The unit measurement of marble in Diocletian's Prices Edict

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Introduction

The Prices Edict of Diocletian was issued in late 301 as an attempt to stem rampant inflation by setting ceiling prices for a range of goods and services. It seems thus to provide a rich quarry of evidence for illustrating manifold aspects of the ancient economy, but the concise form of its entries make any attempt to use this information problematic. One such case is the section entitled *de marmoribus*, which lists the maximum prices for 19 types of marble or granite (*PE* ch. 31).[1] The unit quantity, for which the prices are given, is per *pedem*, in Greek, πό(δα) α'. It is normally assumed that this must denote a cubic foot, an assumption made in both the main editions of the edict;[2] the only other possible alternative, that *pes* here refers to the square foot, has rarely been discussed and generally dismissed.[3] Yet the term is ambiguous, and calculations using the cubic foot render marble suspiciously cheap for a supposedly luxury item. It therefore seems appropriate to investigate these two alternative interpretations more thoroughly than has been previously attempted, and to consider carefully the case for taking the unit of measurement as the square rather than the cubic foot.

pes / πο(ύς) as a unit of measurement

Although both Greek and Roman systems of mensuration use the foot as the basic unit for distance and the foot squared for area, volume is more usually given as capacity, giving a wet (*congius, amphora*) and a dry (*modius*) set of measures.[4] The cubic foot also existed, but its use in Latin sources is meagre,[5] writers such as Vitruvius and Pliny the Elder being more interested in discussing the significant dimensions of solid objects than their overall volume.[6] Even Pliny's

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1   The standard composite text is given in Giacchero 1974 vol. I 210-11. For more recent Latin versions, see M. Crawford and J. Reynolds, "The Aezani copy of the Prices Edict," *ZPE* 34 (1979) 178 (Aezani), and C. Roueché, *Aphrodisias in late antiquity* (London 1989) 299-300 (Aphrodisias).

2   S. Lauffer, *Diokletians Preisedikt* (Berlin 1971) 280 and Giacchero 1974 vol.I 305-6. Pensabene also assumes a cubic foot in his calculations ("A cargo of marble shipwrecked at Punta Scifo near Crotone [Italy]," *IJNA* 7 (1978) 108, 113 and 118 n. 2; cf. his "Osservazioni sulla diffusione dei marmi e sul loro prezzo nella Roma imperiale," *DialArch* 3rd ser. 1 [1983] 57-58).

3   K. T. Erim and J. Reynolds, "The copy of Diocletian's Edict on maximum prices from Aphrodisias in Caria," *JRS* 60 (1970) 136 do consider this alternative, but come down on the side of cubic feet. S. McNally and I. D. Schrunk, *Diocletian's palace: American-Yugoslav joint excavations* 6 [Minneapolis 1989] 22 n. 1) assume that 3 types of stone from the edict are priced in square feet (Docimian, Thessalian and Proconnesian) and 2 types in cubic feet (Porphyry and Lacedaemonian), but they provide no justification for their differentiation. The linear foot can be excluded, since it would imply that only columns were being considered. This would be unduly restrictive, and the prices would make monumental architecture ridiculously cheap. Other arguments for excluding columns from the ambit of the edict are discussed below.

4   Thus *OCD* (2nd ed., 1970) 659 and O. A. W. Dilke, *Mathematics and measurement* (London 1987) 26.

5   The basic account is given in F. Hultsch, *Griechische und römische Metrologie* (2nd ed., Berlin 1882) 112-13; see also A. Oxé, "Kor und Kab," *BonnJb* 147 (1942) 139-42.

6   See, for instance, Vitr, *Arch.* 3.3.10-12 (dimensions of columns, by diameter and height); Pliny, *NH* 36.2.6, 36.3.7, 36.21.95. 36.14.65-74 (columns and obelisks by height); Vitr., *Arch* 3.5.1-3 (dimensions of bases); Pliny, *NH* 16.76.200-1 (trees, cf. R. Meiggs, *Trees and timber in the ancient Mediterranean world* [Oxford 1982] 472-74); Vitr., *Arch.* 2.3.3, and Hero, *Stereometrica* 2.43 (bricks).