The publicly held company, or corporation, marks the height of the evolution of business organizations. Based upon the highly abstract concept of a "legal personality," the emergence of the corporation has opened new doors for market interaction and economic growth.

Three features of the corporation are of note. First, its existence is not affected by the departure of individual members. This stability enhances its ability to participate in economic transactions. Second, designated members of the company can represent it, in other words, they can enter contracts without assuming rights or duties themselves. Instead, the company becomes the bearer of all obligations. This simplifies both the relationship between the company and its members and the relationship among its members. Third, the provision of financial capital does not entail managerial involvement and investor liability is limited. Moreover, ownership is fungible and shareholders can react to changes in a firm's prospects or in their personal financial situation by buying or selling shares. The separation of ownership and management makes it easier to attract human and financial capital. At the same time, the fungibility of ownership alleviates the agency problem of misaligned incentives between managers and shareholders.

Historians and economists have long asked when and under what circumstances such a refined institution first
arose. While the idea of offering shares in enterprises may date back further, most papers and monographs on the history of the corporation identify the East and West India Companies, which emerged during the early seventeenth century, as the world’s first business corporations. In this chapter, I argue that over two thousand years earlier the Roman societas publicanorum, or “society of publicans” anticipated the modern corporation and, in particular, the use of fungible shares with limited liability.

Rise and Fall of the Societas Publicanorum

The publicans were “government leaseholders” or contractors with the Roman government. The Greek historian Dionysius of Halicarnassus (first century B.C.) first mentions such leases in his Antiquities of Rome for the year 493 B.C. He reports that Consul Postumius contracted out the building of temples for the deities Demeter, Dionysus, and Kore. Two characteristic examples of leases from the fourth century B.C. are the provision of the equi curules, the horses for the circus, and the feeding of the geese on the Capitol. The white geese received government-sponsored meals since, in 390 B.C., their honking had warned the Romans of the attacking Gallic troops. Pliny reports that the censors (government) leased out the feeding of the geese.

The companies of these publicani, the societates publicanorum, are first mentioned by Livy. In Ab Urbe Condita he describes the leasing of supply deliveries to the Roman army in Hispania during the Second Punic War in 216 B.C. and refers to “three companies of nineteen people” that “wanted to enter a government lease.” From details on their contract negotiations with the government (e.g., exemption from service in the army—a privilege usually reserved for priests and senators—and coverage of shipwrecks or any accidental damage at sea with public funds) the publicani emerge as experienced businessmen, well versed in negotiating with the government. Livy’s societates appear to have had considerably more capital at their disposal and dealt with larger ventures than the publicani of earlier centuries.

Moreover, Livy gives us the impression that government leaseholding was a well-established business:

When the censores, due to the emptiness of the state treasury, wanted to abstain from contracting out the restoration of the temples and the provision of circus horses and similar duties, those who usually participated in the auctions for such contracts assembled in large numbers and encouraged the censores to act as they usually did and to sell the contracts as though the treasury were full; no one would ask for repayment before the end of the war.

The protest of the publicani implies that the allocation of such contracts had been ongoing for some time and that government leaseholding was an important business activity. In fact, the ancient sources bring up an astonishingly wide range of activities of the publicani. The different types of government leases with the publicani can be roughly divided into three groups: provision of services or supplies for the public, utilization of public property, and collection of public revenues.

The first group was called opera publica et sarta tecta. The opera publica, or locatio operum involved either the delivery of movable property or the erection of new buildings. Sarta tecta are processes of renovation, literally “roof-mending.” This first group of leases included the supply of troops with both equipment and provisions, and the construc-

{ 32 } The Origins of Value
tion, renovation, and maintenance of streets, city walls, temples, markets, porticos, basilicas, theatres, aqueducts, public sewers and the circus. Some smaller services were less important financially, but crucial for the religious and public life of ancient Rome. Private entrepreneurs installed statues, convened the centurion committee, managed religious services and rituals such as painting the face of the Jupiter statue with vermilion on the festival days, and administered the funus publicum (the “public funeral”). The fact that these important tasks were given to the publicani implies that the contracting system and its implementation were well developed and reliable.

In the second group of public leases, the public property rights transferred include grazing rights on the ager publicus (the “public domains”), mining rights, and fishing rights in the lacus lacrinarum, a Campanian lake famous for its rich fishery. Other examples are the utilization of picariae (pitch workshops), silvae (forests), cretificidinae (clay pits), and lapicidinae (stone quarries).

The most (in)famous leases are those of the third group, the collection of taxes, tolls, and other dues. The publicani “leased” the right to collect direct (poll or land) taxes from the inhabitants of the provinces and to collect indirect taxes (customs or dues). Cicero lists the three most important types of dues: the port tax (portorium), the tithe (often referred to as the decuma), and the agistment (scriptura). Another indirect tax, the inheritance tax (vicesima bereditarium), played financially a relatively modest role as Cicero pointed out: “With port dues in Italy abolished, and the Campanian land divided, what home revenue remains except just the 5 percent inheritance tax?”

The rapid growth of the government lease system, as reflected in the wide range of contracts, resulted from the political and geographical expansion of Rome following her victory in the Punic wars. The provinces provided increasing opportunities for revenue extraction, and the government leaseholders became a “class” or an ordo publicanorum. After the lex Claudia barred the senators from participation in speculative enterprises, including government leases, in 218 B.C., this business was taken over completely by the equites, the class of knights that had already formed the majority of publicani before.

The last decades of the Republic became the Golden Age, and the apex of the publicani’s political and economic power.

With the decline of the Roman Republic, the knights and thus many of the publicani were subject to proscriptions. Legal reforms restricted the domain of their activities to the collection of taxes and dues. All other activities were assumed by direct imperial agents. Moreover, Augustus installed a procurator Augusti to handle all tax collection contracts in Gaul, Asia, and eventually in all of the imperial provinces. The process of tax collection, though still leased out, became more similar to a centralized tax collection system. Subsequent emperors of the Julio-Claudian dynasty eliminated more and more of the remaining public leases, and by the second century A.D., under Trajan and Hadrian, only a few taxes remained leased out (e.g., the vicesima bereditarium, the 5 percent inheritance tax). The large associations of leaseholders vanished completely by the second century A.D.

Along with these limitations in scope came other legal restrictions. The publicani lost the right to seize property as pawns in order to settle their claims against debtors; the right to search taxpayers’ belongings and persons was restricted; and all persons authorized to collect taxes had to be registered. All these new regulations made public leaseholding a much less attractive enterprise. Without the support of the government, the societas publicanorum drifted into obscurity.
Sources

The disappearance of the societas publicanorum under the Roman emperors had severe consequences for its historical record. Our primary source of Roman law, the Corpus Iuris Civilis, was compiled after the societas publicanorum disappeared. It discusses legal opinions from the classical and postclassical period (first to sixth century A.D.), but no preclassics. The jurists cited in the Corpus Iuris Civilis mention at most the publicani and the societates vectigalium, but only in the sense of smaller tax collectors and their firms. We will thus turn to alternative sources—classical Roman and Greek literature and inscriptions, which are largely unexplored in the literature on legal history—to provide evidence on business corporations and shares in ancient Rome.

The Monumentum Ephesenum, discovered in Ephesus in 1976, deserves special attention among the inscriptions. It is a former ambo of the St. John’s Basilica in Ephesus and had been reused as a step at the entrance. One side of it hid a Greek inscription, which turned out to be the translation of a Latin tax law, the lex portorii Asiae, or Νόμος τέλος Ἀσίας, from 62 A.D. This lex is an example of the leges locationum, or lex censoria, that governed the contractual relationship between the private entrepreneur, publicanus, and the government, represented by the censor, in a governmental lease. Over time a basic stock of set clauses developed for most contracts and was reused in each new lease. The lex portorii Asiae is such a stock of preset contractual clauses for the lease of tax collection rights in the province of Asia. Its nucleus, paragraphs 1–36, originate in the late Republic, 75 or 74 B.C. (see pp. 41–42 for a few characteristic excerpts). Paragraphs 37–63 are supplementary measures and decrees by later consuls.

The leges primarily governed three areas of the contractual relationship between publicani and the “Roman people” (as represented by the Roman censor). The first area was the object of the lease (i.e., the rights leased by the publicani or the services to be supplied by them). In the case of the lex portorii Asiae, the leges specify the type of tax (portorium) and details on the cities and places in which “tax collection was admitted according to senatorial decree, law, or plebiscite.” We also find details on tax exemptions, “for which kinds of exports from or imports to Asia no customs shall be paid.” Even the issue of double taxation is addressed:

If the right to collect the tithe on grain, wine, or oil has been leased to publicans in the name of the Roman people, [other] publicans may still collect the customs on those goods, as it has been contracted with the Consuls Lucius Octavius and Gaius Aurelius Cotta.

The second area governed by the clauses was the terms of payment. In the case of tax-farming, a fixed sum, to be paid in installments over the course of the contractual period, seems to have been the common arrangement. The lex portorii Asiae specifies annual payment on the Ides of October:

[The p]ublican who has contracted with the Roman people to collect taxes shall make payment [to the Aerarium Saturni, i.e., the treasury] on the Ides of October of the year in which he exercises his right.

Finally, the third type of provisions dealt with collateral. In the case of the lex portorii Asiae, “the publican has to provide the Roman people with guarantors and sureties.” We...
Monumentum Ephesenum. Inscribed marble. 62 a.d. The Monumentum Ephesenum bears an inscription with Roman tax laws for the province of Asia. It was found in 1976 during excavations of the ancient city of Ephesus in modern day Turkey. At some point in history the public monument was pulled down and the stone recut for reuse as a dias or ambo in St. John's Basilica in Ephesus. One side hid a Greek translation of a Latin lex portorii Asiae from 62 a.d. which specifies the contractual relationship between publicani and the Roman people.

will explore the contractual clauses of the lex portorii Asiae and numerous literary sources to complement the Corpus Iuris Civilis and to study the societas publicanorum during the time of its greatest expansion, the Roman Republic.

Organization and Legal Status

The large-scale and long-term business activities of the publicani naturally called for a sophisticated legal and organizational framework and, in particular, incorporation, with all the advantages enumerated in the introduction. Roman law, however, proved to be rigid and inflexible. In fact, the slow development of the ancient Roman economy has often been attributed to the lack of dynamics and adaptation in the legal system. The law of business organizations is no exception. The only legal form of corporative organization outside the public corporations, i.e., populus Romanus (state), aerarium and fiscus (state and imperial treasuries), and municipia and coloniae (municipalities outside Rome), was the collegium (association). The collegium, however, was restricted to organizations with “public purpose” such as religious and political associations.
Thus, business organizations had to be established as *societates*. The societas is a contractual union of a group of people formed to promote a common purpose. The *publicani* met the four essential criteria for forming a *societas*, namely, contributions of the partners, common interest, a lawful business goal, and the *affectus societatis* (i.e., the will to form a societas). In fact, the organization of *publicani* is referred to as a *societas* at least from the third century B.C. on. Throughout the centuries of government leases in Rome until the final period under the Roman emperors, the organization of the *publicani* seem to have remained a form of *societas*, since Ulpian explains:

*Societates* are formed either as universal partnerships [i.e., concerning all the property of the partners], or as partnerships for a specific business or for tax-farming for a tax or for a single event.

The basic *societas*, however, did not form a separate persona. Partners assumed rights and obligations among each other but were in no position to represent the societas as a whole. And "company property" did not belong to the company, but to the socii in common ownership. Moreover, the societas was automatically terminated if a socius died or renounced his partnership. Even the initiation of an *actio pro socio*, an action of one partner against another partner for the settlement of accounts, was considered a renunciation. The partners of a societas could not stipulate that the societas should persist beyond the death or renunciation of a partner. Other deficiencies of the societas for the purposes of the *publicani* were that, at least during Republican times, profits and losses had to be shared equally among all socii and liability could not be limited. This made it hard to attract outside capital.

The solution to this dilemma—the reluctance to change the legal system, on the one hand, and the government's need for corporate organizations, on the other hand—is characteristic for the evolution of Roman law. Insisting on the societas as the only legal form for the organization for the *publicani*, the Romans developed a series of "special rules," applicable only to the societas *publicanorum*. These special provisions gave the societas *publicanorum* the de facto status of a modern corporation.

As a first important step toward the evolution of a corporation, permanence of the organization was guaranteed, even after the death of a socius, or "member of the societas." We do not know when exactly this provision was implemented; but it retained validity even into the first centuries of the Roman Empire, then applying to the only surviving form of societas *publicanorum*, the organization of the tax farmers (*societas vectigalium*), as Pomponius describes:

Upon the death of a partner the societas is dissolved, so that we cannot state without reservation that the heir of a partner inherits membership in a partnership. This is indeed the case with regard to private partnerships, but in the case of the society of tax collectors, the partnership remains in existence even after the death of one of the partners, as long as the deceased partner's share was bequeathed to his heir, so that it must be conferred upon him. Whether this happened depends on the case, for what if the deceased had the main responsibility for the formation of the partnership or if the partnership could not be managed without him?

This and other fragments from the Digest make clear that the societas *publicanorum* could continue to exist even after the death of one of its partners, whether the heir of the deceased joined as a new partner or not. According to the Ulpian quote above, the only
exception was the death of the *manceps*. The *manceps* was the socius who bid in the auction for the government contract and eventually signed the contract. As Festus defines

Somebody who buys or leases from the people is called *manceps* since he indicates by raising his hand (*manus*) that he is willing to buy (at an increased price.)

The *socius* of a regular *societas* could instead not enter contracts in the name of the *societas*. Rather, the individual had to assume all contractual obligations himself. In the case of the government leases, the *manceps* was the bearer of all rights and obligations from the contract with the Roman state, not the *societas*.

The *socii* would typically choose the most respectable and esteemed person among them to be *manceps*, which made him the *princeps inter suos*, “the first among equals.” Given his central role in the *societas* it becomes clear why his sudden disappearance would end the contractual relationship among the *socii*. On the other hand, both the *socii* and the government would have wanted to continue the contractual relationship—among the *socii* as a *societas publicanorum* and between *socii* and the Roman people as government leaseholders—even without their prior *manceps* if his position happened to be filled by another person.

The *lex portorii Asiae* reveals how the Roman legislator resolved this tension without abandoning the *societas*. According to paragraph 46, the consuls Nero and Lucius Calpurnius Piso decreed in 57 B.C. that “over the next twenty days it [shall be admissible to replace] the *manceps*.“ In other words, the *publicani* had the option to substitute the *manceps* with another person for a limited period after contract conclusion. From 5 A.D. on, even annual changes were permitted: “the praetores of every year shall allow [the *societas*] to substitute the *manceps*.“ That way, the censors established contractual continuity of the relationship between a *societas publicanorum* and the government despite the replacement. Given Rome’s refined law of obligations, this “inconsistency” is a clear indication that the *societas publicanorum* is acknowledged as a separate legal entity.

Finally, the *societas publicanorum* also survived the *actio pro socio*, as Paulus writes:

Occasionally it is necessary to go to court against a partner, but keep the partnership alive; for example when a partnership is formed for tax collection and, because of the various contracts, it suits neither party to withdraw from the partnership.

The *actio pro socio manente societate* allowed the *publicani* to deal with internal disputes without having to dissolve their contractual union. The association of *publicani* thus acquired a permanent status, which transformed it into an independent entity in economic transactions.

The second step toward a “corporation” concerned the right of representation. Gaius reports:

Those organizations who are granted the right to incorporate, either as *collegium* or as *societas* or in any other form, typically have a representative or syndic, through whom, just like in a state, everything that needs to be done and needs to happen for the community gets done and happens.

This statement needs to be seen in context with the *principium* of this fragment where Gaius explicitly notes that the *societates vectigalium* are counted among the organizations.
with corpus. The Gaius text indicates that the process of legal change in the status of the mancipis, initiated during the Republic, resulted in the capacity to represent the company, even though the Romans never generally accepted the legal concept of representation.

The next crucial difference between societas and societas publicanorum—and maybe the most astonishing step forward in the evolution of this business organization—was the existence of shares and shareholders. Cicero mentions the partes (shares) numerous times in speeches. For instance, he refers to private citizens possessing partes societatum publicanorum. He refers to shareholders as participes; other authors denote them as adfines. Cicero speaks of magnae partes ("large shares"). Valerius Maximus mentions the particula ("little share") of T. Aufidius. This implies that shares of different companies came in different nominal values.

We also learn that the shares were traded. In his second speech against Verres, Cicero implies the transferability of shares, when he quotes an exceptional restriction: Qui de L. Marcio M. Perperna censoribus redemerit . . . socium non admittito neve partem dato neve redimito, that is, anyone who had been leasing under the censors L. Marcius and M. Perperna was not admitted to the current lease, neither as a partner, nor as a shareholder, nor should he be allowed to buy any shares later. His quote and the context of the case reveal that shares were often traded between participes after the contract had been assigned to a societas publicanorum. A common trading place was supposedly near the Temple of Castor on the Forum Romanum.

What makes the partes look even more like modern shares—and is additional evidence that partes were not just loans with variable interest rate, as proposed by P. W. Duff—is the mention of variable "stock prices." Cicero speaks of partes illo tempore carissimae, of "shares that had a very high price at that time." He implies that the value of the shares depends upon the success of the enterprise and was as such subject to fluctuations, just like today's stock market. In fact, the "stock-market jargon" in this and similar quotes have led some scholars to believe that a "stock-market life" existed in Rome.

How much of a stock market there was in ancient Rome may remain in obscurity. What we do know, though, is that ownership and other involvement in the societas publicanorum was widespread among the Roman population. According to Polybius, by the second century B.C. "almost every citizen" participated, in one form or another, in the government leases. Polybius specifies four forms of participation: those who contract with the censors, the partners of the contractors, the providers of sureties, and investors, literally "others [who] pledge their own fortunes to the state for this purpose." Similarly, Cicero claims that many citizens were financially involved in these businesses.

The most important elements of the modern corporation thus seem to have been granted to the societas publicanorum. The existence of the societas publicanorum did not—to a large extent—depend on the individuals involved, a representative could act "for the company," ownership was fungible, traded in the form of shares, and separated from the control of the company.

Does this make the societas publicanorum the first Roman business corporation? It seems so when Gaius counts the societas publicanorum among the organizations with a "corpus" or when Cicero reports about a societas publicanorum that "it consists of other societates [publicanorum]" and thus assumes the role of a natural persona.

Other fragments of the Digest point in the same direction. The societas vectigalium could sue and in particular file the actio furti against fraud or embezzlement. The company could own property and inherit items. Like a summary, the Digest proposes that
The Forum Romanum
the company could act like a person. This corresponds exactly to the modern classification of corporations as "legal personae."80

All of these texts from the Digest, however, reflect classical (and postclassical) jurisprudence from the first century A.D. on. What about the time of the greatest expansion of the *societas publicanorum*, the time of the Roman Republic? From references to earlier legal rules, such as an edict81 on corporations, however, we know only the *collegium* and state-related associations were identified as corporations, not the *societas publicanorum*.82 On the other hand, we also know from earlier literary sources and from the *lex portorii Asiae* of the existence and (legal) acceptance of corporate elements of the *societas publicanorum* from the second century B.C. on.83

To understand this lack of corporate law, note that the questions "what is a corporation?" and "what does it mean to have legal personality?" do not receive much attention in the *Corpus Iuris Civilis*. In the entire Digest, we only find two—relatively short—titles pertinent to these issues.84 The Roman terminology is rather imprecise, lacking a word for "corporation" and a clear distinction between the corpus and its members. *Universitas* may be closest, but is not used consistently.85

These "inconsistencies" between corporate law and corporate practice, though, are inconsistencies really only from a modern perspective. To ask whether the *societas publicanorum* was a corporation or not under Roman law is, in some sense, anachronistic. The concept of a "legal persona" was formed over the centuries. It underwent major reinterpretations in the sixteenth century and was the subject of extensive theoretical debates in the nineteenth century, most prominently between the "Romanist" legal scholar Friedrich Carl von Savigny and the "Germanist" Otto von Gierke. Imposing the resulting modern systematization upon Roman law runs the risk of introducing much more "system" than existed at the time.86 The Romans were concerned with the rapid transformation of their small closed agricultural economy into an open system that spanned the entire known world. What is crucial is that they managed to accommodate the practical needs of their growing economy, even without revolutionizing their company law. Applying our modern terminology, we may well call the *societas publicanorum* the first shareholder company—even if the Romans themselves would not have undertaken such categorization.
Appendix A: Monumentum Ephesenum excerpts


§1:
νόμος τέλους Άσιας εισαγωγῆς καὶ ἐξαγωγῆς κατὰ τε γῆν καὶ κατὰ θάλασσαν [τοῖς τε κατακλέουσιν καὶ τοῖς ἀνάγουσιν καὶ τοῖς ἑκ] Καππαδοκίας, Γαλατίας, Βειθυνίας Άσιαν ζωννύουσιν.

[This is the] Tax law of Asia for the regulation of import and export by land and sea [for (all) who arrive and depart and for (all) who] pass by Asia [from] Cappadocia, Galatia, [and] Bithnia.

§2:
αἰτινές τε χώραι Καλχαδονίων Βυζαντίων ἐντός τῶν [ὅρων τοῦ στόματος Πόντου εἰσὶν ἔσσονται τε, πρὸ τῆς κατά θάλασσαν εισαγωγῆς καὶ ἐξαγωγῆς ἐν στόματι Πόντου ἐν ὀς τόποις κατὰ δόγμα συγκλήτου ή κατὰ νόμον [ἡ κατὰ δήμου κύρωσιν συγκεκρίμενη ἐπιτέτρωσε] αἱ τε τελονεῖαι ἐκμισθώσεται, ἐν τούτοις τοῖς τόποις, ἁ ἁν κατὰ θάλασσαν εἰσάγηται, ἐξάγηται, κατὰ πέραν ............ ἁ ἁν ... 

For all land belonging to Chalcedon or Byzantium within the [borders of the Ostium Ponti], (or) wherever within the Ostium Ponti it has been decreed by the Senate or by law (or plebiscite) that tax collection rights can be farmed out: (there,) one-fortieth [of the value of all goods] must be handed over to the tax collector upon arrival or departure...

§3:
ὑπὲρ σομάτων παιδαρίων ἀνδρείων ὑπὲρ τε σομάτων] παιδαρίων κορασίων μη τ πλείον τέλους ἐκάστης κεφαλῆς δηναρίων πέντε διδόναι ὀφειλέτω(1).

F[or male slaves that are still in their youth as well as] female [slaves] in their youth one shall not take more than five denari tax per head.

§4:
[άπερ ᾧ τις εἰς Πόντου ἐξάγεσθαι μέλλη, πρὸ τοῦ πόλιν Καλχάδονα παραπλεύσαι τοι τελώνη ή ἐπιτρόποι αὐτοῦ προσφωνεῖτα(1) καὶ ἀπογραφέσθω(1). [άπερ ᾧ τις εἰς Πόντου εἰς τὴν ἡμετέραν ἡγεμονίαν εἰσάγεσθαι μέλλη, πρὸ τοῦ πόλιν Καλχάδονα παραπλεύσαι τοι τελώνη ή ἐπιτρόποι αὐτοῦ προσφωνεῖτα(1) καὶ ἀπογραφέσθω.

[Whatever anyone desires to export to the Pontos, he shall, before] he passes the city of Chalcedon, announce and declare it to the tax collector or his proxy. [Whatever anyone desires to import into our area from] the Pontos, he shall, before he passes the city of Chalcedon, announce and declare it to the tax collector or his proxy.
ON THE LIMITS OF THE TAX LAW — HEAVILY RECONSTRUCTED

§5:
(Anyone who) imports or exports goods by sea may not divert his ship, nor may (a person) who imports and exports over land take a different route in order to evade taxation. If anyone acts against this, then the same law shall apply as though he were transporting goods that are not declared.

§8:
Nobody should take goods from the ship with bad intentions, nor should anyone take them without declaring (the goods) in order to evade the tax. If anyone acts against this, then the concerned goods and the wares will pass into possession of the tax collector. The buyer should import and export following deduction of the tax.

§11:
(For) all goods (listed) in this decree as subject to declaration, anyone who imports (these) must declare them and must subsequently import them following their declaration.

§18:
Whatever goods anyone desires to import or export by sea, and what anyone imports or brings in by land or exports or brings out, of all these goods he shall declare [the value]. He shall declare the weight of those goods that are weighed, and the accurate number of those things that are counted. If this rule is broken the goods and wares shall belong to the tax collector.
Emigration within the Near East. Festschrift E. Lipinski, Orientalia Lovaniensia Analecta 65 (Leuven: Departement Orientalistiek, 1995), 357—64.


44. Recently, an article appeared arguing against my suggestion that interests were not charged per annum. I fail to be convinced by the arguments made there, which basically boil down to two: the Babylonians could easily calculate a fraction of the interest, and it would be economically impossible to charge such high rates. The first argument is irrelevant, the second merely an assumption based on modern prejudices. See Peter Vargyas, “Babylonian Interest Rates: Weren’t They Annual?” in Studi sul vicino oriente antico dedicati alla memoria di Luigi Cagni, ed. S. Graziani (Naples: Istituto Universitario Orientale, 2000), 1095—1105.


46. Lutz, Legal and Economic Documents from Ashdod, no. 8.


48. If we take the numbers given literally the accrual would amount to 4,478,976,000,000 liters. See Marvin Powell, “Masse und Gewichte,” in Reallexikon der Assyriologie, vol. 7, ed. D.O. Edzard (Berlin and New York: Walter de Gruyter, 1987—1990), 497. In “The Renting of Fields in Early Mesopotamia,” 144 note 85, Steinkeller tried to reduce that number substantially, but I am not convinced that this needs to be done.

Enmetena wanted to express that the amount of grain owed was gigantic. To get some idea of its magnitude, one can compare it to the total quantity of grain produced in one year on all institutional lands in the province of Lagash a few centuries later, 37,210,500 liters. See Marc Van De Mieroop, Cuneiform Texts and the Writing of History (London and New York: Routledge, 1999), 132.

49. Mathematical problem texts from the early second millennium, used as teaching tools in the scribal education, also hint at the concept of compound interest. They stated an amount of barley, for example, and asked how long it would take to accrue. These were not practical problems, however, but games that asked the student to display complex mathematical skills. Their relevance for the reconstruction of actual accounting practices is thus minor. See Van De Mieroop, “Old Babylonian Interest Rates: Were They Annual,” 360—61.


CHAPTER 2. ROMAN SHARES


3. Dionysius of Halicarnassus, Antiquitates Rome, (6,17,2): καὶ ναὸν κατασκευάζων ἐξειδίκευσε Δήμητρι καὶ Διονύσου καὶ Κόρην, Demeter, Dionysus, and Kore equate, respectively, with the Roman deities Ceres, Liber, and Liberia. The credibility of this earliest report suffers somewhat from
the mention of three vaal since only one was built by the Romans. See Earnest Cary, *The Roman Antiquities of Dionysius of Halicarnassus*, vol. 3 (London and Cambridge, Mass., 1953), 291, note 1.


5. Livy, 5, 47, 4.


8. Livy, 24, 18, 10 f.: *Cam censors ob inopiam aearii se iam locationibus abstinervint aedium sacrarum tuendarum curuliumque equorum praebendorum ac similium bis rerum, convenire ad eos frequentes qui bastae bius generis adsuuerant, bortarique censors ut omnia perinde agerent locarent ac si pecunia in aerao esset: neminem nisi bello confecto pecuniam ab aeario petiturum esse.*


11. This translation derives *sarta* from *sarcire* as an attributive to *tecta*. *Sarta* may also be a noun or predicative, without changing the meaning. For an overview of the literature see Andrea Trisciuglio, "Sarta tecta, ultrotributa, opus publicum faciendum locare," Sugli appalti relativi alle opere pubbliche nell'età repubblicana e augostea, Memorie del dipartimento di scienza giuridiche, *Università die Torino*, Serie V, Memoria VII (Neapel, 1998), 7–12.

12. Val. Max. 5, 6, 8; Livy, 23, 48, 5–49, 4, 25, 3, 10 and 34, 6, 13 for the years 216–215 B.C.; 27, 10, 13 for the year 209 B.C.; 44, 16, 4 for the year 169 B.C.

13. Examples are in Livy, 25, 3, 9 and Valerius Maximus, 5, 6, 8 (construction and management of public buildings); Cic., *De Leg. Agr.* 3, 128 (temples); Dionys. of Hal., *Ant. Rom.* 3, 67 (public sewers); Livy, 4, 22, 7 (construction of *villa publica*); 5, 23, 7 (temple to Mater Matuta in the Forum Boarium and temple of the Iuno Regina on the Aventin); 6, 32, 1 (city walls); 24, 18, 10 (temple upkeep); 29, 37, 2 (on street surface repairs; also 41, 27, 5); 40, 51, 3–5 (on the renovation of the fora and the theatres); and numerous additional references in Ūrđgi, *Publicani*, col. 1186 f. Badian, Zöllner und Sünden, 8, supports the credibility of these descriptions in spite of Livy's tendency toward embellishment.


15. Varro, *De Ling. Lat.*, 4, 92, and also Badian, Zöllner und Sünden, 8 f.

16. Both the ground of the *ager publicus* and its *vectigalia* appear to have been leased out. See Cicero, *Sec. in Verr.* 3, 6, 13, where he seems to refer not to the property lease of the *ager publicus* in Sicily, but to the *vectigalia*. Comp. Helen Jefferson Loane, "Industry and Commerce in the City of Rome (50 B.C.—200 A.D.)," *The Johns Hopkins University Studies in Historical and Political Science* Series 56, no. 2, (Baltimore, 1938), 100.


18. See Cicero (*De Leg. Agr.* 2, 36) and Festus (P. 121 M = P. 08 L). The *lacus lacinus* was taken by Rome during the second Punic War. According to Servius in his comments on the *Georgica* 2, 36, the rich yields in fish declined due to sedimentary fill and only recovered when Caesar gave in to the publicani's urging and built dams to restore the prior condition of the lake.


20. Roman citizens did not have to pay such direct taxes.


24. The *Fragmentum Leidense* (see Studia Gaiana IV) reveals that the Senators and their "superiors" were also excluded from tax collection and from the delivery of horses for the games by the *lex Iulia repetundarum.*


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According to Appian, *Bell. Civ.* 4, 5, two thousand knights were killed as a result of the proscriptions. See also the detailed account of the brutality of the proscriptions in Cass. Dio 47, 14.


See Joachim Marquart, *Römische Staatsverwaltung* vols. 1–3, 2d ed. (Leipzig, 1884), 301–18; and Üröddgi, Publicani, col. 1200, 1202. Augustus established the concept of "imperial" and "senatorial" provinces in 27 B.C. In the imperial provinces, the emperor himself was formally the provincial governor; he appointed former consuls or praetors to administer those provinces.

Plin., Ep. 7, 14; *Panaeg.* 37, 7; 39, 5. See also Siegfried J. De Laet, *Portorum. Études sur l'organisation douanière chez les Romains, surtout à l'époque du Haut-Empire* (Brügge, 1949), 383, on the allocation of portoria collection to smaller conductores, i.e. "minor contractors"; and Üröddgi, Publicani, col. 1202.


The *Corpus Iuris Civilis* is by far the most important written source of Roman law. In the sixth century A.D., the Eastern Roman Emperor, Justinian, ordered the compilation of several law codes, mostly based on statutes and legal writings from the classical period. Part 1, the Institutes (*Institutiones*), is a beginners' textbook, largely copied from the Institutes of Gaius, which were written 300 years prior. Part 2, the Digest (*Digesta* or *Pandectae*), is a collection of fragments from scholarly writings. Part 3, the Code (*Codex*), is a collection of imperial statutes. Justinian had planned to add another collection to these three: new pieces of legislation (*novellae constitutiones*) that had been adopted after the compilation of the Code. This plan was never realized. Today, we have only private collections of these *novellae constitutiones*. The *Corpus Iuris Civilis* constituted the basis of the revival of Roman law in the Middle Ages. Numerous rules from the Institutes and the Digest are incorporated in laws in force today in countries all over the world.

Ulpian D. 39, 4, 12, 3 (38 ad ed.): *Publicani autem dicuntur, qui publica vectigalia habent conducta* ("Publicani is the name for those who collect public taxes"); similar Gaius D. 50, 16, 16, 3 (3 ad ed. provinc.); for more examples see Ulrike Malmendier, *Societas publicorum* (Cologne and Vienna, 2002), 25.

Pomponius, D. 17, 2, 59 pr. (12 ad Sab.): *in societate vectigalium nihil minus manet societas et post mortem alienius*; Gaius, in D. 3, 4, 1 pr. (3 ad ed. provinc.); *ut eae vectigalium publicorum sociis permisit est corpus habere*. See also Ulpian, D. 17, 2, 5 pr. (31 ad ed.): *societas contrahuntur sive universorum sive negotiatiis aliius sicve vectigalis sive etiam rei unius; Ulpian, 63, 8 (31 ad ed.): Et *circa societas vectigalium ceterorumque idem observamus, ut heres socii non sit nisi fuerit adictus*; Paulus, D. 17, 2, 65, 15 (32 ad ed.): *Nonnumquam necessarium est et manente societate agi pro socio, veluti cum societas vectigalium causa cota est*.


Engelmann and Knibbe, *Das Zollgesetz der Provinz Asia*, 95 f. and 160, date the core of this inscription to 75 B.C. based on the leases mentioned in paragraphs 31 and 33, which were given out by the consuls of that year, L. Octavius and C. Aurelius Cotta.

They are prefaced by the standard Roman legal formula *otio quatoque et prosequentibus* (*consules ad-didissent*).

Paragraph 2: *κατὰ δόμημα συγκλήτου ἤ κατὰ νόμον [ἢ] κατὰ δήμου κυριῶν συγκεκαίρηται ἐπίτροποι οἱ τε τελευτεῖς ἐκμισθώθησαν.*

Paragraph 32: *ἐὰν Ἀσίας εἰς Ἀσίαν [ὅ] ἐν ἐξάγωται, εἴσαξθα, . . . ὑπὸ τοῦ τελοῦ τῆς μὴ διδοῦσθαι.*


Paragraph 42: *[ὁ] δημοσιώτης ἐκ τοῦ δήμου τὴν τῶν τελῶν ἀνάπραξιν ἐγκατάλθουσας, ἢ [ὅ] ἐντείνεται καρπεύσθαι δέχαται, εἰς δοῦς Ὀκτάνους διενεργεῖται διευθυντεῖν ὑπελείποντα . . . . Literally, the lex says that the publican shall pay on the Ides of October of the next year (Ὀκτάνους διενεργεῖται) to make clear that it is the year after the conclusion of the contract. The contract took place before October, typically on the Ides of March; see Engelmann and Knibbe, *Das Zollgesetz der Provinz Asia, 112.*

Paragraph 43: *δημοσιώτης . . . . ὁ ἀντίκειται καὶ ἐνεκέκ ἐν πραξιν ἐν κατανομοῦσθε.*

See Peter Astbury Brunt, "The Equites in the Late Republic," in *The Crisis of the Roman Republic.*
45. Duff, Personality in Roman Private Law, 95 ff.
46. Paulus, D. 17, 2, 3, and Ulpian (Pomponius) D. 17, 2, 57.
47. A partner (socius) had to contribute either property or labor; Gaius, 3, 149 ff.
48. Livy, 23, 48, 10–49.
49. Ulpian, 31 ad edictum, D. 17, 2, 5 pr.: Societates contributur sint universorum bonorum sive negotiatis alicuibus sive vectigalibus sive etiam rei unius.
50. Gaius 3, 152; Paulus D. 17, 2, 65 pr.
52. Institutiones 3, 252; Ulpian D. 17, 2, 10.
53. Pomponius, in the twelfth book of ad Sabinum (D. 17, 2, 59 pr.): Adeo morte socii solvitur societas, ut nec ab initio pacisci possimus, ut heres etiam succedat societate. Haec ina in privatis societatibus sit: in societate vectigalium nihil minus manet societas et post mortem aliius, sed ita demum, si pars defuncti ad personam heredis eius adscripta sit, ut heredi quoque conferri oporteat; quod ipsum ex causa aestimandum est, quid enim, si mortuus sit, propter cuius operam maxime societas causa sit aut sine quo societas administrari non posset?
54. For example, see Ulpian, 31 ad edictum, D. 17, 2, 63, 8.
55. Festus, p. 151 M = p. 137 L, s.v. mancipes: Mancipes dicitur, qui quid a populo emit conductive, quia manu subhata significat ex auctorem emptionis esse.
57. Paragraph 46: In hinc quos socii ea societate etiam post mortem hominem a societate expulsa fuerint, societas autem non in hunc modum expulsa; quia aliter societas aliqua societatis ex sociis oritur. The proper translation for mancipes is ὁρχής, not ὁθόνης; comp. Rostovtzeff, Geschichte der Staatspacht in der römischen Kaiserzeit bis Diokletian, 368. The slight misuse of terminology (ὁθόνης means magister) is an example of the general lack of translation skill in this Greek version of the lex portorii Asiae; see Englemann and Knippe, Das Zollgesetz der Provinz Asia, 6.
59. Gaius, D. 3,4,1,1: Quibus autem permissionem est corpus habere collegii societatis sive cuiusque alterius eorum nominis, proprium est... habere... actorem sive syndicum, per quem tamquam in re publica, quod communsier agi fierique societatis, agatur fiat.
60. Gaius, D. 3,4,1 pr.: vectigalium publicorum sociis permissionem est corpus habere.
61. Cicero, pro lege Manilia 2, 6.
62. Ps.-Asc. In Verr. Sec. 1, 55, 143 (Th. Stangl, 253, 7–8).
65. Duff, Personality in Roman Private Law, 159.
67. Valerius Maximus, 6, 9, 7.
68. Cicero, Sec. in Verr. 1, 55, 143.
69. Polybius, 6, 17, 3: σχεδόν ὡς ἦκες εἰπεν πάντας ἐνδεδοθα ταῖς ἁνίαις.
70. Polybius, 6, 17, 4: οἱ μὲν γὰρ ἀγοραζοντες παρὰ τῶν τιμητῶν αὐτοῦ τῶν ἐκδόσεως, οἱ δὲ κοινωνοῦσι τούτῳ, ὁ δὲ ἐγγύτωται τοῖς ἀγορακότοις, οἱ δὲ τὰς σωτίας διδάσκασι περὶ τῶν εἰς τὸ δήμοστον. It is unclear to whom Polybius refers with the last two categories, οἱ δὲ ἐγγύτωται τοῖς ἀγορακότοις, οἱ δὲ τὰς σωτίας διδάσκασιν ὑπὲρ τῶν εἰς τὸ δημοστόν praeedes ("sureties") as in the

74. Cic., *Pro Lege Man.* 2, 6: *aguntur bona multoram civiam.*

75. Gaius, D. 3, 4, 1, 1.


77. D. 47, 2, 31, 2.

78. D. 3, 4, 1: *babere res communes.*

79. D. 37, 1, 3, 4: was entitled to the *bonorum possessio.*

80. D. 46, 1, 22.

81. Edicts were the civil law created by Rome jurisdictional magistrates, in particular by the praetors. They mainly concerned causes of actions and remedies against actions.

82. Both the content and the record of proceedings of the edict *quod cuiuscumque universitas nomine vel contra eam agatur* (D. 3, 4) are tailored toward the collegium, not the *societas publicanorum.* See Otto Lenel, *Das Edictum Perpetuum. Ein Versuch zu seiner Wiederherstellung,* 3rd ed., (Leipzig, 1927), 101; and Basil Eliachevitch, *La personnalitè juridique en droit prive romain,* (Paris, 1942), 324.

83. Livius (43, 16, 2) mentions *adfines,* "shareholders," with respect to 169 B.C.

84. D. 3, 4: *Quad cuiuscumqae universitas nomine vel contra eam agatur,* and D. 47, 22: *De collegiis et corporibus.*


86. For a more detailed discussion, see Malmendier, *Societas publicanorum.*

**CHAPTER 3. HOW BUSINESS WAS CONDUCTED ON THE CHINESE SILK ROAD DURING THE TANG DYNASTY, 618–907**

Part I: The Resolution of an International Dispute on the Silk Road, ca. 670

1. The Greeks called the Iranian prophet Zarathustra Zoroaster, the name we use in modern English.


7. See note 1, above.


11. Chinese archeologists have yet to publish a detailed site report of the Astana excavations, which were conducted from 1959 to 1975 and overlapped with the tumultuous years of the Cultural Revolution.