

# A systematic method for estimating the populations of Greek and Roman settlements

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The last few years have seen a growing interest in the urbanism of the Greek and Roman world.<sup>1</sup> This has led to a consensus of sorts about some of its vital statistics, such as the sizes of the populations of the most important settlements and the size of the overall urban population, the urbanization rate (i.e., the share of individuals that lived in urban, rather than rural, contexts), and the total population.<sup>2</sup> A good example comes from W. Scheidel in the *Cambridge economic history of the Greco-Roman world*.<sup>3</sup> According to him, it is likely that c.1.5 million people lived in the 5 largest cities of the Greco-Roman world by the 2nd c. A.D. These included Rome, which is usually agreed to have had a population of about 1 million; Alexandria, which might have had c.500,000; Antioch, which could have had at least 150,000; and Carthage and Ephesus (Scheidel does not give explicit figures for those). Although there must have been a few more cities of about the same size, most of the rest were reasonably small with on average no more than a few thousand inhabitants.<sup>4</sup> Accordingly, Scheidel suggests that the overall urban population of the Greco-Roman world was between 7 and 9 million, and that the urbanization rate would have to have been between 10% and 15% to agree with his estimate for the total population of between 59 and 72 million.<sup>5</sup>

Although the bare outlines of this summary are almost certainly correct, there is surprisingly little evidence for many of these statements.<sup>6</sup> There is relatively good evidence for the estimates for Rome, Alexandria and perhaps Antioch, but there is little information about the rest of the settlements. As a result, it has been virtually impossible to discuss the size of most settlements and the size of the overall urban population, the urbanization rate or the total population with much confidence. Here we will review earlier attempts to estimate the populations of ancient settlements based on various forms of textual and archaeological evidence and summarise more recent attempts to estimate the populations of such settlements by measuring their inhabited areas and multiplying these by ranges of

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1 A. K. Bowman and A. I. Wilson (edd.), *Quantifying the Roman economy* (Oxford 2009); iid. (edd.), *Settlement, urbanization, and population* (Oxford 2011); P. Erdkamp, "Urbanism," in W. Scheidel (ed.), *The Cambridge companion to the Roman economy* (Cambridge 2012) 241-65; M. H. Hansen, *The shotgun method: the demography of the ancient Greek city-state culture* (Columbia, MO 2006); id., "An update on *The shotgun method*," *GRBS* 48 (2008) 259-86; J. W. Hanson, "The urban system of Roman Asia Minor and wider connectivity," in Bowman and Wilson *ibid.* (2011) 229-75; id., *An urban geography of the Roman world, 100 B.C. to A.D. 300* (Oxford 2016); D. Kennedy, "Demography, the population of Syria, and the census of Q. Aemilius Secundus," *Levant* 38 (2006) 109-24; W. Scheidel, "Demographic and economic development in the ancient Mediterranean world," *J. Institutional & Theoretical Economics* 180.4 (2004) 743-57; id., "Demography," in W. Scheidel, I. Morris and R. P. Saller (edd.), *The Cambridge economic history of the Greco-Roman world* (Cambridge 2007) 38-86; A. I. Wilson, "City sizes and urbanisation in the Roman Empire," in Bowman and Wilson *ibid.* (2011) 161-95.

2 Kennedy (*supra* n.1) 109.

3 Scheidel 2007 (*supra* n.1) 78.

4 *Ibid.* 80.

5 Scheidel 2004 (*supra* n.1) 747; id. 2007 (*supra* n.1) 79.

6 Hanson 2016 (*supra* n.1).