Increased productivity of shipping was among the most important sources for the growth of world trade and for economic growth in a number of countries. The improved productivity made possible falling shipping costs, that is falling freight rates, which enhanced trade that in turn accelerated the demand for shipping services. In the mid-eighteenth century as much as half of the value of delivered cargo could be attributed to shipping costs. The share diminished significantly during the nineteenth century.

It is generally agreed that the productivity of shipping increased from the early seventeenth century to the early twentieth century. The causes for this development have long been topics for discussion. Douglass C. North and C. Knick Harley have argued that organisational changes were more important for the productivity changes in deep

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sea shipping prior to the mid-nineteenth century, whilst in the latter part of the nineteenth century ‘all the emphasis must be on technological change,’4 that is, when steam replaced sails, and iron and steel took the place of wood vessels.5 Still there were minor technological changes even before the fundamental changes in building materials and propulsion and, on the other hand, shipping organisation did develop gradually, especially during the latter part of the nineteenth century.6 Organisational developments included, among other things, specialization in shipping services and reduced turnaround times due to improvements in ports.

Productivity as such, however, is a concept with a number of definitions and an even wider variety of ways of measuring it. With eighteenth century shipping, the subject gets even more problematic. The available sources set down strict limits. There are differences among economic historians even about how production and thus, productivity is to be understood.7 Most often, some indirect or partial measures of productivity are used, that is analysing only some factors of production like labour costs. That is also the case in studies analysing shipping productivity.8 Labour, however, was responsible for only a minor share of shipping costs in the eighteenth century, especially in low-cost countries such as Finland. Technological and organisational development together with institutional changes had an impact on productivity

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7 The problems with sources and calculation methods, how to define production and labour input are discussed especially in Lucassen and Unger, ‘Labour Productivity in Ocean Shipping, 1450–1875,’ 127–128; Kaukiainen, Sailing into Twilight.