

Indicators for Roman economic growth: a response to Walter Scheidel

Andrew Wilson

Defining the causes, nature, timing and limits of whatever growth may have occurred in the Roman period are some of the chief questions facing students of the Roman economy. W. Scheidel's paper is much to be welcomed in that it sets out clearly how we might test and choose between alternative hypotheses of a single unsustainable spurt of economic growth in the Late Republic and Early Principate and a scenario in which growth continued until it was checked by one or more exogenous shocks such as the Antonine Plague. Although Scheidel is careful not to commit himself to a 'strong' reading of the apparently converging proxies he presents, he argues that such a reading would support the model of 'one-off' growth, against the alternative of sustained growth. He sees support for this in the very limited data that we possess for real wages and incomes, as well as in the matrix he posits for possible scenarios in growth in population and tax income and their effect on the State budget. While his emphasis on greater theorisation of attempts to understand proxy data and on formulating and testing falsifiable hypotheses is entirely correct, the particular proxies he presents and the manner of their presentation are flawed to the extent that one cannot claim that they really support the choice of the unsustainable 'one-off' growth model over the alternative. Before we reach the point where we can use proxy series to test hypotheses, we need to think further not only about what proxies are to be considered sufficiently robust for this purpose, but also how to present and compare them.

Converging proxies?

The apparent convergence of the proxies illustrated in Scheidel's fig. 1 is very misleading. Two of these 4 proxies are simply different ways of graphing exactly the same set of data on 1189 shipwrecks (as Scheidel [n.7] admits); their cumulation in the graph does not reflect two different sources of evidence, and they cannot be argued to support each other. Moreover, as I have argued elsewhere,¹ the shipwreck data cannot be seen as a reflection of economic performance. It is not simply a matter of the uncertainties in the data summarised by Scheidel, but the fact that, as data for trade, the numbers of shipwrecks over time are so demonstrably at variance with the evidence from terrestrial sites that the evident biases in the maritime data set vitiate its utility for the purpose of tracking economic performance over time, and especially within the Roman period. The decline in numbers of wrecks after A.D. 100 is a bias peculiar to the wreck data set, and is not reflected in the evidence of long-distance maritime exports from 1st- and 2nd-c. terrestrial sites; ARS exports from N Africa really take off and the harbour at Portus receives a major upgrade under Trajan just as the graph shows wreck numbers halving.² The overall wreck graph is a graph of known cargoes on the seabed as much as (or even rather than) wrecks; as such, it is highly sensitive to cargo durability and visibility, and it is dominated by patterns of amphora usage. If one looks instead at the numbers of wrecks of stone cargoes (fig. 1), rather than the overall wreck numbers or the amphora cargoes, these continue increasing through the 2nd and even into the 3rd c.; this is the picture we would expect from the archaeological and epigraphic evidence for building activities on land. The drop in overall wreck numbers must be a combination of such factors as changes in cargo visibility resulting from the increased use of barrels, the current under-exploration of the N African coastline, and perhaps larger shipping and routes across open water. These factors demonstrate that the wreck evidence cannot bear a straightforward relationship to the volume or intensity

1 A. I. Wilson, "Approaches to quantifying Roman trade," in A. K. Bowman and A. I. Wilson (edd.), *Quantifying the Roman economy: methods and problems* (Oxford 2009) 213-49; id., "City sizes and urbanisation in the Roman Empire," in A. K. Bowman and A. I. Wilson (edd.), *Settlement, urbanisation and population* (Oxford, forthcoming).

2 Wilson forthcoming (supra n.1).