

# Trade, Commerce, and the State in the Roman World

*Edited by*

ANDREW WILSON AND  
ALAN BOWMAN

OXFORD  
UNIVERSITY PRESS

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UNIVERSITY PRESS

Great Clarendon Street, Oxford, OX2 6DP,  
United Kingdom

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First Edition published in 2017

Impression: 1

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Published in the United States of America by Oxford University Press  
198 Madison Avenue, New York, NY 10016, United States of America

British Library Cataloguing in Publication Data

Data available

Library of Congress Control Number: 2017935371

ISBN 978-0-19-879066-2

Printed in Great Britain by  
Clays Ltd, St Ives plc

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## *Preface*

This volume has its origins, like its three predecessors, in a conference organized as part of the research programme entitled ‘The Economy of the Roman Empire: Integration, Growth and Decline’, funded by the Arts and Humanities Research Council in 2005–10 and directed by the editors. Fuller information on the aims of the research project can be found in the introduction to the first volume, *Quantifying the Roman Economy: Methods and Problems* (ed. A. K. Bowman and A. I. Wilson, 2009); here it suffices to note that the project aimed to bring together both archaeological and documentary evidence relevant to the nature and performance of the Roman economy in four main diagnostic areas—urbanization and demography, agriculture, trade and commerce, and mining and metal supply—with a particular interest in data that allow some degree of measurement and quantification, and the delineation of trends over time. This volume focuses on the evidence for trade, and, in particular, it explores the relations between commercial activity and regulation, interest (especially as regards customs duties), and involvement on the part of the state. Most of the chapters were originally delivered as papers at a conference on ‘Trade, Commerce, and the State in the Roman World’ held in Oxford on 1–3 October 2009.

We are grateful to the AHRC for the award of the grant that supported the research programme, and to Baron Lorne Thyssen and the Augustus Foundation, whose support for the project has allowed us to continue the Oxford Roman Economy Project’s research programme well beyond the period initially funded by the AHRC. We are grateful also to Dr Gareth Hughes, who, as the project’s administrative assistant at the time, assisted with the conference organization; to the staff of the Stelios Ioannou Centre for Research in Classical and Byzantine Studies, where the conference was held; and to all those who contributed to the discussion at the conference. Nichole Sheldrick and Erica Rowan kindly assisted with the preparation of most of the texts; and Angela Trentacoste with obtaining some of the image permissions. The preparation of this volume has, for a variety of reasons, taken longer than any of us could have foreseen or wished, and we thank the authors for their patience during this process.

Andrew Wilson  
Alan Bowman

*March 2017*

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# 1

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## Introduction

### Trade, Commerce, and the State

*Andrew Wilson and Alan Bowman*

[The emperor Trajan] who, by his authority, advice, and loyalty has opened up roads, provided harbours, given routes to the land, let the sea into the shore, and extended the shore out to sea, and has mixed different peoples by trade to such an extent that whatever is produced anywhere seems to have originated among everyone.

(Pliny, *Pan.* 29.2–3)

And here the merchant vessels come carrying these many products from all regions in every season and at every equinox, so that the city appears a kind of common emporium of the world. Cargoes from India and if you will, even from Arabia the Blest, one can see in such numbers as to surmise that in those lands the trees will have been stripped bare and the inhabitants of these lands, if they need anything, must come here and beg for a share of their own. Again one can see the Babylonian garments and ornaments from the barbarian country beyond arriving in greater quantity and with more ease than if shippers from Naxos or from Cythnos, bearing something from those islands, had but to enter the port of Athens. Your farms are Egypt, Sicily and the civilized part of Africa. Arrivals and departures by sea never cease, so that the wonder is, not that the harbour has insufficient space for merchant vessels, but that even the sea has enough, <if> it really does.

(Aelius Aristides, *To Rome* 11–13, trans. Oliver 1953: 896)

There is one continent, one sea, the islands common to all, the harbours opened up and the gates thrown wide. Merchant ships everywhere convey products from all parts and crowd the anchorages. A mutual community has extended through practically all the land under the sun, with some travelling for exploration and others for other reasons, some who cross

oceans and others who traverse the continent. Dwellers in the West are observers of the wonders of the Nile while the inhabitants by the Nile gain knowledge of the beauties of the West. There are Phoenicians in the anchorages of Sicily, and Sicilians in turn in the harbours of Phoenicia. The city of Athens has been opened up to the traffickers in logic, and the nation of the Bithynians has become accessible to those desirous to take whatever they want.

(Libanius, *Oration* 59.171, trans. Dodgeon, Vermes, and Lieu, in Lieu and Montserrat 1996: 204)

Despite their avowedly Rome-centred view, emphasizing the consumer megalopolis, Pliny and Aristides convey a vivid impression of the scale and importance of long-distance trade at the high point of Rome's imperial power and of the state support that underpinned it. Equally striking is the fact that in the later fourth century AD, when, in many people's eyes, the Empire had passed beyond its climax of power and prosperity, Libanius depicted the Mediterranean as a vast and well-connected market, in which the ubiquity of maritime trade encouraged not only the long-distance movement of merchants and their goods, but also other travellers, and even generated almost a common market in trade, travel, and ideas. Not quite two centuries later, Cosmas Indicopleustes in his *Christian Topography* went so far as to state that God had designed the world expressly to facilitate maritime trade: 'He [God] also so prepared the gulfs that they could be navigated and afford a means of transit to different parts of the world, thus always uniting the dispersed nations in the bonds of amity through the facility with which commodities might be transported from nation to nation.'<sup>1</sup> The notion of 'connectivity' has become part of the accepted vocabulary in discussing the economic history of the Mediterranean in antiquity since the publication of *The Corrupting Sea* in 2000; Cosmas offers a more benign view than is implied by the title of Horden and Purcell's influential book, but with exactly the same stress on that notion.

All these testimonies emphasize more or less explicitly the political and economic importance of trading links and activities within and beyond the boundaries of the Empire, even if they offer us no broad programmatic statements about 'economic policy'. In this volume, we approach the subject from the point of view that the state was very actively and self-consciously involved in this aspect of empire.

One crucial prop on which this approach relies is the fact that scholarship on the nature, scale, and importance of ancient trade has changed radically since the 1970s, not least because of the massive increase in the quantity of archaeological evidence that has become available to us. In the mid-twentieth century, A. H. M. Jones believed that trade in the Roman world was relatively

<sup>1</sup> Cosmas Indicopleustes, *Christian Topography*, book 3, trans. McCrindle (1897: 101).

insignificant because of the cost of transport and the limited purchasing power of most rural and urban dwellers.<sup>2</sup> He and many others thought that the overwhelming majority of economic activity, perhaps over 80 per cent, in the ancient world lay in the agricultural sector, with trade being very much a secondary activity, and by some distance.<sup>3</sup> Moses Finley thought that such long-distance trade as there was in the ancient world was a trade in luxury goods, small in scale and aimed at a narrow elite, not a bulk trade in staples.<sup>4</sup> Traders were of low status;<sup>5</sup> elites were not involved in trade, as money came from agriculture; and trade was not a large, or even a significant, component of the ancient economy.

At first sight, it is striking that even in the middle of the twentieth century such views were still held by prominent scholars, despite the testimony of ancient authors. Rostovtzeff's *Social and Economic History of the Roman Empire* was, for many people, the most powerful, original and compelling work on Roman history in the twentieth century and was first published in 1926 (issued in a revised edition in 1957). Rostovtzeff certainly did not take a minimalist view of the importance of trade, even if his arguments about the nature and decline of the urban 'bourgeoisie' failed to win favour. Tenney Frank's *Economic Survey of Ancient Rome*, a product of North American historical empiricism, was published in the 1930s and amassed a great deal of economic data that can hardly fail to take us far beyond any simplistic notion of subsistence agriculture as the core of the ancient economy. Part of the explanation may be that in the mid-twentieth century 'economic history' was too little espoused by ancient historians generally, perhaps partly because it smacked of radical political views or 'economic determinism'. On the positive side, the huge increase in archaeological evidence in the second half of the twentieth century has induced ancient historians to direct attention to cliometric work more effectively than had previously been possible. It may also be relevant that too little had been done to emphasize the economic role of coinage and money (perhaps still the case, with honourable exceptions such as Howgego),<sup>6</sup> but it is nevertheless difficult to see how scholars who recognized the enormous wealth and the conspicuous consumption of the great landowners of the ancient Mediterranean world (the permanent basis of whose wealth was admittedly landed property) could have failed to emphasize and analyse the essential role of trade and commerce in the process of realizing that wealth through agricultural production and sale of surpluses.<sup>7</sup>

<sup>2</sup> Jones (1974: 37–9).

<sup>3</sup> Jones (1974: 36–7; cf. 83).

<sup>4</sup> Finley (1973; 1985).

<sup>5</sup> Finley (1973: 59–60).

<sup>6</sup> Jones (1956) offers a pessimistic view, frequently endorsed. Contrast Howgego (1992; 1994; 1995; 2013).

<sup>7</sup> See Marzano (2007); Bowman and Wilson (2013).



Over the last two decades of the twentieth century the Finley-Jones ‘new orthodoxy’ (as Hopkins called it) was eroded and eventually broken up. Hopkins in a series of papers advanced the argument that taxation by the Roman state encouraged even small-scale agriculturalists to produce a surplus for sale so that they could pay their taxes.<sup>8</sup> Horden and Purcell’s *The Corrupting Sea* dealt the final blow to the notion that the sameness of Mediterranean agriculture made long-distance trade unnecessary, pointing to the variegated microclimates of the Mediterranean whose different rhythms of glut and shortfall set up endlessly shifting constellations of supply and demand, actively necessitating long-distance trade between regions to overcome varying patterns of shortage.<sup>9</sup> The growing recognition of the significance of the archaeological evidence for trade was fundamental in this shift of viewpoint—but it has been a remarkably slow process.<sup>10</sup> More recent work has argued or accepted that bulk long-distance trade was normal, regular, and sustained not only in luxuries but also in staples and a wide range of commodities and manufactured goods throughout the Roman period.<sup>11</sup> Demonstration of the depth of monetization in the economy in both urban and rural contexts has underlined the fact that the commercial tools and institutions were available,<sup>12</sup> and there was a degree of economic rationalism in an overwhelmingly dominant agricultural context (even in terms of long-distance trade).<sup>13</sup> The notion of Roman elite contempt for trade and commerce has been shown to be little more than a veneer or a cliché.<sup>14</sup> There have still been occasional dissenting voices that have emphasized, perhaps even overemphasized, what might seem to be more ‘primitive’ characteristics of economic behaviour and institutions—Peter Bang,<sup>15</sup> for example, although his book *The Roman Bazaar* has not found favour with some economic historians,<sup>16</sup> and is oddly out of touch with archaeological work.<sup>17</sup> As for the archaeological evidence itself, there are still

<sup>8</sup> Hopkins (1980; 1983a; b; 2000; 2002).

<sup>9</sup> Horden and Purcell (2000).

<sup>10</sup> Important contributions in changing opinion include Carandini (1983); Pucci (1983); Tchernia (1983); Greene (1986); Fulford (1987; 1989). The launch of the *Journal of Roman Archaeology* in 1988 was also a landmark, facilitating a flow of important articles marshalling the archaeological evidence to address big historical questions of trade, starting with Mattingly (1988a) on olive oil. See also Harris (1993).

<sup>11</sup> Scheidel, Morris, and Saller (2007); Morley (2007b); Tchernia (2011); Wilson (2011a; b).

<sup>12</sup> Howgego (1992; 2013).

<sup>13</sup> Rathbone (1991; 1994), *contra* Kehoe (1993).

<sup>14</sup> D’Arms (1981); but see Tchernia (2011; 2016) for a more complex and nuanced view of elite involvement in trade.

<sup>15</sup> Bang (2007; 2008). Bang (2012) is more useful.

<sup>16</sup> See, e.g. reviews by Silver (2009) and Temin (2009).

<sup>17</sup> In particular, in its discussion of maritime trade (Bang 2008: 141–2), its failure to appreciate the significance of the distribution and quantities of traded archaeological artefacts, and the fact that it does not take account of the fact that the Roman villa system, the characteristically Roman manner of organizing much of the Empire’s agricultural exploitation was deliberately geared towards market-oriented surplus production and export.

some who doubt that its accumulation is sufficient to impact meaningfully on Finley's position,<sup>18</sup> a view with which we fundamentally disagree.

The question of ancient trade is important because the availability of non-local goods and resources may have a dramatic effect on the nature and quality of everyday life, and on the range of material culture of a society (the vexed discussions of 'Romanization' or even attempts to argue for an early 'globalization' in the Roman period all stem from the realization that a very similar package of material goods and technology—pottery, glassware, millstones, jewellery, and dress—is found across the Roman world); and also because of the potential importance of customs revenue to the state, a question to which we will return. Moreover, as Libanius pointed out, other influences were also carried along trade routes; not only cultural, as people discovered common tastes for the same material goods, but also the spread of ideas, technologies, religions, and philosophies ('the traffickers in logic')—and diseases too. While the Antonine Plague (smallpox?) was brought to the Roman Empire by armies returning from Parthia, its devastating spread around the Empire was certainly facilitated by the high degree of connectivity along trade routes. The Justinianic outbreak of bubonic plague, apparently brought to the Mediterranean from the east coast of Africa or even India, is first recorded at the port of Pelusium in the north-eastern Nile delta. That would be entirely consistent with the presence of the rats that carried the fleas with *Yersinia pestis* arriving on ships sailing along Trajan's canal to the Nile from Clysma at the head of the Red Sea.<sup>19</sup> Its rapid spread to Constantinople and around the Byzantine empire was undoubtedly facilitated by the ships of the grain fleet sailing from Alexandria to Constantinople, and by other intensively used maritime trade routes.<sup>20</sup>

Broadly speaking, Roman archaeologists and most ancient historians would now agree that Mediterranean trade increased during the Hellenistic period to reach a peak under the Roman Empire, sustained until at least the end of the second century AD, when long-distance trade was abundant, even in agricultural staples and in such apparently low-cost items as pottery cooking vessels.<sup>21</sup> This increase in the scale, reach, and intensity of long-distance trade was facilitated by the bringing of the circum-Mediterranean region under unified political control, at least until the third century, and the resultant institutional factors, including the *pax Romana*, the adoption of a common or at least integrated currency for much of the region (with the qualified

<sup>18</sup> Wallace-Hadrill (2014: 584).

<sup>19</sup> On the Antonine Plague, see, e.g. the various papers in: Lo Cascio (2012). Justinianic Plague: McCormick (2003); Little (2006); Bos et al. (2012); Harbeck et al. (2013).

<sup>20</sup> McCormick (1998; 2003).

<sup>21</sup> e.g. Mattingly (1988a; b); Jongman (2007a; b); Morley (2007a; b); papers in Robinson and Wilson (2011); Wilson (2009; 2011b); Wilson et al. (2012). Trade in North African cooking wares: Leitch (2011; 2013).

exception of Egypt<sup>22</sup>), an increasingly unified (integrated?) legal framework; and state investment in transport infrastructure such as roads and harbours. Technological improvements, especially in shipping and in container technology (the use of amphorae with better volume-to-weight ratios, and a gradual shift over time from amphorae towards barrels), to some extent reduced the costs of long-distance and especially maritime trade;<sup>23</sup> and increased demand began to encourage mass production of certain goods.<sup>24</sup> The existence of these phenomena is relatively uncontroversial—what needs further analysis and nuance is the balance between the various factors and the scale of their spread and operation. For example, the accretion of new archaeological evidence may help us to understand why production of particular goods and artefacts remained relatively local and small scale in some places and periods while striking instances of intensive production and wide distribution occur in contexts where the determining factors (such as major transport arteries or specific raw materials) are not so obvious.

The present volume recognizes that the debates of the 1980s and 1990s over the extent and normality of long-distance trade in the Roman Empire may appear to have been largely resolved, but asserts that questions of both economic structure and performance remain, some new, some still not satisfactorily answered (despite the recent proliferation of thematic volumes on Roman economic history<sup>25</sup>). The structural questions would include: how far are we talking about a market economy?<sup>26</sup> What impact did the state have on distribution—by distorting or creating large trade flows, either by bulk requisition or by purchase, for the *annona* or for military supply? Or by the creation and provision of infrastructure (roads, harbours), or institutional incentives? In keeping with the agenda of this series of volumes, and the research programme from which they emerged, we propose an attempt to quantify economic performance further by analysing the complementary bodies of documentary and archaeological evidence, with attention to change and diversity over space and time.

## TRADE AND THE STATE

The chapters in this volume are grouped in three parts. Many of the major institutional factors are discussed in the first part: taxation by Alan Bowman

<sup>22</sup> For Egypt, see Burnett (2005).

<sup>23</sup> Wilson (2011a); for slightly differing views on the significance of this, see Scheidel (2011) and Wilson (2011b).

<sup>24</sup> Wilson (2008).

<sup>25</sup> Scheidel, Morris, and Saller (2007); Bowman and Wilson (2009b); Scheidel (2012).

<sup>26</sup> e.g. Bang (2008) vs. Temin (2013).

(Chapter 2); the legal structures by Boudewijn Sirks (Chapter 3); market regulation and transaction costs by Elio Lo Cascio (Chapter 4); Republican financial institutions by Philip Kay (Chapter 5). A picture begins to emerge of heavy state involvement in establishing institutional frameworks conducive to trade, including provision of transport infrastructure,<sup>27</sup> and, notably, interventions in the market to distort flows of particular goods, whether staples such as grain or olive oil, or luxuries such as marble, to particular concentrations of demands, principally Rome and the army garrisons (which is in effect a restatement of some of the important features of Hopkins's 'taxes-and-trade' hypothesis). But this seems to have been done by the engagement of private contractors, in a way that stimulated private trade on the back of it: Colin Adams's chapter points out the incentives or subsidies of carrying a private cargo as a supplement to a state cargo, and thus how the imbrication of state and private transport subsidized private trade. And there was a lot—an awful lot, for a pre-industrial world—of private, open market trade outside the state-affected sector. The state took some care to protect the functioning of those markets.

The institutional framework was one in which peace, laws, a common currency, and certain incentives to engagement of shippers and merchants in trade that would benefit the state can all be seen to have a positive, if not entirely straightforward, effect, affecting the transaction costs of trade at all levels. A healthy trading sector was essential for the Roman state for several crucial reasons: it guaranteed military supply—and therefore physical control—by a combination of direct requisitions, subsidized purchase, and private trade; it assured the food supply of major cities, especially Rome, which could not be fed from their immediate hinterlands, in order to prevent unrest; although not always openly acknowledged, it underpinned the political and economic power of the elites, as well as a lifestyle that was more often than not conspicuously indulgent, and this, in turn, determined the political character of the Empire in which urbanization was such an important factor. Moreover, the customs dues from trade—local, inter-provincial, and external—could be considerable and were organized in a very sophisticated fashion, a fact whose significance has only recently begun to be appreciated. The institutional framework and the physical infrastructure developed and maintained by the Roman state encouraged the interplay between urban and rural areas and relied on the participation of the landholding elites. This contrasts strikingly with the situation in late medieval/early modern Europe.<sup>28</sup>

<sup>27</sup> Wilson (2011a: 46–53).

<sup>28</sup> See, e.g. Blockmans (1989: 740–1) on medieval cities: 'the early commercial cities had to provide for a number of essential arrangements for their trade and industry, which the surrounding feudal society could not and would not provide. Fundamentally, that society remained hostile to the cities and their activities, which therefore needed protection. The security of roads, the quick and reliable settlement of disputes between sellers and buyers, the supervision of exchange values, the freedom from tolls and arbitrary seizure: these fundamental pre-conditions

However, in this volume, we avoid any attempt to characterize the Roman imperial economy in very broad terms—as it may be ‘dirigiste’, ‘predatory’, or ‘laissez-faire’—not least because we think that there are elements of all such characteristics present and it may be misleading to privilege one of many strands. We realize that this may provoke criticism. We rather focus on the balance of emphasis in a scenario of ‘give-and-take’ and attempt to quantify what the state contributed to the scale and mode of trading activity and what it took out, and the instruments it used to do that. ‘Predation’ is only one side of the coin; and state predation and banditry are very different. A state needs to give something in return, if its rule is to be deemed tolerable; and we are interested in what the Roman state contributed, in return for customs revenue extracted, by way of peace, protection, institutions, and physical infrastructure. It should be noted that, although there is, in the history of Roman imperial expansion, an implicit consciousness that overall the costs of acquiring and controlling territory should not exceed the benefits of revenue derived from it,<sup>29</sup> there is no direct evidence for explicit ‘budgeting’ on such a macroeconomic scale until the later period (after AD 300, when it was part of the responsibility of the praetorian prefecture).

The infrastructural elements contributed by the state will include: the military peacekeeping presence accompanied by the creation and growth of social and economic communities, the monetary and commercial instruments, the legal framework that governed modes of economic behaviour (contracts and so on), and the physical structures—ports, harbours, and other commercial/industrial establishments (though the balance between state and private investment is uncertain in the latter), and transportation networks (very often closely linked to the military infrastructure).

If we look at the picture from a different perspective, the state-supported infrastructure enabled the extraction of increased revenues and taxes, direct (for example, land and capitation taxes) and indirect (customs duties, taxes on trades and ‘industry’), needed for state expenditure on military institutions and infrastructural facilities. Evidently, the top-slicing of increasing wealth in the form of revenue extraction could be and was used also to finance the lifestyle of the elites and the urban communities, supplemented by the

for any regular trade had to be created by the merchants themselves because no other authority was competent and willing to do it. What later became the fields of interstate diplomatic relations, royal coinage prerogatives, and monarchical jurisdictions, were primarily shaped by merchants’ networks in the time when no prince had the possibility or the vision to provide for these typically urban needs.’

<sup>29</sup> e.g. Strabo’s comment that Augustus did not conquer Britain because ‘it seems that at present more revenue is derived from the duty on their commerce than the tribute could bring in, if we deduct the expense involved in the maintenance of an army for the purpose of guarding the island and collecting the tribute; and the unprofitableness of an occupation would be still greater in the case of the other islands about Britain’ (2.5.8, Loeb translation; see also 4.5.3).

willingness of those elites to augment through benefaction and euergetism. As that balance changed and trade shrank (arguably) after AD 200 with the consequent reduction of the flow of revenue to the state, the growing demands of the military establishment and the civil bureaucracy severely distorted the pattern of relative prosperity and, consequently, the political and economic structures of the state. That would serve as an admittedly oversimplified statement of a standard approach to the ‘decline’ of the Empire. From our point of view in this volume, one key question is whether the analysis of the various bodies of quantifiable evidence supports it.

## LONG-DISTANCE TRADE WITHIN THE EMPIRE

The contributors to the second and third parts of this volume concentrate on internal and external (long-distance) trade, respectively. This book does not contain a chapter specifically on maritime trade, although its importance is implicit in many of the contributions. Maritime archaeology and maritime trade have been the subject of a large number of recent publications, to which the reader is referred;<sup>30</sup> in particular, one should note the archaeologically supported emerging consensus that organized, directed long-distance trade between emporia, supplemented by more local trade in the coastal forelands of those emporia, was of far greater significance in the Roman world than was coastal tramping.<sup>31</sup> Among the underlying questions of economic performance, we include: how widely available were different kinds of goods, and what determined differences in availability? How successfully did transport infrastructure provision enable goods to be moved, or did high transport costs deter long-distance land movement? The (predominantly archaeological) evidence reviewed in Part II of this book gives the impression that access to resources via long-distance trade corrected some imbalances in natural reserves, for example, in timber (Chapter 7), and that traded goods (glass, Chapter 9; pottery, Chapters 10–12; and metals) were widely and effectively distributed. In normal circumstances, the transport systems, institutional framework, and market concentrations of demand worked pretty well for a pre-industrial society.<sup>32</sup> But this needs to be set against anecdotal evidence of

<sup>30</sup> e.g. Tchernia (2011; 2016) and the various papers in: Harris and Iara (2011); Robinson and Wilson (2011); Keay (2012).

<sup>31</sup> Nieto (1997); Morley (2007b: 102); Arnaud (2011); Rice (2011); Wilson (2011a); Boetto (2012); Wilson, Schörle, and Rice (2012).

<sup>32</sup> Hitchner (2012: 226–8) contrasts the prosperity of the Drôme (southern France) in the Roman period, when good roads and intensive trade enabled the export of a sweet wine, with the same region in the eighteenth century, when fruit was eaten under the trees by pigs because the roads were so poor it could not be exported to market.

famines that could not be alleviated in time; the system lacked the capacity to do this and was not intended to address such emergencies. Given the slow transport and communication speeds of a pre-industrial world, it took time to organize adequate responses to famine, and sometimes this response time was fatally long; the ability to deal with exceptional crises was low, therefore, even if the system functioned reasonably well in normal circumstances. It is especially striking, and remarked upon by Gregory of Nazianzus in the fourth century, that such disasters particularly affected inland regions that could not be provisioned by sea.<sup>33</sup>

As regards internal trade, it is unnecessary to review in detail the arguments of individual contributors on the whole range of particular commodities, but, although much of the evidence for the scale and reach of Roman trade comes from pottery, since that is one of the most archaeologically durable and traceable commodities, several papers in the volume show what can be done with other goods: timber (Harris), glass (Foy), stone (Russell), and even the service industry in cleaning textiles (Radman). We omit here and in the volume generally discussion of those foodstuffs that have been treated extensively elsewhere.<sup>34</sup> It is important to note that within the Empire we are dealing with local and with intra-provincial trade, which may show different patterns, depending not least on the modes of transport available. Many of the goods available in urban centres were produced or manufactured in distant places, and were traded in markets alongside local products. The subject of the integration of the market, or markets, has received substantial attention recently, and it is important to remain alert to the possibility of local and provincial differences in this respect and to recognize that there were factors that prevent us from characterizing the trading simply as ‘market led’ or ‘market oriented’ (not least the state’s need and demand for goods at ‘non-market’ prices).<sup>35</sup> Some comments on two of the commonest categories, ceramics and stone, might be helpfully diagnostic in pointing out key features of trading patterns, which can be tested against other kinds of traded goods.

## Ceramics

The chapters on pottery in this book raise the question of how far state involvement in distribution might have enabled pottery to reach markets further afield than market forces alone might have done, and implicitly or

<sup>33</sup> Gregory of Nazianzus *Oration* 43.34–5, referring to Caesarea in Cappadocia (Kayseri); cf. Horden and Purcell (2000: 560) for discussion.

<sup>34</sup> e.g. by Rickman (1980); Garnsey (1983); Garnsey and Whittaker (1983); Erdkamp (2001).

<sup>35</sup> Markets: Temin (2001; 2013); Thonemann (2013) for a very different view. Cf. Bowman and Wilson (2009a: 24–7).

explicitly invite us to think about price resilience to transport costs. Bonifay's distribution maps of the pottery production sites known in North Africa illustrate the point nicely (Chapter 11). Amphorae, as transport containers for—principally—olive oil, wine, and fish products, are produced at both coastal and inland sites, but especially at coastal sites. Obviously the preparation of salted fish and related products—*garum*, *liquamen*, *allec*, and so on—was coastal, but even for the products of the interior it often made sense to transport them to the coast in skins and bottle them in the more durable but heavier amphorae only when they needed to be exported in ships. Kiln sites producing cooking wares that were exported are, however, exclusively coastal.<sup>36</sup> This seems to reflect the relatively low value of cooking wares, whose sale price could not absorb lengthy transport costs from the interior to an export port. This appears to be confirmed by the impressionistic distribution of African cooking wares at coastal sites around the Mediterranean, but not very far inland. For example, African cooking wares are common at Ostia and Portus, but wholly absent further up the Tiber at Chianciano Terme.<sup>37</sup>

By contrast, African Red Slip ware was produced at inland sites in Tunisia—which has suggested its transport to the coast along with other agricultural produce, principally the grain destined for the *annona*.<sup>38</sup> But it must also imply that the sale price, while not necessarily high, was high enough to absorb such overland transport costs. Again, this finds its reflection in the greater penetration of ARS finewares (and indeed earlier finewares too) into inland sites in overseas provinces. The different distributions of finewares and cooking wares confirm what we have long suspected, that finewares cost more than cooking pots. But the very widespread coastal distribution even of cheap African cooking wares underlines the sheer scale of maritime trade and relatively low transport costs, which made it possible for large quantities of cookwares to travel around the Mediterranean by sea.

Fulford's demonstration that the distribution of Gaulish Samian finewares somehow overcomes the friction of distance that would be expected in an entirely free-market scenario is especially significant and opens up a number of intriguing possibilities (Chapter 10). His suggestion that somehow the distribution was being subsidized or assisted through the posting stations or transport services of the *cursus publicus* is in many ways very attractive, and would seem to implicate the state in either the production or the distribution or both. Questions remain, however, as to why the state should bother with the distribution of Samian wares. Unless we want to believe in a benevolent Roman state so concerned for the well-being of its citizens that it took special

<sup>36</sup> Leitch (2011). <sup>37</sup> Leitch (2011; 2013).

<sup>38</sup> Fentress and Perkins (1988: 209, 13); Bonifay (2003). These authors also argue that the export of ARS to Portus with *annona* grain explains its widespread distribution around the Empire, as it was re-exported from Portus as return cargoes on other shipping.



measures to ensure their access to glossy red table pottery, it is perhaps hard to see why this would be on the state's radar. The distribution pattern cannot be explained simply by a state concern to supply the army; the whole point is that the distribution reaches remote civilian sites too. The alternative explanation would be the argument from competition, and would imply that the market—even in remote rural sites in northern Britain—was sufficiently affluent that consumers could bear the transport costs reflected in the sale price. There was no high-quality Red Slip industry in Britain, so there was no direct competitor; the distribution here could argue that consumers had the resources and were willing to pay for the costs of the long-distance transport of imported wares, as there was no alternative if one wanted red tableware. To what extent might the issue of different distributions for different wares be explicable in terms of trading relations and networks of particular individuals?

### Stone

Russell's chapter on the stone trade demonstrates how the state's demand for luxury stones impacted on but coexisted with a private trade, and this is a model also applicable to the movement of some other goods, though the evidence is usually less clear-cut. The bulk of the large stone that was moved very great distances was thus shipped for state architectural projects; but at the same time some found its way onto the private market, and non-state cargoes were also shipped across the Mediterranean, making use of the harbour, loading, and shipping infrastructure already in place. The size of the market for certain kinds of stone artefacts, and especially for honorific statues and for sarcophagi, enabled extensive division of labour. Some of this was geographically separated, with work at the quarries often carried to an advanced stage, producing a somewhat standardized product that could then be finished, perhaps including personalization, by workshops elsewhere. Whether one wishes to see this as production to stock,<sup>39</sup> or rather as production for an indefinite market (rather than to particular orders), this indicates not merely a very large market and a degree of affluence reaching some way down society, but also a substantial amount of rationalized organization of systems of mass production of standardized goods in both stone and other materials.<sup>40</sup> At the same time, the state's demand for exotic stone for major building projects led to its taking a direct role in the organization and provisioning of some of these quarries that went well beyond what the purely economic value of the stone might have justified. The exploitation of granite and porphyry in the Eastern Desert of Egypt was a venture that relied on state infrastructure and demand,

<sup>39</sup> As Ward-Perkins did (Dodge and Ward-Perkins 1992: 25–31).

<sup>40</sup> Wilson (2008); see further on this, Russell (2013).

and was driven by the political capital to be made from employing in state building projects a stone known to be exotic, from distant regions, and very costly and difficult to obtain.<sup>41</sup>

## TRADE BEYOND THE ROMAN FRONTIERS

As for trade beyond the frontiers, it is striking how little significance has been attributed to it until quite recently, though the authoritative book (for its time) by R. E. M. Wheeler was first published in 1954.<sup>42</sup> The recent accumulation of archaeological evidence has encouraged a re-evaluation of the scale and value of this trade, but, as will be seen from the contents of this volume, the available evidence focuses our attention on the southern and eastern frontiers (Egypt, Arabia, and India, and the Sahara). While there has been a spate of recent publications on Roman-period trade to the south and east, these have been chiefly concerned to establish the significance of the phenomenon they study, and this external trade has largely been treated separately from more general discussions of Roman trade.<sup>43</sup> It is our contention, in fact, that external trade, with the east whether via Palmyra and the Silk Road(s) or with the Arabian peninsula and India, and with (and even across) the Sahara, should be considered not merely as an exotic sideshow, but as a fundamental part of the Roman trade system from the reign of Augustus onward, important not only for the quantities of exotic imports that it introduced, but also for the fiscal revenue that the 25 per cent customs dues yielded; and that this view of eastern trade is reflected in the passage from Aelius Aristides quoted at the beginning of this Introduction.<sup>44</sup>

Much of this new research on Eastern trade derives from important recent archaeological work at Palmyra, on the Egyptian Red Sea ports and the Eastern Desert infrastructure, as well as the west coast of India, which has put more flesh on the bones of the notices of Strabo, Pliny, the *Periplus Maris Erythraei*, and the documentary evidence. Moreover, archaeology now shows that imports from India and Arabia did not just reach the wealthy cities of the Mediterranean heart of the Empire: black pepper (imported from India) has been found in deposits from Oberaden and London, and is mentioned in the

<sup>41</sup> Cf. Tomber, Chapter 16, this volume.

<sup>42</sup> Wheeler (1954).

<sup>43</sup> E.g. (a few examples of many), for eastern trade in general: Young (2001); McLaughlin (2010; 2014). Silk Road: Giuliani et al. (2000); Hill (2009). Indian Ocean and Red Sea trade: Seland (2007; 2010; 2012); Tomber (2008); Morelli (2011); Sidebotham (2011); Van der Veen (2011); Agius et al. (2012). Saharan trade: Liverani (2000a; b; 2005); Mattingly (2003; 2011); Mattingly and Wilson (2010); Schörle (2012); Wilson (2012); Mattingly et al. (2013); Gliozzo et al. (2014).

<sup>44</sup> Wilson (2015).

Vindolanda tablets from northern Britain;<sup>45</sup> and frankincense has been identified in two third-century AD burials from Dorchester, and possibly also in two Roman burials from York.<sup>46</sup>

Renewed study of the so-called Muziris Papyrus emphasizes the economic value of the customs duties derived from this trade.<sup>47</sup> The papyrus recorded the valuation of (part of) a cargo of ivory and incense from Muziris in India, valued after tax at 1,151 talents 5,852 dr. of silver,<sup>48</sup> or HS 6,911,852; the customs tax at the 25 per cent rate must therefore have been HS 2,303,951. The goods might also have been liable to further tariffs in the course of their overland and riverine transport through the desert and to Alexandria. Strabo, writing around 150 years earlier, says that 120 ships per year left Myos Hormos for India. Trade by the mid-second century had not declined, as both Tomber's and Nappo's chapters illustrate, and may if anything have increased, but we will probably not overestimate state revenue if we calculate 100 ships per year; with a similar tax revenue per cargo, this would yield 230 million *sestertii* per year as import dues alone, not counting export dues on those 100 ships on their outward voyage, or inter-provincial customs dues on that part of the imports that was not consumed within Egypt but was traded on to other provinces. This makes it very possible that something like one-third of the state's military budget, estimated by Duncan-Jones at 643–704 million *sestertii*,<sup>49</sup> could have been met from the customs revenues on the Red Sea trade alone.<sup>50</sup> If that is the case, it suggests that the positive balance of income over expenditure might be greater than previously thought and thus invites reflections on how the state's surpluses might have been used (or sometimes stockpiled?).

The figures provided by the Muziris Papyrus cast in a more credible light the oft-dismissed figures given by Pliny, that the **India trade drained the Empire of HS 50 million each year.**<sup>51</sup> Pliny's figure (where *sestertii* must be a unit of account rather than actual coins) would imply export dues already levied of *c.* HS 12.5 million on goods leaving the Empire. Pliny writes about a 100-fold mark-up for the imports, which, if taken literally, would mean a final sale value for this trade of **HS 5,000,000,000;** but that might be at Rome, and not the import value to Egypt on which the quarter-tax was calculated. To make the figures match even approximately the order of magnitude of the

<sup>45</sup> Bowman and Thomas (1994: 135 no. 84); Cool (2006: 64); Van der Veen (2011: 44).

<sup>46</sup> Brettell et al. (2015: 7).

<sup>47</sup> *PVindob.* G 40822. Harrauer and Sijpesteijn (1985); Casson (1990); De Romanis (1998; 2012); Rathbone (2001); Morelli (2011).

<sup>48</sup> This is the most recent reading: Morelli (2011: 214) and followed by De Romanis (2012). The initial reading, in the *editio princeps* by Harrauer and Sijpesteijn (1985), was 1,154 talents 2,852 dr. of silver, or HS 6,926,852.

<sup>49</sup> Duncan-Jones (1994: 36, table 3.3).

<sup>50</sup> Wilson (2015).

<sup>51</sup> Pliny, *NH* 6.101.

calculation just essayed for the Muziris Papyrus, we would need to suppose that the cost of goods had increased tenfold between India and the Red Sea, and tenfold again between the Red Sea and Rome; we might in such a case be talking of a value of goods imported to Egypt of HS 500 million, on which a 25 per cent customs levy would be HS 125 million. These figures are imprecise and inevitably speculative extrapolations from the few data we have, but they do suggest that Pliny's figure is not beyond the bounds of possibility. Dario Nappo's chapter explores some of their implications, and the practicalities of exporting silver and gold coins to India in order to pay for the imports.

Given the sums involved, it is perhaps unsurprising that there is evidence that the imperial *familia* of freedmen and slaves (the *Caesariani*) was involved in this trade;<sup>52</sup> and that the Roman state invested in infrastructure for it (summarized in Roberta Tomber's chapter): in the first century AD, cleared roads across the Eastern Desert, with forts and watering points, from the Nile to the ports of Myos Hormos and Berenice; in the reign of Trajan, a canal linking Cairo to Clysma at the head of the Red Sea, and, under Hadrian, the Via Nova Hadriana, which ran from Antinoopolis to the Red Sea and down along the coast to Berenice.<sup>53</sup> For at least two or three decades in the first half of the second century AD a naval detachment was stationed on the Farasan islands in the southern Red Sea, no doubt to protect merchant shipping against piracy, but also as part of a wider projection of power in the region.<sup>54</sup> As Tomber points out, though, the investment in roads and forts across the routes linking the Red Sea to the Nile does not seem to have been matched by a similar investment in monumental harbour infrastructure such as one finds at Mediterranean ports. The importance of the protection infrastructure along the routes is underscored by the events of the late third century. During the Palmyrene dominance, after Zenobia and Vaballathus had taken Egypt in 269, the forts along the route from Coptos to Berenice were abandoned and the Blemmyes disrupted much of the Eastern Desert and took Coptos. While Coptos was recovered in 279, the forts do not seem to have been immediately regarrisoned, and several strands of evidence, including the pottery evidence from Berenice, and the evidence of Roman coins in India, suggest that thereafter, while the Red Sea to India trade recovered somewhat, it never fully regained its former level; and that from the fourth century onwards trade between the Red Sea and the Nile did not go across the desert but was routed largely up the Red Sea through the port of Clysma, and Trajan's canal.<sup>55</sup>

Davidde's paper illustrates the role that Arabian ports played in this trade with India and also with the products of Arabia. Qana' was receiving Campanian, Laodicean, and Egyptian wine, and even wine from Spain and the Black Sea.

<sup>52</sup> Bowman (2010). <sup>53</sup> Speidel (2015); Wilson (2015).

<sup>54</sup> Villeneuve (2004); Villeneuve, Philipps, and Facey (2004); Speidel (2015: 89–94).

<sup>55</sup> Young (2001); Wilson (2015).

Some of this was clearly traded in return for frankincense from the interior of Yemen; but some will have been bought for onward shipment to the ports of northern India, and Indian goods would have gone the other way.

Alongside the growing evidence from archaeology for the maritime trade routes with the east, we can now also see the cumulative force of the evidence for overland trade via the Silk Road(s), gathered in the important contribution by David Graf. The Silk Road trade at the Chinese end *originated* epiphenomenally on the practice of state tribute and diplomatic embassies, as tribute in kind and diplomatic gifts were resold by their enterprising recipients. As trade developed along the routes westward and gained its own momentum, its value was harnessed by the state in the form of heavy customs dues.

For trade across the southern frontiers of the Empire, discussed in Chapter 19,<sup>56</sup> fieldwork in Libya between the late 1990s and 2011 has forced a radical reassessment of the volume and significance of trade into the Sahara, at least via the routes down from Tripolitania to the Garamantes of the Fazzan, on whose settlement sites and in whose cemeteries large quantities of Roman imports have been found.<sup>57</sup> Roman wine, olive oil, glassware, and pottery were traded for slaves, gemstones (carnelian), probably cotton, and perhaps some gold, from the Flavian period onwards. We lack quantifications for the value of Saharan trade of the kind that we can attempt for the Red Sea trade, and in particular it is unclear whether the excise duties were the same as the 25 per cent charged on the eastern frontiers, although we tend to assume so. Saharan trade in Roman times was doubtless never as lucrative as the trade with India or the distant East, but it is now looking increasingly significant, as a component of the provincial economy of Tripolitania, and the scale of the traffic in slaves could have reached levels comparable with the medieval Saharan slave trade.<sup>58</sup>

It is primarily archaeological research that has led to this comprehensive reassessment of the scale and nature of trade across the Empire's southern and eastern frontiers. By contrast, trade across the northern frontiers of the Empire appears less spectacular—although Strabo reminds us that, before the conquest of Britain, the customs dues on cross-Channel trade were thought to exceed the tribute that could be extracted under direct rule less the costs of occupation of Britain.<sup>59</sup> The majority of Roman goods found outside the frontiers in Scandinavia are thought to be diplomatic gifts, or booty.<sup>60</sup> The

<sup>56</sup> We regret that it has not proved possible to include a contribution from David Mattingly on the Fazzan (Libyan Sahara). His updated treatment of this area will be published in Mattingly, Duckworth, and Sterry (forthcoming). Andrew Wilson has added a chapter on Saharan trade instead.

<sup>57</sup> Liverani (2000a; b; 2005); Mattingly (2003; 2011); Mattingly and Wilson (2010); Wilson (2012); Mattingly et al. (2013); Gliozzo et al. (2014). See n. 46.

<sup>58</sup> Wilson (2012: 432–5).

<sup>59</sup> Strabo, *Geogr.* 2.5.8 and 4.5.3.

<sup>60</sup> Cf. Grane (2007); Morris (2010); and the various papers in Wells (2013).

relative insignificance of Roman-period trade across the Rhine–Danube frontier is to be explained by similar ecologies to the provinces of northern Europe within the Empire, and the lack of highly urbanized civilizations in Germany, Scandinavia, and points east. Simply put, these people had little that the Romans did not themselves have, and there was little Roman demand for what they could produce.

Thus, once again, the evidence suggests a mixed picture of the development of patterns of trade across the Empire, especially in the third and fourth centuries, and no definitive or widely applicable conclusion about ‘economic collapse’. Clearly the health of external trade, and the intensity of intra-provincial and inter-provincial trade, remained healthier and thus, we suppose, more profitable in the east than the west (where, as time goes by, the quality of goods revealed by archaeological evidence perceptibly declines). But, in the east at least, the state appears, in collaboration with the elite holders of wealth, to have adapted the mechanisms of taxation, both direct and indirect, to support its need for revenue. On the other hand, the price of that collaboration, which was in effect a fiscal partnership, in slightly different forms in east and west, in the longer term fundamentally changed the political character of the Empire.

## ACKNOWLEDGEMENTS

We are grateful to George Woudhuysen for the quotation from Libanius, and to Maja Kominko for drawing our attention to the passage in Cosmas Indicopleustes.

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