

CHAPTER 19

THE LATE REPUBLIC

WILLIAM V. HARRIS

I INTRODUCTION

Conventionally enough, this chapter will attempt to answer questions about economic growth: did per capita GDP grow in the late Republic, and what determined whether it did or not? Which features of the Roman world assisted growth, which impeded it? It should also be our aspiration to recreate the economic lives of flesh-and-blood people, peasants, slaves, craftsmen – and the rich (who bulk so large in the evidence). Economic history should tell us among other things who went hungry, what work was like, and who could afford every amenity (or, as economists say, utility).

Prime topics therefore will be the actual mechanisms of economic life (their degree of technical development) and their capacity for delivering a decent physical existence, and beyond that the standard of living of each social class or group. This is a fairly mainstream approach: when Douglass North set out his agenda, he included in his notion of economic “performance” the question of income *distribution*.¹ In addition, we should not neglect the field of “public goods”: it may be important to consider the effects of the Roman habit of allocating plentiful resources to some public “goods,” such as foreign wars and the water supply, and few to others, such as mass education.

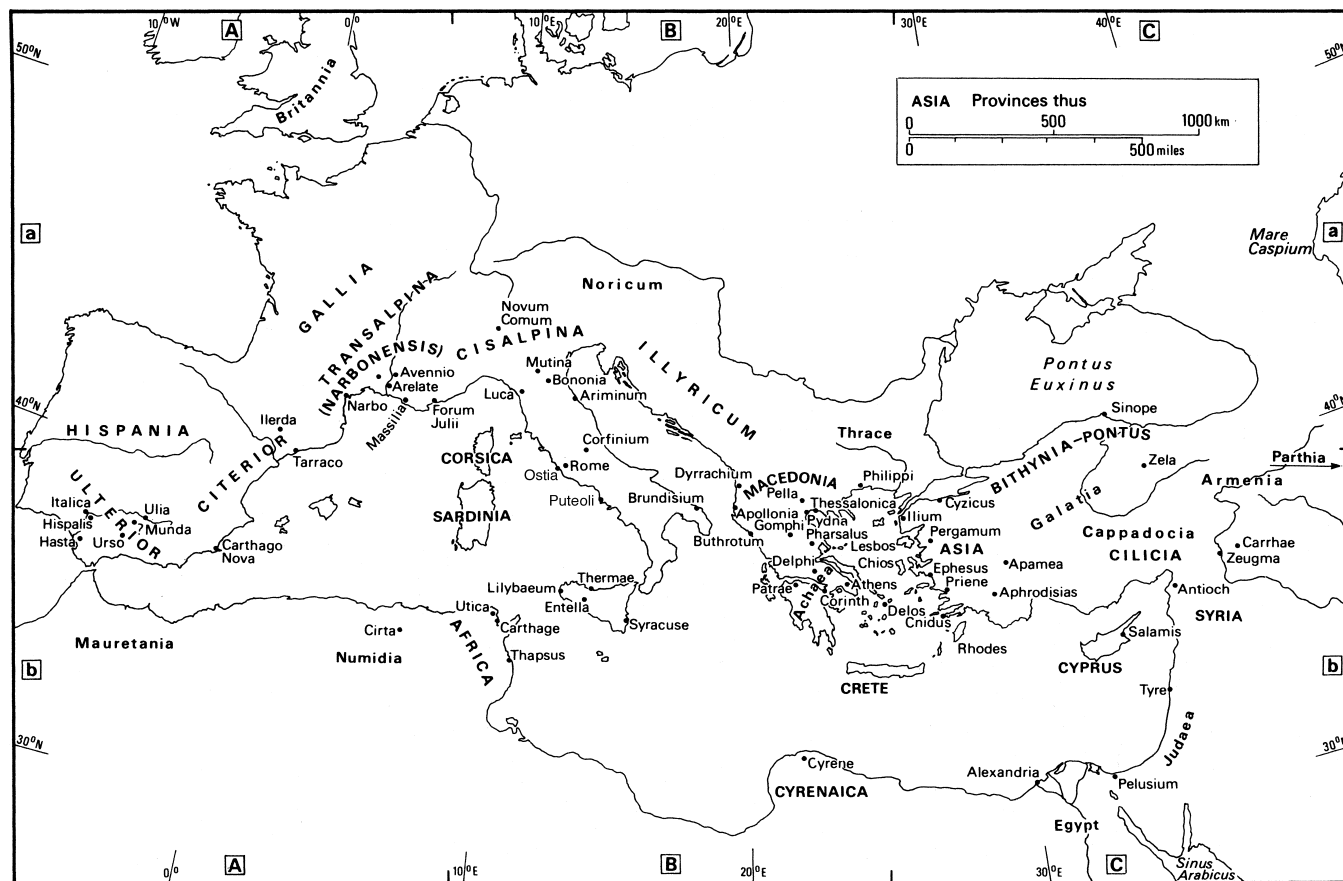
There can hardly be said to be one single accepted view of the late-republican economy. An experienced archaeologist has written, with quotation marks admittedly, of an “economic miracle,”² which may be an Italocentric view. Gelzer once wrote vaguely but not without reason of the “chronic unhealthiness” of the Roman economy in the period before the civil war of 49 BC,³ a view which is hard to reconcile with the continuation through this whole century of a high volume of Mediterranean trade (cf. Table 19.1). A consensus view may hold that the period was one of sluggish and sporadic growth.⁴

¹ North 1981: 3. Nowadays some economists and even the World Bank realize the complete inadequacy of GDP as a measure of economic performance: see, e.g., Todaro 1997: 164–71.

² Manacorda 2001: 392. Cf. “swift economic growth” in Frier 1985: 270.

³ Gelzer 1968: 221.

⁴ Cf. Hopkins 1983b: xiv–xv, and from another perspective Persson 1988: 132.



Map 19.1 The Roman world in 50 BC.
Adapted from Crook et al. 1994: 566

II EXISTING CONDITIONS, THE *LONGUE DURÉE*, AND EMPIRE

There is no need to add much to what has already been said above about the ecology of the Mediterranean world and the adjacent regions, and about climate, though we shall bear in mind that the period may have been one of warmer temperatures,⁵ with overall economic consequences unknown.

It is vital, however, to notice that well before 133 BC Rome, while it retained its agrarian-military economy, had also become part of a larger Mediterranean Hellenistic-Carthaginian economic system which was different in kind from the economy of Greece before 400 BC and from that of pre-Hellenistic Italy. The links between this world and that of Rome grew steadily stronger as Rome asserted its control over the Greek areas of southern Italy and over Sicily (we recall, for example, that southern Italy was one of the main areas of Hellenistic metal-working),⁶ and even more of course as Roman power spread into the Aegean and Asia Minor. Among the many symptoms of this linkage are the eastwards movement of Italian amphoras,⁷ the commercial settlement of Romans, Italians, and their freedmen established on Delos from 166 BC, and the presence of Italian merchants at Alexandria.⁸ The most important result of all these Hellenistic ties was arguably the spread of Greek financial sophistication to Rome and Italy.

Let us define Roman imperial power as it was in 133 BC. It was never coextensive with the formal “provinces” ruled over – more or less – by Roman governors. The Roman conception of empire also included the Italian peninsula, Gallia Cisalpina and a number of places controlled by vassal rulers (hence the standard expression *provinciae et regnal reges*). By 133 BC Macedonia was a province, Achaea too. King Attalus III of Pergamum, who had ruled in the shadow of the Romans, died at about this time and bequeathed them his wealthy kingdom. There were still no other Roman provinces in the eastern Mediterranean, yet no one would doubt that Polybius was right to say that Rome’s victory over Macedon at the Battle of Pydna (168 BC) had effectively completed its conquest of the whole (Mediterranean) world. Outside the core area formed by Italy and the provinces, there was always a penumbra of Roman power, places where Rome received a degree of obedience – the “informal empire,” we might call it. And outside that area, which was constantly being redefined, there was another area which was also to varying degrees part of the economic

⁵ With regard to climate, however, one wonders what exactly led the respected agricultural writer Saserna (early first century BC) to assert that improved weather had in the long term made land more fertile (Columella, *Rust.* 1.1.5, with details). – Map 19.1 shows most of the places named in this chapter.

⁶ Treister 1996: 320–2. ⁷ Will 1989.

⁸ *ID* 1699 (“*Alexandreae Italiceae quae fuerunt*”, etc.) (= *ILLRP* 343); also a dedication at Puteoli, *CIL* x.1797 = *ILS* 7273 (“*mercatores qui Alexandr. Asiai Syriai negotiantur*”).

world of the Romans. This shadow area will have included much of pre-Caesarian Gaul, and (to judge from the numerous hoards of Roman coins) much of Romania. The size of Rome's economic tentacles we can also judge from the career of the billionaire financier Rabirius Postumus, whom King Ptolemy Auletes had to put in charge of Egypt's finances, or from that of the senator Q. Ovinius, to whom Cleopatra VII entrusted the management of her kingdom's wool and textile production.⁹

The imperial character of the late-republican state will condition the whole of this account. Twelve major effects stand out:

- 1 The Roman state was becoming Roman-Italian, with numerous consequences: more of the profits of empire flowed to non-Roman Italy, and attempting to "colonize" Italy was now in one way or another a very costly business.
- 2 The Roman state was very frequently at war with foreigners, even in the 30s BC, at considerable expense but to its net financial advantage. Apart from plunder, the largest single exaction of this period was the 20,000 talent indemnity (equivalent to 480 million sesterces) imposed on the cities of the province Asia after the expulsion of Mithridates in 86.
- 3 Tax revenue flooded to Rome, perhaps reaching 540 million sesterces a year in cash (there were also revenues in kind) even before the addition of Gaul.¹⁰ Most of it was spent on the army or in Rome and Italy, but after the profits of Pompey's eastern wars arrived at Rome even the Italian harbor dues (*portoria*) were abolished (60 BC). In civil war conditions in 43 BC direct taxation (*tributum*) was temporarily re-imposed on Roman citizens, but in ordinary circumstances income exceeded expenditure, and the Roman state had no long-term debt.
- 4 Their power and wealth enabled Romans and allies to acquire land in the provinces, as individual settlers and as more or less absentee landowners, and to build commercial enterprises. Meanwhile the Roman elite acquired more and more property in Italy, while the elite itself was being penetrated by Italians, both before and after the Social War of 91–89 BC. Roman and Italian merchants spread all over the Mediterranean world in the course of the second century. We first find members of the social elite (knights) owning land in Sicily in the 130s BC. By the time of Varro and Atticus (by their old age, at least), it was commonplace for a rich Roman citizen to own land in Epirus, Spain, or Illyria.¹¹

⁹ Cic. *Rab. Post.* 22. Ovinius: Oros. 6.19.20.

¹⁰ The size of Rome's revenues is probably an insoluble problem; see among others Hopkins 1980: 116; Brunt 1988: 505. 540 m. derives from Plut. *Pomp.* 45, but some think that the total he alludes to was 340 m. Although we cannot believe in any ancient number which is a 4 followed by zeroes (cf. Scheidel 1996a), Suetonius' statement that Caesar imposed annual tribute of 40 m. sesterces on Gaul (*Iul.* 25) must have the order of magnitude right.

¹¹ The Sicilian case: Diod. Sic. 34.2.3. For the geographical range of Atticus' interests see Rauh 1986: 7–9.

The economic affairs of well-to-do Romans in both the formal and the informal empire were normally conducted with a certain level of support from the representatives of the political power.

- 5 The era of overseas colonization began slowly in second-century Spain, but such settlements could be popular, as in the cases of Iunonia (C. Gracchus' failed settlement at Carthage) and Narbo (118). Saturninus, Marius, and above all Caesar led in the same direction.
- 6 Romans believed that they had a right to exploit the provinces, and acted accordingly (sensible people recognized of course that the exploitation should not be overdone).¹²
- 7 Roman officials could sometimes change whole ecosystems, as in the Po valley.
- 8 The financial needs of peripheral rulers such as Nicomedes IV of Bithynia who bought favors from the Romans created enormous opportunities for Romans willing and able to lend to them.¹³
- 9 The labor market partly consisted of, and was entirely conditioned by, a prolific supply of slaves – still very much in demand even though the years 143 to 71 BC were the classic era of slave rebellions.
- 10 The capital city continued to grow, because tax revenues and private wealth made it an economic magnet; in spite of dangerous sanitary conditions, its population seems to have doubled in 100 years.
- 11 The Roman citizen body became more heterogeneous, ethnically speaking, at all levels, and hence its economic behavior may have changed too. Finally
- 12 the economy of the Roman empire achieved a level of economic integration – unmeasurable but not negligible. The price of grain in Egypt, of slaves in Ephesus and of iron ore in Spain must have been strongly affected by demand in Rome. In 63 BC, so it has been argued, high interest rates attracted funds from Italy to the provinces in the east.

III DEMOGRAPHY

This chapter must not fall into the trap of discussing simply the city of Rome or simply Roman citizens. Though we may find it difficult to gather evidence about economic conditions in, say, Spain or Achaëa prior to 31 BC, it is the whole of Rome's empire that is under consideration.

Before we can even ask whether Roman population increased or decreased in this period, we have to say which population we are talking about. Rome had many more subjects in 31 BC than in 133, for Gaul, the Illyrian coast, sections of Asia Minor, Syria, Cyprus, Cyrenaica, and

¹² Cf. Brunt 1988: 63–4. For Strabo, the Gauls have been “enslaved” (4.195).

¹³ See e.g., App. *Mith.* 11.

Numidia had accrued to the Romans' formal domain. And the number of actual Roman citizens recorded in the census increased dramatically, from 318,823 adult males in 131 BC to 4,063,000 in 28 BC.¹⁴ Whether the latter figure, and the rather higher numbers from later in Augustus' reign, referred to adult males, or to women and children too, has been a classic problem of Roman demography. There is in fact no evidence whatsoever that the basis of the count changed, and Lo Cascio has argued that there is nothing demographically implausible about the increase (which included of course the promotion to citizenship of the entire free population of allied and Cisalpine Italy, not to mention the manumission of numerous slaves).¹⁵ The figures themselves were no doubt highly approximate: 318,823 was an undercount, as is shown by the 24 percent increase at the next census in 125 BC, and the vainglorious author of the *Res Gestae* may be suspected of exaggerating.

Was the area Rome already ruled in 133 BC more populous a century later? There is no decisive argument on either side, but it seems likely that this number did increase, though modestly. The further growth of Rome itself, a cauldron of germs, will have had a mildly negative effect on the overall population,¹⁶ but Roman citizens in general were probably less vulnerable now to Malthus' "positive checks," that is to say malnutrition and its consequences (including the abandonment of infants). And as we shall see below, historians may sometimes have exaggerated the amount of malnutrition in the late-republican city of Rome. Certainly many went hungry in late-republican Italy, but fewer perhaps, in peacetime, than was usual in antiquity.

Outside Italy there may have been grave nutritional problems, especially in times of civil war and in places which were constrained to contribute to Rome's own grain supply (Sicily and "Africa" particularly). There are places in Greece where the admittedly precarious evidence of survey archaeology indicates that the first century BC was a period of population decline. A relatively clear case is the Methana peninsula, where the number of sites reaches its lowest point in the first century BC,¹⁷ and it is hard to resist the

¹⁴ Liv. *Per.* 59; *Res Gestae* 8.

¹⁵ Lo Cascio 1994a and 2001a: taking ample account of counter-arguments. Cf. also Morley 2001; but see above, Chapter 3. For the census figures of this period and their sources see Brunt 1971: 13–14, reproduced by Nicolet 1994: 603.

¹⁶ See Morley 1996: 39–44, for a useful assessment.

¹⁷ Alcock 1993: 42, reporting the work of Mee et al. 1991. More commonly even this degree of chronological precision is impossible. We are typically told that in southwest Boeotia "the Late Hellenistic and Early Roman period . . . experienced a very significant drop in site numbers" (Alcock 1993: 38, drawing on the work of Bintliff and Snodgrass 1985: esp. 145–7), but such are the difficulties of dating sites that the reference is to a period stretching from 200 BC to AD 300 (!). Alcock was duly cautious (e.g., 54), but she appears to conclude that Achaia did undergo some population decline under early Roman rule (154).

suspicion that this was typical of Greece and perhaps even of all the areas that Rome had annexed during the second century.¹⁸

Rome itself may have grown from about 375,000 people in 130 BC¹⁹ to a figure between 800,000 and one million under Augustus. And in some other areas, northern Italy and Spain for instance, towns will also have grown much larger.

IV GOVERNMENT, LAW, AND THE PUBLIC SECTOR

The most important thing the Roman government did for the Roman economy was to conquer vast territories; the next most important thing, in this period, was probably to found “colonies.” But as for economic concerns, it has been widely supposed that the Roman government’s interest, in late-republican times, began and virtually ended with maintaining legality and taking care of the citizens’ grain supply.²⁰ Closer attention to the economic aspects of Roman imperialism, and to problems of debt and credit, suggests a somewhat different conclusion.²¹

Governments, both central, provincial and local, concerned themselves with the food supply, with infrastructure, with a variety of economic actors including merchants, and with law (the maintenance of legality and the development of the laws themselves), with taxes and tariffs, with credit markets, and finally with the *publicani*, private businessmen who helped the government collect and spend its revenues. Most of this is reasonably obvious, and we need only make a few specific comments.

No one will deny that Roman governments sometimes had to think about the supply of cereals for the population of the capital. The chance discovery of an inscription revealing that about 129 BC an aedile solicited grain in Thessaly²² simply added to the evidence that much official effort was already required to ensure the basic food supply of what was now a super-large city by the standards of the ancient world. A key moment in the politics, if not the economics, of the late Republic occurred in 123 BC, when a law of C. Gracchus introduced subsidized monthly sales of grain in the capital city. Sulla abolished them in 81 BC, but they were revived in 73 BC by a Lex Terentia Cassia (consular, be it noted, in other words the

¹⁸ For some apparent depopulation in the middle Ebro valley in the first century see Burillo Mozota 1991: 41, while developments in coastal Catalonia are from this point of view ambiguous (cf. Miret et al., 1991). In Africa the overall trend is unclear; the population of southern Gaul probably increased.

¹⁹ The reasonable conjecture of Brunt 1971: 384.

²⁰ See Andreau 1994, who may, however, overstate the officials’ interest in the citizens’ food supply.

²¹ Harris 2006: 8–17; simply a sketch.

²² The inscription: Garnsey et al. 1984. See further Garnsey and Rathbone 1985; Garnsey 1988: 187; *SEG* xxxiv.558.

possessing classes accepted that it was necessary).²³ As the city grew, it seems to have become increasingly uncertain whether the normal system – grain exactions in certain provinces, plus the free market, plus the aediles and the *quaestor Ostiensis* – could be relied on to keep the whole city supplied: in 57 BC another consular law (a Lex Cornelia Caecilia) gave Pompey “absolute power over the grain supply throughout the world” (as Cicero calls it) for no less than five years.²⁴ “Throughout the world” did not mean that he was to look after the feeding of the provincials; and while some Greek cities had grain reserves and grain funds, and officials whose job it was to take thought for the grain supply, the effectiveness of all this in the late Republic is doubtful.²⁵

The late-republican capital city required a complex physical infrastructure, which included *basilicae* (commercial centers?),²⁶ *horrea* (warehouses), *macella* (food markets), porticoes, harbor works, aqueducts and long-distance roads (though the latter were built for mainly military purposes). Public Rome was transformed by public as well as private money in the second century (the pace may actually have slowed somewhat in the last generations of the Republic).²⁷ More critical for the overall economy was the physical infrastructure outside the capital, but our information is sporadic. The scale of what might happen in Italy is indicated by the vast extent of works in the Po plain, before 133 BC. Strabo describes an ambitious later program laconically: “much of Cispadana used to be marshland . . . , but [M. Aemilius] Scaurus [censor in 109–108 BC] drained the plains by running navigable canals from the Po as far as Parma.”²⁸ Romans were now willing to give some help to provincials over such matters: Marius, for instance, canalized the mouth of the River Rhône to the benefit of Massilia.²⁹ Roman canals in Lusitania may belong to the first century BC.³⁰ But most such developments still lay in the future,

A number of incidents show Roman senatorial officials outside Italy giving assistance, unsurprisingly, to financiers and merchants, sometimes by means of military force. The young noble M. Brutus lent money, at usurious rates, to the city of Salamis in Cyprus. In order to collect the debt, one of his agents obtained some cavalry from the provincial governor

²³ The subsequent *leges frumentariae* of the late Republic are the Lex Porcia of 62 and the Lex Clodia of 58. See further Viriout 1994.

²⁴ Cic. *Att.* 4.1.7. The other sources: *MRR* 11.200. ²⁵ Cf. Garnsey 1988: 81–2.

²⁶ My view of the *basilica*’s primary function. For a full discussion and a different conclusion see Welch 2003.

²⁷ Coarelli 1977; Galsterer 1994.

²⁸ Strabo 5.217 (I have tried not to use Strabo’s evidence without weighing the likelihood that he was referring to conditions earlier than 31 BC).

²⁹ Strabo 4.183. In characteristic pre-modern fashion, he sees the advantage in the additional tax revenue, not in any putative increase in the volume of trade.

³⁰ Cf. Strabo 3.143.

Ap. Claudius Pulcher and besieged the town councillors in their council house; five of them starved to death.³¹

That event leads nicely to the question of maintaining legality. In some ways the late Roman Republic did quite well: the numerous defects in its criminal justice system were partly remedied by Sulla, and in 67 BC Pompey very sharply reduced the volume of Mediterranean piracy – a problem which had admittedly long demanded a solution in vain. Twice in this period, on the other hand, legislation imposed degrees of debt forgiveness, in 86 BC (75 percent) and in 49 BC (in effect 25 percent); Caesar claims many had come to expect debt cancellations.³² In 82–81 and again in 49–45 and 44–28 BC, many of the well-to-do lost their property for reasons of factional politics.

Roman law showed itself, in the course of the second and first centuries, to be more alert to the economic interests of some of Rome's citizens than might possibly be expected. As early as Cato's time, such ordinary people as those who harvested olives or grapes might find themselves in a world of formal contracts.³³ By the late Republic a number of legal developments had made commercial life more efficient. Above all, the creation of the so-called *actiones adiecticiae qualitatis* – the *actio exercitoria*, *actio institoria*, and other procedures for suing people who were de facto agents – was serious progress. This was the work of members of the senatorial elite, specifically praetors, carried out in the mid-second or late second century BC (the exact chronology is subject to argument).³⁴ The consensual contract of sale (*emptio venditio*) came in at the latest in the course of the second century BC.³⁵ The anomalous area was the law of insolvency, which was by modern standards (though hardly by ancient standards) harsh; but a very significant softening of these rules took place with the introduction, under Caesar (or possibly Augustus), of the procedure of *bonorum cessio*.³⁶

It is also probable that within this period there was some development of the law regarding partnerships (*societates*). It always remained unsatisfactory from a modern point of view, in that only certain types of partnerships were able to claim legal personality. Those entitled to do so were those considered useful to the state, and it was the *publicani* who began to receive this special treatment, in all likelihood during the general period of C. Gracchus' tribunates.³⁷ But the law of *societas* was evolving in the very late Republic, in the direction of greater flexibility.³⁸

³¹ As we happen to know from Cic. *Att.* 6.1.6.

³² 25 percent: Suet. *Iul.* 42.2. Caesar: *B Civ.* 3.1.3. ³³ Cato, *Agr.* 144–7.

³⁴ Aubert 1994: esp. 70–100. For an overview of the development of private law see Crook 1994: 561–3.

³⁵ Johnston 1999: 79.

³⁶ Johnston 1999: 108–10. Cf. Frederiksen 1966: 128–30, who inclined (135–41) to attribute *cessio bonorum* to Caesar.

³⁷ See Nicolet 1979, whose chronology is preferable to those previously proposed.

³⁸ See *Dig.* 17.2.30, 2.52.18, 2.65.8, and other texts cited in Watson 1965: ch. 6.

Historians have probably not paid enough attention to the frequency with which politicians intervened in the late-republican credit-market, or at least threatened or proposed to do so. In addition to the two debt-forgiveness laws mentioned above, we should take note of the short-lived debt law of Cato the grandson of the Censor (118 BC?), the intervention of an aedile in the year 90 BC, the riot which killed the praetor Asellio in 89 BC, also of a law of the tribune Sulpicius Rufus (88 BC), a consular law of the same year, not to mention the agitation of Catiline. It was probably in order to contain interest rates that the Senate banned the exporting of gold and silver from Italy in 63 BC, something which it had also done on previous occasions. Once again in the winter of 51–50 BC the Senate apparently attempted to impose a ceiling on interest rates.³⁹

Finally, for this section, a note on the *publicani*, private entrepreneurs who lived in large part on the state. Our concern is less with their political and social history than with their structural role in the economy. They contracted with the state to supply goods (such as military clothing) and they gathered revenues (*vectigalia*) from Italian land, harbor dues, state-owned mines and various other sources, and this meant a great deal of active management. Their great profits from empire expanded still further in 123 BC when a law of C. Gracchus gave them the right to bid for the huge tithe of the province Asia. Pompey bestowed on them the same privilege in the provinces he had created. They commonly operated as partnerships, and in the very late Republic these *societates* sometimes, it seems, attracted investment from senators (who were theoretically supposed to be above the more commercial profits of imperialism).⁴⁰ On the other hand there is no adequate reason to endorse the common view that the *publicani* became more and more of a cartel at the end of the Republic: Nicolet seems to have demonstrated the survival in the 50s BC of independent *societates* and genuine auctions.⁴¹ We should rather think of large networks, sometimes overlapping, which reached out into the furthest provinces, where we find, for example, *publicani* running the realgar mines in Paphlagonia.⁴² But the most intriguing development was that the companies of publicans, because they accumulated funds and moved them around, became in a sense banks, and rather large ones. It would be of great interest to know how they invested. Sometimes of course we do know: they lent the equivalent of nearly half a billion sesterces to the cities penalized by Sulla in “Asia,” and in a few years the sum had multiplied by six (and so became unrepayable).⁴³

³⁹ Cato’s law: the entire evidence is contained in an allusion in *ORF* no. 41 fr. 2 (cf. *MRR* 1 527). The aedile in 90 and the decree of 51–50 BC: *Cic. Att.* 5.21.13. The ban of 63 BC: *Cic. Flac.* 67 (how recent these other occasions had been we are not told), with *Vat.* 12.

⁴⁰ See *Cic. Vat.* 29. Owning *partes* in the companies was part of high financial life: *Cic. Rab. Post.* 4.

⁴¹ Nicolet 1979. ⁴² Strabo 12.562.

⁴³ The sources on this affair include *Cic. Q Fr.* 1.1.33, *Plut. Luc.* 20, *App. Mith.* 63 and 83.

Orthodoxy holds that the Romans' only money was coinage.⁴⁴ In my view, this is a grave over-simplification. Let us start with a large late-republican transaction: how did Cicero transfer the 3.5 million sesterces he paid for his famous house on the Palatine (by no means the largest property price we know of in this period), at a time when Rome had practically no gold coinage? His slaves did not load three-and-a-half tons of silver coins. Without much doubt, it was at least for the most part a paper transaction. The commonest procedure for real-estate purchases was probably the one casually alluded to by Cicero on another occasion: "*nomina facit, negotium conficit*," "he provides the credits [or "bonds"], <and so> completes the purchase."⁴⁵ It was of course possible to pay quite large sums in coin, and when Cicero was contemplating another purchase on the same scale, he reported to Atticus that he had 600,000 sesterces "at home," which could form part of the payment.⁴⁶

Money, to adapt a standard definition, is anything that serves as a unit of account, a means of exchange, or a store of value.⁴⁷ The financial instruments available to prosperous Romans were hardly less complex than our concepts M-1, M-2, M-3. In the Roman case both commodities and debt are crucial. Commodities were regularly used as methods of accounting and saving.⁴⁸ As for debt, it was the lifeblood of the system: *nomina* (i.e., outstanding loans) were a standard part of the assets of people of property, and an everyday fact of life for great numbers of others.⁴⁹ Proof positive that the traditional understanding of Roman money is mistaken appears in 49 when the credit system tottered under the impact of civil war: nervous creditors began to seek payment *even* of the principal "in silver," i.e. coin, and part of Caesar's reaction was to "forbid anyone to hold more than 15,000 drachmas [i.e. 60,000 sesterces] in silver or gold,"⁵⁰ which would have meant red revolution – most emphatically not Caesar's purpose – if silver coins had really been the only form of money. There was a considerable array of

⁴⁴ For statements of what is practically a universal dogma see Nicolet 1988: 157; Williams 1998: 173. Howgego 1992 gives a more nuanced account.

⁴⁵ Cic. *Off.* 3.59 (where the purchase is made by a Roman knight in Sicily). It is commonly imagined that large payments were made in gold bullion, and there was indeed bullion in circulation; but there is no evidence in Cicero's extensive writings or elsewhere that gold was a regular means of payment before Caesar's dictatorship. Howgego 1992: 10 sought for evidence that individuals made commercial payments in bullion under the Republic, and found none; of the roughly 226 relevant hoards catalogued by Crawford 1969 for the years 150 to 27 (hoards with more than 25 coins that were dominated by Roman coins, i.e. belonged to the Roman economy), exactly two (nos. 193 and 337) seem to have had a bullion component.

⁴⁶ Cic. *Att.* 12.25.1. ⁴⁷ Cf. Hawke 1980: 76, etc. On the whole matter see Harris 2006.

⁴⁸ As demonstrated in full in the published version of Hollander 2002.

⁴⁹ Cf. Howgego 1992: 13–15. It will be admitted that not all debt increased the money supply.

⁵⁰ Dio Cass. 41.37.3, 38.1.

financial mechanisms: you could make a payment by transferring to the recipient a debt you were owed by a third party (*delegatio*).⁵¹ You could sell a debt you were owed (a *nomen*) at a discount.⁵² And there is much more: commentators will continue to dispute exactly what was going on when Cicero telegraphically pointed out to Atticus the three possible methods of realizing a *nomen* which was in some way due to him from Caesar in 46 BC,⁵³ but the main points are that he had a choice, and that we do not fully understand the mechanisms in question.

This is not to deny that gold bullion and silver coinage played large roles: the provincials who paid their taxes in money paid them in coin, and when the consul Cicero, in sympathy with the Senate, wanted to intervene in the credit market to stem the flow of funds out of Italy, he banned the export of gold and silver and sent a quaestor to Puteoli to put the regulation into effect.⁵⁴ The big innovation in coinage in this period was the introduction of gold coinage, briefly by Sulla in 84–80 BC and then with permanent effect by Caesar in 48 BC. This change greatly improved liquidity⁵⁵ and thus in the long term favored growth.

Since we have not the faintest idea how much money resided in callable deposits in Roman banks (already in regular use by the Roman elite at the beginning of our period), we have no chance of calculating the size of the money supply. What is most interesting about the aggregate stock of silver coinage is that it apparently starts to decrease after the early 70s BC, after rising steadily for generations;⁵⁶ in ordinary circumstances this evidently caused no inconvenience to the well-to-do.

There could hardly be such a thing as Roman monetary policy in a modern sense: throughout this period, there were other currencies in existence besides Rome's, especially of course in the Greek-speaking provinces, and Rome evidently had no policy of replacing them.⁵⁷ Rome's own mints coined what was thought to be necessary for the state's immediate needs. Magistrates were, however, occasionally constrained to take action with respect to coin purity: in about 85 BC Marius Gratidianus earned enormous popularity by testing the coinage and eliminating debased coins.⁵⁸

There were undoubtedly areas of the Roman empire which remained unmonetized; there may have been peasants even in Italy and Greece

⁵¹ Rauh 1989: 55, 65–6.

⁵² Rauh 69. Howgego 1992: 3 cannot be right to say that "there was no negotiable paper."

⁵³ Cic. *Att.* 12.3.2; cf. D. R. Shackleton Bailey's edition (Cambridge, 1966), vol. v, Appendix 1; Rauh 1989: 72–3.

⁵⁴ For bullion in private hands in this era see Cic. *Clu.* 179, and Lucil. 456–7 Marx. In Cic. *Att.* 13.45.3 *argentum* may well be "plate."

⁵⁵ Cf. Howgego 1992: 10–11.

⁵⁶ Hopkins 1980: 109, who is necessarily puzzled (111). The numbers have been disputed (Buttrey 1993; *contra* Hopkins 1995–6: 53), and it is possible that the decrease began earlier.

⁵⁷ For the spread of Roman currency to the republican provinces, as seen by a numismatist cf. Harl 1996: 61–72.

⁵⁸ For the sources see *MRR* II 57.

who lived outside the money economy. When Roman power arrived in an unmonetized region, the change might possibly be slow in coming: Strabo considered the deep interior of Lusitania to be unmonetized; on the other hand, he found the phenomenon strange and marginal.⁵⁹ It cannot plausibly be held that a low level of monetization was a serious brake on growth, indeed the spread of coinage use probably lowered transaction costs.⁶⁰

The banking system had its strengths and its weaknesses. It operated in an unregulated fashion, and most banks apparently consisted of a single principal, usually – one must suppose – with quite limited capital. On the other hand, bankers were able to make payments at a distance,⁶¹ and there were bankers where we might not have expected them, such as Herennius of Leptis.⁶² Capital markets depended much more on personal ties than modern ones do (usually you borrowed from your acquaintances, not institutions) – as indeed was inevitable in a pre-print or early-print culture in which economic information was scarce and unreliable.⁶³ But the complexity and sophistication of late-republican finance has been wilfully ignored by the Finley school,⁶⁴ no doubt partly for the innocent reason that the sources often allude to procedures which they do not explain. And there are many real obscurities, for instance about the full range of activities of the *coactores* (auction financiers).⁶⁵

With all this we are of course far away from the mass of the population. Could an Italian, or a Spanish or Macedonian, farmer borrow money on reasonable conditions? How were the wool-producers of Patavium or the ship-builders of Gades paid, and how did they pay their bills? That is all hidden from us, but it is very suggestive that the numerous shipwrecks of this period, unlike some late-antique ones, have never so far produced enough coins to suggest that big cargoes were paid for in cash.⁶⁶

VI OWNERSHIP AND SOCIAL CLASS

We might like to talk about income, but the evidence is altogether lacking and the best we can do is ownership. A tribune from a noble family said in

⁵⁹ Strabo 3.155 (not necessarily from a recent source). In 7.315 he reports that in Dalmatia they use no coinage and identifies this as a barbarous characteristic; but there are enough coin hoards there to show that he was at least out-of-date or exaggerating. The Caucasus Albanians have no coins: 12.502. The view taken here is consistent with the number of provincial coin hoards of the late Republic (for which see Crawford 1969).

⁶⁰ Cic. *QFr.* 2.15.4, *Att.* 4.15.7.

⁶¹ See, e.g., Cic. *Fam.* 2.17.4. In Cic. *II Verr.* 1.102 it is implicit that the banker P. Tadius at Athens can make payments at Rome. Cic. *Att.* 7.18.4 shows that in ordinary circumstances it was possible to make payments from Italy to Greece. A good deal is known about Ptolemaic banking (Bogaert 1998–9), but how much it had in common with practices in the rest of the Hellenistic world is obscure.

⁶² Cic. *II Verr.* 5.155.

⁶³ Early industrial England was similar: Pomeranz 2000: 179–80.

⁶⁴ See instead Rauh 1989. ⁶⁵ Concerning whom see Rauh 1989: 52–4.

⁶⁶ Cf. Parker 1992: 30.

104 BC that there were not 2,000 persons who owned property (“*qui rem haberent*”), and he was probably right in a sense – but what did he mean?⁶⁷ As for trends, the rich most definitely grew still richer during these hundred years – it is enough to recall Pliny’s remark that the house of M. Aemilius Lepidus, consul in 78 BC, which was the finest in Rome, was not among the finest one hundred houses 35 years later;⁶⁸ meanwhile the expansion of slave labor may lead to the conclusion that the free poor were actually worse off than before.

Can we know much more than that about changing inequalities in distribution? Can we generalize about the wealth or otherwise of the various classes or social strata? Nothing significant can be measured: we can calculate no Gini coefficients of inequality. We are on the other hand helped a little by the fact that most wealthy Romans still held a good proportion of their assets in a relatively visible form, namely land. Crassus had 200 million sesterces “*in agris*,”⁶⁹ which on a very hypothetical price basis of 1,000 sesterces a *iugerum* (but the price of improved land was probably higher than this) would have meant 50,460 hectares, a large area by the standards of any western European aristocracy in any period. The late-republican freedman C. Caecilius Isidorus, who according to Brunt’s daring guess may have gathered up the fortunes of the last of the Caecilii Metelli, was famed for his wealth and seems to have owned some hundreds of thousands of hectares.⁷⁰ But by the end of the Republic, in any case, the fortunes of the rich normally included other large assets too: slave *familiae*, loans made to friends, freedmen and others, and urban real estate, simply to name the principal categories.

A long controversy has centered round the concentration of landed property in Italy in the second century and later. Sallust saw it as one of the main features of the period after 146 that the families of serving soldiers were deprived of their farms by the men of power. Appian for his part seems to see the growth of large estates as a trend affecting “public land,” i.e., land that had been confiscated from the Italian allies, and there are ample signs that such land had been the subject of dispute well before the issue came to a head in Ti. Gracchus’ tribunate in 133 BC. That Italian land was sometimes seized by violence or stealth in these times is also a possibility envisaged by the author(s) of the *Lex agraria* of 111 BC.⁷¹ For some time those historians

⁶⁷ L. Marcius Philippus’ remark: Cic. *Off.* 2.73 (Cicero was of course most indignant). For Frank (1933–40: vol. 1, 253) this “was a wild exaggeration made by an excited agitator.”

⁶⁸ Plin. *HN* 36.109–10.

⁶⁹ Plin. *HN* 33.134. This was perhaps his own evaluation.

⁷⁰ The basic text is Plin. *HN* 33.135; see Brunt 1975: 625–6. As has often been pointed out, Isidorus must have made much of his fortune before 31 BC, even though he did not die until AD 8.

⁷¹ Sall. *Iug.* 41.8, App. *B Civ.* 1.7.29–8.32; for other references see E. Gabba’s commentary on 7.29. For second-century conflict about public land prior to Ti. Gracchus’ tribunate see Livy 42.1.6 (173 BC), *Lex agraria* (FIRA 8 = RS 2): line 18.

who knew of the results of surface survey (many small farms identifiable as republican, for example in south Etruria), and knew of the evidence of social continuity which is sometimes visible in the funerary inscriptions, liked to reject what the sources say about the concentration of ownership – for no adequate reason.⁷² There were regional and intra-regional variations in landowning, that is obvious and is confirmed by the material evidence, which also shows, though not with much precision, that the second century was the time when the well-organized large “villa” started to be an important part of the Italian landscape. Settefinestre near Cosa is the most famous example but there were others scattered up and down the peninsula.⁷³

The near-cessation of “colonization” (in the technical Roman sense) in peninsular Italy after the 150s BC created a pent-up demand for land and hence a need for redistributions such as those provided by the Gracchan laws of 133 and 123 BC. But apart from a handful of colonies in Italy, the laws of the Gracchi did not in the long term change patterns of landholding: when fifteen years had elapsed after C. Gracchus’ reforms, the poor, says Appian, had been dispossessed again and were worse off than before.⁷⁴ Between 104 and 60 BC at least seven tribunes of the people attempted to pass agrarian laws.⁷⁵ But the only person who succeeded in benefiting civilians was Caesar, first as consul in 59 BC (about 20,000 fathers of families received allotments in Campania), then as dictator, in which role he founded a limited number of Italian *coloniae* and put into effect a programme of unprecedented ambition for sending others to the provinces.⁷⁶ This programme probably created as many losers as winners – the provinces had not been empty.

Not content with expanding their Italian landholdings, the rich (senators, knights, and others) had already begun to acquire land in the provinces, a trend that probably gathered speed at the very end of the Republic.⁷⁷ They had meanwhile become a more diverse group: by the end of the period, a freedman such as Isidorus could be as rich as virtually any senator. There could now be large fortunes based on commerce. When a forensic orator, to

⁷² The best statement of what used to be the unorthodox view is Frederiksen 1970–1; but his position seems to have changed somewhat by the time he wrote 1981: 270. *Contra*: see Gabba 1979: 24–5 and 37; and Nicolet 1994: 617–19. Cf. also Rich 1983: 296–8.

⁷³ Settefinestre: Carandini 1985. For some newly studied examples see Giancola near Brundisium (Cambi 2001) and Termito near Heraclea (De Siena and Giardino 2001: 153–6; this was allied territory).

⁷⁴ App. *B Civ.* 1.27.121–4. Most of the *complures coloniae* of C. Gracchus referred to in Livy, *Per.* 60 did not materialize.

⁷⁵ See Brunt 1988: 240–1. ⁷⁶ Brunt 1971: 255–9, 589–601.

⁷⁷ Shatzman 1975: 34. For some further evidence see Aubert 1994: 162 n. 153. Cf. Crawford 1977a: 48–9. Rawson 1976: 90–1 (and 1994: 446–7), perversely attempted to deny the evidence that refers to senators (arguing *inter alia* that *II Verr.* 5.45 means that it was illegal for senators to own land in the provinces; but the obvious meaning is that the *governor* of the province was not meant to own property there; cf. 4.9). Non-senatorial Romans farming in Narbonese Gaul in the early first century: Cic. *Quinct.* 12.

make a point, said that “many slave-dealers and merchants” had surpassed in wealth “men like Africanus and Laelius,”⁷⁸ he is not to be taken literally. But there is more sober testimony: it is implicit in Cicero’s evaluation of the comparative standing of investments that *mercatura* could produce very healthy results even from the point of view of a well-to-do senator.⁷⁹

Between the wealthy few and the propertyless poor lay other groups. One will have consisted of more or less prosperous farmers, some of them farming with slave labor, others, definitely poor (*pauperculi*), “with their own children.”⁸⁰ De Ligt has rightly stressed the stratification of the peasant population.⁸¹ Town professionals, artisans, and shopkeepers will have run the whole range from near-wealth to grinding poverty. It is not clear that any of these groups had any shared experience in the late Republic. Some people certainly prospered, especially in towns; at the top end they will often have been town councillors, or prosperous freedmen such as the late-republican *sagarius* (cloak-merchant) Sabbio whose residence at Capua was excavated not long ago.⁸² But one’s livelihood could be insecure: a mistake or ill luck and you could lose your land. One scholar has estimated that no fewer than 130,000–150,000 veterans were settled in Italy between 47 and 14 BC.⁸³ The dire insecurity that resulted is to be heard in Vergil’s *Eclogues*, literary conventions notwithstanding.⁸⁴

We have no way of knowing how many people lived at a subsistence level or sank below it. But we do know that some provinces were severely exploited by Rome and its officials, that child-abandonment was commonplace in many regions and that the poor had no economic safety-net. In the countryside, in particular, the job opportunities for the landless man were seasonal and sporadic, and in towns they will also have been grim: these *mercenarii* and *obaerarii* were at least as vulnerable, economically, as the worst-treated slaves. None of this is likely to have changed much during the century we are considering.

In these conditions we may regard the introduction of tenancy as an improvement – it at least allowed free men to make a livelihood on the land. It is first known from the lost writings of Saserna,⁸⁵ father or son, probably in the early first century.

VII LABOR

The conditions of labor, at least in the central parts of the Roman world, were dominated by slavery. The form of labor relations might vary (according to Varro, there were still indebted serfs, *obaerarii*, in “Asia,” Egypt and

⁷⁸ Cic. *Orat.* 232. ⁷⁹ Cic. *Off.* 1.151. ⁸⁰ Varro, *Rust.* 1.17.2.

⁸¹ De Ligt 1990: 49–56. ⁸² Pagano and Rougetet 1987.

⁸³ Keppie 1983: 127. ⁸⁴ E.g., *Ecl.* 1.3, 11–12, 70–1; 11.4–6.

⁸⁵ Quoted by Columella, *Rust.* 1.7.4; see De Neeve 1984a: 40–62, 91–2, 124.

Illyricum),⁸⁶ but chattel slaves were always a key element. Slave numbers are admittedly even more elusive than those of the free population. In 167 BC the slave market had absorbed 150,000 new Epirot slaves without difficulty; Caesar's Gallic Wars overshadowed this effort, producing more than 400,000 prisoners.⁸⁷ Yet there was no hint of a glut. My guess is that in the very late Republic there were always four to eight million slaves and serfs in the Roman empire; but no accurate figure is obtainable.⁸⁸

Cato and Varro explain in detail how to make the best use of slave labor on the land. Tenant farmers might also own slaves. Slaves made up a large proportion of the skilled craftsmen of republican Italy.⁸⁹ Wealthy first-century Romans, accustomed to owning a number of residences, numbered their domestic servants by the hundreds (and if there were 12 million free people in Italy in 31 BC, comparative figures suggest that there may have been two million or more domestic servants).⁹⁰ Slaves could already possess or could receive education, and during the second century they probably came to dominate the managerial level of the Roman economy still further, working as *vilici* (estate managers), *actores* (financial managers) and private secretaries. The logic of this system is obvious: the owner has far more power over his slave subordinate than he could ever have over a fellow citizen.

It is futile to discuss whether slave labor was "efficient": we are in no position to second-guess the slave owners on this point. It may be sufficient to record the surprisingly candid view of a historian of economic growth: the underlying advantage of technological improvement is that it allows a nation "to control and manipulate nature and people for productive ends."⁹¹ Slavery did that quite well, and it did not prevent its victims becoming, in selected cases, consumers.

While avoiding the common tendency to soften the life conditions of Roman slaves, we should pay attention to the very noticeable differences. Many were violently mistreated: chain-gangs and vicious punishments, including execution on the mere say-so of the owner, were commonplace. Cato lists the work which farm slaves ought to do on "holidays." Child slaves could be put to work at an early age. Though it has been suggested that eventual freedom was the prospect of large numbers of slaves, and manumission was indeed a regular part of the system which probably grew more common in the late Republic, the evidence for readily available manumission is insufficient,⁹² and it was ordinarily available only to those who were judged to be especially meritorious – which excluded the average farmhand, porter, and quarry-worker. But slavery was a legal, not an

⁸⁶ Varro, *Rust.* 1.17.2 (with Lo Cascio 1982). Aubert (1994: 130–1) seems too sceptical on this point.

⁸⁷ Vell. Pat. 2.47 (with the reservation implied in n. 10).

⁸⁸ For the overall total cf. Harris 1999: 65. ⁸⁹ Cf. Morel 1983c: 25–6.

⁹⁰ Cf. Cipolla 1994: 66, for domestic servants as a percentage of total population in Italian cities, 1448–1696.

⁹¹ Mokyr 1990: vii. ⁹² See Wiedemann 1983; in my view, Nicolet 1994: 605 has this wrong.

economic, category, and the most vital question concerns “low-wage” labor, whether it was slave or free.

Wage laborers (*mercennarii*), who were almost equated with slaves by upper-class authors,⁹³ were often still worse-off economically, as already mentioned: on the land they were often seasonal laborers, hired for hay-making or the harvest or the vintage.⁹⁴ None of this will have changed much in late-republican times.

It is only recently that the work of Roman women has emerged from the historiographical shadows,⁹⁵ and much remains unclear (see above, Chapter 4). As in most traditional societies, they will have worked at cloth- and clothing-production (but the slave owner, even in Cato’s time, was recommended to go to market to buy clothes).⁹⁶ In towns, women had more economic possibilities than in some other pre-industrial worlds, such as classical Athens. On the land, peasant women undoubtedly joined in special outdoor tasks such as the vintage, and probably did other outdoor work as well in many regions – which ones exactly, it would be worth trying to define.⁹⁷ Slave women were probably outnumbered by the males, especially on large slave-farmed estates, though perhaps less heavily so as our period progressed; here their work will mainly have been in and around the house.⁹⁸

As to the experience of work, no one, it seems, attempted to calculate work by the hour, there being no mechanical clocks, but that no doubt often meant toil from dawn to dusk (before dawn is when the peasant Simylus gets up in the *Moretum*). It may have been within our period that an agronomist, namely Saserna, first propagated the notion that certain agricultural tasks ought to be accomplished in a fixed number of days. There were holidays, but they affected different classes in different ways: on festive days Simylus works his garden.⁹⁹

VIII CAPITAL AND CAPITALISM

One scholar has suggested that we might call the developed Roman economy a “capitalist market economy without factories,”¹⁰⁰ but experts on

⁹³ Harris 1988: 608 n. 29.

⁹⁴ Varro, *Rust.* 1.17.2. He recommends using *mercennarii*, not slaves, in unhealthy districts, *ibidem*. See further Treggiari 1980; De Ste. Croix 1981: 179–204.

⁹⁵ See Scheidel 1996b; Dixon 2001: esp. 113–32.

⁹⁶ Cato, *Agr.* 135. Columella, *Rust.* 12.3.6 assumes that the clothes for ordinary slaves will be purchased.

⁹⁷ Cf. Scheidel 1996b: 2. The best testimony might appear to be the *Moretum*, in which the poor farmer’s wife seems not to work in the fields (119–24), but the literariness of the whole work must put us on our guard (cf. Horsfall 2001). For Illyricum see Varro *Rust.* 2.10.7.

⁹⁸ Harris 1999: 69–70. Scheidel 1996b: 3 seriously misreads Columella *Rust.* 12.3.6 on this subject.

⁹⁹ Saserna and the days per task: Varro *Rust.* 1.18.2 and 6; cf. Columella *Rust.* 2.12.7 and Kolendo 1980: 48–50. Simylus in the garden: *Mor.* 67–9.

¹⁰⁰ Millar 1981: 73; cf. Love 1991.

capitalism and experts on Rome have on the whole been very reluctant to bring the two concepts together. It is all too obvious that even the capitalism of the nineteenth century differed greatly from the Roman system.

There were rich people regularly on the look-out for good investments, and people who helped them; conversely, a reputable borrower could borrow on a very large scale.¹⁰¹ Much of the borrowing will have been conducted through patrons and friends, but less so probably as our period progressed. Such relationships were *not* what brought Brutus and the Salaminians together, or the late-republican Cloatii with the people of Gytheum to whom they later generously forgave their 48 percent annual interest.¹⁰² A banker such as Pythius of Syracuse could have such wide contacts that he was said to be “*apud omnes ordines gratiosus*,” “esteemed by high and low alike.”¹⁰³ And Andreau has established that there were loans for productive purposes as well as for consumption.¹⁰⁴

In a capitalistic system, investment is supposed to be guided by expectation of returns, without inhibitions (the real world is more complicated). Members of the late-republican elite show no sign of embarrassment about large-scale money-lending. Even when Cicero is ranting on moralistically in a philosophical work, the only kind of lending he pretends to disapprove of is extortionate lending to provincials through freedmen.¹⁰⁵

What differentiates the late-republican Roman system from a simple form of capitalism was not that it lacked markets in capital, in goods, in land or even in labor, for it did not, but that its urban production was carried out by households rather than firms.¹⁰⁶

IX CONSUMPTION AND LIVING CONDITIONS

We can consider this matter from both a macro- and a microeconomic direction, from the point of view of aggregates and from the point of view of households. Aggregates are admittedly all a matter of conjecture, and the consumption choices of individuals are also hard to get at.

It makes little sense to divide Roman commodities into “luxuries” and “staples” – there were far too many major items that were neither one nor the other.¹⁰⁷ But there were of course luxuries recognized by the Romans as such. It was Pompey’s defeat of Mithridates, we are told, that first turned Roman customs to pearls and precious stones; and the surviving jewelry can make a vivid impression, for instance the items made of gold buried

¹⁰¹ We have been told that capital markets “were almost entirely absent from the ancient world,” Millett 2001: 24. It depends what you mean by a capital market, but this is more false than true.

¹⁰² *SIG* 3 748. ¹⁰³ *Cic. Off.* 3.58.

¹⁰⁴ Andreau 1999: ch. 12. But there may not have been enough productive outlets for capital (cf. Brandel 1981–4 [1979]: vol. II, 248; Pomeranz 2000: 179).

¹⁰⁵ *Cic. Paradox.* 46. ¹⁰⁶ Cf. Persson 1988: 68, on the mediaeval European economy.

¹⁰⁷ Harris 1993b: 12.

in a house on Delos in 88 or 69 BC.¹⁰⁸ The late Republic sustained a lively trade in works of art.¹⁰⁹ The 50s BC, apparently, were the years when rich Romans acquired a taste for the use of marble in private houses.¹¹⁰ On the other hand there were still sumptuary laws, and some real hostility may have been felt towards luxury spending.¹¹¹

But let us turn to everyday life, beginning with cereals. In mediaeval and early-modern Europe, according to a widespread view, “the lower orders lived in a chronic state of undernourishment and under the constant threat of starvation,”¹¹² and that may be what we should expect to find in the Roman empire. We suppose after all that in any given Mediterranean region the wheat crop failed at least one year in every four. Recent scholars have argued that shortages of grain were very common in the late-republican city of Rome¹¹³ – but they have largely been looking in the wrong place. The capital was obviously subject to serious distribution problems – and people died of starvation there if civil war cut off supplies.¹¹⁴ But Italy was relatively well-off, and chronic and severe malnutrition must have been more common in the less-talked about world of the provinces. In Sicily, the tithe exacted by Rome must sometimes have caused serious shortages. Garnsey has argued that in the late Republic some three million *modii* of wheat came as tax from Sicily in an average year, perhaps some eight million from “Africa.”¹¹⁵ Three million *modii* would have weighed on average 20,460 tons, and hence at a reasonable net yield of 400 kg./ha. would have corresponded to the entire production of some 51,150 ha.; no more than half a million of Sicily’s 2.5 million ha. can be supposed to have been under grain cultivation at any given moment.¹¹⁶ Even in good years, Roman exactions must have been burdensome for the places most affected (they were not shared equally), and during slave rebellions and after bad

¹⁰⁸ Plin. *HN* 37.12. Delos: the exact date is unclear – see Siebert 2001: 133–47 (most of it came from Syria).

¹⁰⁹ Coarelli 1996; Galsterer 1994. ¹¹⁰ Plin. *HN* 36.48–50.

¹¹¹ When the censors of 125–124 BC expelled a consular from the Senate for spending too much to rent a house (Vell. *Pat.* 2.10.1, cf. Val. *Max.* 8.1 *damn.* 7), that was a pretext. But the censors of 97–96 expelled the tribune Duronius (*MRR* II 7) because he had repealed a sumptuary law. By the end of our period, it may be that only extreme extravagance was criticized (cf. Sall. *Cat.* 7.4, 13.1) – but there were at least two more sumptuary laws between Duronius and Caesar’s dictatorship, and Pompey proposed one in 55 (Dio Cass. 34.37). See further Gowers 1993: 70–3.

¹¹² Cipolla 1994: 23.

¹¹³ Virlouvet 1985; Garnsey 1988: 195–217; Cherry 1993 (“food crisis . . . is attested about one year in four,” 433).

¹¹⁴ Actual starvation in republican Rome seems only to be attested during the war against Sex. Pompeius (numerous deaths, Dio Cass. 48.18.1), but the sources may very well have missed something.

¹¹⁵ Garnsey 1988: 182.

¹¹⁶ However Coarelli 1981: 13, following Scramuzza, conjectured that there will only have been about 250,000 ha. under grain each year. For the weight of a *modius* of wheat see Rickman 1980: XIII. I am assuming alternate-year fallow (with Morley 2001: 56). Note that there were normally compulsory purchases in Sicily in addition to the tithe (Duncan-Jones 1990: 147).

harvests, the effects will have been dire. In short, the extraction of large quantities of grain from Sicily, Africa, and Sardinia must sometimes have had very negative effects there.¹¹⁷

Since there is no space to consider all other significant commodities here, we may concentrate on five especially important ones, olive oil, wine, metals, slaves, and textiles.¹¹⁸

Consumption of olive oil must have been noteworthy in all the provinces that existed in 31 BC except Gallia Comata, as well as in Italy.¹¹⁹ It has been supposed that average consumption in the Mediterranean parts of the Roman empire is likely to have been about 20 liters a year per head.¹²⁰ Cato's ration for farm slaves was one *sextarius* a month,¹²¹ equivalent to 6.47 liters a year, but that was in a production area. Even if consumption was only at the level of five liters a year in a population of, say, 25 million – a quite conservative guess – that would have required 125 million liters a year, which would have been the product of, say, 34 million trees or the contents of 5.68 million amphoras¹²² – impossibly high numbers, one might say. Yet the dossier of olive-oil trading intensifies greatly in the course of the late Republic.¹²³ Much the most interesting number we have concerns Caesar's exaction of three million pounds (one million liters) of olive oil a year from Leptis.¹²⁴ That means that the Leptitani possessed at least 273,000 olive trees (much of whose product they must previously have been exporting). It also means that they had a fairly reliable market share and that someone had invested heavily.

Wine consumption in the city of Rome has been analyzed well by Tchernia, who estimated consumption in the range 146–182 liters per head per annum, having increased, so he argued, in the course of the second century.¹²⁵ Once again, rural consumption is a conundrum. Cato recommended something like 200 liters a year, sometimes mixed with

¹¹⁷ C. Gracchus insisted that some Spanish communities be paid for their grain, Plut. *C. Gracch.* 6.

¹¹⁸ This selective approach runs the risk of simplifying an increasingly complex economy. Ideally we would also consider the full range of consumption choices, services as well as commodities.

¹¹⁹ At Rome itself it was certainly considered, by 74 BC, to be an essential commodity: Plin. *HN* 15.2. There were parts of other provinces besides Gaul where little oil was consumed: see e.g., Strabo 3.155 on inland Spain.

¹²⁰ Mattingly 1996: 239. It has been argued that in classical Attica oil consumption had been at the level of between 15 and 28 liters a year per head (Amouretti 1986: 177–96; she included two to three slaves per family).

¹²¹ Cato, *Agr.* 58.

¹²² In truth the matter of average yield is obscure. The best discussion known to me is Mattingly 1994a, but the figure of 5 kg. of oil per tree used here is my own extrapolation. Late-republican amphoras: Peacock and Williams 1986: 52 give the capacity of Dressel type 1B as 22 l.

¹²³ Two of the earliest surviving dedications by specialist merchants at Delos were made by the oil dealers, in the 90s: see *ILLRP* 344. There are ample signs of Italian exports in this period: Strabo 5.214, Plin. *HN* 15.3. But much is obscure; cf. Lafon 1993.

¹²⁴ Caes. *B Afr.* 97; for the equivalence see Frank 1933–40: vol. 1, 193.

¹²⁵ Tchernia 1986: 21–7; 58–60.

sea-water (!), for his in general harshly treated farm slaves, once again in a producing region.¹²⁶ It is difficult at all events to imagine that empire-wide consumption was less than 10 million hectoliters a year in the late Republic. Production probably increased notably during that period, for the export of wine-filled Dressel 1 amphoras from Italy to Gaul and Spain was only beginning in 133 BC, and the market continued to grow;¹²⁷ it will have been damaged, obviously by Caesar's massacres in the 50s BC.

If demand for wine is hard to measure, aggregate demand for metals is a real mystery.¹²⁸ But the Greenland ice-cap shows that copper production increased sharply, and several general considerations suggest that this will have been true of all other metals (cf. Chapter 20). Better-capitalized agriculture was one factor, and sources of ore improved as imperial power expanded. An underlying trend was leading towards the world of Flavian Pompeii, which teemed with metal household vessels and utensils of every kind, with metal implements and tools, with statuary, with locks, nails, water pipes – and so on.¹²⁹ Now merchant ships carrying metals are as common in wrecks of around 100 BC (cf. Table 19.1) as they were around 79 AD. Arms-makers must have made fortunes during the civil wars of 49–30 BC. When wrecks are well preserved, they tend to be rich in metal artifacts: in the fairly modest Valle Ponti wreck, for instance, were found lead ingots, bronze strainers, metal ladles, baking pans and plates, metal boxes and clasps, votive models made of lead, carpenter's tools, fish-hooks, a bronze balance, a gridiron, strigils, a sword, and an iron anchor.¹³⁰ Yet the history of the metallization of the Roman economy has still to be written.

The numbers of slaves we have already mentioned will give some impression of the demand for new slaves. At the end of the Republic it will have been in the hundreds of thousands a year, empire-wide.¹³¹ It was probably in this period that someone coined the Greek word *statarion* for a specialized market place given over to slave dealing.¹³² Yet it is not certain that the demand for market-purchased slaves was continuing to rise at the very end

¹²⁶ Cato, *Agr.* 57; cf. Tchernia 1986: 24.

¹²⁷ Gaul: Laubenheimer 1993: 59–61. Spain: Nolla and Nieto 1989: 381.

¹²⁸ The two most interesting early-imperial sites, Pompeii and the town on the Magdalensberg, have been no more than marginally helpful, at least so far, for the republican period. For metal artifacts at Pompeii see esp. Frederiksen 1970–1: 353. The occupation of the Magdalensberg site began about 50 BC (Schütz 2002), but how many of the metal finds go back to the earliest years is unclear. For Aquileia cf. Nonnis 1999: 86–7. For a peak in lead production in the area of the Roman empire very roughly around the end of the first millennium BC, detected through lake sediment in Sweden, see Renberg et al. 1994. By means of a peat bog in Switzerland, Shoryk et al. 1998.

¹²⁹ No publication gives a full account of this matter, but see esp. Grafts 1988 and Ciarallo and De Carolis 1999.

¹³⁰ Parker 1992: no. 1206, 25–1 BC. On the variety of objects recovered at the Magdalensberg: Schütz 2002.

¹³¹ Harris 1980b: 121; 1999: 75. The best explanation of the presence of so much late-republican coinage in Romania is still that the region exported slaves to the Romans (Crawford 1977b); but see Moisl and Depeyrot 2003: 11–13.

¹³² The earliest instances are in *I.Magn.* 240 and in *MAMA* 6.260.

of our period, for slave reproduction may have gained some importance (though of course one who was born into slavery might easily be sent to market).

As for textiles, while some poor people in the country dressed in skins, and linen was also a factor, most people dressed in wool. The evidence as to whether demand shifted from wool to cloth to clothing as urbanization intensified is confusing (cf. above). According to one account, there was no kind of “mass market” for clothing in the Roman world, except for the military market.¹³³ That there was no kind of mass *production* is obvious, but as we have already seen family autarchy was not the only alternative. In a well-to-do republican household the family’s cloth and clothes were made by the slaves,¹³⁴ whose own garments will have come from specialized suppliers.¹³⁵ As for the less prosperous, we can only guess – the urban-rural divide may have been crucial, with country women most likely producing their own cloth as well as their own clothing. The topic remains wide open for some informed speculation.

X DISTRIBUTION AND TRADE

This is not the place to criticize Horden and Purcell’s recent revival of a purportedly Polanyi-esque view of exchange in the ancient world,¹³⁶ all the less so (a) because it is unclear how much they would disagree with the claims made in this chapter, and (b) because I have no wish to deny the social “embeddedness” of the transactions alluded to here. In so far as these authors deny us the right to use the terminology of modern economics, they seem misguided (and this practice is no barrier to studying the conceptual world of the late-republican Romans). But the real disadvantage of the Horden–Purcell immobility model is obviously that it makes it difficult to grapple with good evidence for change. The remains of some 220 wrecks of Mediterranean merchant ships (or redistribution ships) are known from our period (a selection of them is described in Table 19.1) – whereas many earlier and later one-hundred-year periods have produced hardly any.¹³⁷ The inscribed objects found on these shipwreck sites bear the names not of officials or plutocrats, with one or two exceptions, but those of obscure individuals, who are none other than traders of one kind or another. In short, Mediterranean trade accelerated rapidly in the mid-second century.

It should also be considered significant that Roman trade included inexpensive goods that could easily have been substituted for locally in most

¹³³ Frayn 1984: 154, 163. ¹³⁴ Cf. Asc. *In Milonianam* p. 38 Stangl = p. 43 C.

¹³⁵ Cf. Varro, *Rust.* 1.2.21 for weaving shops on large estates.

¹³⁶ Horden and Purcell 2000 *passim* (esp. 606). See Harris, 2005. Polanyi’s actual view of the Roman economy (1977) was an alarmingly “modernist” one based largely on Rostovtzeff.

¹³⁷ Horden and Purcell 2000: 371, based on Parker 1992. See below, Chapter 21.

Table 19.1 *Selected Mediterranean shipwrecks, 130s to 30s BC arranged by date*

NAME	LOCATION	DATE	KNOWN CARGO	REFERENCE
Megadim A	near 'Atlit, Israel	130s or a little later	copper ingots, bronze, silver, and gold artifacts	Parker 689*
La Chrétienne A	near Agay, France	c.150–100	wine	Parker 302
Spargi	NE Sardinia	last q. of second c.	wine, pottery	Parker 1108
Dramont C	near Agay, France	late second c.	amphoras, iron bars, pine resin, etc.	Parker 373
Bagaud 2	Iles d'Hyères, France	c.110–100	ingots of iron and tin	Parker 77 ("Bagaud B")
Agde J	S. France	late second/early first c.	lead ingots	Parker 16
Cavalière	S. France	c. 100	meat (pig), amphoras, pottery	Parker 282
Sant Jordi 1	Majorca	c. 100	amphoras, pork, almonds, olives	Parker 326 ("Colonia de Sant Jordi A")
Mahdia	Tunisia	c.110–90 (?)	marble columns, sculpture and furniture, bronze works of art, lead ingots	Parker 621
Baratti B	near Piombino, Italy	c.120–80 (?)	amphoras, pottery, glass, spices	Parker 898 ("Pozzino")
Grand Congloué B	near Marseille	c.110–80 (?)	amphoras	Parker 473
Albenga	Liguria	100–80	wine, pottery	Parker 28
Antikythera A	between the Peloponnese and Crete	80	amphoras, pottery, glass, works of art, etc.	Parker 44
Punta de Algas	NE of Cartagena	100–50	amphoras, pottery	Parker 919
La Fourmigue C	near Juan-les-Pins, France	c.80–60	amphoras, Greek furniture	Parker 425
Punta Glavina A	Rab island, Croatia	100–25 (?)	amphoras	Parker 940
Madrague de Giens	near Hyères, France	70–50	wine, pottery	Parker 616
Palamós	N Catalonia	c.80–30	amphoras	Parker 776
Capo Testa B	NE Sardinia	c.75–25	iron bars	Parker 258
Mal di Ventre	W Sardinia	c.50	lead ingots	Africa Romana IV, 1992 (Parker 637)
Le Titan	Iles d'Hyères, France	c.50–45	preserved fish	Parker 1149
Cape Gelidonya B	Lycia	c.50–25	pottery, perishable goods	Parker 209
Santa Severa	S. Etruria	50–25 (?)	amphoras	Parker 1035

*All numbers refer to Parker 1992.

places, such as commonplace black-glaze pottery (see Table 19.1 again), wax, and honey.¹³⁸ The implication is that transport was efficient, that part of the economy at least was organized on the basis of trade, and that an entrepreneurial spirit was widespread.

To what extent peasants or pastoralists operated in a “natural” economy that was separate from the market economy is a delicate question. No doubt there were gradations, and the problem cannot be solved by reference to literary sources or to comparative material. It is suggestive, but nothing more, that amphoras were rather widely diffused far from their place of manufacture.¹³⁹ Further enlightenment could only come, I think, if we could establish a better typology of country-dwellers.

XI TRANSPORT

The notion promulgated by C. A. Yeo that land transport was never commercially viable under the Roman empire except for small-scale luxuries has largely given way to the realization that even quite bulky commodities constantly traveled by road when the market existed.¹⁴⁰ When both were available, water-transport cost less – hence the interest of all Roman agronomists in whether a farm has navigable water nearby. But Cisalpine pork must have come to Rome on the hoof, and as for land transport in Italy, “their roads can carry boat-loads.”¹⁴¹ If demand was strong enough, in fact, the costs of land transport could be accepted. Not that we shall want to ignore the system’s technological limitations.

We are certainly not faced with full technological inertia in this sector. Ships’ pumps are a clear-cut innovation (Table 19.2). Larger merchant ships were to be seen in the western Mediterranean.¹⁴² But what made most difference may have been the further spread of high-quality roads, most of all in Italy but also to some degree elsewhere (Via Popillia 132, Via Egnatia c.130, Via Domitia c.120 BC, etc.).¹⁴³

¹³⁸ Strabo 3.144.

¹³⁹ For the distribution of Dressel 1 amphoras see Panella 1981: 56–7, reproduced as Tchernia 1986: map 4. What is most striking perhaps is their diffusion in Gaul away from the great rivers.

¹⁴⁰ Meiggs 1982: 339–46; Hopkins 1983b: xx; Spurr 1986: 144–6; Sippel 1987b; Harris 1993b: 27–8; Laurence 1999: 95–108. See also Horden and Purcell 2000: 377.

¹⁴¹ Strabo 5.235. Varro, *Rust.* 1.16.6, seems just as interested in road transport.

¹⁴² Few ordinary merchant ships exceeded 400 tons burden, in order to limit risks (the Albenga wreck may have carried 500–600 tons; Parker 1992: 50). Many vessels carried 20–40 tons and no doubt stuck as close to shore as possible. On the capacity of such cabotage for shifting large quantities of goods see Horden and Purcell 2000: 140. On the rather high quality of the best ships, such as the one wrecked at La Madrague de Giens, see Pomey 1982 (for a comparison with what was possible in the seventeenth century see 153 n. 37).

¹⁴³ See Map 19.1. But it is important to consider the whole network, not just the famous long-distance roads. For the date of the Via Egnatia see *AE* 1973 no. 492.

Table 19.2 *Diffusion of technological improvements, 150–1 BC**

SECTOR	INNOVATION	TYPE OF EVIDENCE	DATE	REFERENCE
construction	<i>pozzolana</i> concrete	physical remains	mid-second c. **	Ward-Perkins 1970: 246
merchant shipping	ships' pumps	shipwreck remains	late second c.	Parker 1992: 28
agriculture	iron ploughshares (in Italy) (but there are only two of them)	physical remains vs. Cato	late second or early first c.	Frederiksen 1970–1: 352
luxury eating	oyster beds	literary	early first c.	D'Arms 1970: 18–19
food-production	wedge press	physical remains	early first c.	Above, Chapter 17
dyeing	blue dye	Vitruvius 7.11.1	second quarter of first c.	
glass making	glass blowing	physical remains	mid-first c.	Newby and Painter 1991
construction	<i>opus reticulatum</i> (in Italy)	physical remains	mid-first c.	Torelli 1980
food production	water mills	Strabo 12.556 suggests some diffusion in E provinces	from mid-first c.	Landels 1978: 16–21

*This table can be no more than illustrative, since so many changes are undatable.
**“This was not a sudden, dramatic discovery . . . each generation add[ed] its quota of practical experience until, by the last century of the Republic . . .” (Ward-Perkins 1970: 246).

XII PRODUCTION

The crucial question here is productivity,¹⁴⁴ and the most obscure variable is technological improvement, or rather the diffusion of technological improvements. What did it really amount to? It has been claimed that the Romans learned much about agricultural production from Greeks,¹⁴⁵ but it is hard to say precisely what they learned. The Roman rich have a rather bad reputation with the moderns – they were interested in social status more than in investment, and never gave any thought to more efficient means of production. But this stereotype is inaccurate. The only Punic literary work which the Romans kept for themselves after they had destroyed Carthage was the twenty-eight-volume farming handbook of Mago: the Senate had it translated.¹⁴⁶ Varro, admittedly not a typical landowner, specifically favors rational experimentation.¹⁴⁷ Posidonius caused some shock to Stoic philosophers by suggesting that technological innovators of the past had actually

¹⁴⁴ Horden and Purcell 2000: 269, were ill-advised, I think, to belittle this concept. Cipolla 1994: 97–108, offers a better example.
¹⁴⁵ Nicolet 1994: 612. ¹⁴⁶ Plin. *HN* 18.22; see also Varro, *Rust.* 1.1.10; Columella, *Rust.* 1.1.13.
¹⁴⁷ *RR* 1.18.8.

displayed “wisdom.”¹⁴⁸ To take all this as posturing would be the merest prejudice.

There were technical advances (see Table 19.2), but it will readily be admitted that none of them is likely to have made any radical economic difference within the period we are now considering. It gives the wrong impression to say that widespread literacy assisted technology transfer:¹⁴⁹ it may be true by ancient near-eastern standards, but by modern standards literacy was very limited, and even when the literate changed their methods of farming or building it can seldom have been because of what they had read.

There must always have been places that were well known for this product or that, but a feature of the late Republic suggests at least the potential for economic growth: certain towns grew famous for particular kinds of manufactured goods (they were no longer all-purpose ports or market towns); one thinks of ironmongery at Puteoli, for example, of ship-building at Gades, of Patavium and woolen clothing, Arretium and red-glazed pottery.¹⁵⁰

XIII ECONOMIC ORGANIZATION

It would require a separate chapter to explore the full implications of the family, manumission, friendship, *clientela*, the partnership, and the *collegium* for the economic life of the late Republic. Three propositions may be offered. (1) The family – in the Roman sense, that is to say, with freedmen and slaves included – became a more flexible economic instrument in the second and first centuries in virtue of the legal developments already described. Thus the rich could more comfortably entrust their business affairs, which senators at least were supposed to keep at arm’s length, to freedmen and slaves. Modest artisanal production was also to a large extent in the hands of *familiae*.¹⁵¹ (2) The partnership (*societas*) was therefore less needed than it might have been, but in any case it gained more importance in the late Republic, and not only because of the growing power of the *societates publicanorum*. Witness among other things the presence of the *Societas* of the two Pontilienus brothers, engaged in sending ingots of lead from Spain to Rome, as we see from two shipwrecks (Agde J and Mal di Ventre: Table 19.1).¹⁵² (3) The full economic effects of extra-legal *fides*-based

¹⁴⁸ Fr. 284 EK, from Sen. *Ep.* 90, who comments (s. 21) that modern cultivators also think of many ways of improving yields.

¹⁴⁹ Greene 2000: 44.

¹⁵⁰ Puteoli: Diod. Sic. 5.13. Gades: Strabo 3.168 (cf. 140). Patavium: 5.213. For the beginning date of Arretine ware 40 now seems to be the canonical date: Oxé, Comfort, and Kenrick 2000: esp. 37.

¹⁵¹ On slave managers: Aubert 1994: *passim*. Artisan production: Morel 1983c: 30, 35.

¹⁵² Either one of the dates is wrong, or modern ideas about the short-lived nature of Roman *societas* are exaggerated (incidentally, the name Pontilienus is also probably to be understood in *ILLRP* 777 from Cartagena).

social relationships in the late Republic still need to be explored. People relied on each others' loans and on their expertise, for example in dealing with real property.¹⁵³ Should such ties be seen as backward substitutes for institutions, or a sophisticated way of doing without them?

XIV GROWTH

We glanced earlier at some of the conceptual problems, and decided to concentrate on the area which comprised the Roman empire at the beginning of our period. If we were going to discover whether per capita GDP in this area increased over the following century, we would have to average the experience of very diverse regions: one scholar has concluded that, for the eastern provinces, the late Republic "was probably catastrophic with regard to the prosperity of the native populations."¹⁵⁴ On the other hand, the copper residues in the ice of Greenland show that there was a major increase in production,¹⁵⁵ which powerfully suggests overall growth.

This chapter has shown that there were fewer serious obstacles to growth than is often supposed. It is true that if you make a comparison with the "first modern economy," seventeenth-century Holland,¹⁵⁶ one striking difference is the poor supply of information in the Roman world, which must have meant high transaction costs. Very limited literacy and no printing, combined with some rather long distances, made investing and trading very hazardous, even at times when there was no war and little piracy. But while it is common to cite the social elite's lack of interest in mechanical improvement as another impediment, it did in fact show some interest in the rationalization of what it understood, for example law: it was in these times that Rome developed a law of agency.¹⁵⁷ The most serious mental obstacle was a system of social prestige which deplored greed.

But were the necessary positive factors present? The most important are commonly thought to have been capital accumulation (to which we should add: willingness to engage in productive investment), growth in population, and the diffusion of technological improvements.¹⁵⁸ Let us take these in reverse order.

Some technological improvements did spread, but it must be doubted whether their impact was great.

Malthusian checks probably held down the population of the most exploited provinces, but Roman citizens were very fertile (if Lo Cascio is

¹⁵³ Consider for instance the help Cicero had from Vestorius, *Att.* 14.9.1, 10.3, 11.2.

¹⁵⁴ Andreau 1999: 134. ¹⁵⁵ Hong et al. 1996.

¹⁵⁶ Described by De Vries and Van der Woude 1997.

¹⁵⁷ On the importance of which cf. North 1990: 126.

¹⁵⁸ See, e.g., Todaro 1997: 105; cf. Mokyr 1990; Millett 2001; and, on China, Deng 2000. Others emphasize investment in human capital (Becker 1993), or (Sylla 2002) the desirability of sound financial systems.

right¹⁵⁹), and the total population of the empire as it was in 133 BC probably grew.

Capital was the real problem. It was serious enough that Rome's rulers showed virtually no interest in human capital or popular education (even Greek cities drew in their horns), and negative enough that raising liquid capital often depended on the vagaries of personal relationships. What makes it impossible to suppose that there was much ultimate economic growth in this period is the sheer destruction of fixed capital – and of people – in the civil wars.¹⁶⁰

Archaeologists have been struck by the evident prosperity of the best-preserved Italian towns (Aquileia, Pompeii) in the last two decades or so of the second century.¹⁶¹ There were, on the other hand, signs of unease, even in Italy: for instance some 4,000 slaves had rebelled at Sinuessa in 141 BC.¹⁶² In the last years of the second century, the Gracchan reforms having been undone, plenty of free Romans and Italians were unemployed, even though much of the economic misery was being shifted to the provincials.

Then came the Social War of 91–89 BC, involving hundreds of thousands of men,¹⁶³ destroying great quantities of fixed capital, disrupting production and trade, and draining the treasury (which was not necessarily a bad thing). There ensued Mithridates' invasion of the Aegean provinces, a serious debt problem at Rome in 86 BC, the Sullan War in Italy, and then Sulla's colonization, the largest single disruption of rural life in Italy for over a century. Spain and Italy suffered seriously from war during the 70s BC.

The numerous signs of more or less intense social malaise in the late Republic are to a great extent attributable to the failure of the Roman elite to recognize and address the various economic problems that afflicted Rome, Italy, and the provinces.¹⁶⁴ The potential for modest economic growth was there, and liquid capital seems to have been abundant. But then civil war returned again in 49 BC, not to let up for more than a few months until 36 BC. And while warfare probably acted in some ways as an economic stimulus (we need a new model of how this might have worked), there was no chance of overall growth until Caesar's heir reimposed internal order.

¹⁵⁹ Lo Cascio 1994a; 1994b.

¹⁶⁰ Between 49 and 30 BC Italy and every province were the scene of warfare or at least of special exactions. On the vulnerability of fixed capital in a pre-industrial economy see Cipolla 1994: 80–91.

¹⁶¹ See Verzar Bass 1983: 209–12, and Oleson 1996: 73 (cf. Frank 1933–40: vol. 1, 288, etc.), respectively. Rome's recent wars had been fought elsewhere, and Asia Minor now contributed regularly to the imperial revenues. At Pompeii it was evidently the Social War that changed things.

¹⁶² Oros. 5.9.4 (the apparent date). ¹⁶³ Brunt 1971: 439, discusses the numbers involved.

¹⁶⁴ For an analysis of these problems, as they were experienced by the *plebs* in Rome itself, see Purcell 1994: 678–9.

