used extensively in future cliometric research on this neglected period of South African history.

The next section will discuss Beyers's earlier evidence of ship traffic. Section 3 contains a discussion and brief analytical overview of the new evidence provided by Bruijn, Gaastra and Schöffer. Section 4 will show an application of the data by identifying medium-term fluctuations. Section 5 will provide historical validity for the empirical evidence.

## 2. THE BEYERS DATA

Beyers was the first to publish data on the number of ships that arrived in Table Bay.<sup>5</sup> Beyers's list contains a breakdown of all ships arriving in Table Bay from 1700 to 1793 disaggregated by nationality. Figure 1 depicts the number of ships over time, disaggregated by the five most prominent nationalities.

Dutch ships comprised more than 60% of all arrivals in Table Bay up to the end of the 1760s. For some years, more than 90% of all ships that arrived at the Cape were Dutch. The only other noteworthy nationality that arrived in Table Bay during this period was English vessels. The number of Dutch vessels shows very little change over the 60-year period. In fact, the number of ships that arrived per year in the 1760s was roughly the same as in the first decade of that century (approximately 50 each year). The only decade that does show some variation is the 1720s, where the average is above 70 ships per year.

After 1770, the arrival of Dutch ships shows a rapid decline, followed by a period of even more rapid recovery.

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<sup>2</sup> *Vereenigde Oostindische Compagnie*.

<sup>3</sup> L. Guelke, 'The white settlers, 1652–1780', in Richard Elphick and Hermann Giliomee (eds.), *The Shaping of South African Society, 1652–1820*, Cape Town, Longman Penguin Southern Africa, 1980, p 69.

<sup>4</sup> P. van Duin and R. Ross, *The economy of the Cape Colony in the 18<sup>th</sup> century*, Leiden, The Centre for the Study of European Expansion, 1987.

<sup>5</sup> C. Beyers, *Die Kaapse Patriotte, 1779–1791*, Juta, Cape Town, 1929. Table Bay is a natural inlet in Cape Town, so named because it is dominated by the flat-topped Table Mountain.

This period of recovery also coincided with an increase in ship arrivals from other nationalities. During the 1780s, but especially between 1783 and 1785, an increasing number of ships arrived from Portugal (14 for the years specified), Austria (41), Prussia (17), Sweden (25) and France (148). While most ship traffic stagnated or declined during the 1790s, American ships arrived in increasing numbers, so much so that American vessels counted as the second most important nationality in terms of ship arrivals by the end of the century.

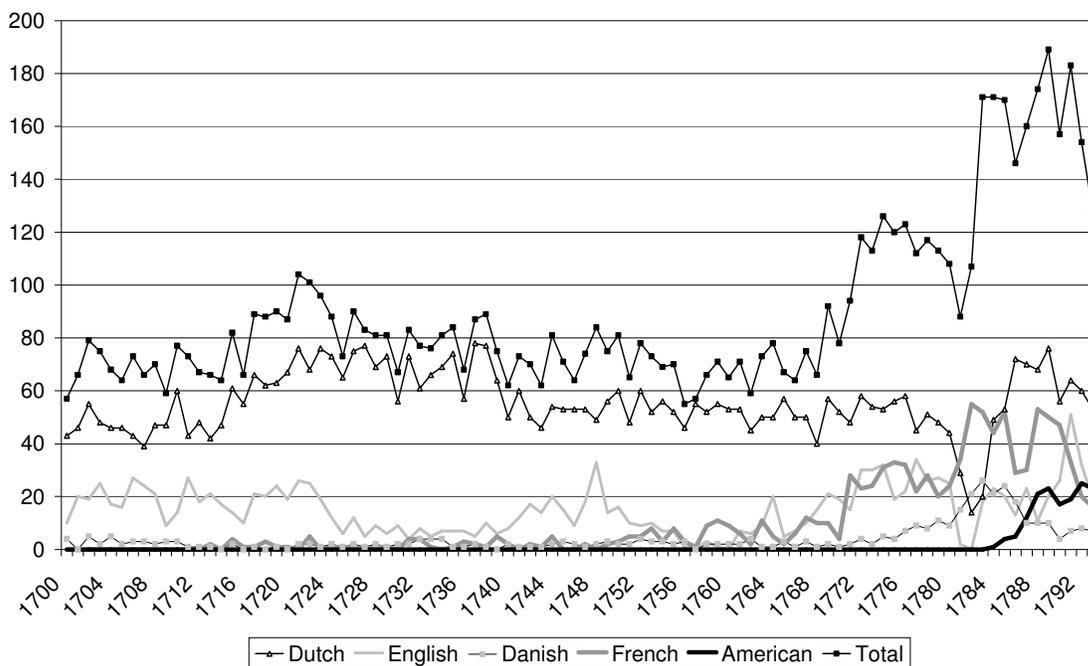


Figure 1: The number of ships arriving in Table Bay by nationality, 1700–1793

Source: Beyers (1929)

Yet, the data present a number of limitations. First, there is no indication about the type of ships that arrived, in other words indication of whether they were war ships, personnel carriers or ships trading in goods. Second, there is no indication of the length of their stay, in other words whether the ships arrived, anchored for two days while replenishing supplies and immediately continued their voyage, or whether they docked for days, weeks or months before continuing to their final destination. Third, while the time frame is generous for data of this period, it would be advisable to also investigate trends before the eighteenth century.

### 3. BRUIJN, GAASTRA AND SCHÖFFER'S DATA

In a three-volume publication, Bruijn, Gaastra and Schöffer have compiled a dataset that contains outward-bound and homeward-bound voyages of Dutch ships between the Dutch East Indies and the Republic of the United Netherlands from 1602 until 1795. Apart from dates of departure and arrival, the dataset also includes the dates on which the Cape of Good Hope was passed. The information in the electronic dataset is not identical to the data presented in the source publication, *Dutch-Asiatic Shipping*.<sup>6</sup>

Figure 2 shows two measures: the number of Dutch ships that arrived per year in Table Bay and the average number of days these ships spent in Table Bay per visit. The growth in the number of Dutch ships to arrive in Table Bay from 1652 to the end of the 1730s is evident, followed by a decline and subsequent stagnation. There is a sudden decrease (nearly 75%) in the number of ships to arrive in 1782. Towards the end of the period, the number of Dutch ships to arrive in the Colony dwindled to less than 20 per year.

<sup>6</sup> J.R. Bruijn, F.S. Gaastra and I. Schöffer, *Dutch-Asiatic Shipping in the 17th and 18th Centuries* / R.G.P. no. 165, Den Haag, 1987. The electronic version can be downloaded from <http://www.dans.knaw.nl/databases/nhda/study/15001/> [Accessed 20 November 2007]. The dataset requires some cleaning before any analysis could be undertaken. The final version is available from the authors on request.

The average days a ship spent in Table Bay per visit shows no significant trend over the entire period. The first four decades show rather erratic year-to-year changes, mostly due to the lower number of ships and the need to stay longer in the harbour to either replenish vital food and water supplies or to allow ill crew members to recover. Again, 1782 is a significant outlier with a five-fold increase in the average number of days that ships stayed in Table Bay. This is explained later.

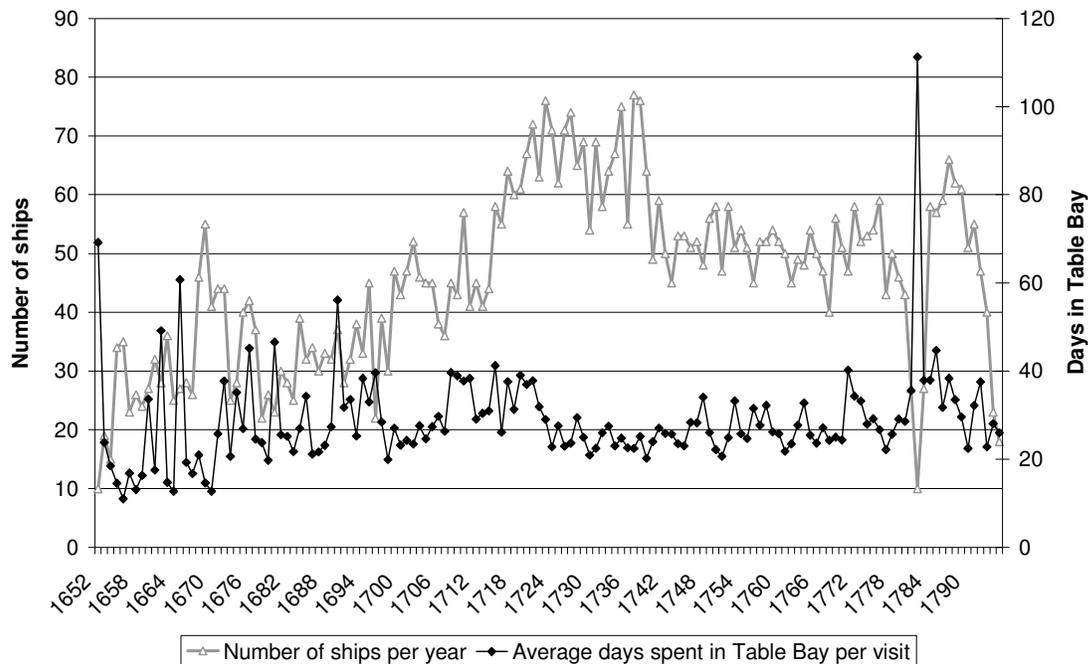


Figure 2: Number of ships and length of stay, 1652–1795  
 Source: Bruijn, Gaastra and Schöffer (1987), own calculations

A new measure of ship traffic is obtained by combining the number of ship arrivals and the length of their stay. The Bruijn, Gaastra and Schöffer dataset offers the opportunity to determine exactly how many ships docked in Table Bay for each of the 52 554 days in the 143 years covered by the dataset. This measure is called ship days. One ship day is equivalent to one ship docking in Table Bay for one day. For example, if three ships arrived in Cape Town during a specific month, the first docking for 4 days, the second for 19 days and the third for 11 days, the month’s total ship days would equal 34.

Why is this measure important? The ships that arrived in the Cape Colony had three important demand-generating impacts. First, the ships required replenishing of food, water and fuel supplies for the journey ahead. This was the original purpose of building a halfway station at the Cape. Second, and especially after production in the local economy had increased to above-subsistence levels, some products were bought for exports, especially wine and brandy destined for the East Indies. Also, especially for the first few decades of the Colony’s existence, most manufactured items had to be imported from Europe. Third, Cape Town offered crew arriving on ships after several months at sea the opportunity to heal, relax and enjoy themselves. Cape Town was known as the “Tavern of the Seas”. According to Van Duin and Ross, an average of between 9 700 and 11 600 men left either Europe or Asia every year between 1720 and 1780 on the ships of the VOC. Almost all these men, except those who had died on the way, would have come into Cape Town where they would have spent several weeks recuperating from the long voyage.<sup>7</sup> Giliomee notes that most of the townspeople were employed by the VOC or were involved in private (and, usually, illegal) trade, while Schutte notes that according to seamen, nearly every house in Cape Town was a public house or inn.<sup>8</sup> The demand created by this market was thus considerable. The

<sup>7</sup> P. van Duin and R. Ross, *The economy of the Cape Colony in the 18<sup>th</sup> century*, Leiden, Centre for the Study of European Expansion, 1987, p 13.  
<sup>8</sup> H. Giliomee, *The Afrikaners*, Cape Town, Tafelberg, 2003, p 28 and G. Schutte, ‘Company and Colonists at the Cape’, in Richard Elphick & Hermann Giliomee (eds.), *The shaping of South African society, 1652–1820*, Cape Town, Longman Penguin Southern Africa, 1980, p 189.

longer the ships were docked in Table Bay, the more demand, especially in the secondary and tertiary sector, would have been stimulated.

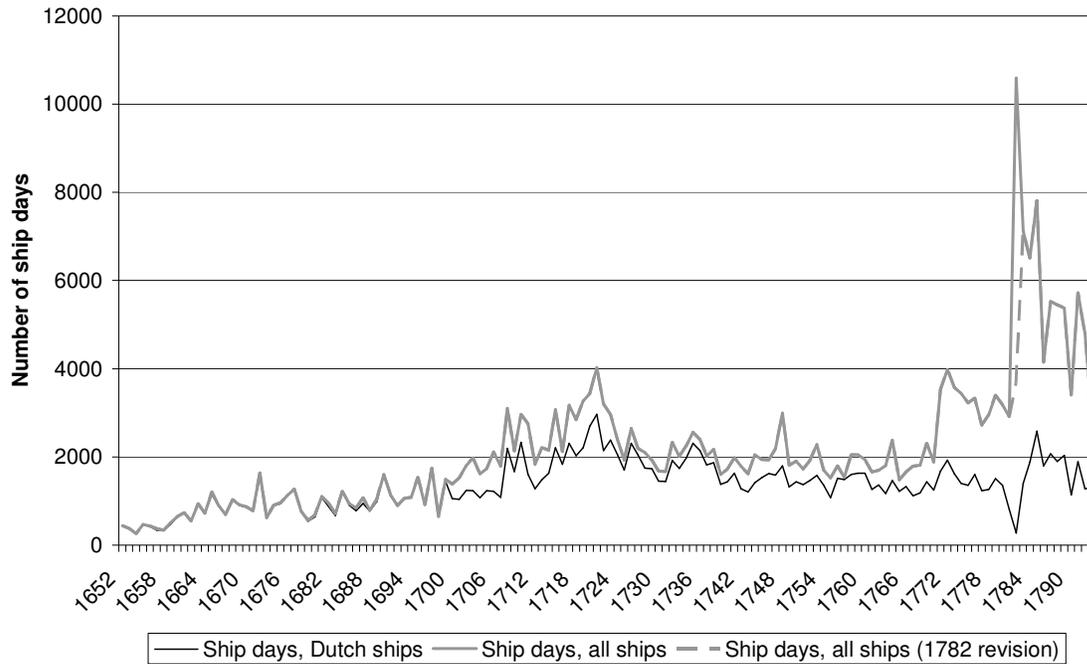


Figure 3: Ship days for Dutch and non-Dutch ships, 1652–1793  
 Source: Bruijn, Gaastra and Schöffner (1987), own calculations

Figure 3 shows the number of ship days for Dutch ships for the period 1652 to 1793. Because Bruijn, Gaastra and Schöffner’s dataset only includes Dutch ships, the ship days for ships from other nationalities cannot be calculated. Also, information for non-Dutch ship arrivals is not available before 1700.

To correct these limitations, the authors assume that all non-Dutch ships remained in Table Bay for the same length of time as the Dutch ships. The year average of Dutch ships is therefore multiplied by the number of arrivals of non-Dutch ships to calculate non-Dutch ship days. While this method is not perfect, there is no evidence to suggest that the length of time foreign ships stayed in Table Bay was significantly different from the length of time for the Dutch ships. Using this methodology, 1782 is a massive outlier because of the few Dutch ships that arrived and the length of their stay (on average more than 111 days per visit, compared to the average of 28 days per visit over the whole period). A revision is therefore required for 1782. This is done by taking the average of 1781 and 1783.

Information earlier than 1700 is obtained from two other sources: *The Resolutions of the Political Council (1652–1707)* and the journal of Jan van Riebeeck (1652–1663). While these are the only sources that would document ship arrivals, it is evident that there is a break in the data between 1699 and 1700. The sudden increase in non-Dutch ships in the year 1700 is difficult to explain.

Demand is not only determined by the number of ships and the length of their stay but also by the type of ship. The dataset by Bruijn, Gaastra and Schöffner documents the type of ship of all 3 562 ships that arrived in the Cape. Table 1 shows a breakdown.

Ship type	Description	Number	Proportion of total
<i>Pinas</i>	War and trade ship	36	1.01%
<i>Boot</i>	Other	2	0.06%
<i>Fluit</i>	Trade ship	599	16.82%
<i>Galjoet</i>	Trade ship	25	0.70%
<i>Hoeker</i>	Fishing ship	75	2.11%
<i>Jacht</i>	People carrier	227	6.37%
<i>Kat</i>	Trade ship	2	0.06%
<i>Lootsboot</i>	Trailer	1	0.03%
<i>Pakketboot</i>	War and trade ship	26	0.73%
<i>Spiegelschip</i>	War and trade ship	2 530	71.03%
<i>Fregat</i>	War and trade ship	39	1.09%
<b>Total</b>		<b>3 562</b>	

Table 1: Types of ships arriving in Table Bay, 1652–1795

Source: Bruijn, Gaastra and Schöffner (1987), own calculations

More than 70% of all ships during this time were of the *spiegelschip* type, a ship used for carrying personnel and goods. Although the *spiegelschip* is also considered a warship as it was furnished with cannons, it was mostly used for defensive purposes. The *fluit* was the second most dominant trading ship, representing approximately 17% of the visits. Unlike the previous two, the third most dominant type of ship was not used for the transportation of goods. The *jacht* was considered a means of transport for *hooggeplaaaste personen* (important persons) and also for recreation. Nevertheless, only 6.4% of ships over the sample period were of this type. A breakdown of the figures for two subperiods (1652–1750; 1751–1795) does not reveal substantial changes. The assumption that all ships that arrived in Table Bay had similar freight capacity (and therefore demand) cannot be rejected on the basis of available data.

#### 4. AN APPLICATION: IDENTIFYING FLUCTUATIONS

Many economic time series oscillate between periods of expansion and stagnation. The focus in modern macroeconomics is on those oscillations with duration between 1.5 and 8 years, called short-term fluctuations. However, the concept of medium-term fluctuations – with duration between 8 and as much as 50 years – is receiving increased attention.<sup>9</sup> This interest in longer cycles is based on the notion that short-term fluctuations may not be transitory, due to lags in productivity and technology dynamics.<sup>10</sup>

The distinction between short- and medium-term fluctuations requires specific definition, in order to avoid *ad hoc* concepts. However, such definitions, in themselves, involve an amount of judgment. It is the same type of challenge that Burns and Mitchell encountered during their business cycle research: “Seldom can the interrelated species of social ... phenomena be marked off from one another with such precision as to leave no doubtful cases”.<sup>11</sup> Nonetheless, in their study of US business cycles (which can be considered short-term fluctuations) from 1885 to 1931, Burns and Mitchell found cycles to last between 1.5 and 8 years.<sup>12</sup> However, Burns and Mitchell explicitly warned that the range appears to shift over time<sup>13</sup> – although many contemporary studies of the business cycle continue to employ the 1.5- to 8-year range. Consequently, in the context of the present study, it might be useful to consider some comparable figures on the South African experience.

The research by Schumann on the properties of South African business cycles from 1806 to 1936 offers some guidance in this regard.<sup>14</sup> Specifically, Schumann’s research (conducted in the Burns-Mitchell fashion) indicates

<sup>9</sup> D. Comin and M. Gertler, “Medium-Term Business Cycles”, *The American Economic Review*, 96(3), 2006.

<sup>10</sup> M. Baxter and R. King, “Measuring Business Cycles: Approximate band-pass filters for economic time series”, *The Review of Economics and Statistics*, 81(4), 1999) and Comin and Gertler, “Medium-Term Business Cycles”.

<sup>11</sup> A.M. Burns and W.C. Mitchell, *Measuring business cycles*, New York, National Bureau of Economic Research, 1946, p 469.

<sup>12</sup> Burns and Mitchell, *Measuring business cycles*.

<sup>13</sup> M. Everts, *Duration of business cycles*, University of Bern, Mimeo, 2006.

<sup>14</sup> C.G.W. Schumann, *Structural changes and business cycles in South Africa, 1806–1936*, London, P.S. King & Son, 1938.

that business cycle durations varied between two and twelve years in the period up to the 1870s, before diamonds were discovered. Arguably, the economic fluctuations of this period are closest in nature to those of the eighteenth century Cape Colony, as the economy was still largely agrarian based.<sup>15</sup> On the other hand, there are significant differences between fluctuations in the eighteenth and nineteenth century, the least of which is not the difference in government. This paper defines short-term (or high-frequency) fluctuations as those cyclical components with a period of between two and twelve years.<sup>16</sup> Sensitivity tests based on a period of two to eight years did not yield significantly different results.

Medium-term fluctuations can be defined in similar fashion. Unfortunately, less guidance is available concerning the upper bound for the medium-frequency range. This is not necessarily problematic, as Comin and Gertler argue: “[e]ven though our measure of the cycle includes frequencies up to 50 years ... its representation in the time domain leads to cycles on the order of a decade”.<sup>17</sup> This result, they argue, is an outcome of the spectral density. In this context, it is also interesting to note that Schumann identifies three medium-term cycles in the predominantly agricultural period from 1806 to 1869, with respective duration 30 years, 13 years and 20 years.<sup>18</sup> Again, although these durations are not necessarily comparable to the eighteenth century, they do indicate that South Africa as an agrarian economy did experience medium-term fluctuations. This paper defines medium-term (or medium-frequency) fluctuations as those movements lasting between 12 and 40 years<sup>19</sup>. As the upper bound is a subject of debate, sensitivity tests were performed for narrower frequency ranges of 12 to 20 years. Results were not significantly different.

Finally, it is important to note that we do not combine high- and medium-frequency ranges as Comin and Gertler did.<sup>20</sup> Although such a combination overcomes the subjective categorisation, it has the major drawback that very little smoothing occurs where low frequencies do not explain a significant portion of the sample variance.

The focus on specific frequency ranges requires the decomposition of time series into different frequency bands. Theoretically, such decomposition is possible, by virtue of the spectral decomposition theorem.<sup>21</sup> This theorem enables the extraction of a specific frequency range via a time series filter called the band-pass filter. This filter is so named as it “passes” only the specified frequency range, removing other frequency components. Unfortunately, an infinitely long time series is required for this filter and, in practice, approximations are used. Two approximations have become popular: the Baxter-King and the Christiano-Fitzgerald approximation.<sup>22</sup>

Zarnowitz and Ozyildirim note that, if the focus is on high-frequency components only, the Baxter-King approximation does not outperform the popular Hodrick-Prescott filter.<sup>23</sup> However, they argue that the Baxter-King filter is useful where the focus is on broader frequency ranges. In addition, Everts note that the Christiano-Fitzgerald approximation is more suitable to identify longer-term fluctuations than the Baxter-King approximation.<sup>24</sup> Consequently, this paper employs the Christiano-Fitzgerald approximation, although sensitivity tests are performed using the Baxter-King approximation to ensure robust results.

The methodology described above can now be applied to identify short- and medium-term fluctuations in ship numbers and ship days. Following the approach in Comin and Gertler, Figure 4 presents the short- and medium-term fluctuations for the number of ships.<sup>25</sup>

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<sup>15</sup> Schumann, *Structural changes and business cycles in South Africa, 1806–1936*, p 112–113.

<sup>16</sup> Comin and Gertler, “Medium-term business cycles”.

<sup>17</sup> Comin and Gertler, “Medium-term business cycles”, p. 526.

<sup>18</sup> Schumann, *Structural changes and business cycles in South Africa, 1806–1936*.

<sup>19</sup> M. Baxter and R. King, “Measuring business cycles: approximate band-pass filters for economic time series”.

<sup>20</sup> Comin and Gertler, “Medium-term business cycles”.

<sup>21</sup> L. Christiano and T. Fitzgerald, “The band pass filter”, *International Economic Review*, 44(2), 2003, p 436.

<sup>22</sup> M. Baxter and R. King, “Measuring business cycles: approximate band-pass filters for economic time series” and Christiano and Fitzgerald, “The band pass filter”.

<sup>23</sup> V. Zarnowitz and A. Ozyildirim, “Time series decomposition and measurement of business cycles, trends and growth cycles”, *Journal of Monetary Economics*, 53(7), 2006.

<sup>24</sup> Everts, *Duration of business cycles*, p 24.

<sup>25</sup> Comin and Gertler, “Medium-term business cycles”.

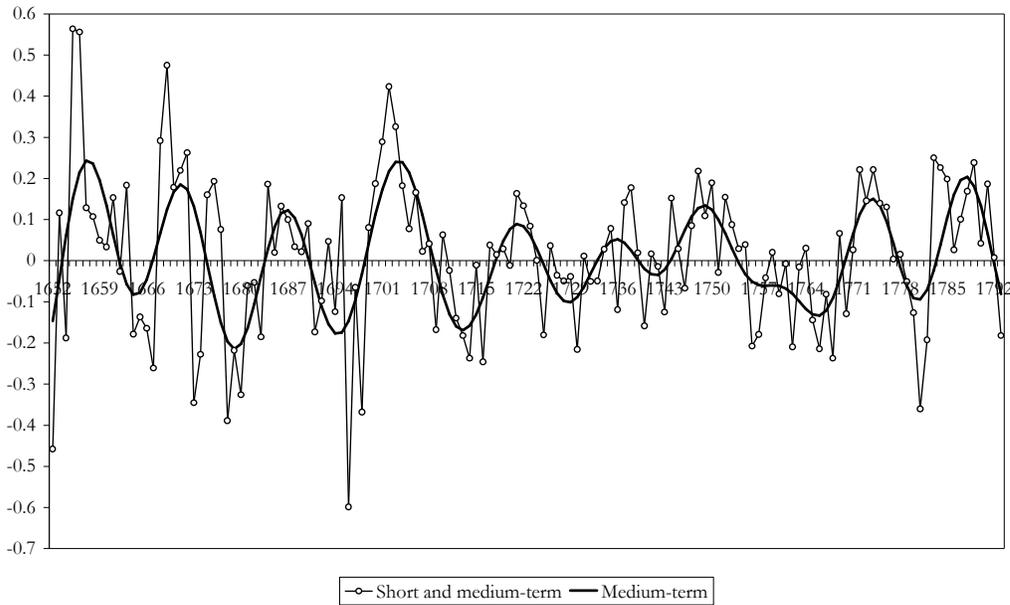


Figure 4: Short- and medium-term fluctuations in the number of ships, 1652–1793

The line with circles indicates the short- and medium-term fluctuations combined. Put differently, that line can be interpreted as the de-trended series, representing the deviations of the actual series from the long-run trend (defined as those fluctuations with a period in excess of 40 years). The solid line represents the medium-term fluctuations (defined previously as that component of the time series with a period between 12 and 40 years). The short-term fluctuations can be found from the difference between the two lines. Clearly, a substantial amount of short-run noise is present.

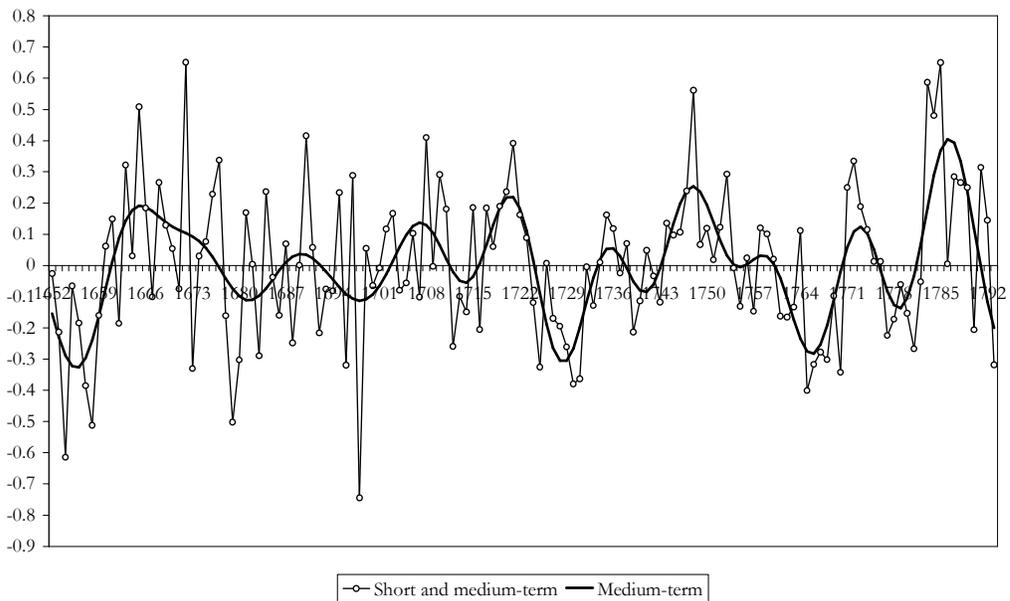


Figure 5: Short- and medium-term fluctuations in ship days, 1652–1793

Figure 5 presents a similar plot for ship days. Although not presented here, alternative frequency bands for the short- and medium-term fluctuations (2 to 8 years for high frequency and 8 to 40 years for medium frequency) did not yield diverging results. Also, lowering the upper bound for the medium frequency from 40 to 20 years did not produce significantly different outcomes.

It is now possible to assess whether the analysis of fluctuations in ship days, as opposed to ships, results in markedly different fluctuations. Figure 6 shows the results for the period 1701–1793, which is the sample period for the remainder of the study to ensure comparability.

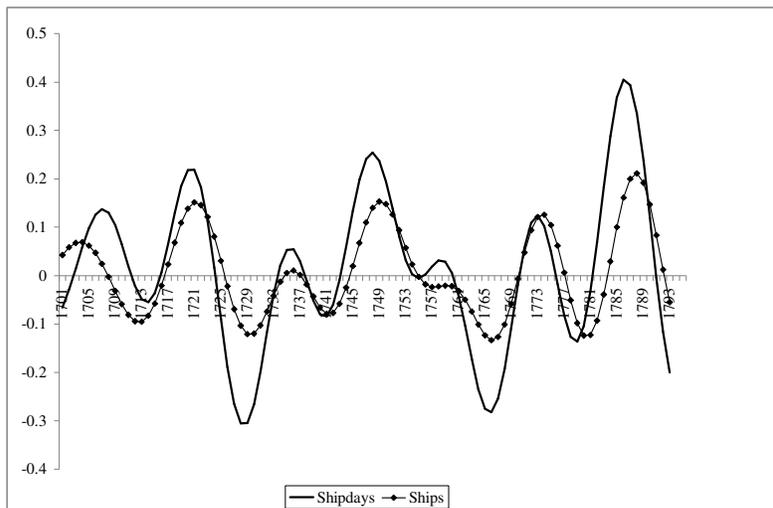


Figure 6: Medium-term fluctuations in ship traffic, 1701–1793

As shown in Figure 6, medium-term fluctuations do not differ substantially for the number of ships and the shipping days. The only difference worth noting is the relatively small upswing recorded during 1757–1761 for shipping days but not for the number of ships. In addition, fluctuations in shipping days appear to have larger amplitude in proportional terms compared to that of ship numbers. This might indicate that increases in ship traffic to Cape Town were accompanied by *longer* visits.

## 5. HISTORICAL VALIDITY

The explanations for ship traffic fluctuations in the early Cape Colony have to be regarded in historical context in order to determine the impact of significant historical events and trends over time. During the seventeenth and eighteenth centuries the Dutch gradually succeeded in expanding their monopoly in world sea power and trade. As a developed European maritime power, the Dutch had mastery of the sea. At the time, the sheer foundation of any sustained maritime power was economic trade, and in this regard the Dutch sought to maintain their long-distance commerce with both the Dutch East and West Indies.<sup>26</sup> As a result of the prevailing Dutch dominance on world sea trade with the East, the Dutch attained an enormous wealth of profit and socioeconomic prosperity. The Dutch Republic became very rich and its citizens lavishly spent their money on middle-class pleasures and art often commissioned to commemorate themselves.<sup>27</sup> Essentially the VOC had to play a key role in ensuring profitable trade and, moreover, as a symbol of Dutch state power. It has been stated that “the need of the Dutch to earn their bread on the water was itself determined by the water.”<sup>28</sup>

The Dutch “Golden Age” renaissance, though, over time provoked jealousy and eagerness to compete amongst evolving neighbouring European powers. Thus, between 1652 and 1680 the Netherlands became drawn into subsequent Anglo-Dutch wars (these comprised the First Anglo-Dutch War of 1652–1654, the Second Anglo-Dutch War of 1665–1667, the Third Anglo-Dutch War of 1672–1674, as well as the Franco-Dutch War of 1672–1680) from which the Dutch afterwards victoriously secured their position as a leading seafaring power.<sup>29</sup> After 1680 the number of Dutch ships bound for the East increased significantly, as indicated in Figure 2 for ships arriving in Table Bay, predominantly due to the naval strength of the Dutch to protect their merchant fleet.

The VOC sea routes had to be carefully planned by Dutch cartographers and navigators to make the long-

<sup>26</sup> Lambert, A., *War at sea in the age of sail 1650–1850*, Cassel, London, 2000, p 21.

<sup>27</sup> Hale, J.R., *Age of exploration, Time-Life*, New York, 1966, p 39.

<sup>28</sup> Hale, J.R., *Age of exploration, Time-Life*, New York, 1966, p 41.

<sup>29</sup> Lambert, A., *War at sea in the age of sail 1650–1850*, Cassel, London, 2000, p 10.

distance voyages as convenient and safe as possible. J.P. Sigmund confirmed that in the *Weg naar de Oost* (the journey to the East) the Dutch searched for the fastest and safest sea route.<sup>30</sup> The Cape of Good Hope, as an important halfway refreshment station for Dutch shipping, became a pivotal strategic possession. In the Vingboons-Atlas from the Rijksarchiv it is evident from Dutch cartographers that the Cape became the “officiële rust-en steunpunt van de VOC” (the official replenishing base of the VOC) but that, however, no sufficient route maps for the Cape existed.<sup>31</sup> The Dutch then developed their own shipping route that entailed ships sailing from Europe passing the Cape Verde Islands southwards towards the equator. From there the ships would sail in a large bend in the southern Atlantic, supported by strong *westenwinde* (westerly winds) to the Cape of Good Hope.<sup>32</sup> The ships would then continue sailing to cover the voyage through the barren southern Indian Ocean and finally turn northwards for Batavia and the Dutch East Indies. Various complaints were made that Table Bay was geographically and technically not ideally situated because of the turbulent south-easterly winds. Ships would then have to be sailed to Dassen Island and Robben Island or Saldana Bay for sheltering. Nonetheless, for the better part of the time, the VOC ships were provided with essential provisions and reparations in pleasant weather conditions.

In emphasising the importance of the Cape for Dutch eastbound shipping, a regulation was imposed in 1652 making it obligatory for all ships to call at the Cape and to be documented by Jan van Riebeeck. An additional regulation was made that the number of waiting days at the Cape was not to be counted in the calculation of the bounties received by officers for speedy voyages. Otherwise, if the Cape had been bypassed without notification, the officers could lose their bounties.<sup>33</sup> Gaastra remarked that the Cape of Good Hope became a compulsory victualling stop but that the southeast trade route through the southern Indian Ocean was also soon to be made compulsory by the directors of the VOC.<sup>34</sup>

All Dutch ships were required to visit the Cape Colony *en route* to and upon their return from the East.<sup>35</sup> The efficacy of this regulation is confirmed by the dataset of Bruijn, Gaastra and Schöffler, which shows that over the entire period, 93% of all VOC ships leaving from either the Netherlands or the East Indies dropped anchor in Table Bay.<sup>36</sup> The successful implementation of a regulation requiring VOC ships to visit the Cape ensured that fluctuations in Dutch ship traffic were driven by the commercial activities of the VOC in the East Indies.

Apart from the VOC trade route via the Cape of Good Hope, an alternative route existed, which comprised communications with Asia via land. The VOC could make use of existing networks, in which Armenian merchants and French missionaries played a part, to send letters and products via the Middle East to Persia and India. According to Gaastra, the route most in use ran from Basra to Aleppo and then further to the harbours of Iskenderun on the Mediterranean. From there the products were sent to Venice or Livorno and via Marseille back to Amsterdam.<sup>37</sup> In comparison with the Cape route, the land route became, as an intra-Asian trade enterprise, too expensive for the Netherlands primarily due to the insufficient profit being made from the return goods. Strategically and economically the Cape route remained the obligatory halfway stop in the Dutch sea route between the Netherlands and the Dutch East Indies.

There were various factors at the Cape Colony itself that influenced ship traffic. Initially there was no need for large-scale cargo management at the Cape station, but with the increase in VOC cargo ships better-equipped harbour facilities became necessary. Practically, the beach was not the easiest place to manhandle large cargo products and Van Riebeeck therefore ordered the construction of an effective landing stage (jetty) for ships together with a supporting defensive battery, called *Duijnhoop*, near Salt River.<sup>38</sup> The Cape station became one of the few places on the African continent where Dutch ships could be provided with sufficient sheltering and

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<sup>30</sup> Sigmund, J.P., ‘De weg naar de Oost’, Spiegel Historiaal IX, nr. 6, 1974, p 361.

<sup>31</sup> Vingboons-Atlas (atlas van kaarten en aanzichten van de VOC en WIC in het Algemeen Rijksarchiv), Unieboek, Antwerpen, 1981, p 5.

<sup>32</sup> De VOC in de kaart gekeken. Cartografie en navigatie van de Verenigde Oostindische Compagnie 1602–1799, SDU uitgeverij, Gravenhage, 1988, pp 8–9.

<sup>33</sup> Bruijn, J.R., Gaastra, F.S., Schöffler, I., Dutch-Asiatic shipping in the seventeenth and eighteenth centuries, Rijksgeschiedkundige publication, Grote serie Nr. 165, Den Haag, 1987, p 111.

<sup>34</sup> Gaastra, F.S., The Dutch East India Company: expansion and decline, Walburg, Zutphen, p 110.

<sup>35</sup> Van Duin and Ross, The economy of the Cape Colony in the 18<sup>th</sup> century, p 13.

<sup>36</sup> Bruijn, J.R., Gaastra, F.S. and Schöffler, I., Dutch-Asiatic shipping in the seventeenth and eighteenth centuries, Rijksgeschiedkundige publication, Grote serie Nr. 165, Den Haag, 1987, Vol. 2 and 3.

<sup>37</sup> Gaastra, F.S., The Dutch East India Company: expansion and decline, Walburg Pers, Zutphen, p 119.

<sup>38</sup> Knox-Johnston, A., Cape of Good Hope: a maritime history, Hodder and Stoughton, London, 1989, p 139.

services, especially during the summer months between November and April.<sup>39</sup> In spite of this relative safety the increasing ship traffic around the Cape posed the threat of ship accidents.

One of the most important factors influencing ship traffic at the Cape was the effect of hazardous weather conditions. Severe storms, fog and particularly strong north-west gales caused numerous ship tragedies in 1697, 1722, 1728 and 1737 when richly laden Dutch East Indiamen (cargo vessels such as the *Oosterland* and *Waddinxveen* in 1697) were lost.<sup>40</sup> In Bruijn, Gastra and Schöffers the influence of geographical and weather conditions at the Cape is described as follows: “The run across the Atlantic was no more dangerous than that across the Indian Ocean. Entering Table Bay and other bays near the Cape could be risky and fatal. Eighteen ships were lost here on the voyage out, no less than nine of them between 1722 and 1728. In the middle of the southern winter of 1722 five ships sank simultaneously. This incident also illustrates the fact that sometimes it was extreme weather that at one blow wrecked great havoc and caused the average losses to be much higher than in most ‘normal’ years.”<sup>41</sup>

In correspondence with Figure 2 it is evident that, with the great storm of 1737, the number of ships anchoring at the Cape declined accordingly. On 21 May 1737 the entire VOC homebound fleet lay at anchor when a sudden north-westerly wind caused the destruction of eight out of ten ships.<sup>42</sup> It is remarkable, though, that between 1737 and British command in 1795 only six ships were lost. This indicates the infrequent nature of severe ship tragedies caused by unfavourable weather conditions at the Cape of Good Hope.

Socioeconomic factors in the early Cape Colony impinging on the ship traffic have to be taken into account. Shortly after the Dutch arrived, an uneasy relationship with the indigenous peoples (known colloquially as the *Khoikhoi*) ensued. The Khoikhoi’s role as a source of cheap labour gradually became thwarted by the Company’s cheaper use of slaves and servants. Thus, the Khoikhoi rose against the Dutch for possession of the Peninsula and initially threatened Dutch economic activities. With the defeat of the Khoikhoi by the superiority of Dutch military power after the First and Second Khoikhoi-Dutch Wars of 1659 and 1673 respectively, the Dutch imposed stricter rule over the Cape Colony.<sup>43</sup> The lesser numbers of days spent by ship in Table Bay during 1659 and 1673 could well have been caused by Dutch ships deciding to bypass the Cape in order to avoid potential damage from revolting Khoikhoi. Afterwards the white expansion proceeded at a rapid pace with the arrival of the French Huguenot in 1688. Deducing from Figure 2 it is noticeable that the ships porting, together with the length of days spent in Table Bay, increased sharply that year.

On 13 February 1713 a tragedy occurred when a parcel of dirty linen from a fleet of visiting Dutch ships caused a devastating trail of suffering and death at the Cape. The so-called smallpox epidemic not only simply annihilated the Khoikhoi population but also, to a lesser extent, engulfed the tiny white settlement.<sup>44</sup> Clearly, it is evident from Figures 3, 5 and 6 that markedly fewer ships arrived or anchored at the Cape for fear of contracting and further spreading the fatal disease.

The increase in the number of Dutch ships invariably led to an increase in demand for fresh foodstuffs, meat and other basic provisions. Complaints of insufficient refreshments at the Cape were reported to the *Heeren XVII* in the Netherlands and ultimately led to a decision to create self-supplying outposts, called *buiteposte*, in the close vicinity of Cape Town. These outposts served, in the long run, as a constant source of provisions (as well as caretaking for sailors suffering from *skorbut* or scurvy) for the Dutch shipping service. Saldanha Bay, Paarden Island, Milnerton, Simonstown, Tulbach, Riebeeck-Kasteel, Robben Island and others became valuable outposts within the Company’s “*begrepen cirkel*” (sphere of influence).<sup>45</sup> Apart from the effective contribution of the outposts, the VOC kept a firm grip on the economic development of the Cape Colony. Though this strict control and numerous restrictions handicapped the colonial development, it also led to discontent amongst the free burghers. An unproductive cooperation between the Company and the free burghers ensued. C.R. Boxer stated that “the desire of the directors to keep the cost of maintaining the colony down to a minimum, and to provide their ships with fresh provisions as cheaply as possible, clashed with the wish of the colonists to get the prices to

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<sup>39</sup> Wertz, E.J.S., ‘Een bedroefd, en beclaaglijk ongeval’ De wrakken van de VOC-schepen *Oosterland* en *Waddinxveen* (1697) in de Tafelbaai, Walburg Pers, Zutphen, 2004, p 34.

<sup>40</sup> Boxer, C.R., *The Dutch seaborne empire 1600–1800*, Hutchinson, London, 1965, p 224.

<sup>41</sup> Bruijn, J.R., Gastra, F.S and Schöffers, I., *Dutch-Asiatic shipping in the seventeenth and eighteenth centuries*, Rijksgechiedkundige publicatie, Grote serie Nr. 165, Den Haag, 1987, p 75.

<sup>42</sup> Knox-Johnston, A., *Cape of Good Hope: a maritime history*, Hodder and Stoughton, London, 1989, p 143.

<sup>43</sup> *Illustrated history of South Africa*, The Reader’s Digest Association, London, 1994, p 47.

<sup>44</sup> *Illustrated History of South Africa*, The Reader’s Digest Association, London, 1994, p 45.

<sup>45</sup> Sleight, D., *Die buiteposte: VOC-buiteposte onder Kaapse bestuur 1652-1795*, Haum, Pretoria, p 7.

which they thought they were entitled and which they could usually obtain from the passengers and crews of foreign shipping.”<sup>46</sup> Ultimately, a deep-rooted conflict of interests ensued, which would endure until the VOC’s rule of the Cape Colony came to an end in 1795.

Since the second half of the eighteenth century a flattening out of and gradual decline in the number of Dutch ships at the Cape of Good Hope occurred (see Figure 2) that was primarily due to the VOC’s stagnation within the Netherlands. Internal problems such as poor management, serious corruption on the part of the servants and inadequate financing hindered any real progress. External problems with rising European maritime powers, most notably France and Britain who became more competitive, slowly contributed to the Dutch’s dwindling position. After the devastating blow to the Dutch in the Fourth Anglo-Dutch War of 1780–1784 (resulting in a dramatic decrease in both Dutch and British ship traffic to the Cape, see Figure 1), the Company was on the verge of collapse. Additionally, the outbreak of malaria in Batavia caused considerable human and financial losses.

Dan Sleight explained that even the Cape station was in a state of decay and, as a refreshment station for shipping, no more valuable than profitable.<sup>47</sup> The Cape became very expensive for the VOC to maintain and consequently the number of ships arriving also decreased sharply, which added to the Company’s financial encumbrance.

As a result of revolutionary turmoil in Europe and the simultaneous erosion of Dutch power, the British took the initiative with the occupation of the Cape of Good Hope in 1795. As a result of the Dutch being deprived of a vital halfway station the VOC’s trade soon became unprofitable and finally the Company went bankrupt in 1799. For almost one and a half centuries the sheer success of the VOC depended largely on the existence of the Cape station, so that after its loss, its value was summarised in a Dutch saying: “*De Caab verlooren, de Compagnie verlooren*” (the Cape lost, the Company lost).<sup>48</sup>

## 6. CONCLUSIONS

New data and modern quantifying techniques can provide new insights into the early history of South Africa. The Bruijn, Gaastra and Schöffers data provide new empirical estimates of the pattern of ship traffic in the Cape colony. This paper provides an overview and discussion of the salient trends of 141 years of ship arrivals in Table Bay, finding historical proof for the empirical claims of the data. Furthermore, this data offer the opportunity to review and reassess the historical literature of this important but neglected period of South African economic history.

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<sup>46</sup> Boxer, C.R., *The Dutch seaborne empire 1600–1800*, Hutchinson, London, 1965, p 249.

<sup>47</sup> Sleight, D., *Die buitposte: VOC-buitposte onder Kaapse bestuur 1652-1795*, Haum, Pretoria, p 727.

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