



Francqui Foundation Conference

Long-Term Quantification in Ancient Mediterranean History

Alain Bresson (University of Chicago), *Grain, market and agricultural production in Greece: ancient and modern data*

It is now ever more recognized that market and market institutions were fundamental in explaining the development of the ancient Greek economy. This is of course true of the internal market. The *polis* organization, boosted by the invention of coinage, allowed a division of labor that enhanced productivity. But division of labor was of also the rule on the international market. Long distance trade allowed the population of Aegean Greece to be fed with grain produced in regions of comparatively high productivity (Sicily, Cyrene, Egypt, Pontus). Conversely, Aegean Greece specialized in the production of wine and oil, but also handicraft products like textiles, weapons, perfumes, luxury objects and ceramics. To illustrate the result of this division of labor, we could say that slaves of the Laurion silver mines, or female slaves, or manumitted weavers of Athens were fed with comparatively low-cost imported food. Now is it possible to get a better view of the grain market in ancient Greece? The attention devoted to grain should not conceal the fact that products other than grain were also traded. But grain was the basic food of the population, and in ancient Greece, grain was traded *en masse*. This trade had nothing in common with the trade in luxury objects, which were destined for a small, aristocratic minority of the population. Imported grain was a continuing necessity in order to feed the population of the Aegean. A city like Athens in the second half of the fourth century had to import between 66% and 75% of its grain every year.

But how can we prove this? Fortuitously, we have a set of literary texts and inscriptions from the second half of the fourth century which allows us to quantify both the local production of Attica and the imports. Among these data, the most famous is a 329/8 BCE Eleusis inscription, which gives us the amount of grain production in Attica and in its dependent territories. However, there has been a huge debate over these ancient data. Are they reliable?

And even if they are, how can we estimate the value of this production for a single year? To evaluate the figures provided by the Eleusis inscription, there exists a document of central importance which has thus far been neglected. For the beginning of the 20th century, we have a series of statistics for agricultural production in the several regions of modern Greece and, incidentally, only for one year, of Attica. These figures are sufficient to allow us to make an estimate of the value of the amounts in the inscription of 329/8. Far from being a year of exceptionally low production, 329/8 appears to have been an average or good year.



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With this approach to the Eleusis inscription, we can disprove the contention that Athens was self-sufficient. But beyond the case of Athens, the modern Greek statistics are of extraordinary value because, for a period of c. twenty years, they provide us detailed statistics on the grain, wine, oil, vegetable production of the several regions of Greece. We can thus correlate the modern figures with ancient data, for instance on the high grain productivity of Thessaly, or the very low one in most islands. It thus becomes absolutely clear that, just like in modern times, most ancient Greek communities were forced to trade: the local grain production was inevitably so low, but conversely the wine or oil production potentially so high, that it becomes clear that the life of these communities was simply unthinkable without trade. This is all the more true since we know that in many cases population density was higher in antiquity than it was at the beginning of the 20th century.

Inevitably, this methodology will raise objections. Is it sound to use modern data to estimate ancient production? Should we accept that data on modern Greek agriculture can provide us with a precise picture of ancient Greek agriculture? To the second question, the answer should certainly be no: we know for sure that there has been a considerable evolution over time and that for instance islands like Lesbos or Thasos that produced mainly wine in Antiquity are now covered with olive trees. Many other examples could be provided of this variability of production, even in modern times. And yet there is every reason to answer yes to the first question. It is sound to use modern agricultural data (prior the introduction of fertilizers and mechanization) to evaluate ancient production not because production choices, techniques or even climate would have been the same, but because basic environmental factors such as available agricultural land, land productivity and comparative rainfall differences have remained unchanged.

This paper will provide analyses of three test cases. Beyond these test cases, a systematic data base, allowing the correlation of ancient and modern economic data, should be developed, and this could lead to surprising results in our reading of ancient data.