THE CORN SUPPLY OF THE ROMAN ARMIES DURING THE THIRD AND SECOND CENTURIES B.C.¹

Introduction

A major role in the corn supply of the Roman armies, from at least the third century B.C. on, is ascribed to large scale contractors, who took care of all aspects of organization, administration and execution. In Badian's influential study of these private entrepreneurs, it is supposed that the feeding of the Roman armies exceeded the capabilities of the Roman governmental apparatus; as a result, the state in Republican times had to rely on private enterprise.² The role given to private entrepreneurs assumes that private trade was capable of supplying and distributing huge amounts of corn without much difficulty. On the other hand, the capabilities of the Roman governmental structure seem very limited. The question whether indeed it was private business and not the Roman state itself that managed the corn supply of the Roman armies is important for our understanding of the Roman wars, the state and private trade in this period.

It is the purpose of this paper to show that the evidence furnished for the role of large scale contractors in the corn supply of the armies is inadequate. The sources provide ample evidence of other means the Roman government had to acquire corn for its armies.

¹ I wish to express my gratitude to professors J.S. Richardson, E. Badian and G. Rickman and dr. G. de Kleijn for their stimulating criticism of an earlier draft of this paper. The paper was partly written during a visit to the University of Edinburgh, which was made possible by a grant from the Reiman-De Bas Fonds, Netherlands.

Publicani

The supposed structural role of large scale contractors in the food supply to the Roman armies is based largely on a rather dubious story which involves publicani in the provisioning of the Spanish army during the Hannibalic War (Livy 23.48f. and 25.3ff.).

In the year 215 the commanders of the army in Spain informed the senate of their accomplishments, but also of the shortage of money, clothing and corn. They would try to get money themselves, but clothing and corn had to be delivered from Italy. The senate agreed that these demands were justified, but lacking the necessary resources they decided to appeal to those who had made profits before from state-contracts to deliver the necessary supplies to the Spanish army on credit. On the day fixed by the praetor, nineteen individuals in three societaes were willing to subscribe to the contracts on two conditions. Firstly they demanded exemption from military service for the duration of the contracts and secondly they demanded that the state should carry all the risk of adverse weather conditions or hostile actions (23.48ff.).

Some years later one of these publicani – M. Postumius from Pyrgi – was charged with fraud. Together with a colleague – T. Pomponius from Veii – he had deliberately sunk worthless ships or pocketed money for non-existent ships and cargoes. The accusations and the ensuing trial led to a political row. At first the senate was reluctant to take action, because it was afraid of offending the class of public contractors. When two of the tribunes started prosecution nonetheless, the publicani at first tried to obstruct their action using the veto of one of their colleagues; later they resorted to simple violence. As a result, the senate took a firm line with the publicani (25.3ff.).

Badian concluded from the story that "the selling of such contracts was the only known way of getting supplies, and that it had been systematized into set forms." Even if we take Livy’s account at face value, the story seems to support this conclusion only imperfectly. It is impossible to tell on the basis of the story if entrepreneurs were regularly and normally involved in the acquisition of corn. Even more audacious is the conclusion that the Roman government only had recourse to large scale contractors for its corn supply of the armies. Tenney Frank, for instance, suggested that it was only during the Second Punic War that the help of publicani was called upon for the provisioning of the army and that Rome reverted to governmental control during the wars in the East because of the fraud this led to.

Even on the basis of the story as it is told by Livy it is hard to come to any conclusion. But to what extent is the account of Livy in this instance to be trusted? There are various reasons to assume this story is rather dubious. The

3 Badian (op. cit. n. 2) 17.
most serious criticism is that the story contains many anachronistic elements. Badian rightly rejected the depiction of the political row which implies “an organized ordo publicanorum with the sort of status and powers it had in the age of Cicero”. He points also to certain inconsistencies in the attitude of the senate. The planned obstruction of the action of two of the tribunes by the veto of a third, together with the use of open violence in a public assembly, seem no less anachronistic and find an obvious parallel in the late second century B.C.

The criticism in the first instance undermines only the credibility of the latter part of the story. 23.48ff. and 25.3ff., however, are clearly part of the same tradition, and we have to conclude that this information comes from a not reliable one. Though Livy may be the only source we have for the internal affairs of Rome in this period, we must admit that he often is not trustworthy. In the Livian tradition “the actual history was written in the late Republic, often in the light of contemporary events.”

Even if we would assume the famous “kernel of truth” in the story, the whole construction would depend on the mention of corn among the cargo. As we shall see later, contracting was one of the means used by the Roman government to acquire uniforms, horses etcetera for their armies. Some ignorant later Roman writer could easily have made the mistake to add corn. This possibility is not proposed as a likelihood, but to emphasize the danger in depending on such slight grounds in the face of much better evidence.

In a later instance, however, Livy was thought to have provided corroboration of the theory, when he mentions Cato’s measures regarding the food supply of his army in Spain in 195 B.C. The relevant passage in Livy (34.9,12) says: \textit{Id erat forte tempus anni, ut frumentum in areis Hispani haberent; itaque redemptoribus vetitis frumentum parare ac Romam dismissis ‘bellum’ inquit ‘se ipsum alet’}. Some scholars see this as the dismissal of the publicani, who had contracted for the provisionment of food to the Spanish army.\textsuperscript{5} The text,\textsuperscript{4}


\textsuperscript{5} J.A. Briscoe, \textit{A commentary on Livy, books XXIV–XXVII}, London 1981, 70, even refers to
however, does not allow only this interpretation, for *redemptor* may just as well have the meaning of ‘supplier’ or ‘entrepreneur’ in general or of ‘transport contractor’.\(^6\) *Parare* does not only mean ‘buy’, but also ‘furnish’, ‘equip’, ‘deliver’ and ‘supply’. Other possible translations are “Cato forbade the transport contractors to deliver the grain and sent them back to Rome”, or “Cato forbade the tradesmen to furnish the grain and sent them back to Rome”. This passage is therefore open to various interpretations.

Furthermore, Polybius in his discussion of the *publicani* in book 6 does not mention contracts for the food supply of the armies. In 6.17 he even illustrates the great importance of these *societates* with examples of contracts in several domains, but army supplies are not one of them. If the contracts for the provisioning of the armies had included the food supply and not only uniforms, horses etc., this would have been one of the most profitable fields. As I do not doubt there were contracts for the provision of uniforms, weapons, horses etc. and as these are not mentioned by Polybius either, his silence is not conclusive. However, the omission is more easily understood if the food supply, which would have been a huge assignment, formed no part of the contracts on behalf of the armies.

**Purchases, contributions and levies**

In this next section an overview will be given of the means the Romans had recourse to for the procurement of military provisions. The accounts of Roman warfare in the third and second century B.C. offer ample evidence for the military corn supply. I first want to emphasize Roman levies, tributes and allied contributions, which were to a large degree determined by the needs of the moment. The Roman government did not use only one mechanism to acquire corn. There were many alternatives and one did not exclude another. In the next paragraph we will assess the part played by the tithes in supplying the army. By then it will be time for a more detailed discussion to answer the question

---

\(^6\) *Redemptor* as such has a wide spectrum of meanings. The *RE* classifies them in three categories: first it means anyone who conducts a task against payment – the *conductor operis*, in which category we have to include the *redemptor operum publicorum*; secondly the *conductor rei*, which refers to hiring and leasing; the third category refers to the release of captives against ransom. This is the meaning of most instances of the word in the work of Livy. The most interesting parallels in Livy are 23.48,10, where *redempturis* clearly refers to state contracts, and 42.3,11, where *redemptores* means ‘transport contractors’. 
whether these mechanisms were based on private business or on state control.

For an important part the trade of grain was an aspect of the normal diplomatic relations between states, and it is in this context that we have to consider the purchases from states like Numidia, Carthage, Syracuse and Epirus.7

Hardly distinguishable from these purchases are the free contributions by allies and befriended states. During the third century B.C. the most famous of these allies was King Hiero II of Syracuse, who according to our sources provided corn from the First Punic War on. However, the Romans did not rely on his contributions structurally during this war; he only helped when the regular supply, which was meant to come from Italy, was cut off or collapsed. The treaty did not bind Hiero to provide material aid to the Romans. While in our sources he once sold corn to Rome during the interbellum, his contributions during the first years of the Second Punic War were also voluntary gifts. The amount of corn that was sent to the legions in Italy must not be overestimated. In the year 216 300.000 modii of wheat and 200.000 modii of barley were sent to Italy and in the next year another 200.000 modii of wheat and 100.000 modii of barley. Compared to the millions of modii of wheat that were necessary for the armies in Italy in each of these years, it can not be regarded as anything more than a nice gesture.8

Similar are the contributions of Carthage and Numidia during the wars in the east in the first half of the second century B.C. Both states had no treatised obligation to provide food, but they probably regarded these supplies as a means to gain or strengthen relations with Rome. From the Roman point of view these shipments were a welcome, and in some years substantial, contribution, but Rome could hardly rely structurally on foreign aid.9

The largescale help from states like Syracuse, Carthage and Numidia was regarded as interesting enough for an explicit mention in our sources. Structurally probably more important, but in the eyes of the ancient authors not as

7 The embassy to Egypt to sollicit a supply of corn during the Hannibalic War in Polybius 9.11a is undoubtedly a further instance of corn trade on a diplomatic level.
9 See Appian, Pun. 94. P. Garnsey, Famine and food supply in the Graeco-Roman world. Responses to risk and crisis, Cambridge 1988, 185f. rightly stated, “the contributions were not part of an organized system for supplying Rome and the armies.” Frank (op. cit. n. 4) 160, concludes from the contributions and the strength of the armies in these years, that “when ten or twelve legions were active, additional supplies had to be bought or accepted as gifts from Africa and elsewhere.” According to Livy 36.4,1ff., the kings of Macedon and Egypt offered money and corn for the war against Antiochus. This information, however, is widely distrusted. See for the discussion Briscoe (op. cit. n. 5) 224f.; also H.J. Hillen (Hrsg.), T, Livius, Römische Geschichte, Darmstadt 1991, 515f. African contributions: Livy 31.19,2ff.; 32.27,2; 36.4,5ff.; 42.29,8; 43.6,11ff.
The corn supply of the Roman armies during the third and second centuries B.C. 173

interesting, were the regular contributions of the allies in and neighbouring to the war zone. The source-material on this subject matter is usually scarce and vague.

In a speech by Eumenes of Pergamon in the narrative of Polybius (21.20), the Greek ruler reminds the Romans that he had provided the Roman and allied armies with provisions during the war against Antiochus. In the parallel speech in Livy's account, Eumenes mentions the contribution of provisions under his father Attalus (37.53.9). It cannot be doubted that aid in the form of corn was provided by states like Pergamon, which were not only allied to the Romans, but directly involved in the war as well. Possibly these states were bound by treaty to deliver corn. 10 From various instances in the sources we must conclude that the small states near the warzone – like the allied towns in Sicily during the First Punic War, the communities in Southern Italy during the Hannibalic War, and some towns in Africa during the Third Punic War – also contributed to the needs of the Roman and allied armies. 11

Besides acquisition of corn through trade from states like Syracuse, Carthage and Numidia, there is also mention of purchases in parts of Italy. During the Second Punic War the senate is said to have occasionally bought grain in Etruria through legates or a praetor. 12 The practice of the acquisition of corn through representatives we meet again in the year 172. As part of the prepara-

10 Compare the case of Athens, which in 170, albeit unwillingly, had to comply with the Roman demand of 100.000 modii of corn (Livy 43.6.1ff.).
11 Polybius (1.18) mentions the help of the allies on Sicily during the First Punic War, who brought supplies to the Roman supply base at Herbesos. In a similar case, he tells us that the supplies for the military stores at Cannae during the Second Punic War were collected from the Apulian hinterland surrounding Canusium, which was allied territory (Polybius 3.107.3). During the Third Punic War various African cities provided the Roman army with provisions (Appian, Pun. 94). See also Livy 23.46.9; 34.26.10; 38.41.8; Appian, Hann. 34. Livy 22.16.4 states that the Roman army, which in the summer of 217 watched the Punic army ravaging the Campanian plain, could count on the contributions of the nearby allies. This statement occurs, however, in an unhistoric story. See P. Erdkamp, 'Polybius, Livy and the Fabian strategy', Ancient society 23 (1992) 133. The voluntary contributions of the Etruscan states to Scipio's campaign in Africa (Livy 28.45.14ff.) are too unreliable to allow any conclusions. See esp. Frank (op. cit. n. 4) 93ff.; Toynbee (op. cit. n. 4) 11; A.J. Pfiffig, 'Die Haltung Etruriens im Zweiten Punischen Krieg', Historia 15 (1966) 205ff.; P.A. Brunt, Italian manpower, 225 B.C. – A.D. 14, Oxford 1971, 65ff. Caesar gives an important insight into the contributions of allies during the Gallic and civil wars: Caesar, B.G. 1.16; 1.48.2; 2.5.5; 3.7.2–4; 7.10.1–3; 7.17.2–5; B.C. 1.48; 1.60; 3.47; 3.58.
12 Livy 25.15.4; 25.20.2; 27.3.9. There is some doubt on the reliability of the first of these cases. See most recently Kukoffka (op. cit. n. 4) 57ff. This might cast doubt on both other instances as well, but in the light of other evidence there is hardly enough reason to reject the mechanism as such.
tions for the war against Macedon, three legates were sent to Apulia and Calabria to buy grain for the navy and army (Livy 42.27,8). On the basis of the very slight information that is given in our sources, it is impossible to decide whether this trade was with private traders or with the town communities. Free contributions and government purchases in Italy might have to be seen in the same light as the contacts with Syracuse, Carthage, Numidia and Epirus, though on a smaller scale. The clearest instance we have in this regard is the inscription on the purchase of corn from Thessaly in the late second century B.C., which is clearly on a diplomatic level. For the mechanisms involved in this I have to refer, however, to the later discussion.

One of the easiest ways for the Romans to acquire grain for their armies was to exact contributions from other states. The distinction between regular aid by allied states and ad hoc contributions, which were enforced by the presence of the Roman armies, will in some cases have been subtle. The statement of Cicero (De imp. Cn. Pomp. 38.15), who doubts that more cities of the enemy were ruined by Roman troops than allied cities as a consequence of the quartering of troops during winter, leaves no doubt as to the harshness of Roman demands. It must be emphasized that Cicero had the chaotic times of the first century B.C. in mind, but even in earlier times the Romans probably forced helpless allies to provide winterquarters. The scarcity of the source-material does not allow a clear view of the usual Roman attitude. Some instances of harsh treatment of small states in the eastern world during the first half of the second century B.C. may be more the result of the emphasis of some of the Roman authors on the detrimental effect of the empire on Roman virtues than a true reflection of usual practice involving ruthless requisitions.13

Furthermore, it was also usual practice to exact the delivery of corn from defeated states. In most cases this grain was explicitly intended for the armies and the amount sometimes stipulated in the period for which provisions for the army had to be provided. These contributions were demanded, for instance, from Carthage and Antiochus, but the peoples of Spain and Sardinia also had to deliver corn after Roman victories.14

Such contributions from allied and suppressed states were ad hoc exactments, determined by the actual need of the Roman armies in wartime. A regular levy in corn only followed after provinces were established in some of

13 See esp. T.J. Luce, Livy. The composition of his history, Princeton 1977, 250ff. Notorious is the way in which Manlius Vulso blackmailed the states of the interior of Asia Minor into the delivery of money and corn (Polybius 21.36; Livy 38.13,13; 38.14,5ff.; 38.15,8ff.). Further instances Polybius 21.6; Livy 37.9,1ff.; 43.4,9; 43.6,1ff.; Cicero, Att. 5.21.

these war zones. This is also the conclusion of Richardson regarding the corn levies in Spain during the first decades of Roman involvement. "As might be expected in an area continually beset by wars and at a considerable distance from Rome itself, the methods of revenue-collecting developed in response to the conditions on the spot, rather than being imposed from the centre." Sometime before the year 171 B.C., when the system was modified, a regular levy in the form of the *vicensuma* was imposed on the Spanish provinces.15

The tithes from Sicily and Sardinia

Sicily and Sardinia contributed to the needs of the Roman legions stationed there before the Second Punic War (e.g. Livy 23.48,7). The paucity of the evidence, however, does not permit any conclusions as to the exact nature of these contributions. The big difference between the Iberian peninsula and Sicily was that the latter had known largescale tribute systems, which had been exacted by Carthage and Syracuse, before the Roman annexation. The Romans indeed took over the tithe system – the so-called *lex Hieronica* – from Syracuse, but the exact date is unknown.16

An important breaking point seems to have been the warfare on the island during the Second Punic War and Valerius' reorganisation of the province in the years 210-206 B.C., which according to Livy was intended to make possible the full exploitation of Sicilian agrarian resources.17 Whatever the exact nature

15 Richardson (art. cit. n. 5) 147ff. He compared these corn levies to the system of the *stipendium* during this period. Until 180 money was demanded by the governors according to the needs of the Roman army. Comparison can also be made with the *indictio*, which came to be levied as an irregular tax as a result of the increased military demands under Trajan.

16 This could have been during the organisation of the province in the year 227, or during the reorganisation of the province, which now included Syracuse, after the pacification of the island in the year 210, or even later. See esp. Toynbee (op. cit. n. 4) II 222; R.T. Pritchard, 'Cicero and the *lex Hieronica*', *Historia* 19 (1970) 352f.

17 In Livy 27.5.5, Valerius claims to have straightened affairs on Sicily: in peace and war the island is now a most dependable source of the grain supply. In 26.40.15f. and 27.8.18f. this is explicitly described as the restoration of the situation of the pre-war years. The incidental shipments by Hiero and the contributions to the troops stationed on the island before and during the first years of the Second Punic War by no means can be compared to the structural importance of the island during the late Republic, which is brought to mind by the phrasing of the Livian account. Similarly Brunt (op. cit. n. 11) 274. Cf. Toynbee (op. cit. n. 4) 211; G.P. Verbrugghe [a], *The Sicilian economy and the slave wars*, c. 210-70 B.C. Problems and sources, Ann Arbor, Michigan 1971, 8ff.; G.P. Verbrugghe [b], 'Sicily 210–70 B.C. Livy, Cicero and Diodorus', *Transactions and Proceedings of the American Philological Association* 103 (1972) 537; Garnsey (op. cit. n. 9) 186.
of the corn levies, it is likely that the enlarged province of Sicily was intended from the start to contribute regularly and structurally to the food supply of the Roman armies. In the year 205, during his preparations for the campaign in Africa, Scipio Africanus requisitioned corn from the towns of Sicily (Livy 29.1,14). It was probably an ad hoc measure, implemented because of the temporary presence of the large army. While there were some incidental shipments of corn to the Roman armies in Italy in the first years of this decade, regular supplies occurred during the campaign of Scipio Africanus in Africa and continued without any break during the war against Macedon and later.

In the year 198 B.C. Sicily and Sardinia supplied corn to the Roman army in Greece. Regarding the later wars, there are several references to second tithes, which were levied in Sicily and Sardinia largely on behalf of the Roman armies. The nature of these second tithes is hardly a matter of debate, as they were doubtlessly levied primarily to fulfill the increased need of the Roman armies during the wars in the east.

More interesting, however, is the question as to the destination of the regular tithes. Rickman and Garnsey assume that they were used to provide a regular supply of corn both to the city of Rome and to the armies. Consequently,

18 Verbrugghe (op. cit. n. 17 [bl]) 537, even interpreted it as the levy of a tax on grain, but it seems rather a late date to introduce such a tax. V.M. Scramuzza, 'Roman Sicily', in: T. Frank (ed.), An economic survey of ancient Rome, vol. III, 1937, Paterson 1959, 234 explains the requisition as an additional quota besides the tithe.

19 The shipment of corn to the garrison of Tarentum in the year 210, which was at the time besieged by the Carthaginians, will not have involved a large amount and was even captured by the Carthaginians (Livy 26.39). Kukofka (op. cit. n. 4) 95, gives an interesting analysis of the passage. More significant will have been the supply of corn to the city of Rome and to the Roman army near Tarentum in the next year (Livy 27.8,18). However, this shipment does not have to point to an increased production in Sicily, but was rather connected with the reduction of the army on the island from four to two legions in the same year, which will have released some provisions for the armies abroad. There is silence in the next years. Interesting is Livy's remark that Scipio requisitioned the grain from the Sicilian towns to spare the grain from Italy (29.1,14). If this information is to be taken at face value, it means that there could hardly have been a regular supply of Sicilian corn to Italy at the same time, because in that case it would have meant carrying owls to Athens to transport grain from Italy to Sicily. In any case, a really important role can only be made to stick for the campaign in Africa. The overseas supplies came not only from Sicily; also Sardinia, Spain and Italy itself are mentioned. Supplies from Sicily: Livy 29.35,1 (comp. Polybius 15.1); 30.24,5f.; Sicily, Sardinia and Italy are mentioned in 29.36,1— 3; from Sardinia, Sicily and Spain in 30.3,2.

20 198: Livy 32.27,2. 191: 36.2,12f. 190: 37.2,12. 189: 37.50,9f. 171: 42.31,8. The difference between the war against Antiochus, when second tithes are levied in the years 191–189, and the war against Perseus, when a second tithe is only mentioned for the year 171, is probably partly connected with the much larger contribution of Carthage and Numidia during the latter war (Livy 36.4,5ff.; 43.6,1ff.). See on the levying of a second tithe on behalf of the armies Toynbee (op. cit. n. 4) 217; Garnsey (op. cit. n. 9) 194.
Garnsey assumes the grain supply of Rome to have been in jeopardy during the wars against Antiochus and Perseus. Indeed in some years, when a second tithe was levied, the senate ordered that part of the tithe corn was to be sent to the city of Rome, while in the year 190 it ordered a corn shipment to Rome from Africa. There is in fact one more or less explicit indication of a food crisis in the city, when grain traders were punished in the year 189 for hoarding grain (Livy 38.35.5). The fact that part of the additional tithe corn was shipped to Rome – Livy does not actually say that it was the urban population which was to be the main beneficiary – seems to be the primary reason to assume that part of the regular tithe corn was shipped to Rome as well. I would like to propose an alternative theory, in which I posit that the tithes of Sicily and Sardinia were used (almost) exclusively on behalf of the Roman armies, which were constantly operating or stationed in the western half of the Mediterranean.

In most years, the surplus production of the Sicilian and Sardinian farmers, minus the regular tithes, could be brought onto the market and became available for the supply of structural markets, one of which was the city of Rome. The levy of a second tithe fairly diminished the amount of corn available for the market. We must not forget that the tithe was actually one tenth of the total harvest. Since a large part of the harvest was needed as seed corn and for the consumption of the producers themselves, the levy of an additional ten percent of the total harvest significantly diminished the amount of grain available for the market. Furthermore, the structural suppliers of the city of Rome must have been an obvious source of corn, to which the Roman government turned in its quest for additional supplies for its armies. The huge contributions by Carthage and Numidia are clear instances where the stream of corn to the private corn markets was depleted even further. The reduction of the market supply was inevitably to lead to an increase in corn prices.

It must be emphasized that these assumptions do not imply that the population of Rome was structurally and solely fed from Sicilian and Sardinian corn. Neither is it to be assumed that market grain played a structural role in the feeding of large sections of the civilian population of Italy as a whole. Quite the opposite: the effect of the army supply will have been all the larger because the part of the population that was dependent on the market for its food supply was relatively small. On the other hand, Rome probably relied to a large degree on Italian agricultural production for its food supply; otherwise, the withdrawal of

21 Rickman (op. cit. n. 2) 44; Garnsey (op. cit. n. 9) 193f. Hillen (op. cit. n. 9) 514, in his note to 36.2.12 states that the tithe corn of Sicily and Sardinia was normally used for the troops stationed there. This cannot be the case, for since the end of the Second Punic War hardly any troops normally were stationed there. (See esp. Toynbee [op. cit. n. 4] 652.)

22 See Scramuzza (op. cit. n. 18) 237; Pritchard (op. cit. n. 16) 354.
Sicilian and Sardinian corn would not merely have resulted in price fluctuations, but in a disaster.\textsuperscript{23}

To soften the effect on the population of Rome, and to protect itself against widespread discontent, the government in some of these years of increased military effort ensured the supply of corn to Rome by sending part of the double tithe corn. This can be compared to the several instances where corn was distributed to the population of Rome in the decades around the year 200 B.C. or the time when a shipment was sent from Thessaly in the late second century B.C. These distributions must be regarded as ad hoc measures of individual magistrates or as the release of surplus corn in particular circumstances. The shipment from Thessaly amounted to about half a million \textit{modii}, which is only a fraction of the total, annual consumption of the population of Rome at the time. However, at the right time of year even a small supply could mean a material difference to the corn market of the city.\textsuperscript{24} Likewise, in years of increased army demands, some supply of cheap corn to the Roman market could have been ensured. The supply to the other structural markets of Sicilian and Sardinian surplus grain was nevertheless diminished by the levying of additional tithes. This, however, will have been of no concern to the Roman politicians.

The most important difference between the two theories is that in the first theory the Roman government secured a regular supply of the Roman corn market. The tithe, it is assumed, went annually to the city of Rome and the armies. The other theory posits that the tithe went solely to the armies. Only in some instances did the Roman government take ad hoc measures regarding the food supply of Rome. Neither theory, however, can be proved on the basis of the available source material.

\textsuperscript{23} Brunt (op. cit. n. 11), 286, assumes a substantial supply of corn and other food products to the city of Rome from its Italian hinterland even in the first century B.C. and in the early principate. See also De Neeve, [review of] 'Rickman, The corn supply of ancient Rome, 1980', \textit{Mnemosyne} IV 38 (1985) 445f. To their material I want to add Appian, \textit{B.C.} 1.67 and 1.69, in which passages it is clearly stated that during the siege of Rome by Marius and Cinna, the food supply of Rome is cut off not only by blocking the Tiber downstream of the city, but above the city as well. In the following events Marius captures the neighbouring towns "where grain was stored for the Romans". Having first blocked the supply over sea and river, it is concluded, he now also has taken command of the supplies by land. Because of the location of towns like Aricia and Lanuvium, it is improbable that overseas corn, that was shipped to Italy on behalf of the city of Rome, would have been stored there, inland and miles from the Tiber. More probable is that this grain, meant for Rome, had grown on the fertile soils of central Italy.

\textsuperscript{24} Livy 26.10,2; 30.26,5f.; 31.4,5; 31.49,8ff.; 33.42,8. See Rickman (op. cit. n. 2) 34ff.; P.D.A. Garnsey, T. Gallant and D. Rathbone, 'Thessaly and the grain supply of Rome during the second century B.C.', \textit{Journal of Roman Studies} 74 (1984) 38; Garnsey (op. cit. n. 9) 193f.
Closely adhering to the information given in Livy's account, we have to conclude that the tithe of both islands constituted a relatively small amount compared with the total requirement of a city like Rome and, furthermore, it cannot have exceeded the requirement of the usual number of legions in the first decades of the second century B.C. The double tithes during the war against Antiochus provide clarification in this respect. The presence of 2 to 4 legions in the east during this war induced the Romans to levy a second tithe on Sicily and Sardinia in the years 191–189. Both tithes went largely to the army involved in the war; only part of the tithe corn of Sardinia went, in two out of the three years, to Rome. There were also large shipments from Carthage and Numidia to the armies in the east, as well as contributions from Pergamon and possibly other allies. Since this amount of corn, of which the regular tithes of both islands constituted only a part, was consumed by the few legions present and the fleet, it is extremely likely that the regular tithe did not exceed the food requirement of the 8-10 legions and large naval forces which were operating annually during the first decades of the second centuries B.C.25

The regular tithes probably contributed to the military food supply since the Second Punic War. The legions that were permanently stationed in the western half of the Mediterranean required a constant food supply. The armies that were operating in Spain, for instance, were almost annually supplied by outside sources as well as receiving ad hoc corn levies from the provinces. Although the only two references in Livy to the food supply of the Spanish armies actually state that no external supplies were necessary, it is clearly implied that this was the exception rather than the rule.26

As the war against Antiochus shows, the military food supply in these decades will not only have depended on tithe corn. During the war against Antiochus the legions in the other warzones will have fallen back partly upon

25 For the strength of the Roman army in the war against Antiochus see esp. Brunt (op. cit. n. 11) 274; 657f. For a survey of the number of legions in the period 200-168 see Toynbee (op. cit. n. 4) 652. In the year 191 two tithes were levied on Sicily and transported to Greece. A second tithe was levied on Sardinia and shipped to Rome (Livy 36.2,12f.). It must be noticed that the destination of the regular tithe of Sardinia is not mentioned. In the next year both tithes of Sicily were transported to the army in Aetolia, while part of the tithe corn of Sardinia was shipped to Rome, part to Aetolia (Livy 37.2,12). In the year 189 B.C. one tithe of Sicily was to be transported to Asia, the other to Aetolia; the same was ordered for the two tithes of Sardinia (Livy 37.50,9f.). The contribution from Carthage and Masinissa in Livy 36.3,1; 36.4,5ff. The amount of wheat promised by Carthage on behalf of the army is uncertain. Assuming that the Carthaginians will have contributed about as much as their rival in Numidia, the total amounts to 1.000.000 modii of wheat and 800,000 modii of barley. Pergamon also contributed corn (Polybius 21.20; 37.53,9). See also Brunt (op. cit. n. 11). Because he wrongly assumes the monthly rations to be 3 instead of 4 modii, his estimates have to be corrected to 2.400.000 and 3.600.000.

26 Livy 34.9,12f.; 40.35,4.
corn reserves, partly on the other means available to the Roman government for the acquisition of corn. During this war only the regular tithe of Sardinia from the year 191 B.C. probably was used on behalf of the legions outside of the Greek warzone. Livy (36.2,12f.) states explicitly that both tithes of Sicily were transported to the army in Greece, while the second tithe of Sardinia was shipped to Rome. He does not mention the destiny of the regular Sardinian tithe. As it is likely that Livy would also have mentioned the regular tithe of Sardinia, if it had been destined for the army in Greece or Rome, we can be sure that it was sent to the other armies. It is interesting to note that Livy in this case seems to be not interested in the destination of the regular tithe corn, even while he is speaking about the corn.

State control or private business

The tasks of some magistrates involved them in the corn supply of the army and the city. The *aediles* were primarily concerned with the market distribution of corn in Rome. It was probably only later on that some *aediles* acquired corn to be sold at low prices to the population of Rome. The acquisition of corn seems to have been of more concern to the *quaestores*. The military aspect this originally will have involved, is illustrated by the fact that provisions in the Roman military camp were controlled by the *quaestor* (Polybius 6.31,1).27

The senate had considerable authority over corn supplies. It probably gave the orders to the legates to acquire grain; it decided to levy a second tithe and ordered the shipment of the supplies to the armies.28 In book 6 Polybius depicts

---

27 See also Polybius 1.52; Sallust, *lug.* 29.4; Appian, *Pun.* 116 for the involvement of the *quaestores* in the provisionment of the Roman armies (cf. Livy 25.13,10.). The role of the *aediles*: Livy 26.10,2; 30.26,5ff.; 31.4,5; 31.49,8ff.; 33.42,8. Garnsey et al. (art. cit. n. 24) 38; Garnsey (op. cit. n. 9) 178ff. See for the involvement of the *quaestores* in the corn supply esp. W.V. Harris, ‘The development of the quaestorship, 267–81 B.C.’, *Classical Quarterly* 26 (1976) 97ff., 104. Interesting is also Livy 23.41,6–7, in which passage we are told that the commander, after gaining victory in Sardinia, sailed back to Rome. In Rome he delivered the money to the *quaestores*, the corn to the *aediles* and the captives to the *praetor* Quintus Fulvius. It is amazing that the corn is delivered to Rome, while the two legions remain on the island for years on. A little while after this shipment to Rome the food supply of the legions indeed turned out to be inadequate (23.48,6–7). It seems improbable that the Roman governor would not have realized the drain on Sardinian resources, which came from two Roman legions and allied troops. While the neat delivery of money, corn and captives makes a rather construed impression, this information seems also contradictory to the latter passage.

28 Senatorial power over corn supplies: Polybius 1.52; Livy 27.3,9; 36.2,12–13; 37.50,9–10; 42.31,8; 43.6,11–13. Orders for the levy of tithes: Livy 31.19,2–4; 36.2,12–13; 37.50,9–10; 42.31,8. In 169 Rhodes asks permission of the senate for the import of corn from
the commanding consul as totally dependent on the senate for the provisionment of the armies. “The consul, when he sets out with his army, equipped with the powers I have mentioned, appears to hold absolute authority for the execution of his purpose, but in practice he needs the support both of the people and of the senate and cannot bring his operations to a successful conclusion without them. It is obvious, for example, that the legions require a constant flow of supplies, but without the approval of the senate neither corn nor clothing nor pay can be provided, so that a commander’s plans can be completely frustrated if the senate chooses to be antipathetic or obstructive.”

This dependency of the consul on the senate is rather overemphasized to illustrate Polybius’ point pertaining to the equal balance of power in the Roman constitution. Because the lines of communication between the commanding magistrates and the senate since the First Punic War had become too long for a centrally regulated provisionment, the generals had to have some authority for the procurement of corn.29

Tenney Frank suggested that as a result of the fraud during the Hannibalic War, the state purchased its supplies through its own magistrates during the Eastern Wars. Unfortunately he only refers to the second tithes, which were levied in Sicily and Sardinia. Frank’s suggestion provoked Badian to remark sarcastically: “He does not give us any idea of how the magistrates suddenly acquired the technique and the organization that enabled them to manage the complicated business of buying supplies and providing transport. Did the state itself now go into the contracting business?”30 Based on the argument that the

Sicily (Polybius 28.2). Interesting is also Cicero, Att. 6.3: “A great war is likely in Syria, which will apparently break forth into this district [Cilicia], where there is no protection and only the ordinary supplies have been voted for the year.”

29 J.P. Adams, Logistics of the Roman imperial army. Major campaigns on the eastern front in the first three centuries A.D., s.l. 1976, 217f., remarks regarding the provisioning of the Roman armies that “the Roman military establishment was remarkably slow to develop any sort of superstructure of administrative machinery to meet these various needs. [...] The usual governor with imperium was left to his own devices in seeing to the requirements of his forces. And this is what one would expect in any case, for the senate was always wary of the independence of a governor who had an army.” It should be noticed, however, that a centrally governed provisioning of the armies would on the contrary restrict the freedom of action of the commanding magistrates, which is indeed Polybius’ point.

30 Frank (op. cit. n. 4) 149. He fails to point, however, to evidence for this thesis. Toynbee (op. cit. n. 4) 356, says that Frank may be right in stating that the supplies were handled by the government itself and also in suggesting that a change of policy had been brought about by the unhappy experience of the Hannibalic War. He remarks, however, that Livy’s notices of the tithes do not clear up this point, but points to the transaction with Epirus in Livy 44.16,2f. To which more later. Badian (op. cit. n. 2) 27f. Brunt (art. cit. n. 2) 210, agrees with Badian, saying in his German addition “man kann sich nicht sehr gut vorstellen, welches andere System außer der Requirierung überhaupt anwendbar war.”
governmental apparatus of the Roman Republic was totally inadequate, one could indeed argue that the state was hardly involved at all in managing the corn supply, that its magistrates, legates and commanders only expressed the need for corn, and that the actual job was done through private trade and private entrepreneurs. Would it make a difference, then, whether these entrepreneurs were publicani in the sense of large scale contractors or not?

Against this line of reasoning, two objections have to be made. In the first place, the Roman Republic did not have to rely on the mechanisms of private business to the degree which is usually assumed. Secondly, there are significant differences between different forms of participation of private enterprise; it therefore does matter in what way entrepreneurs participated in the execution of governmental tasks.

Regarding the first objection, it should be emphasized that trade contributed less to the military corn supply than provincial tributes, levies and allied contributions. As we mentioned briefly earlier, army commanders, legates and magistrates were involved in trading of corn at least from the Second Punic War on. While we never come across any role of large scale contractors – or publicani in whatever form – in the corn supply of the Roman armies during the late Republic, there are several instances of the direct purchase of corn by late Republican generals. Most cases are concerned with problems that arise from the impossibility to acquire corn by trade. The ancient historiography mostly concerned itself with the corn supply of the armies, when the situation was something out of the ordinary. We can infer from these instances that it was not irregular practice for commanders to purchase corn themselves.

Even with respect to the acquisition of corn through trade at a high level – locating surplus corn and making transactions with the people that can provide it, whether they are community councils, corn merchants or farmers – it should be emphasized that this did not require a huge administrative apparatus and could be managed by special legates, non-combatant members of the military staff or personal representatives. Examples of these we find in the three legati which were sent by the senate to Apulia and Calabria in 172 B.C. to buy corn on behalf of the army, and in Octavian’s freedman, whom the triumvir sent during the Civil Wars to acquire corn. The assignment of three legates to go to Southern Italy would have been needless, if it was usual practice to delegate the actual job to contractors. The magistrates and their representatives might have contacted corn traders and farmers selling surplus locally and on a small scale. It is also possible, as we have indicated before, that Rome traded with local communities. Their assignment could very well have been made easier by

31 Appian, B.C. 4.108; Caesar, B.G. 1.16,6; Plutarch, Caesar 41,3.
32 Livy 42.27,8; Appian, B.C. 5.78. See also Caesar, B.G. 3.7,3; B. Afr. 21, 36; Strabo, Geogr. 3.4,20; Appian, B.C. 3.11.
existing connections. To assume a strict division between a class of politicians and generals and a class of businessmen, which would make it necessary for the state to rely on the mediation of the publicani, would lead to wrong conclusions. The wealth of the elite was based on agriculture, which made contact with the corn trade almost inevitable. On the other hand, the profits which were to be gained in the provisioning of the armies made it interesting enough for traders to approach a legate or commander themselves.33

Sallust (Iug. 47.1f.) informs us that Metellus expected the many Italic traders in the Numidian city of Vaga to be of use in supplying his army.34 There were evidently no contracts with large scale contractors. What is more, this points to an involvement of private traders in the acquisition of corn which was less structural and on a lower level than the supposed management by the Roman societates.35

Although some corn was purchased on the private market, we can be sure that not all corn was bought through the channels of the private corn trade. As we have seen, allied states often contributed or sold corn to Rome on behalf of its armies. Two cases offer some insight into the actual management of such acquisitions: the purchase of corn from Thessaly in the late second century B.C. and the levying of the tithe in Sicily.

33 On the business interests of the Roman elite J. D'Arms, Commerce and social standing in ancient Rome, Cambridge, Mass. 1981. Caesar, B.G. 7.55.5 provides us with an interesting example of the role of traders, when he mentions that those who had gathered negotiandi causa in the city of Noviodunum, in which Caesar collected his stores, were murdered when the city fell into his enemies' hands. In one of his elaborate stories, Livy 41,1ff. informs us that when Roman ships on their way to a campaign against the Illyrians put into a Histrian harbour, traders immediately gathered and started to sell their wares on the beach. These provisions were collected into the Roman camp. The Histrians made use of the chaos to attack and capture the camp. The story is typical for what Gelzer called late-annalistic "Kleinmalerei" and is doubtlessly not authentic. It is nevertheless an interesting passage. Cf. Appian, B.C. 3.26: When Dolabella arrived in the province of Asia, its governor Trebonius, who was a follower of Cassius and Brutus, "would not admit him to Pergamon or Smyrna, but allowed him, as consul, an opportunity of buying provisions outside the walls."


35 In this light we also have to view the transfer of part of the responsibility for the provisioning of the army in Gaul to one of the Roman traders in the city of Cenabum (Caesar, B.G. 7.3.1). See also A. Labisch, Frumentum commeatusque. Die Nahrungsmittelversorgung der Heere Caesars, Beiträge zur klassischen Philologie, Heft 69, Meisenheim am Glan 1975, 115ff.
An inscription that was found at Larissa in 1976 records the purchase of Thessalian corn because of a dearth in Italy.\textsuperscript{36} The Roman aedile who made the deal is recorded to have approached the council of Thessaly, which decided that 430,000 kophinoi (or about 485,000 modii) of wheat would be sent and "that the allocations among the cities of the aforesaid quantity of grain be made by Petraios the strategos with his co-magistrates and the councillors."

In the acquisition of corn we can always distinguish several levels. In this case the aedile constituted the first level; he contacted the Thessalian council at the second level. As executives of the council, the strategos and other magistrates did some of the organizational work themselves, but delegated most of the actual jobs to those at a lower level, the cities and their officials. The inscription is silent about the contact between the city officials and the providers of the corn at the lowest level. Did the city officials use the town granaries? Did they buy from corn traders, or from farmers? Did they acquire corn through some sort of levy? We do not know. It is clear, however, that at all the higher and intermediary levels the governmental mechanisms were adequate for the job and that even at the lowest level the participation of the corn trade is only one of many possibilities.

The \textit{lex Hieronica} partly relates to the acquisition of corn at a low level. The workings of the \textit{lex Hieronica} are known for Roman times, but essentially reflect the practice of pre-Roman times as well.\textsuperscript{37} There are a few important characteristics to be noted. The monarch or governor made contracts for each community separately, stipulating the amount of corn the contractors had to deliver. These tax farmers were mostly local, rich Sicilians and sometimes even the cities themselves. The contractors for their part negotiated with each individual farmer in their district. The management of the tithes by the contractors did not involve corn trade. Although the individual tax farmer could be a corn trader of some scale, corn trade as such was not involved in the levying of the tithe.\textsuperscript{38}

The cities had an important part to play. To provide the state and the tax farmers with the necessary information to base their deals on, the city officials had to draw up a detailed annual report of the agricultural resources in their

\textsuperscript{36} See for text and commentary Garnsey et al. (op. cit. n. 24) 36ff.; Garnsey (op. cit. n. 9) 187.

\textsuperscript{37} On the workings of the \textit{lex Hieronica}, Scramuzza (op. cit. n. 18) 237ff.; Pritchard (op. cit. n. 16); Rickman (op. cit. n. 2) 37ff.

\textsuperscript{38} The corn contractors mentioned in the Loeb edition of Cicero, \textit{Planc.} 64, seem to be an invention of the translator. Cicero, referring to his quaestorship in Sicily in the year 75 B.C., makes a point of his good relations with the \textit{negotiaiores, mercatores, municipes} and \textit{socii}. While I am perfectly satisfied with the translator's financiers, traders and allies, I have to object to his translation of contractors for \textit{municipibus}. It seems that the translator is working from another edition than the one given in the text.
community. The executive capacity of the cities was not only adequate for performing this laborious task, but apparently in some cases to actually do the job of the tax farmer as well.

Presumably, other states, like Carthage, Numidia or Pergamon, had similar mechanisms to collect the tax corn in their territories. The temporary transfer of the farming of the tithes of Asia to the Roman *publicani* in 123 B.C. by C. Gracchus' law does not vitiate my argument, since it was primarily politically motivated and does not point to an absence of alternatives or a preference for large scale contracting. The *publicani* in Asia on their part let sub-contracts with the communities. Caesar conveyed the levying of the tithe to the local communities, which from then on directly payed a sum of money to the Roman government. Badian indeed states that the activities of the *publicani* as tax farmers before the introduction of the Gracchan law had been rather marginal. The examples of Thessaly and Sicily corroborate my point that the corn supply was largely managed through governmental channels and that reliance on private elements was small scale and on a low level. As far as the procurement of corn was concerned, the dealings between Rome and other states to supply the Roman armies could therefore be managed without the involvement of private business on any significant level.

Some aspects of its transportation probably did involve private contractors. Unlike transportation over sea, transportation over land in the warzone itself and to the military supply bases could largely be managed by military personnel and resources. An essential unit of every army was its large detachment of *calones* and *muliones*, accompanied by a large number of *muli* and, sometimes, wagons. If occasionally there was a shortage of packanimals, carriages or manpower, the military command took its recourse to requisitions from the civilian population. In some cases the supplying communities were ordered or offered voluntarily to bring the provisions to the army or supply base.  

39 Plutarch, *Caesar* 48; Cassius Dio 42.6,3; Appian, *B.C.* 5.4. See Badian (op. cit. n. 2) 116f.; Rickman (op. cit. n. 2) 60. A significant difference with the tithes from Sicily and Sardinia was that in the case of Asia the state received money, and not corn. See Rickman (op. cit. n. 2) 42ff.  

40 Badian (op. cit. n. 2) 23f.  

41 The number of *muli* and *muliones* is indicated by the stratagem of staging a fake cavalry, whether it is historic or not (Frontinus, *Strat.* 2.4.1,5,6,8; Polyaeus 4.4,3). G. Veith und J. Kromayer, *Heerwesen und Kriegführung der Griechen und Römer*, München 1928, 394, estimates the number to be 1200 to 1500 for a legion of 4000. Labisch (op. cit. n. 35) 26, assumes a number of 1200 for a Caesarian legion of 5000. See also F. Stolle, *Der römische Legionär und sein Gepäck (Mulus Marianus).* Eine Abhandlung über den Mundvorrat, die Gepäcklast und den Tornister des römischen Legionars und im Anhang *Erklärung der Apokalypse 6.6*, Straßburg 1914, 63; Adams (op. cit. n. 29) 224.  

42 According to the story about Octavian's arrival in Italy after Caesar's death, as told by Appian (*B.C.* 3.11), among the multitude that flocked to him were soldiers, "who were
The resources needed for huge overseas shipments were of a different scale however. For this kind of transport the Roman government in some cases probably did turn to shipping contractors. As we have seen, the brief note of Livy (34.9,12) could possibly refer to transport contractors, but explicit statements about transportation contracts in a military context, other than the dubious story about the fraudulent *publicani*, do not occur in the sources. The principal reasons for assuming that contracts were indeed involved in the shipment of army provisions are firstly the analogy of the civilian corn supply and secondly the improbability that the Roman government possessed an adequate fleet of freighters.

The transportation of Sicily’s tithe corn was let out to contractors. It could have been the case that some tithe farmers acted as contractors as well, but I agree with Rickman that usually different groups were involved.43 We should not assume too readily that ancient entrepreneurs were involved in all branches of business, i.e. that tithe farmers were corntraders and shipowners as well. Livy’s statement (30.38,5) that the merchants had to hand over their grain to the skippers in the year 202 just to cover the shipping costs, because of the extremely low corn prices at that time, is very revealing in this respect. There is no doubt that shipping contractors were in business with private traders as well as the state.

This is not to say that the state had no alternatives to contract shipping. As a matter of fact, the sources provide information regarding other ways of shipping military provisions, so we should not overemphasize the dependence on contracting. Unlike Rome, states like Carthage and Syracuse did possess an adequate fleet of freight ships, and it was usual for overseas suppliers to take care of transportation to Rome, the armies or “wherever the senate liked.”44 It is even explicitly stated in the inscription concerning the transaction with Thessaly that other measures had to be taken “since the Thessalians have no ships”.45 It was decided that “Quintus [the aedile] be responsible for contracting it out as seems best to him.”46 The costs were to be settled out of the price of the corn, i.e. had to be paid by the Thessalians. It should probably be assumed that the

either engaged in conveying supplies and money to the army in Macedonia, or bringing other money and tribute from other countries to Brundisium.” Furthermore: Polybius 1.18; Livy 38.41,8; Caesar, *B.C.* 1.60; 3.42; Sallust, *Lug.* 46.5. Forced manpower and requisitions: Caesar, *B. Afr.* 9; Sallust, *Lug.* 75.4; Appian, *Pun.* 114; Plutarch, *Ant.* 68.4; not historical Livy 27.43,11.

43 Rickman (op. cit. n. 2) 41. See Cicero, *In Verr.* 2.3,172.
44 This phrase Livy 43.6,11ff.; furthermore Livy 22.37,1; 23.38,13; 31.19,2ff.; 33.42,8; 36.4. On a small scale Appian, *Hann.* 34. See also Pritchard (op. cit. n. 16) 359; Garnsey et al. (op. cit. n. 24) 42.
45 See the text in Garnsey et al. (op. cit. n. 24) 36f.
46 Ibidem.
aedile would let out contracts to shipping contractors in Rome. As a contingency plan, "if Quintus is unable to send out ships", men will be sent by Quintus, who will work together with Petraios the *strategos* and the other magistrates. The workings of this plan are not clear at all, but the transportation plan as a whole does not suggest state aloofness or structural dependence on transport contracting to the degree that is usually assumed.

This case makes a very important point, which cannot be emphasized enough: transport contractors could not guarantee sufficient transportation capacity in every circumstance. An element of uncertainty such as this, however, could jeopardize the Roman military campaigns. Therefore, besides letting out shipping contracts, the Roman state had every reason to strive for more direct control over freighters.

The sources offer little information to help solve the question whether the Roman state actually owned a fleet of cargo vessels. It is probable that the Roman navy included some transport ships for daily use. Furthermore it probably was the most obvious thing to do with the captured freighters, which are frequently mentioned in the accounts of Roman warfare, to incorporate them in the Roman navy. But a fleet of 800 freighters, the size of the fleet involved in the Roman expedition to Sicily in the year 249 B.C., was of a quite different scale.  

Military transportation demands often led to large scale requisitions of civilian vessels. During the preparations for the invasion of Africa, Scipio, for instance, "sent orders round the entire coastline to have all freighters pressed into the service and concentrated at Lilybaeum". Likewise Cato, when he brought his army to Spain in the year 195 B.C., “sent a proclamation along the coast to collect ships of every kind”, which from the context clearly refers not to warships but to transport ships.

We can conclude that the Roman state not only had recourse to contract shipping, but also to requisitioning ships for its large-scale corn shipments and probably to contributions of vessels by allied communities as well, insofar as suppliers did not take care of shipments themselves. The measures that were taken by the senate and commanders in each individual case will have depended on the kind of transportation which had to be undertaken and the circumstances prevailing at the moment.

48 Polybius 1.52.
49 Livy 29.24.9. Similarly, Octavian used a large fleet of requisitioned vessels during the wars against Sext. Pompeius (Appian, B.C. 5.127). On the other hand, during his wars in the Dalmatian region he ordered ships to be built to provision his troops along the Save (Appian, Ill. 22). There seems to be a tendency in some translations to translate Greek and Latin terms for freighters and cargo vessels by "merchantmen". Not all freighters need have been merchant vessels.
It is time to return to the point of departure of this discussion. The commis­sion of the military corn supply to the societates publicanorum, as envisaged by Badian, suggests that a few businessmen took care of all aspects of organiza­tion, administration and execution. While emphasizing the efforts undertaken in the wars of expansion since the Hannibalic War, Badian says, "it is important to stress that, as far as we can see, the publicani were in charge of the commissariat for all these wars, providing the logistics, and the organization that enabled the legions to win them."\(^50\) The important part played by large­scale contractors was presumed necessary because of the rudimentariness and inadequacy of the governmental structure.

The picture that emerges from the sources is quite different. Through its representatives in central and community government and in the armies, the state took part at all levels in matters concerning the corn supply of the Roman armies. On the other hand, involvement of private entrepreneurs was always at a low level and fragmented among different groups. Private entrepreneurs, involved in the military corn supply, could include corn traders and farmers, who sold corn to legati or officers, or tax farmers, who took care of gathering tithe corn at community level, or ship owners, who transported corn and other provisions by contract. But the military corn supply as a whole was character­ized by state controlled mechanisms, in which private entrepreneurs only took part, but which they never dominated.

This is not to say that the publicani had no role whatsoever in the provi­sionment of the armies. The evidence seems sufficient to assume that the publicani were involved in the supply of uniforms, weapons, horses etc. How­ever, there is a material difference between the historical development of this kind of provisionment and that of the military corn supply. The legions in early Rome were manned by civilian soldiers, who brought their own arms, uniforms and horses into battle. The feeding of the troops, however, always had to be the responsibility of the commander and consequently of the state.\(^51\) As the Roman wars grew longer, it became necessary for the state to provide not only food, but also uniforms, horses and weapons. The publicani could be used for this sort of

50 Badian (op. cit. n. 2) 27.
51 W.K. Pritchett, The Greek state at war, vol. 1, Berkeley 1974, 32ff., discusses the early Greek practice. The soldiers were ordered to bring along food for a few days – in Athens three days was customary. After this term the food supply was the responsibility of the commander. Labisch (op. cit. n. 35) 127, 131f., points out that the Celtic armies in the war against Caesar's legions carried along supplies which were meant for the whole campaign and which were not centrally managed. The unhappy experiences with this system induced Vercingetorix to make some changes. According to F.E. Adcock, The Roman art of war under the Republic, Martin classical lectures, vol. 8, Cambridge (Mass.) 1940, 54ff., Rome was first confronted with the complex problem of the food supply of large armies during the Samnite Wars.
provisionment. The armies’ total demand for uniforms and weapons was not as huge as the demand for food, and at the same time much more flexible – to skip the supply of new uniforms for a few months was affordable.

But the supply of these things came to be contracted to the *publicani* in part only. It must not be overlooked that Livy provides evidence of other ways besides contracting for the provision of uniforms, horses etc. to the overseas armies.\(^{52}\) Livy 44.16,4, which is always cited as a contract for the provision of togas, tunics and horses to the Roman army in Greece in the year 169 B.C., actually only refers to transporting the goods to the armies. Support in Livy’s work of the contracting for supplies other than food constitutes of 23.48,5f. and 27.10,13.\(^{53}\)

The economic context

One of the major characteristics of the military corn supply mechanism is the direct involvement of the state, which must be put into contrast with the supposed detachment of the state. There were good reasons for ancient states to stay directly involved in the acquisition of corn.

The size of the harvest fluctuated heavily, primarily as a result of weather conditions. State controlled flows of surplus grain were not as vulnerable to fluctuations as the distribution through private trade. With respect to fluctuations in the flow of corn, it is important to differentiate between the total harvest and surplus corn. Seed corn and the producers’ own consumption constituted a large and inelastic part of the ever fluctuating harvest. This means that, relatively speaking, surplus production fluctuated even more. Although this picture

\(^{52}\) In the first years of the Second Punic War, Hiero of Syracuse promised food and clothing to the Roman troops on the island (21.50,10). At the end of the Second Punic War in Spain, Spanish tribes had to contribute to the Romans corn and clothing (29.3,5). The *praetor* Cn. Octavius is ordered to obtain on behalf of the army in Africa clothing from the praetor of Sardinia, to be sent from that province (Livy 29.36,2f.). Livy 32.27,2 mentions for the year 198 B.C. the delivery from Sicily and Sardinia not only of corn, but also of clothing. Clothing was demanded among other things, including corn, from the Roman ally Phocaea (37.9,1ff.; cf. Polybius 21.6). A year before the contract for the delivery of horses to the Roman army in Greece was made, Masinissa contributed 1200 horses to the same army (43.6,11ff.). Cf. Appian, *Iber.* 55: the vanquished Spanish tribe of the Intercatii had to give to the Roman commander 10,000 cloaks and a certain number of cattle. (See also Caesar, *B.G.* 7.55.)

\(^{53}\) Harder evidence of a state contract for the delivery of such goods refers to the 1st century B.C.: probably in the sixties of this century, Ventidius Bassus had resorted “to the humble calling of a buyer of mules and carriages, which he had contracted with the state to furnish to the magistrates who had been allotted provinces” (Gellius, *N.A.* 15.4,3).
may differ in detail, it holds true for both peasants and market-oriented farmers.54

There are several ways to distribute surplus production. The most important ways that concern us here involved levies and the market. A levy like the tithe on Sicily was a constant part of total production and therefore normally fluctuated in proportion to the size of the harvest. The proportion of the harvest that was brought onto the market fluctuated heavier than the total size, because it was determined by the surplus production.

As the demand for grain and other staple foods was very inelastic, the fluctuation in the amount of corn that was brought onto the market will have translated itself directly into extreme price-fluctuations. It is a well-known phenomenon in early modern societies that these are even more extreme than the fluctuations of the supply of corn.

It is important to note the difference between the stream of corn which was handled by state controlled mechanisms and the stream of corn which was distributed through market channels. The ancient economy was not as trade-dominated as our modern world and therefore we must not overlook the importance of non-trade channels. Accordingly, we should not overrate the strength of the market section of the ancient economy, certainly not in mid-Republican times. The market need not have had access to corn to the degree that non-market distribution channels had access. Even if we assume that the state allowed itself to be subjected to extreme price fluctuations, it is very doubtful indeed that private trade could guarantee a sufficient supply to the armies in all circumstances.55

Conclusions

There were many ways in which the Roman government managed the corn supply of its armies. The needs and circumstances at each particular time and place decided the mechanisms that were used. Since the Second Punic War

54 The proportion of the harvest consumed by the producers is the highest and least flexible in peasant agriculture. Farmers working for the market use their labour more efficiently, and furthermore they use less seasonal labour in harvesting and threshing when the harvests are low. Peasants, however, can hardly adjust the number of mouths to feed to the amount of corn harvested. Nonetheless, seed yields and labour productivity were low for farmers as well.

Roman armies were a constant presence in the western part of the Mediterranean and during some years in the east as well. This caused a constant, though fluctuating, need of grain. Some mechanisms were ad hoc tributes and contributions; a constant supply of corn came into being with the tithes in the provinces.

For the execution of these mechanisms the magistrates and commanders could use *legati*, personal representatives and the enormous manpower of their armies. Of primary importance was also the executive apparatus of the cities and local communities. Purchases and free contributions were handled to a large degree on a diplomatic level.

Rome did not depend on large-scale contractors. Involvement of traders, skippers and tithe contractors was on a low level and on a small scale. In a situation of very fluctuating supply of the corn market, mechanisms which were dominated by state control and execution could offer more security and stability than private trade could.

Katholieke Universiteit Nijmegen

Paul Erdkamp