The edited volume *Shipping and Economic Growth* starts from the observation that shipping was the most dynamic sector of the early modern European economy, and that ‘expansion and rising productivity in shipping was the critical factor in economic growth from 1350 to 1850’. Taking this as starting point, the contributions examine the sources of maritime productivity gains and the practices of specific places and periods. This results in an interesting comparison of the development of early modern shipping practices throughout the globe.

The framework used for this world-wide study of shipping and productivity is provided by Jan Lucassen and Richard W. Unger in their introductory chapter. Lucassen and Unger give an overview of the development of the ‘tons/man ratios’, combining reconstructions of the size of national merchant fleets (in tonnage) with reconstructions of the labour force. Comparing their reconstructions with additional isolated data, Lucassen and Unger discern five phases of rising maritime productivity, that ‘represented best practice of a sub-period, an ideal that some demonstrated could be achieved and other tried in various ways to achieve.’

The authors note that the leadership in maritime productivity seems to relate to shifting economic leadership. This relation between shipping productivity and economic growth is explained by the suggestion that ocean shipping was the ‘leading sector’ of the early modern ‘European and, therefore, perhaps the world economy’. In this respect it was exactly the gains in shipping that generated commercial expansion, by promoting urbanization and enabling increased division of labour on regional and even intercontinental scale.

The volume, therefore, is not an open study on the sources of economic growth in general, but aims to turn the exploration of the roots of economic growth from land to sea. As stated, it takes the rise of productivity in shipping as main focus. Measuring this increase in maritime productivity, however, is not unproblematic, as the authors themselves explain. The traditional measure for productivity would be the ‘quantity of shipping service per man day’, or, more specific, the ‘hours worked per person per ton moved’. As detailed information for this way of measuring is only available for some, limited areas and periods, the authors use a more general approach, relying on reconstructions of ‘tons served per man’.

The choice of Lucassen and Unger does not remain undisputed within the volume. Interesting in this respect is the contribution of Milja van Tielhof and Jan Luiten van Zanden. They emphasize ‘that changes in manning ratios do not indicate changes in the importance of shipping to total Dutch output. Nor do they indicate changes in total factor productivity.’ Van Tielhof and Van Zanden propose that the ‘total factor productivity’ would be a more accurate measure. The total factor productivity is attained by comparing the output, in the form of freight rates, with the weighted average of the most important input factors, including wages and costs of shipbuilding, repair and victualling.

Based on an analysis of factor costs and freight rates for shipping in the Dutch Republic, Van Tielhof and Van Zanden argue that the efficiency of the shipping sector rose from 1550 until the 1620s, but stagnated in the following period. This seemingly contrasting conclusion with the strong and continuing rise in labour productivity shown by Unger and Lucassen is explained by Van Tielhof and Van Zanden with ‘the changed relationship between capital and labour inputs’. In reaction to a relatively strong rise of wages, Dutch shipping switched to a more capital intensive mode of production, which, according to the authors, did not significantly improve total efficiency.

Unfortunately, the tension between the conclusions of Van Tielhof and Van Zanden and the framework by Unger and Lucassen remains unsolved. How does the criticism Van Tielhof and Van Zanden on the improvement of efficiency of the maritime sector relate to
the thesis presented by Unger and Lucassen as the starting point for the edited volume, the suggested relation between rising shipping productivity and economic growth?

The rest of the framework proposed by Lucassen and Unger provides more common ground for the contributors to the volume. Lucassen and Unger differentiate between three broad categories of sources of productivity growth: institutional changes on land and at sea, technical improvements, and economies of scale. Especially the institutional factors are studied and put forward as having played an important role. The contributions in the volume deal with interesting and wide-ranging topics such as the decline of Spanish shipping (Regina Grafe), the rise of English Atlantic shipping (Nuale Zahedieh), shipping in Northern Europe (David J. Ormrod), factor productivity for the Royal Navy (Patrick Karl O’Brien and Xavier Duran), but also Portuguese shipping between Macau and Nagasaki (Rui Manuel Loureiro) and Chinese junk trade (Kent G. Deng and Paul A. van Dyke). Other studies deal with the different factors behind productivity growth. Unger and Duran study technological developments, while Lucassen studies changing productivity in dock work. Jelle van Lottum, Jan Lucassen and Lex Heerma van Voss study the role of national and international recruitment strategies. Interesting is the final chapter of Amelia Polonia, bridging the developments in the maritime sector to wider economic developments with an analysis of seaports as the centre of (early modern) economic growth.

In conclusion, Shipping and Economic Growth raises important questions on the sources of early modern economic growth and the role of the maritime sector. Its contributions on the rise and decline of the shipping of various European powers, on Portuguese port cities, as well as on shipping in Asia are interesting. The debate on the methods of measuring efficiency improvements provides new insights, but seems to leave some questions unresolved. In the words of Unger and Lucassen: ‘The matter is not closed by any means. The extent of influence that shipping had on the economy is still an open question.’ Hopefully, this will be an encouragement for historians to engage in more of this interesting research on early modern maritime development in the near future.