1: Approaching the Roman economy

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Defining the Roman economy

What was the "Roman economy?" In this volume, we apply this term to economic developments that occurred within the Roman Empire, a polity that evolved from an alliance system in peninsular Italy into a large empire that from the second century BCE onward came to dominate and then rule the most densely populated parts of western Eurasia and North Africa west of Mesopotamia and Iran before it eventually experienced substantial contraction in the fifth and seventh centuries CE. Although many of the following chapters devote particular attention to conditions in Roman Italy, the original core of the empire, coverage extends across the varied territories under Roman control. More specifically, this volume seeks to relate economic structures and processes to the formation of the imperial state.[1]

Thanks to its exceptional size and duration, the Roman Empire offers one of the best opportunities to study economic development in the context of an agrarian world empire. Moreover, the fact that the Roman period was the only time when the entire Mediterranean basin was contained within a single political domain raises the question of how much the specific characteristics of the Roman economy owed to imperial unification. The Roman economy was a typical premodern economy in the sense that it depended on organic fuels and was dominated by agriculture and production within households. In developmental terms, it can be seen as the continuation and culmination of the expansion of the Hellenistic economies of the Eastern Mediterranean and Near East that in turn represented the mature phase of the political and economic recovery that had commenced in the Early Iron Age. The Roman period witnessed the extension of Near Eastern, Hellenic, and Hellenistic features such as urbanization, monetization, market exchange, taxation, and chattel slavery into the western peripheries of Eurasia.

Three things are necessary to understand Roman economic history: determine what happened, explain why it happened, and assess these developments comparatively by relating them to those of other times and places, thereby situating the Roman case in a global context of pre-modern economic performance. Explanations must be grounded in the empirical record but do not directly emerge from it: the evidence never speaks for itself. The study of causation benefits from an awareness of economic theory and from explicit comparison: both are vital tools in formulating logically coherent and historically plausible hypotheses that can be tested against specific data. Only an integrated approach that combines evidence, theory, and comparison has the potential to generate credible models of Roman economic development.

PERFORMANCE

Our appreciation of Roman economic performance and its change over time rests on careful study of its visible manifestations. At the most basic level this requires the collection, analysis, and standardization of relevant data. Material remains are of crucial importance: consumer goods, technical devices and containers, remains of settlements, evidence of land use, building materials, human bones, plant and animal remains, coins, shipwrecks, and even traces of air pollution preserved in ice and sediment all shed light on economic life in the Roman world. In addition, we derive information from literary accounts and legal regulations and from large numbers of stone inscriptions and papyri as well as graffiti and wax tablets. Even though the scarcity of a potentially decisive type of documentation – that of ancient statistics – inevitably inhibits our efforts, on the whole the main challenge lies not so much in the amount of evidence, which is abundant and keeps expanding, as in its interpretation. In the near-absence of records of how much was produced, traded, and consumed, modern observers commonly interpret different kinds of data (such as those listed above) as putative proxies of Roman economic development. Temporal or spatial variation in the quantity or quality of such proxies is taken to reflect economic change.

In practice, however, the meaning of such variations is often ambiguous, which can make it difficult to relate them directly to economic performance. For example, evidence suggestive of population growth might reasonably be interpreted as a proxy of growing economic output – but only if it was not offset by a reduction in per capita levels of consumption. To complicate matters, demographic change is an elusive issue. Field surveys trace objects and not people: variation in surface scatter primarily reflects variation in the incidence of datable objects, which represents a different proxy of economic development. Urbanization may be interpreted in different ways, which are by no means mutually exclusive: as a sign of population growth, as an indicator of intensive economic growth and division of labor that increased the relative share of the non-agrarian sector, and of nucleation driven by social and political factors such as the emergence of an empire-wide city-based ruling class. The scale and direction of long-distance trade is often inferred from the frequency of ceramic finds, above all shipping containers and tableware, and from the distribution of shipwrecks: yet changes in the use of barrels or sacks may obscure actual trends, and shipwrecks only remain visible if they contain durable cargo. Whereas it would be hard to dissociate the appearance of large numbers of elaborate *villa* estates in late Republican Italy from increasing wealth and rationalization of production, it remains much more challenging to make sense of the later reduction of their numbers. Technological progress may be measured by tracking novel installations such as water-mills, but such devices can be very rare in the material record. Monetization through coinage may have been an index of economic development or more mundanely a function of increasing mining activity in previously underdeveloped areas. Moreover, coinage does not tell us about the scope of credit money and how it changed over time. Isotopic evidence of lead pollution reflects mining output but does not show how changes in metal use were related to overall economic growth or decline.[2] Contextual incentives or disincentives to economic activity also merit attention, yet their impact is even more difficult to gauge. They include evidence of institutional arrangements, such as laws and tolls, or signs of literacy.[3]

It is important to be specific about the limitations of the evidence. It would seem perverse to question the economic relevance of any given proxy individually, viewed in separation from others. Inasmuch as different types of data converge in distinctive ways, we may reasonably assume that they indicate at least the general direction of economic development. Thus, the combination of more or higher-quality goods being more widely distributed, of more or costlier infrastructure, and of more archaeologically visible settlement points to economic growth, and vice versa. At the same time, it is much more difficult to distinguish between extensive (aggregate) and intensive (per capita) growth. Once again, massive congruent changes in different indicators may well suggest not just the former but also the latter. However, such broad clues do not clearly translate to estimates of economic output in terms of per capita product or real incomes.

Historians are unable to establish Roman GDP without relying on exceedingly schematic extrapolation from select data for prices and wages. More generally, GDP estimates are to a significant extent determined by what we expect to have happened rather than by empirical measurements. They are useful mostly in establishing boundaries that constrain modern conjecture but far less capable of supporting cross-cultural comparison, of distinguishing among regions, or of discerning change over time.[4]

The distribution of GDP is at least as important as its size. Even if intensive economic growth could reliably be established, we would still need to ask how these gains were allocated. Indications of rising living standards in the general population are not incompatible with the notion of disproportionate elite enrichment: high-profile trade and urban monumentalization can easily be read in both ways. Slavery is an excellent example: just as it creates wealth by turning labor power into capital and is capable of increasing productivity, it is likely to exacerbate asset and income inequality within society. A wide range of material evidence, from house sizes to skeletal remains, can be marshaled to investigate such distributional effects.[5]

This raises an even bigger question, that of the relationship between economic development and human welfare. Information on real wages throws some light on the consequences of economic change but is relatively scarce and very unevenly distributed. Textual accounts, pollen data, and food remains can all help us obtain a better idea of Roman diets. The most immediately relevant evidence is preserved within the human body: stature and dental and bone health are powerful indicators of nutritional status and disease loads. Yet even physiological markers are by no means easy to interpret: economic growth may improve access to foodstuffs (thus favoring bodily wellbeing) but, by encouraging urbanization, may simultaneously increase the transmission of infectious disease (thereby causing the opposite effect).[6]

All this adds up to a thoroughly mixed picture of promise and limitations. On the one hand, the empirical record is abundant and continues to grow as new methods are developed: as always, natural science leads the way by enhancing our knowledge of the provenance of goods and people, of mineral extraction, and of human well-being. Not only will there be new data, but already existing data will also yield more information. Systematic analysis, greatly aided by information technology, will further contribute to this process. A growing amount of information will be available to test hypotheses and undertake comparisons with other times and places. On the other hand, some constraints will likely prove insuperable, as in the case of GDP estimates. But this focus on the level of economic performance and its consequences neglects what are perhaps the most interesting questions, those concerning the reasons for observed outcomes. Richer data help us address these questions but cannot answer them. The next two sections take a closer look at what is required to do so.

Comparison

The sheer size of the Roman economy creates a strong temptation to study it on its own terms by concentrating on conditions and developments within a clearly circumscribed space and period. This has always been and still is the dominant approach. Yet this exercise can only be a first step: by itself, it deprives Roman economic history of vital context. Comparison is not merely an optional bonus feature of historical inquiry: it not only gives us a better sense of how the Roman economy performed relative to that of other pre-modern systems, it also provides much-needed inspiration in the search for causation. Broadly speaking, comparison comes in three flavors: focusing on the same period, on the same space, or on the same type of social formation.[7]

The first kind of comparison would set Roman Italy against the Hellenistic East, or the mature Empire against economies in ancient Iran, India, and China. This approach is particularly useful if we are looking for factors that may have affected different economies concurrently. Candidates include connectivity, as proposed in the more ambitious versions of world-systems theory, or, more plausibly, exogenous forces such as climate change that acted more globally and thereby influenced the course of otherwise largely separate economies.[8]

The second kind privileges space by situating the Roman economy within the *longue durée* of a particular region or eco-system. Two recent attempts warrant particular attention. Peregrine Horden and Nicholas Purcell have focused on the Mediterranean properties of the Roman economy, stressing the nexus between physical connectivity and diverse micro-ecologies that favored mobility and exchange, as well as long-term continuities underlying phases of intensification and abatement. This perspective, which seeks to build a history *of* and not merely *in* the Mediterranean by taking proper account of ecological circumstances and basic structures, provides an important counterweight to the otherwise dominant preoccupation with the specifics of particular social formations. In a nutshell, it may help us determine how "Roman" the Roman economy really was. Instead of making us lose sight of the potential significance of the institutions of Roman rule – a likely but by no means inevitable corollary of this perspective – appreciation of the Mediterranean context ought to encourage explicit comparative analysis of different pre-modern economies in that region.[9] The other example is Willy Pleket's emphasis on continuities or rather functional equivalencies between the Roman economy and the later European economies of the Middle Ages and the *Ancien Régime*. This approach questions common notions that the structure of the Roman economy was substantially different from that of later periods of western history. Less interested in the ecological properties of a given region, it stresses similarities over discontinuities, assimilating the various economies of pre-modern Europe into a shared pattern of subsistence activities that were interspersed with niches of capitalist development tied to markets and long-distance trade. Once again, this perspective is useful in so far as it challenges preconceived notions of putatively "Roman" features but runs the risk of eliding potentially quite fundamental differences between the fusion of town and country or the dynamics generated by universal empire in the Roman period and contrasting conditions later on. As before, the principal value of this paradigm lies in providing a template for systematic diachronic comparison.[10]

The third and intellectually most stimulating kind of comparison transcends the constraints of time and space by focusing on institutional and organizational features. Thus, the Roman economy can fruitfully be compared to the economies of other large agrarian empires wherever and whenever they existed. This approach, still in its infancy, works best for formations that have generated comparable or, preferably, better data sets. Peter Bang's ongoing work on the Roman Empire and Mughal India is currently the most prominent example. China offers particularly rich opportunities: while the economy of the Han Empire has already begun to be considered in relation to that of the Roman economy, the economic efflorescence of the Song period (and its dramatic curtailment) may well constitute the closest analogy to Roman developments. In addition, the Umayyad and Abbasid Caliphates and especially the Ottoman Empire likewise offer suitable comparanda. But historical comparison is not merely about similarities: the study of contrasts can be instrumental in establishing the causal significance of specific variables in terms of observed outcomes. In the present case, the most obvious comparison is that between tributary integration in the Roman economy and the mechanisms of economic development in the very different political ecology of the Greek city-state culture.[11]

None of these different approaches is inherently superior to others, and all of them have something valuable to add. While consideration of concurrent developments may draw attention to otherwise obscure factors and the long-term study of the same environments may shed light on the influence of continuities or discontinuities, linkages are not necessary to justify comparison: temporally and spatially unrelated cases can equally well be brought together as long as this exercise improves our understanding of causation. The latter is perhaps the single most important element of a comparative approach to the Roman economy: our goal is not to rank it in some imaginary global league table but to explain why it developed the way it did.

Causation

Markets and violence

In their critique of academic models of medieval (English) economic development, John Hatcher and Mark Bailey remark on the dominance of three competing 'supermodels' that focus on the role of demography (a Malthusian perspective), class relations (a Marxist perspective), and commercialization and consequently seek to explain the same historical processes "in exclusive and starkly conflicting terms." The contrast to the study of the Roman economy is striking: not only is there no need to respond to and bridge the gaps between competing 'supermodels,' historical interpretation has, with very few exceptions, barely advanced to the stage of explicit model-building.[12]

Instead, much existing scholarship has primarily been concerned with establishing facts, or otherwise accounting for them with the help of inchoate notions of plausibility that are heavily indebted to contemporary modes of economic behavior. Inasmuch as analytical framing devices are employed, the debate continues to be dominated by the contrast between 'primitivist' and/or 'substantivist' perspectives on the one hand and 'modernist' and/or 'formalist' ones on the other. Dating back to the nineteenth century, these are concerned with questions of scale (positing more or less economic development) but also, and crucially, with the structure of ancient economies. Put in a highly simplified manner, formalist positions stress similarities between ancient and modern economies by emphasizing the putative significance of price-setting markets, comparative advantage, and capitalist ventures, whereas substantivists emphasize discontinuities by focusing on how status concerns mediated economic behavior and generated specific dynamics that reflected elite preference for rent-taking and landownership and disdain for commercial enterprise that reinforced the fusion of political and economic power and marginalized independent merchants. De facto, if not in principle, these positions frequently tend to correlate with divergent assessments of the scale of economic development, with formalists keen to document growth and integration and with substantivists pointing out constraints.[13]

Both perspectives share a strong interest in the mechanisms and degree of economic integration, which is plausibly regarded as a yardstick of economic development in general: for economies to grow, they have to become more integrated.[14] Again very broadly speaking, the most recent generation of scholarship on the Roman economy has produced two competing visions of the underpinnings of its integration and hence the nature, scale, and sustainability of economic growth. Economic activities that extended beyond the household were framed by two types of relations, relations of the market and relations of domination. Historians of the Roman economy divide on whether they privilege market relations – characterized by trade driven by comparative advantage – or power relations such as tribute and rent-taking and slavery and their economic consequences.

According to market-centered narratives, Roman conquest created favorable preconditions for production and trade. Empire lowered transaction costs by reducing risk, easing the flow of information, and standardizing media of exchange at the same time as it facilitated an expansion of primary production (in farming and mining) that in turn encouraged urbanization, manufacturing, and production for the market. It enabled different regions to capitalize on their comparative advantage in producing goods for exchange. In this scenario, the imperial state plays an important role indirectly, by providing favorable framing conditions, and (in some versions) also directly, by issuing regulations or coinage or by investing in infrastructure that was conducive to trade or, at a later stage, by throttling markets through deleterious intervention. For much of the Roman period, these processes are thought to have created a conglomeration of interdependent markets.[15]

Others question whether market exchange and economic integration would automatically arise in that context. They assign critical importance to the need of the imperial state to process revenue and to the opportunities this created for political and landowning elites. From this perspective, integration was very much driven by tribute and rent collection and by the modes of exchange that it effectively supported. One of the most notable examples of this perspective is the Keynesian "tax-and-trade" model developed by Keith Hopkins: state demands for tax and elite demand for rent and their conversion and transfer impelled reciprocal flows of taxed and traded resources that encouraged urbanization, monetization, and the formation of exchange networks.[16] The counterpart to this model is Chris Wickham's account of the unraveling of the Roman economy, a process he explains with reference to the decline of the fiscal system and the elite network of market-oriented production and long-distance exchange that the state sector had sustained.[17] The most recent incarnation of this approach is Peter Bang's model of tributary surplus mobilization and portfolio capitalism (i.e., power elites' expansion of their economic activities into commercial ventures) that is based on both Roman evidence and explicit analogies to other agrarian empires where similar framing conditions prevailed.[18] In all these models, the Roman economy waxed and waned along with the power of the imperial state.

It would be a mistake to regard these perspectives as mutually exclusive causative interpretations.[19] In the most general terms, it is hard to see how Roman rule could have failed to lower transaction costs in ways that were, at least in principle, conducive to an increase in the volume of exchange. Yet this does not establish that any such development did not critically depend on the redistributive fiscal mechanisms of the state. At the same time, it is important to recognize that these two approaches do not merely represent two complementary sides of the same coin. The question which types of relations were essential or dominant in bringing about observed outcomes is not merely of intellectual interest but of vital importance for understanding the dynamics of Roman economic development and especially its limits and decline.

This debate underlines the pivotal role of comparison, theorizing, and model-building. Divergent modern reconstructions are ultimately shaped by analogies: with post-Roman Europe in the case of market-centered narratives or with other patrimonial empires in the case of coercion-based models. They are also indebted to different theoretical underpinnings and conceptualizations. One way forward that has the potential to bridge the gap between formalist or neo-classical notions of comparative advantage and a benign state and more substantivist or fiscalist models of commercial development is offered by the New Institutional Economics and Economic Sociology.[20] By demonstrating how social and cultural features shape economic activity, they alert us to the overriding significance of historically specific "rules of the game," the incentives and constraints that were instrumental in determining Roman economic development. Students of the Roman economy have recently begun to pay attention to these fields and one can only hope that this trend will continue.[21]

Ecology

Regardless of whether they emphasize markets and comparative advantage or tributary integration and coercion, currently dominant perspectives uniformly privilege human agency. However, we must not forget that economic behavior was embedded in a deep ecological context that constrained actors' choices and shaped outcomes. In marked contrast to the intensity of past and present debates about the institutional determinants of Roman economic development, historians have barely begun to take proper account of ecological factors. We have already noted recent work on the supposed commonalities of Mediterranean economies. Alternatively, one might focus on changes in the distribution and quality of crops and livestock, or explore the impact of soil erosion and deforestation. Due to constraints of space, this section will consider only two fundamental issues, namely the interaction of economy and demography and the role of climate change.[22]

Population is central to the economic history of later historical periods and despite its pervasive neglect by Roman economic historians can be expected to have played an important role in that period as well.[23] Both structural demographic features and population numbers are of great relevance. The former include low levels of overall and health-adjusted life expectancy that necessitated high fertility rates and thus restricted female labor participation, discouraged investment in human capital, and impaired asset management through the imposition of guardianship on orphans. Family and household structures mattered inasmuch as different patterns of marriage and residence – such as nuclear or extended families, age of first marriage, and levels of endogamy – helped condition economic behavior.[24]

The relationship between economic and demographic growth is perhaps the most important problem. If the Roman economy increased its output, it presumably also increased the number of consumers: the production and support of people is the core function of any economy. Although Roman natural population growth is not strictly speaking provable – in the technical sense that serial statistics referring to the same (breeding) population are lacking –, it is both logically compelling and made highly likely by the archaeological record that such a